

CURRICULUM VITAE

University of Idaho

NAME: Andrew Steven Nelson

DATE: 31 December 2021

RANK OR TITLE: Associate Professor, Tom A. Alberg and Judith Beck Chair of Native Plant Regeneration

DEPARTMENT: Forest, Rangeland, and Fire Sciences, College of Natural Resources

OFFICE LOCATION AND CAMPUS ZIP: CNR 102C; 1133

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DATE OF FIRST EMPLOYMENT AT UI: July 2015

DATE OF TENURE: Tenured

DATE OF PRESENT RANK OR TITLE: Alberg-Beck Chair (August 2018), Associate Professor (August 2021)

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

- Ph.D., Forest Resources, University of Maine, Orono, ME 2013
Dissertation: Production ecology and stand dynamics of young Acadian forest stands in response to silvicultural intensity and compositional objectives
Advisor: Dr. Robert Wagner
- M.S., Forest Resources, University of Maine, Orono, ME 2010
Thesis: Spatial ecology and compositional management of American beech and sugar maple regeneration in Maine
Advisor: Dr. Robert Wagner
- B.S. Conservation & Resource Studies, Minor in Forestry, University of California - Berkeley, Berkeley, CA 2005

EXPERIENCE:

Teaching and Research Appointments:

- Associate Professor, Department of Forest, Rangeland, and Fire Sciences, University of Idaho, Moscow, ID 2021 - Present
- Tom A. Alberg & Judith Beck Chair of Native Plant Regeneration, Department of Forest, Rangeland, and Fire Sciences, University of Idaho, Moscow, ID 2018 - Present
- Assistant Professor, Department of Forest, Rangeland, and Fire Sciences, University of Idaho, Moscow, ID 2015 - 2021
- Assistant Professor, School of Forestry and Natural Resources, University of Arkansas—Monticello and University of Arkansas System Division of Agriculture, Monticello, AR 2013 - 2015
- Graduate Research Assistant, School of Forest Resources, University of Maine, Orono, ME 2007 - 2013
- Laboratory Technician, Forest Entomology, University of California—Berkeley 2005 - 2007

Academic Administrative Appointments:

- Director, Center for Forest Nursery & Seedling Research (CFNSR) and Franklin H. Pitkin Forest Nursery, College of Natural Resources, University of Idaho, Moscow, ID 2018 - Present
I lead and administer the CFNSR and Pitkin Nursery by supervising 2.75 FTE staff and 25 students per semester, manage the nursery budget, oversee production of 400,000 plants per year for sale, maintain the seedling quality testing lab, lead the Nursery Advisory Committee, and engage with stakeholders and donors.
- Interim Director, CFNSR & Pitkin Forest Nursery, College of Natural Resources, University of Idaho, Moscow, ID 2016 - 2018
- Interim Coordinator, Cooperative Forestry Research Unit (CFRU), School of Forest Resources, University of Maine, Orono, ME 2010 - 2011
I served as the main point of contact for the CFRU, a forestry landowner-University of Maine research cooperative. I hired and supervising summer field

crews, maintained long-term research databases, coordinated cooperator business meetings, compiled the annual report, and disseminated research results to cooperative members.

Consulting:

- Forest Regeneration Consultant, Larix LLC. 2020 - Present
- Forest Regeneration Consultant, Western Forestry & Conservation Association 2017

TEACHING ACCOMPLISHMENTS:

Areas of Specialization: Native plant regeneration, silviculture, nursery propagation

Courses Taught:University of Idaho

FOR 424 – Silviculture Principles & Practices	2015-2020	4 cr.	Enrollment 15-30
FOR 324 – Forest Regeneration	2016-2020	3 cr.	Enrollment 15-40

University of Arkansas, Monticello

FOR 3434 – Silviculture	2014-2015	4 cr.	Enrollment 20-25
FOR 2291 – Advanced Dendrology	2014	3 cr.	Enrollment 18
FOR 3133 – Forest Fire & Herbicides	2013	3 cr.	Enrollment 20

University of Maine

SFR 106 – Forest Land Navigation	2012	1 cr.	Enrollment 22
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Courses Development:University of Idaho

FOR 424 – Silviculture Principles & Practices	2016	4 cr.
FOR 324 – Forest Regeneration	2017	3 cr.

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

FOR 102 – Introduction to Forest Management	2016-2021	Guest Lectures: Silviculture
NRS 235 – Society & Natural Resources	2019-2020	Guest Lectures: Regeneration

Students Advised:

Undergraduate Students: I advise 6-8 undergraduate students per semester.

Graduate Students:

<u>Student</u>	<u>Degree Sought or Attained</u>	<u>Status</u>	<u>Research Emphasis</u>	<u>Institution</u>
<i>Completed as Major Professor</i>				
Joshua Mullane	M.S.	2021	Silviculture	University of Idaho
Meghan Foard <small>NSF IGERT Trainee</small>	Ph.D.	2020	Dendrochronology	University of Idaho
Brooke Durnin	M.S.	2020	Silviculture	University of Idaho
Kelsie Grover	M.S.	2019	Silviculture	University of Idaho
Jonathan Cherico	M.S.	2018	Silviculture	University of Idaho
Jacob Reely	M.S.	2018	Silviculture	University of Idaho
Geoffrey Williams	M.S.	2017	Forest Biometrics	University of Idaho
<i>In Progress as Major Professor</i>				
David Akowuah	Ph.D.	2021-Present	Silviculture	University of Idaho
Vovener de Verlands Edmond	Ph.D.	2021-Present	Seedling Physiology	University of Idaho
Sarah Larson	M.S.	2021-Present	Seedling Physiology	University of Idaho
Alexander Hoffman	Ph.D.	2020-Present	Seedling Physiology	University of Idaho
Emily Behrens	M.S.	2020-Present	Seedling Physiology	University of Idaho
Mariajuana James <small>Gates Millenium Scholar</small>	M.S.	2019-Present	Seedling Propagation	University of Idaho
Lauren King	M.S.	2019-Present	Seedling Physiology	University of Idaho
Thomas McDonough	M.S.	2019-Present	Seedling Physiology	University of Idaho

<i>Did Not Finish as Major Professor</i>				
Maggie Waugaman (co-advised with Dr. Kerri Vierling)	M.S.	2020	Restoration Ecology	University of Idaho
Shay DuPris	M.S.	2020	Seedling Propagation	University of Idaho
<i>Committee Member – Completed</i>				
Ryan Heiderman	Ph.D.	2021	Forest Biometrics	University of Idaho
Patrick Whalen	M.S.	2021	Forest Biometrics	University of Idaho
Raquel Partelli-Feltrin	Ph.D.	2020	Fire Physiology	University of Idaho
Ann Abbott	Ph.D.	2017	Forest Biometrics	University of Idaho
Halli Hemingway	M.S.	2020	Forest Biometrics	University of Idaho
Wade Steady	M.S.	2019	Fire Ecology	University of Idaho
Allison Lutes	M.S.	2018	Restoration Ecology	University of Idaho
Callie Collins	M.S.	2018	Health and Nutrition	University of Idaho
Kelli Roemer	M.S.	2017	Nat. Res. Sociology	University of Idaho
Lauren Sherman	M.S.	2017	Silviculture	University of Idaho
Alexander Anderson	M.S.	2017	Wood Products	University of Idaho
Christopher Shelton	M.S.	2016	Restoration Ecology	Univ. Ark., Monticello
Ethan Childs*	M.S.	2016	Silviculture	Univ. Ark., Monticello
Alexander Hoffman*	M.S.	2016	Seedling Physiology	Univ. Ark., Monticello

<i>Committee Member – In Progress</i>				
Toriani Kent	M.S.	2020-Present	Entomology	University of Idaho
Endalkachew Mengistie	Ph.D.	2020-Present	Biomass Chemistry	University of Idaho
Krystal Snyder	Ph.D.	2020-Present	Fire Ecology	University of Idaho

* I served as the student's Major Professor at the University of Arkansas, Monticello. The student transferred major professors when I moved to the University of Idaho.

