The Status of Forests and Forestry in California: Forest Inventory and Management

Synopsis of 2015 FRAP Assessment Findings

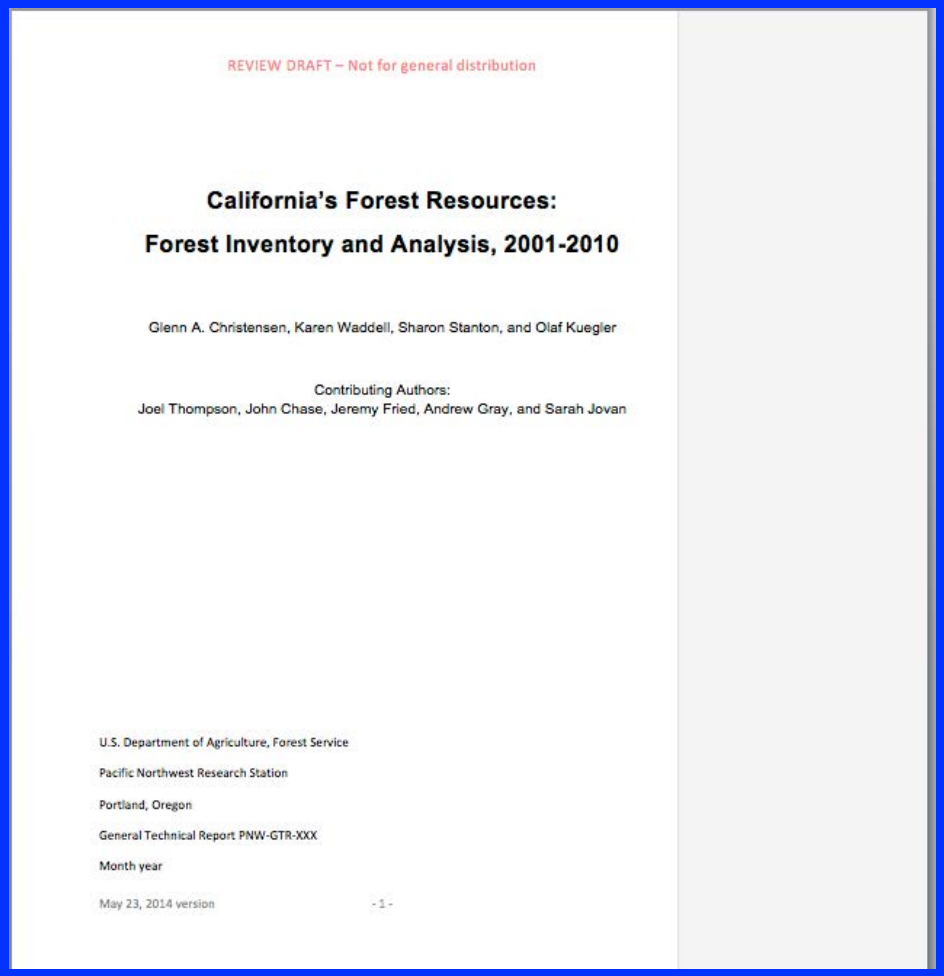
Presentation Outline

- Commercial Forest Resources
- Forest Ownership
- Harvest Versus Growth by Ownership
- Timber Harvest Trends
- The Management Landscape
- Third Party Certification of Forest Management
- Landowner Assistance

Data Sources

- The U.S. Forest Service Forest Inventory and Analysis Program
  - Results obtained from sampling 2001-2010 updated to 2013
- CAL FIRE Forest Practices Data Base
  - Data compiled on harvesting between 1997-2014
  - Data on regulatory initiatives
- Websites of Third Party Certification Organizations
  - Supplemented by interviews with certification practitioners and certified companies

FIA is the Comprehensive Forest Inventory for the US



REVIEW DRAFT – Not for general distribution

California's Forest Resources:

Forest Inventory and Analysis, 2001-2010

Glenn A. Christensen, Karen Waddell, Sharon Stanton, and Olaf Kuegler

Contributing Authors:
Joel Thompson, John Chase, Jeremy Fried, Andrew Gray, and Sarah Jovan

U.S. Department of Agriculture, Forest Service

Pacific Northwest Research Station

Portland, Oregon

General Technical Report PNW-GTR-XXX

Month year

May 23, 2014 version - 1 -

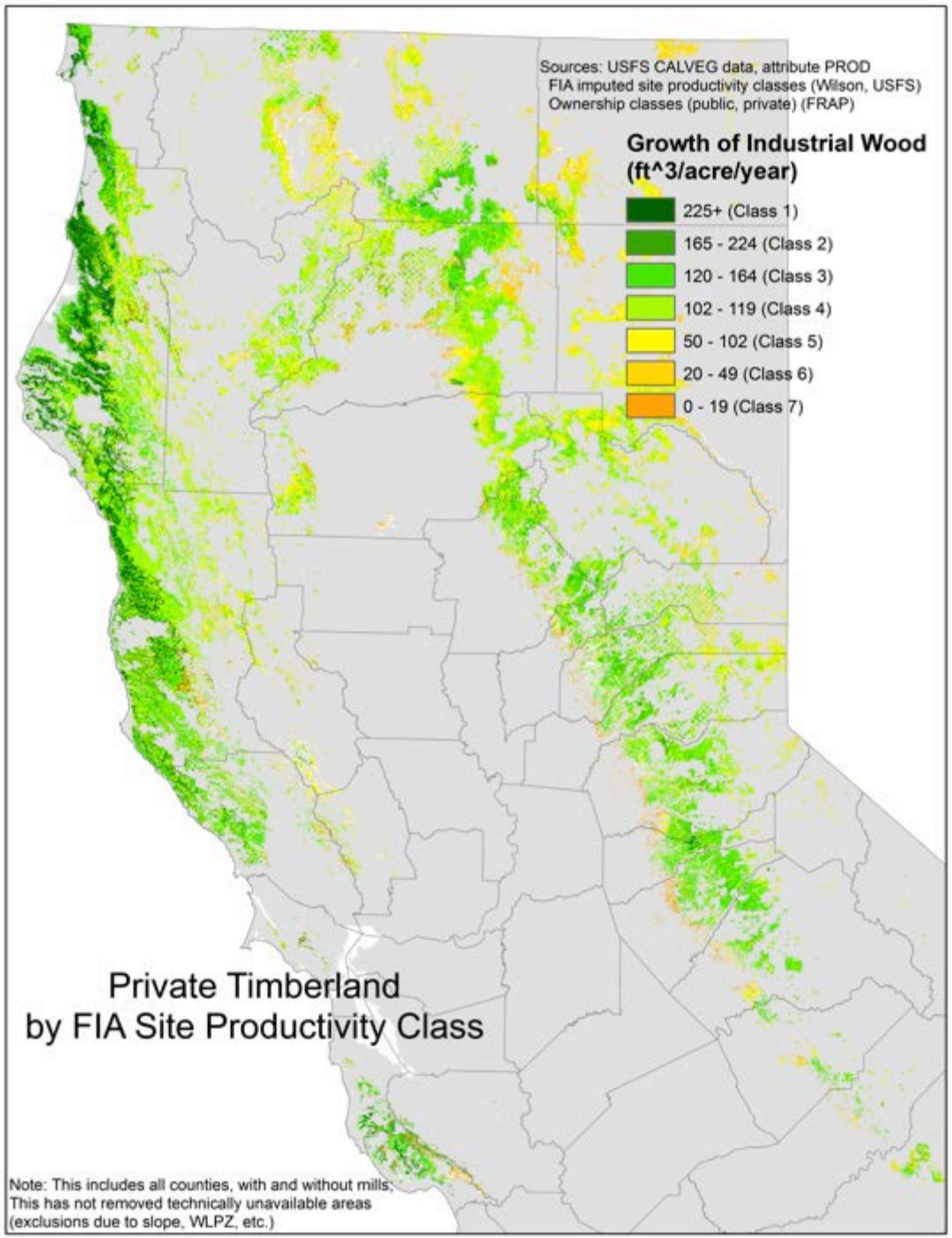
Distribution of FIA Plots in California's Forested Landscape

Forestland versus Timberland

- Forestland is generally defined as land with 10 percent canopy cover of trees of any species
- Timberland is defined on the basis of productivity. FIA defines it as land capable of producing 20 cubic feet/acre/year of fiber.
- Timberland may include commercial and non-commercial tree species.

The majority of the most productive private timberland is located in the redwood region and is in industrial ownership.

Note: all maps shown here will be available at the FRAP website after publication of the 2015 Assessment.



