

Sector-Based Workshop

Forest Sector

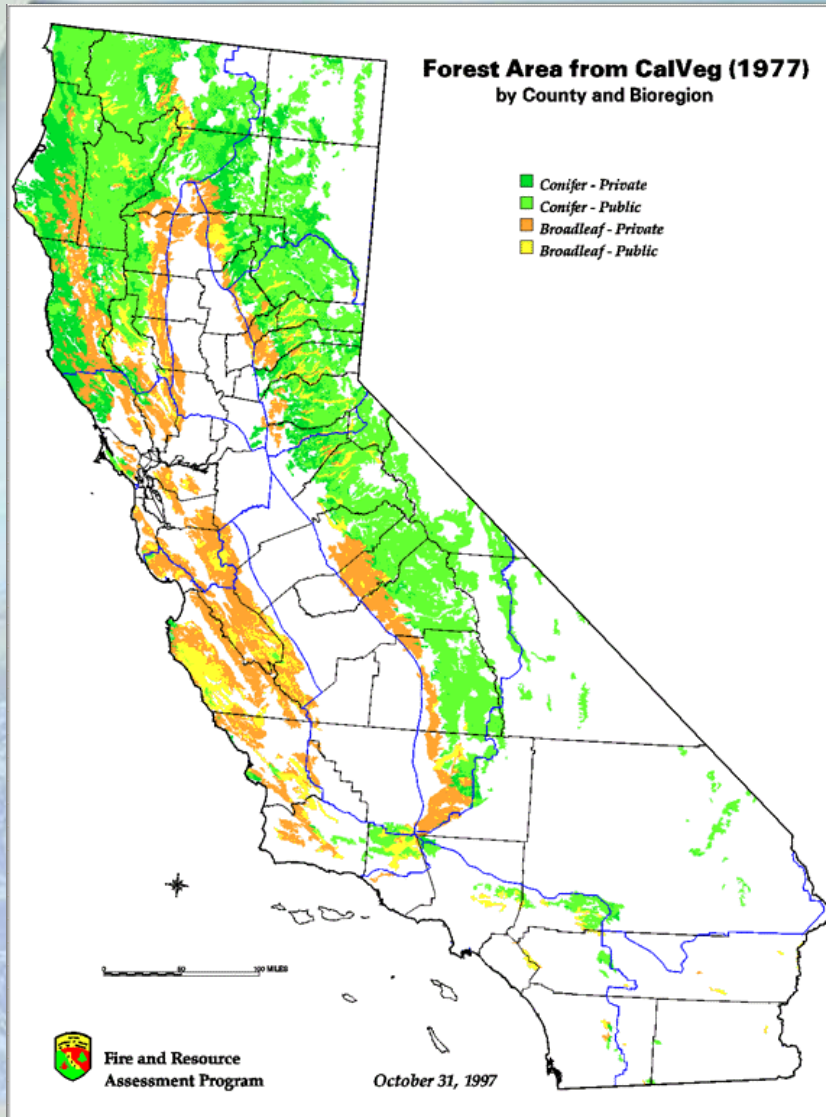
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What's in the Forest Sector

- **Public and private forests and woodland**
- **Forest management and use, including harvesting**
- **Wildfires**
- **Land-use change**
- **Wood products, bioenergy**