Undergraduate Theses and Mentees:

<u>Student</u>	<u>Degree</u>	<u>Status</u>	<u>Research Emphasis</u>	<u>Institution</u>
Joshua Mullane	B.S. Forestry	2018	Seedling Physiology	University of Idaho
Gabrielle Harden ^{Berklund Scholar}	B.S. Forestry	2019	Restoration Ecology	University of Idaho
Ashleigh Vale ^{NSF REU}	B.S. Range Ecology	Current	Seedling Physiology	University of Idaho

Post-doctoral Scientists / Research Interns / Visiting Scholars:

<u>Staff Member</u>	<u>Degree</u>	<u>Position</u>	<u>Year(s)</u>	<u>Research Emphasis</u>
Ehren Moler	Ph.D.	Post-doc	2020-Present	Seedling Physiology
Jessie Godfrey	Ph.D.	Post-doc	2020	Seedling Physiology
Cen Chen	Ph.D.	Post-doc	2020-2021	Forest Biometrics
Cen Chen	Ph.D.	NSF INTERN	2019	Forest Biometrics
Chenchen Shen	Ph.D.	Post-doc	2017-2018	Regeneration Ecology

Honors and Awards:

- Outstanding Advisor, College of Natural Resources, University of Idaho 2019

Student Awards:

- Joshua Mullane, M.S. Natural Resources, *In progress*, Dr. Robert F. Powers Memorial Scholarship 2020
- Sierra Brantz, B.S. Environmental Science, Graduated 2021, Adele Berklund Undergraduate Research Scholar Award 2020
- Gabrielle Harden, B.S. Forestry, Graduated 2019, Adele Berklund Undergraduate Research Scholar Award 2018

Club Advising:

- Society of American Foresters Student Chapter, University of Idaho 2015 - Present

SCHOLARSHIP ACCOMPLISHMENTS:

Publications (* = Undergraduate students advised, * = graduate students advised ; † = post-doctoral scientists supervised):

Refereed/Adjudicated Journal Articles:**2021**

35. Jain, T.B., **Nelson, A.S.**, Bright, B.C., Byrne, J.C., and Hudak, A.T. *Accepted*. Biophysical setting that influenced plantation survival during the 2015 wildfires in northern Rocky Mountain moist mixed-conifer forests. *Journal of Forestry*. DOI: 10.1093/jofore/fvab036
34. Moler, E.R.V.† and **Nelson, A.S.** 2021. Perspectives on drought preconditioning treatments with a case study using western larch. *Frontiers in Plant Science* 12: Art. 741027. DOI: 10.3389/fpls.2021.741027.
33. **Nelson, A.S.**, Haase, D.L., Paquet, S., Friedman, J., Webb, S., Sowders, G., and Stevens, T. 2021. Nursery strategies to maintain production and protect human health during the coronavirus pandemic. *Tree Planters' Notes* 64(1): 11-20.
32. Reely, J.A.* and **Nelson, A.S.** 2021. Root growth potential and microsite effects on conifer seedling establishment in northern Idaho. *Forests* 12: 597. DOI: 10.3390/f12050597.
31. Vale, A.M.*†, Moler, E.R.V.†, and **Nelson, A.S.** 2021. Two studies of the potential of drought preconditioning to enhance deep root production in seedlings of western larch (*Larix occidentalis*). *Reforesta* 12: 3-12. DOI: 10.21750/REFOR.12.02.94.

2020

30. Chen, C.† and **Nelson, A.S.** 2020. Growth and mortality of planted interior Douglas-fir and western larch seedlings during the establishment phase in Idaho, USA. *Forest Ecology and Management* 474: Art. 118386. DOI: 10.1016/j.foreco.2020.118386.
29. Bose, A.K., **Nelson, A.S.**, and Olson, M. 2020. Growth and mortality response of forest regeneration to partial harvesting varies by species' shade tolerance. *Canadian Journal of Forest Research*. 50(10): 1081-1092. DOI: 10.1139/cjfr-2020-0022.
28. Cherico, J.R.*†, **Nelson, A.S.**, Jain, T.B., and Graham, R.T. 2020. Multidecadal growth of western white pine and interior Douglas-fir following site preparation. *Forests* 11:509. DOI: 10.3390/f11050509.
27. Kattge, J., Bönnisch, G., Díaz, S. *et al.* 2020. TRY plant trait database – enhanced coverage and open access. *Global Change Biology* 26 (1): 119-188. DOI: 10.1111/gcb.14904.
26. Partelli Feltrin, R., Johnson, D.M., Sparks, A.M., Adams, H.D., Kolden, C.A., **Nelson, A.S.**, and Smith, A.M.S. 2020. Drought increases vulnerability of *Pinus ponderosa* saplings to fire-induced mortality. *Fire*. 3: 56. DOI: 10.3390/fire3040056.

2019

25. **Nelson, A.S.** 2019. Root growth potential effects on first-year outplanting performance of Inland Northwest conifer seedlings. *Tree Planters' Notes* 62 (1-2): 144-154.
24. Shen, C.†, **Nelson, A.S.**, Jain, T.B., Foard, M.B., and Graham, R.T. 2019. Structural and compositional responses to thinning over 50 years in moist forests of the northern Rocky Mountains. *Forest Science* 65 (5): 626-636. DOI: 10.1093/forsci/fxz025.
23. Steady, W.D., Partelli Feltrin, R., Johnson, D.M., Sparks, A.M., Kolden, C.A., Talhelm, A.F., Lutz, J.A., Boschetti, L., Hudak, A.T., **Nelson, A.S.**, and Smith, A.M.S. 2019. The survival of *Pinus ponderosa* saplings to increasing levels of fire behavior and impacts on post-fire growth. *Fire* 2: 23. DOI: 10.3390/fire2020023.

2018

22. Bose, A., **Nelson, A.S.**, Kane, M., and Rigling, A. 2018. Density reduction in loblolly pine (*Pinus taeda* L.) stands to increase tree C assimilation: an approach with the dual $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ isotope signatures in needles. *Annals of Forest Science* 75: 8. DOI: 10.1007/s13595-017-0687-1.
21. Collins, C.N., Brooks, R.H., Sturz, B.D., **Nelson, A.S.**, and Keefe, R.F. 2018. Body composition changes of United States smokejumpers during the 2017 fire season. *Fire* 1: 48. DOI: 10.3390/fire1030048.