General Statistics

Forest and Timberland by Ownership and Status (thousands of acres)

Ownership	Unreserved Forests			Reserves	Grand Total
	Timberland	Other Forest	Total		
Federal*	9300	3700	13000	5700	18700
Other Public**	100	200	300	800	1100
Private/Tribal	7400	5200	12600	0***	12600
All	16800	9100	25900	6500	32400

*Includes National Forests, National Parks, Bureau of Land Management and other federal agencies

** Includes state and local government and special districts

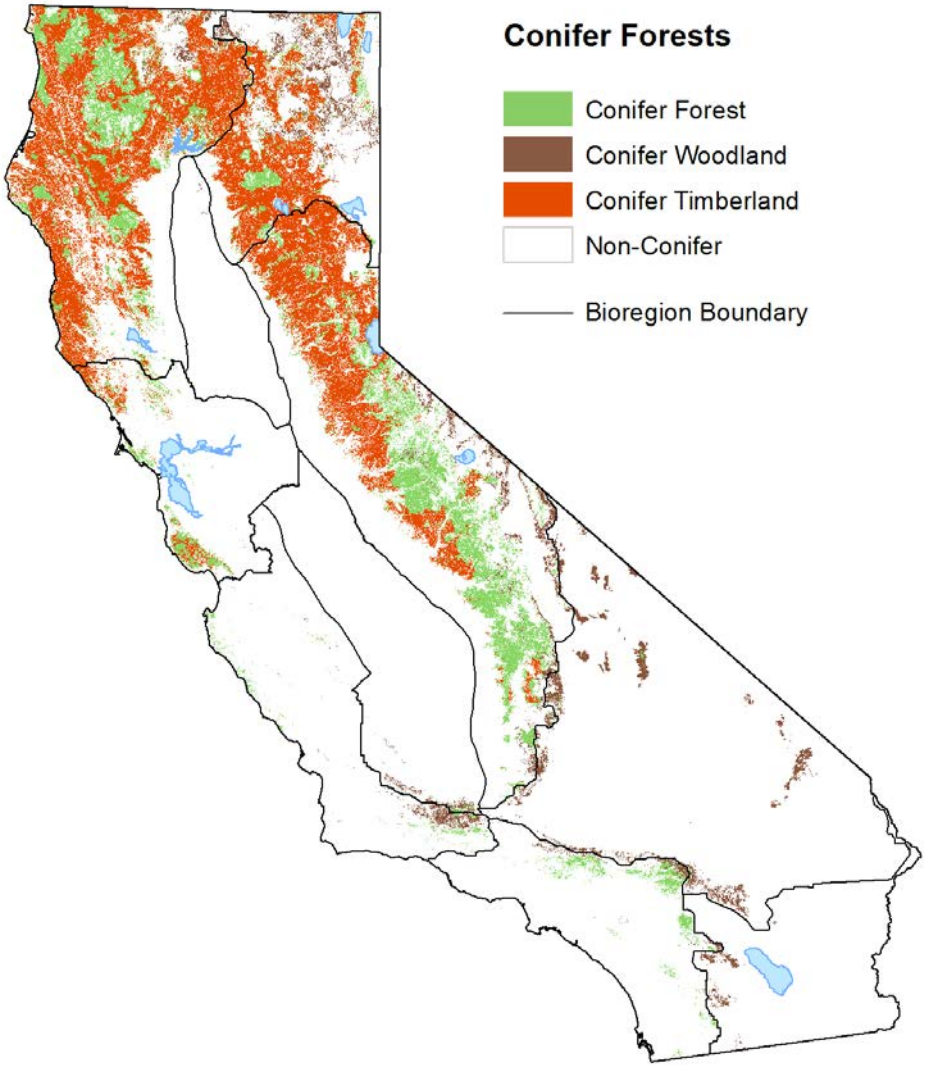
***Although reserves may not be formally designated on private or tribal lands, in many cases areas set-aside from timber management such as riparian zones, old-growth habitats and steep, inaccessible lands are de facto reserves.

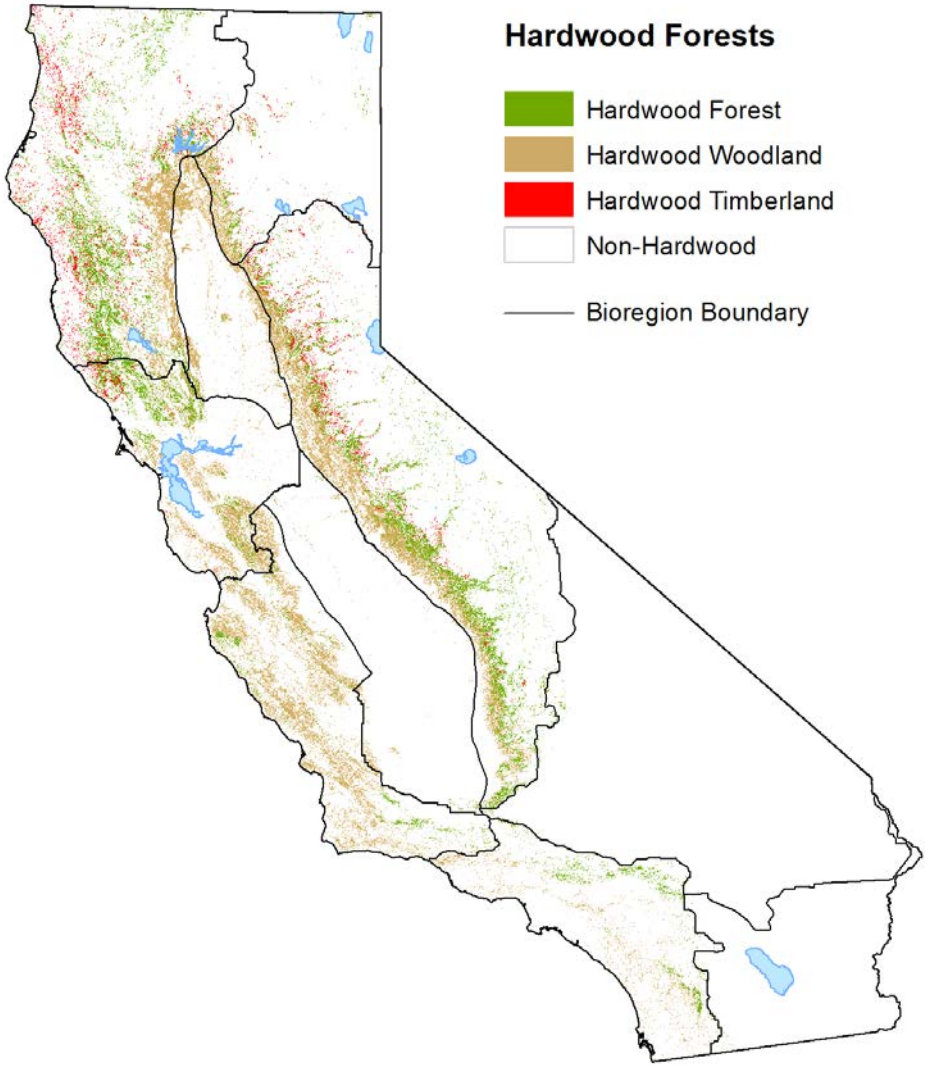
Some Details

- Public agencies own 17 million acres of timberland and private owners primarily engaged in timber production own about 3.9 million acres of timberland.
- Over 30 percent of public timberland is not available for timber harvest.
- Non-industrial owners own about 3.5 million acres of timberland.
- The area of “working forest” owned and managed by conservation organizations and land trusts is increasing.

Some Details (cont.)

- Commercial conifer forests constitute about 12 million acres of timberland.
- Hardwood forest types cover about 13 million acres of which 4.7 million acres is classed as timberland.
- Net tree volume exceeds 100 billion board feet, two thirds of which is on public land.
- Public land has greater percentages of volume in larger diameter classes than private land.

