



# Forest and Rangelands Assessment Steering Committee (FRASC)

## Kick-off Meeting March 1, 2012



**FRAP**  
Fire and Resource Assessment Program  
California Department of Forestry and Fire Protection

# Who We Are



Fire and Resource  
Assessment Program



USFS Pacific Southwest Region  
State and Private Forestry



Natural Resources  
Conservation Service

# Who You Are

## Stakeholders:

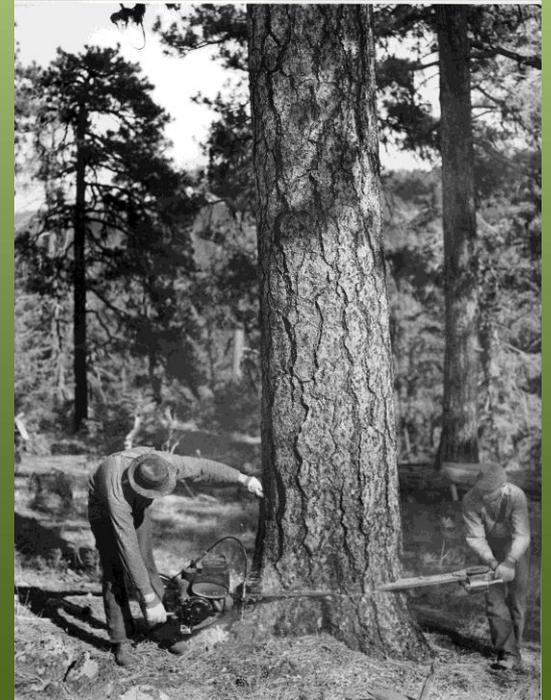
- State Agencies
- Federal Agencies
- Local Government
- Tribes
- Conservancies
- Non-Governmental Organizations



# What is FRASC

Your chance to guide the 2015 Assessment of Forest & Rangelands in California

- Quarterly Meetings
- New Assessment Report Due in 2015



# FRASC

## Organization and Operation



- Leadership Teams
  - Topic Based
  - Self-Organized out of Need and Interest
- Ground Rules
  - Everyone's voice matters
  - We are all interested in the health and vitality of California's forests and rangelands



# The Forest Action Plan

## Assessment and Strategies Reports June 2010



# FRAP

Fire and Resource Assessment Program  
California Department of Forestry and Fire Protection

# FRAP Mandate

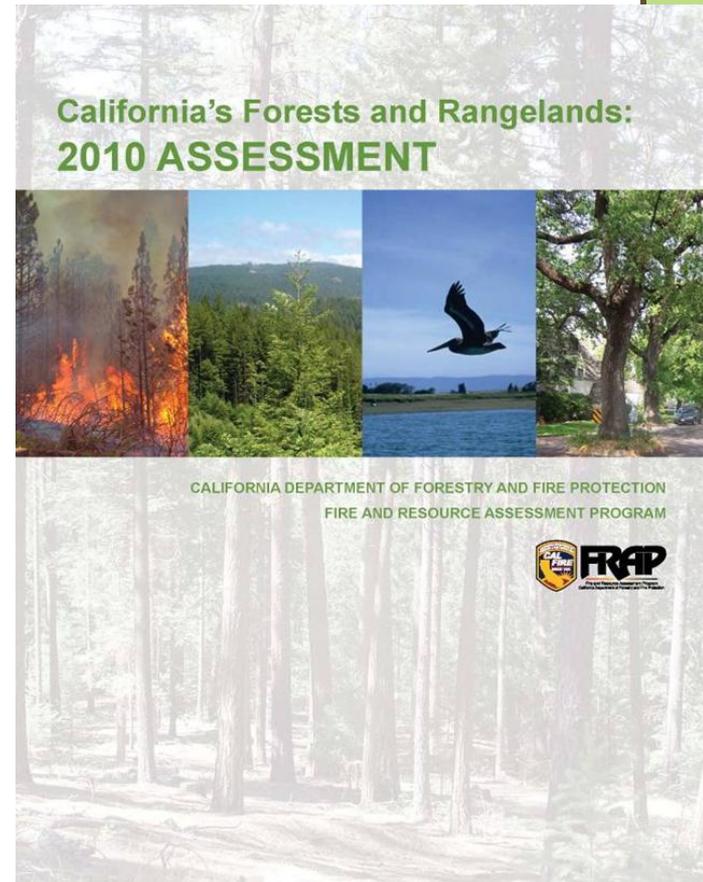
- State legislative mandate in the 70's created FRAP
- Reports to legislature and state Board of Forestry on status of forest / rangelands
- Board of Forestry uses reports to inform their policies and rule making
- Thus while not directly regulatory, strongly influential on policy and regs

# The Forest Action Plan

- California's Statewide Assessment and Resource Strategy (SWARS) rebranded
- Coordinated with USFS State and Private Forestry "Redesign"
- Required under the Cooperative Forestry Assistance Act, as amended by the 2008 Farm Bill.
- Completed by FRAP in June, 2010.

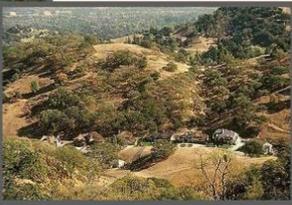
# The 2010 Assessment

- Integrate existing plans
- Partner and stakeholder outreach
- Identify key resources (assets)
- Threats to assets
- Priority Landscapes
- All Lands Approach



# The 2010 Strategy Report

## CALIFORNIA'S FORESTS AND RANGELANDS: 2010 STRATEGY REPORT



- Companion Assessment
- Cross-cutting issues
- Existing programs and plans
- Constraints, key partners
- Core: Lists of Strategies and supporting actions
- Strategy matrices (tables)

# National State & Private Forestry Redesign Three Overarching Themes

- Conserve working forest landscapes
- Protect forests from harm
- Enhance public benefits from trees and  
forests

