

TIMOTHY A. ROBARDS

Curriculum Vitae



EDUCATION

- Ph.D. University of California, Berkeley,
Environmental Science, Policy and Management, 2009
M.S. University of California, Berkeley, Forest Biometrics, 1988
B.S.F. Purdue University, Forest Management, 1985

Honoraries: Xi Sigma Pi (forestry), Ceres (agriculture)

PROFESSIONAL EXPERIENCE

Staff Chief – Forest Health, Wood Products & Bioenergy

California Department of Forestry and Fire Protection, Climate & Energy Program:
September 2020 – Present

- Administer the Forest Health Program including CCI grants.
- Administer the new Wood Products & Bioenergy Program including workforce development planning and grants.

Wood Products & Bioenergy Administrator (Forester III)

California Department of Forestry and Fire Protection, Climate & Energy Program:
April 2020 – August 2020

- Program manager for new Wood Products & Bioenergy Program.

Forest Health Program Manager (Forester II, Reinstated to State Service)

California Department of Forestry and Fire Protection, Climate & Energy Program:
November 2018 – April 2020

- Program manager for California Climate Investments Forest Health Grants.
- California forest products industry development.

Owner

TYLD Corp: May 2018 – October 2018

- Forestry and Biometrics Consulting

Associate Director, Investments and Operations

New Forests, Inc: July 2016 – April 2018

- Company strategic development for U.S. operations.
- Investment fund raising with pension, sovereign wealth, and other funds; listed key person.
- Supervise team of foresters and analysts.
- Manage variety of third party contractors including inventory, analytics, and economics.

- Timberland Acquisitions, U.S. Forest Management Operations and Carbon Projects.

Manager, Investments and Operations

New Forests, Inc: March 2013 – June 2016

- U.S. Forest Management operations manager.
- Timberland Acquisitions analytics and due diligence.
- Quantitative analyst on forest carbon project assessments and development.
- Timberland and forest carbon policy development.

Principal / Chief Forester

Spatial Informatics Group, LLC: July 2010 – February 2013

- Forestry and Forest Carbon Program Manager.
- Forest Biometrician/Analyst on carbon, biomass energy and timber acquisition projects in the United States and South/Central America.

Forest Biometrician (Forester II / FRAP Assistant Program Manager)

California Department of Forestry and Fire Protection, Fire and Resources Assessment Program (FRAP): November 2007 – June 2010

- Assessment of California forest and rangelands to meet state and Farm Bill requirements.
- Climate change analyses to meet the objectives of AB32 and the Western Climate Initiative.
- Assist program manager with management and supervision duties.
- Forest protocol development with the Climate Action Reserve.
- Inventory and program analysis for statewide urban forestry program.
- Manage damage assessment teams on large fires with significant structure loss.

State Forests Research Manager (Forester II / Division Chief)

California Department of Forestry and Fire Protection: September 1999 - November 2007

- Administer competitive research grants program of \$600,000 per year.
- Strategic planning for research and outreach program.
- Research infrastructure development including online information systems. Successful completion of USDA Forest Service Stewardship Grant (\$68,000).
- Principal investigator for carbon sequestration project (California Energy Commission grant for \$200,000).
- Applied research on forest growth, regeneration, measurements, and climate change.

State Forests Program Manager (Acting Deputy Chief)

California Department of Forestry and Fire Protection: 5 months in 2001

- Performed administrative duties of program manager while position vacant.

Sustained Yield Forester (Forester I/II)

California Department of Forestry and Fire Protection: January 1994 – September 1999

- First Sustained Yield Forester in CDF.
 - Reviewed long-term planning documents (Sustained Yield Plans, option A, Programmatic Timber Environmental Impact Reports, Nonindustrial Timber Mgmt Plans) for conformance with state forest practice rules.
 - Forest policy analysis for state and county forestry regulations.
- Project Manager for the first Sustained Yield Plan submitted in California, LaTour Demonstration State Forest.
- Various projects including data recorders, forest practice automation, and forest canopy research and sampling protocols.
- Guest lecturer at U.C. Berkeley.