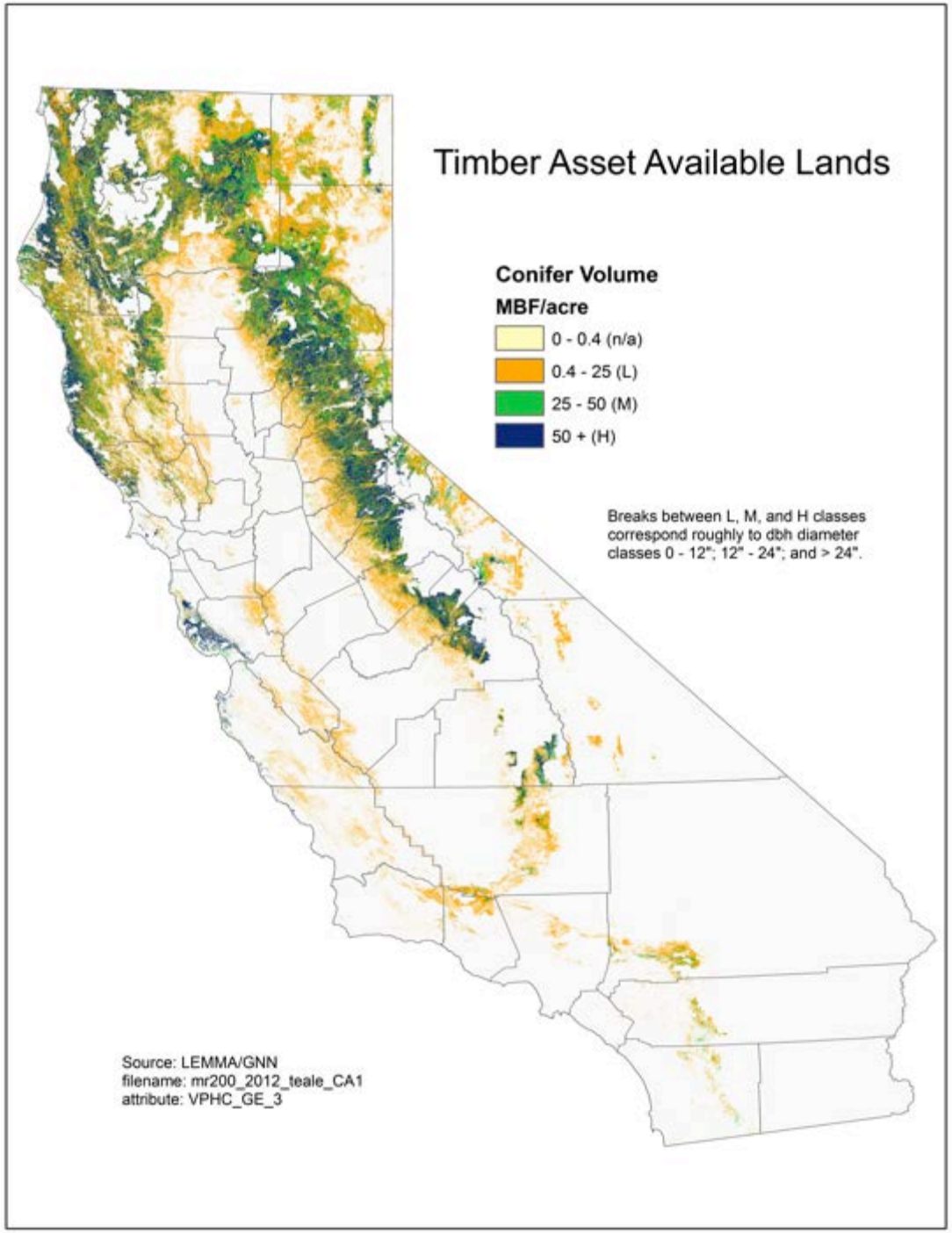




Conifer forest: <20 cubic ft./acre/year

Conifer woodland: non-commercial e.g., juniper

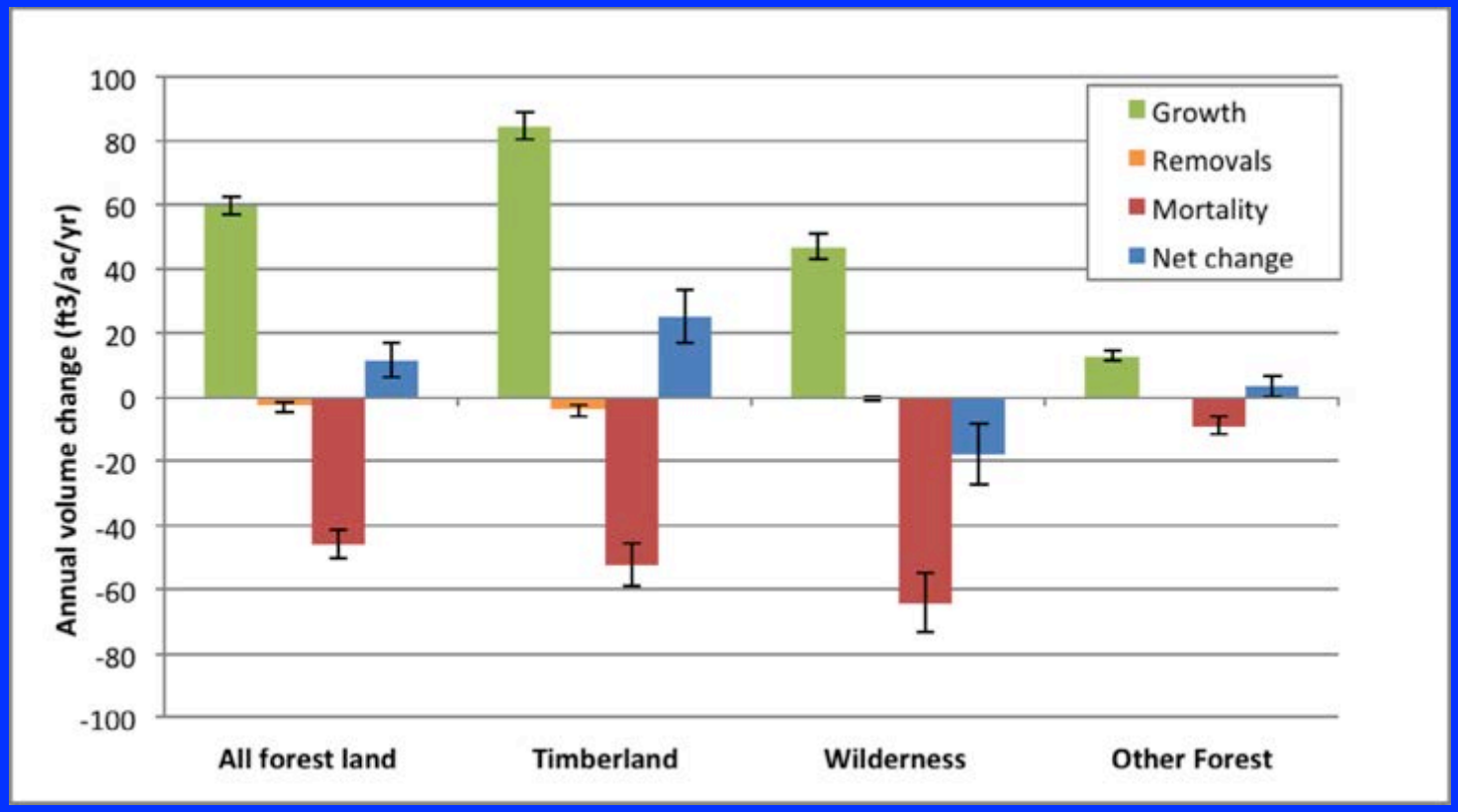
Site productivity and existing timber inventory are not necessarily positively correlated i.e., potential production is not being achieved, particularly in some forest types. This represents a management opportunity.



