

# RESOURCES FOR CALIFORNIA'S FUTURE

To meet California's ambitious goals of reducing greenhouse gas (GHG) emissions and safeguarding the state from the impacts of climate change, we must protect and manage natural and working lands - forests, rangelands, wetlands, farmlands and natural ecosystems - to serve as carbon sinks. Forests and other lands can be actively managed to mitigate the threat of climate change while buffering both people and nature from its expected impacts. State and local efforts to manage land for carbon sequestration should work in conjunction with existing plans and programs protecting California's water supply, agricultural lands, and wildlife habitat. These efforts require an integrated approach across public and private land on a landscape scale to ensure enhanced ecosystem services and maximum management flexibility for our climate-constrained future.

## THE VALUE OF NATURAL AND WORKING LANDS

- » **California's land base stores carbon** below ground, in soil and root systems, and above ground, in trees, shrubs, grasses and other plant biomass. When protected from development and managed for reducing GHG emissions, these lands can mitigate emissions from other sources and sectors.
- » **Healthy and resilient natural and working lands provide sustainable public benefits in addition to carbon sequestration**, such as water filtration, improved air quality, temperature moderation through shading, and soil fertility that supports food production. Healthy terrestrial and aquatic systems serve to buffer both humans and nature from the expected impacts of climate change, safeguarding California against persistent drought, extreme heat, increased incidence of wildfire, more destructive storm events and sea level rise.
- » **Conservation of natural and working lands supports sustainable communities** while protecting valuable agricultural and wildland resources and critical wildlife habitat.
- » **Natural and working lands provide jobs, support regional economies and improve quality of life for all California residents.** California's forests, farms and ranches produce food and fiber that is consumed locally and around the world. Natural lands, waterways and parks provide recreational opportunities and support tourism.

## HOW WE GET THERE: ALREADY ON OUR WAY

### Planning

- » The Forest Climate Action Team will publish a **Forest Carbon Plan** in 2016 setting targets, goals, and recommended actions for managing the state's forests to best sequester carbon and safeguard against climate change.
- » A 2015 update to the **State Wildlife Action Plan** will describe ecosystem management for adaptation to climate change.
- » The 2012 **Bioenergy Action Plan** outlines actions to improve utilization of organic biomass for renewable power and transportation fuels in a manner that promotes forest health and grows rural economies.

### Investments

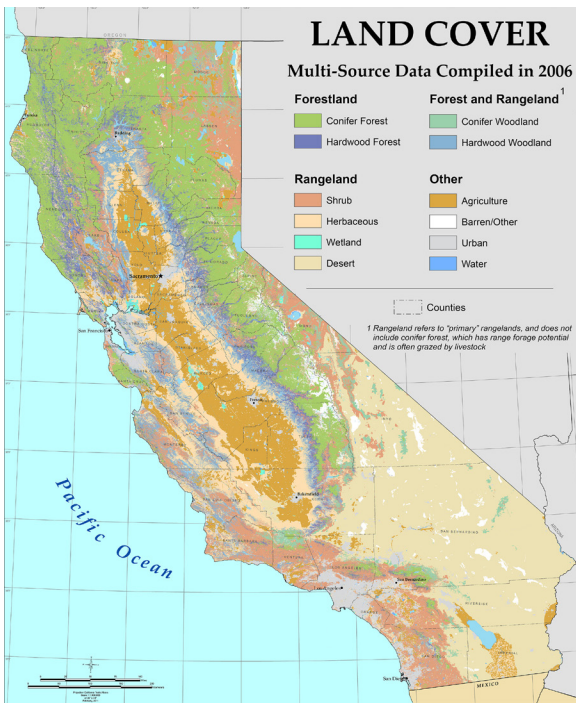
- » **Greenhouse Gas Reduction Fund** grants are funding agricultural and forest land conservation easements, improved forest management, wetland habitat restoration, water efficiency on agricultural operations, dairy digester implementation, agricultural land use planning for conservation and urban forestry. In addition to GHG emission reductions, these grants will provide multiple environmental, social and economic co-benefits.
- » Some of the activities funded through Voter-approved bonds targeting water supply enhancements, habitat restoration and flood management – **Prop. 50 in 2002, Prop. 84 in 2006 and Prop. 1 in 2014** – also promote GHG emission reductions.

» Development and scaling of next-generation bioenergy and biofuels technologies are funded through the California Energy Commission's EPIC program.

**Collaboration**

- » The State is engaged in ongoing efforts to coordinate fire risk mitigation activities with **U.S. Forest Service and local fire departments** to maximize targeted investments.
- » The State's Watershed Improvement Program and the federal Resilient Lands and Waters Initiative are enhancing collaboration for healthy forests at the landscape level.
- » The Administration's inter-agency **Healthy Soils Initiative** promotes food security through soil health, improved climate resilience and agricultural sustainability.

**NATURAL AND WORKING LANDS IN CALIFORNIA**



Source: Fire and Resource Assessment Program (2006)

**GOING FORWARD:  
CREATING A MORE ROBUST NATURAL  
AND WORKING LANDS FRAMEWORK**

**Protect:** Minimizing conversion and managing to preserve the sequestration potential of forests, rangelands, farms, wetlands and riparian systems will be essential.

**Enhance:** We must manage and restore land to increase carbon storage and minimize GHG emissions in a sustainable manner so that the carbon bank is resilient and grows over time, and engage with local communities and private landowners to disseminate best practices to improve sequestration rates on agricultural, rangeland and forest lands; restore wetlands and other natural systems; and reduce the risk of wildfire.

**Innovate:** We will seek synergies that optimize contributions from natural and working lands while sustaining lands and rural economies. Research and development for appropriate bioenergy, food crop, water system and waste management technologies and product manufacturing that serve to support sustainable resource management will be key.

**Nature's Benefits in the City:** Increasing urban forest canopy in urban areas generates shade for improved building energy efficiency and makes alternative transportation methods such as walking and bicycling more attractive. Other green urban infrastructure solutions reduce energy use, improve water system efficiencies, and make urbanized areas more resilient to climate change.

**Land Use Planning and Sustainable Communities:** We can improve conservation outcomes and land management at the local and regional scales through spatial data sharing, collaborative programs, direct investment, and improved methods of quantifying the value of ecosystem services.

**Mapping and Data Development:** Mapping the existing and potential carbon inventory represented by natural and working lands will inform planning for both climate change mitigation and adaptation. We must also integrate data on priority habitat, agricultural conservation and watershed protection and inform the public so that land use, infrastructure and conservation planning processes at multiple scales are equipped with uniform information for decision-making.