CURRICULUM VITAE

University of Idaho
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NAME: Tara W. Hudiburg **DATE:** 01/05/2021

RANK OR TITLE: Associate Professor

DEPARTMENT: Forest, Rangeland, and Fire Sciences

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Moscow, ID
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DATE OF FIRST EMPLOYMENT AT UI: August 14, 2014

DATE OF TENURE: April 2019

DATE OF PRESENT RANK OR TITLE: April 2019

EDUCATION BEYOND HIGH SCHOOL:

2008-2012 **PhD:** Forest Ecology, Department of Forest Ecosystems and Society, Oregon State University
Advisors: Dr. Bev Law, Dr. Peter Thornton, Dr. Richard Waring, and Dr. Dominique Bachelet
Foci: ecosystem ecology (plants), ecosystem modeling, climate change, biogeochemical cycling,bioenergy
Dissertation: *'Analysis of the Regional Carbon Balance of Pacific Northwest Forests Under Changing Climate, Disturbance, and Management for Bioenergy'*

2005-2007 **MS:** Forest Ecology, Department of Forest Science, Oregon State University
Advisors: Dr. Beverly Law, Dr. Peter Thornton, Dr. David Turner, and Dr. Warren Cohen
Foci: carbon sequestration, forest management and disturbance, remote sensing
Thesis: *'Climate, Management, and Forest Type Influences on Carbon Dynamics of West-Coast US Forests'*

1994-1998 **BS:** Biology, Department of Biology, Pacific Lutheran University, Tacoma, Washington
Advisor: Dr. David Hansen
Foci: ecology, plant water relations
Thesis: *'Water Relations and Gas Exchange Rates of Red Alder and Big Leaf Maple'*

EXPERIENCE:

Teaching, Extension and Research Appointments

2019 -	Associate professor, Department of Forestry, Rangeland, and Fire Sciences, University of Idaho, Moscow, Idaho
2014 - 2019	Assistant Professor, Department of Forestry, Rangeland, and Fire Sciences, University of Idaho, Moscow, Idaho
2014 -	Affiliate faculty, Environmental Sciences Program, University of Idaho, Moscow, ID
2014 -	Affiliate faculty, Ecology and Conservation Biology Program, University of Idaho, Moscow, ID
2012 - 2014	Postdoctoral Research Associate, Department of Plant Biology, University of Illinois, Urbana, Illinois
Summer 2010	Microsoft Graduate Intern, Microsoft Research at Lawrence Berkeley National Lab, Berkeley, California
2006 - 2012	Graduate Research Assistant, Department of Forest Ecosystems and Society, Oregon State University, Corvallis, Oregon

2004 – 2005 Field Ecology Research Assistant, Department of Forest Science, Oregon State University, Corvallis, Oregon

Non-Academic Employment
1999-2003 Programmer / Analyst, Information Technology, Chapman University, Orange, California

TEACHING ACCOMPLISHMENTS:

Areas of Specialization:
Ecosystem Modeling, Ecology, Biogeochemistry

Courses Taught:

FOR 330: *Terrestrial Ecosystem Ecology*, Spring 2020 - present (4 cr.)
FOR 221: *General Ecology*, Spring 2015 – Spring 2019 (3 cr.) (100+ students)
FOR 330: *Terrestrial Ecosystem Ecology*, Spring 2020 (4 cr.)
FOR 529: *Forest Ecosystem Analysis and Modeling*, Fall 2015, Fall 2016 (3 cr.)
ISEM 301: *Climate Change and You*, Fall 2017 - 2019 (1 cr.)
FOR 504: *ST: Earth System Modeling*, Fall 2017 (1 cr)
FOR 504: *ST: DayCent Ecosystem Modeling*, Spring 2018 (3 cr.)

Students Advised:

Undergraduate Students (research):

Dana Andres, University of Idaho, Ecology and Conservation Biology, thesis advisor, 2015 - 2016
Gabrielle Becker, University of Idaho, MURI Undergraduate Research advisor, Summer 2015
Kaylissa Beale, Lewis and Clark State College, MURI Undergraduate Research advisor, Summer 2015
Alexis Litty, University of Idaho, MURI Undergraduate Research advisor, 2015 - 2017
Jesus Gonzalez, University of Idaho, MURI Undergraduate Research advisor, 2015 - 2017
Andrew Piersall, University of Idaho, Ecology and Conservation Biology, thesis advisor, 2016 – 2017
Seth Parker, University of Idaho, Forestry, Undergraduate Research advisor, 2016 – 2019
Heather Crawford, University of Idaho, Ecology and Conservation Biology, thesis advisor 2018 – present
Nikole Lorvick, University of Idaho, SURF advisor, 2019 – present
Jeralyn Poe, Michigan State University, REU advisor, Summer 2019
Sam Sentenn, University of Idaho, Senior thesis advisor, 2019 - present
Nicolas Srodes, Michigan State University, REU advisor, Summer 2020

Graduate Students:

Current
Danielle Berardi, PhD student, University of Idaho, major advisor, 2018 – present
Kristina Bartowitz, PhD student, University of Idaho, major advisor, 2017 – present
Chloe Arthaud, PhD student, University of Idaho, co-major advisor, 2019 – present
Sarah Parkinson, MS student, University of Idaho, committee member, 2019 - present

Completed
Jeffrey Stenzel, MS student, University of Idaho, major advisor, 2015 – 2016
Danielle Berardi, MS student, University of Idaho, major advisor, 2015 – 2017
Mark Clytus, MS student (non-thesis), University of Idaho, co-major advisor, 2016 – 2017
Adam John Raines, MS student (non-thesis), University of Idaho, major advisor, 2016 – 2018
Eric Walsh, PhD student, University of Idaho, major advisor, 2015- 2018
Katherine Baker, PhD student, University of Idaho, co-major advisor, 2015 – 2019
Megan Miller, MS student, University of Idaho, committee member, 2017- 2018
Adrienne Marshall, PhD student, University of Idaho, committee member, 2017 - 2019
Nuria Lopez, PhD student, University of Idaho, committee member, 2015 - 2019
Jeffrey Stenzel, PhD student, University of Idaho, major advisor, 2017- 2021

Materials Developed:

Courses Developed:

GEOS 697: Interdisciplinary Modeling, June 2015 (3 cr.) (2 week co-taught intensive course at BSU)
FOR 529: Forest Ecosystem Analysis, Fall 2015 (3 cr.)
FOR 330: Terrestrial Ecosystem Ecology, Spring 2020 (4 cr.)
ISEM 301: Climate Change and You (1 cr.)

Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:

Invited seminar, The MET Office, Exeter, UK, November 2021
Invited seminar, Ecosystem and Conservation Sciences, University of Montana, February 2021
Invited seminar, Forest, Rangeland, and Fire Sciences, University of Idaho, October, 2020
Invited seminar, Biology Department, University of Idaho, October 2019
Workshop/Course Leader, 4-day NSF Forest-Climate Interactions High School Teacher Workshop/Course, June 2019, McCall, ID
Invited seminar, U. Idaho Vice-Provost for Research seminar series, May 2019, Moscow ID
Invited seminar, Palouse Clearwater Environmental Institute, December 2018, Moscow ID.
Workshop/Course Leader, 4-day NSF Forest-Climate Interactions High School Teacher Workshop/Course, June 2018, McCall, ID
Workshop/Course Leader, 4-day NSF Forest-Climate Interactions High School Teacher Workshop/Course, June 2017, McCall, ID
Invited seminar, University of Wisconsin, December 2017, "Fire, Drought, Beetles, and Humans: Quantifying the Impacts of Disturbance on the Forest Carbon Cycle"
Invited speaker, National Academy of Sciences, Terrestrial Carbon Panel, September 2017, "Forest Carbon Sequestration Strategies"
Invited speaker, Washington Environmental Council, Carbon Friendly Forestry, September 2017, "Oregon's Forest Carbon Balance: Potential Bioenergy Implications"
Invited seminar, Malcolm Renfrew Interdisciplinary Symposium, University of Idaho, April 2017, "Fire, Drought, Beetles, and Humans: Quantifying the Impacts of Forest Disturbance on the Carbon Cycle
Invited lecture, Washington State University, Fall 2015, "Organisms and global change"
Invited lecture, University of Idaho, Spring 2015, 2016, Natural Resources 101
Invited seminar, "Ecosystem Measurements and Modeling from Minutes to Millennia", Washington State University Center for Environmental Research, Education, and Outreach. September, 2015
Invited seminar, "Automated tree (hugging) measurements to improve model prediction of forest carbon uptake. Palouse Ecology and Evolution Symposium", April 29th, 2015.
Invited lecture, University of Idaho, Spring 2015, Environmental Science and Policy
Invited speaker: "Bioenergy Landscapes of the Future", Olympia Science Café, Olympia, WA
Invited seminar: "Effects of climate, disturbance, and forest management on regional carbon storage and emissions under current and proposed policy plans", March 2012. Microsoft Research
Conservation and Ecology Group, Cambridge University, Cambridge, UK

SCHOLARSHIP ACCOMPLISHMENTS:

Publications, Exhibitions, Performances, Recitals (* indicates mentored student or postdoc author):

Refereed/Adjudicated (Non-blind review; i.e. books, book chaps., journals, proc., abstr., etc.**):** --

Peer Reviewed/Evaluated (blind review; i.e. journals, articles, proceedings, abstracts, etc.):

Juice, S. M., Walter, C. A., Allen, K. E., Berardi, D. M., Hudiburg, T. W., Sulman, B. N., & Brzostek, E. R. A new bioenergy model that simulates the impacts of plant-microbial interactions, soil carbon protection, and mechanistic tillage on soil carbon cycling. GCB Bioenergy, 00, 1– 18. (2022). (https://doi.org/10.1111/gcbb.12914)

Walsh, E. S., and Hudiburg, T. W. Response of avian cavity nesters and carbon dynamics to forest management and climate change in the Northern Rockies. Ecosphere 12 (7) (2021). (https://doi.org/10.1002/ecs2.3636)

Stenzel, J*, Walsh, E.*, Berardi, D.*, and **T. Hudiburg**. Thinning creates a persistent carbon deficit in a drought-prone Idaho forest. *JGR-Biogeosciences* (2021). (https://doi.org/10.1029/2020JG005815)

Case, M., K. Bartowitz*, B. Johnson, and **T. Hudiburg**. Forests of the future: Climate change impacts and implications for carbon storage in the Pacific Northwest, USA. *Forest Ecology and Management* 482, 118886 (2021). (https://www.sciencedirect.com/science/article/abs/pii/S0378112720316558)

L. Chen, E. Blanc-Betes*, **T. Hudiburg**, D. Hellerstein, S. Wallander, E. H. DeLucia, M. Khanna. Assessing the Returns to Land and Greenhouse Gas Savings from Producing Energy Crops on Conservation Reserve Program Land. *Environmental Science and Technology* 55 (2), 1301-1309 (2021). (https://pubs.acs.org/doi/abs/10.1021/acs.est.0c06133)

Kent, J.*, Hartman, M. D., Lee, D. K., & **T. Hudiburg**. Simulated biomass sorghum GHG reduction potential is similar to maize. Environmental Science & Technology, 54 (19), 12456-12466 (2020). (https://doi.org/10.1021/acs.est.0c01676)

Moore, C., D. Berardi*, E. Blanc-Bates, C. Bernacchi, **T. Hudiburg**, et al., The carbon and nitrogen cycle impacts of reverting perennial bioenergy switchgrass to an annual maize crop rotation. GCB Bioenergy 12 (11), 941-954 (2020). (https://doi.org/10.1111/gcbb.12743)

Berardi, D.*, E. Brzostek., E. Blanc-Bates, E. Delucia, Hartman, M., J. Kent*, D. Saha, B. Davidson, and **T. Hudiburg**. 21st century biogeochemical modeling: Challenges for Century-based models and where do we go from here? GCB Bioenergy 12 (10), 774-788 (2020). (https://doi.org/10.1111/gcbb.12730)

Bartowitz, K.*, P.E. Higuera, B.N. Shuman, K.K. McLauchlan, and **T. Hudiburg**. Post-fire carbon dynamics in subalpine forests of the Rocky Mountains. Fire 2 (4), 58 (2019). https://doi.org/10.3390/fire2040058

Hudiburg, T., B.E. Law, J. Stenzel*, M. Harmon, and W. Moomaw. Meeting regional GHG reduction targets requires accounting for all forest sector emissions. Environmental Research Letters 14 (9), 095005 (2019). (https://doi.org/10.1088/1748-9326/ab28bb)

