Matthew J. Gregory
Senior Faculty Research Assistant II
Department of Forest Ecosystems & Society
Oregon State University
Telephone: 541-750-7436
Email: matt.gregory@oregonstate.edu
Web page: http://lemma.forestry.oregonstate.edu/about/matthew-gregory

EDUCATION AND EMPLOYMENT INFORMATION

Education

M.S., Geographic Techniques, Oregon State University, 1999.
Thesis title: Comparing intercell distance and cell wall midpoint criteria for discrete global grid systems.

B.A., Mathematics, The Colorado College, 1993.

Employment

1998 – present. Faculty Research Assistant (1998 – 2005), Senior Faculty Research Assistant I (2005 – 2016), Senior Faculty Research Assistant II (2016 – present). Landscape Ecology, Modeling, Mapping, and Analysis (LEMMA) team. Department of Forest Ecosystems and Society, Oregon State University, Corvallis, OR. (Supervisors: Dr. Matthew Betts (OSU) and Dr. David Bell (USFS PNW Research Station)).

1998 – 2001. Faculty Research Assistant. BigFoot project. Department of Forest Science, Oregon State University, Corvallis, OR. (Supervisor: Dr. David Turner).

Areas of specialization

Predictive forest vegetation modeling and mapping
Spatial analysis and geographic information systems
Geospatial software development
Database design and programming
Cartography and geovisualization
Web design

SCHOLARSHIP AND CREATIVE ACTIVITY

Refereed publications

29. Laughlin, MM, JD Bakker, DJ Churchill, MJ Gregory, T DeMeo, EC Alvarado, BJ Harvey. 2023. Trends in forest structure restoration need over three decades with increasing wildfire activity in the interior Pacific Northwest US. Forest Ecology and Management, 527, 120607.

28. Bell, DM, MJ Gregory, DJ Churchill, DJ, AC Smith. 2022. Mapping with height and spectral remote sensing implies that environment and forest structure jointly constrain tree

community composition in temperate coniferous forests of eastern Washington, USA. Frontiers in Forests and Global Change 5, 962816.

27. Strunk, JL, DM Bell, MJ Gregory. 2022. Pushbroom Photogrammetric Heights Enhance State-Level Forest Attribute Mapping with Landsat and Environmental Gradients. Remote Sensing, 14(14), p.3433.

26. Reilly MJ, J Halofsky, C Raymond, A McEvoy, A Dye, A Zuspan, D Donato, J Kim, B Potter, N Walker, R Davis, C Dunn, JD Johnston, B Harvey, D Bell, M Gregory, J Halofsky, B Kerns. 2022. Cascadia Burning: Ecological and social perspectives for the historic, but not historically unprecedented, 2020 wildfires in westside forest of the Pacific Northwest. Ecosphere 13 (6), e4070.

25. Myroniuk, V, DM Bell, MJ Gregory, R Vasylyshyn, A Bilous. 2022. Uncovering forest dynamics using historical forest inventory data and Landsat time series. Forest Ecology and Management, 513, p.120184.

24. Downing, WM, GW Meigs, MJ Gregory, MA Krawchuk. 2021. Where and why do conifer forests persist in refugia through multiple fire events? Global Change Biology, 27(15), p.3642.

23. Bell, DM, SA Acker, MJ Gregory, RJ Davis, BA Garcia. 2021. Quantifying regional trends in large live tree and snag availability in support of forest management. Forest Ecology and Management 479(2021):1-9.

22. Mauro, F, AT Hudak, PA Fekety, B Frank, H Temesgen, DM Bell, MJ Gregory, TR McCarley. 2021. Regional modeling of forest fuels and structural attributes using airborne laser scanning data in Oregon. Remote Sensing 13(2):261.

21. Lesmeister, DB, SG Sovern, RJ Davis, DM Bell, MJ Gregory, JC Vogeler. 2019. Mixed-severity wildfire and habitat of an old-forest obligate. Ecosphere, 10(4), p.e02696.

20. Henderson, EB, DM Bell, MJ Gregory. 2019. Vegetation mapping to support greater sage-grouse habitat monitoring and management: multi-or univariate approach? Ecosphere, 10(8).

19. Bell, DM, MJ Gregory, V Kane, J Kane, RE Kennedy, HM Roberts, M Simpson, Z Yang. 2018. Multiscale divergence between Landsat- and lidar-based biomass mapping explained by regional variation in canopy cover and composition. Carbon Balance and Management 13:1-15.

18. Kennedy, RE, JL Ohmann, MJ Gregory, HM Roberts, Z Yang, DM Bell, V Kane, MJ Hughes, WB Cohen, S Powell, N Neeti, T Larrue, S Hooper, J Kane, DL Miller, J Perkins, J Braaten, R Seidl. 2018. An empirical, integrated forest biomass monitoring system. Environmental Research Letters, 13(2), 025004.

17. Reilly, MJ, M Elia, TA Spies, MJ Gregory, G Sanesi, R Lafortezza. 2018. Cumulative effects of wildfires on forest dynamics in the eastern Cascade Mountains, USA. Ecological Applications, 28(2), 291-308.

16. Bell, DM, MJ Gregory, HM Roberts, RJ Davis, JL Ohmann. 2015. How sampling and scale limit accuracy assessment of vegetation maps: a comment on Loehle et al. 2015. Forest Ecology and Management. 358:361-364.

15. Bell, DM, MJ Gregory, JL Ohmann. 2015. Imputed forest structure uncertainty varies across elevational and longitudinal gradients in the western Cascade Mountains, Oregon, USA. Forest Ecology and Management 358:154-164.

14. Meigs, G, RE Kennedy, AN Gray, MJ Gregory. 2015. Spatiotemporal dynamics of recent mountain pine beetle and western spruce budworm outbreaks across the Pacific Northwest Region, USA. Forest Ecology and Management 339:71-86.

13. Henderson, EB, JL Ohmann, MJ Gregory, HM Roberts, HSJ Zald. 2014. Species distribution modelling for plant communities: stacked single species or multivariate modelling approaches? Applied Vegetation Science 17:516-527.

12. Ohmann, JL, MJ Gregory, HM Roberts. 2014. Scale considerations for integrating forest inventory plot data and satellite image data for regional forest mapping. Remote Sensing of Environment 151: 3-15.

