Sustainable Harvest Technical Advisory Committee – Roster

*No term limits have been set for this particular committee. Term limits may be imposed, subject to a review by the Office of Equity and Environmental Justice. The SHTAC Charter does not specify term limit requirements.

Name	Term Began	Term Expires	Position
David Affleck	12/2021	Ongoing	Chair, Department of Forest Management – University of Montana
Temesgen Hailemariam	08/2020	Ongoing	Oregon State University
Sean Jeronimo	06/2021	Ongoing	Resilient Forestry
Knox Marshall	08/2020	Ongoing	Murphy Company
Arjan Meddens	02/2022	Ongoing	Washington State University College of Agriculture, Human, and Natural Sciences
Ed Murphy	08/2021	Ongoing	Sierra Pacific Industries
Nate Osborne	08/2020	Ongoing	Representative of the Timber Industry (Weyerhaeuser)
Mark Rasmussen	08/2020	Ongoing	Mason, Bruce & Girard, Inc.
Crystal Raymond	12/2020	Ongoing	Climate Impacts Group (CIG - University of Washington
John Sessions	08/2020	Ongoing	Oregon State University

Sándor Tóth	**08/2020**	**Ongoing**	School of Environmental and Forest Sciences – University of Washington
Gareth Waugh	**08/2020**	**Ongoing**	Director of Forestry – Port Blakely

The Joint Legislative Audit and Review Committee (JLARC) is also represented on the committee. JLARC members have included Suzanna Pratt, Rebecca Connolly, and Joshua Karas.

*Please see below for member biographies -

Sustainable Harvest Technical Advisory Committee Member Biographies

David Affleck

David Affleck is Chair of the Department of Forest Management and Professor of Biometrics at the University of Montana (UM). He holds a PhD in Biometrics from Yale University as well as MS and BS degrees in forestry from the University of British Columbia. He joined the faculty at UM in 2006, and since 2007 has served as the Statistician for the Montana Forest & Conservation Experiment Station. At UM he has taught courses in forest measurements, biometrics, sampling methods, and GIS.

David's research focuses on the development and application of statistical methods in forestry, in particular in forest inventory and growth modelling. His scientific work has been published in the peer-reviewed forestry, ecological, and statistical literatures, and he has served as Associate Editor for Forest Science and Environmental and Ecological Statistics. Since 2011 he has also coordinated an applied forestry research program serving public, tribal, and private forest management agencies as Director of the Inland Northwest Growth & Yield Cooperative.

Temesgen Hailemariam

Temesgen Hailemariam is Professor of Forest Measurements and Biometrics at Oregon State University (OSU). He holds an undergraduate B.Sc. degree from Alemaya University, M.Sc. degree in Quantitative Silviculture from Lakehead University, and Ph.D. degree in Forest Biometrics from the University of British Columbia (UBC). Prior to joining OSU in 2003, he was a visiting scientist at the Institute of Forest Management and Yield at the University of Gottingen, Germany, and Research Associate in Forest Biometrics and Measurements at UBC. He taught Forest Measurements and Biometrics at UBC and Applied Statistics and Forest Modeling for the United Nations. Currently, he leads the Forest Biometrics and Measurements and teaches Forest Measurements, Forest Biometrics, and Sustainable Forest Management at OSU.

A Registered Professional Forester in British Columbia, Dr. Temesgen seeks to develop (or extend): 1) applications of lidar to forest measurements and assessment; 2) imputation methods that support dynamic forest inventory, silvicultural planning, and habitat analysis; and 3) sampling and statistical methods to characterize and quantify status and change of selected attributes including merchantable volume, biomass and carbon. His research have been published in over 110 technical publications, including 90 refereed journal articles.

Sean Jeronimo

Sean Jeronimo is a forest science researcher and practitioner of ecological forest management. After earning a BA in Mathematics, Sean completed his PhD at the University of Washington in 2018, investigating practical, operational approaches for incorporating lidar into forest restoration planning and implementation. His doctoral research identified areas with contemporary healthy active fire regimes and developed methods to characterize the structure and function of those systems and apply that knowledge to management of degraded and fire-excluded landscapes. A major component of the research also focused on aligning the formal structure of statistical models with the theoretical understanding of ecosystem process by explicitly representing interactions between landscape scales.