Walsh, E.* and **T. Hudiburg**. An integration framework for linking avifauna niche and forest landscape models. PLOS ONE 14 (6), e0217299 (2019). (https://doi.org/10.1371/journal.pone.0217299)

Stenzel, J*, K. Bartowitz*, A. Smith, J. Lutz, C. Kolden, M. Swanson, A. Larson, B. Law and **T. Hudiburg**. Fixing a snag in estimating carbon emissions from wildfire. Global Change Biology 25 (11), 3985-3994 (2019). (https://doi.org/10.1111/gcb.14716)

Buotte, P., S. Levis, B. Law, T. Hudiburg, D. Rupp, P. Mote, and J. Kent*. Near-future forest vulnerability to drought and fire varies across the western US. Global Change Biology 25.1, 290-303 (2019). (https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.14490)

Walsh, E.*, K. Vierling, E. Strand, K. Bartowitz*, and **T. Hudiburg**. Climate change, woodpeckers, and forests: Current trends and future modeling needs. Ecology and Evolution 9 (4), 2305-2319 (2019) (https://doi.org/10.1002/ece3.4876)

Law, B.E., **T.W. Hudiburg**, P. Buotte, L. Berner, J. Kent, and M. Harmon. Forest land use strategies to mitigate climate change in a carbon dense temperate region. Proceedings National Academy of Sciences, 115 (14) 3663-3668 (2018). (http://www.pnas.org/content/115/14/3663)

Gomez-Casanovas, N., DeLucia, N. J., **Hudiburg, T. W.**, Bernacchi, C. J., & DeLucia, E. H.

Conversion of grazed pastures to energy cane as a biofuel feedstock alters the emission of GHGs from soils in Southeastern United States. *Biomass and Bioenergy*, *108*, 312-322 (2018) (https://www.sciencedirect.com/science/article/pii/S0961953417303951)

Hudiburg, T.W., P.E. Higuera, and J.A. Hicke. Fire-regime variability impacts forest carbon dynamics for centuries to millennia. Biogeosciences 14 (17), 3873-3882 (2017). (https://www.biogeosciences.net/14/3873/2017/)

Khanna, M., W. Wang, **T.W. Hudiburg**, and E. H. DeLucia. Regulating indirect land use change due to biofuels: is it worth it? Nature Communications 8, 15513 (2017). (http://www.nature.com/articles/ncomms15513)

Carvalho, J. L.*, **T.W. Hudiburg**, Henrique C. J. Franco, and E.H. Delucia. Contribution of above- and belowground bioenergy crop residues to soil carbon. Global Change Biology-Bioenergy 9 (8), 1333-1343 (2017). (http://dx.doi.org/10.1111/gcbb.12411)

Berner, L.T.*, B.E. Law, and **T.W. Hudiburg**. Water availability limits tree productivity, carbon stocks, and carbon residence time in mature forests across the western United States. Biogeosciences 14 (2), 14 (2), 365-378 (2017). (https://www.biogeosciences.net/14/365/2017/)

Black, C.K*, S. C. Davis, **T.W. Hudiburg**, C. J. Bernacchi, and E.H. DeLucia. Elevated CO2 and temperature increase soil C losses from a soy-maize ecosystem. *Global Change Biology* (Early View; 2016) (http://onlinelibrary.wiley.com/doi/10.1111/gcb.13378/full)

Hudiburg, T.W., W. Wang, M. Khanna, S. Long, W. Parton, P. Dwivedi, M. Hartmann, and E.H. DeLucia. Impacts of a 32-billion-gallon bioenergy landscape on land and fossil fuel use in the US. *Nature Energy* 1: 15005 (2016). (http://www.nature.com/articles/nenergy20155)

Gomez-Casanovas, N., **T.W. Hudiburg**, E.H. DeLucia, W. Parton, and C. Bernacchi. Current and future impacts of atmospheric nitrogen deposition on grassland GHG balance. *Global Change Biology* 22, 1348-1360 (2016). (http://onlinelibrary.wiley.com/doi/10.1111/gcb.13187/pdf)

P. Dwivedi, W. Wang, **T. Hudiburg**, M. Khanna, S. Long, E. DeLucia and W. Parton. Life-Cycle Carbon Intensity and Production Cost of Cellulosic Ethanol. *Environmental Science and Technology* 49 (4), 2512–2522 (2015). (http://pubs.acs.org/doi/abs/10.1021/es5052588)

Hudiburg, T.W., S.C Davis, W.J. Parton, and E.H. DeLucia. Bioenergy crop greenhouse gas mitigation potential under a range of management practices. *Global Change Biology-Bioenergy* 7 (2), 366-374 (2015). (http://onlinelibrary.wiley.com/doi/10.1111/gcbb.12152/epdf)

DeLucia, E.H., N. Gomez-Casanovas, J.A. Greenberg, **T.W. Hudiburg**, I.B. Kantola, S.P. Long, A.D. Miller, D.R. Ort, and W.J. Parton. Theoretical limit to plant productivity. *Environmental Science & Technology* 48 (16), 9471-9477 (2014). (http://pubs.acs.org/doi/abs/10.1021/es502348e)

Hudiburg, T.W., B.E. Law, S. Luyssaert, and P.E. Thornton. Interactive effects of environmental change and management strategies on regional forest carbon emissions. *Environmental Science and Technology* 47 (22), 13132–13140 (2013). (http://pubs.acs.org/doi/abs/10.1021/es402903u)

Hudiburg, T.W., B.E. Law, P.E. Thornton. Evaluation and improvement of the Community Land Model (CLM 4.0) in Oregon forests. *Biogeosciences* 10, 453-470 (2013). (http://www.biogeosciences.net/10/453/2013/bg-10-453-2013.pdf)

Anderson-Teixeira, K., A. Miller, J. Mohan, **T. Hudiburg**, B. Duval, and E.H. DeLucia. Dynamics of forest recovery under a changing climate. *Global Change Biology* 19 (7), 2001-2021 (2013). (http://onlinelibrary.wiley.com/doi/10.1111/gcb.12194/epdf

Law, Beverly, **Tara Hudiburg**, and Sebastiaan Luyssaert. Thinning effects on forest productivity: consequences of preserving old forests and mitigating impacts of fire and drought. *Plant Ecology and*