11. Zald, HSJ, JL Ohmann, HM Roberts, MJ Gregory, EB Henderson, R McGaughey, J Braaten. 2014. Influence of lidar, Landsat imagery, disturbance history, plot location accuracy, and plot size on accuracy of imputation maps of forest composition and structure. Remote Sensing of Environment 143:26-38.

10. Ohmann, JL, MJ Gregory, HM Roberts, WB Cohen, RE Kennedy, Z Yang. 2012. Mapping change of older forest with nearest-neighbor imputation and Landsat time-series. Forest Ecology and Management 272:13-25.

9. Ohmann, JL, MJ Gregory, EB Henderson, HM Roberts. 2011. Mapping gradients of community composition with nearest-neighbour imputation: extending plot data for landscape analysis. Journal of Vegetation Science 22(4):660-676.

8. Pierce Jr., KB, JL Ohmann, MC Wimberly, MJ Gregory, JS Fried. 2009. Mapping wildland fuels and forest structure for land management: a comparison of nearest-neighbor imputation and other methods. Canadian Journal of Forest Research 39(10): 1901-1916.

7. Gregory, MJ, AJ Kimerling, D White, K Sahr. 2008. A comparison of intercell distance and cell wall midpoint criteria for discrete global grid systems. Computers, Environment and Urban Systems 32(3): 188-203.

6. Kennedy, RSH, TA Spies, MJ Gregory. 2007. Relationships of dead wood patterns with biophysical characteristics and ownership according to scale in Coastal Oregon, USA. Landscape Ecology 23(1): 55-68.

5. Ohmann, JL, MJ Gregory, TA Spies. 2007. Influence of environment, disturbance, and ownership on forest vegetation of Coastal Oregon. Ecological Applications 17: 18-33.

4. Turner, DP, S Ollinger, ML Smith, O Krankina, MJ Gregory. 2004. Scaling net primary production to a MODIS footprint in support of Earth Observing System product validation. International Journal of Remote Sensing 25: 1961-1979.

3. Turner, DP, S Urbanski, D Bremer, SC Wofsy, T Meyers, ST Gower, MJ Gregory. 2003. A cross-biome comparison of light use efficiency for gross primary production. Global Change Biology 9: 383-395.

2. Ohmann, JL and MJ Gregory. 2002. Predictive mapping of forest composition and structure with direct gradient analysis and nearest-neighbor imputation in coastal Oregon, U.S.A. Canadian Journal of Forest Research 32: 725-741.

1. Turner, DP, ST Gower, WB Cohen, MJ Gregory, TK Maiersperger. 2002. Effects of spatial variability in light use efficiency on satellite-based NPP monitoring. Remote Sensing of Environment 80: 397-405.

Non-refereed publications and reports

General Technical Reports (peer-reviewed)

4. Bell, DM, MJ Gregory, M Palmer, RJ Davis. In review. Guidance for forest management and landscape ecology applications of recent gradient nearest neighbor imputation maps in California, Oregon, and Washington. Gen. Tech. Rep. PNW-GTR-xxx. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

3. Davis, RJ, DM Bell, MJ Gregory, Z Yang, AN Gray, SP Healey, AE Stratton. 2002. Northwest Forest Plan-the first 25 years: status and trends of late- successional and old-growth forests. Gen. Tech. Rep. PNW-GTR-1004. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

2. Davis, RJ, JL Ohmann, RE Kennedy, WB Cohen, MJ Gregory, Z Yang, HM Roberts, AN Gray, TA Spies. In press. Northwest Forest Plan – The First 20 Years: Status and Trends of Late-successional and Old-growth Forests. Pacific Northwest Research Station, USDA Forest Service, Portland, OR.

1. Moeur, M, JL Ohmann, RE Kennedy, WB Cohen, Z Yang, MJ Gregory, HM Roberts, M Fiorella. 2011. Northwest Forest Plan -- status and trends of late-successional and old-growth forests from 1994 to 2008. PNW-GTR-853, Pacific Northwest Research Station, USDA Forest Service, Portland, OR.

Other Reports and Publications

15. Bell, DM, MJ Gregory. 2021. Exploring data sources and modeling frameworks in support of species composition and vegetation structure mapping for eastern Washington (Agreement # 93-100006). Final project Report. Delivered to Washington Department of Natural Resources June 29, 2021.

14. Naficy, CE, GW Meigs, MJ Gregory, R Davis, DM Bell, K Dugger, JD Wiens, MA Krawchuk. 2021. Fire refugia in old-growth forests. Final report to the USGS Northwest Climate Adaptation Center. Oregon State University, Corvallis, OR. 39 p.

13. Pinagé, ER, DM Bell, MJ Gregory, NN Tran, W Zhang, A Huete. Effects of Tropical Forest Degradation on Amazon Forest Phenology. In IGARSS 2020-2020 IEEE International Geoscience and Remote Sensing Symposium (pp. 4516-4519). IEEE.

12. Grossmann, EB, JL Ohmann, J Kagan, HK May, MJ Gregory. 2010. Mapping ecological systems with a random forest model: tradeoffs between errors and bias. USGS Gap Analysis Bulletin, No. 17; February 2010; pp 16-22.

11. Grossmann, EB, JL Ohmann, MJ Gregory, HK May. 2009. Nationwide Forest Imputation Study (NaFIS) - Western Team final report. Final Report of the Nationwide Forest Imputation Study (NaFIS).

10. Grossmann, EB, J Kagan, JL Ohmann, HK May, MJ Gregory, C Tobalske. 2008. Final report on land cover mapping methods, map zones 2 and 7, Pacific Northwest ReGAP. Institute for Natural Resources, Oregon State University, Corvallis, OR.

9. Kagan, J, JL Ohmann, MJ Gregory, C Tobalske. 2008. Land cover map for map zones 8 and 9 developed from SAGEMAP, GNN, and SWReGAP: A pilot for NWGAP. USGS Gap Analysis Bulletin, No. 15; February 2008; pp 15-19.

8. Holt, TM, MJ Gregory, JL Ohmann. 2007. GNNViz User Guide. Appendix 1 of the JFSP Final Report; Project 05-4-1-12.

7. Ohmann, JL, MJ Gregory, TM Holt. 2007. Innovative, 3-D, interactive, and immersive techniques for visualizing, querying, and understanding regional maps of forest vegetation, fuels, and fire risk. Final Report to the Governing Board, Joint Fire Science Program, Project 05-4-1-12.