20. Hoffman, A., Bataineh, M., Adams, J., and **Nelson, A.S.** 2018. Partial harvesting effects on seedling growth and physiology of three hardwood species in mature pine (*Pinus* spp., Pinaceae)-hardwood mixtures. *Journal of the Torrey Botanical Society* 145(3): 237-249. DOI: 10.3159/TORREY-D-17-00031.
19. Lei, Y., Fu, L., Affleck, D.L.R., **Nelson, A.S.**, Shen, C., Wang, M., Zheng, J., Ye, Q., and Yang, G. 2018. Additivity of nonlinear crown width models: Aggregated and disaggregated model structures using nonlinear simultaneous equations. *Forest Ecology and Management* 427: 372-382. DOI: 10.1016/j.foreco.2018.06.013.
18. McDonough, T.C., Regan, D.J., and **Nelson, A.S.** 2018. Propagation protocol for blue elderberry (*Sambucus nigra* L. ssp. *cerula* (Raf.) R. Bolli). *Native Plants Journal* 19(3): 254-259. DOI: 10.3368/npj.19.3.254.
17. Shen, C.[†] and **Nelson, A.S.** 2018. Natural conifer regeneration patterns in temperate forests across the Inland Northwest, USA. *Annals of Forest Science* 75:54. DOI: 10.1007/s13595-018-0724-8.
16. Wagner, R.G., Gonzalez-Benecke, C., **Nelson, A.S.**, and Jacobs, D.F. 2018. Forest regeneration in changing environments. *New Forests* 49(6): 699-704. DOI: 10.1007/s11056-018-9687-8.
15. Williams, G.M.* and **Nelson, A.S.** 2018. Spatial variation in specific leaf area and horizontal distribution of leaf area in juvenile western larch (*Larix occidentalis* Nutt.). *Trees – Structure and Function* 32(6): 1621-1631. DOI: 10.1007/s00468-018-1738-4.
14. Williams, G.M.* , **Nelson, A.S.**, and Affleck, D.L.R. 2018. Vertical distribution of foliar biomass in western larch (*Larix occidentalis* Nutt.). *Canadian Journal of Forest Research* 48: 42-57. DOI: 10.1139/cjfr-2017-0299.

2017

13. Hoffman, A., Adams, J., Bataineh, M., Babst, B., and **Nelson, A.S.** 2017. Response of standard eastern cottonwood and novel black willow clones to artificial lighting. *Tree Planters' Notes* 60 (1): 28-36.
12. Rajan, K., **Nelson, A.S.**, Adams, J.P., and Carrier, D.J. 2017. Phytochemical recovery for valorization of loblolly pine and sweetgum bark residues. *Journal of Sustainable Chemistry and Engineering* 5: 4258-4266. DOI: 10.1021/acssuschemeng.7b00243

2016

11. **Nelson, A.S.**, Wagner, R.G., Day, M.E., Fernandez, I.J., Weiskittel, A.R., and Saunders, M.R. 2016. Light absorption and light-use efficiency of juvenile white spruce trees in natural stands and plantations. *Forest Ecology and Management* 376: 158-165. DOI: 10.1016/j.foreco.2016.06.019
10. **Nelson, A.S.** and Bragg, D.C. 2016. Multi-decadal response of naturally regenerated southern pine to early vegetation management and commercial thinning. *Forest Science* 62(1): 115-124. DOI: 10.5849/forsci.15-056
9. Sheldon, C.J., Ficklin, R.L., Fawley, K.P., Fawley, M.W., Bataineh, M., **Nelson, A.S.**, and Wilson, S. 2016. Vegetation diversity in natural and restored forested wetland sites in southeast Arkansas. *Journal of the Arkansas Academy of Science* 70: Art 37. 221-231.

2015

8. **Nelson, A.S.**, Wagner, R.G., Weiskittel, A.R., and Saunders, M.R. 2015. Effects of species composition, management intensity, and shade tolerance on vertical distribution of leaf area index in juvenile stands in Maine, U.S.A. *European Journal of Forest Research* 134: 281-291. DOI: 10.1007/s10342-014-0850-2

2014

7. **Nelson, A.S.**, and Wagner, R.G. 2014. Spatial coexistence of American beech and sugar maple regeneration in post-harvest northern hardwood forests. *Annals of Forest Science* 71(7): 781-789. DOI: 10.1007/s13595-014-0376-2
6. **Nelson, A.S.**, Weiskittel, A.R., Wagner, R.G., and Saunders, M.R. 2014. Development and evaluation of aboveground small tree biomass models for naturally regenerated and planted tree species in eastern Maine, U.S.A. *Biomass and Bioenergy* 68: 215-227. DOI: 10.1016/j.biombioe.2014.06.015
5. **Nelson, A.S.**, Weiskittel, A.R., and Wagner, R.G. 2014. Development of branch, crown, and vertical distribution leaf area models for contrasting hardwood species in Maine, U.S.A. *Trees - Structure and Function* 28(1): 17-30. DOI: 10.1007/s00468-013-0926-5

2013

4. **Nelson, A.S.**, Wagner, R.G., Saunders, M.R., and Weiskittel, A.R. 2013. Influence of management intensity on the productivity of early successional Acadian stands in eastern Maine. *Forestry* 86(1): 79-89. DOI: 10.1093/forestry/cps064

2012

3. **Nelson, A.S.**, Saunders, M.R., Wagner, R.G., and Weiskittel, A.R. 2012. Early stand production of hybrid poplar and white spruce in mixed and monospecific plantations in eastern Maine. *New Forests* 43: 519-534. DOI: 10.1007/s11056-011-9296-2

2011

2. **Nelson, A.S.**, and Wagner, R.G. 2011. Improving the composition of beech-dominated northern hardwood understories in northern Maine. *Northern Journal of Applied Forestry* 28(4): 186-193.

2008

1. Erbilgin, N., Gillette, N.E., Owen, D.R., Mori, S.R., **Nelson, A.S.**, Uzoh, F., and Wood, D.L. 2008. Acetophenone superior to verbenone for reducing attraction of western pine beetle *Dendroctonus brevicornis* to its aggregation pheromone. *Agriculture and Forest Entomology* 10: 433-441. DOI: 10.1111/j.1461-9563.2008.00407.x

Peer Reviewed/Evaluated Articles:

12. Worden, S., Collins, C., Roe, A., Brown, K., Smith, A.M.S., Kolden, C., **Nelson, A.S.**, Brooks, R., and Ramsay, S. 2017. Wildland firefighters' self-reported nutrition and hydration concerns that may impact health and safety. *Journal of Nutrition Education and Behavior* 49(7) S85.
11. Hoffman, A.P., Adams, J.P., and **Nelson, A.S.** 2016. Effects of light regime and IBA concentration on adventitious rooting of an eastern cottonwood (*Populus deltoides*) clone. In: Proceedings of the 18th Biennial Southern Silviculture Research Conference. Edited by: Schweitzer, C.J., Clatterbuck, W.K., and Oswald, C.M. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. e-Gen. Tech. Rep. SRS-212. pp. 478-485.
10. **Nelson, A.S.** and Bragg, D.C. 2014. Long-term response of natural-origin even-aged southern pine to early competition control and density management in Arkansas, U.S.A. XXIV IUFRO World Congress. *The International Forestry Review* 16(5): 305.
9. **Nelson, A.S.**, Wagner, R.G., and Saunders, M.R. 2014. Silvicultural options for early-successional stands in Maine: Six-year results of the silvicultural intensity and species composition experiment. In: Penobscot Experimental Forest: 60 Years of Research and Demonsration in Maine, 1950-2010. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. Gen. Tech. Rep. NRS-P-123. pp. 91-102.
8. **Nelson, A.S.**, Weiskittel, A.R., Wagner, R.G., and Saunders, M.R. 2012. Verification of the Jenkins and FIA Sapling biomass equations for hardwood species in Maine. In Moving from Status to Trends: Forest Inventory and Analysis (FIA) Symposium 2012. Edited by R.S. Morin, and G.C. Liknes. USDA Northern Research Station Gen. Tech. Rep. NRS-P-105, Baltimore, MD. pp. 373-377.
7. **Nelson, A.S.**, Wagner, R.G., Weiskittel, A.R. 2012. Verification of regional and national aboveground sapling biomass equations in Maine. In Cooperative Forestry Research Unit 2012 Annual Report. Edited by B. Roth, Orono, ME.
6. **Nelson, A.S.**, and Wagner, R.G. 2011. Influence of silvicultural intensity and species composition on the productivity of early successional stands in Maine. In Cooperative Forestry Research Unit 2011 Annual Report. Edited by B. Roth, Orono, ME. pp. 22-26.
5. Mercier, W.J., and **Nelson, A.S.** (eds). 2010. Cooperative Forestry Research Unit 2010 Annual Report, Orono, ME.
4. **Nelson, A.S.**, and Wagner, R.G. 2010. Productivity of hybrid poplar on forested sites in Maine. In Cooperative Forestry Research Unit 2010 Annual Report. Edited by W.J. Mercier, and A.S. Nelson, Orono, ME. pp. 16-22.
3. **Nelson, A.S.**, and Wagner, R.G. 2009. Improving the composition of natural regeneration in Maine hardwood stands with beech-dominated understories: third-year results. In Cooperative Forestry Research Unit 2009 Annual Report. Edited by S.R. Meyer, Orono, ME. pp. 35-39.