Harvest, Mortality and Growth

National Forests – removals mean harvest

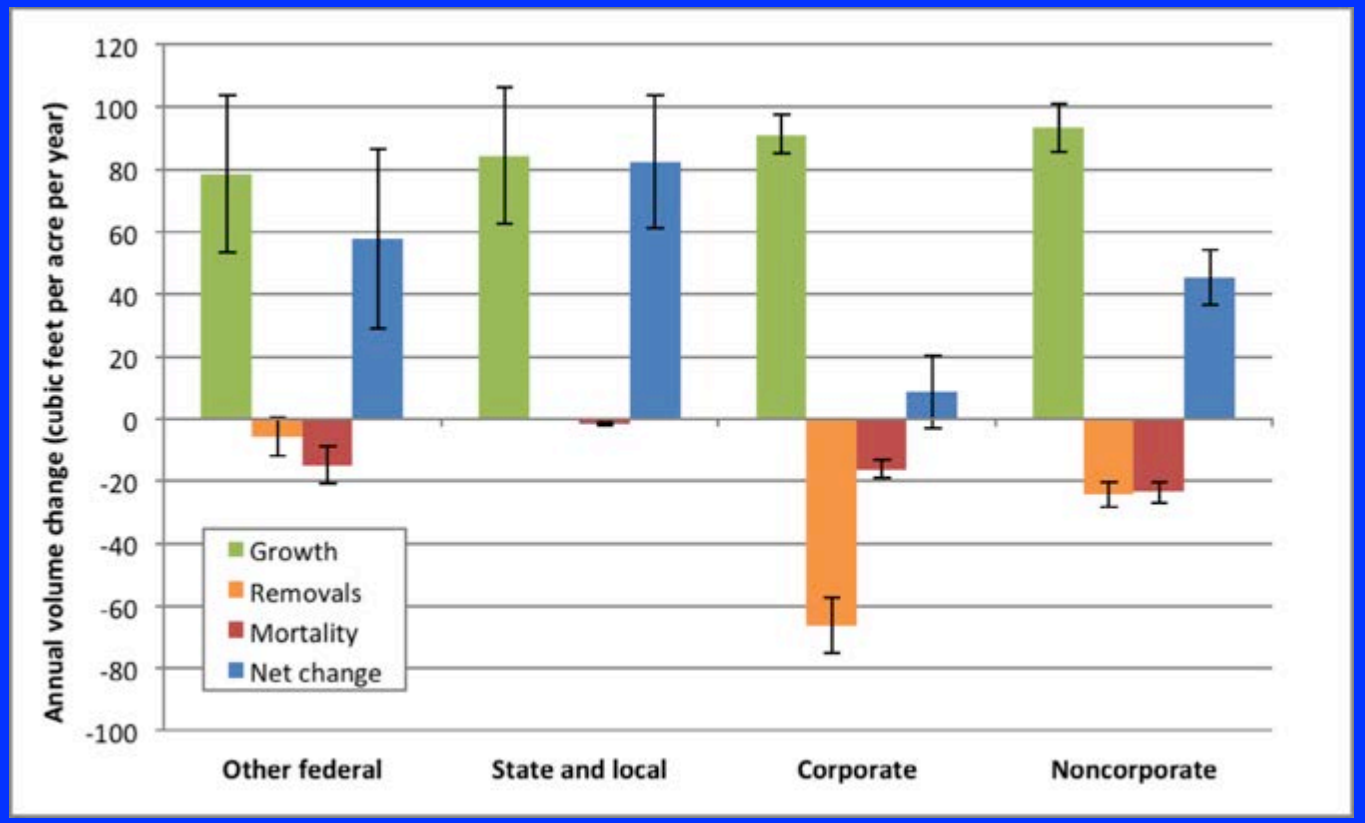
Data for 2001-2006 and 2006-2010



Harvest, Mortality, Growth (cont.)

Private and other public lands (timberland only)

Data for 1991-1994 and 2007-2010



Forestland in Need of Restoration

- As of 2013, there were over 2 million acres of commercial timberland that were either non-stocked or poorly stocked.
- At least another million acres of forestland (not just timberland) were excessively stocked and at risk of disease, insect attack or wildfire.
- In total, over 2.5 million acres of timberland in need of restoration were sites naturally supporting commercial conifer species.
- All of this based on data collected as much as fifteen years ago. Things have changed since then!

Summary

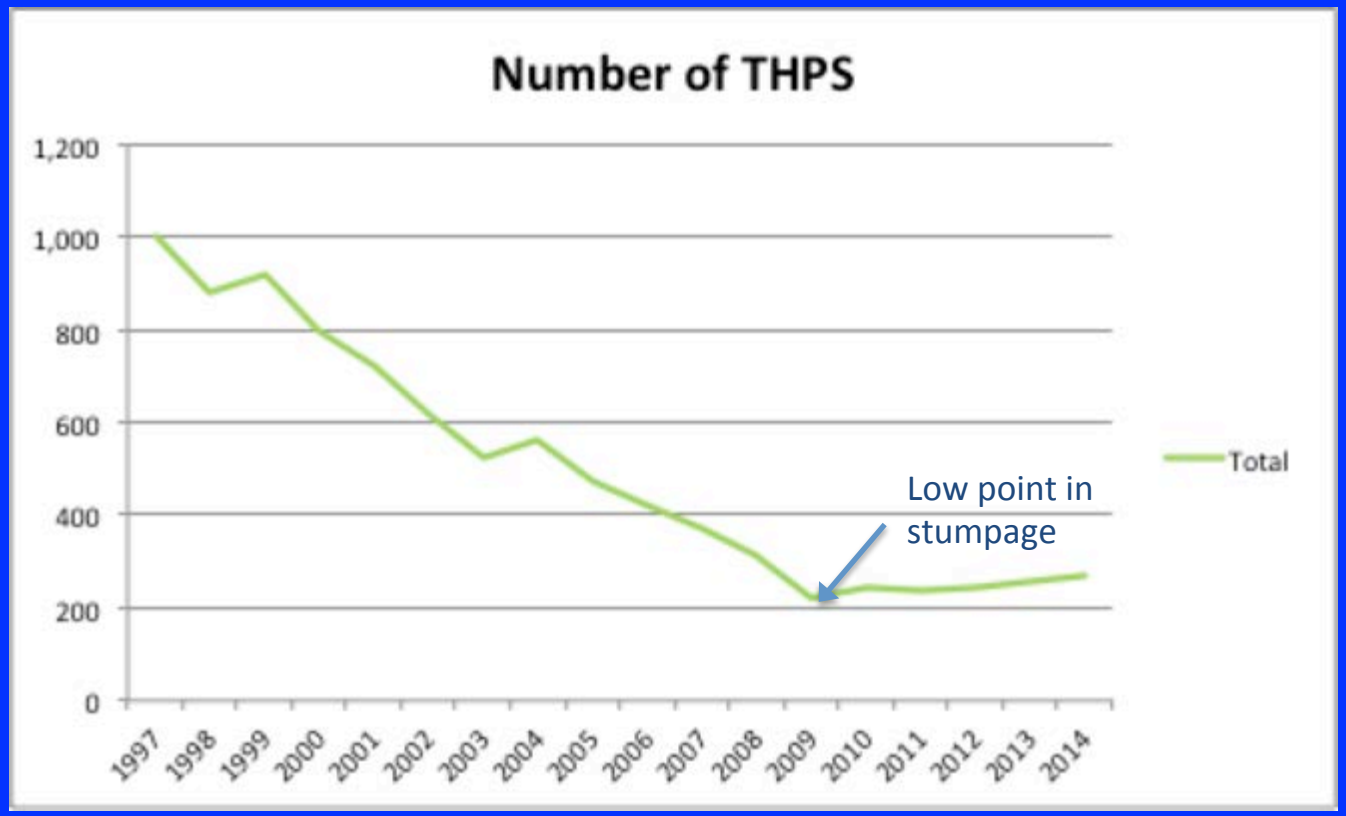
- The amount of forestland has not changed over the past decade or more i.e., land conversion is relatively minor.
  - Ownership patterns have shifted somewhat.
  - The amount of land in reserve status has increased.
- FIA data indicates that potential site productivity is not being realized on a significant amount of land.
  - In addition, a substantial area of forest is susceptible to wildfire, insects and disease.
  - The long term drought effects are not reflected in the FIA data.
- Data indicate that harvest and mortality do not exceed growth on any land type except National Forest wilderness.
  - Effects of extensive mortality and recent wildfires are not reflected in these data.
- The amount of forest and timberland in need of restoration continues to grow.

Patterns of Timber Harvest

- Timber production in the state has declined substantially since the late ‘80’s and early ‘90’s.
- Between 1990 and 2013 the volume of timber harvested declined from 4 billion board feet/year to 1.6 billion board feet/year.
- The decline in timber production is largely due to reduced harvesting on National Forests.
- Fluctuations in timber values and increases in harvesting costs have also had an impact on production.

Timber Harvest Trends

Timber Harvest Statistics 1997-2014
Total THPs – 9067
Total NTMP Notices of Harvest - 2174