Diversity 6 (1), 73-85 (2013). (http://www.tandfonline.com/doi/abs/10.1080/17550874.2012.679013)

Hudiburg, T., Beverly Law, Christian Wirth, and Sebastiaan Luyssaert. Regional carbon dioxide implications of forest bioenergy production. *Nature Climate Change* 1, 419–423 (2011). (http://www.nature.com/nclimate/journal/v1/n8/full/nclimate1264.html)

Turner, D.P., Goeckede, M., Law, B.E., Ritts, W.D., Cohen, W.B., Yang, Z., **Hudiburg, T.**, Kennedy, R., Duane, M., Multiple constraint analysis of regional land–surface carbon flux. *Tellus B* 63, 207-221. (2011) (http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0889.2011.00525.x/epdf)

Duane, M.V., W.B. Cohen, J.L. Campbell, **T. Hudiburg**, D.P. Turner, D. Weyermann. Implications of alternative field-sampling designs on Landsat-based mapping of stand age and carbon stocks in Oregon forests. *Forest Science* 56(4): 405-416. (2010) (http://terraweb.forestry.oregonstate.edu/pubs/duane_2010.pdf)

Hudiburg, T.W., B. Law, D. P. Turner, J.L. Campbell, D. Donato, and M. Duane. Carbon dynamics of Oregon and northern California forests and potential land-based carbon storage. *Ecological Applications* (19) 163–180 (2009). (http://www.esajournals.org/doi/pdf/10.1890/07-2006.1).

Turner, D.P, W.D. Ritts, B.E. Law, W.B. Cohen, Z. Yang, **T. Hudiburg**, J.L. Campbell, M. Duane. Scaling net ecosystem production and net biome production over a heterogeneous region in the western United States. *Biogeosciences* 4, 597-612 (2007). (http://www.biogeosciences.net/4/597/2007/)

Popular Press Publications: ---

Other: (reports, proceedings, papers, citations and references, performances)

Refereed/Adjudicated (currently scheduled or submitted):

Peer Reviewed/Evaluated (currently scheduled or submitted):

Presentations and Other Creative Activities: (i.e. slide sets, web pages, video productions, etc., provide date and location) ---

Professional Meeting Papers, Workshops, Showings, Recitals: (provide date and location)

First-author presentations / posters:

Hudiburg, T., J. Stenzel*, B. Law. (2019) Meeting GHG reduction targets requires accounting for all forest sector emissions. UC Davis and California Air Resources Board Forests in Flux meeting, San Francisco, CA.

Hudiburg, T., D. Berardi, J. Kent. (2019) DayCent challenges and successes. Center for Advanced Bioenergy and Biofuels Innovation Annual PI meeting, Champaign, IL.

Hudiburg, T., J. Kent*, E. DeLucia. (2019) Modeling Energy Sorghum Emissions for the Rainfed US. DOE Genomic Science Program Meeting, Washington D.C.

Hudiburg, T. (2019) Modeling biogeochemical consequences of bioenergy landscapes: advances and challenges. DOE Joint BRC Modeling Workshop. Chicago, IL

Hudiburg, T., B. Law, and W. Moomaw. (2018). B33E-2704 Advanced ecosystem accounting for state to country-level forest sector net emissions that account for biogenic, pyrogenic, and anthropogenic emissions. AGU 2018 Fall Meeting, Washington D.C.

Hudiburg, T. (2018) Forest growth and mortality: carbon cycle impacts and mitigation opportunities. USDA Agricultural Congressional Research Exhibition, Washington D.C.

Hudiburg, T., J. Stenzel, B. McNellis, and D. Berardi. (2016) Measuring and modeling carbon balance in mountainous Northern Rocky mixed conifer forests. AGU 95, Fall Meeting, San Francisco, CA.

Hudiburg, T., N. Gomez-Casanovas, E.H. DeLucia, and C. Bernacchi. (2014) Current and Future Impacts of Atmospheric Nitrogen Deposition on Grassland GHG Balance. AGU 94, Fall Meeting, Abstract BG21H-0162

Hudiburg, T., W. Wang, M. Khanna, S. Long, W. Parton, M. Hartmann, P. Dwivedi, and E.H. DeLucia. (2014) Environmental impact of bioenergy landscapes in the United States. 20th World Congress of Soil Science. June 8 – 13th, 2014. Jeju, South Korea

Hudiburg, T.W, P. Dwivedi, W. Wang, M. Khanna, W. Parton, M. Hartmann, S. Long and E.H. DeLucia. (2013) Integrated regional modeling assessment of the environmental and economic potential of perennial grass bioenergy feedstocks. AGU 93, Fall Meeting, Abstract GC43A-1033 (poster)

Hudiburg, T.W. and E.H. DeLucia. (2013) Bioenergy landscapes of the future. Energy Biosciences Retreat. July 15 – 18. Champaign, Il. (Invited oral presentation)

Hudiburg, T.W., S. Davis, W.J. Parton, K. Anderson-Teixeira, C. Smith, E. DeLucia. (2013) Reducing uncertainty of bioenergy crop carbon sequestration strategies using observations from field sites across the central and eastern United States and the DayCent biogeochemical model. 4th NACP Investigators Meeting. Feb. 4-7, Albuquerque, NM. (poster)

Hudiburg, T., Beverly Law, Sebastiaan Luyssaert, and Peter Thornton. (2012) Forest carbon response to management scenarios intended to mitigate GHG emissions and reduce fire impacts in the US West Coast region. AGU 92, Fall Meeting, Abstract B32C, (Invited oral presentation)

Hudiburg, T., Beverly Law, and Peter Thornton. (2012) Interactive effects of changing climate, increasing atmospheric CO2, nitrogen deposition and disturbance on carbon and nitrogen dynamics in Oregon forests. AGU 92, Fall Meeting, Abstract B53B (poster)

Hudiburg, T., Beverly Law, Sebastiaan Luyssaert, and Peter Thornton (2012). Effects of climate, disturbance, and forest management on regional carbon storage and emissions under current and proposed policy plans. Microsoft Research Conservation and Ecology Group, Cambridge University, Cambridge, UK (invited seminar)

Hudiburg, T., Beverly Law, Christian Wirth, Sebastiaan Luyssaert, and Peter Thornton. (2011) Short and Long Term Impacts of Forest Bioenergy Production on Atmospheric Carbon Dioxide Emissions. Eos Trans. AGU 91. Fall Meet. Suppl., Abstract GC21E-04 (oral presentation)