Programmer/Analyst (Associate Programmer/Analyst)

California Department of Forestry and Fire Protection: December 1990 – January 1994

- Wrote and supported timekeeping software for emergency personnel use in Fire Stations and Ranger Units.
- Wrote major components of distributed Personnel and Accounting Database.
- Developed training material for Incinet, an automated system for tracking resources on large incidents.

Consultant

Telos Corporation, Sacramento and U.C. Berkeley: October 1989 - November 1990

- Programmer/Analyst for California Department of Forestry and Fire Protection contract working on Personnel System.
- Wrote major components of Seasonal Firefighter Hiring Software.
- Various software projects for U.C. Berkeley Forest Biometrics Laboratory.

Researcher

Forestry Department, U.C. Berkeley: June 1988 - September 1989

- Conducted research on a variety of topics encompassed by the objectives of the Northern California Forest Yield Cooperative.
- Database administrator for permanent research plot database.

Graduate Research Assistant

Forestry Department, U.C. Berkeley: June 1986 - May 1988

- Conducted statistical analyses of forest growth and yield topics such as conifer crown geometry and individual tree growth, mortality, and ingrowth prediction models.
- Incorporated statistical models into simulation software (CACTOS, STAG).

Seasonal and Undergraduate Positions

- Undergraduate research assistant for outdoor recreation research at Purdue University.
- Seasonal positions with BLM (Canon City, CO) as River Ranger, City of Indianapolis on tree inventory crew, and Boy Scout Counselor as Trailsman teaching climbing/rappelling and muzzleloader rifle shooting.

TEACHING EXPERIENCE

Instructor for CAL FIRE Growth and Yield Training Course, 3 Times

Taught classes on statistics, inventory, growth models, and climate change.

Short Course Instructor and Guest Lecturer

ESPM, U.C. Berkeley: Various courses 1988 to present

State of California: Various Departments on Forest Sampling and Analysis

Graduate Student Instructor

Forestry Department, U.C. Berkeley: Spring semesters of 1987 and 1988

- Instructed computer laboratories and assisted Professor for Wildland Resource Sampling.

Public Speaking Engagements

Hundreds of speaking engagements as 10-year member of Toastmasters International and community talks on science and forestry.

AFFILIATIONS

Society of American Foresters, 2021 Chair of California SAF

California Licensed Foresters Association

CERTIFICATION, LICENSURE

California Registered Professional Forester 2521

Certified Forester 2015

FAA Certified Commercial sUAV Pilot (14 CFR) part 107

Supervision 5, CAL FIRE, April 2019.

Leadership Program for Directors, Sydney, Australia, February 2017.

Incident Command System: UAS (Drone) pilot, Incinet Advisor, Resource Unit Leader, Fire Behavior Specialist, Field Observer, Demob Unit Leader, Damage Inspection Specialist (Leader)

COMMITTEES

- Workforce Development Subgroup Co-Chair, Cal. Wildfire and Forest Resilience Task Force
- Resource Management Committee (RMC), CAL FIRE
- Advisory Committee to Innovative Wood Products Institute, Cal. Board of Forestry & F.P.
- Technical Advisory Committee, American Carbon Registry
- Western Climate Initiative, Offsets Committee, California Natural Resources Agency
- Forestry and Fire Climate Advisory Committee, California Air Resources Board
- Forestry Protocols Workgroup, Quantification Committee Lead, Climate Action Reserve
- Departmental Web Site Advisory Committee, Cal. Dept. of Forestry & Fire Protection
- Information Technology Advisory Committee, Cal. Dept. of Forestry & Fire Protection
- Timber Tax Advisory Committee, California Board of Equalization
- Forest Practices Automation Committee, Cal. Dept. of Forestry & Fire Protection

GRANTS

- \$200,000 Principal investigator - Carbon sequestration research & demonstration, WESTCARB, U.S. Department of Energy & California Energy Commission.
- \$65,000 Senior Scientist – Forest growth and climate change study, California Energy Commission, Climate Action Team biannual climate change research (2008).
- \$30,000 Senior Scientist – Forest growth and climate change study, California Energy Commission, Climate Action Team biannual climate change research (2006).
- \$68,000 Principal Investigator – Web-based research outreach, USDA Forest Service Stewardship Grant.