2. **Nelson, A.S.**, and Wagner, R.G. 2008. Hardwood regeneration improvement and spatial ecology of beech-dominated understories in Maine. *In Cooperative Forestry Research Unit 2008 Annual Report. Edited by S.R. Meyer, Orono, ME.* pp. 39-43.
1. Wagner, R.G., and **Nelson, A.S.** 2007. Improving species composition of hardwood regeneration in beech-dominated understories: first-year results. *In Cooperative Forestry Research Unit 2007 Annual Report. Edited by S.R. Meyer, Orono, ME.* pp. 33-36.

Peer Reviewed/Evaluated Books:

1. Deal, R. (Editor) and 19 Associate Editors (including **Nelson, A.S.**). 2018. The SAF Dictionary of Forestry, 2nd edition. The Society of American Foresters. Bethesda, MD. 208 p.

Other Publications:

- Nelson, A.S.** 2019. Educating 21st Century Silviculturists. Part of *The 21st Century Silviculturist* discussion (Lead Author Dr. Terrie Jain). *Journal of Forestry* 117(4): 417-424. DOI: 10.1093/jofore/fvz027.
- Nelson, A.S.** 2015. Contemporary values of multiaged silviculture: Review of *Multiaged Silviculture: Managing for complex forest stand structures* by Kevin O'Hara. *Journal of Forestry* 113(2): 264-265. DOI: 10.5849/jof.14-593.
- Nelson, A.S.**, Osborne, D., Liechty, H., and Adams, J. 2014. Fourche Bottoms Desired Forest Conditions Report. Audubon Arkansas, National Audubon Society, Inc. Internal Report.

Refereed/Adjudicated (currently scheduled or submitted):

Contributed Datasets:

1. **Nelson, A.S.** 2019. *Larix occidentalis* branch section specific leaf area and dry mass. TRY Plant Trait Database. DOI: 10.17871/TRY.28.

Presentations (§ = undergraduate students advised; * = graduate students advised; † = post-doc scientists supervised):

Invited Presentations:

13. Mullane, J.A.* and **Nelson, A.S.** 2020. Douglas-fir and western larch response to spring release herbicide treatment in north Idaho. *Forest Vegetation Management Conference*. Anderson, CA. January 14-16.
12. **Nelson, A.S.** 2020. Nursery practices and outplanting performance of tropical hardwoods in Togo, West Africa. *Forest, Rangeland, and Fire Sciences Department, University of Idaho*. Moscow, ID. February 5.
11. **Nelson, A.S.** 2019. Applicability of root growth potential testing to predict seedling survival and growth in the Inland Northwest. *Forest Nursery Association of British Columbia Conference*. Sidney, BC. October 1-2.
10. **Nelson, A.S.** 2019. Causes, consequences, and solutions of forest regeneration failures in the Inland Empire. *Department of Forestry and Natural Resources, Purdue University*. West Lafayette, IN. April 23.
9. **Nelson, A.S.** 2018. Togo nursery and restoration project. *U.S. Embassy in Togo*. Notsé, Togo. February 21.
8. **Nelson, A.S.** 2017. Togo nursery and restoration project. *Forest Research Institute of Ghana*. Kumasi, Ghana. October 20.
7. Williams, G.*, **Nelson, A.S.**, and Affleck, D. 2017. Leaf allocation in a deciduous conifer: vertical distribution of foliage in western larch in Montana and Idaho. *Inland Northwest Growth and Yield Cooperative Winter Technical Meeting*. Coeur d'Alene, ID.
6. **Nelson, A.S.** 2016. Role of forest vegetation management for climate change adaptation. *Department of Forest, Rangeland, and Fire Sciences Seminar*. Moscow, ID. February 17.
5. **Nelson, A.S.** 2014. Improving resiliency of forests in Arkansas. *69th Arkansas Forestry Association Annual Meeting*. Hot Springs, AR. September 23.
4. **Nelson, A.S.** 2014. Upland hardwood thinning options. *Ozark Woodland Owners Association Spring Meeting*. Batesville, AR. April 3.
3. **Nelson, A.S.** 2014. Natural pine silviculture in southern Arkansas. *School of Forest Resources Seminar*. Monticello, AR. March 18.

2. **Nelson, A.S.**, Saunders, M.R., Wagner, R.G., and Weiskittel, A.R. 2011. Hybrid poplar and white spruce stand production in mixed and monospecific plantations on the Penobscot Experimental Forest. *School of Forest Resources Noontime Seminar Series*. Orono, ME.
1. **Nelson, A.S.** 2010. Spatial ecology and compositional management of American beech and sugar maple regeneration in Maine. *College of Natural Resources, Agriculture and Forestry, Graduate Student Awards*. Orono, ME.

Conference Presentations:

2021

65. Godfrey, J., Pinto, J., and **Nelson, A.S.** 2021. Conditioning seedlings for drought using nursery cultural practices: morphological, anatomical, and chemical opportunities. *Society of American Foresters Convention*. Virtual. (oral)
64. Moler, E.[†], Toca, A., Jacobs, D., and **Nelson, A.S.** 2021. Root system improvement and aboveground-belowground trait covariance. *Forest Seedling Root Development and Function for Reforestation and Restoration Symposium*. Virtual. (oral)
63. **Nelson, A.S.**, Jacobs, D.F., and Gonzalez-Benecke, C. 2021. Intraspecific hydraulic responses of commercial tree seedlings to nursery drought conditioning. *Center for Advanced Forestry Systems Summer Meeting*. Virtual. (oral).
62. **Nelson, A.S.**, Jacobs, D.F., and Gonzalez-Benecke, C. 2021. Project Update: Intraspecific hydraulic responses of commercial tree seedlings to nursery drought conditioning. *Center for Advanced Forestry Systems Winter Meeting*. Virtual. (oral).
61. Toca, Moler, E.[†], **Nelson, A.S.**, and Jacobs, D. 2021. Seedling root development and architecture regulation through environmental conditions. *Forest Seedling Root Development and Function for Reforestation and Restoration Symposium*. Virtual. (oral)
60. Vale, A.[‡], Moler, E.[†] and **Nelson, A.S.** 2021. Western larch seedling root distribution responses to drought conditioning. *11th Symposium of the International Society of Root Research and Rooting 2021 Joint Meeting*. Virtual. (poster)
60. Vale, A.[‡], Moler, E.[†] and **Nelson, A.S.** 2021. Western larch seedling root distribution responses to drought conditioning. *University of Idaho Undergraduate Research Symposium*. Moscow, ID. (poster & video)

