California Forests and Climate Change: Enhancing Carbon Storage through Forest Health

February 9, 2015

Detailed Outline

I. Introduction
   a. State Climate Goals - AB 32 (purpose, goals, objectives….)
   b. Role of forests in meeting State Climate Goals for mitigation and adaptation
   c. Scoping Plan Update
   d. Requirement for Forest Carbon Action Plan
      1. Purpose of the plan; what is expects to accomplish
      2. Forest health considerations and long-term climate benefits
      3. Managing for multiple benefits

II. FCAT Vision, Goals and Objectives
   a. Vision
   b. Goals and Objectives
   c. Milestones and Desired Future Conditions
      a. 2020, 2030, 2050 and beyond
   d. Related Plans Summary – Examples include:
      1. Strategic Plan 2012 Vision
      2. Strategic Fire Plan 2010 Goals
      3. Climate Change Scoping Plan Update 2014 Objectives
      4. Forest & Range Assessment
      5. State Wildlife Action Plan
      6. State Water Plan
      7. National Forest Plans

   [See Appendix 1 – Description of Related Plans and Web Links]

   [See Appendix 2 – Management Authority]

III. Forest Conditions in California

a. Forest land base

1. Forest types
2. Ownership
3. Regional Diversity
4. Forest Management and Timber Production

b. Climate Change Impacts on Forests

1. Forest carbon cycle
2. Ecological impacts
    - Forest composition (i.e., species mix)
    - Forest structure
    - Ecological processes, including disturbance regimes (e.g., wildfire , forest pests)

c. Risk of Uncharacteristically Large, Intense Wildfires

1. Acres are at risk of wildfire due to forest conditions
2. GHG emissions–short term and long term
3. Vegetation type conversion (e.g., conifer forest to shrubs)

d. Forest Carbon Inventory

1. Current estimates by vegetation type and ownership group
    - Summary of estimates by data source
    - Regional estimates
    - Level of uncertainty
2. Current estimates of GHG emissions from forests
    - Wildfire
    - Mortality
3. Forest carbon inventory issues and needs
    - Approaches to improving and updating inventory information over time
    - Identifying resources to make improvements and conduct updates
4. Inventory trends and projected conditions

e. Co-Benefits
    1. Environmental services from healthy forests
    2. Findings from Resource Economic Study (appendix to plan)
    3. Co-benefits matrix and other decision tools
    4. Threats to co-benefits (i.e., water quality impairment, habitat loss, etc…)

f. Forest Projects and their Climate and Co-Benefits
    1. State Forestry Programs that Contribute Benefits
        - Types of Projects and Current Level of Investment
    2. Federal Forestry Programs that Contribute Benefits
        - Types of Projects and Current Level of Investment
    3. Non-Profit and Private Landowner Contributions to Benefits
        - Types of Projects and Current Level of Investment
        - Level of Participation in Existing Offset Programs

IV. Policy and Regulatory Framework (see also section II d)

a. State and Private Lands - Forest Practice Rules, CEQA, CA Endangered Species Act

b. Federal Lands – NFMA, FLPMA, and NEPA requirements, Federal Endangered Species Act, and national climate goals

c. Related Programs and Planning Documents

d. Air Quality – State and federal statutes, Regulations, and Guidelines

e. Water Quality – State and Federal Statutes, Regulations, and Guidelines

V. Integrated Goals and Targets for Forest Carbon and Enhancing Co-benefits

a. Targets and Goals
    1. Pace and scale of ecological restoration of forests
    2. Short-, medium- and long-term targets for enhanced carbon storage and emissions reductions on forest lands.
    3. Regional Targets

- Regional issues and constraints
- Obtaining forest carbon targets while enhancing co-benefits

4. Project Portfolio by Ownership Group and Regions– Contributions to targets
   - Role of working lands (wood products, reforestation…)
   - Role of conservation and reserve lands
   - Role of federal and other public lands
5. Options for enhancing carbon storage and reducing emissions for ownership groups and by region

b. Investment Opportunities
   1. Market-based opportunities, including private investment and public-private partnerships.
   2. Existing funding sources
   3. Offset programs and other funding streams (including CEQA mitigation credit banking)
   4. Identify both social and economic returns on investments

c. Economic Considerations
   1. Costs, benefits and tradeoffs
   2. Limits in monetizing environmental benefits
   3. Incentives
   4. Level of investment need to meet targets
   5. Potential impacts to landowners or local economies
   6. Potential cost avoidance (i.e. long-term reducing costs in fire suppression)

d. Constraints

VI. Recommended Management Actions and Investment Opportunities

a. Management Actions (All Lands)
   1. Fire Suppression and Prevention
   2. Timber Production and Management

3. Fuel Reduction – examples include:
    - Mechanical and hand treatments, prescribed fire, herbivory, etc.
3. Reforestation
4. Forest Health and Pest Management
5. Forest Conservation
6. Restoration

b. Wood Products and Biomass Utilization

c. Research Needs
    1. Climate Action Team Research Plan
    2. Fourth Climate Change Assessment

d. Carbon Offset Programs

e. Policy Change Recommendations

VII. Implementation, Reporting and Monitoring

a. Implementation
    1. Summary of actions needed to support long-term forest climate benefits and co-benefits in CA
    2. Incorporating climate benefits and co-benefits into investment and management decisions.
    3. Timeline for implementation

b. Monitoring and Reporting
    1. Inventory – Continue investment to reduce uncertainty in estimates of forest carbon storage and emission sources.
        - Enhanced support for FIA monitoring
        - Support for vegetation data collection (including structure and composition) and fuels mapping
    2. State Activity Reporting (i.e., CalMAPPER)
    3. Federal Activity Reporting
    4. Private activity reporting
    5. Support resource assessments, vulnerability studies
    6. Support climate change research and filling data gaps