# Theme 1: Conserve working forest landscapes

## Subthemes/Chapters:

- 1.1 Population Growth and Development Impacts



- 1.2 Sustainable Forests and Rangelands



# Theme 2: Protect forests from harm

## Subthemes/Chapters:

- 2.1 Wildfire Threat to Ecosystem Health and Community Safety



- 2.2 Insect, Disease and Other Threats to Ecosystem Health and Community Safety



# Theme 3: Enhance public benefits from trees and forests

## Subthemes/Chapters:

- 3.1 Water Quality and Quantity Protection and Enhancement



- 3.2 Urban Forestry for Energy Conservation and Air Quality



- 3.3 Planning for and Reducing Wildfire Risks to Communities and Services



# Theme 3: Enhance public benefits from trees and forests (continued)

## Subthemes/Chapters:

- 3.4 Emerging Markets for Forest Products and Services



- 3.5 Plant, Wildlife and Fish Habitat Protection, Conservation and Enhancement



# Theme 3: Enhance public benefits from trees and forests (continued)

## Subthemes/Chapters:

- 3.6 Green Infrastructure for Connecting People to the Natural Environment



- 3.7 Climate Change: Threats and Opportunities



# GIS-based Risk Assessment

## Preventing Wildfire Threats for Community Safety Analytical Framework

### Assessment

#### Assets

Structures

Major Roads

Transmission  
Lines

Composite  
Assets

#### Threats

Community  
Wildfire Threat

Priority Landscape  
(High Value, High Threat)

