

**DEPARTMENT OF FORESTRY AND FIRE PROTECTION**

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**Joint Committee on Emergency Management
Informational Hearing
August 20, 2013
Ken Pimlott, Director, CAL FIRE**

1. Overview of the 2013 Fire Season
 - a. Overall weather and fuel conditions
 - b. Activity to-date
 - c. Overview of selected large fires in 2013
2. Status of CAL FIRE's resources
3. The State Fire Plan and Looking to the Future
 - a. Overview of the Fire Plan and Implementation To-date
 - b. Impact of Climate Change on the State's Fire Season
 - c. Bolstering the State's Fire Prevention Activities
 - i. Increasing defensible space inspections
 - ii. Increasing vegetation management
 - iii. Changing the State's role in land-use planning

Background Materials

1. 2010 State Fire Plan
2. 2012 Annual Report to the Board of Forestry and Fire Protection on the Implementation of the Fire Plan
3. CAL FIRE Annual Fire Prevention Activities Report Fiscal Year 2011/2012

2012 Annual Report to the Board of Forestry and Fire Protection

2010 Strategic Fire Plan



"A vision for a natural environment that is more resilient and man-made assets which are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships."

September 12, 2012

Presented by
Phyllis Banducci, Staff Chief
California Department of Forestry and Fire Protection
Office of the State Fire Marshal

I. Background

CAL FIRE is in the second year of implementation of the 2010 Strategic Fire Plan (Plan). This is the second Annual Report of progress.

The work accomplished under the Plan in 2011 continues to be updated and revisited. The Unit Fire Plan template, framework (planning tools and data sets), and database to track vegetation treatments and activities, (Cal MAPPER) have all been tested and implemented. We continue to update the Plan products based on implementation and feedback for the CAL FIRE Units (Units). Below is a summary of the significant progress made through the Plan implementation.

II. 2012 Significant Accomplishments of the Plan

- ✓ Unit Fire Plan template utilized by the field and modified as a result of feedback in 2011
- ✓ Framework tools delivered to the field
- ✓ Two cycles of Cal MAPPER statewide data submitted from Units and Contract Counties
- ✓ 2012 Unit Fire Plans submitted to Sacramento and posted on the CAL FIRE internet site
- ✓ Continued Plan rollout and training

Unit Fire Plan Template

The template was designed to provide a common statewide framework for the Unit Fire Plans. The template has served its purpose; all 2012 Unit Fire Plans were submitted in the format provided in the template. The Unit Plans have a consistent layout, making them much easier for the reader to follow and locate sections such as projects, Ignition Management Plans, and maps.

Framework

The framework was presented to the Units in November 2011. Work continues to take place for full field utilization with additional training planned for December 2012.

Cal MAPPER Version 1.2 -Statewide Database for Fuel Modification Treatments

The latest version of Cal MAPPER, Version 1.2, was delivered to Units in mid-June 2012. This effort was organized to bring the Department's records from various fuels reduction and forest improvement programs into a common database.

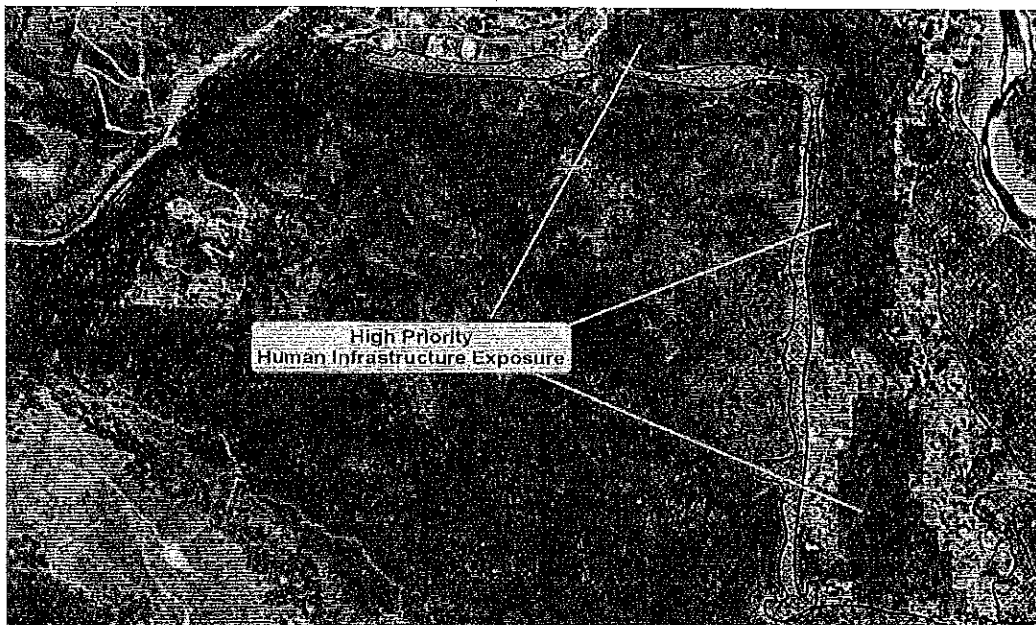
The first submittal was in March 2012. To date, the statewide geodatabase holds 30,000 acres in 209 projects, 435 treatments and 1169 activities.

Treatment types include

- 65% Fuel Reduction
- 15% Fuel Break
- 10% Type Conversion (habitat improvements)
- 5% Land Conservation
- 5% Other

The next submittal of data was due September 1 and the final submittal for 2012 is due in December. Additional training and the development of reports will be topics at the December workshop. Figure 1 is an example of the kinds of data submitted in the geodatabase.

Figure 1. Berryessa Estates Fuel Break 2009 – Sonoma Lake Napa Unit



Cal MAPPER Version 2.0

This update is currently under development and led by core team members Suzanne Lang -Forest Practice GIS, Rich Walker – FRAP, and Brian Peasley, Carl Palmer and Kelvin Kishaba of CAL FIRE IT. The Cal MAPPER application is a system for non-GIS specialists to enter spatial locations (polygons, lines, points) and a range of attributes that describe conditions, practices, inspections, and associated costs.

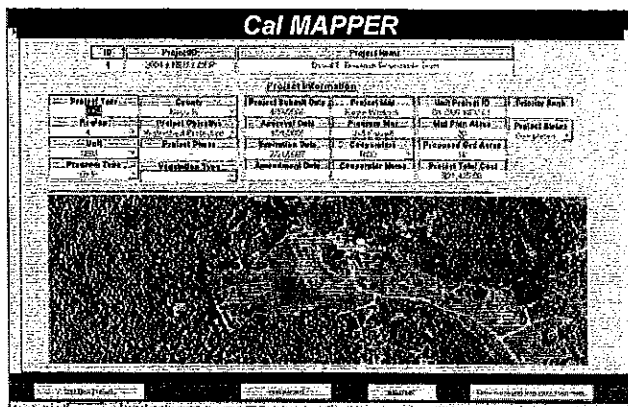
The geodatabase has evolved to include activities performed by:

- California Forest Improvement Program (CFIP) and Forest Legacy
- Fire Plan
- Fire Prevention

- Vegetation Treatment Program
- Conservation Camps
- Urban Forestry

Cal MAPPER V2 is serving as the springboard for CAL FIRE's Enterprise GIS (eGIS) which is housed at the Resources Agency Data Center (RADC); it is set to be available November 2012.

The Cal MAPPER web-based application is estimated to be operational, July 1, 2013



Unit and Contract County Fire Plan Updates

To date, all CAL FIRE Units and Contract County Fire Plans have been updated using the new template and can be viewed at http://cdfdata.fire.ca.gov/fire_er/fpp_planning_plans.

Plan Rollout and Training for 2012 and 2013

The Annual Fire Plan Training will be held at the CAL FIRE Academy in December 2012. Representatives from CAL FIRE Regions, Units (Fire Protection and Resource Management personnel), and Contract Counties will be encouraged to attend. The training program will present materials on the framework tools, Cal MAPPER geodatabase and the template.

Plan Rollout - Checked items have been accomplished

- ✓ **January 2012** - Fire Plan Presentations to Northern and Southern Region Leadership Teams (Unit Chiefs and Association of Contract County Chiefs)
- ✓ **March 2012** - Field Deliver 1st Quarterly Data to FRAP for compilation
- ✓ **May 2012** - Report to Board of Forestry and Fire Protection
- ✓ **June 1, 2012** - 2nd Submittal of Cal MAPPER Data to Sacramento
- ✓ **June 15, 2012** - CAL FIRE Unit Fire Plans due to Sacramento (all submitted)
- ✓ **September 2012** - 3rd Submittal of Cal MAPPER Data to Sacramento (September 1)

Annual Accomplishment Report to the Board

- October 2012** - Work with Resource Management and IT to develop contract to move Cal MAPPER geodatabase into an eGIS environment

December 2012 - Annual Cal MAPPER/Fire Plan Training

4th Submittal of Cal MAPPER Data due to Sacramento

January 2013 - Fire Plan presentations to Northern and Southern Region Leadership Teams (Unit Chiefs and Association of Contract County Chiefs)

January 2013 - **Attend Resource Protection Committee meeting to discuss updates and amendments to the Strategic Fire Plan Goals, Objectives and Appendices.**

Though not specifically one of the goals or objectives of the California Strategic Fire Plan, recognition of the Plan by the Sustainable Cities Center (Center) in London, England shows that California is on the cutting edge, internationally in fire prevention and planning. A board of international scientific advisors identified the Plan as a showcase example in internationally renowned best practices for sustainable cities. The advisors contacted the OSFM and asked to showcase the Plan as part of the Sustainable Cities Center. The OSFM worked with the developers of the Center to showcase not only the Plan, but also fire safe codes, building standards, and other fire safe regulations.

The Sustainable Cities Center is housed in a structure referred to as "the Crystal" constructed by Siemens Corporation. The Center will open by the end of September. The California Strategic Fire Plan is going to be presented in the "Safe and Sound zone" in the "Prevent Fires" exhibit, which is an interactive display that shows ways that fire dangers can be detected and prevented. The exhibit's primary goal is to keep people safe in their cities, workplaces and homes. The interactive display is not available for viewing yet, but information about the Sustainable Cities Center is available at www.thecrystal.org.

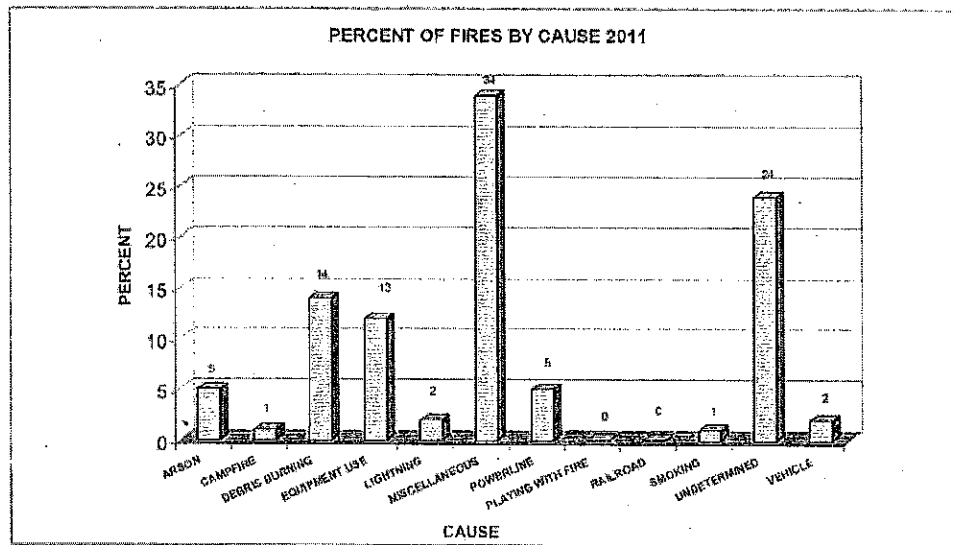
III. Overview of Other Activities That Contribute to Accomplishment of the Plan

In addition to the efforts of the CAL FIRE Units, other activities undertaken by CAL FIRE Programs are taking place that contribute to accomplishment and measurement of Plan objectives. These activities typically cover multiple objectives within or even across Plan goals. Below are updates and new activities that have taken place since September 2011.