6. Kagan, J, JL Ohmann, MJ Gregory, C Tobalske, JC Hak, JS Fried. 2006. Final report on land cover mapping methods, map zones 8 and 9, Pacific Northwest ReGAP. Institute for Natural Resources, Oregon State University, Corvallis, OR.

5. Ohmann, JL, MC Wimberly, JS Fried, KB Pierce Jr., MJ Gregory. 2005. A novel approach to regional fuel mapping: linking inventory plots with satellite imagery and GIS databases using the Gradient Nearest Neighbor method. Final report to the Governing Board, Joint Fire Science Program; Project 01-1-4-09.

4. Wimberly, MC, JL Ohmann, KB Pierce Jr., MJ Gregory, JS Fried. 2003. A multivariate approach to mapping forest vegetation and fuels using GIS databases, satellite imagery, and forest inventory plots. Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress. Orlando, FL; 16-20 November 2003. American Meteorological Society.

3. Turner, DP, and MJ Gregory. 2001. Interannual Variability at AGRO, 1970-1999. Report published on the BigFoot project website (http://www.fsl.orst.edu/larse/bigfoot/reports/agrohrv.pdf)

2. Turner, DP, and MJ Gregory. 2001. AGRO Meteorological Products in support of BigFoot modeling. Report published on the BigFoot project website (http://www.fsl.orst.edu/larse/bigfoot/reports/agromet.pdf)

1. Turner, DP, and MJ Gregory. 2001. GPP/NPP Products for the AGRO site for the year 2000. Report published on the BigFoot project website (http://www.fsl.orst.edu/larse/bigfoot/reports/agronppgpp00.pdf)

Presentations

(*) denotes presenter

Invited conference presentations

19. Strunk, J*, MJ Gregory, DM Bell. 2019. An Examination of DAP, Landsat, and environmental variables for modeling volume, biomass, and carbon on FIA plots. FIA Stakeholders Science Meeting: Knoxville, TN; November 2019

18. Bell, DM*, MJ Gregory, RE Kennedy, JJ Battles, B Collins, D Saah, R York. 2019. An integrated disturbance and vegetation mapping framework highlights landscape level changes in forest dynamics during a multiyear drought. FIA Stakeholders Science Meeting: Knoxville, TN; November 2019

17. Bell, DM*, MJ Gregory, M Krawchuk, G Meigs, C Sodergren, Z Yang. 2019. Seed source, climate, and disturbance history constrain regional patterns of ponderosa pine seedling density in California, Oregon, and Washington. North American Forest Ecology Workshop: Flagstaff, AZ; June 2019

16. Gregory, MJ*, Z Yang, DM Bell, WB Cohen, SP Healey, JL Ohmann, HM Roberts. 2016. Cloud-based computation for accelerating change detection and vegetation mapping at regional to national scales. Google Earth Engine Users Summit: Mountain View, CA; June 2016.

15. Kennedy, RE*, JL Ohmann, V Kane, SL Powell, Z Yang, J Braaten, MJ Gregory, HM Roberts, J Lutz, R Riemann, BT Wilson. 2013. Regional-scale monitoring of biomass in wooded lands through integration of satellite, plot, and airborne data. North American Carbon Program Fourth Annual Meeting: Albuquerque, NM; February 2013.

14. Ohmann, JL*, MJ Gregory, HM Roberts, RE Kennedy, Z Yang, J Braaten, SL Powell, WB Cohen, V Kane, J Lutz. 2012. Mapping change in live and dead forest biomass with Landsat time-series, remeasured plots, and nearest-neighbor imputation. ForestSAT 2012: Corvallis, OR; September 2012.

13. Powell, SL*, RE Kennedy, JL Ohmann, WB Cohen, MJ Gregory, HM Roberts, V Kane, J Lutz. 2012. Comparison of biomass allometric approaches for regional scale carbon mapping. ForestSAT 2012: Corvallis, OR; September 2012.

12. Ohmann, JL*, MJ Gregory, HM Roberts, RE Kennedy, Z Yang, M Moeur, WB Cohen. 2011. Landscape context for density management: implications of land ownership and ecological gradients. Conference on state-of-the-art in west-side forest management: Corvallis, OR; October 2011.

11. Ohmann, JL*, MJ Gregory, HM Roberts, RE Kennedy, WB Cohen, Z Yang, M Moeur. 2011. Spatial monitoring of older forest and habitat for the Northwest Forest Plan. National FIA Users Group Meeting: Sacramento, CA; March 2011.

10. Ohmann, JL*, MJ Gregory, HM Roberts, RE Kennedy, WB Cohen, Z Yang, M Moeur. 2010. Spatial monitoring of late-successional forest habitat over large regions with nearest-neighbor imputation. XXIII International Union of Forest Research Organizations (IUFRO): Seoul, South Korea; August 2010.

9. Ohmann, JL*, MJ Gregory, HK May, EB Grossmann. 2010. Nearest neighbor mapping of vegetation gradients for landscape analysis and planning. 53rd International Symposium of the International Association for Vegetation Science: Ensenada, Mexico; April 2010.

8. Gregory, MJ*, JL Ohmann, EB Grossmann, HK May. 2008. Spatial scaling effects of inventory reference data on nearest neighbor model predictions. Forest Inventory and Analysis Symposium: Park City, UT; October 2008.

7. Grossmann, EB*, JL Ohmann, MJ Gregory, HK May. 2008. Is the World a Gradient, or a Hierarchy of Thresholds? Imputing Forest Composition and Structure Variables in the Pacific Northwest. Forest Inventory and Analysis Symposium: Park City, UT; October 2008.

6. Grossmann, EB*, JL Ohmann, J Kagan, KB Pierce Jr., HK May, MJ Gregory. 2007. Models for ecological systems map building: random forest and gradient nearest neighbor. Which one works best?. National GAP Analysis Program Conference: Asheville, NC; September 2007.

5. Ohmann, JL*, MJ Gregory and TM Holt. 2006. Innovative, 3-D, interactive, and immersive techniques for visualizing, querying, and understanding regional maps of forest vegetation, fuels, and fire risk. Special presentation to the Joint Fire Science Program Principal Board: Missoula, MT; September 2006.