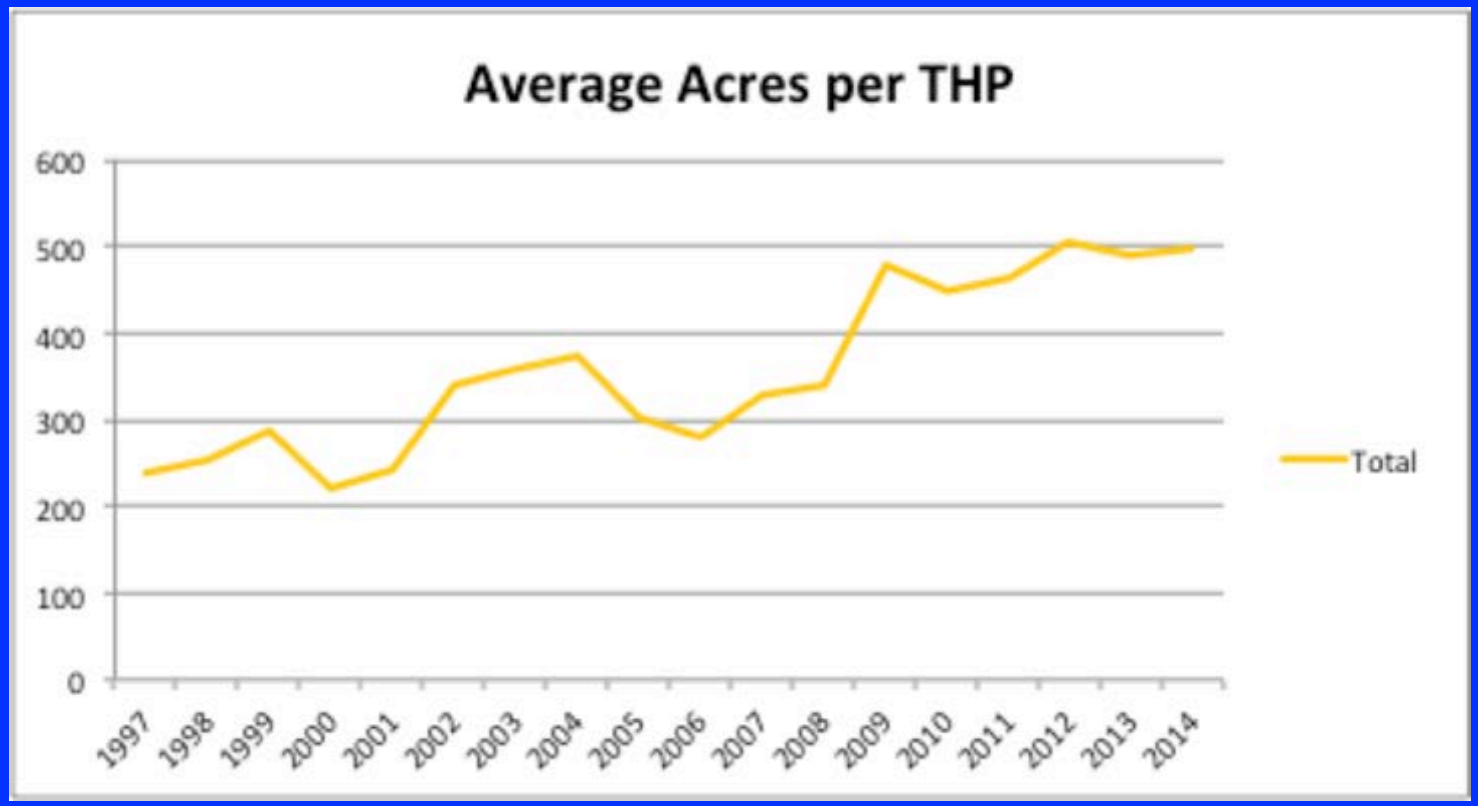
Timber Harvest Trends (cont.)

Total Acres Harvested: 1997-2014 - 2.9 million acres

1997 – 238 thousand acres

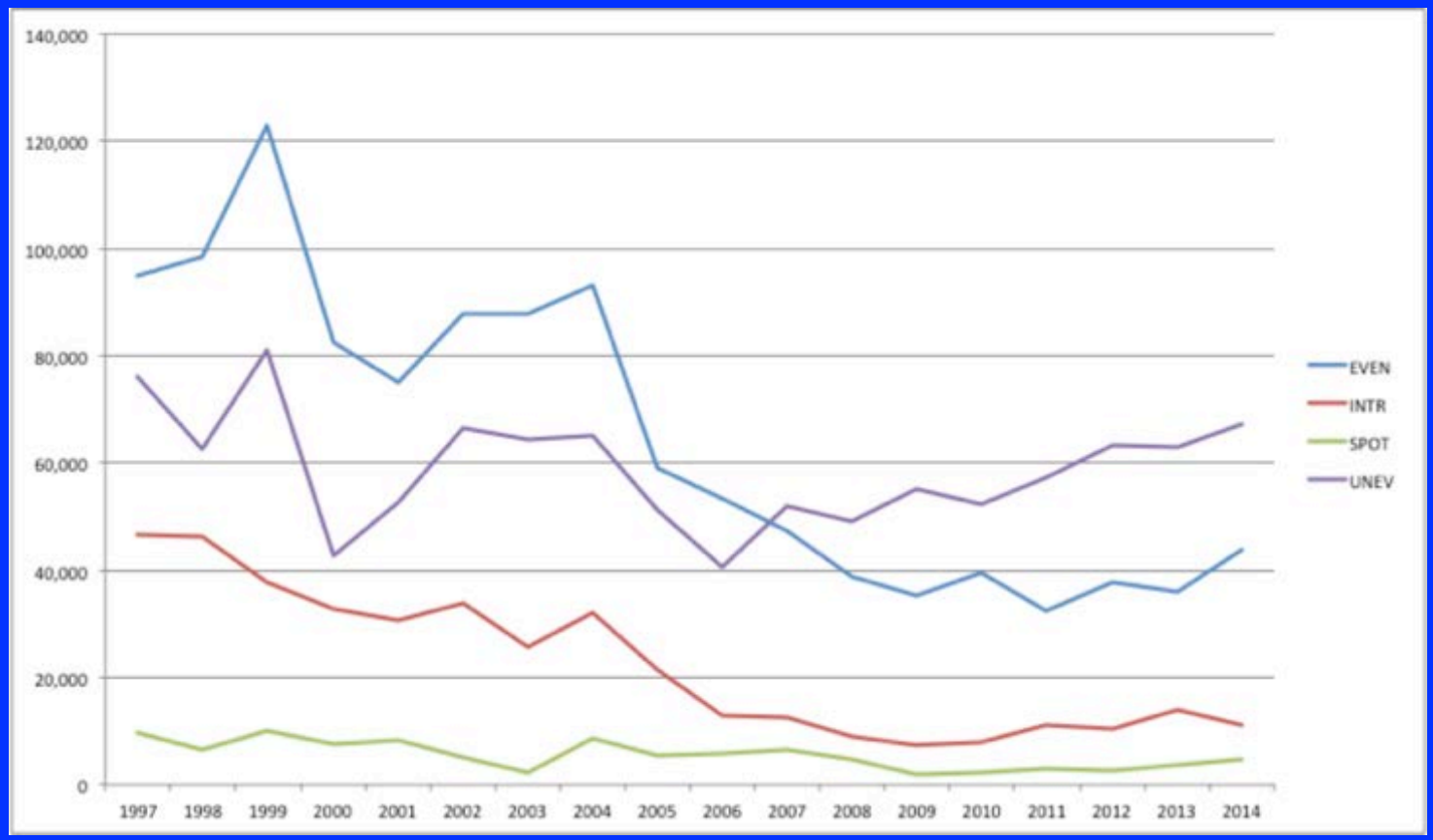
2014 – 135 thousand acres

Average Size of Timber Harvest Plans, 1997-2014



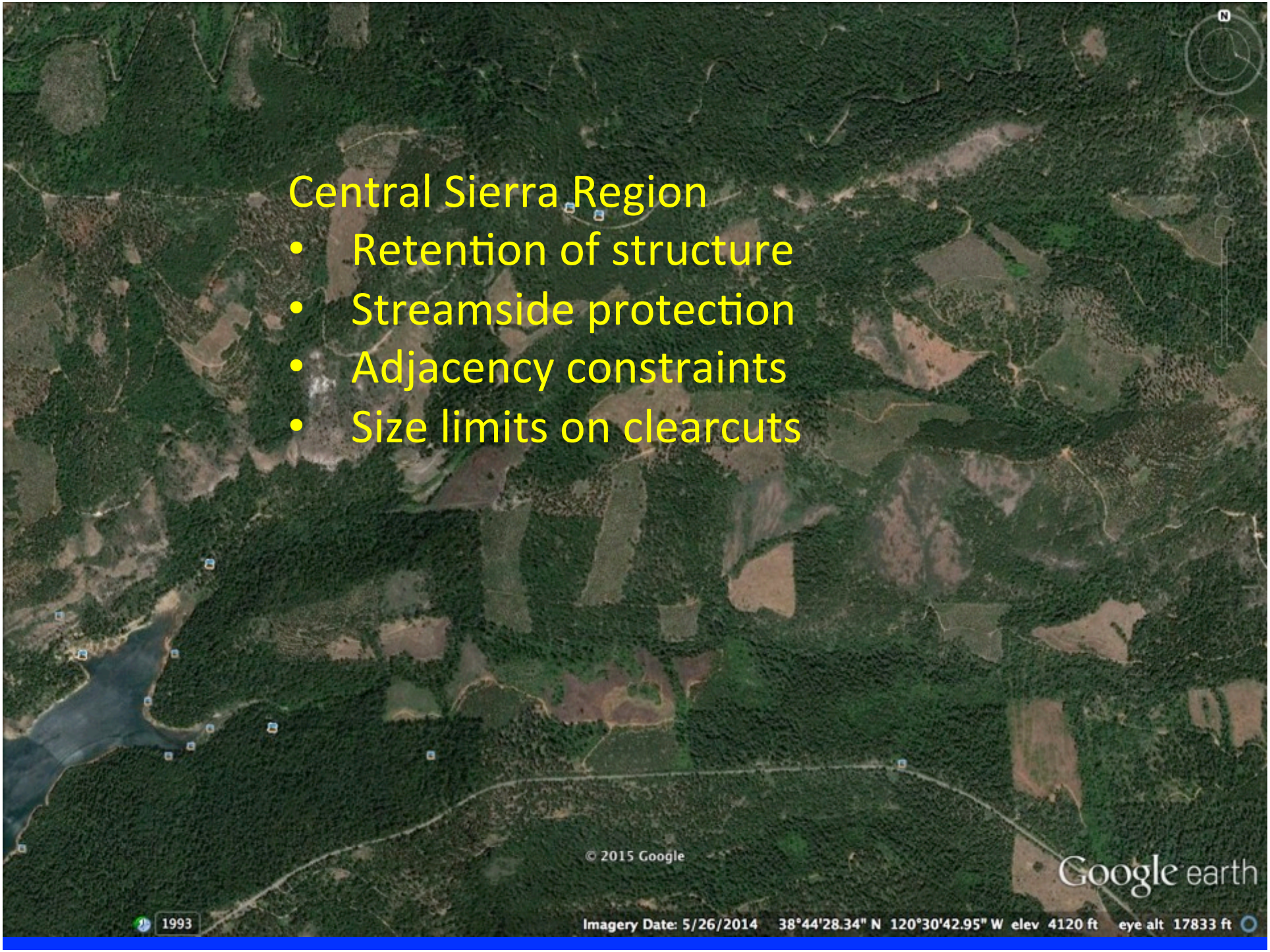
Timber Harvest Trends (cont.)