A. Improving and Sharing Plan-Relevant Databases to and from CAL FIRE

- CAL FIRE implemented improvements to its wildland fire cause data collection – In May 2012, CAL FIRE secured a new contract for software services to continue with the California All Incident Reporting System (CAIRS). One of the new features allows for easier entry of wildland fire cause data while providing more details on the fire cause. The change was made because a gap analysis of CAIRS done in 2009 identified a need to

simplify the way fire causes are entered into the database. Nearly 25% of the fire causes are left as undetermined and much of this can be attributed to difficulty in entering the data and lack of training.



In addition to making the causes easier to identify by providing drop down menus with the main categories, cause subcategories were delineated. For example, if debris burning is identified, the user can also select Permit/No Permit/Tools present and/or proper clearance. These subcategories will enable prevention staff to further refine areas needing prevention efforts. Below is a chart displaying 2011 wildland fire cause data. Only the main categories are displayed with the undetermined category is 24%.

- Interactive Website for 2010 Forest and Range Assessment – The 2010 Forest and Range Assessment contains 22 high priority landscapes displayed spatially where high value assets overlap with high risk to those assets. Within most of these landscapes, wildfire is one of the major threats to high value assets. Units utilized the priority landscapes when assessing their Unit assets at risk. <http://frap.fire.ca.gov/assessment2010/mapper.html>

B. Improved Wildfire Hazard or Risk Mapping and Planning

- Fire Hazard Severity Zones (FHSZ) in Local Responsibility Areas – CAL FIRE has delivered recommendations for Very High FHSZ in Local Responsibility Areas (LRA).

The FHSZ maps and recommendations provide a detailed assessment of wildfire hazard in over 200 cities and unincorporated county areas that are in LRA. This includes hazards to communities and structures from burning embers. Once adopted by local agencies, FHSZ serves as the basis for application of defensible space and building standards for new residences that will improve resistance to wildfire. A FHSZ update process is under study as part of the new SRA evaluation process.

- West Wide Wildfire Risk Assessment (WWA) – CAL FIRE remains engaged in WWA project deliverables (Phase 1) which will be available shortly to partners and the public. Phase 1 deliverables include a comprehensive wildfire database, a wildfire risk assessment and related reports and data transfer.

Phase 2 of the project, completing the “Fire in the West” Report and development and delivery of a Technology Transfer component, started in December 2011; completion is expected by February 2013. A dedicated web-page is available at <http://www.westwideriskassessment.com/>.

C. Improved Mitigation Provisions for Residential Construction

- Fire Prevention Engineering Public Resource code (PRC) 4291 Regulations and Guide updates – CAL FIRE Program staff completed revisions to the defensible space regulations in Title 14 and the Defensible Space Field Guide.
- Rewrite of PRC 4290 – CAL FIRE Program staff is leading a committee to update and review the regulations. Committee members include CAL FIRE Program and field staff, and local government representation. The committee is also comparing PRC 4290 regulations with other fire safe regulations to identify conflicts and inconsistencies.
- NIST Workshop on WUI Fire Research Needs – Program staff attended a National Institute on Standard and Training (NIST) sponsored Wildland Urban Interface (WUI) workshop in August of this year. The purpose of the workshop was to identify research needs and establish research priorities to improve the fire resistance of WUI communities.

The workshop provided an opportunity for experts in WUI fire behavior, engineered fire protection technologies, fire resistant design, standard test methods for building materials, and WUI building and fire codes to collectively determine the areas of research which will have the most impact in mitigating the hazards associated with WUI fires. A workshop proceedings report will describe and document the research needs and priorities as well as the discussions and presentations. A summary of the research needs identified at the workshop is displayed below.

	Research Need	Votes	Rank
1.	Harden building structures - exteriors, including decks	19	1
2.	Specify performance standards/needs	16	2
3.	Understand ignition phenomena	13	3
4.	Education – ignition prevention, all parties involved in conversation	11	4
5.	Improved tools for post-fire evaluation	11	4
6.	Attack of fires– improve effectiveness resources and technology; develop standards for unified command and cooperative tactics	11	4
7.	Fuels management - ecosystem health	11	4

8.	Test methods that represent realistic problems, e.g., performance based and material neutral	9	8
9.	Codify Class A fire-rated roofs as a system, to include vulnerabilities of complex roofs	9	8
10.	Strategically build greenbelts, parks, defensible spaces into new developments 8 Votes	8	10
11.	Develop accelerated weathering protocol for materials & coatings	7	11
12.	Develop simulation software to show homeowners tradeoffs between vegetation & structure hardening options	6	12
13.	Develop/adopt classifications for combustible materials to complement WUI exposures	5	13
14.	New codes focused on both ignition and fire resistance	5	13
15.	Increase fire engine crew size to vastly increase efficiency	5	13
16.	Standardize defensible spaces in high wildfire-prone states	5	13
17.	Research fire resistive materials	3	17
18.	Social/local grassroots inspections and self-enforcement	0	18

- Assessment of Waldo Fire, Colorado Springs – On August 20, 2012, the State Fire Marshal had the opportunity to visit with the Colorado Springs Fire Department to discuss the portion of the Waldo Fire that burned through Colorado Springs. The main purpose of the visit was to get a first-hand look at the success of their mitigation and community outreach program that has existed for 12 years. The Colorado Springs portion of the Waldo Fire damaged 47 structures and destroyed 345. The most profound piece is the 82% of structures saved in the impacted area.

Over the life of the community Firewise and fuels mitigation program (approximately 12 years), the Fire Department has worked with over 70 home owners associations for stewardship of property and has received millions of dollars in grant funds. During a visit by FEMA after the fire, they determined the cost benefit to the Fire Department's program to be \$517 to \$1 (for every \$1 spent there was a benefit of \$517).

CAL FIRE will continue its connection to the Colorado Springs Fire Department in an effort to track the validation of a long standing and successful community Firewise effort.

Key lessons learned:

- Structures destroyed in the conflagration area were the result of structure to structure ignitions, ember intrusion into attic spaces and vegetation too close to structure
- Cedar fencing was an issue creating embers and caused significant impact on ember production and fire spread
- 72% damaged/destroyed structures had combustible roofing or siding (of the 392)
- 99% of the conflagration destroyed area had structures with combustible roof or siding or both

D. Enhance Forest Management and Fuel Reduction

- Vegetation Treatment Program Environmental Impact Report (VTP-EIR) - The Department and Board have completed a draft of the Vegetation Treatment Program Environmental Impact Report (VTP-EIR), it is nearing release for public comment.

E. Enhanced Agency and Community Outreach

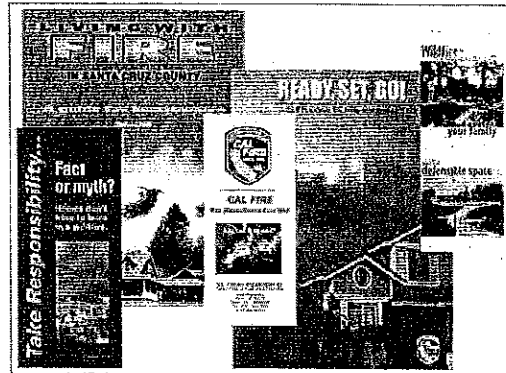
- California Fire Safe Council and Firewise – By a Memorandum of Understanding, CAL FIRE transferred the implementation of Firewise to the California Fire Safe Council (CFSC). The Firewise program encourages local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from wildfire risks. Through the CFSC's contact with local councils, five new Firewise communities have been approved since January 2012. Thanks to the collaborative efforts of the CFSC, Firewise USA and CAL FIRE, California now has 52 approved Firewise communities.
- California Fire Science Consortium – The Consortium is a network of scientists and managers funded by the Joint Fire Science Program to synthesize local fire science and encourage collaboration between fire researchers, land managers, and stakeholders. The Consortium sponsored many webinars that were well attended by the public and fire managers. In June, the Fire Plan program, in collaboration with the California Fire Safe Council and Firewise USA, participated in a Consortium sponsored webinar on Firewise. The webinar was well received and resulted in many inquiries about the Firewise program.

Visit the Consortium website for more information <http://www.cafiresci.org/>.

- National Cohesive Strategy Document Phase III – The Cohesive Strategy is in response to a request from Congress, identified in the FLAME Act, that addresses primary elements facing fire managers and the fire community at all levels. Having completed Phases I and II, CAL FIRE continues to provide comment on Phase III presenting concerns that there are many assessments in place and this strategy should complement them, as opposed to creating a new assessment for the west.
- Establishment of the Interagency Fire Prevention Committee – The California Wildland Fire Coordinating Groups Interagency Fire Prevention Committee is made up of CAL FIRE, US Forest Service, Bureau of Indian Affairs, Bureau of Land Management, National Parks Service, California Emergency Management Agency, US Fish and Wildlife Service, the Association of Contract Counties, the California Fire Safe Council, and Regional Council of Rural Counties. The Committee's charter strives to increase the efficiency and effectiveness of agency programs through: coordinated wildland fire prevention; hazard reduction and mitigation processes; information and

education; planning; implementation and evaluation. More specifically the charters provides the following goals:

- Coordinate statewide fire prevention, education, engineering and enforcement efforts.
- Coordinate fire prevention data to support research, planning and future goals.
- Document and disseminate lessons learned in fire prevention.
- Monitor and evaluate fire prevention policies, guidelines and programs.
- Coordinate efforts with partners and stakeholders to ensure consistencies and to enhance agency support.
- Increase the effectiveness of public outreach and education through coordinated and consistent statewide wildland fire prevention messages and outreach initiatives.
- Collectively coordinate and sponsor interagency fire prevention training and conferences such as the interagency Fire Academy and the Interagency Prevention Conference.
- Provide guidance and support to regional and National Fire Prevention and Education Teams.



IV. Progress on Goals and Objectives as of September 2012

*Categories with an asterisk indicate ongoing actions from 2011; italicized items are new to 2012.

Goal 1: Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the sharing of all analyses and data collection across all ownerships for consistency in type and kind.

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Identify and provide appropriate automated tools to facilitate the collection, analysis and consistent presentation of datasets.	2011	Exists	*Is being initiated with the implementation of the Cal MAPPER V1.2 and V2 database.	No
b) Update and maintain consistent, detailed vegetation and fuels maps across all ownerships in an efficient and cost-effective manner.			*Signed interagency MOU to facilitate annual joint mapping.	
c) Provide regular updates to the Department's Very High Fire Hazard Severity Zone maps.			*Completed VHFHSZ mapping for LRA. Update process under study as part of new SRA evaluation process.	
d) Develop and validate weather and climatology information for use in predicting fire behavior.			Developing Fire Danger Operating Plan for decision support. Updating fire environment handbook will include policies that address fire and weather.	
e) Update fire history information and re-evaluate existing fire prediction models to get composite fire threat across all ownerships.			*Continue to provide annual fire perimeter but have not started fire threat updates.	
f) Update existing data for values and assets at risk utilizing geographic information systems (GIS) data layers and other mapping solutions, including fire behavior-specific effects.	2011	Exists	*FRAP is updating data value and asset layers to be used with the Fire Plan Framework tools. <i>Anticipated release of West Wide Risk Assessment data.</i>	
g) Use science-based approaches to evaluate, understand and protect against the negative impacts of new and emerging threats such as climate change, insect and disease outbreaks or land use changes on forest health and public safety, including the build up of hazardous fuel conditions and resulting fire behavior.			*California Fire Science Consortium is designed to connect science with the end users. *Participating in climate change and biomass studies.	
h) Engage and participate with local stakeholder groups (i.e., fire safe councils and others) to validate and prioritize the assets at risk.			*Collaboration by Unit and Contract Counties as documented in their Fire Plans.	