4. Ohmann, JL*, JS Fried, KB Pierce Jr., MJ Gregory, MC Wimberly. 2006. Mapping forest vegetation and fuels with Gradient Nearest Neighbor imputation. Yosemite Fire Science Symposium: Yosemite National Park, CA; May 2006.

3. Pierce Jr., KB*, MC Wimberly, JL Ohmann, MJ Gregory, JS Fried. 2005. What is the probability that I-30 runs through Fort Worth? Incorporating uncertainty into map use. Annual meeting of the Society of American Foresters: Fort Worth, TX; October 2005.

2. Ohmann, JL*, MJ Gregory, TA Spies. 2003. Linking field plot, satellite imagery, and environmental data to assess regional patterns of vegetation biodiversity. Annual meeting of the Society of American Foresters: Buffalo, NY; October 2003.

1. Ohmann, JL*, MJ Gregory, JE Gray. 1999. Linking satellite, plot, and environmental data to map patterns of species composition across Pacific Northwest forests. Special session at

annual meeting of the American Society of Photogrammetry and Remote Sensing: Portland, OR; May 1999.

<u>Volunteered conference presentations</u>

69. Gregory, MJ, and DM Bell. 2022. Using synthetic forest inventory plots to approximate k>1 nearest-neighbors mapping for accuracy and operational considerations. FIA Science Stakeholder Meeting; Online; November 2022. (oral).

68. Bell, DM, MJ Gregory, J Strunk. 2022. Digital aerial photogrammetry improves large tree and old forest mapping. FIA Science Stakeholder Meeting; Online; November 2022. (oral).

67. Bell, DM, MJ Reilly, AN Gray, MJ Gregory. 2022. Beyond background mortality: Forest inventory and the complex drivers and consequences of tree death in the western USA. FIA Science Stakeholder Meeting; Online; November 2022. (oral).

66. Thwal NS, B Roberts-Pierel, RE Kennedy, P Cleary, A Poortinga, DM Bell, MJ Gregory, JB Kilbride, QH Nguyen, DS Saah. 2022. Effectiveness of LandTrendr optimized temporally stabilized composites for enhancing the Lower Mekong regional land cover monitoring system. American Geophysical Union Annual Meeting; Chicago, IL; December 2022. (oral).

65. Kennedy RE, C Babcock, DM Bell, DS Saah, AT Hudak, VR Kane, A Hyke, MJ Gregory, T Kramer. 2022. The Forest Carbon Framework: leveraging Earth-observation data to democratize carbon markets. American Geophysical Union Annual Meeting; Chicago, IL; December 2022. (oral).

64. Bell, DM, MJ Gregory, R Kennedy, JJ Battles, B Collins, DS Saah, RA York. 2019. Multi-year drought altered regional disturbance dynamics in California and Oregon. ESA Annual Meeting; Louisville, KY; August 2019. (oral).

63. Bell, DM, MJ Gregory. 2019. An application of generalized joint attribute modeling for modeling forest structure and composition. FIA Stakeholders Science Meeting: Knoxville, TN; November 2019. (oral)

62. Fantoni, G, DM Bell, MJ Gregory, F Giannetti, D Travaglini, S Francini, G Chirici. 2019. Classification of forest tree species in Tuscany using Sentinel-2 multi-temporal data and Google Earth Engine platform. XII Conference of SISEF: Palermo, Italy; November 2019. (poster)

61. Pinagé, ER, DM Bell, MJ Gregory, CA Silva, W Zhang, NN Tran, AR Huete. 2018. Investigating the Effects of Reduced-impact Selective Logging on Tropical Forest Phenology. American Geophysical Union Annual Meeting; Washington, DC; December 2018. (oral)

60. Gregory, MJ*, DM Bell, N Gorelick, V Myroniuk. 2018. Utilizing high-performance and data-rich cloud platforms for nearest neighbor imputation: bringing NN to the cloud. ForestSAT 2018: College Park, MD; October 2018. (poster)

59. Bell, DM*, MJ Gregory, RE Kennedy, DS Saah, JJ Battles, BM Collins, J Sanders. 2018. Assessing the relationships between stand characteristics and Landsat-based aboveground

forest biomass mapping uncertainty. ForestSAT 2018: College Park, MD; October 2018. (poster)

58. Bell, DM*, MJ Gregory, RE Kennedy, JJ Battles, BM Collins, DS Saah, RA York. 2018. Regional variation in landscape-level forest biomass trends before and during a multi-year drought. US Regional Association of the International Association of Landscape Ecology (US-IALE) Annual Meeting: Chicago, IL; April 2018. (oral)

57. Bell, DM*, MJ Gregory, RE Kennedy, JJ Battles, BM Collins, DS Saah, RA York. 2018. Regional variation in landscape-level forest biomass trends before and during a multi-year drought. US Regional Association of the International Association of Landscape Ecology (US-IALE) Annual Meeting: Chicago, IL; April 2018. (oral)

56. Bell, DM*, MJ Gregory, S Acker, K Mellen-McLean, HM Roberts. 2017. Assessing temporal trends in snag-dependent wildlife habitat using imputed forest vegetation maps. FIA Stakeholder Science Meeting: Park City, UT; October 2017. (oral)

55. Gregory, MJ*, DM Bell, HM Roberts, RJ Davis. 2017. GNN Trend Tool: An interactive web-based platform for exploring trends of forest vegetation attributes across space and time. FIA Stakeholder Science Meeting: Park City, UT; October 2017. (software demonstration)

54. Bell, DM*, MJ Gregory, HM Roberts. 2016. An approximation for non-parametric bootstrapping to assess uncertainties in imputation mapping of forest vegetation. ForestSAT 2016: Santiago, Chile; November 2016. (oral)

53. Kennedy, RE*, J Hughes, N Neeti, T Larrue, MJ Gregory, HM Roberts, JL Ohmann, V Kane, J Kane, S Hooper, P Nelson, WB Cohen, Z Yang. 2016. Toward a comprehensive landscape vegetation monitoring framework. European Geosciences Union General Assembly: Vienna, Austria; April 2016. (oral)

52. Gregory, MJ*, Z Yang, DM Bell, WB Cohen, SP Healey, JL Ohmann, HM Roberts. 2015. Cloud-based computation for accelerating change detection and vegetation mapping at regional to national scales. Forest Inventory and Analysis Science Symposium: Portland, OR; December 2015. (oral)

