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: 52%
- State/Local Government: 3%
- Private: 45%
Forests: Gross CO\textsubscript{2} Emissions and Sinks

- 1990 Baseline Emissions 4.9 MMTCO\textsubscript{2}
  - 1990 sinks -14.3 MMTCO\textsubscript{2}
- 2004 Baseline Emissions 4.9 MMTCO\textsubscript{2}
  - 2004 sinks -14.1 MMTCO\textsubscript{2}
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)
• 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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