SELECTED PUBLICATIONS - JOURNALS

- Hurteau, M.D., T.A. Robards, D. Stevens, D. Saah, M. North, G.W. Koch. 2014. **Modeling climate and fuel reduction impacts on forest carbon stocks in the Sierra Nevada, California.** Forest Ecology and Management. 315:30-42.
- Robards, T.A. and G.S. Biging. (2012-Accepted). **An examination of factors influencing forest growth projection accuracy of six growth models in California: Effects of stand structure, sampling and data processing.** Forest Science.
- Battles, J.J., T. Robards, A. Das, K. Waring, J.K. Gilles, G. Biging, and F. Schurr. 2008. **Climate change impacts on forest growth and tree mortality: a data-driven modeling study in a mixed-conifer forest of the Sierra Nevada.** Climatic Change. 87(Suppl 1):S193-S213.
- Jameson, M.J. and T. Robards. 2007. **Coast redwood regeneration survival and growth in Mendocino County, California.** Western Journal of Applied Forestry. 22(3):171-175.

Biging, G.S., T.A. Robards, P.C. Van Deusen and E.C. Turnblom. 1994. **The predictive models and procedures used in the Forest Stand Generator (STAG)**. *Hilgardia* 61(1), California Agricultural Experiment Station, Univ. of California, Berkeley.

SELECTED PUBLICATIONS - PROFESSIONAL

Battles, J. J., D. S. Saah, T. Robards, S. Cousins, R. A. York and D. Larson. 2012. **Intact Forest Report. A Natural Resource Condition Assessment for Sequoia and Kings Canyon National Parks**. National Park Service, Fort Collins, Colorado, Natural Resource Report NPS/SEKI/NRR-2012.

Foster, B.C., T.A. Robards, and W.S. Keeton. 2010. **Carbon Dynamics Associated with Even-Aged Forest Management**. White paper for the Climate Action Reserve. 62 p.

Robards, T. 2010. **Current Forest and Woodland Carbon Storage and Flux in California: An Estimate for the 2010 Statewide Assessment**. Cal. Dept. of Forestry and Fire Protection. Sacramento, CA. 11p.

CAL FIRE. 2010. **California's Forests and Rangelands: 2010 Strategy Report**. Cal. Dept. of Forestry and Fire Protection, Fire And Resource Assessment Program. Sacramento, CA.

CAL FIRE. 2010. **California's Forests and Rangelands: 2010 Assessment. (Ch. 1.2 Sustainable Working Forests and Rangelands, Ch. 3.4 Emerging Markets, Ch. 3.7 Climate Change)** Cal. Dept. of Forestry and Fire Protection, Fire And Resource Assessment Program. Sacramento, CA.

Robards, T.A. and D. Wickizer. 2009. **Demonstration of the Climate Action Reserve Forestry Protocols at LaTour Demonstration State Forest, WESTCARB Final Report**. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-05-029.

Battles, J.J., T. Robards, A. Das, W. Stewart. 2009. **Projecting climate change impacts on forest growth and yield for California's Sierran mixed conifer forests**. California Climate Change Center, California Energy Commission. Publication # CEC-500-2009-047.

Robards, T. 2009. **Five-year Climate Change Research Plan for Forestry**. California Energy Commission Public Interest Energy Research Discussion Paper. 10p.

Robards, T. (Team Leader). 2008. **Humboldt Fire Damage Assessment Report**. California Department of Forestry and Fire Protection. Butte County, CA. 158p.

Robards, T. (Team Leader). 2008. **Ophir Fire Damage Assessment Report**. California Department of Forestry and Fire Protection. Butte County, CA. 50p.

Robards, T. 2008. **A review of the accuracy of urban forestry biomass functions: utility for the California Climate Action Registry protocol**. White paper: 6p.

Parisi, M. D., R. S. Motroni and T. A. Robards. 2007. **Clarification of the measurement of California wildlife habitat relationships (CWHR) system size classes 5 and 6 for tree habitats**. Cal. Dept. of Fish and Game, Sacramento, CA. 11p.

Robards, T. 2006. **Damage assessment report - Canyon Fire**. CA-SCU-004303.49p.