Sean has worked as a consultant in forestry, forest science, and ecological forest management since 2011. He has worked on large-scale forest inventories, developing regional remote sensing-based monitoring programs, forest management on tribal lands, modeling of habitat for spotted owl and Pacific marten, forest planning under projected future climate conditions, implementation of the DNR 20-Year Forest Health Strategic Plan, collaborative forest management under the NW Forest Plan, implementation of the Four Forest Restoration Initiative, and a wide variety of other projects. Since 2020, Sean has been the co-owner of Resilient Forestry, a consulting group focused on managing forests as whole ecosystems according to the best available science and technology.

Sean serves as an Affiliate Assistant Professor at the University of Washington School of Environmental and Forest Sciences, where he contributes to research and advising graduate students in the disciplines of ecological forest management, fire ecology, and landscape analysis and planning. Sean has authored publications on fire ecology,

landscape ecology, remote sensing, and forest management. His current primary research focus is using drone-based lidar in applied forest and fire management.

Knox Marshall

Knox Marshall was born and raised in the Northern California timber town of McCloud. He is a third-generation forester brought up entirely in the forest products business. Mr. Marshall has been working in the industry directly for 28 years but has been involved in the wood products business for 35+ years.

Mr. Marshall was educated at California State University at Chico with a degree in Economics and Natural Resources. Immediately following graduation, Mr. Marshall joined The Campbell Group as a forester focused on a new acquisition in the McCloud, California area. During the 10+ years at The Campbell Group, Mr. Marshall served on the Acquisition Team and was engaged in directing timberland appraisal and modeling of assets under management and being considered for purchase. Mr. Marshall became the Campbell Groups Northern California Regional Manager and managed the Fort Bragg Tree Farm for four years.

In 2004 Mr. Marshall left The Campbell Group to take a position for Rosboro Lumber Company as Vice President of Resources. Rosboro is a vertically integrated company located in Springfield, Oregon. During that time Mr. Marshall led and directed a revamping of the growth and yield modeling of Rosboro's 100,000+ acres of strategic fee timberlands.

In 2007 Mr. Marshall left Rosboro to accept a position as Vice President of Resources for Murphy Company. Murphy Company is an integrated manufacturing company located in Eugene, Oregon. The Murphy Company is one of the most efficient and low-cost operations in the wood products business and is dependent on state and federal timber to run its operations. With some uncertainty in the Federal Timber outputs, Murphy Company has purchased 60,000+ acres of land since 2014. Strategic planning and modeling are an ongoing practice of Murphy Company assets and is regularly reviewed to ensure long-term benefits are maximized to the company. Mr. Marshall continues to work as Vice President for Murphy Company and is proud to lead one of the highest performing resource and operations departments in the Industry.

Mr. Marshall's professional experiences with The Campbell Group, Rosboro, and Murphy Company have given him a unique and diverse perspective in the field of timberland asset management for a multitude of owners.

Arjan Meddens

Arjan Meddens is an assistant professor of forest ecology in the School of the Environment at Washington State University (WSU). He holds a PhD from the University of Idaho and an MS and BS from Wageningen University in the Netherlands. Dr. Meddens joined the WSU faculty in 2019 and teaches an advanced forest measurements course and an upper-level remote sensing course.

Arjan's research involves detecting and characterizing the impacts of large-scale forest disturbances, such as wildfires and bark beetle outbreaks. In the Meddens Lab, we mostly use remote sensing methods but also add field observations and dynamic vegetation modeling to investigate environmental change. We employ a drone to make fine-scale observations that we scale up to the landscape using more moderate resolution satellite imagery to help natural resource professionals improve forest management.