51. Bell, DM*, JL Ohmann, MJ Gregory, HM Roberts. 2015. Impacts of imputation uncertainty and scaling on the estimation of forest attributes in a western Oregon, USA landscape. Ninth International Association of Landscape Ecology World Congress, Portland, OR; July 2015. (oral)

50. Kennedy, RE*, Z Yang, J Braaten, WB Cohen, JL Ohmann, MJ Gregory, HM Roberts, G Meigs, P Nelson, E Pfaff. 2012. Life-histories from Landsat: algorithmic approaches to distilling Earth's recent ecological dynamics. American Geophysical Union: San Francisco, CA; December 2012. (oral)

49. Roberts, HM*, JL Ohmann, MJ Gregory, EB Henderson. 2012. Gradient nearest neighbor forest vegetation maps for landscape analysis and planning. ForestSAT 2012: Corvallis, OR; September 2012. (poster)

48. Zald, HSJ*, JL Ohmann, HM Roberts, R McGaughey, MJ Gregory, RE Kennedy. 2012. Influence of inventory plot and Landsat imagery positional accuracies on nearest-neighbor (NN) imputation maps of vegetation composition and structure. ForestSAT 2012: Corvallis, OR; September 2012. (poster)

47. Henderson, EB*, JL Ohmann, MJ Gregory, HM Roberts, HSJ Zald. 2012. All for one or one for all? Mapping many species individually versus simultaneously with random forest. Ecological Society of America Annual Conference: Portland, OR; August 2012. (oral)

46. Ohmann, JL*, MJ Gregory, HM Roberts, RE Kennedy, WB Cohen, Z Yang, M Moeur, M Fiorella. 2012. Mapping change of older forest with permanent plots, Landsat time series, and nearest-neighbor imputation. Ecological Society of America Annual Conference: Portland, OR; August 2012. (poster)

45. Gregory, MJ*, JL Ohmann, HM Roberts, R Riemann. 2011. Nearest neighbor vegetation maps for landscape analysis and conservation planning: are they good enough, and how will I know? US Regional Association of the International Association of Landscape Ecology Annual Meeting: Portland, OR; April 2011. (poster)

44. Ohmann, JL*, MJ Gregory, HM Roberts, RE Kennedy, WB Cohen, Z Yang, M Moeur, M Fiorella. 2011. Spatial monitoring of forest landscape dynamics with permanent plots, Landsat time-series and nearest-neighbor imputation. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Portland, OR; April 2011. (poster)

43. Roberts, HM*, JL Ohmann, MJ Gregory, EB Henderson. 2011. Gradient nearest neighbor forest vegetation maps for landscape analysis and planning. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Portland, OR; April 2011. (poster)

42. Roberts, HM*, JL Ohmann, MJ Gregory, EB Grossmann. 2010. Nearest-neighbor forest vegetation maps from FIA plots and geospatial data for landscape analysis and planning in the Pacific Northwest (and beyond). Forest Inventory and Analysis Symposium: Knoxville, TN; October 2010. (poster)

41. Gregory, MJ*, EB Grossmann, JL Ohmann, HM Roberts. 2010. The Nationwide Forest Imputation Study (NaFIS): Challenges, results and recommendations from the western United States. Forest Inventory and Analysis Science Symposium: Knoxville, TN; October 2010. (oral)

40. Grossmann, EB*, JL Ohmann, HK May, MJ Gregory. 2009. Mapping mountain hemlock and pinpointing ponderosa pine: Imputation mapping species distributions in Western Oregon. North American Forest Ecology Workshop: Logan, UT; June 2009. (poster)

39. Ohmann, JL*, MJ Gregory, HK May, EB Grossmann, RE Kennedy, WB Cohen, Z Yang, E Pfaff, M Moeur. 2009. Spatial monitoring of disturbance and late-successional forest dynamics in the Pacific Northwest. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Snowbird, UT; April 2009. (poster)

38. Grossmann, EB*, JL Ohmann, MJ Gregory, HK May. 2009. Gradients or hierarchies? Which assumptions make a better map? US Regional Association of the International Association of Landscape Ecology Annual Meeting: Snowbird, UT; April 2009. (oral)

37. Ohmann, JL*, M Moeur, M Hemstrom, T Burcsu, J Merzenich, MJ Gregory, HK May, EB Grossmann. 2008. Integrating forest inventory data, vegetation maps, and models of vegetation dynamics to support landscape analysis and planning: the IMAP story. Forest Inventory and Analysis Symposium: Park City, UT; October 2008. (oral)

36. Grossmann, EB*, JL Ohmann, J Kagan, MJ Gregory, HK May. 2008. Context-dependent hierarchy of plant community predictors from the Oregon Coast Range to the eastern slopes of the Cascade Mountains. Ecological Society of America Annual Meeting: Milwaukee, WI; August 2008. (poster)

35. Gregory, MJ*, JL Ohmann, TM Holt. 2008. An application of computer gaming technology to visualize, query, and understand forest landscapes. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Madison, WI; April 2008. (poster)

34. Ohmann, JL*, MJ Gregory, JD Kline, RJ Alig, HK May, EB Grossmann. 2008. Implications of social and ecological gradients for conservation planning in large, multi-ownership, forested landscapes. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Madison, WI; April 2008. (poster)

33. Grossmann, EB*, JL Ohmann, J Kagan, KB Pierce Jr., HK May, MJ Gregory. 2008. Random forests and nearest neighbors: Methods for mapping the West Cascades of Oregon. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Madison, WI; April 2008. (oral)

32. Grossmann, EB*, JL Ohmann, J Kagan, KB Pierce Jr., HK May, MJ Gregory. 2007. A tale of two techniques: Gradient Nearest Neighbor and random forest for mapping ecological systems in Oregon's Western Cascades. North American Forest Ecology Workshop: Vancouver, BC; June 2007. (poster)

31. Gregory, MJ*, JL Ohmann, BC McComb. 2006. Sensitivity of wildlife habitat capability models to spatial resolution of underlying mapped vegetation data. 2006 Nearest Neighbors Workshop - Meeting in the Middle: Minneapolis, MN; August 2006. (oral)