2020

59. **Nelson, A.S.**, Jacobs, D.F., and Gonzalez-Benecke, C. 2020. Intraspecific hydraulic responses of commercial tree seedlings to nursery drought conditioning. *Center for Advanced Forestry Systems Summer Meeting*. Virtual. (oral).
58. **Nelson, A.S.**, Jacobs, D.F., and Gonzalez-Benecke, C. 2020. Project Update: Intraspecific hydraulic responses of commercial tree seedlings to nursery drought conditioning. *Center for Advanced Forestry Systems Winter Meeting*. Virtual. (oral).
57. Chen, C.[†], **Nelson, A.S.**, and Coleman, M. 2020. INTERN: Gains from advanced genetics western larch across the Inland Northwestern United States. *Center for Advanced Forestry Systems Summer Meeting*. Virtual. (oral)

2019

56. Durnin, B.* , **Nelson, A.S.** and Jain, T.B. 2019. Diversity in restored western white pine-dominated forests of the northern Rocky Mountains. *Society of American Foresters Convention*. Louisville, KY. (oral)
55. Ex, S., Waring, K., Long, J., and **Nelson, A.S.** 2019. Inland West Reforestation Short Course. *USDA Forest Service National Silviculture Workshop*. Bemidji, MN. (poster)
54. Harden, G.[‡] and **Nelson, A.S.** 2019. Restoration of native Togolese forests with nitrogen-fixing tree species. *University of Idaho Undergraduate Research Symposium*. Moscow, ID. (poster)
53. Mullane, J.A.* and **Nelson, A.S.** 2019. Western larch and Interior Douglas-fir seedling response to microsite manipulation in northern Idaho. *Society of American Foresters Convention*. Louisville, KY. (poster)
52. **Nelson, A.S.** and Chen, C. 2019. Incorporating seedling quality and competition into a Inland Northwest seedling model. *Society of American Foresters Convention*. Louisville, KY. (poster)

51. **Nelson, A.S.**, Coleman, M., Rust, M., and Grover, K. 2019. Response of superior western larch families to site quality and simulated drought. *Center for Advanced Forestry Systems Annual Meeting*. Athens, GA. (oral)
50. **Nelson, A.S.**, Nyakokpa, K.S., and Afatchao, R. 2019. Nursery practices and outplanting performance of tropical hardwoods in Togo, West Africa. *Society of American Foresters Convention*. Louisville, KY. (oral)
49. Puhlick, J., Weiskittel, A., Roth, B., and **Nelson, A.S.** 2019. Evaluation of silvicultural options for increasing productivity of early successional stands in the Acadian Forest Region. *Center for Advanced Forestry Systems Annual Meeting*. Athens, GA. (oral)
48. Puhlick, J., Weiskittel, A., Roth, B., and **Nelson, A.S.** 2019. Silvicultural options for increasing productivity of early successional stands: 14-year results of the Silvicultural Intensity and Species Composition Experiment. *New England Society of American Foresters Winter Meeting*. South Burlington, VT. (poster)
47. Puhlick, J., Weiskittel, A., Roth, B., and **Nelson, A.S.** 2019. Growth and yield of hybrid poplar and white spruce in pure and mixed plantations in eastern Maine. *New England Society of American Foresters Winter Meeting*. South Burlington, VT. (oral)

2018

46. Durnin, B.A.* , **Nelson, A.S.**, and Jain, T. B. 2018. Understory diversity in restored western white pine stands. *Society of American Foresters Convention*. Portland, OR. (poster)
45. Foard, M. B.* , **Nelson, A.S.**, and Harley, G.L. 2018. Potential for streamflow reconstructions using species- and site-specific tree ring models. *9th Annual Northwest Climate Conference*. Boise, ID. (poster)
44. Grover, K.* and **Nelson, A.S.** 2018. Response of improved western larch clones to site quality and climate. *Society of American Foresters Convention*. Portland, OR. (oral)
43. Grover, K.* , **Nelson, A.S.**, Coleman, M., Rust, M., Kimsey, M., and Shaw, T. 2018. Response of superior western larch families to site quality. *Center for Advanced Forestry Systems Annual Meeting*. Burlington, VT. (oral)
42. **Nelson, A.S.**, Vore, S., Johnstone, R., and Johnson, G. 2018. Integrated vegetation management alternatives to promote vegetation diversity in Inland Northwest utility rights-of-way. *Environmental Concerns in Rights-of-Way Management. 12th International Symposium*. Denver, CO. (poster)

2017

41. Brooks, R., Collins, C., Brooks, S., **Nelson, A.S.**, and Brown, A. 2017. Wildland firefighter perceptions regarding health and safety issues on the fire line. *7th International Fire Ecology & Management Conference*. Orlando, FL. (poster)
40. Brooks, R., Collins, C., James, S., **Nelson, A.S.**, and Brooks, S. 2017. Wildland firefighter perceptions regarding health and safety issues on the fire line: Assessing fatigue. *7th International Fire Ecology & Management Conference*. Orlando, FL. (oral)
39. Brooks, S., Collins, C., **Nelson, A.S.**, Brooks, R., and Brown, A. 2017. Wildland firefighters' hydration on a fire assignment: Self-reported contributing factors and perceptions. *7th International Fire Ecology & Management Conference*. Orlando, FL. (poster)
38. Cherico, J.* **Nelson, A.S.**, and Jain, T. 2017. Long term effects of site preparation and productivity of two Inland Northwest conifers. *Society of American Foresters Convention*. Albuquerque, NM. (oral)
37. Cherico, J.* **Nelson, A.S.**, and Jain, T. 2017. Effects of site preparation on the long-term growth and productivity of Interior Douglas-fir and western white pine. *IUFRO Forest Regeneration in Changing Environments Conference*. Corvallis, OR. (poster)
36. Collins, C., Brooks, S., Brooks, R., James, S., Brown, A., and **Nelson, A.S.** 2017. Implications of body composition changes across a fire season: A case study of wildland fire fighters. *7th International Fire Ecology & Management Conference*. Orlando, FL. (poster)
35. Foard, M.* , **Nelson, A.S.**, and Harley, G. 2017. Selective tree-ring models: A novel method for reconstructing streamflow using tree rings. *American Geophysical Union Annual Meeting*. New Orleans, LA. (poster)
34. Gerber, K., Davis, A., and **Nelson, A.S.** 2017. Photoperiod reduction influences western larch (*Larix occidentalis*) seedling development. *IUFRO Forest Regeneration in Changing Environments Conference*. Corvallis, OR. (poster)

33. Grover, K. *, **Nelson, A.S.**, Coleman, M., Rust, M., Kimsey, M., and Shaw, T. 2017. Response of superior western larch families to site quality and competition control. *Center for Advanced Forestry Systems Annual Meeting*. Portland, OR. (oral)
32. Reely, J. * and **Nelson, A.S.** 2017. Biomass allocation patterns of three Northwest conifer species: The effects of seedling quality, site quality, and moisture stress. *IUFRO Forest Regeneration in Changing Environments Conference*. Corvallis, OR. (oral)
31. Reely, J. * and **Nelson, A.S.** 2017. Morpho-physiological attributes of 3 Northwest conifers: Effects of drought stress, seedling and site quality. *Society of American Foresters Convention*. Albuquerque, NM. (oral)
30. Shen, C.† and **Nelson, A.S.** 2017. The response and adaptation of tree seedling regeneration to potential competition in Inland Northwest forests, USA. *IUFRO Forest Regeneration in Changing Environments Conference*. Corvallis, OR. (oral)
29. Williams, G. *, **Nelson, A.S.**, and Affleck, D. 2017. Spatial foliage distribution models for western larch (*Larix occidentalis* Nutt.). *Society of American Foresters Convention*. Albuquerque, NM. (poster)