Goal 2: Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Assist the appropriate governmental bodies in the development of a comprehensive set of wildland and wildland urban interface (WUI) protection policies for inclusion in each county general plan or other appropriate local land use planning documents.	2011	Exists		
b) Identify the minimum key elements necessary to achieve a fire safe community, and incorporate these elements into land use planning, CWPPs and regional, county and Unit fire plans.	2011	Exists		
c) Engage in the development, review and adoption of local land use plans to ensure compliance with fire safe regulations and current building standards.			<i>Working with Board on 14 CCR 1270 revisions.</i>	
d) Promote the consolidation and broad availability of project-level land use planning, project implementation and wildland fire occurrence data developed throughout each county for use by all cooperating agencies.			*Web based viewers such as MyPlan, WWA, Assessment Priority Landscape Viewers make data more easily accessible.	

Goal 3: Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, county and regional plans that address fire protection and landowner objectives.

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Establish a working group, consisting of Board members and Department staff, to develop minimum standard elements for inclusion in Unit fire plans.	2011	Exists	*Fire Plan Workgroup-Template sub-committee has accomplished this for CAL FIRE Unit and Contract Counties.	
b) Emphasize coordination of Unit fire plans with community wildfire protection plans to encourage and support one consistent approach. Develop county or regional fire plans by bringing together community-based groups, such as fire safe councils and affected fire and land management agencies.	2011	Exists	*Testing this process in the CAL FIRE San Luis Obispo Unit.	

Goal 3 Continued:

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
c) Create and support venues in which individual community members can be actively involved in local fire safe councils, community emergency response teams, FIREWISE and other community-based efforts to develop readiness plans and educate landowners to mitigate the risks and effects of wildland fire.	2011	Exists		
d) Collaborate with federal and local governments, other State agencies, fire service, and other organizations, to maintain and improve emergency response plans.			*CAL FIRE has ongoing meetings with agencies and the forest industry to prepare for emergency response.	
e) Ensure planning efforts are consistent with the National Fire Plan, the Healthy Forest Restoration Act, the Statewide Hazard Mitigation Plan, as well as local hazard mitigation plans and other relevant statewide strategic planning documents.			<i>Interagency Prevention Committee will facilitate interagency coordination at the planning and prevention level.</i>	
f) Maximize available resources to strengthen planning efforts through the development of public/private partnerships.				
g) Develop fire risk mitigation treatment decision support tools to assist in project design, implementation, and validation.			*This is what the Fire Plan Framework tools are designed to do. Assessments like the WWA and 2010 Assessment also support these efforts.	

Goal 4: Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards.

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Educate landowners, residents and business owners about the risks and their incumbent responsibilities of living in the wildlands, including applicable regulations, prevention measures and preplanning activities.	2011	Exists	CAL FIRE's, "Wildfire is Coming: Is your home Ready?" http://www.readyforwildfire.org/	

Goal 4: Continued

b) Educate landowners, residents, fire safe councils and business owners to understand that fire prevention is more than defensible space, including why structures ignite, the role embers play in such ignitions and the importance of fire safe building designs and retrofits.			<i>CAL FIRE Coordination with CA Fire Safe Council on Firewise and other workshops.</i>	
c) Facilitate activities with individuals and organizations, as appropriate to assist individual property owners in complying with fire safe regulations.				
d) Improve regulatory effectiveness, compliance monitoring and reporting pursuant to Public Resources Code (PRC) 4290 and 4291.			<i>Identifying WU Research needs.</i>	
e) Increase the number and effectiveness of defensible space inspections and promote an increasing level of compliance with defensible space laws and regulations through the use of CAL FIRE staffing as available, public and private organizations, and alternative inspection methods.	2011	Exists	<i>*With recent reductions in staffing (4.0 to 3.0 on Engines), inspection numbers are down.</i>	
f) Promote the consolidation of Fire Safe Regulations contained in California Code of Regulations (CCR) Title 14, with CCR Titles 19 and 24, to achieve uniform application of building standards.			<i>Committee formed to update defensible space regulations</i>	
g) Continue to evaluate new, ignition-resistant construction technologies and materials, and promote the strengthening of California Building standards.			<i>CAL FIRE OSFM to support research needs identified at 2012 Colorado WUI Workshop.</i>	
h) Seek out incentives to promote the retrofit of existing structures to meet ignition-resistant building codes.			<i>CAL FIRE OSFM to support research needs identified at 2012 WUI Workshop.</i>	
i) Actively enforce and seek updates as necessary to fire prevention codes and statutes, including those regulating utilities, railroads, small engines and other categories of equipment use that contribute to fire ignition.			<i>4290 Update Committee, led by CAL FIRE OSFM. Participating in PUC regulatory and mapping efforts around powerlines.</i>	
j) Actively investigate all wildland fires. For those resulting from negligent acts, pursue appropriate civil and/or criminal actions, including cost recovery.			<i>CAL FIRE's Cost Recovery Program is fully staffed and in place. Training provided in winter 2012.</i>	
k) Analyze trends in fire cause and focus prevention and education efforts to modify behavior and effect change.			<i>*Each CAL FIRE Unit has completed an Ignition Analysis that identifies fires causes and trends. Cause CAIRS updates.</i>	

Goal 5: Develop a method for integration of fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas.

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Increase support of landowner-initiated hazardous fuels reduction using all available authorities, including the Vegetation Management Program.			Draft of VTP-EIR finished and nearly ready for Public comment	
b) Work to remove regulatory barriers that limit hazardous fuels reduction activities.	2011	Exists		
c) Promote and enhance programmatic documents that assist and streamline regulatory processes.			VTP-EIR nearly ready for public release.	
d) Assist collaborative partners by educating, improving grant capacity and other means that provide tools to achieve fuels reduction work on the landscape.			*CAL FIRE is engaged in the development/ ranking of the WUI and the CFSC Clearing-house grants.	
e) Promote forest and rangeland health and hazardous fuels reduction. Improve utilization of all forest products, including small logs, urban green waste and biomass.			*2010 Assessment created priority landscapes that reflect importance of biomass and impact of forest pests and wildfire/fuels. Participating in biomass resource study.	
f) Increase public education and awareness in support of ecologically sensitive and economically efficient vegetation management activities, including prescribed fire, forest thinning and other fuels treatment projects.				
g) Promote the development of multi-agency/landowner fuels reduction policies and activities at the watershed and fire shed level.				
h) Support the availability and utilization of CAL FIRE hand crews and other CAL FIRE resources, as well as public and private sector resources, for fuels management activities, including ongoing maintenance.	2011	Exists	Possible reduction in available hand crews due to inmate realignment.	
i) Support efforts to restore the ecological role of fire in areas and upon jurisdictions where doing so is consistent with local land management objectives and does not present an unacceptable risk to human health and safety or security of adjacent ownerships.				

Goal 6: Determine the level of fire suppression resources for adequate protection of the values and assets at risk identified during the planning process.

Objectives	Department Priority (year)	Performance Measures Exist/Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Maintain an aggressive wildland fire initial attack policy that places a priority on protecting lives, property and natural resources. At the same time consider suppression strategies that incorporate values and assets at risk, as well as cost factors wherever possible.			<i>*Budget cuts have reduced available resources.</i>	
b) Develop criteria for determining suppression resource allocation based on elements such as identified values and assets at risk, ignition density, vegetation type and condition, as well as local weather and topography.			<i>*Master Staffing Plan Project on hold, due to other priority workload.</i>	
c) Initiate studies and analyses to identify appropriate staffing levels and equipment needs commensurate with the current and projected emergency response environment.			<i>*Master staffing Plan Project</i>	
d) Seek to increase the number of CAL FIRE hand crews for use in fighting wildland fires and other emergency response activities.			<i>Possible reduction in available hand crews due to inmate realignment.</i>	
e) Initiate and maintain cooperative fire protection agreements with local, state and federal partners that value the importance of an integrated, cooperative, regional fire protection system and deliver efficient and cost effective emergency response capabilities beneficial to all stakeholders.	2011	Exists	<i>*Significant revision of CFMA with federal partners.</i>	
f) Improve policies and strategies to minimize injuries or loss of life to the public and emergency responders during emergency response activities throughout the state.			<i>Enhanced accident information materials to field following injuries. 2012 FOCUS ON SAFETY, Field Accountability and Personal Safety in the Wildland.</i>	
g) Ensure all firefighters are provided the appropriate training, equipment and facilities necessary to successfully and safely meet the increasingly complicated and challenging fire and emergency response environment.			<i>CAL FIRE has developed WUI Operational Guidelines. OSFM updated Fire Command in WUI course.</i>	
h) Continue to evaluate and implement new technologies to improve firefighter safety, situational awareness and emergency response effectiveness.			<i>Research and development project on Next Generation Incident Command System.</i>	
i) Provide for succession planning and employee development at all levels within CAL FIRE to maintain emergency response leadership capabilities, administrative management skills and pre-fire planning expertise.			<i>CAL FIRE completed a Strategic Plan for the Department that in part addresses these issues.</i>	
j) Effectively engage and train employees across all disciplines to address both planning and emergency response utilizing a "total force" approach.	2011	Exists	<i>CAL FIRE sponsoring a Firefighter Academy for Resource Management Foresters.</i>	

Goal 7: Address post-fire responsibilities for natural resource recovery, including watershed protection, reforestation and ecosystem restoration.

Objectives	Department Priority (year)	Performance Measures Exist/ Needed	Actions/ Accomplishments	Revisions Needed Yes/No
a) Encourage rapid post-fire assessment, as appropriate, and project implementation to minimize flooding, protect water quality, limit sediment flows and reduce other risks on all land ownerships impacted by wildland fire.	2011	Exists	<i>CAL FIRE OSFM working with NIST to bring detailed Damage Assessment teams to California (Ponderosa Fire).</i>	
b) Work with landowners, land management agencies and other stakeholders across the State to design burned area rehabilitation actions that encourage salvage and reforestation activities, create resilient and sustainable landscapes, and restore functioning ecosystems.				
c) Effectively utilize available resources, including CAL FIRE hand crews, to accomplish restoration and protection activities.			<i>Possible reduction in available hand crews due to inmate realignment.</i>	
d) Assess the effects of pre- and post-fire treatments to refine best management practices.			<i>Lessons learned by SFM evaluation of Colorado Springs Fire.</i>	
e) Assist landowners and local government in the evaluation of the need to retain and utilize features (i.e., roads, firelines, water sources) developed during a fire suppression effort, taking into consideration those identified in previous planning efforts.	2011	Exists	<i>*CAL FIRE Incident Command Teams are collecting the locations of fire suppression features used or created during incidents.</i>	
f) Aid landowners in recently burned areas in developing and implementing vegetation treatment plans to manage the re-growth of fuels to maintain reduced hazardous conditions.				
g) Promote the maintenance of a native species seed bank and seedling production capacity to provide the availability of appropriate tree species for reforestation within all of the State's diverse seed zones.			<i>Funding for CAL FIRE seed bank was eliminated in recent budget cuts.</i>	
h) Use after-action reports to evaluate and implement new technologies and practices to improve future firefighting efforts.				



CAL FIRE

Annual Fire Prevention Activities Report

Fiscal Year 2011/2012



Fire Prevention Message to Children

Ken Pimlott
Director
CAL FIRE

John Laird
Secretary
Natural Resources Agency

Edmund G. Brown, Jr.
Governor
State of California

Annual Fire Prevention Activities Report

Fiscal Year 2011/2012

INTRODUCTION

Public Resources Code (PRC) 4137 requires the annual reporting of the California Department of Forestry and Fire Protection (CAL FIRE) Fire Prevention Activities. The expectation of the Legislature, as stated in the statute, is that the year round staffing in southern California and the "extension of the workweek" known as Immediate Response Assignment (IRA) would result in increased fire prevention activities. The report is required as a means of documenting that increased activity as well as assuring that the year round IRA does not cause any reductions in the reimbursements received by the department from its Amador contracts.

The scope of this report covers the fire prevention accomplishments of CAL FIRE and the Contract Counties(1) for the 2011/2012 fiscal year (FY). It also provides information on Amador Contracts(2) These accomplishments are captured in both statistical data, as well as narrative updates, for each of the fire prevention program components.