### Strategy

#### Toolbox

- Fuels Reduction Projects
- Biomass Projects

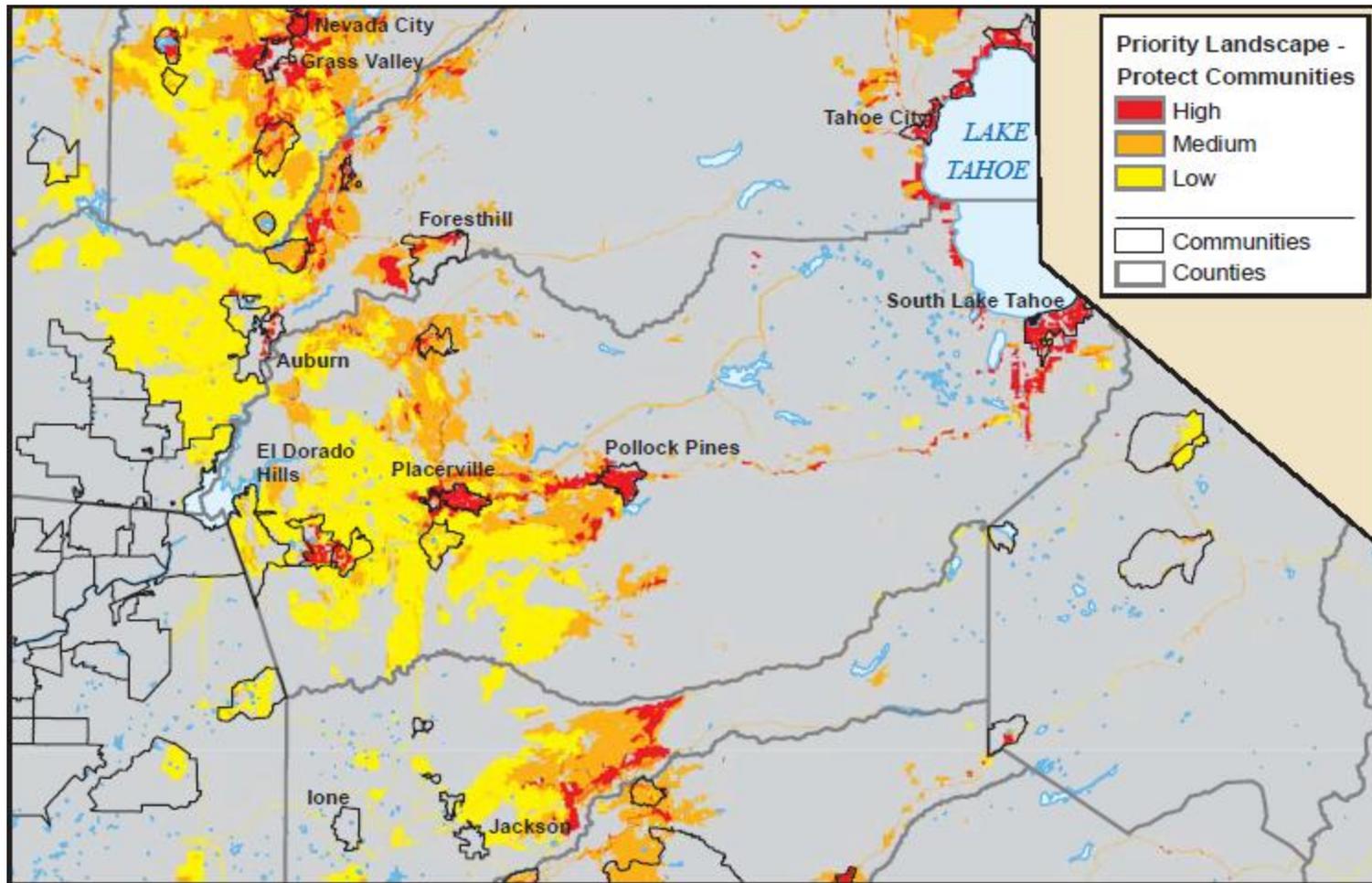
Funding

Changes to Laws,  
Policies and Plans

Strategy

Desired Future  
Condition Landscape

# GIS-based Risk Assessment 2.1

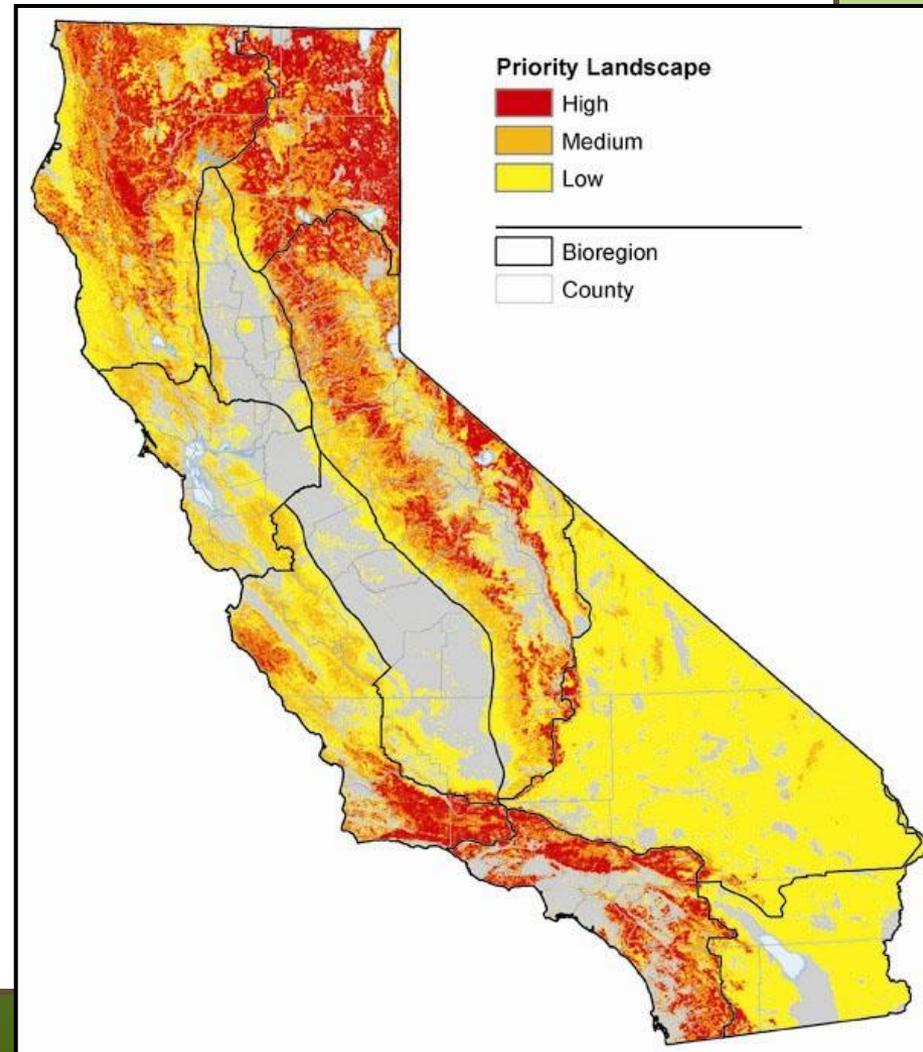


# Assessment Priority Landscape 2.1: Fire Threat to Ecosystem Health

Uncharacteristically dense stands with high fuel loads are more susceptible to high severity fire.

Over 20 million acres in the State deviate from historic conditions (condition class 3) and are high priority areas.

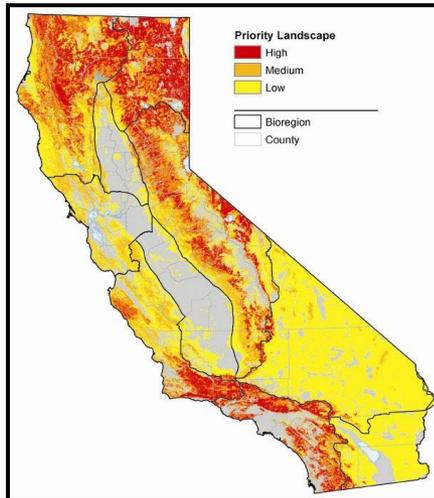
Forest and other vegetation types most at risk include Ponderosa Pine, Sierra Mixed Conifer, Douglas-fir and Mixed Chaparral.



# Strategy 2.1

## Reduce Damaging Wildfires

### Priority Landscape 2.1: Wildfire Threat to Ecosystem Health



### Long-term Strategy:

Reduce the occurrence of damaging wildfires and reduce life, property and natural resource losses through the implementation of effective and efficient fire prevention programs and activities

# Strategy 2.1.1 Matrix: Reduce Damaging Wildfires

## Strategy Matrix

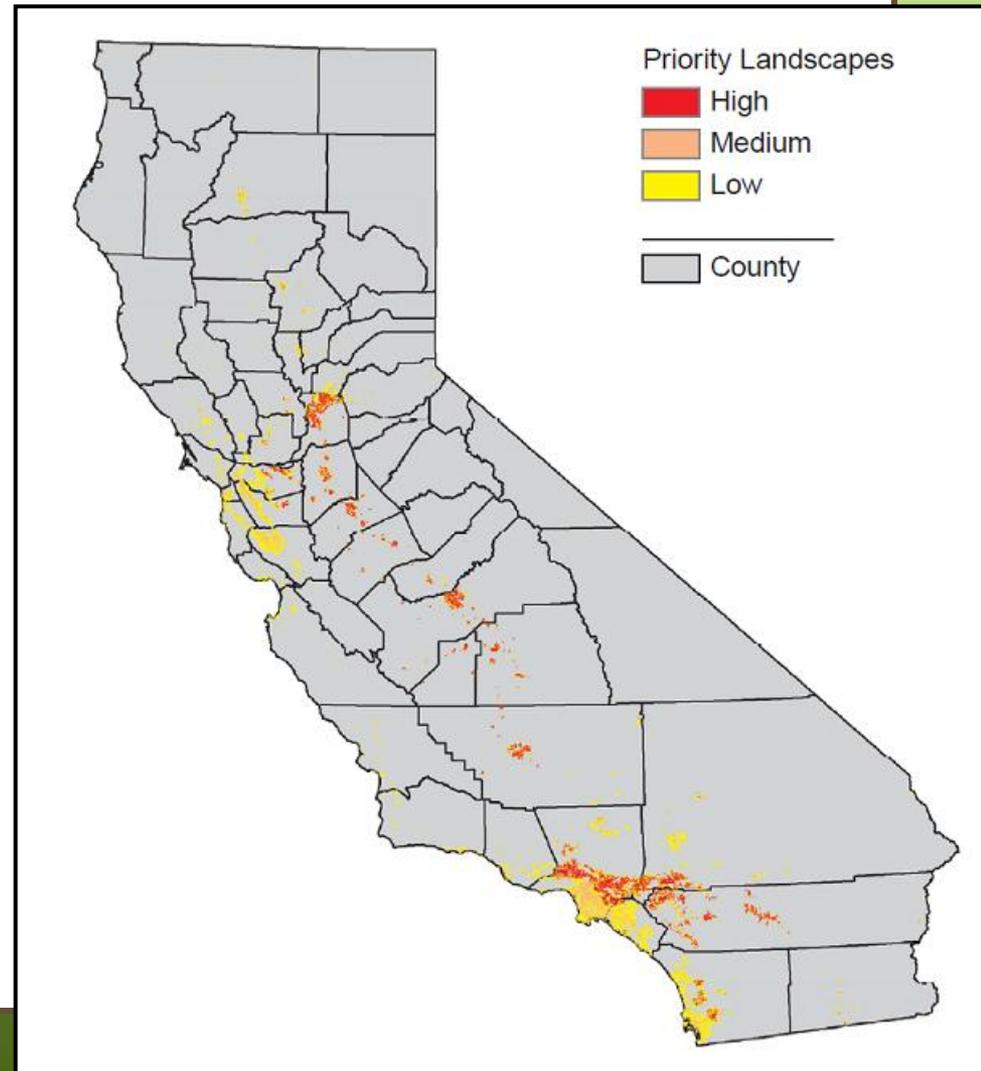
Strategy: 2.1.1. Reduce the occurrence of damaging wildfires and reduce life, property and natural resource losses through the implementation of effective and efficient fire prevention programs and activities.

Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Existing Programs	Partners / Stakeholders	Resources Available	Measures of Success	National Objectives Supported
Reduce the occurrence of damaging wildfires and reduce life, property and natural resource losses through the implementation of effective and efficient fire prevention programs and activities	18.4 million ac HPL in S. Coast, Sierra, Modoc, SMC, DFR, SGB and CSC habitats	Forest pest threats; sustainable carbon, biomass, timber; biodiversity; water quality and quantity;	CAL FIRE resource management and fire protection programs; CA and National Fire Plan; OSFM; FRAP; VMP;	California citizens, land owners, CAL FIRE, state, federal and local governments and agencies as well as non-profit organizations	State and Federal programs and funding for fire protection and resource management activities; Grants, bond funding	Acres treated to reduce the risk of catastrophic wildfire Acres of fuels treated in the WUI	Protect Forests From Harm; Enhance benefits from trees and forests.

# Assessment Priority Landscape 3.2: Urban Forestry Planting

## Priority Landscapes for fostering urban forestry

- Frequent high temperatures
  - Energy consumption
- Compromised air quality
- Program augmentation





# Priority Landscapes Viewer



## Table of Contents

- ▶  1.1: Population Growth and Development Impacts
- ▶  1.2: Sustainable Working Forests and Rangelands
- ▶  2.1: Wildfire Threat to Ecosystem Health and Community
- ▶  2.2: Forest Pests and Other Threats to Ecosystem Health
- ▶  3.1: Water Quality and Quantity Protection and Enhancement
  - ▶  Analysis: Water Supply
  - ▶  Analysis: Water Quality
    - ▶  Priority Landscape
      - Low
      - Medium
      - High
- ▶  Threats
- ▶  Assets
- ▶  3.2: Urban Forestry for Energy Conservation and Air Quality
- ▶  3.3: Planning for and Reducing Wildfire Risks to Communities
- ▶  3.4: Emerging Markets for Forest and Rangeland Products
- ▶  3.5: Plant, Wildlife and Fish Habitat Protection, Conservation



**Disclaimer**  
The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of or arising from the use of data or maps.

http://frap.fire.ca.gov/assessment2010.html

The 2010 Assessment - Windows Internet Explorer

http://frap.fire.ca.gov/assessment2010.html

Search

GO

California Department of Forestry and Fire Protection

CAL FIRE FRAP The Assessment Maps GIS Data Tools Publications Projects FRASC

FRASC Meetings | FRASC Projects |

FRAP → 2010 Assessment

**California's Forests and Rangelands: 2010 Assessment**

Welcome to the website for the 2010 Assessment of California's forest and rangeland resources. We invite your interest and involvement, and encourage you to learn more by visiting these centers of information:

- **Final Document**
- **Assessment Basics**
- **Key Topics**
- **Project Details**
- **Themes and Subthemes**
- **Maps, Data, Tables and Methods**
- **Analytical Framework**
- **Priority Landscapes Mapper**
- **Definitions and Terms**
- **People and Contacts**

- **Final Report** - the final [2010 Assessment](#) document is now available online. The accompanying Strategy Report may also be found on this page.
- **Maps, Data, Tables and Methods** - this information is organized by [subtheme \(chapter\)](#).
- **Assessment basics** - if you're unfamiliar with FRAP's Assessment process or the 2010 Assessment approach specifically, [start here](#).
- **Key topics** - if you want to learn more about how we're addressing particular concerns, such as wildfire, water quality, economic benefits, etc., [start here](#).
- **Detailed information** - if you know about assessments or just want to dive right into the specifics, [start here](#).
- **Priority Landscapes Mapper** - shows interactive map overlays of the spatial analysis results. Twenty-two Priority Landscapes can be viewed, overlaying a map or satellite image of the state. To try the mapper, [start here](#).





[Home](#) » [Regional & State](#) » [California](#)

## California

Protecting diverse ecosystems and healthy forests while meeting the needs of a large and growing population



### Conserve

Preserving working forest ecosystems and strengthening their local communities



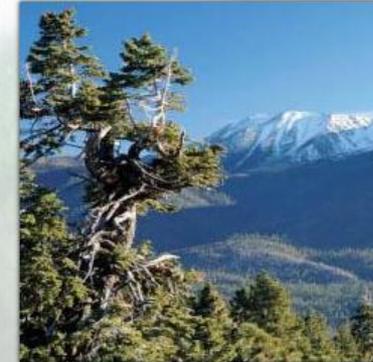
### Protect

Protecting against wildfire, pests, development and other forest threats



### Enhance

Improving forest and rangeland productivity, health, ecosystem services and economic vitality



### Agency Information



Ken Pimlott, Acting Director  
California Department of  
Forestry and Fire Protection  
P.O. Box 94246  
Sacramento, CA 94244-2460  
916.653.5123

Chris Keithley, Chief, Fire and  
Resource Assessment Program  
(FRAP)

## Fostering healthy forests and communities in a changing world

Forests, rangelands, and urban forests contribute greatly to the quality of life enjoyed by all Californians. They provide vital resources and services including timber, livestock grazing, water, wildlife habitat, recreational opportunities and biomass fuels. Many small rural communities rely on these lands for their economic livelihood. However, threats to forest health from catastrophic wildfire, insects, disease and development are increasing due to climate change and population growth. Urban forestry can help mitigate climate change and improve local conditions and quality of life. The Assessment and Strategy documents review major issues facing California's forests, and describe strategies to foster healthy ecosystems and communities in this era of unprecedented changes.