- Battles, J.J., T. Robards, A. Das, K. Waring, J. K. Gilles, F. Schurr, J. LeBlanc, G. Biging, and C. Simon. 2006. **Climate change impact on forest resources**. Public Interest Energy Research, California Energy Commission. CEC-500-2005-193-SF.
- Jameson, M. J., E. Rueter, and T.A. Robards. 2005. **Growth of redwood and Douglas-fir leave trees using variable retention**. Cal. Forestry Note no. 119. Cal. Dept. Forestry & Fire Protection. Sacramento, CA. 8pp.
- Robards, T.A. 2003. **Measuring forest canopy as powerplant and habitat**. Licensing news 21(2). California Board of Forestry and Fire Protection. Sacramento, California.
- Robards, T., M. Berbach, P. Cafferata, and B. Valentine. 1999. **A comparison of techniques for measuring canopy in watercourse and lake protection zones**. Cal. Forestry Note no. 113. Cal. Dept. Forestry & Fire Protection. Sacramento, CA. 15pp.
- Robards, T.A. 1999. **Instructions for WLPZ Canopy/Surface Cover Compliance Sampling Forest Practice Rules**. Cal. Dept. Forestry & Fire Protection. Sacramento, CA. 2pp.
- CDF. **Latour Demonstration State Forest Sustained Yield Plan**. 1995. California Department of Forestry and Fire Protection. 246pp.
- Robards, T. and H. Eng. 1994. **Impact of the new silviculture and sustained yield rules on Mendocino County**. California Department of Forestry and Fire Protection. 82pp.
- Biging, G.S., W.J. Meerschaert and T.A. Robards. 1991. **STAG user's guide**. Dept. of Forestry and Resource Mgt., Univ. of California, Berkeley.
- Swartz, P.D., G.S. Biging and T.A. Robards. 1990. **PERMCHECK - A permanent plot data checking program**. Research Note No. 28, No. Calif. For. Yield Cooperative, Dept. of Forestry and Resource Mgt., Univ. of California, Berkeley.
- Wensel, L.C. and T.A. Robards. 1990. **Sources of bias in diameter growth predictions**. Research Note No. 31, No. Calif. For. Yield Cooperative, Dept. of Forestry and Resource Mgt., Univ. of California, Berkeley.
- Wensel, L.C. and T.A. Robards. 1989. **Revised parameter estimates for CACTOS growth models**. Research Note No. 23, No. Calif. For. Yield Cooperative, Dept. of Forestry and Resource Mgt., Univ. of California, Berkeley.
- Robards, T.A. and G.S. Biging. 1989. **A change in the height-to-crown base model for six conifer species of the California mixed conifer region**. Research Note No. 29, No. Calif. For. Yield Cooperative, Dept. of Forestry and Resource Mgt., Univ. of California, Berkeley.
- Biging, G.S. and T.A. Robards. 1989. **Individual tree mortality models for Northern California mixed conifer species**. Research Note No. 24, No. Calif. For. Yield Cooperative, Dept. of Forestry and Resource Mgt., Univ. of California, Berkeley.

SELECTED PRESENTATIONS

- Robards, T. 2020. **Forest Biometrics Update**. Invited Speaker. California Licensed Forester's Association Annual Meeting. March 6, 2020.
- Robards, T. 2019. **Forest health crisis response in California: increase forest products capacity and a**