FIRE PREVENTION PROGRAM COMPONENTS

The CAL FIRE Wildland Fire Prevention Program is multidimensional and the components are interdependent. There are seven of these program components.

- Fire Planning
- Investigations and Enforcement
- Wildland Fire Prevention Engineering
- Civil Cost Recovery
- Education and Information
- Vegetation Management
- Volunteerism

(1) In most cases SRA is protected directly by CAL FIRE, however, in Kern, Los Angeles, Marin, Orange, Santa Barbara and Ventura counties, SRA fire protection is provided by the counties under contract with CAL FIRE. Known as "Contract Counties", they protect 3.4 million acres of SRA.

(2) An Amador Contract is a cooperative agreement whereby a local entity pays CAL FIRE to provide fire protection services in accordance with Public Resources Code 4144

Photos used in this report are provided from CAL FIRE archives and local Unit fire prevention bureaus.

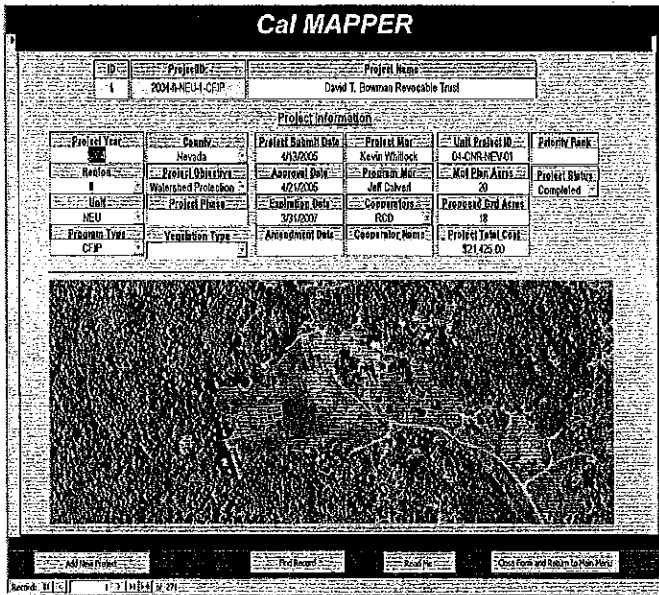
Fire Planning

In general, fire planning is a method by which steps can be taken in advance to reduce the costs and losses of wildland fires. Many programs within CAL FIRE contribute to the planning functions. Significant accomplishments for 2011/2012 include:

Unit and Contract County Fire Plan Updates

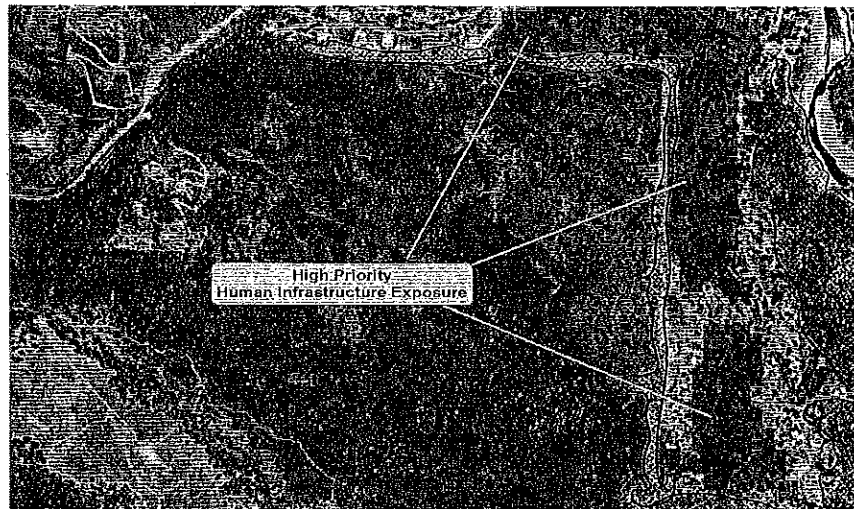
To date, all CAL FIRE Units and Contract County Fire Plans have been updated and can be viewed at http://cdfdata.fire.ca.gov/fire_er/fpp_planning_plans.

Cal MAPPER Version 1.2 – A Statewide Database for Fuel Modification Treatments



The latest version of Cal MAPPER, Version 1.2, was delivered to Units in mid-June 2012. This effort was organized to bring the Department's records from various fuels reduction and forest improvement programs into a common database.

To date, the statewide geo-database holds 30,000 acres in 209 projects, 435 treatments and 1169 activities.



Fire Planning: Berryessa Estates, LNU

Investigations and Enforcement

During FY11/12 over 3315 fires occurred on SRA land. CAL FIRE spent hundreds of hours investigating these fires to determine their origin and cause. Based on these investigations CAL FIRE Peace Officers made multiple arrests. Several of the suspects arrested were responsible for lighting numerous fires which caused millions of dollars of damages to tax payers, property and the environment.

Thorough origin and cause investigations are the core of CAL FIRE's Wildland Fire Prevention Program. The specific cause information ascertained from these investigations is used by each of the prevention program components in determining the most effective and efficient areas of program focus. Following are some highlights of CAL Fire's investigation efforts in FY 2011/2012:

Placer County - After more than two weeks of continuous investigation by CAL FIRE peace officers, the Robbers Fire arson suspect was arrested without incident. The suspect admitted to lighting the fire. The suspect is currently in custody in Placer County awaiting further court action.

Mendocino County - Steven Gene Hensley, 36, was arrested shortly after noon, August 22, 2011, without incident, for a series of suspected arson fires in the Willits and Redwood Valley areas. Unit Chief Rowney stated in the press release "Fire investigators, Fire Captain Specialists Shawn Zimmermaker and Craig Dudley, worked tirelessly to put an end to the property destruction and life threat of these intentionally set fires."

Southern California - CAL FIRE conducted a two-part multi-agency operation during the Fourth of July holiday. The operation was designed to prevent illegal fireworks from entering California. The two part operation resulted in the confiscation of over thirteen thousand pounds of illegal and dangerous fireworks



Incendiary device (match book) discovered during an investigation

Wildland Fire Prevention Engineering

Fire prevention engineering processes reduce or eliminate fire hazards and risks. They also change the fire environment by removing or reducing the heat source, modifying or reducing the fuels and modifying behaviors that would allow a heat source to contact ignitable fuels. The Wildland Fire Prevention Engineering Program focused on two major projects in FY 2011/2012 with the goals of assisting our partners and the public in our collective fire prevention efforts:

Interagency Fire Prevention Website

Using grant funding, CAL FIRE and the California Wildland Fire Coordinating Group [CWCG] Interagency Fire Prevention Committee are working to build "PreventWildfireCA.org" as a site to host the following tools:

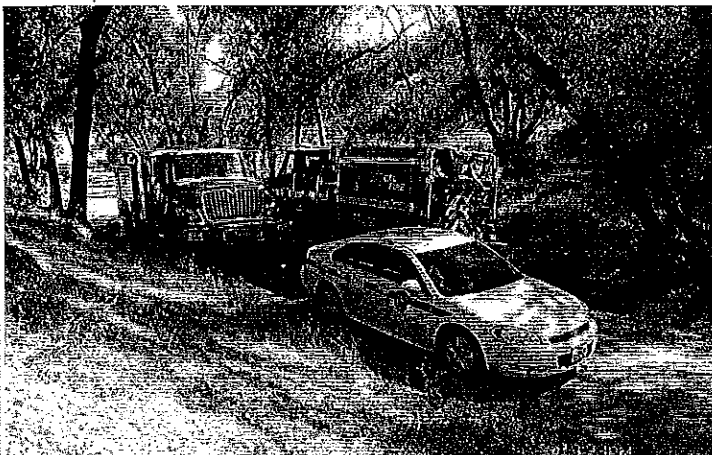
- A map application that will allow private industry a tool to use in making decisions whether or not to cease operations during times of high fire danger.
- An *Online Burn Permit* application that will provide local burn permit forms and require the user to view and agree to the related educational information and requirements.
- An *Online Camp Fire Permit* with the same requirements as the Debris Burn permit process
- A Defensible Space self-assessment tool that will provide the public with education as well as the specific inspection form.
- CAL FIRE's newly revised Fire Prevention Field Guides will be available in a user friendly format for information and downloading.



Future Prevention Website

PRC 4290 Work Group

In 2011, at the direction of the Board of Forestry, CAL FIRE formed a workgroup tasked with the review of relevant statutes, regulations, codes and guidelines related to fire safe development. From this review they will develop recommendations for the Board that will ensure consistency in intent and language. The group includes members of CAL FIRE from Northern and Southern California, the Office of the State Fire Marshal, and local government. The group is currently reviewing the road standards for fire equipment access and civilian evacuation. They recently concluded live tests using modern apparatus.



Assessing PRC 4290 Road Widths with Current Engines

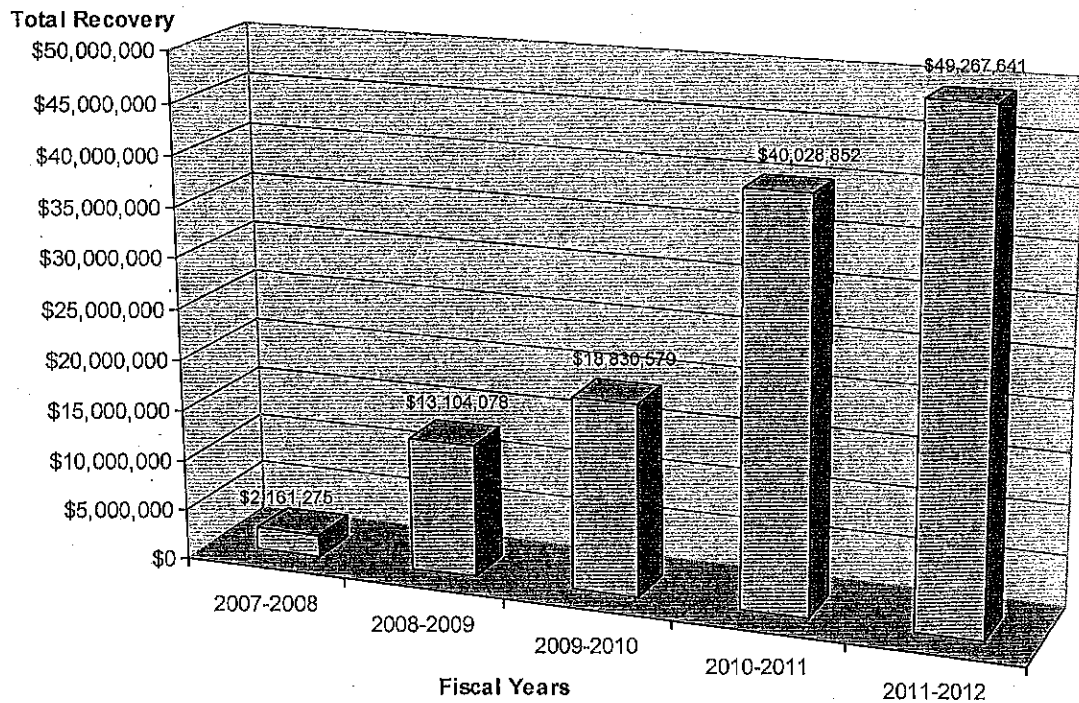
Civil Cost Recovery

Wildland fires cost California's taxpayers millions of dollars every year. In 2008, CAL FIRE established a Civil Cost Recovery Program pursuant to authority granted by the Legislature to recover suppression costs when a fire investigation reveals that a fire was caused negligently, or in violation of law. This serves the state in two ways: it assigns the cost of fire suppression to culpable parties rather than the taxpayers at large, and serves as a deterrent to carelessness that may result in a fire. In the first four years of the program 80 major cases have been resolved with a total recovery of more than \$118 million.

Eighteen cases were settled in FY 2011-12 with recovery in excess of \$48 million compared to a program cost of just less than \$3 million. An anticipated \$13.9 million will be reimbursed to FEMA for recoveries from incidents that were at least partially funded by a Fire Management Assistance Grant from that Agency.