30. Ohmann, JL*, MJ Gregory, KB Pierce Jr., TM Holt, HK May. 2006. Mapping forest species and plant communities with Gradient Nearest Neighbor imputation. 2006 Nearest Neighbors Workshop - Meeting in the Middle: Minneapolis, MN; August 2006. (oral)

29. Fried, JS*, JL Ohmann, MC Wimberly, KB Pierce Jr., MJ Gregory. 2006. Tapping the forest inventory for spatially continuous estimates of fuels and fire potential: the GNNFire approach. First Fire Behavior and Fuels Conference: Fuels Management - how to measure success: Portland, OR; March 2006. (poster)

28. Ohmann, JL*, MJ Gregory, KB Pierce Jr., MC Wimberly, JS Fried. 2005. A novel approach to regional fuel mapping: linking inventory plots with satellite imagery and GIS databases using

the Gradient Nearest Neighbor method. Poster presented at Joint Fire Science Program Principal Investigator Workshop: San Diego, CA; November 2005. (poster)

27. Ohmann, JL*, MJ Gregory, KB Pierce Jr., MC Wimberly, JS Fried. 2005. Mapping forest vegetation and fuels with Gradient Nearest Neighbor imputation in three western ecoregions. JFSP Annual Meeting: San Diego, CA; October 2005. (poster)

26. Gregory, MJ*, KB Pierce Jr., JL Ohmann. 2005. Gradient Nearest Neighbor imputation for local scale basal area mapping: FIA 2005 Symposium interpolation contest. Seventh Annual Forest Inventory and Analysis Science Symposium: Portland, ME; October 2005. (oral)

25. Fried, JS*, JL Ohmann, KB Pierce Jr., MC Wimberly, MJ Gregory. 2005. A mid-scale approach to mapping forest fuel and fire hazards at the wildland-urban interface by imputation and modeling of inventory plot data. Seventh Annual Forest Inventory and Analysis Science Symposium: Portland, ME; October 2005. (oral)

24. Gregory, MJ*, A Kimerling, D White, K Sahr. 2004. Evaluating desirable geometric characteristics of discrete global grid systems: revisiting the Goodchild criteria. Second International Conference on Discrete Global Grids: Ashland, OR; October 2004. (oral)

23. Pierce Jr. *, KB, JL Ohmann, MJ Gregory, MC Wimberly, JS Fried. 2004. Mapping forests of the Pacific Northwest: structure, species and uncertainty. Ecological Society of America Annual Meeting: Portland, OR; August 2004. (poster)

22. Wimberly, MC*, C Avery, JL Ohmann, KB Pierce Jr., MJ Gregory, JS Fried. 2004. Landscape connectivity and the potential for catastrophic fire in forested landscapes. Ecological Society of America Annual Meeting: Portland, OR; August 2004. (poster)

21. Gregory, MJ*, JL Ohmann. 2004. Spatial modeling of regional vegetation using field plots and geospatial information: a software framework for the Gradient Nearest Neighbor method. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Las Vegas, NV; April 2004. (poster)

20. Wimberly, MC*, C Avery, JL Ohmann, KB Pierce Jr., MJ Gregory, JS Fried. 2004. Influences of landscape structure, drought, and wind on crown fire spread in forest landscapes. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Las Vegas, NV; April 2004. (oral)

19. Pierce Jr., KB*, JL Ohmann, MJ Gregory. 2004. Assessing spatial uncertainty in landscape vegetation maps created with imputation procedures. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Las Vegas, NV; April 2004. (oral)

18. Wimberly, MC*, JL Ohmann, KB Pierce Jr., MJ Gregory, JS Fried. 2003. A multivariate approach to mapping forest vegetation and fuels using GIS databases, satellite imagery, and forest inventory plots. Fifth Symposium on Fire and Forest Meteorology and 2nd International Wildland Fire Ecology and Fire Management Congress: Orlando, FL; November 2003. (oral)

17. Hicks, WT*, ME Harmon, JL Ohmann, MJ Gregory, B McCune, SD Berryman, E Martin, L Geiser. 2003. Mapping the abundance and activity of two symbiotic nitrogen fixers in western Oregon. North American Forest Ecology Workshop: Corvallis, OR; June 2003. (poster)

16. Ohmann, JL*, TA Spies, MJ Gregory, KN Johnson. 2003. Distribution of vegetation biodiversity across a continuum of land ownership and management emphasis in coastal Oregon. North American Forest Ecology Workshop: Corvallis, OR; June 2003. (poster)

15. Ohmann, JL*, KB Pierce Jr., MJ Gregory, S Danskin, MC Wimberly, JS Fried. 2003. Mapping live and dead forest fuels at the ecoregion scale in coastal Oregon with Landsat imagery and forest inventory plots. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Banff, AB; April 2003. (oral)

14. Turner, DP*, S Ollinger, ML Smith, O Krankina, MJ Gregory. 2002. Scaling net primary production to a MODIS footprint in support of Earth Observing System product validation. Ecological Society of America Annual Meeting: Tucson, AZ; August 2002. (poster)

13. Ohmann, JL*, TA Spies, MJ Gregory, KN Johnson. 2002. Distribution of vegetation biodiversity across a continuum of land ownership and management emphasis in coastal Oregon. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Lincoln, NE; April 2002. (poster)

12. Ohmann, JL*, MJ Gregory. 2001. How does spatial resolution affect Gradient Nearest Neighbor vegetation maps? Symposium: A landmark assessment of Oregon's forest sustainability: Corvallis, OR; October 2001. (poster)

11. Ohmann, JL*, MJ Gregory. 2001. Predictive mapping of forest composition and structure using direct gradient analysis and nearest-neighbor imputation. Symposium: A landmark assessment of Oregon's forest sustainability: Corvallis, OR; October 2001. (poster)

10. Ohmann, JL*, MJ Gregory. 2001. Predictive mapping of forest composition and structure using direct gradient analysis and nearest-neighbor imputation. North American Forest Ecology Workshop: Duluth, MN; June 2001. (poster)

9. Turner, DP*, ST Gower, SC Wofsy, AK Knapp, T Meyers, MJ Gregory. 2001. A cross-biome comparison of vegetation light use efficiency. Global Change Open Science Conference: Amsterdam, Netherlands; June 2001. (poster)