2016

28. Foard, M. *, **Nelson, A.S.**, and Brooks, R. 2016. Reconstructing historical stream flows in multiple reaches of the Columbia River Basin using tree ring records. *Western Mensurationists Annual Meeting*. Stevenson, WA. (oral)
27. Hoffman, A.P. *, Bataineh, M., Adams, J.P., and **Nelson, A.S.** 2016. Response of standard eastern cottonwood and novel black willow clones to artificial lighting. *Southern Hardwood Forest Research Group Meeting*. Stoneville, MS. Feb. 18. (poster) (3rd Place Poster Award)
26. **Nelson, A.S.**, Coleman, M., Rust, M., Kimsey, M., and Shaw, T. 2016. Response of superior western larch families to competition control and site quality. *Center for Advanced Forestry Systems Annual Meeting*. Pensacola, FL. (oral)
25. **Nelson, A.S.**, Coleman, M., Shaw, T., and Kimsey, M. 2016. Inland Northwest conifer mortality response to nitrogen and potassium fertilization. *Society of American Foresters Convention*. Madison, WI. (oral)
24. Reely, J.A. * and **Nelson, A.S.** 2016. Seedling quality and site quality effects on early growth and survival of two Inland Northwest conifer species. *Society of American Foresters National Convention*. Madison, WI. (poster)

2015

23. Child, E. *, Bataineh, M., **Nelson, A.S.**, and Guldin, J. 2015. Neighborhood effects on shortleaf and loblolly pine crown dimensions in southern Arkansas. *Society of American Foresters National Convention*. Baton Rouge, LA. (poster)
22. Childs, E. * and **Nelson, A.S.** 2015. Effects of neighborhood composition and competition on shortleaf and loblolly pine productivity in southern Arkansas. *18th Biennial Southern Silviculture Research Conference*. Knoxville, TN. (poster)
21. Hoffman, A. *, Bataineh, M., Adams, J., and **Nelson, A.S.** 2015. Canopy gap effects on seedling growth of three hardwood species of southeastern Arkansas. *Society of American Foresters National Convention*. Baton Rouge, LA. (poster) (2nd Place Poster Award)
20. Hoffman, A. *, Adams, J., and **Nelson, A.S.** 2015. Response of eastern cottonwood (*Populus deltoides*) microcuttings to different light conditions and IBA concentrations. *18th Biennial Southern Silviculture Research Conference*. Knoxville, TN. (oral) (Outstanding Student Speaker Award)
19. Liechty, H.O., **Nelson, A.S.**, Osborne, D.C., Adams, J.P., and Scheiman, D. 2015. Pre-management forest conditions of Fourche Bottoms-An urban bottomland hardwood forest in Little Rock, Arkansas. *Natural Areas Conference*. Little Rock, AR. (poster)
18. Pagels, T. *, Bataineh, M., **Nelson, A.S.**, and Bragg, D. 2015. Allometric biomass equations for six common understory hardwoods in southeastern Arkansas. *Society of American Foresters National Convention*. Baton Rouge, LA. (poster)
17. Pagels, T. * and **Nelson, A.S.** 2015. Total aboveground biomass of unmanaged and managed mature natural pine-hardwood stands in southern Arkansas. *18th Biennial Southern Silviculture Research Conference*. Knoxville, TN. (poster)

2013

16. Wagner, R.G., Bataineh, M., Olson, M.G., **Nelson, A.S.**, Rice, B. 2013. Influence of partial harvesting on hardwood regeneration. *Northern Hardwood Research Institute Fall Meeting*. Edmundston, New Brunswick, Canada. (oral)

2012

15. **Nelson, A.S.**, Wagner, R.G., Saunders, M.R., and Weiskittel, A.R. 2012. Influence of silvicultural intensity and species composition on the productivity of young Acadian stands in eastern Maine. *Eastern Canada-USA Forest Science Conference*. Durham, NH. (oral)
14. **Nelson, A.S.**, Weiskittel, A.R., Wagner, R.G., and Saunders, M.R. 2012. Development and validation of aboveground sapling biomass equations in Maine. *Northeastern Mensurationists Organization Meeting*. State College, PA. (oral)
13. **Nelson, A.S.**, Weiskittel, A.R., Wagner, R.G., and Saunders, M.R. 2012. Vertical distribution and total tree leaf area equations of juvenile trees in eastern Maine. *Southern Mensurationists Annual Meeting*. Jacksonville, FL. (oral)

2011

12. **Nelson, A.S.**, and Wagner, R.G. 2011. Herbicide treatments can selectively improve the composition of natural hardwood regeneration in American beech-dominated understories in Maine, USA. *7th International Vegetation Management Conference*. IUFRO Unit 1.01.01 Forest Vegetation Management, Valdivia, Chile. pp. 16-18. (oral)
11. **Nelson, A.S.**, Wagner, R.G., Saunders, M.R., and Weiskittel, A.R. 2011. Influence of silvicultural intensity and compositional objectives on the productivity of regenerating Acadian mixedwood stands in Maine, USA. *7th International Vegetation Management Conference*. IUFRO Unit 1.01.01 Forest Vegetation Management, Valdivia, Chile. pp. 90-92. (oral)
10. Olson, M.G., Wagner, R.G., Brissette, J.C., and **Nelson, A.S.** (*presenter*). 2011. Forty years of spruce-fir stand development following herbicide release and precommercial thinning in central Maine, USA. *7th International Vegetation Management Conference*. IUFRO Unit 1.01.01 Forest Vegetation Management, Valdivia, Chile. pp. 34-36. (oral)
9. **Nelson, A.S.**, Weiskittel, A.R., and Wagner, R.G. 2011. Crown and total biomass equations of young, naturally regenerated hardwood species in central Maine. *Northeastern Mensurationists Organization Meeting*. Quebec City, Quebec, Canada. (oral)
8. Wagner, R.G., and **Nelson, A.S.** 2011. Improving the composition of beech dominated northern hardwood understories in northern Maine. *Canadian Institute of Forestry Annual Conference*. Huntsville, Ontario, Canada. p. 25. (oral)

2010

7. **Nelson, A.S.**, and Wagner, R.G. 2010. Spatial patterns of coexisting shade-tolerant northern hardwood regeneration in understories dominated by *Fagus grandifolia* in Maine. *Eastern Canada-USA Forest Science Conference*. Université de Moncton, Edmundston, NB, Canada. p. 44. (oral)
6. **Nelson, A.S.**, Wagner, R.G., and Saunders, M.R. 2010. Influence of silvicultural intensity and compositional objectives on the productivity of regenerating Acadian forest stands. *Eastern Canada-USA Forest Science Conference*. Université de Moncton, Edmundston, NB, Canada. p. 45. (oral)