Ed Murphy

Ed Murphy is the Information and Environmental Services Manager (Inventory Forester) for Sierra Pacific Industries (SPI) in Anderson, California. He graduated from U.C., Berkeley with a B.S. Degree in Forestry in 1978 and has been a California Registered Professional Forester since 1982. Ed began his career in 1978 with Simpson Redwood/Green Diamond Resources Company where he spent 10 years serving as the Geographic Information System Manager supporting the forest inventory and other resources. In 1988 Ed moved to assume the responsibilities of his current position at SPI, and during his 33-year tenure SPI ownership has grown from 130,000 acres in California to 2.15 million acres in California and Washington. His 43 years of industry experience has included leading the development of comprehensive resource mapping using GIS and multi-resource inventory

applications. Currently, he is responsible for tracking and maintaining all of SPI's resource inventory data and establishing projections for California's state mandated 100-year sustainable harvest demonstration covering 1.85 million acres. These efforts are supported by continuous multi-resource inventory sampling on 400,000+ plots, or one sample plot for every 4-acres, which maintains current forest stand conditions across SPI's entire CA ownership. Ed's role includes supervising SPI's Biologists, Botanists, and Inventory Foresters.

Ed and his team's most recent efforts on SPI's California lands involved securing a 50-year Incidental Take Permit (ITP) and Habitat Conservation Plan (HCP) covering 1.6 million acres for both northern and California spotted owls; and we are weeks away from completing a 50-year ITP and HCP and Safe Harbor Agreement (SHA) for seven anadromous salmonid species on 650,000 acres of SPI lands within the known or potential range of anadromy in California.

Ed has worked on numerous boards and committees to advance the science of forest management; including serving on the Board of Directors of the California Licensed Foresters Association, Chair of the California Forest Research Association, founding member of the Quincy Library Group, a member of the 2008 U.S. Fish and Wildlife Service Northern Spotted Owl Recovery Team, and is a past President of the U.C., Berkeley California Alumni Foresters. Ed was also instrumental in development of the California Air Resources Board's U.S. Forest Project Protocol as a member of the Forest Project Protocol Stakeholders Work Group of the Climate Action Reserve. The protocol was endorsed by the California Air Resources Board and the Climate Action Reserve for use in California's compliance-grade carbon offset market and other voluntary efforts.

Nate Osborne

Nate Osborne's education started at NC State University as an undergraduate in forest management. He worked with the Extension-Forestry program at NC State during that time, ultimately leading to his M.S. at NC State (Prof. Dennis Hazel) and M.Sc. from the University of Helsinki (Prof. Bo Dahlin). During his master studies, he focused on measuring the amount of wood left after energy wood harvesting across the US South and Southern Sweden. Nate went to Oregon State University (Ph.D., minor statistics, Prof. Doug Maguire) to expand his understanding of forest modeling. His dissertation, supported by the Center for Intensive Planted-forest Silviculture (CIPS), was focused on linking growth, yield and wood properties models. The aim was to generate "glass logs" from growth models which could be passed into a sawing simulator to understand how silvicultural regimes influence lumber design values. He feels lucky to have worked with the French National Research Institute (INRA) and the UK Forest Service on his dissertation topics in France and Scotland. After graduating with his Ph.D., he took on a biometrician position at Weyerhaeuser company for 2-years in Centralia Washington. Nate joined Rayonier as a Forest Biometrics Project Leader in 2017 working from their office near Amelia Island, Florida. His move to Rayonier was motivated by an interest to develop leadership and project and program management skills. In January 2020, he was promoted to Manager of Forest Modeling and Biometrics Research. Within his current role, he manages a forest biometrics team focused on research in the domains of scientific programming, sampling, growth and yield models and integration of remote sensed data into operational inventories. His team also oversees harvest scheduling, support for acquisition and divestitures and ESG reporting (environmental, social, governance). He remains active in the scientific community outside of Rayonier, most notably as an associate editor for the SAF Forestry Source, chair-elect of the SAF Biometrics working group, publishing articles to scientific journals, and as an affiliate faculty at Oregon State University.

Suzanna Pratt

Suzanna Pratt is a nonpartisan research analyst for the Joint Legislative Audit and Review Committee (JLARC). She joined the JLARC staff in 2015. Her JLARC evaluations include reviews of homelessness programs, public records assistance, land acquisition and regulation programs, and wildfire prevention and preparedness efforts. She has a background in applied social science and her previous research focused on local impacts of heritage management strategies, spatial and temporal patterning of mortuary artifacts, and reconstruction of historical landscapes. She holds a BA in Anthropology and Peace Studies from the University of Notre Dame and an MA in Applied Anthropology from the University of South Florida.