Hudiburg, T., Beverly Law, Christian Wirth, and Sebastiaan Luyssaert. (2011) Life-cycle analysis of US West Coast forests following thinning for combined fire prevention and bioenergy production. North American Carbon Program Meeting, New Orleans, LA. (poster)

Hudiburg, T., Beverly Law, Jon Martin. (2009) An evaluation of the impact of forest biomass harvest for biofuels on carbon storage in the US west coast states under different management scenarios. Eos Trans. AGU 90(52), Fall Meet. Suppl., Abstract B52C-06 (oral presentation)

Student/poster/collaborator posters and presentations (* indicates mentored student or postdoc):

Bryant K.*, T. Hudiburg et al., (2021) B43A-07 Not Dead Yet: Physiological Resilience of Pinus ponderosa to Wildfire and Prolonged Drought. AGU Fall Meeting, San Francisco, CA.

Mathias, J.*, T. Hudiburg et al., (2021) B45P-02 Integration of multiple data streams reveals the impact of environmental change on northern Rocky Mountain forests. AGU Fall Meeting, San

Francisco, CA.

Berardi, D.*, T. Hudiburg et al. (2021) GC32B-05 Increasing Resilience in Agroecosystems: Mitigating Climate Change and Crop Loss to Excessive Moisture with Flood-Tolerant Perennial Bioenergy Crops. AGU Fall Meeting, San Francisco, CA.

Bartowitz, K.*, T. Hudiburg et al., (2021) GC35C-0716 Forest fire carbon emissions continue to be a fraction of fossil fuel emissions. AGU Fall Meeting, San Francisco, CA.

Kent, J., T. Hudiburg et al., (2021) GC45R-01 DayCent-DeepC: Description and Evaluation of a Depth-Resolved Decomposition Submodel for DayCent, and Effects on Soil Carbon Sequestration Potential. AGU Fall Meeting, San Francisco, CA.

Bartowitz, K.J.*, M.J. Case, & T.W. Hudiburg. (2020). Consequences of climate change, land management, and disturbances on the carbon sink potential of Pacific Northwest forests. Ecological Society of America.

Bartowitz, K.* and T. Hudiburg. (2020). What's the fate of forest carbon following wildfires in PNW forests? Take 5 For Science Presentations, The Nature Conservancy, Seattle WA.

Poe, J.*, J. Stenzel*, L. Boschetti, N. Lopez*, T. Hudiburg. (2019) B53J-2535 Modeled Vs. Measured NPP: Are Global Satellite Estimates of Forest NPP Appropriate Across the Terrain of Northern Rocky Mountain Forests? AGU Fall Meeting, San Francisco, CA.

Berardi, D.*, T. Hudiburg et al. (2019) B33E-04 Mitigating Climate Change and Crop Loss by Converting to Flood Tolerant Bioenergy Crops. AGU Fall Meeting, San Francisco, CA.

Blanc-Betes, E.*, T. Hudiburg et al. (2019) B31F-2450 Potential benefits of converting land enrolled in the Conservation Reserve Program to perennial bioenergy crops. AGU Fall Meeting, San Francisco, CA.

Majeed, F., M. Khanna, T. Hudiburg et al. (2019) PA33E-1133 Incentivizing Ecosystem Services from Crop Production: Implications for Energy Crop Production by Risk-Averse Farmers. AGU Fall Meeting, San Francisco, CA.

Stenzel, J.*, E. Walsh**, D. Berardi*, T. Hudiburg. (2019) B53H-2496 Forest Thinning and Drought Impacts on the Carbon Balance of the Northern Rockies. AGU Fall Meeting, San Francisco, CA

Bartowitz, K.*, J. Stenzel*, P. Buotte, T. Hudiburg. (2019) B22C-04 Implications of Land Management and Disturbances on the Carbon Sink Potential of Western US Coniferous Forests: Northwest Forest Plan Case Study. AGU Fall Meeting, San Francisco, CA.

Kent, J.**, M. Hartman, T. Hudiburg. (2019) B43A-07 Improved Accounting for Soil Health Benefits from Soil Organic Matter: Connecting Climate Change Mitigation and System Resilience. AGU Fall Meeting, San Francisco, CA.

Bartowitz, K.*, J. Stenzel*, M. Hartman, T. Hudiburg. (2019). Abstract #77388. Post-fire resiliency in western US forests: Carbon consequences of forest management, fire suppression, and wildfire. ESA Annual Meeting, Louisville, KY.

N. Lorvick*, D. Berardi*, and T. Hudiburg. (2019) Evaluating the Impacts of Seasonal Root and Litter Quality and Biomass on Belowground Carbon Dynamic. Idaho Conference for Undergraduate Research, Boise, ID.

J. Poe*, K. Bartowitz*, J. Stenzel*, and T. Hudiburg. (2019) Modeled vs Measured NPP: Are Global Satellite Estimates of Forest NPP Appropriate Across the Terrain of Northern Rocky Mountain Forests? Idaho Conference for Undergraduate Research, Boise, ID.

E. Walsh* and T. Hudiburg. (2018) GC11G-0989 A Framework for Forest Landscape and Habitat Suitability Model Integration to Evaluate Forest Ecosystem Response to Climate Change. 2018 AGU Fall Meeting, Washington D.C.

D. Berardi*, T. Hudiburg, W. Yang, A.C. von Haden, E. DeLucia. (2018) B33E-2713 Corn Belt Bioenergy Crops: Perennial Grass Potential for Additional Greenhouse Gas Abatement Compared to Corn Given Increased Frequency of Seasonal Flooding. 2018 AGU Fall Meeting, Washington D.C.

K. Bartowitz*, T. Hudiburg, P. Higuera. (2018) GC51E-0830 Carbon Consequences of Fire-regime Variability in Rocky Mountain Subalpine Forests Over Millennia. 2018 AGU Fall Meeting, Washington D.C.

C. Moore, D. Berardi, E. Blanc-Bates, T. Hudiburg. (2018) B51J-2081 The carbon, water and energy costs of converting perennial switchgrass back to annual maize-soybean rotation. 2018 AGU Fall Meeting, Washington D.C.

L. Chen, E. Blanc-Bates, M. Khanna, T. Hudiburg, et al. (2018) GC53F-1010 Achieving Conservation and Renewable Energy Goals with the CRP. 2018 AGU Fall Meeting, Washington D.C.