The focus for FY 2012-13 will be improving existing processes and procedures of civil cost recovery to best assist at the unit and region level.

Civil Cost Recovery by Fiscal Year - Region Level Cases - as of July 24, 2012



Currently the Civil Cost Recovery program is pursuing recovery for 83 fire incidents with a total fire suppression cost of nearly 113 million dollars.

Education and Information

Since the public plays a pivotal role in fire prevention, CAL FIRE works hard to educate both residents and visitors of California of the dangers wildfires pose and the steps needed to prevent them. These statewide efforts include media outreach, public service announcements, fair exhibits, school programs, as well as one-on-one contacts at public events.

CAL FIRE's primary fire prevention outreach campaign is the "Ready For Wildfire" campaign. "Ready For Wildfire" stresses the importance to homeowners of their responsibilities in preparing for a wildfire. This includes maintaining 100-feet of Defensible Space, using ember-resistant building materials and creating an evacuation plan. The campaign entails roadside signage, brochures, social media outreach and the web-site www.ReadyForWildfire.org.



Ready For Wildfire Web Site



The department is also responsible for informing the public of critical emergency information during incidents like wildfires. While information like evacuations always takes priority during emergencies, the department takes advantage of having the public's attention, to disseminate fire prevention and preparedness information. This includes television, print and radio interviews. Social media sites like Facebook and Twitter have also become staples for public education information dissemination. CAL FIRE can be found on Facebook at www.facebook.com/CALFIRE and on twitter at www.twitter.com/CAL_FIRE.

Vegetation Management

The Vegetation Management Program (VMP) is a cost sharing program that focuses on the use of prescribed fire and other mechanical means to reduce wildland fire fuel hazards. The use of prescribed fire mimics natural processes, restores fire to its historic role in wildland ecosystems, and provides significant fire hazard reduction benefits that enhance public and firefighter safety. VMP allows private landowners to enter into a contract with CAL FIRE to use prescribed fire to accomplish a combination of fire protection and resource management goals.



CAL FIRE Crews Providing Fuel Reduction

In FY 2011/2012 CAL FIRE Vegetation Management staff completed significant projects:

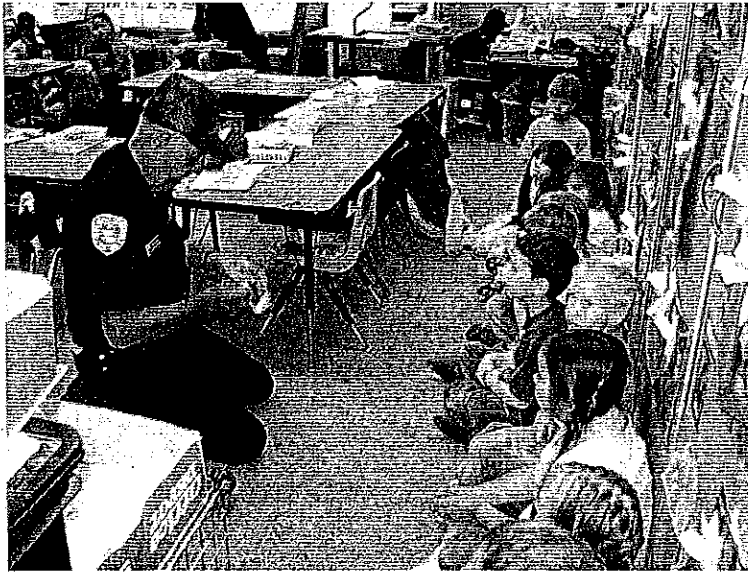


Shaded Fuel Break

- Burned 8,067 acres with prescribed fire and treated 8,769 acres mechanically.
- Work is continuing using the Federal Fuels Grant funding obtained as well as funding from the northern California Disaster Supplement.
- The Vegetation Management Program in the Units is starting to treat acres with the Prop 40 money granted out in FY 2011/2012.

An Administrative Draft has been completed for a program-level environmental impact report on vegetation treatment and is scheduled for public release in mid-December 2012. This report will update environmental documentation in support of project planning and operation.

Volunteerism



For over 30 years CAL FIRE has bolstered its prevention staffing with the use of the Volunteers In Prevention (VIP) Program. The goal of the program is to utilize private citizens and public service organizations to help reduce human-caused fires.

Each year the nearly 1,500 VIPs provide over 20,000 hours of service to the citizens of California and preparing Californians for the steps they must take to be ready for wildfires. These volunteers also assist in CAL FIRE's efforts to reduce the number of wildfire ignitions. VIPs

participate in a number of different activities including classroom visits, fairs, parades and public events. History has shown that when VIP teams provide fire prevention lessons in grades K-3, child-related fires in those areas have dropped. The volunteers are often trained to provide homeowners with the requirements of defensible space around homes, as well as making preliminary property inspections for fire safety.

The VIPs also add an extra set of eyes and ears for Red Flag Patrols. During certain holidays like the 4th of July and when there is critical fire weather, the volunteers patrol selected hazardous areas to deter arsonists and alert firefighters in the case of a fire.



VIP's Providing Public Education

FIRE PREVENTION ACTIVITIES INFORMATION

PRC 4137 specifies the Fire Prevention Activities Report include information for the following activities in the State Responsibility Area (SRA).

- Fire Prevention activities that occurred on SRA lands, including Contract Counties:
 - ◊ The number of defensible space inspections and citations for non-compliance
 - ◊ The number of acres treated by mechanical fuel reduction
 - ◊ The number of acres treated by prescribed burns
 - ◊ The number of hours of prevention education conducted
- Fire Prevention activities that occur from December 15 through April 15 (reflecting work accomplished due to year round staffing)
- An annual update on the number of Amador Contracts in place and the reimbursements received

The following pages display the data gathered for FY 2010/2011 relative to the requirements listed above.

Fire Prevention Activities Data

(The tables display calendar year and full FY due to a change
in the statute regarding the reporting cycles)

Southern Region Data

Annual Prevention Activities	South						
	Totals 2006	Totals 2007	Totals 2008	Totals 2009	Totals FY 09/10	Totals FY 10/11	Totals FY 11/12
Acres treated mechanically	4,184	3,588	4,210	6,264	3,103	3,560	2,662
Acres treated by prescribed fire	3,428	918	4,290	1,963	1,852	1,290	2,378
Citations issued	2,011	4,611	9,911	7,726	1,831	2,705	1,647
Inspections	117,010	127,079	139,819	152,860	165,506	126,106	93,088
Education hours	11,226	17,184	17,517	17,406	18,109	18,253	19,411

Northern Region Data

Annual Prevention Activities	North						
	Totals 2006	Totals 2007	Totals 2008	Totals 2009	Totals FY 09/10	Totals FY 10/11	Totals FY 11/12
Acres treated mechanically	3,507	6,436	5,584	3,667	3,712	7,927	6,107
Acres treated by prescribed fire	6,906	12,923	4,104	1,840	1,842	4,763	5,689
Citations issued	3	17	95	71	71	152	8
Inspections	18,980	34,876	31,691	34,871	44,271	38,422	13,294
Education hours	8,754	20,625	27,260	21,399	25,826	24,155	19,630

Statewide Data

Annual Prevention Activities	STATEWIDE						
	Totals 2006	Totals 2007	Totals 2008	Totals 2009	Totals FY 09/10	Totals FY 10/11	Totals FY 11/12
Acres treated mechanically	7,691	10,024	9,794	9,931	6,814	11,487	8,769
Acres treated by prescribed fire	10,334	13,841	8,394	3,803	3,694	6,053	8,067
Citations issued	2,014	4,628	10,006	7,797	1,902	2,857	1,655
Inspections	135,990	161,955	171,510	187,731	209,777	164,528	106,382
Education hours	19,980	37,809	44,777	38,805	43,935	42,408	39,041

Fire Prevention Activities December 2011 - April 2012

CAL FIRE has collected this specific data set for the last four reporting cycles
(calendar year 2009, FY 2009/2010, FY 2010/2011 and FY 2011/2012).

This information is required to reflect increased winter fire prevention activities related to year round staffing.

Southern Region Data

December 2011 - April 2012	Southern Region			
	Totals 2009	Totals FY 09/10	Totals FY 10/11	Totals FY 11/12
Acres treated mechanically	819	321	N/A	N/A
Acres treated by prescribed fire	529	332	N/A	N/A
Citations issued	6	36	1	6
Inspections	8,694	21,707	7,493	5,125
Education hours	5,416	6,280	5,094	9,653

Northern Region Data

December 2011 - April 2012	Northern Region			
	Totals 2009	Totals FY 09/10	Totals FY 10/11	Totals FY 11/12
Acres treated mechanically	1,522	1,511	N/A	N/A
Acres treated by prescribed fire	1,194	143	N/A	N/A
Citations issued	3	0	1	0
Inspections	5,792	15,044	1,494	821
Education hours	4,531	5,402	6,903	5,636

Statewide Data

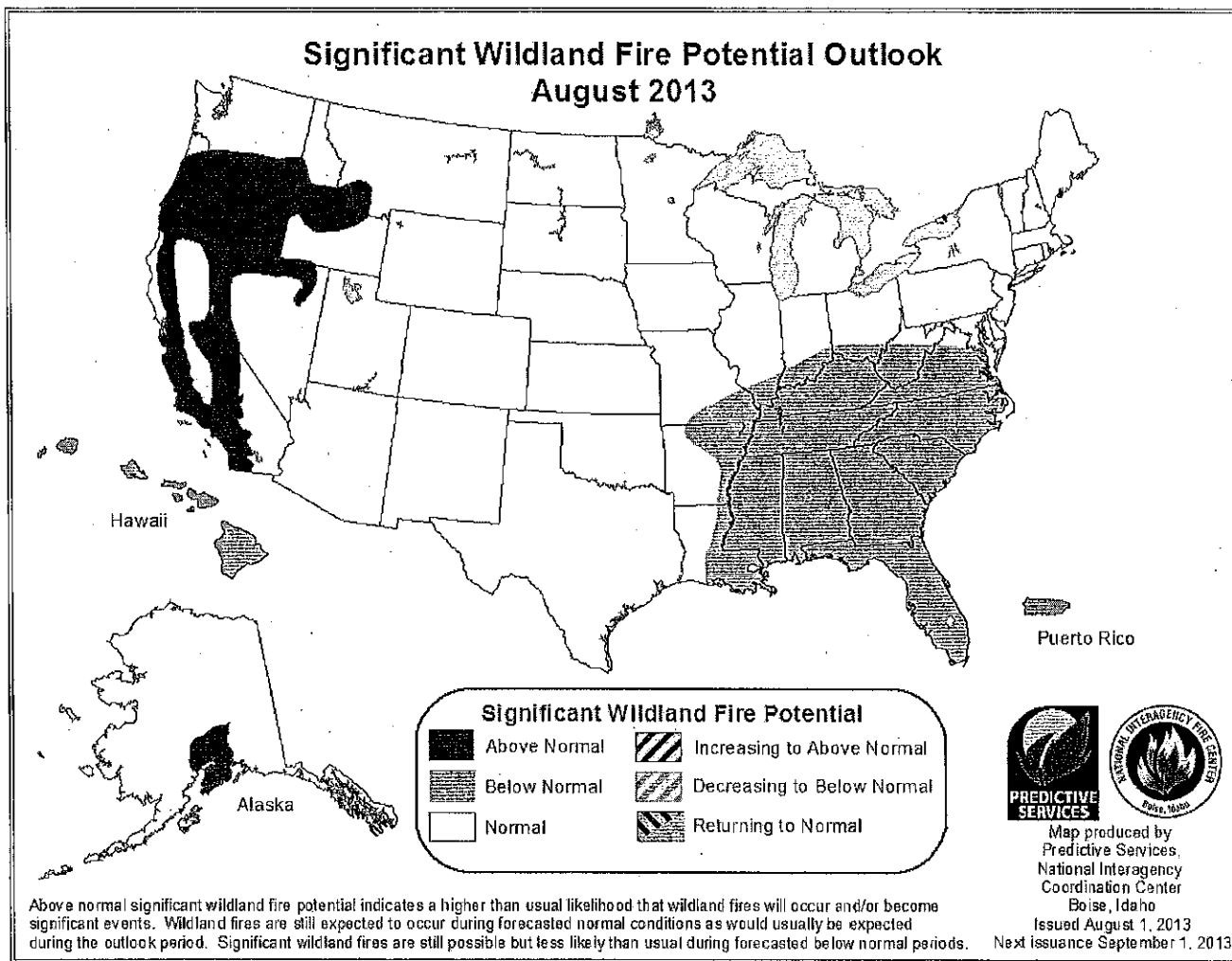
December 2011 - April 2012	Statewide			
	Totals 2009	Totals FY 09/10	Totals FY 10/11	Totals FY 11/12
Acres treated mechanically	2,341	1,832	N/A	N/A
Acres treated by prescribed fire	1,723	475	N/A	N/A
Citations issued	9	36	2	6
Inspections	14,486	36,751	8,987	5,946
Education hours	9,947	11,682	11,996	15,289

AMADOR CONTRACTS SUMMARY

Amador Contracts are a mechanism by which local entities contract with CAL FIRE to provide fire protection and other emergency services during the winter months when CAL FIRE stations are not funded or staffed for emergency response by the State. CAL FIRE had 35 Amador contracts in FY 2011-2012. The revenues associated with those agreements were \$3,106,542.