Mark Rasmussen

Mark Rasmussen is a Forest Economist and Principal with Mason, Bruce & Girard, Inc. Mark heads MB&G's Forest Planning and Economics Group which over the past 20 years has built about 200 forest planning models covering 75 million acres. MB&G has held state forest management agencies prepare long term management plans in Idaho, Washington, Michigan and Minnesota, and has been involved in forest management planning in Oregon and Washington. MB&G was founded in 1921. Our 50+ professional staff provide a variety of forestry, environmental and spatial services to a wide variety of private, public and Tribal clients. MB&G has direct management responsibilities for about 150,000 acres owned by families, trusts, municipalities and TIMOs.

Crystal Raymond

Crystal Raymond is a climate adaptation specialist with the Climate Impacts Group (CIG) at the University of Washington. She has worked in the field of climate science and adaptation since 2010. She works on climate impacts and resilience as it relates to forests, wildfires, and water resources of the Pacific Northwest. She has contributed to several climate change vulnerability assessments and adaptation plans including DNR's Plan for Climate Resilience, Chelan County Climate Resilience Strategy, Washington State Parks Climate Adaptation Plan, and Climate Change Vulnerability and Adaptation in the North Cascades Region, Washington. She works on climate resilience with federal agencies, state agencies, Northwest Tribes, and local governments. Prior to her current position with the CIG, she was a climate adaptation advisor for the US Forest Service and Seattle City Light, Seattle's municipal hydropower utility. She has a PhD in Forest Ecology from the University of Washington. Her research in forest and fire ecology includes the effects of climate change on wildfire potential and carbon storage, as well as the effects of forest management on fire severity.

John Sessions

John Sessions is University Distinguished Professor of Forestry and Strachan Chair of Forest Operations Management at Oregon State University. Before coming to OSU he served in various positions in the USDA Forest Service in engineering and timber management and was harvesting manager of JARI Florestal, a 3.4 million acre property in northern Brazil. He has consulted in 16 countries for NGO's, companies, and agencies on five continents as well as participating in several congressionally-mandated assessments including vice-chair or co-chair of four national assessments of Indian forests and forest management. For 15 years he supported the strategic planning efforts of the Oregon Department of Forestry. He chairs the graduate program in Sustainable Forest Management at OSU and continues to teach courses in Forest Planning, Transportation Planning, Logging Mechanics, Combinatorial Optimization, and International Forestry. His research focuses on searching for efficient solutions to forest planning problems and all aspects of the forestry supply chain and is documented in more than 350 publications and reports. He has a BS in civil engineering, MS in civil engineering, MS in forest engineering, and PhD in forest management. Since 2013, Dr. Sessions has chaired the state of Oregon Forest Engineering examination. In 2013 he was recognized by the Society of American Foresters with the National Award in Forest Science. In 2015, he received the Forester of the Year award by the Intertribal Timber Council and the 2015 International Forest Engineering Achievement Award from the Council on Forest Engineering. Dr. Sessions is a Fellow of the Society of American Foresters.

Sándor Tóth

Sándor Tóth is Donald J. & Robert G. McLachlan Associate Professor of Natural Resource Informatics at the University of Washington's (Seattle) School of Environmental & Forest Sciences and adjunct associate professor at the Department of Industrial & Systems Engineering. He has an MS degree in Forest Engineering from Sopron, Hungary (1994) and a PhD in Forest Management & Operations Research from Penn State University (2005). Dr. Tóth published 25 refereed research articles in leading forestry, conservation and operations research journals. He serve as associate editor for Forest Science (Society of American Foresters) and for Natural Resource Modeling (Wiley). He teaches forest management & economics, forestry consulting and optimization in natural resources. Lastly, Dr. Tóth is executive director of the Symposium on Systems Analysis in Forest Resources since 2017.

Gareth Waugh

Gareth Waugh is the Director of Forestry for Port Blakely. He has worked for Port Blakely for 20 years, 15 of those involved with estate level wood flow planning. Gareth leads the Resources team at Port Blakely, responsible for silviculture, acquisitions, inventory, research and risk management. Gareth is a native of New Zealand and has worked in forestry for Port Blakely in both countries. He holds an MBA from University of Washington and a Bachelor of Forestry Science from the University of Canterbury. He recently graduated from the AgForestry program. Gareth lives in Olympia with his wife and two spirited children.