S.M. Parker*, J. Stenzel, and T. Hudiburg (2018) ED13E-0797 High resolution measurements of forest productivity in the Northern Rockies: Examining the mechanics of forest response to thinning and drought. 2018 AGU Fall Meeting, Washington D.C.

P. E. Higuera, T. Hudiburg, K. Bartowitz, et al. (2018) GC43D-01 A Framework for Understanding, Testing, and Anticipating the Ecosystem Consequences of Wildfire Activity over Space and Time. 2018 AGU Fall Meeting, Washington D.C.

J. Kent*., and T. Hudiburg. (2018) B33E-2704 Modeling Energy Sorghum Emissions for the Rainfed United States. 2018 AGU Fall Meeting, Washington D.C.

J. Stenzel*, T. Hudiburg, D. Berardi, B. McNellis, and E. Walsh. (2017) GC24G-08 Integrated model-experimental framework to assess carbon cycle components in disturbed mountainous terrain. AGU 96, Fall Meeting, New Orleans, LA.

P. Buotte, B. Law, and T. Hudiburg. (2017; invited) B51B-1800 Forecasting Vulnerability to Drought-related Mortality in Western US Forests. AGU 96, Fall Meeting, New Orleans, LA.

B. Law, C. Still, T. Hudiburg, P. Buotte, and C. Hanson. (2017) GC24G-04 Advances in Estimating Current and Future Effects of Climate and Management on Forest Ecosystem Carbon and Water Dynamics at Multiple Scales. AGU 96, Fall Meeting, New Orleans, LA.

D. Berardi*, N. Gomez-Casanovas and T. Hudiburg. (2017) B23H-08 Reducing uncertainty in the DayCent model of heterotrophic respiration with a more mechanistic representation of microbial processes. AGU 96, Fall Meeting, New Orleans, LA.

E. Walsh* and T. Hudiburg. (2017) B53D-1977 The Big Burn: C Emissions from the Northern Rockies 1910 Fires. AGU 96, Fall Meeting, New Orleans, LA. (poster)

E. Blanc-Bates*, T. Hudiburg, M. Khanna, and E. DeLucia. (2017) B53D-1985 Environmental impact of converting Conservation Reserve Program land to perennial bioenergy crops in Illinois. AGU 96, Fall Meeting, New Orleans, LA. (poster)

B. McNellis* and T. Hudiburg. (2017) B53D-1979 Improving Predictions of Tree Drought Mortality in the Community Land Model Using Hydraulic Physiology Theory and its Effects on Carbon Metabolism. AGU 96, Fall Meeting, New Orleans, LA. (poster)

B. McNellis* and T. Hudiburg. (2017) Predicting forest mortality and landscape change under novel climates using an analytical approach to drought response physiology and probabilistic scaling. Spring

Western Sectional Meeting #1128, American Mathematical Society, Pullman, WA.

E. Walsh* and T. Hudiburg. (2017) Future Carbon Dynamics of the Northern Rockies Ecoregion due to Climate Impacts and Fire Effects. Spring Western Sectional Meeting #1128, American Mathematical Society, Pullman, WA.

E. Walsh, K. Vierling, and T. Hudiburg. (2016) Future Carbon Dynamics of the Northern Rockies Ecoregion due to Climate Impacts and Fire Effects. Abstract # B51J-08, AGU 95, Fall Meeting, San Francisco, CA.

J. Stenzel, D. Berardi, and T. Hudiburg. (2016) Automated Monitoring of Carbon Fluxes in a Northern Rocky Mountain Forest Indicates Above-Average Net Primary Productivity During the 2015 Western U.S. Drought. Abstract # B53A-0517, AGU 95, Fall Meeting, San Francisco, CA.

K. Beale*, G. Becker*, D. Berardi, and T. Hudiburg. Belowground Carbon Allocation in a Mixed Conifer Forest in the Northern Rockies. Idaho Conference of Undergraduate Research. July, 2015, Boise, ID. (poster; undergraduate students)

E. Walsh* and T. Hudiburg. Linking climate impacts with avian cavity nester viability: predicting long term habitat suitability across multiple ecological scales. Northwest Climate Conference. November 3-5th, 2015. (poster)

J. Stenzel*, D. Berardi*, and T. Hudiburg. Biogeochemical impacts of drought on Idaho forest ecosystems: can we resolve species level differences with high resolution measurements? Northwest Climate Conference. November 3-5th, 2015, Coeur D'Alene, ID. (poster)

Patents: ---

Grants and Contracts Awarded (totals reflect the amount award to PI Hudiburg; ~3 million)

2021 – 2024 Co-PI: NSF DEB: COLLABORATIVE: Effects of top scavenger declines: from microbes to ecosystems **$677,975**

2021 – 2023 PI: USDA NIFA: Improving the ecological services of Nez Perce Lands through agriculture management and decision support tools. **$500,000**

2020 – 2021 PI: NSF RAPID: Collaborative Research: In situ forest ecosystem response to wildfire. **$126,069**

2020 – 2020 PI: NSF RHASS Supplement: Forest-atmosphere interactions in an era of fire and drought. **$5,278**

2020 – 2020 PI: NSF REU Supplement: Forest-atmosphere interactions in an era of fire and drought. **$8,207**

2020 – 2020 PI: NSF REU Supplement: Causes and consequences of fire-regime variability in Rocky Mountain forests. **$7,584**

2020 – 2020 PI: NSF INTERN Supplement: Causes and consequences of fire-regime variability in Rocky Mountain forests. **$54,406**

2019 – 2019 PI: NSF REU Supplement: Causes and consequences of fire-regime variability in Rocky Mountain forests. **$7,606**

2019 – 2020 Co-PI: BIA Tribal Resilience Planning Grant, "Dataset Development and Modeling for Resilient Decision-Making for Extreme Events, Harmful Environmental Trends, and Land Cover Impacts to Nez Perce Tribe Salmon, Wetlands, Forests, and Prairies", S. Krantz (PI), **$80,858**

2017 - 2022 Co-PI: DOE BRC, CABBI: Center for Advanced Bioenergy and Bioproducts Innovation. E. Delucia, T. Hudiburg, plus 60 other PIs. **$771,000**