(The areas with no value shown reflect either new contracts with no prior years history or contracts no longer in place)

ORGANIZATION	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12
UKIAH VALLEY FD	\$3,596	\$2,205	0	0	\$0
HUMBOLDT COUNTY	\$17,473	\$19,750	\$20,207	\$20,253	\$93,841
HUMBOLDT CO. DISPATCH	\$42,861	\$26,299	\$23,300	\$5,759	
COUNTY OF NAPA	\$205,124	\$175,908	\$172,961	\$158,770	\$37,500
SONOMA COUNTY CSA #40	\$32,351	\$40,083	\$37,812	\$24,464	\$135,470
CLOVERDALE FPD	\$8,806	\$9,332	\$8,759	0	\$0
SOUTH LAKE COUNTY FPD	\$46,170	\$59,882	\$1,070	\$44,907	\$44,677
SOUTH SANTA CLARA CO FD	\$50,523	\$25,823	\$113,234	\$104,403	\$210,922
SANTA CLARA COUNTY	\$31,557	\$31,360	\$32,670	\$43,327	\$65,323
EAST CONTRA COSTA FPD	\$42,789	\$50,523	\$51,219	\$82,147	\$88,351
SAN MATEO COUNTY	\$4,732	\$4,882	\$4,952	\$4,952	\$4,461
SANTA CRUZ COUNTY	\$53,267	\$52,800	\$65,711	\$53,332	\$53,765
BUTTE COUNTY	\$126,764	\$125,653	\$121,313	\$124,378	\$121,000
HIGGINS AREA FPD	\$30,748	\$30,483	\$31,069	\$30,335	\$30,581
PLACER COUNTY	\$113,700	\$131,567	\$133,788	\$166,987	\$135,777
LOMA RICA/BROWN'S VALLEY	\$38,576	\$38,302	\$38,689	\$37,319	\$37,689
SHASTA COUNTY	\$182,599	\$210,437	\$221,212	\$215,327	\$198,447
SHASTA COLLEGE	\$27,951	\$27,706	\$28,050	\$26,726	\$21,726
TRINITY COUNTY	\$10,555	\$10,891	\$10,075	\$9,365	\$9,972
TEHAMA COUNTY	\$8,898	\$11,699	\$11,968	\$38,398	\$35,390
SISKIYOU CO, GENERAL FIRE	\$13,436	\$15,538		\$15,692	\$9,073
SISKIYOU CO, McCLOUD ZIB	\$15,020	\$8,755	\$10,259	\$9,562	\$15,819
MONTE RIO FPD				\$13,157	\$13,280
YUIMA MWD	\$13,972	\$13,972	\$13,972	\$12,402	\$13,972
VALLEY CENTER FPD	\$14,541	\$14,541	\$15,500	\$15,500	\$13,964
DEER SPRINGS FPD	\$14,983	\$14,541	\$14,541	\$14,541	\$13,141
SAN DIEGO COUNTY	\$182,782	\$181,179	\$183,649	\$220,798	\$201,199
SAN LUIS OBISPO COUNTY	\$132,959	\$131,794	\$130,712	\$131,673	\$70,750
CITY OF PISMO BEACH	\$3,208	\$9,384	\$3,177	\$3,336	\$8,491
CAYUCOS FPD	\$14,061	\$13,938	\$14,106	\$12,132	\$20,935
CITY OF HIGHLAND	\$137,837	\$137,837	\$269,507	\$242,697	\$294,924
CITY OF YUCAIPA	\$137,837	\$137,837			
TULARE COUNTY	\$19,790	\$17,288			
COUNTY OF MADERA	\$72,874	\$72,235	\$87,852	\$73,902	\$73,902
FRESNO COUNTY FPD	\$16,598	\$16,452	\$16,650	\$16,794	\$16,659
COUNTY OF FRESNO	\$183,155	\$229,018	\$220,111	\$237,293	\$230,400
TUOLUMNE COUNTY	\$82,940	\$94,262	\$76,371	\$68,595	\$72,371
AMADOR FPD	\$97,466	\$82,264	\$83,254	\$89,403	\$75,301
CAMERON PARK CSD	\$33,065	\$24,625	\$24,910	\$24,770	\$24,770
EL DORADO CO. EMER SER	\$7,459	\$7,286	\$7,374	\$7,378	\$23,447
TOTAL	\$2,273,023	\$2,308,331	\$2,300,004	\$2,400,774	\$3,106,542

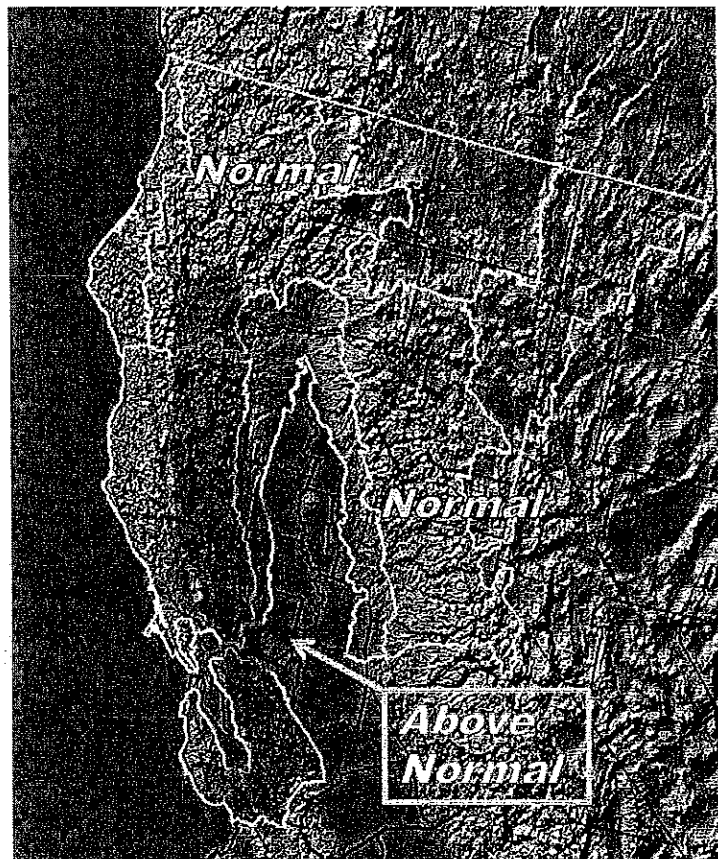


SEASONAL OUTLOOK

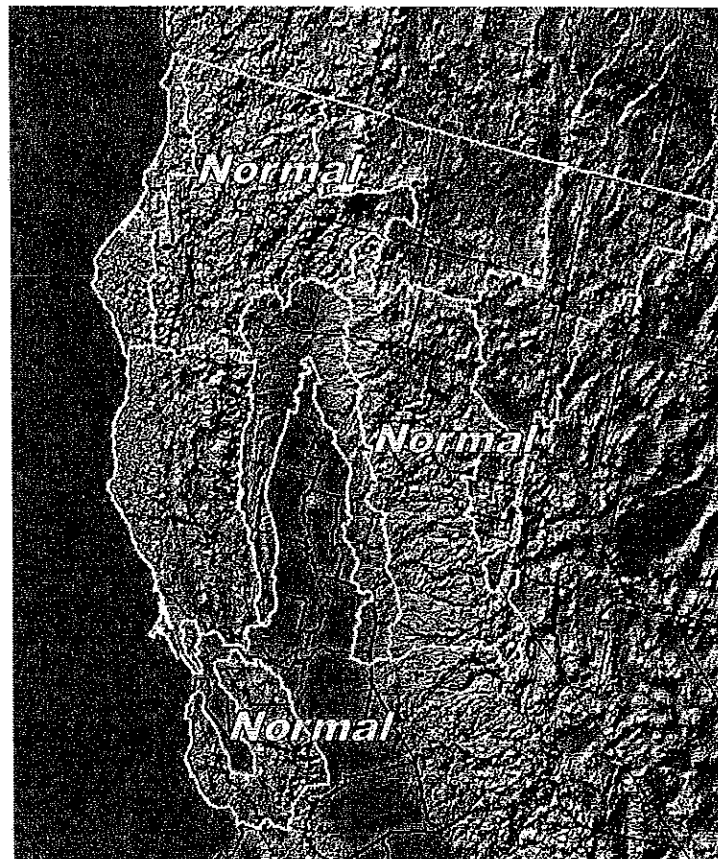
For Northern California and Hawaii

Issued August 1st 2013

Valid for September and Oct-Nov 2013



September 2013



October-November 2013

Weather and Fuel/Fire Potential

The 5-month record dry period between Jan-May was temporarily alleviated by a near record rain event in late June, and additional heavy in the form of wet thunderstorms, with flooding and mudslides in some areas, which fell in late July. However most areas did not get the heavy rain in July and fuels continue a notch drier than normal (Fig 1 and 2).

The Climate Prediction Center outlook indicates **Above Normal Temperatures** for most of Nrn CA thru October (Fig 3). Precipitation is expected to be Near Normal (Fig 4). A prolonged warm and dry pattern for late September into early October is forecast by the CFS2 long range model with the Eastern Pacific High amplifying just off the coast (Fig 5 & 6). This pattern would be a strong NE/Offshore wind producer if it develops. However, this long range models reliability this far out still questionable.

Fuel dryness should be near the 90th percentile much of September into early October. Afterwards, the potential of a widespread wetting rain event begins to increase significantly. For September we will maintain **Above Normal Large Fire Potential** for the Coastal Range, mainly south of the Trinity Alps. Otherwise, a return to Normal Fire Potential is expected for October-November, barring an unexpected continuation of drought.