### Documents

 [Forest Action Plan \(assessment\)](#)

 [Forest Action Plan \(strategy\)](#)



Improving forest health and community protection, preservation and enhancement in the face of increased threats from wildfire, disease, insects, and expanding development. Many forests are at high risk of catastrophic fire, due to years of insufficient fuels management. These conditions have also made California forests more susceptible to insect infestations and disease. And as the largest

**Forest and Range Assessment Steering Committee (FRASC)  
SURVEY**

*How important are these Assessment Topics to you?  
Thursday, March 01, 2012*

Name: \_\_\_\_\_  
 Organization: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Telephone: \_\_\_\_\_

Please rate the following according to importance to your program:

Choose one for each Topic and  
indicate by placing an 'X' in the box

FRAP 2010 Assessment Topics <a href="http://frap.cdf.ca.gov/assessment2010/topics.html">http://frap.cdf.ca.gov/assessment2010/topics.html</a>	Importance		
	LOW	MEDIUM	HIGH
1.1 Population Growth and Development Impacts			
1.2 Sustainable Working Forests and Rangelands			
2.1 Wildfire Threat to Ecosystem Health and Community Safety			
2.1 Insect, Disease and Other Threats to Ecosystem Health and Community Safety			
3.1 Water Quality and Quantity Protection and Enhancement			
3.2 Urban Forestry for Energy Conservation and Air Quality			
3.3 Planning for and Reducing Wildfire Risks to Communities			
3.4 Emerging Markets for Forest and Rangeland Products and Services			
3.5 Plant, Wildlife and Fish Habitat Protection, Conservation and Enhancement			
3.6 Green Infrastructure for Connecting People to the Natural Environment			
3.7 Climate Change: Threats and Opportunities			

Write in:


Comments:

# What do YOU think is important??

**Please take a moment  
to complete the survey**

Break

# Forest Indicators: Measuring the Path Towards Sustainability



Chris Keithley, Ph.D.

Kelly Larvie

Rich Walker, Ph.D.

CAL FIRE

Fire and Resource Assessment  
Program

<http://frap.cdf.ca.gov/>

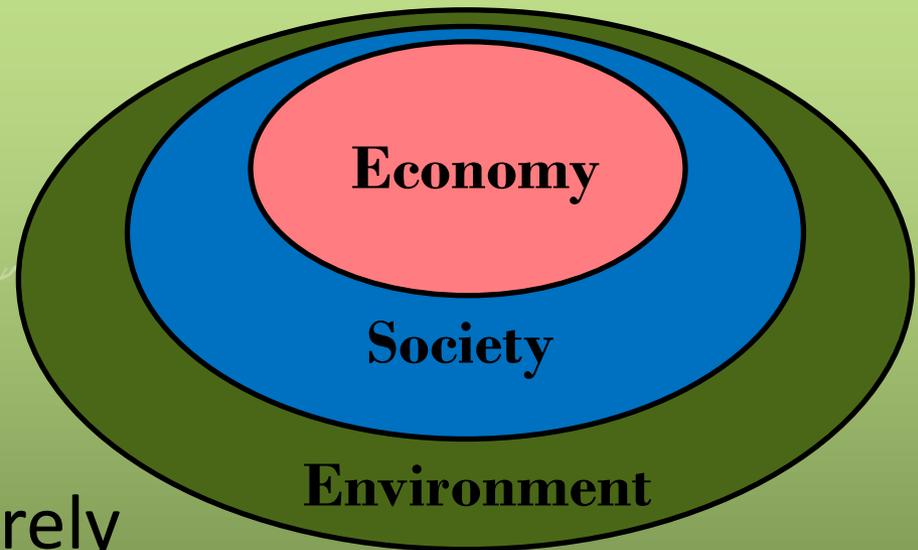
# Sustainability

Balancing environmental, social, and economic factors to meet the needs of the present without compromising the ability of future generations to meet their needs.

Source: World Commission on Environment & Development

# Strong Sustainability

“The core concept of strong sustainability is that the benefits of nature are irreplaceable and that the entire economy is reliant on society, which in turn is entirely dependent on the environment.



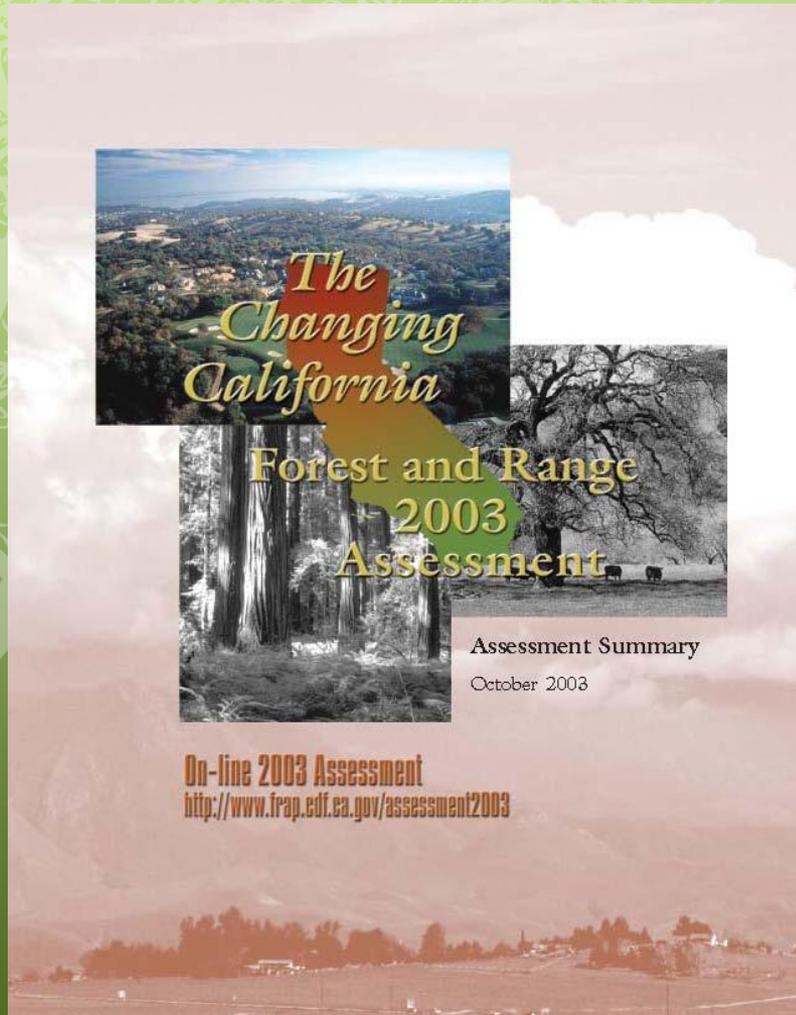
This emphasizes the interdependencies between our society, our economy, and the natural environment.”

# Viewpoints

Sustainability includes a broad range of perspectives – from commodities to aesthetics – and applies to a wide range of temporal and spatial scales.