2017 - 2021 PI: T. Hudiburg. NSF DEB Ecosystem Sciences, Collaborative Research: Causes and consequences of Rocky Mountain Fire Regime Variability. P. Higuera (Lead Institution PI), B. Shuman (U. Wyoming PI), K. McLaughlin (KState PI). **$194,238**

2016 - 2021 PI: NSF CAREER DEB Ecosystem Sciences, Forest-atmosphere interactions in an era of fire and drought. **$664,235**

2014 - 2018 Senior Personnel: USDA NIFA, EaSM2: Forest die-off, climate change, and human

intervention in Western North America. P. Mote et al., **$141,598**

2017 - 2018 Co-PI: USDA-NIFA Sun Grant, Achieving Conservation and Renewable Energy Goals with the Conservation Reserve Program. M. Khanna (PI), E. DeLucia (Co-PI). **$19,000** (consultant fee)

2015 – 2016 PI, NASA ISGC Seed Grant, Exploratory analysis of drought impacts on forest ecosystem respiration. **$40,000**

2009 - 2012 PI: DOE Global Change Graduate Fellowship; **$150,000**

2007 – 2008 PI: Microsoft E-Science Grant, Development of the AmeriFlux Relational Database, Co-PIs: Mathias Goeckede, Bev Law. **$25,000**

Honors and Awards:

2021 UI Alumni Award for Excellence Inspirational Mentor
2021 Excellence in Research and Creative Activity Award
2020 Outstanding Faculty Research Award, College of Natural Resources, University of Idaho
2019 Presidential Early Career Award for Scientists and Engineers (PECASE)
2016 NSF Early CAREER Award
2016 Outstanding Faculty Research Award, College of Natural Resources, University of Idaho
2012 Awarded student travel grant to attend DOE model-data integration workshop
2011 NACP meeting student travel award
2010 Microsoft Graduate Internship
2009 OSU COF graduate fellowship
2009 OSU Dept. of Forest Science Henry and Mildred Fowells Fellowship
2008 NACP meeting student travel award
2008 Visiting Graduate Student Scholar at National Center for Atmospheric Research
2008 Oregon Laurels Scholarship
2007 OSU Dept. of Forest Science Henry and Mildred Fowells Fellowship
2006 OSU COF graduate fellowship
2005 Oregon Laurels Scholarship
2005 Visiting Graduate Student Scholar at National Center for Atmospheric Research
1997 MJ Murdock Undergraduate Research Grant recipient

Postdoctoral Researchers, and Visiting Scientists advised:

Postdoctoral Researchers:
Jeffrey Kent, University of Idaho, postdoc advisor, June 2017 - present
Justin Mathias, University of Idaho, postdoc advisor, June 2021 - present

Visiting Scientists:
Elena Blanc-Bates, University of Illinois, visiting postdoc, Summer 2017, 2018
Nuria Gomez-Casanovas, University of Illinois, visiting postdoc, Summer 2016

SERVICE:

Major Committee assignments:

University, departmental and college:

2020 Borah Symposium
2019 UI ORED internal review of concept papers for NSF S-STEM
2019 UI College of Engineering, Dept. of Chemical Engineering, P&T committee member
2019 - CNR Diversity committee, co-chair
2019 - UIdaho NSF LSAMP advisory board member
2019 - CNR Graduate Council Representative, member
2018 Dean of College of Natural Resources, search committee member
2018 Vice Provost for Faculty, search committee member
2016 - 2019 University Curriculum Committee, College of Natural Resources delegate (elected)

2016 Dept. Head of Forest, Rangeland, and Fire Sciences, search committee member
2014 Faculty search committee member for UI Dept. Forest, Rangeland, and Fire Sciences
2014 - Curriculum Committee member, Ecology & Conservation Biology
2014 - Curriculum Committee member, Forestry

National:

2021 AmeriFlux Steering Committee (member)
2021 Proposal Review: NSF BIO (panelist)
2020 Proposal Review: NSF BIO (panelist)
2019 AmeriFlux Annual Meeting (Co-chair)
2019 Proposal review: NSF DEB Ecosystems (panelist), Purdue Postdoctoral Fellowship Program (panelist)
2019 Proposal review: NSF CAREER (adhoc), Purdue Postdoctoral Fellowship Program (panelist)
2018 National Academies report on Developing a Research Agenda for Carbon Dioxide Removal and Reliable Sequestration, reviewer
2018 State of the Carbon Cycle Report, multi-agency (USDA, NASA, DOE), review editor (SOCCR2)
2017 NASA ROSES C Cycle Science (panelist), NSF PREEVENTS Fire (panelist), Purdue Postdoctoral Fellowship Program, NSF Geography (adhoc reviewer)
2016 NSF DEB Ecosystems (panelist), NASA ROSES C Cycle Science (panelist), Joint Fire Science Program (panelist), USDA NIFA BNRE (panelist)
2012 USGS Western Region Carbon Report, reviewer

International:

2020 Swiss National Science Foundation (adhoc review)
2019 Swiss National Science Foundation (adhoc review)
2017 Wood Product Substitution Working Group, Pierre and Marie Curie University, Paris, France, invited participant

Professional and Scholarly Organizations

Memberships:

2019 - American Chemical Society
2010- European Geophysical Union
2008- Ecological Society of America
2005- American Geophysical Union

Editorial (peer-reviewed journals):

2019 Guest Editor, Special Issue in Forests: “Management Strategies for Greenhouse Gas Emissions Mitigation”
2014 Global Change Biology Bioenergy Editorial Advisory board (2014 – present), 5.4 impact factor

Peer Reviewer for:

Nature Climate Change, Global Change Biology, GCB- Bioenergy, Global Biogeochemical Cycles, Ecosystems, Frontiers in Ecology and the Environment, Journal of Ecology, Science of the Total Environment, Carbon Management, Remote Sensing and Environment, Environmental Science and Technology, Forest Ecology and Management, Carbon Balance and Management, Journal of Geophysical Research-Biogeosciences, Ecological Applications, PLOS ONE, Biogeosciences, Forests, Geoderma, EcoGraphy, Nature Communications, Oecologia, and the National Academy of Science and Engineering

Outreach Service:

2020 Congressional forest and climate science meetings with staffers for Washington, Oregon,

California, and Utah US representatives and senators (zoom; invited expert; 6 meetings)
2019 Session Chair and Convener, Biogeosciences, ESA Annual Meeting, Louisville, KY.
2019 Meeting Chair and organization committee, 2019 Joint BRC Modeling Meeting, Chicago, IL
2019 Organized a 2-day symposia for Rep. Bob Inglis (R-SC) and Rep. Brian Baird (D-WA) to meet with students, faculty and give a townhall, "Crossing Party lines to solve Climate Change", Moscow, ID
2019 Seminar, Rural Roots and UI Extension Monthly Speaker Series, Moscow, ID
2018 Organized a 2-day symposia for Rep. Bob Inglis (R-SC) and Rep. Brian Baird (D-WA) to meet with students, faculty and give a keynote address "BiPartisan Solutions to Climate Change", Moscow, ID
2017 Organized a 2-day symposia for Rep. Bob Inglis (R-SC) to meet with students, faculty and give a keynote address "Solving Climate Change with Conservative Principles", Moscow, ID
2017 Session Chair and Convener, Biogeosciences Section, AGU Fall Meeting, New Orleans, LA
2017 Idaho Master Forest Stewards Meeting, ~30 forest stewards, gave lecture (outside) on "Mitigating Climate Change - How Forests Store Carbon", Pitkin Nursery, Moscow, ID
2016 Session Chair and Convener, "Alteration of Disturbance-Driven Forest Dynamics under a Changing Climate", AGU Fall Meeting, San Francisco, CA
2015 Session Chair and Convener, "Forest disturbance and climate impacts: Measuring and Modeling from Minutes to Millennia", AGU Fall Meeting, San Francisco, CA
2015 Session Convener, Northwest Climate Conferences, Coeur D'Alene, ID, "Ecological Impacts"
2015 Speaker, UI Experimental Forest Field Day, Moscow, ID
2014 Invited Panel Participant, Earth Science Women's Network workshop "Getting on the Tenure Track and Succeeding" (AGU Fall Meeting, San Francisco, CA)
2014 Volunteer Judge, AGU Fall Meeting Outstanding Student Presentation Award
2013 Volunteer Judge, AGU Fall Meeting Outstanding Student Presentation Award
2012 Volunteer Judge, AGU Fall Meeting Outstanding Student Presentation Award

Interviews and Press Releases:

Burger, Forrest. (July 2019) "Living with Wildfire", Outdoor Idaho, Idaho Public Television. (https://www.idahoptv.org/shows/outdooridaho/episodes/livingWithWildfire/)

Jackson, S. (July 2019) UI professor to receive presidential award for science (https://dnews.com/local/ui-professor-to-receive-presidential-award-for-science/article_32a13c15-43ee-5432-ae5f-cd91e0a6100d.html)

Fisher, S. (June 2018) Interview with Idaho Business Review. Grant aids University of Idaho biofuel program (https://idahobusinessreview.com/2018/06/01/grant-aids-university-of-idaho-biofuel-program/)

Cooper, L. (January 2018) U. Idaho Press Release: Land Use Changes May Help Oregon Mitigate Climate Change, Study Indicates (picked up be several press outlets in Oregon) http://www.ktvz.com/news/osu-study-carbon-benefits-in-forest-management-change/719904506

Collins, N. (January 2016) Article written by Pacific Standard Magazine. New Biofuels Could Cut Emissions and Preserve Land Used to Grow Food. https://psmag.com/new-biofuels-could-cut-emissions-and-preserve-land-used-to-grow-food-e4a6dd6c2d51#.kpmyfkbcv

Roberts, T. (January 2016) University of Idaho Press Release. Grasses are Economic, Low-Emission Biofuel Crops, but Not a Fit for the West. http://www.uidaho.edu/news/news-articles/news-releases/2016-january/011116-biofuelgrasses. Picked up by SciencDaily, Conservation Magazine, and others.

Barnard, J. (Feb. 2013) Phone interview with Dr. Tara Hudiburg for Associated Press and US News. Report: Warming bringing big changes to forests. (http://www.usnews.com/science/news/articles/2013/02/05/report-warming-bringing-big-changes-to-forests)

Templeton, A. (Oct. 2011). Radio interview with Tara Hudiburg for Oregon Public Broadcasting, an NPR member station. OSU Study: Woody Biomass Not a Good Substitute For Fossil Fuels. (http://earthfix.opb.org/energy/article/thining-nw-forests-for-biofuel-increases-carbon-em/)

Boxall B. (Oct. 2011) Phone interview with Tara Hudiburg for LA Times. Forest biofuel projects could increase West Coast carbon emissions. (http://latimesblogs.latimes.com/greenspace/carbon-emissions/page/3/)

Stauth, D. (Oct. 2011) Oregon State University Press Release.
Report: Production of biofuel from forests will increase greenhouse emissions. (picked up by EurekAlert!, ScienceDaily, First Science, The Oregonian, Conservation Magazine, Seattle Times and others)

Community Service:

2019 Moscow High School Senior night committee member
2019 City of Moscow Rendezvous Music Festival committee member
2018 Volunteer, Moscow Charter School, Climate Cats club
2016 PBS Science Trek Forestry Episode

PROFESSIONAL DEVELOPMENT: (workshops and seminars attended)

Teaching:

2012-2014 Informal Early Feedback, Flipping the Classroom, Active Learning, Classroom Assessment Techniques, Writing Exam Questions in Math and Science (University of Illinois Center for Teaching and Learning)

Scholarship:

2018 Data-discovery for FEW nexus workshop, SESYNC, University of Maryland, Invited participant
2017 Invited participant and speaker, NSF NOVUS IV RCN Workshop, Hubbard Brook, New Hampshire
2017 Invited participant for paper synthesis, Wood Product Substitution Working Group, Pierre and Marie Curie University, Paris, France
2015 Participant, 20th Annual CESM workshop
2014 Invited participant, NSF Novus RCN Workshop "Scaling biogeochemical interactions with disturbance events, multiple disturbance agents, and disturbance regimes" (Estes Park, CO)
2013 Participant, 18th Annual CESM workshop
2013 North Central Regional Sun Grant Center Annual Meeting participant (Chicago, Il)
2012 National Sun Grant Meeting participant (New Orleans, LA)
2012 Strategies to promote integrated experiment-model approaches to terrestrial ecosystem study (DOE, Washington DC)
2011 AGU Fall Meeting Communicating Science Skills Workshop

Outreach: --

Administration/Management: --