- billion dollars in treatments.** Society of American Foresters National Convention. Louisville, KY. Oct. 30 - Nov. 3, 2019.
- Robards, T. 2017. **Introduction to the California Cap-and-Trade Program and Forest Carbon Projects.** Invited Speaker. Association of Consulting Foresters Annual Meeting. Lake Tahoe.
- Robards, T. 2017. **Forest Carbon Project Development in California.** Invited Speaker. California Licensed Forester's Association Annual Conference. Sacramento. March 11, 2017.
- Robards, T. 2016. **Mensurational Tools: Gaps and Limitations, TIMO Perspective.** Invited Speaker. Western Forest Mensurationists Meeting. Skamania, WA. June 19-21, 2016.
- Robards, T. 2015. **Implementing a Carbon Offset Project – Examples from California Projects.** Invited Speaker. Society of American Foresters, Northern and Southern California Winter Meeting, San Luis Obispo. January 24, 2015.
- Robards, T. and D. Saah. 2011. **A Comparison of Forest Biomass Impact Studies.** Society of American Foresters National Convention. Honolulu, HI. November 3-6, 2011.
- Gunn, J. and T. Robards. 2011. **Forest Carbon Pro Forma Tool to Evaluate Market Opportunities on Forestlands.** Ecosystem Markets: Making them Work. Madison, WI. June 29-July 1, 2011.
- Robards, T. 2011. **Panel Discussion on Bioenergy and Ecosystem Services: Assessing the Tradeoffs and Informing Policy.** Invited Speaker. Ecosystem Markets: Making them Work. Madison, WI. June 29-July 1, 2011.
- Saah, D, T. Robards. 2011. **Forest Biomass and Carbon Accounting: Context Driven Analyses.** 8th Annual Forum of the California Biomass Collaborative. UC Davis. April 5, 2011.
- Robards, T. 2010. **A Biometrical Approach to Estimating Forest Carbon Storage and Flux: Estimates for California Using FIA and FVS.** National FIA Symposium, Knoxville, Tennessee.
- Robards, T. 2011. **An Examination of Factors Influencing Forest Growth Projection Accuracy.** Western Mensurationist's Meeting. Banff, Alberta, Canada. June 20-21, 2011.
- Robards, T. 2011. **Climate Sensitive Growth Models for Six Interior California Conifer Species.** National Workshop on Climate & Forests. Flagstaff, AZ. May 16-18, 2011.
- Robards, T. 2009. **The Use of Climate in Individual Tree Growth Models, an Example from the Sierra Nevada Ecoregion.** Western Mensurationist's Meeting, Vancouver, Washington.
- Robards, T. 2009. **New Forest Growth Simulator for Interior California Conifers Using Empirical Climate-Sensitive Models.** ESPM Forestry Seminar Series, U.C. Berkeley.
- Robards, T. 2009. **Forest management sequestration methods.** Invited speaker at Integrated Energy Policy Report Workshop, California Energy Commission, Sacramento.
- Robards, T. 2009. **Projected Climate Change in California Forests and Tools for Adaptation Planning.** Invited speaker at California Licensed Foresters Association Annual Conference. Sacramento.
- Robards, T. 2009. **New Forest Growth Simulator for Interior California Conifers Using Empirical Climate-Sensitive Models.** ESPM Forestry Seminar Series, U.C. Berkeley.
- Robards, T. 2009. **New climate sensitive growth models for the Sierra Nevada with incorporation into the Wessin variant of FVS.** Presentation at the Growth Model Users Group (GMUG). World Forestry Center: Portland, Oregon.
- Robards, T. 2008. **The Revised Forest Management and Reforestation CCAR Protocols: A Case Study for Private and Public Lands.** Westcarb annual meeting. Anchorage, Alaska.
- Robards, T. 2008. **Forests, Forestry and Climate Change: Research Plan.** Invited Speaker at the California Energy Commission, Public Interest Energy Research (PIER), Technical Meeting.

- Sacramento.
- Rosenberg, M., T. Robards, and C. Keithley. 2008. **FRAP Assessment: Inventory and monitoring for climate change analysis.** Presentation at California Board of Forestry and Fire Protection Workshop: Ensuring AB 32 Scoping Plan Target for California Forests. Sacramento.
- Robards, T. 2008. **Climate change and forest adaptation, mitigation and monitoring: data and analysis tool needs for California.** Presentation at the USDA Forest Service Pacific Northwest Research Station's Forest Inventory and Analysis Client's Meeting. Sacramento, California.
- Robards, T. and D. Wickizer. 2006. **LaTour carbon sequestration demonstration: fuels reduction.** Westcarb annual meeting. Pheonix, AZ.
- Robards, T. and E. Smith. 2006. **Carbon sequestration planning using the Landscape Management System.** Society of American Foresters national convention. Pittsburg, PA.
- Robards, Timothy A. 2003. Poster. **Sustainable Forests: Research at California's Demonstration State Forests.** American Association for the Advancement of Science, Pacific Division. San Francisco June 17, 2003.
- Robards, T.A. 1998. **Simulations of overstory canopy sampling.** Integrated tools for natural resources inventories in the 21st century. Boise, ID.