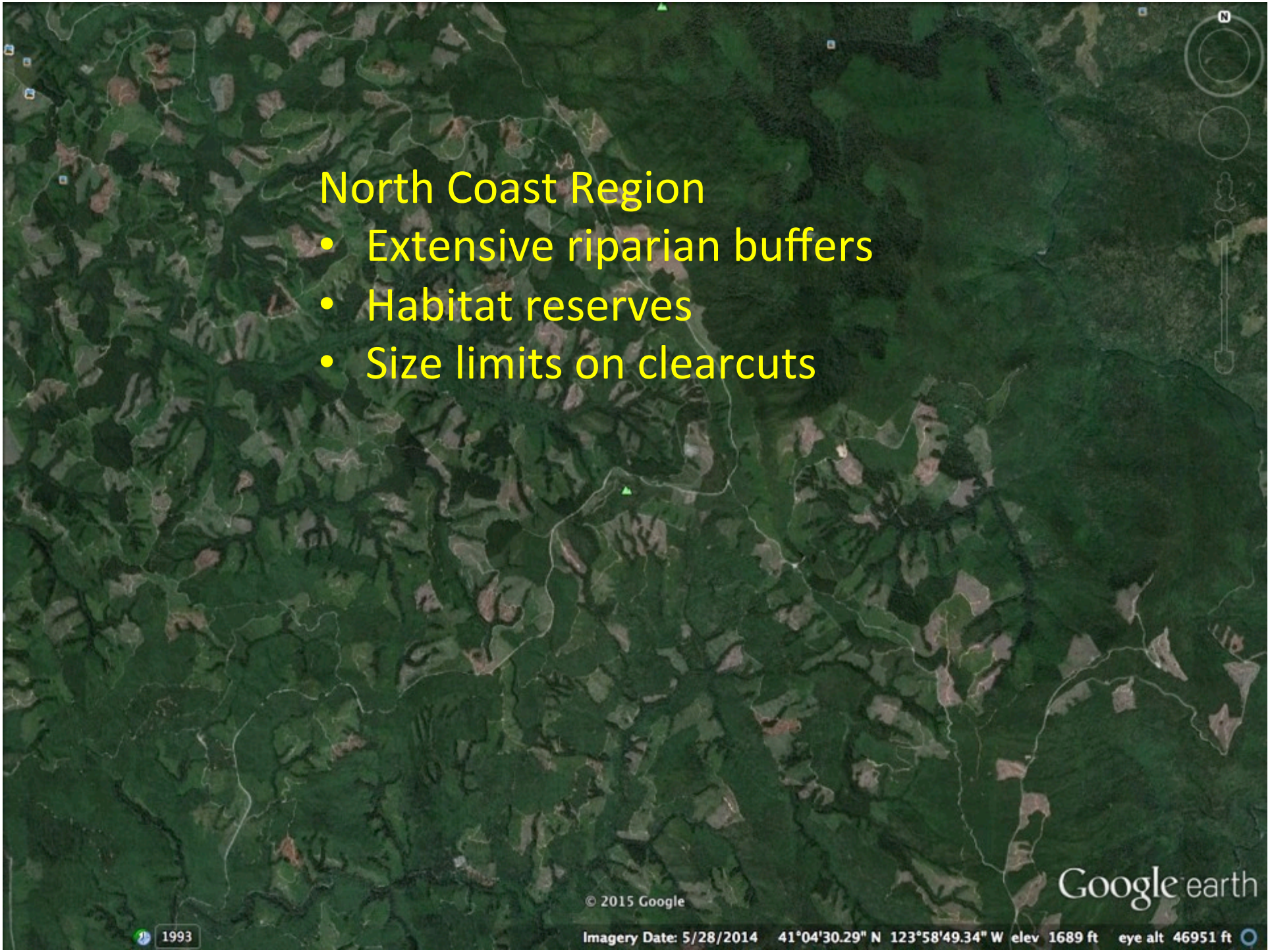
Acres Harvested by Silvicultural Prescription, 1997-2014
Average 1997 – 42% even-aged, 33% selection, 25% other
Average 2014 – 35% even-aged, 53% selection, 12% other



Clearcutting: Still Controversial

Practices Have Changed Over Time


Central Sierra Region
• Retention of structure
• Streamside protection
• Adjacency constraints
• Size limits on clearcuts
© 2015 Google
Google earth
1993
Imagery Date: 5/26/2014 38°44'28.34" N 120°30'42.95" W elev 4120 ft eye alt 17833 ft


North Coast Region
• Extensive riparian buffers
• Habitat reserves
• Size limits on clearcuts
© 2015 Google
Google earth
1993
Imagery Date: 5/28/2014 41°04'30.29" N 123°58'49.34" W elev 1689 ft eye alt 46951 ft

What are Changes in Harvesting Methods Attributed to?

- Increased regulatory requirements to protect wildlife, fisheries and water quality, especially in the coastal region.
- Changes in management regimes of some major landowners.
- Voluntary participation in regulatory initiatives and certification programs.