Seasonal Outlook (continued)

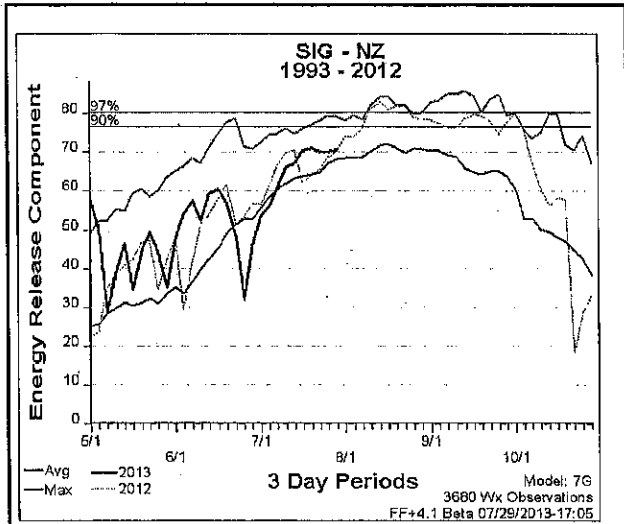


Fig 1: Average Nrn CA ERC's

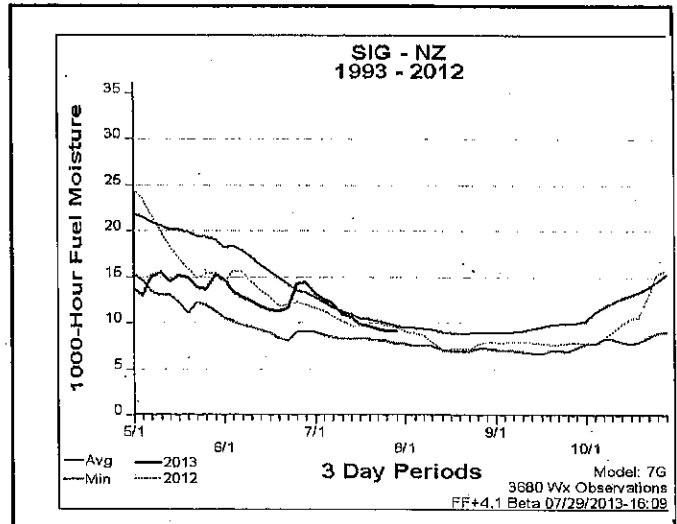


Fig 2: Average Nrn CA 1000-hr Fuel Levels

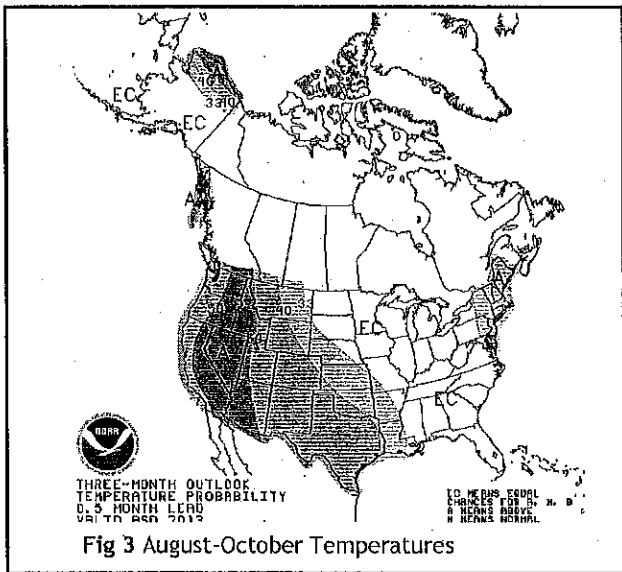


Fig 3 August-October Temperatures

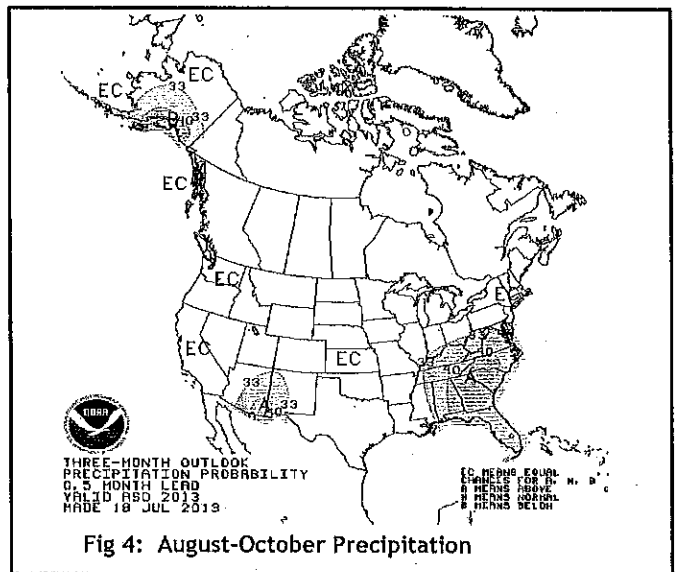


Fig 4: August-October Precipitation

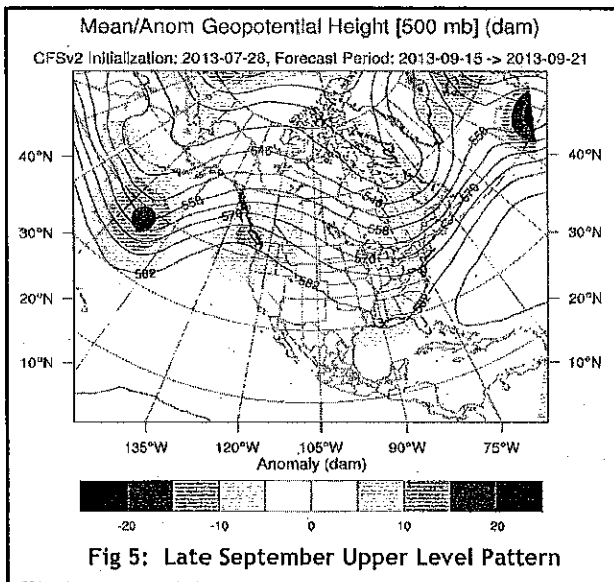


Fig 5: Late September Upper Level Pattern

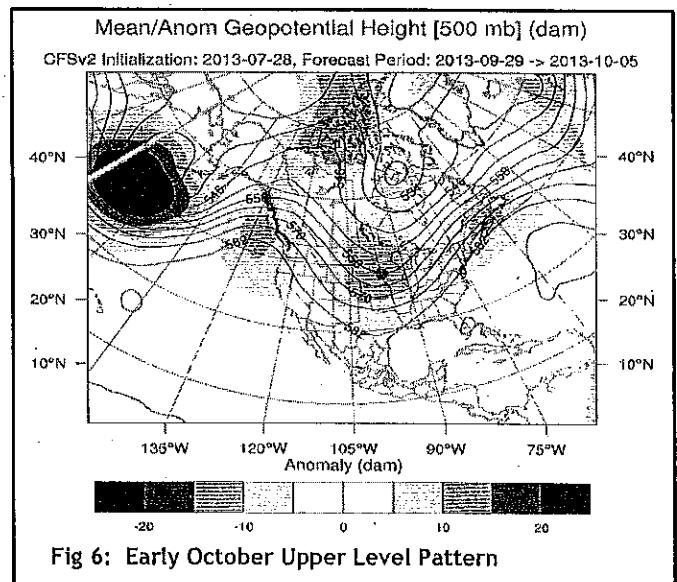
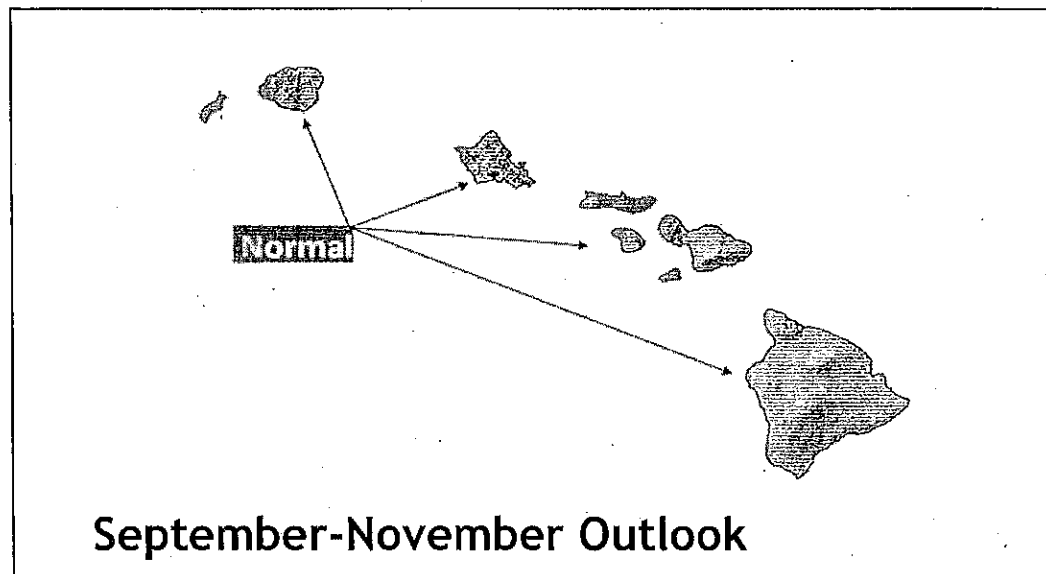
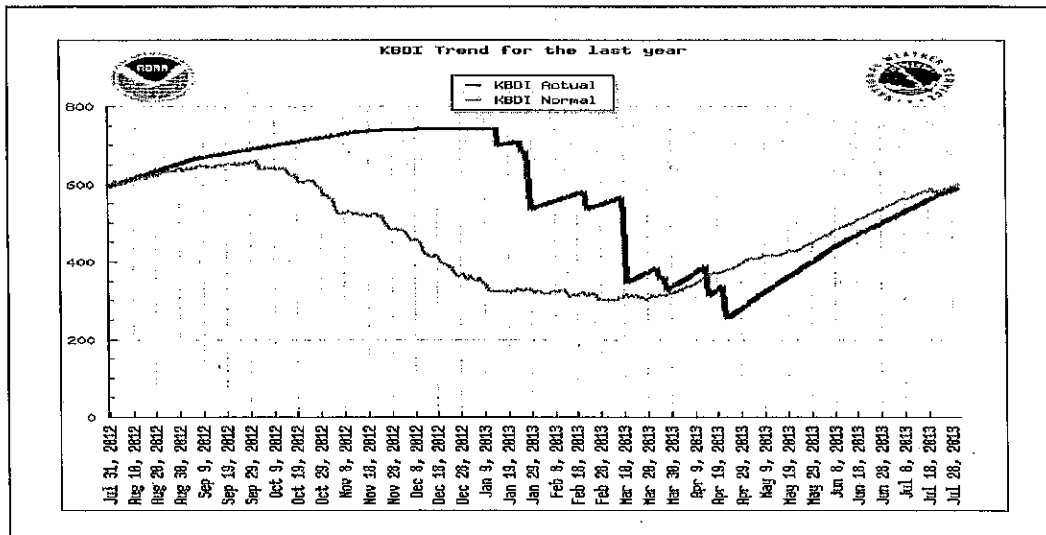


Fig 6: Early October Upper Level Pattern

Hawaii Seasonal Outlook: Sept-Nov 2013



Hawaii Seasonal Discussion:

Drought conditions have moderated considerably over the past 3 months. Areas such as the leeward (western) side of the Big Island, which was previously covered under a vast area of *Extreme Drought* for several years, has moderated significantly due to recent rains. However, the Keetch-Byram Index (top image) shows that fuels are entering above the critical 600 level, normal for late summer. So with a combination of recent rains but lingering drought, we are expecting *Normal Fire Potential* (lower image) for the remainder of the period.