8. Hudak, AT*, MJ Gregory, JL Ohmann, M Moeur, MA Lefsky, WB Cohen. 2001. Comparison of two methods for mapping forest structure from inventory plot and environmental data in Western Oregon. US Regional Association of the International Association of Landscape Ecology Annual Meeting: Tempe, AZ; April 2001. (poster)

7. Ohmann, JL*, MJ Gregory. 2001. How does spatial resolution affect Gradient Nearest Neighbor vegetation maps? US Regional Association of the International Association of Landscape Ecology: Tempe, AZ; April 2001. (poster)

6. Hudak, AT*, MJ Gregory, JL Ohmann, M Moeur, MA Lefsky, WB Cohen. 2000. Predictive mapping of tree species basal areas from forest inventory and environmental data: a comparison of two models. Ecological Society of America Annual Meeting: Snowbird, UT; August 2000. (poster)

5. Ohmann, JL*, MJ Gregory. 2000. Predictive mapping of forest composition and structure using direct gradient analysis and nearest-neighbor imputation. Ecological Society of America Annual Meeting: Snowbird, UT; August 2000. (poster)

4. Turner, DP*, ST Gower, WB Cohen, MJ Gregory, TK Maiersperger. 2000. Spatial heterogeneity in vegetation light use efficiency over an agricultural landscape in central Illinois. Ecological Society of America Annual Meeting: Snowbird, UT; August 2000. (poster)

3. Gregory, MJ*, A Kimerling, D White, K Sahr. 2000. Comparing intercell distance and cell wall midpoint criteria for discrete global grid systems. First International Conference on Discrete Global Grids: Santa Barbara, CA; March 2000. (oral)

2. Ohmann, JL*, MJ Gregory. 1999. A Nearest Neighbor Method for Mapping Forest Composition in the Oregon Coastal Province. Oregon's Forests at the Millennium: What Might the Future Hold?: Corvallis, OR; September 1999. (poster)

1. Turner, DP*, MJ Gregory, BE Law, PM Anthoni, PE Thornton. 1999. Validating modeled gross primary production and evapotranspiration using eddy covariance flux measurements. Ecological Society of America Annual Meeting: Spokane, WA; August 1999. (poster)

Invited seminars

24. Gregory, MJ*, DM Bell, RJ Davis, Z Yang, S Healey. 2022. Gradient Nearest Neighbor (GNN) for habitat analysis. USFS Region 5 Habitat Group (online); April 2022.

23. Gregory, MJ*, DM Bell, HM Roberts, Z Yang, S Healey, WB Cohen, JL Ohmann. 2018. Status update for LCMS/GNN in support of Northwest Forest Plan effectiveness monitoring. College of Forestry Spatial Data Management Group: Corvallis, OR; October 2018

22. Gregory, MJ*, RJ Davis. 2018. Utilizing Google Earth Engine for Bureau of Land Management spatial data activities. Seminar given to Bureau of Land Management Data Users Meeting: Roseburg, OR; June 2018

21. Bell, DM*, MJ Gregory, and HM Roberts. 2017. Spatially complete and temporally deep: An overview of gradient nearest neighbor mapping in the American Northwest. Webinar for the Data Resource Management Program Lunch and Learn Webinar Series, US Forest Service Northwest Region; Portland, OR; February 2017

20. Gregory, MJ*, DM Bell. 2016. TrAccEr: A web-based tool for summarizing vegetation trends at landscape- and regional-scales. USFS Region 6 Information Exchange, Portland, OR; July 2016.

19. Bell, DM*, MJ Gregory, HM Roberts. 2016. Vegetation mapping workflows and the bridge to cloud-based computation. FIA-Esri Massive Raster Processing Meeting, Redlands, CA; May 2016.

18. Bell, DM*, MJ Gregory. 2016. A new web-based trend tool for exploring regional vegetation attribute data. Oregon Department of Forestry, Salem, OR; March 2016.

17. Gregory, MJ*, HM Roberts, DM Bell, JL Ohmann. 2015. Nearest neighbors methods for regional-scale forest vegetation mapping in the western USA. Conservation Biology Institute: Corvallis, OR; August 2015.

16. Roberts, HM*, JL Ohmann, MJ Gregory, HSJ Zald. 2014. Gradient Nearest Neighbor method for forest vegetation mapping. USDA Forest Service Region 6 Lunch and Learn Webinar Series: Corvallis, OR; June 2014.

15. Gregory, MJ*, JL Ohmann, HM Roberts, HSJ Zald, EB Henderson. 2013. Recent advances and applications of nearest neighbors methods for regional-scale forest vegetation mapping in the Pacific Northwest, USA. Landcare Research Seminar: Lincoln, New Zealand; February 2013.

14. Zald, HSJ*, JL Ohmann, HM Roberts, MJ Gregory, EB Henderson, R McGaughey, RE Kennedy, J Braaten, M Simpson. 2013. Incorporating LiDAR and Landsat disturbance history into nearest neighbor mapping of vegetation composition and structure. USFS Region 6 office for Monitoring Inventory Mapping and LiDAR (MIML) working group: Portland, OR; February 2013.

13. Gregory, MJ*, JL Ohmann, TM Holt. 2008. Seeing data with GIS: from paper maps to immersive visualizations. Kids' Keynote address to GIS Day: Corvallis, OR; November 2008.

12. Gregory, MJ*, JL Ohmann, HK May, EB Grossmann, KB Pierce Jr., TM Holt, JS Fried. 2008. Recent advances and applications of nearest neighbors methods for regional-scale forest vegetation modeling. Department of Forest Science Seminar: Corvallis, OR; April 2008.

11. Ohmann, JL*, MJ Gregory, HK May, EB Grossmann. 2008. Gradient Nearest Neighbor (GNN) maps of forest vegetation: accuracy assessment and uncertainty. Interagency Mapping and Assessment Project (IMAP) Users' Group: Portland, OR; February 2008.

10. Ohmann, JL*, KB Pierce Jr., EB Grossmann, MJ Gregory, HK May, TM Holt. 2007. Seeing the forest and the trees: harnessing GIS to map forests of the Pacific Northwest. Keynote address to GIS Day: Corvallis, OR; November 2007.

9. Ohmann, JL*, KB Pierce Jr., EB Grossmann, MJ Gregory, HK May, TM Holt. 2007. Current Vegetation Mapping in Western Oregon. Presented at: USFS Klamath Falls Ranger District: Klamath Falls, OR; June 2007.