2009

5. **Nelson, A.S.**, and Wagner, R.G. 2009. Improving species composition of hardwood regeneration in beech dominated understories. *New England Society of American Foresters Meeting*. Portland, ME. p. 30. (oral)
4. Olson, M.G., Wagner, R.G., **Nelson, A.S.**, and Saunders, M.R. 2009. Influence of silvicultural intensity and compositional objectives on the production of regenerating Acadian forest stands. *New England Society of American Foresters Meeting*. Portland, ME. p. 31. (poster)

2008

3. **Nelson, A.S.**, and Wagner, R.G. 2008. Improving species composition of hardwood regeneration in beech dominated understories. *Eastern Canada-USA Forest Science Conference*. University of Maine, Orono, ME. p. 46. (poster)

2. **Nelson, A.S.**, and Wagner, R.G. 2008. Spatial patterns of natural regeneration in northern hardwood stands in Maine. *Eastern Canada-USA Forest Science Conference*. University of Maine, Orono, ME. p. 87. (poster)

2007

1. Erbilgin, N., McPherson, B.A., Bonello, P., Wood, D.L., and **Nelson, A.S.** 2007. New relationships among the sudden oak death pathogen, bark and ambrosia beetles, and fungi colonizing coast live oaks. *Sudden Oak Death Science Symposium III*. Santa Rosa, CA. (poster)

Grants and Contracts Awarded:

Total funded research:	\$3,156,051
PI-led funded research:	\$2,089,867
Total funded research at University of Idaho:	\$2,315,462
PI-led funded research at University of Idaho:	\$1,896,473

In addition to the grants listed below, I receive approximately \$35,000 per year from seedling quality testing services through the Center for Forest Nursery & Seedling Research (CFNSR) to employ CFNSR staff and support applied nursery research.

My role on each grant is indicated by either PI (Principal Investigator), Co-PI, Senior Personnel, or PD (Project Director). USDA NIFA uses PD to indicate the lead investigator on the grant.

Active Grants:

<u>Period</u>	<u>Funding Information</u>	<u>Amount</u>
2021-24	USDA Forest Service, Rocky Mountain Research Station (PI) Long-term silvicultural research in the Northern Rockies: Updates and results (with T. Jain)	\$108,770
2021	PotlatchDeltic Corp. (PI) Stocktype-Spring Release 2021.	\$48,000
2020-25	USDA Forest Service, Rocky Mountain Research Station (PI) Mechanisms of seedling drought avoidance (with J. Pinto).	\$25,000
2020-23	USDA National Institute of Food & Agriculture: Agriculture and Food Research Initiative, Foundational and Applied Science Program (PD) . Integrating plant physiology, insect management, and extension strategies to improve survival of nursery stock (with Co-PDs S. Cook and R. Brooks). Grant #2020-68008-31404.	\$298,420
2020-21	Idaho State Dept. of Agriculture, Nursery and Florist Advisory Committee (PI) . Cultural alternatives to manage anthracnose leaf spot disease in greenhouses.	\$7,403
2019-24	National Science Foundation: Industry-University Cooperative Research Centers Program (PI) . Phase III IUCRC University of Idaho: Center for Advanced Forestry Systems (with Co-PI M. Kimsey). Award # 1916699.	\$500,000
2019-24	USDA National Institute of Food & Agriculture: Agriculture and Food Research Initiative, Foundational and Applied Science Program (PD) Acclimating commercial tree seedling root system architecture to drought (with Co-PD D. Jacobs). Grant # 2019-67014-29109.	\$480,000
2019-22	USDA Forest Service, Rocky Mountain Research Station (PI) Supporting drought research towards resilient landscapes (with K. Dumroese, J. Pinto).	\$96,172
2017-22	USDA Forest Service, Rocky Mountain Research Station (PI) Silvicultural management strategies for enhancing disturbance resilience in the northern Rocky Mountains (with T. Jain).	\$49,770

Completed Grants:

<u>Period</u>	<u>Funding Information</u>	<u>Amount</u>
2020	PotlatchDeltic Corp. (PI) Spring release and garden plots 2020.	\$40,502
2020	PotlatchDeltic Corp. (PI) Competing vegetation effects on tree growth 2019.	\$41,116

2018	University of Idaho Office of Research and Economic Development (Co-PI) ORED 2018 EIS Request: Gap analysis instrument for measuring leaf area of forest canopies (with PI M. Coleman, and Co-PIs D. Johnson, P. Goebel, M. Kimsey, T. Hudiburg).	\$7,025
2018	Avista Utilities (PI) Benefits of shrub competition when managing transmission line rights-of-way.	\$49,000
2018	PotlatchDeltic Corp (PI) Competing vegetation effects on tree growth.	\$24,988
2017	Avista Utilities (PI) Integrated vegetation management – Cultural and biological control components: Benefits of shrub competition when managing transmission line rights-of-way in northern Idaho and western Montana.	\$24,932
2017	Potlatch Corp. (PI) Root growth potential and site quality field trial 2017.	\$39,373
2016	Potlatch Corp. (PI) Root growth potential and site quality field trial 2016.	\$63,027
2015-20	National Science Foundation: Industry/University Cooperative Research Centers (Co-PI) I/UCRC Phase II: University of Idaho membership in Center for Advanced Forestry Systems (with PI M. Coleman). Award # 1540045.	\$411,964
2015-20	National Science Foundation EPSCoR Program (Senior Personnel) EPSCoR RII Track-1: Arkansas Advancing and Supporting Science, Engineering, and Technology (ASSET) III – Multifunctional and Tunable Nanostructured Surfaces (with PI G. McClure).	\$527,004 <i>(Forfitted upon UI appointment)</i>
2015	Univ. Arkansas, Monticello Faculty Research Committee (PI) Vertical distribution of foliar nitrogen content in loblolly pine and shortleaf pine crown in response to neighborhood composition and competition.	\$1,500
2015	Arkansas Science and Technology Authority (PI) Seasonal and tree size-related effects on biological activity of loblolly pine and sweetgum bark (with Co-PIs D. Carrier, and J. Adams).	\$49,999
2014	National Audubon Society (PI) Fourche Creek Bottom forest community assessment and defined forest conditions silvicultural recommendations (with Co PIs H. Liechty, D. Osborne, J. Adams).	\$24,737
2014	Univ. Arkansas, Monticello Faculty Research Committee (PI) Influence of forest thinning and neighborhood competition on the intrinsic water-use efficiency of loblolly pine trees.	\$1,500
2013	Maine Agricultural and Forest Experiment Station (PI) Within-crown carbon and nitrogen partitioning in red spruce and balsam fir tree in response to neighborhood competition (with Co-PIs R. Wagner, J. Frank, A. Weiskittel).	\$2,500
2013-14	Cooperative Forestry Research Unit (Co-PI) Weymouth Point: Monitoring the effects of whole tree harvesting and intermediate silvicultural treatments on long-term spruce-fir productivity (with PI B. Roth, and Co-PIs R. Wagner, R. Seymour, A. Weiskittel).	\$12,811
2012-14	Cooperative Forestry Research Unit (co-PI) Incorporating young hardwood stand responses to various levels of silviculture and stand composition into new CFRU growth & yield models (with PI R. Wagner).	\$67,871
2011-12	Northern States Research Cooperative – Theme III (PI) Silvicultural effects on environmental conditions and resulting aboveground productivity and carbon sequestration of northeastern mixedwood forests.	\$38,350
2010	Penobscot Experimental Forest Research Operations Team (PI) Measuring climate conditions on the Penobscot Experimental Forest.	\$3,000
2009-11	Northern States Research Cooperative – Theme III (PI) Role of silvicultural intensity and species composition objectives on the growth, dynamics, and carbon balance of northeastern forest stands (with Co-PIs R. Wagner, M. Olson, and A. Weiskittel).	\$71,808
2008-11	Cooperative Forestry Research Unit (co-PI) Improving the species composition of understory hardwood regeneration on beech-dominated sites: continued measurement (with PI R. Wagner).	\$39,509