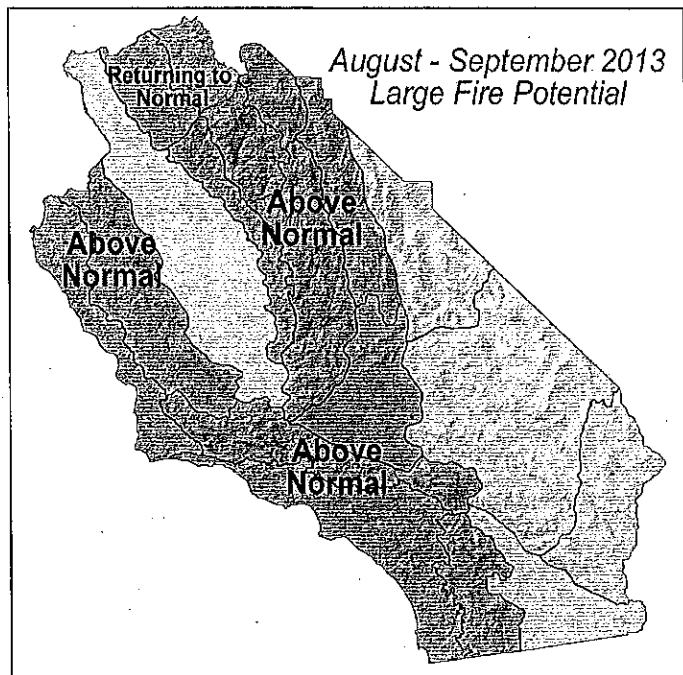


This Product was developed by the Predictive Services group, located at the North Zone Coordination Center in Redding, California

Basil Newmerzhycy

Phone: (530) 226-2730

bnewmerzhycy@fs.fed.us



Overview:

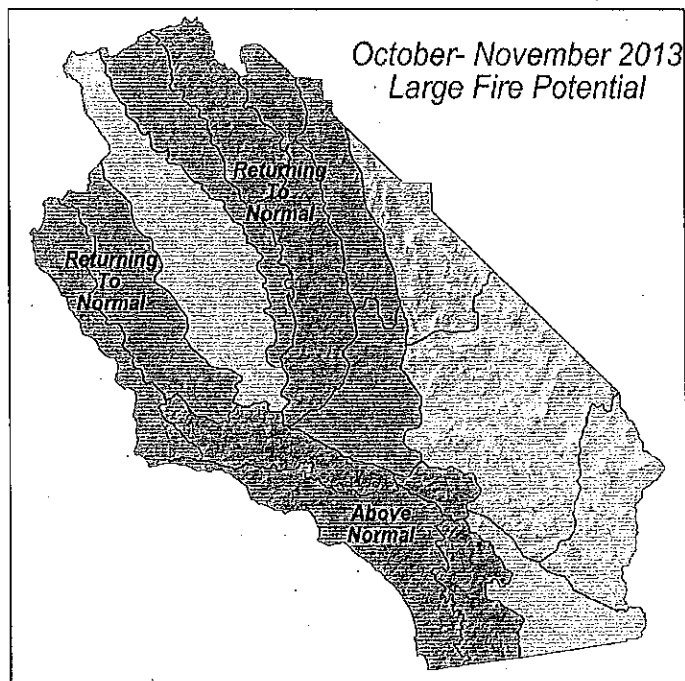
- Above normal large fire potential for most of the mountains, valleys and foothills through October.
- Large fire potential returning to normal in Central CA in October, but remaining above normal over Southern CA into November.
- Below normal "monsoon" thunderstorm activity in Aug. – Sept.
- One or two offshore events possible prior to the return of seasonal rains.

WEATHER DISCUSSION

July was a month of rapidly changing long-wave patterns across the West. Several strong ridges developed over the northern part of the state and the northern Great Basin early in the month, while latter portions of the month saw the ridge migrate further eastward into the central Rockies. But unlike last summer which saw an upper level pattern lock into a very strong, stationary ridge over the Southern Plains, this summer has yet to produce a pattern of any notable duration.

This lack of a defined long-wave pattern may be possibly due to a very low deviation in Pacific-North American Pattern (PNA) or a non-descript Arctic Oscillation (AO). During the past few weeks, these indices have been neutral or weakly positive during much of the time.

The lack of a strong West Coast ridge or trough has allowed easterly flow to develop which has allowed several "monsoonal" surges to reach the southern half of the state. Locally heavy rainfall resulted from widespread wet thunderstorms. The heaviest precipitation occurred on the desert side of the San Bernardino and Cleveland National Forest. Other areas of the central and southern Sierras received widespread heavy rains as



PREDICTIVE SERVICES

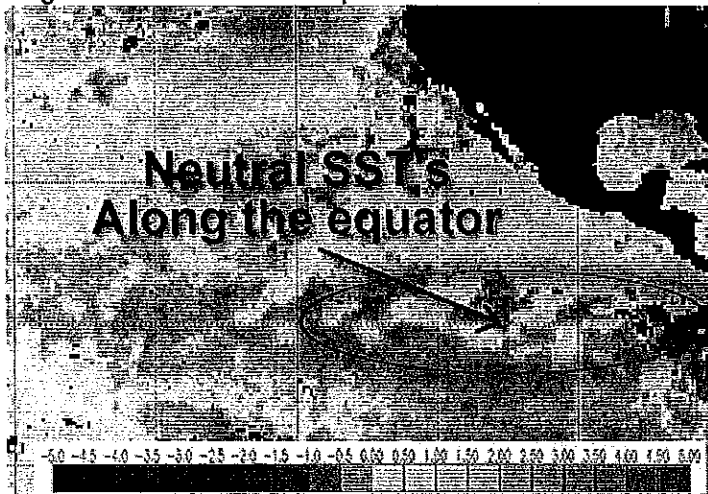
MONTHLY/SEASONAL OUTLOOK



AUGUST THROUGH NOVEMBER 2013

well. These areas experienced over 300% of normal July precipitation (See figure on right). (Other areas of the northern Sierras experienced similarly high rainfall totals, but these areas are not covered as well by radars and precipitation estimates tend to be underestimated). The easterly flow also kept humidity readings quite high during much of the month and low daytime RH was infrequent in July, except along the central coast interior.

Figure 2: Sea Surface Temperatures across the Pacific



At the current time, sea surface temperatures (SST) across the equator are running fairly close to average (see above). This trend is expected to continue into the fall and early winter months. A strong El Niño or La Niña is unlikely to emerge later this year and a typical start to the winter rainy season is expected in October.

Long range models suggest the long-wave pattern over the western 2/3rds of the country may closely resemble the pattern of last August and early September. A strong ridge over the Eastern Pacific and the Central Plains may allow a weak trough to be present near the West Coast during August and September (see figure 3). This would result in southwesterly flow aloft which would keep most of the "monsoonal" moisture east of the region. Summertime convection may be substantially less frequent than what experienced in July. Temperatures along the coast may be near to slightly below normal, while further inland, temperatures may be slightly above normal. The strong Midwestern ridge may migrate further west by late September into October which may lead to a period of much above normal temperatures during the first few weeks of autumn, similar to last year.

Figure 1: Percent of Normal Precipitation, July

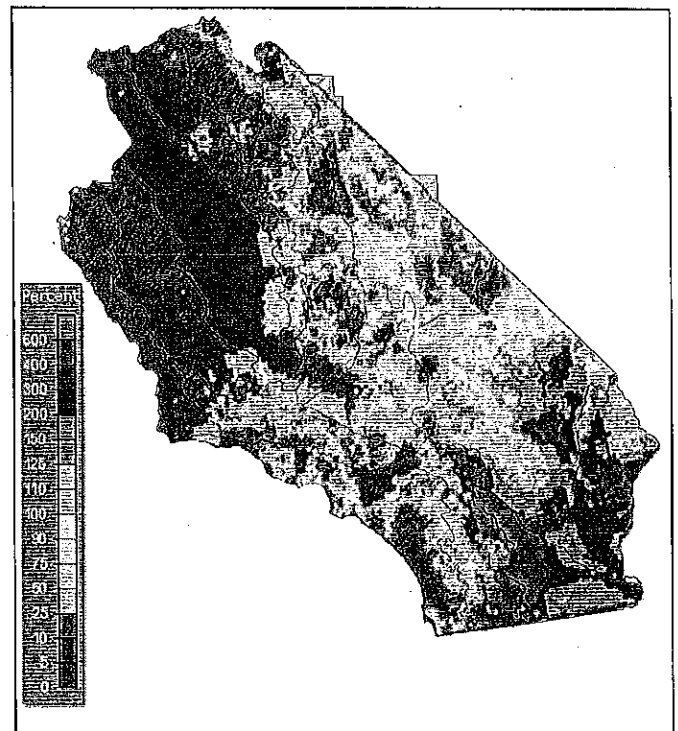
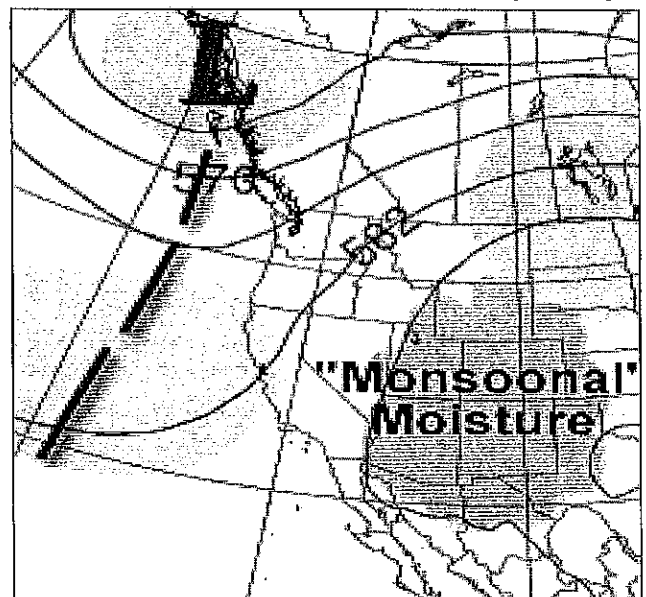


Figure 3: Possible Long-Wave Pattern in Aug. – early Sept.



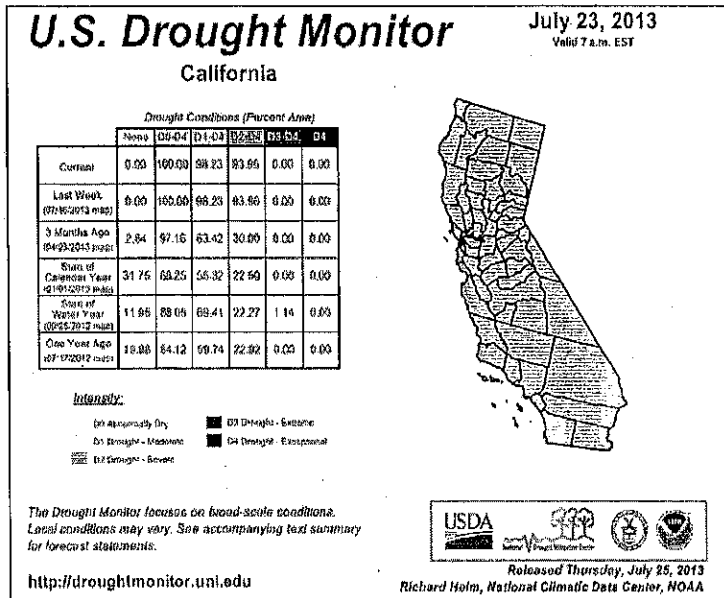
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Figure 4: Current Drought Monitor



FUELS OUTLOOK:

The heavy rain of last month brought a temporary reprieve from the extremely dry fuel conditions over many areas. Multiple days of wetting rains were experienced over many areas in the Sierras and in the mountains east and southeast of Los Angeles County.

While the rains were welcomed by many, they will do little to alter fuel moisture conditions in the long term. Much of the precipitation in July fell as a result of wet thunderstorms, and thus, fell in brief heavy downpours. This rain typically results in substantial runoff as the plants and soils have little time to uptake this moisture. Therefore, once the summertime convection comes to an end and lower daytime RH returns, fuel moisture conditions will return close to the near record readings seen in late May and June.

The only exception to this may be over the far northern part of the district over the Sierras. Significant stratiform rains in late July along with the higher RH of this past month will make it unlikely for large fires to develop in this area, generally from Yosemite N.P. northward. Other areas of the mountains, valleys and foothills will continue to see large fire potential remain above normal until wetting rains occur this fall and winter.

The lack of an ENSO signal may mean that winter rains will arrive more or less on time this year. For Central California, this is typically in October while Southern California usually experiences widespread wetting rains in November. *It is likely Southern California will see a few offshore wind events occur prior to the arrival of winter precipitation.*

Very low live and dead fuel moisture will continue to set the stage for above normal large fire potential for most mountains, valleys and foothill locations until the arrival of widespread precipitation. Expect active fire behavior in all fuel types, especially during windy periods. Fires will continue to exhibit a high resistance to suppression throughout the fall.

Figure 5: 1,000 hour Fuel Moisture Central Sierras