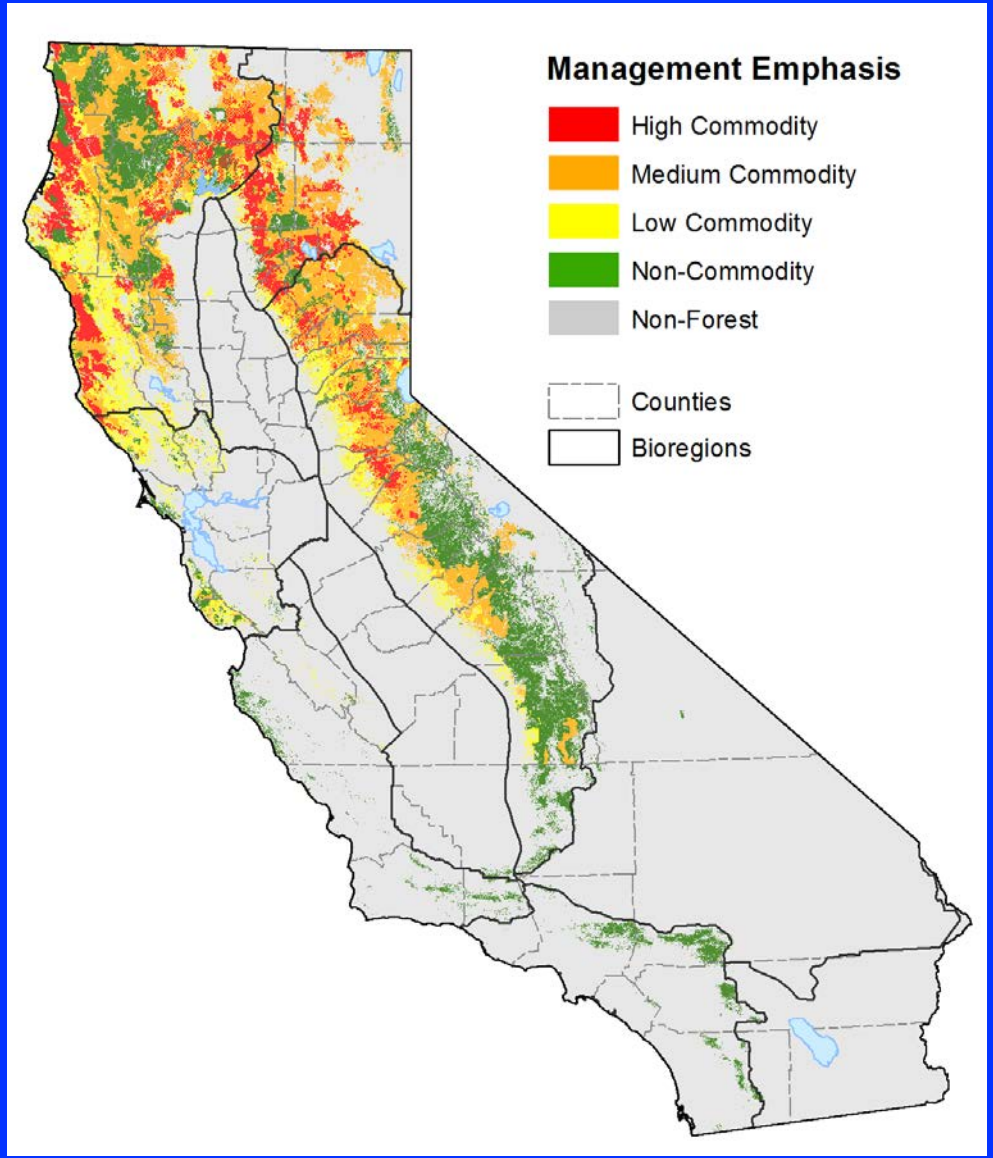
Summary

- The numbers of THPs filed and total area harvested have declined over the past 17 years, consistent with a decline in timber production.
- The average sizes of THPs have increased apparently due in part to regulatory costs.
- Harvesting with un-even-aged methods has increased and the area harvested with even-aged methods has declined over time.
- Even-aged harvesting results have changed, particularly in the coastal region.

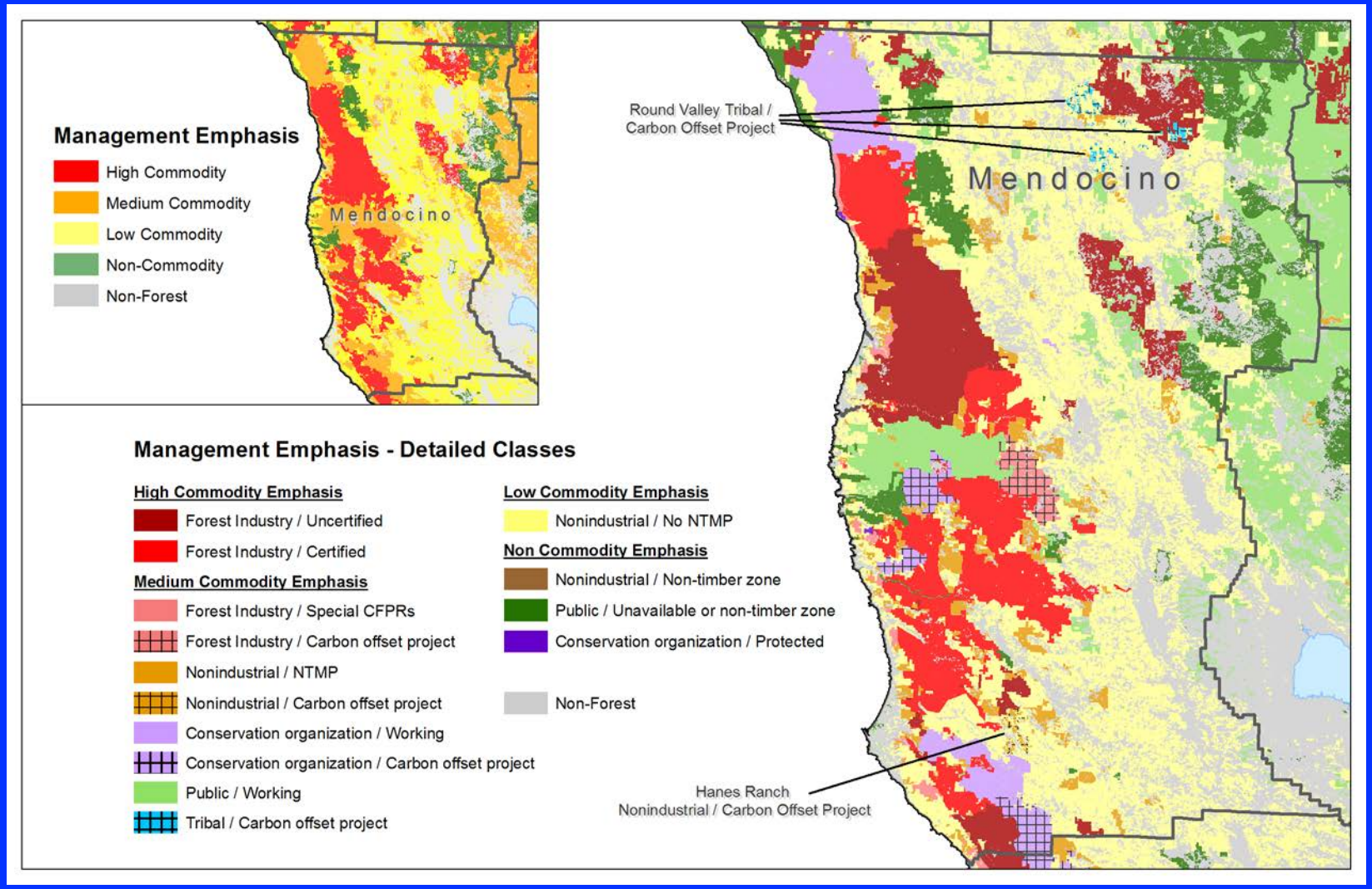
The Management Landscape

Defined on the Basis of Commodity Emphasis

- High: forest industry
- Medium: timber production one of multiple objectives
- Low: limited evidence of timber production emphasis
- Non-commodity: reserves and non-commercial forest types



A Mosaic of Alternative Management



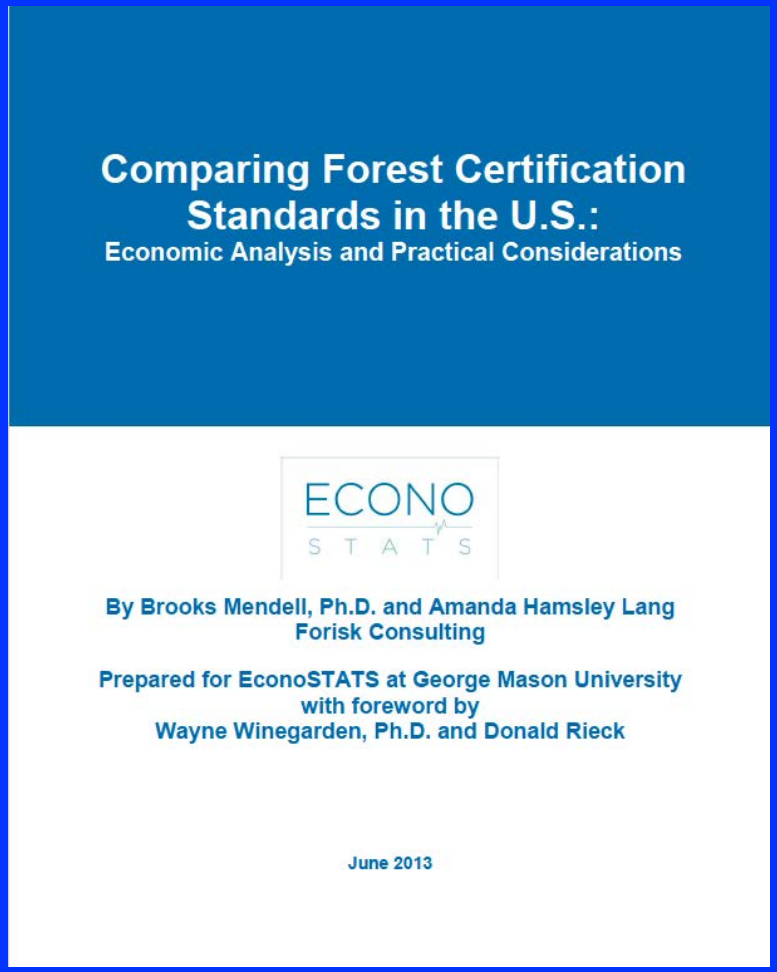
Mandatory and Voluntary Regulatory Initiatives

- Compliance with sustained yield regulations: Sustained Yield Plans (350 thousand acres) and "Option a" (3.9 million acres)
- Non-industrial Timber Management Plans: 772 covering 319 thousand acres
- Program Timber Environmental Impact Reports: four covering 229 thousand acres
- HCP/NCCP: six covering 748 thousand acres
- Some properties have more than one initiative in place

Third Party Certification

- Forest Stewardship Council, Sustainable Forestry Initiative, American Tree Farm System plus Air Resources Board Carbon Offset program
- FSC: 1.5 million acres; SFI: 2 million acres; TFS: 455 thousand acres
- California ARB Projects: six compliance projects covering 48.8 thousand acres and five "early action" projects covering 59 thousand acres.
- Virtually all lands with high and moderate commodity emphasis are certified by third parties for sustainable management.