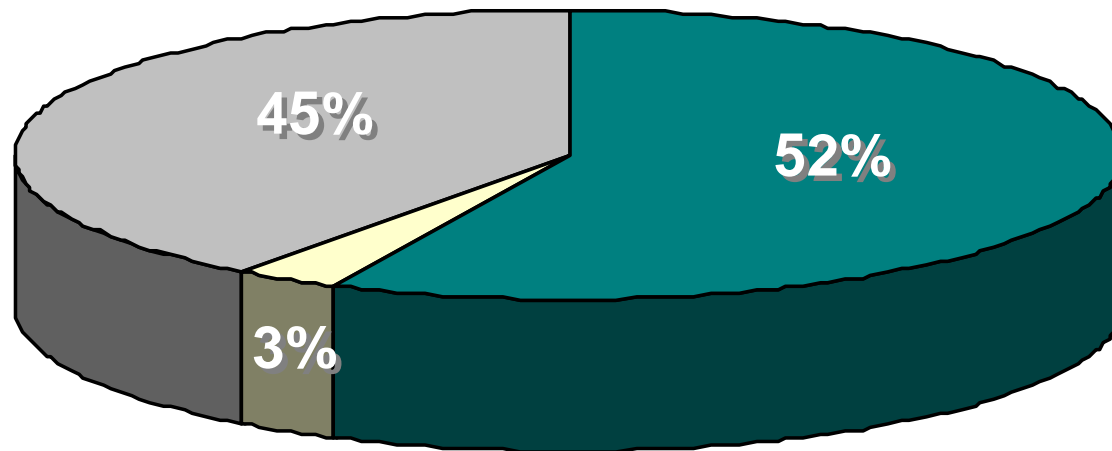


Forests in California



- 31 million acres of forest and woodlands (FRAP 2003)
- Diversity of forest types
- Diversity of ownership and management
- Large potential for sequestration

California Forest Ownership



■ Federal ■ State/Local Government ■ Private

Forests: Gross CO₂ Emissions and Sinks

- **1990 Baseline Emissions 4.9 MMTCO₂**
 - 1990 sinks -14.3 MMTCO₂
- **2004 Baseline Emissions 4.9 MMTCO₂**
 - 2004 sinks -14.1 MMTCO₂

Challenges and Opportunities

- **Complex biological systems**
- **Life-cycle analysis complex**
- **Potential for sequestration and emission reductions**
- **Potential measures oriented toward voluntary approaches**



Potential Forest Strategies

- **Reforestation**
- **Conservation Forest Management**
- **Conservation (avoided development)**
- **Urban Forestry**
- **Fuels Management/Biomass**

Reforestation

- **Planting non-forested lands**
- **Old burns and mortality from drought, disease and pests**

Conservation Forest Management

- **Increasing forest stocks by:**
 - improving stand structure
 - maximizing tree growth
 - improving stand health
 - modifying timber rotations

Conservation (avoided development)

- **Conserving forest and woodlands by avoiding development**
- **28,000 acres being parcelized each year**

(http://frap.cdf.ca.gov/assessment2003/Chapter3_Quality/habitat.html)

Urban Forestry

- **Planting of trees in urban areas to:**
 - **store carbon**
 - **reduce energy use**
 - **provide materials for increased bioenergy**

Biomass/Fuels Management

- **Removal of vegetation to:**
 - **decrease wildfire emissions**
 - **increase carbon-neutral bioenergy production**
- **Current activity level of 143,000 acres of fuel removal could be increased**

Emission Reduction Approaches

- **Policy options include:**
 - **Direct regulation**
 - **Unlikely in this sector**
 - **Market mechanism**
 - **Could become a source of offsets**
 - **Incentives**
 - **Voluntary actions**

ARB Actions to Date

- **October 2007: ARB adopted California Climate Action Registry (CCAR) Forestry protocols for voluntary purposes**
- **November 2007: Multi-agency/ stakeholder forest sector scoping workgroup created**
- **November 2007: CCAR leading forestry protocol technical development effort**

Scoping Plan Process

- **Climate Action Team Sub-group**
- **Interagency/Multi-stakeholder Forest Sector Scoping Workgroup**
- **Staff Forest Sector Technical Team:
ARB, CalFire and others**

Potential Climate Change Impacts on Forests



- **Reduced forest productivity**
- **Reduced yield for plantations**
- **Increased vulnerability to disease and pests**
- **Increased vulnerability to catastrophic wildfire**
- **Increased risk of vegetation type conversions**

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