8. Gregory, MJ*. 2007. How to Stay on Campus Forever: A Career Path Through Geography, Forestry, and Technology. Department of Geosciences Spring Seminar: Corvallis, OR; May 2007.

7. Holt, TM* and MJ Gregory*. 2006. Demonstration of the GNNViz application. COF Centennial Open House, Corvallis, OR; November 2006.

6. Ohmann, JL*, KB Pierce Jr., MJ Gregory, JS Fried. 2005. Gradient Nearest Neighbor imputation based on FIA plots - useful tool or lying with maps? Seminar at Forestry Sciences Lab: Portland, OR; August 2005.

5. Gregory, MJ*, JL Ohmann. 2004. Spatial modeling of regional vegetation using field plots and geospatial information: a software framework for the Gradient Nearest Neighbor method. College of Forestry Spatial Data Management Group: Corvallis, OR; April 2004.

4. Ohmann, JL*, MJ Gregory, TA Spies. 2003. Predictive vegetation mapping and current vegetation biodiversity in coastal Oregon. Botany and Plant Pathology Departmental seminar: Corvallis, OR; February 2003

3. Ohmann, JL*, MJ Gregory. 2002. Predictive mapping of forest composition and structure with direct gradient analysis and nearest-neighbor imputation (the Gradient Nearest Neighbor method). Focus session at the Joint Meeting of Fourth Annual Forest Inventory and Analysis Science Symposium and the Southern Forest Mensurationists: New Orleans, LA; November 2002.

2. Ohmann, JL*, TA Spies, MJ Gregory, KN Johnson. 2002. Vegetation biodiversity in coastal Oregon forests. A Multi-ownership Assessment of Forests and Watersheds of the Oregon Coast Range. Presented as part of an all-day symposium of invited stakeholders and landowners. Organized by the Coastal Landscape Analysis and Modeling Study (CLAMS): Corvallis, OR; June 2002.

1. Gregory, MJ*, JL Ohmann. 2000. Predictive mapping of forest composition and structure using the Gradient Nearest Neighbor Method. Willamette Valley GIS Users Group: Corvallis, OR; November 2000.

Training Presentations

9. Gregory, MJ*. 2017. Introduction to Mapbox. Presentation for OSU Open Science/Computational Science Study Group: Corvallis, OR; May 2017.

8. Gregory, MJ*. 2014. Introduction to Python for open source geospatial applications. Presentation to the Spatial Data Management Group: Corvallis, OR; May 2014.

7. Gregory, MJ*. 2013. An introduction to Mapbox tools and software. Presentation to the Spatial Data Management Group: Corvallis, OR; July 2013.

6. Gregory, MJ*. 2013. An introduction to Mapbox tools and software. Presentation to the OSU Cartography and Geovisualization Group: Corvallis, OR; May 2013.

5. Gregory, MJ*. 2010. Using Python tools in ArcGIS and open source geospatial libraries. Presentation to the OSU student chapter of the American Society for Photogrammetry and Remote Sensing: Corvallis, OR; June 2010.

4. Gregory, MJ*. 2008. Incorporating your data into Google Maps and Google Earth. Presentation to the Spatial Data Management Group: Corvallis, OR; February 2008.

3. Gregory, MJ*. 2007. Revision control using Subversion and TortoiseSVN. Presentation to the SDMG geoprogramming group: Corvallis, OR; October 2007.

2. Gregory, MJ*. 2006. Mapping current vegetation in the Pacific Coast states with Gradient Nearest Neighbor imputation. Department of Forest Science Remote Sensing Seminar: Corvallis, OR; October 2006.

1. Gregory, MJ*. 2004. Using ArcObjects within ArcGIS 8. Presentation to the Spatial Data Management Group: Corvallis, OR; July 2007.

Grants and Contracts

11. Kennedy, RE and MJ Gregory. 2022. Supporting improved forest attribute status and change mapping. Three years. Joint Venture Agreement with USDA Forest Service. Contract support: $204,391

10. Shaw, D, M Betts, and MJ Gregory. 2021. Forest vegetation mapping and analyses to support forest resource management and monitoring. Five years. Cost reimbursable agreement with USFS Region 6. Contract support: $468,396

9. Gregory, MJ (DM Bell: USFS collaborator). 2019. Exploring New Data Sources and Modeling Frameworks in Support of Species Composition and Vegetation Structure Mapping for Eastern Washington. Two years. Grant with Washington Department of Natural Resources. Contract support: $55,439

8. Shaw, D, M Betts, and MJ Gregory. 2019. Innovations in mapping forest attribute change for stands, landscapes, and regions. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $386,878

7. Ganio, LM and MJ Gregory. 2016. Multidecadal Forest Vegetation and Change Assessment over Regional Landscapes. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $811,028

6. Ganio, LM and MJ Gregory. 2012. Spatial Monitoring of Forest Conditions over Regional Landscapes. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $710,098.

5. Ganio, LM and MJ Gregory. 2012. Integrated, observation-based carbon monitoring for wooded ecosystems in Washington, Oregon, and California. Two years. Sub-award with Boston University. Contract support: $122,083.

4. Ganio, LM and MJ Gregory. 2009. Concepts and Tools for Predictive Vegetation Mapping to Monitor and Project Forest and Landscape Change. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $411,906.

3. Ganio, LM and MJ Gregory. 2006. Predictive Vegetation Mapping and Landscape Modeling in Support of Conservation, Natural Resources, and Land-Use Planning in the Pacific Northwest. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $646,792.

3. Ohmann, JL, MJ Gregory, TM Holt. 2005. Innovative, 3-D, Interactive, and Immersive Techniques for Visualizing, Querying, and Understanding Regional Maps of Forest Vegetation, Fuels, and Fire Risk. Two years. Joint Fire Science Program. Contract support: $202,636.

2. Ganio, LM and MJ Gregory. 2004. Analysis of Regional Variability in Forest Vegetation. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $509,207.

1. Ganio, LM and MJ Gregory. 2000. Spatial Analysis of Variability in Forest Composition and Structure among Ownership and Land Allocations in the Oregon Coastal Province. Five years. Joint Venture Agreement with USDA Forest Service. Contract support: $114,429.