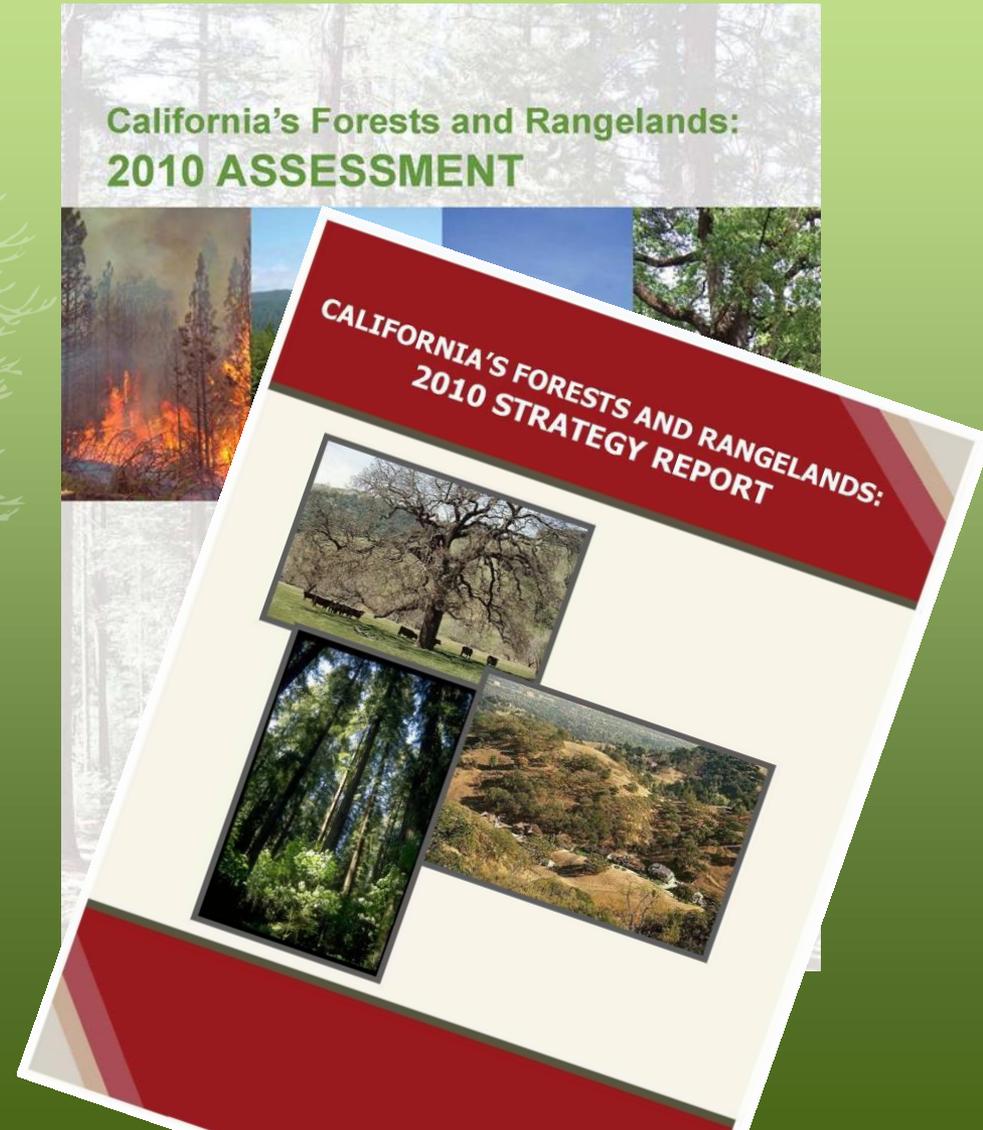
# 2003 Forest and Range Assessment



- Adopted Montreal Process (MP)
- Used all Seven MP Criteria
- Used 66 of 67 MP Indicators

# 2010 Forests and Rangelands Assessment

- Adopted new framework for Assessment to comply with 2008 Farm Bill.
- MP criteria were not addressed in the Assessment, but were referenced in the Strategy Report



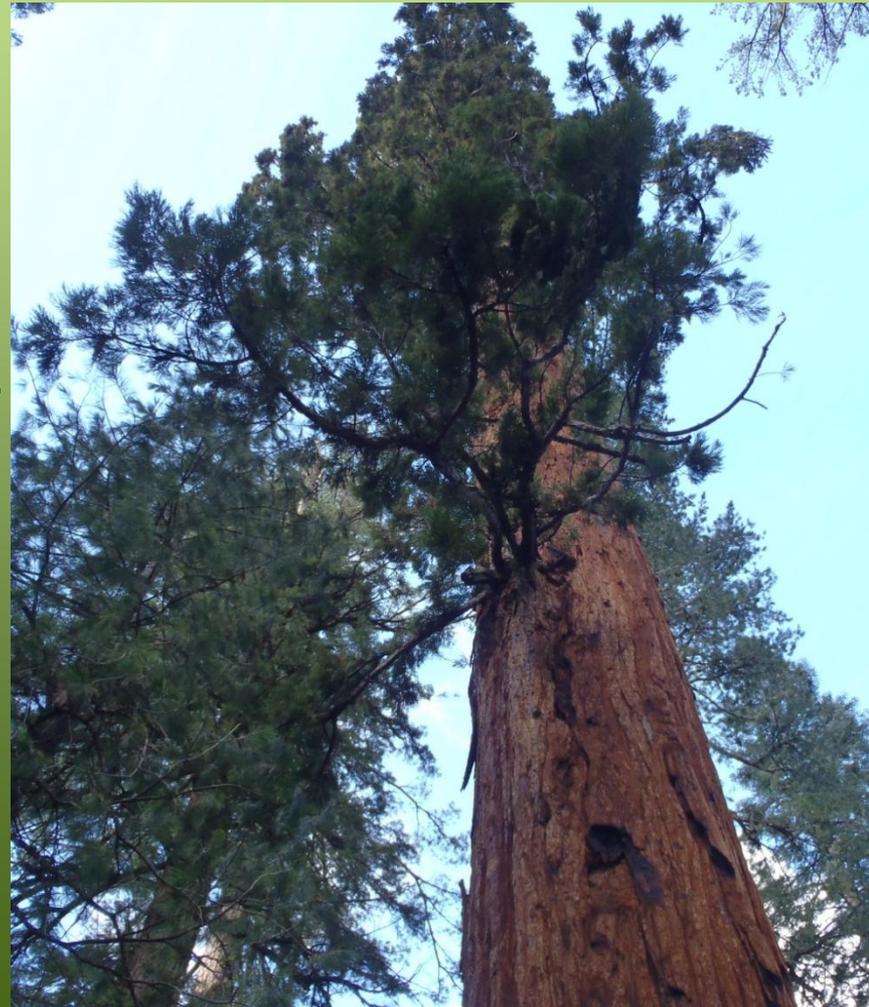
# Purpose and Use

- California BOF concerned with sustainable forests – requested indicators to measure trends
- Allow us to evaluate trends in future forests and rangelands assessments.