Certification Standards Vary



Comparing Forest Certification Standards in the U.S.:
Economic Analysis and Practical Considerations

ECONO STATS

By Brooks Mendell, Ph.D. and Amanda Hamsley Lang
Forisk Consulting

Prepared for EconoSTATS at George Mason University
with foreword by
Wayne Winegarden, Ph.D. and Donald Rieck

June 2013

A COMPARISON OF CALIFORNIA FOREST PRACTICE RULES AND TWO FOREST CERTIFICATION SYSTEMS

April 2003

Christopher A. Dicus
Assistant Professor
Natural Resources Management Department
California Polytechnic State University
San Luis Obispo, CA

Kenneth Delfino
Executive Director
Urban Forest Ecosystems Institute
California Polytechnic State University
San Luis Obispo, CA

This report was funded through a grant
from the California Forest Products Commission (www.calforests.org)

CAL POLY

UFEI

California Forest Products Commission

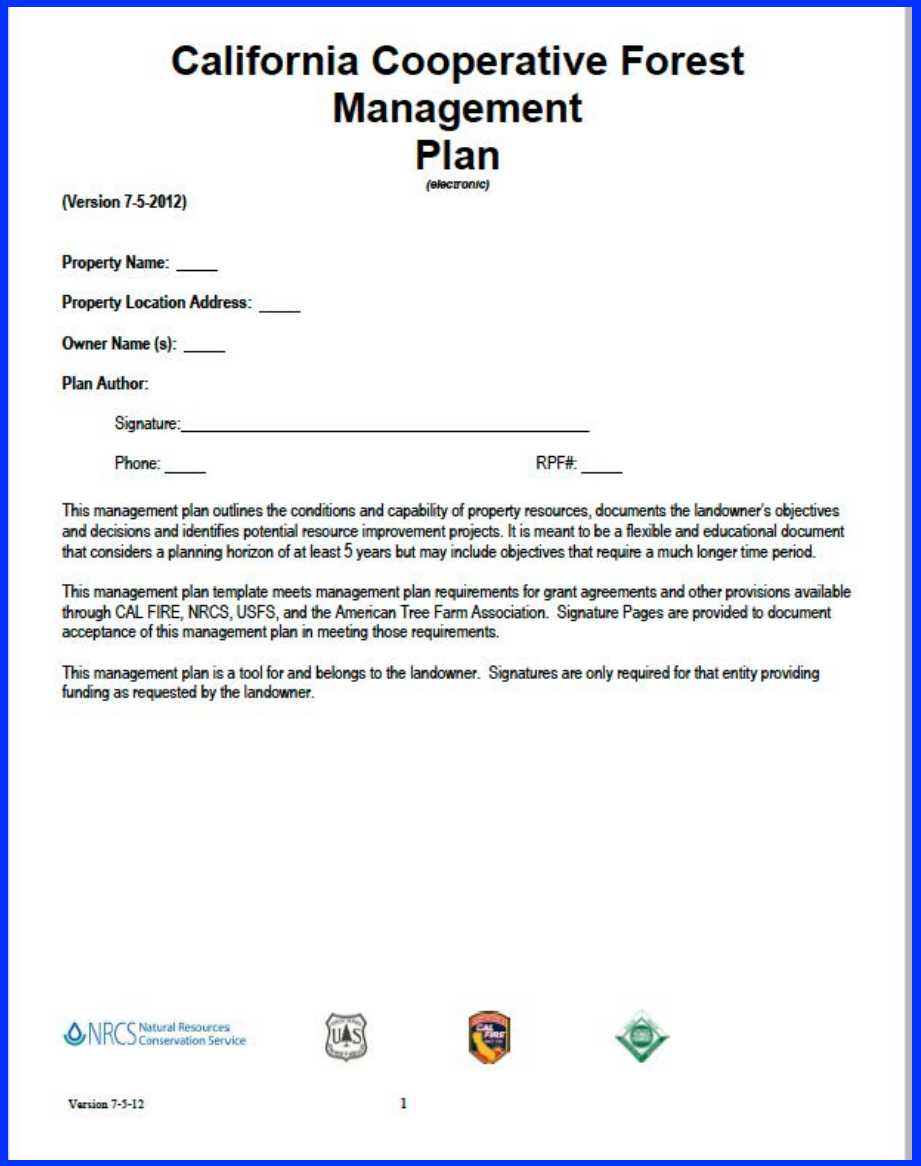
Summary

- Of the 12.6 million acres of private forestland, over one third has demonstrable regulatory evidence of sustainable management.
- The management landscape is complex, consisting of a mosaic of management objectives potentially creating obstacles to coordinated resource management.
- Over 4 million acres of forestland is certified by third parties. There is some controversy over the comparative rigor of the certification process.
- Over 8 million acres of forestland is owned by entities that show limited evidence of active management.

Landowner Assistance

Major Providers

- University of California Cooperative Extension
- Natural Resource Conservation Service
- CAL FIRE
- Resource Conservation Districts



California Cooperative Forest Management Plan

(electronic)

(Version 7-5-2012)

Property Name: ____

Property Location Address: ____

Owner Name (s): ____

Plan Author:

Signature:_____

Phone: ____ RPF#: ____

This management plan outlines the conditions and capability of property resources, documents the landowner's objectives and decisions and identifies potential resource improvement projects. It is meant to be a flexible and educational document that considers a planning horizon of at least 5 years but may include objectives that require a much longer time period.

This management plan template meets management plan requirements for grant agreements and other provisions available through CAL FIRE, NRCS, USFS, and the American Tree Farm Association. Signature Pages are provided to document acceptance of this management plan in meeting those requirements.

This management plan is a tool for and belongs to the landowner. Signatures are only required for that entity providing funding as requested by the landowner.

NRCS Natural Resources Conservation Service

Version 7-5-12 1

California Forest Improvement Program (CFIP)

- Historically provided funding to do forest management to enhance timber productivity.
- Emphasis has shifted to fuel reduction and management plans.
- Between 2008-2014 147 projects were funded covering nearly 9000 acres.
- Anticipated funding for 2016 is $3.465 million

California Forest Legacy Program

- Provides funding to acquire working forests and conservation easements.
- A national program in which California competes annually for congressionally appropriated funds.
- To date 22 projects on nearly 96 thousand acres have been secured through the program, utilizing over $15 million in federal funds.

NRCS Programs

Environmental Quality Incentives Program (EQIP)

- Provides funding for forest treatments e.g., thinning to reduce fuel loads and response to catastrophic wildfire.
- Between 2010-2014 624 forest treatment projects affecting 2.3 million acres were funded at a cost of over $13.6 million.
- Between 2013-2014 28 projects on 26 thousand acres were funded to address post-wildfire erosion control and recovery.

NRCS Programs (cont.)

Healthy Forests Reserve Program

- Provides funding for acquiring conservation easements in most states.
- In California, the program has been used to fund projects benefitting anadromous fish recovery on north coast Forest Legacy parcels.
- Between 2010-2013 11 projects affecting 23 thousand acres were implemented at a cost of $969 thousand.
- Future funding for the program is uncertain in part because of the emergence of a new program called the Regional Conservation Partnership Program.

Other Programs

- Several state and federal agencies have programs aimed at forest land but they are not usually accessible to private landowners.
- Sierra Nevada Conservancy is an example. With funding from Proposition 84 it distributed over $50 million to more than 300 projects in the Sierra Nevada sponsored by public agencies and non-profit groups.
- The recent approval of Proposition 1 provides a new source of grant funding to the Conservancy and other agencies.

New Programs

- Cal Fire Greenhouse Gas Reduction Fund – Forest Management Projects (GGRF). Grants were awarded for 2014-2015. No funding has been allocated for 2016.
- Cal Fire State Responsibility Area grants to reduce fire hazard. In 2015-16 there is $5 million available to public agencies and non-profit groups.
- AB 1492 Timber Regulation and Forest Restoration Fund. This fund was created by the imposition of a tax on lumber. Proceeds are used to improve the timber harvest plan review process and for forest and watershed restoration projects. Currently, grant funds have been allocated to the Fisheries Restoration Grant Program.

Summary

- Private landowners, public agencies and non-profit groups can access technical and financial assistance through CAL FIRE, NRCS and other organizations.
- Funding to private landowners is primarily available through CFIP and EQIP.
- Some new programs have emerged to increase financial assistance to forest landowners. In the case of the GGRF, which represents a potential large source of assistance, funding has not been allocated for 2016.

Questions?

rrharrisconsulting@gmail.com

707 685-5508