# Indicators

- Measure and evaluate progress towards forest sustainability in California
- Provide objective measures that can be reported on with each update of the Forests & Rangelands Assessment.





# Montreal Process

The Montreal Process is the Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests.

Formed in 1994, member nations represent approximately 60% of world's temperate and boreal forests

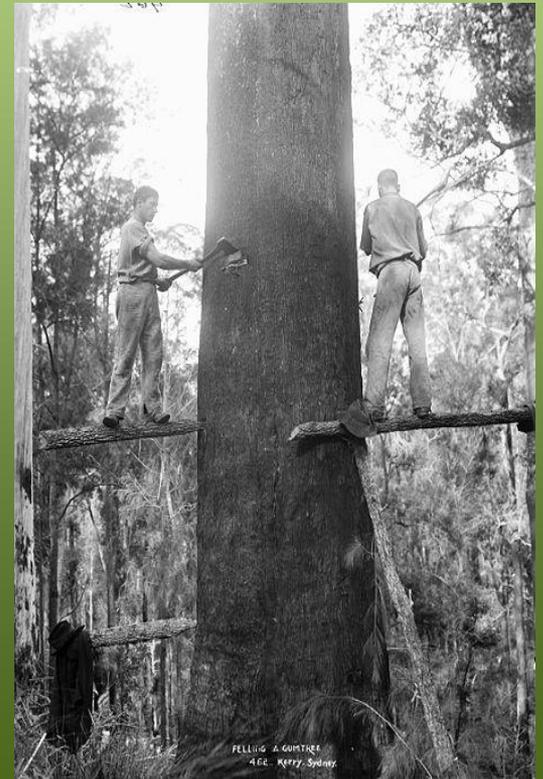
For more detail, go here:

[http://www.rinya.maff.go.jp/mpci/criteria\\_e.html](http://www.rinya.maff.go.jp/mpci/criteria_e.html)



# Montreal Process - Purpose

The Montreal Process identified a framework of criteria and indicators that provide a common definition of what characterizes sustainable management of forests.



# Statewide Indicators

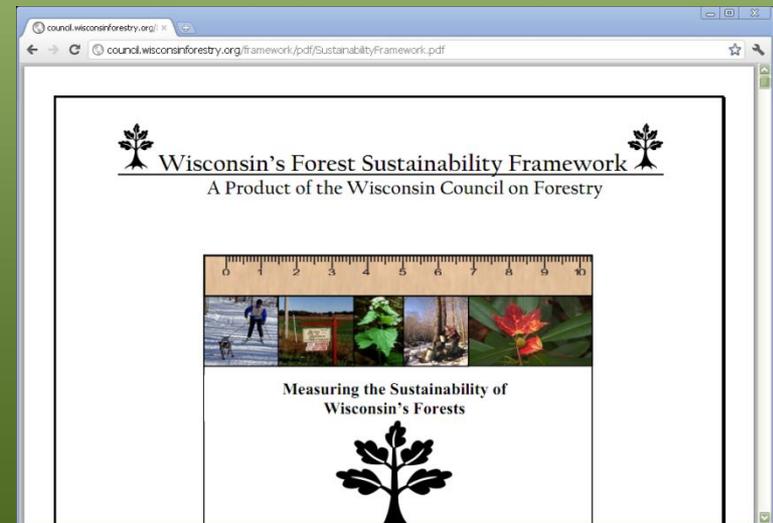


## Oregon Indicators of Sustainable Forests

<http://www.oregon.gov/ODF/indicators/index.shtml>

## Wisconsin's Forest Sustainability Framework

<http://council.wisconsinforestry.org/framework/>



# Local - Regional Indicators

- Indicators can be developed locally to better represent social and physical environments

**Sacramento River Watershed  
Program ([www.sacriver.org](http://www.sacriver.org))**

**Sierra Nevada Conservancy  
([www.sierranevada.ca.gov](http://www.sierranevada.ca.gov))**



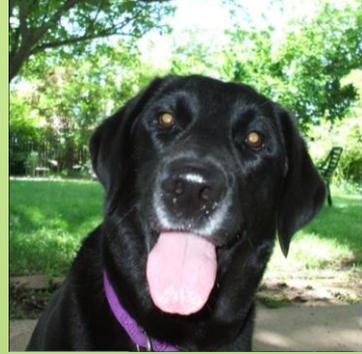
# CRITERION

- A category of conditions or processes by which sustainable forest management may be assessed.
- Characterized by a set of related indicators which are monitored periodically to assess change.



# Seven MP Criteria

1. Conservation of biological diversity
2. Maintenance of productive capacity of forest ecosystems
3. Maintenance of forest ecosystem health and vitality
4. Conservation and maintenance of soil and water resources
5. Maintenance of forest contribution to global carbon cycles
6. Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies
7. Legal, institutional and economic framework for forest conservation and sustainable management



Interesting!

# INDICATOR



Photo courtesy Santa Rosa PressDemocrat

- A measure (measurement) of an aspect of the criterion.
- A quantitative or qualitative variable which can be measured or described and which, when observed periodically, *demonstrates trends*.
- MP Identifies 67 possible indicators

For additional information see:

<http://www.rinya.maff.go.jp/mpci/criteria.html>

# Metric



Quantitative (turbidity)



Qualitative (well-being)



Spatial (invasive species distribution)

## Montreal Process Criteria

### Forest and Rangelands Assessment Chapter Topics

	Conservation of Biological Diversity	Maintenance of Productive Capacity	Maintenance of Forest Ecosystems Health	Conservation & Maintenance of Soil and Water Quality	Forests and Climate	Socio - Economic Well Being	Governance
1.1 - Population Growth and Development	X		X			x	x
1.2 Sustainable Forests		X	X	X		X	
2.1 Wildfire Threat			X			X	
2.2 Forest Pests			X			X	
3.1 Water Quality and Quantity			X	X			
3.2 Urban Forests			X			X	
3.3 Community Wildfire Planning						X	
3.4 Emerging Markets - Biomass		X	X		X	X	
3.5 Wildlife	X						
3.6 Green Infrastructure						X	
3.7 Climate Change			X		X		

**Criterion:**  
**Conservation of  
Biological Diversity**

**Indicator A:**  
**Ecosystem Diversity**

**Metric 2:**

Forest area; percent of forest by ecosystem type, successional stage, age class, and forest ownership

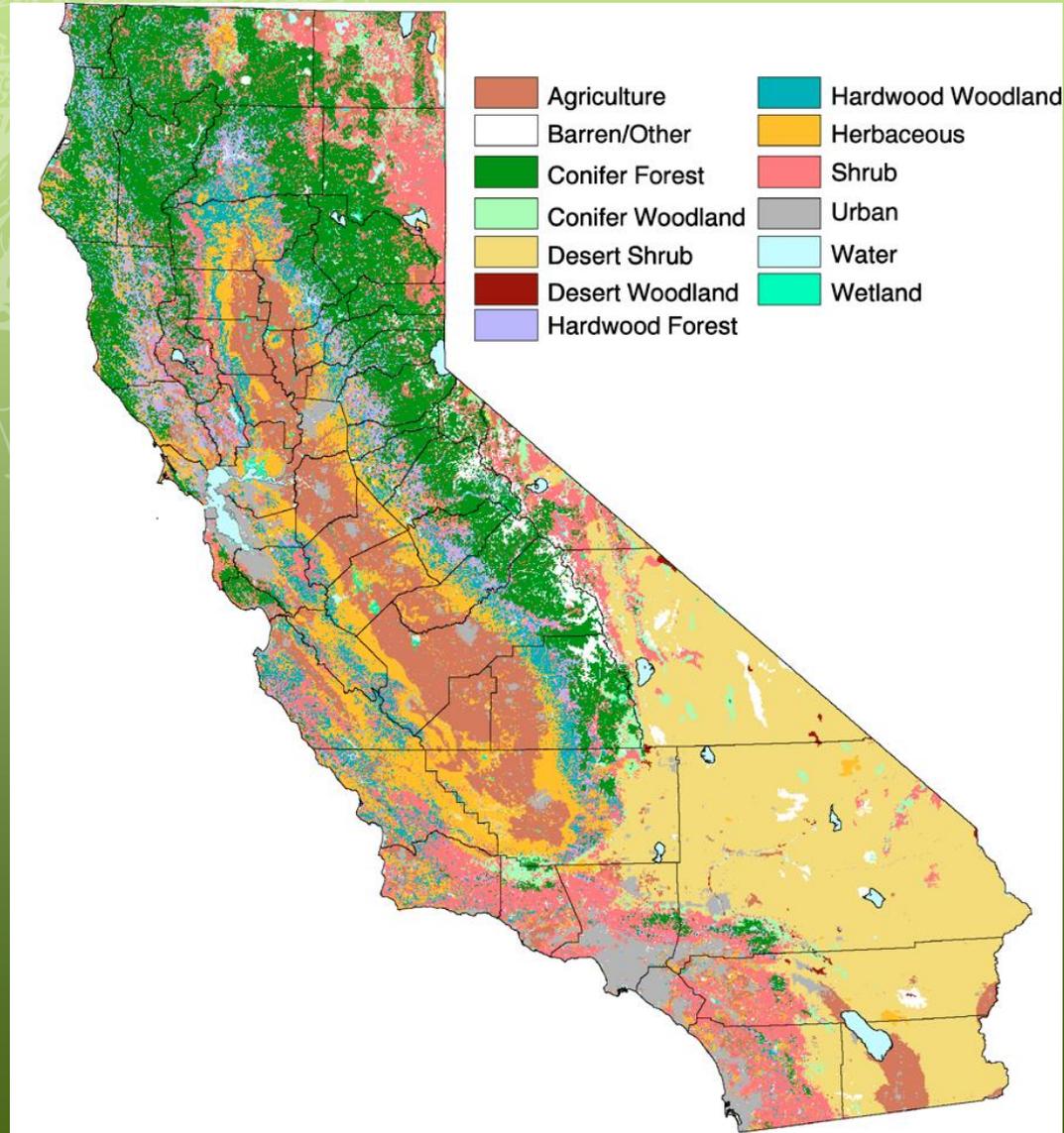
**Metric 1:**

Fragmentation of Forests

**Metric 3:**

Area and percent of forest in protected areas by forest ecosystem type, and by age class or successional stage

# Metric: Ecosystem type



# Metric – Forest Area

ASSESSMENT (YEAR)	2003	2012
Conifer Forest	19,004	19,335
Conifer Woodland	2,363	2,399
Hardwood Woodland	5,188	5,292
Hardwood Forest	4,690	4,594
Shrub	14,565	14,522
Grassland	10,919	11,407

Source: 2003 and 2010 Forest and Range Assessment

## TRENDS

Estimated 64,000 acres converted annually, predominately Ag lands, between 1986 and 2000 (Sleeter et al, 2010)

**Criterion:**  
**Forests & Climate**

**Indicator A:**  
Net Carbon  
Sequestration

**Metric 2:**  
Emissions from Natural Processes  
(mortality, wildfire...) and Harvesting

**Metric 1:**  
Carbon Sequestration in Live Trees

**Metric 3:**  
Storage in wood products and landfill

# Indicator – Net Carbon Sequestration

Source	Type	C (tonnes)	CO2e (tonnes)
Growth	Storage	-16,367,285	-60,067,936
Model Mortality	Emission	5,455,351	20,021,137
Wildfire	Emission	1,719,915	6,312,087
Harvest (merch)	Emission	565,315	2,074,706
Harvest (non-merch)	Emission	791,776	2,905,819
Wood Products (in-use)	Pool	-389,436	-1,429,231
Wood Products (landfill)	Pool	-48,796	-179,081
Net		-8,273,161	-30,362,499

Source: 2010 Forest and Range Assessment; FIA data (2001 – 2007)

# Discussion

- Process for developing indicators
- Coordination with existing indicator projects or projects in development
- Role of FRASC in indicator development
- Identifying priorities for Indicators



# Wrap-up

To set the context of FRASC and why we need your help, a brief overview of:

- FRAP's mandate, changes in 2010 and beyond
- Overview of the 2010 Forest Action Plan
- A look at criteria and indicators for California

# Outreach to You

- We would like your (and your organization's) help in planning for the next assessment
- Ongoing and future discussions of:
  - ✓ Assessment topics and issues of concern (a.k.a. Redesign Themes)
  - ✓ Data sources and gaps
  - ✓ Methodology

Questions and Comments?

Thank you, and  
see you next time!

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