Honors and Awards:

2012	Ralph Griffin Memorial Scholarship	University of Maine
2009	Mark Housewart Scholarship	University of Maine

SERVICE:**Major Committee Assignments:**University of Idaho:

- Library Affairs Committee 2021 - Present
- University Assessment Committee 2017 - 2020

University of Idaho, College of Natural Resources:

- Rangeland Center communications Specialist Search Committee, Member 2021
- College Bylaws Revision Committee, Member 2021
- Faculty in Forest & Sustainable Products, Search Committee Member 2019
- Heady Endowed Chair in Rangeland Ecology, Search Committee Member 2017
- College of Natural Resource Curriculum Committee, Committee Member 2016 - Present

University of Idaho, Department of Forest, Rangeland, and Fire Sciences

- John Mandzak Forest Research Travel Award, Committee Chair 2020
- Russell H. Hudson Tree Improvement Excellence Award, Committee Chair 2019 - Present
- Faculty Promotion & Tenure Committees, Committee Member 2017, 18, 20
- John Mandzak Forest Research Travel Award, Committee Member 2016 - Present

University of Arkansas, Monticello

- Academic Appeals Committee, Committee Member 2014-2015
- University Library Committee, Committee Member 2014-2015
- University General Council, Committee Member 2015

Other University Service:

- Franklin H. Pitkin Nursery Advisory Committee, Committee Organizer 2016 - Present
- UI Spring Commencement, CNR Commencement Marshall 2016
- Society of American Foresters Program Reaccreditation Self-Assessment Report, Contributor 2015-2016

Professional Leadership and Steering Committees:

- IUFRO Unit 1.01.03 Temperate Forest Regeneration Working Group, Lead Coordinator 2020 - Present
- USFS Boise Basin Experimental Forest Landscape Resiliency Committee, Member 2017-2018
- The Society of Xi Sigma Pi National Forestry Honor Society, Secretary Fiscal Agent 2016-2020
- Inland Empire Tree Improvement Cooperative Steering Committee, Member 2016 - Present

Peer-review Journal Leadership and Contribution:

- *New Forests*, an international journal of forest regeneration research, Associate Editor 2018 - Present
 - *Journal of Forestry*, Associate Editor 2015-2019
 - *Journal of Forestry*, Book Reviews Editor 2015-2017
- Journal reviewer: Nature Plants (1), Canadian Journal of Forest Research (2), European Journal of Forest Research (2), Forest Ecology and Management (5), Forests (8), Forest Science (10), Forestry (4), Journal of Forestry (13), Journal of Vegetation Science (1), Sustainability (1), New Forests (9), Oecologia (1), The

Journal of the Torrey Botanical Society (1), Western Journal of Applied Forestry (2), Native Plants' Journal (1).

External Funding Grant Proposal Panels and Reviews:

- BiodivERsA (European Union) BiodivRestore Call, Ad Hoc Proposal Reviewer 2021
- USDA National Institute of Food and Agriculture, Agricultural and Food Research Initiative, Panel Member 2019
- The Icelandic Center for Research, Ad Hoc Proposal Reviewer 2018

Professional Society Membership:

- Forest Nursery Association of British Columbia, Member 2020 - Present
- American Society of Horticultural Science, Member 2018 - Present
- Society of American Foresters, Member 2004 - Present

Conference Organization / Session Moderation:

- Inland Empire Reforestation Council Meeting, Chair 2020, 2021t
- North American Nursery Management Online Seminars, Organizing Committee 2020
- USDA Forest Service 2021 National Silviculture Workshop, Planning Committee 2020 - Present
- Inland Empire Reforestation Council Meeting, Organizing Committee 2018 - Present
- Western-Intermountain Joint Nursery Growers' Meeting, Co-Chair 2018
- Intermountain Container Seedling Growers' Meeting, Chair 2017 - Present
- IUFRO International Forest Regeneration in Changing Environments Conference, Organizing Committee 2015-2017
- IUFRO International Forest Regeneration in Changing Environments Conference, Session Moderator 2017
- IUFRO International Forest Regeneration in Changing Environments Conference, Post-Conference Tour Lead 2017
- Society of American Foresters National Convention, Session Moderator 2015-2017
- Biennial Southern Silviculture Research Conference, Steering Committee Member 2014-2015
- Biennial Southern Silviculture Research Conference, Session Moderator 2015

Professional Short Courses:

- USDA Forest Service Regions 1-4, Rocky Mountain Regional Silviculture Course (20 hours online, 5 days in-person), Co-Instructor 2020 - Present
- USDA Forest Service Regions 1-4, Reforestation Short Course (20 hours online, 2.5 days in-person in Boise, Idaho), Co-Instructor 2017 - Present
- USDA Forest Service Region 1, Advanced Reforestation and Regeneration Short Course (2.5 days in-person in Moscow, Idaho), Organizer and Lead Instructor 2017

Outreach Field Tours:

- Annual Inland Northwest Active Management Tour, Co-organizer 2018 - Present
- University of Idaho Extension Shrub Field Day, Presenter 2016
- University of Idaho Experimental Forest Field Day, Presenter 2015
- Crossett Arkansas Forestry Field Day, Presenter 2015
- Shortleaf Pine Initiative Southern Arkansas Field Tour, Co-organizer 2014

Nursery Tours

- Franklin H. Pitkin Nursery Tours, 4-5 per year, Tour Lead 2016 - Present
- Togo Nursery & Restoration Projects, 4-5 tours per year, Tour Lead 2016 - Present

Outreach Presentations: (* = graduate students advised; † = post-doctoral scientists supervised)**2021**

32. Moler, E.R.V.† and **Nelson, A.S.** 2021. Effects of drought conditioning on western larch physiology and growth. *Intermountain Container Seedling Growers' Association annual meeting*. September 15. (~20 attendees)
32. **Nelson, A.S.** 2021. Tree responses to extended drought. UI Extension, *Current Topics in Forest Health*. Virtual. December 17. (85 attendees)
31. **Nelson, A.S.** 2021. 2020 Inland Northwest reforestation survey results. *Intermountain Container Seedling Growers' Association annual meeting*. September 15. (20 attendees)
30. **Nelson, A.S.** 2021. Value of competition control in young forest stands. *Bureau of Land Management Reforestation Training*. Online. November 10. (~40 attendees)
29. **Nelson, A.S.** 2021. Conifer seedling response thresholds. *Intermountain Forestry Cooperative Annual Meeting*. Moscow, ID. March 23. (~40 attendees)

2020

28. **Nelson, A.S.** 2020. Competition threshold studies in the Inland Northwest. UI Extension, *Current Topics in Forest Health*. Virtual. December 11. (~105 attendees)
27. Chen, C.† and **Nelson, A.S.** 2020. Identification and modeling of key variables to reforestation success. *Intermountain Forestry Cooperative Annual Meeting*. Moscow, ID. March 24. (~40 attendees)
26. Jain, T., **Nelson, A.S.**, and Warwell, M. 2020. Climate, disturbance, and mitigating factors that affect seedling growth environments. *USDA Forest Service Regions 1-4 Annual Reforestation/Stand Improvement Workshop*. Missoula, MT. February 19-21. (~60 attendees)
25. **Nelson, A.S.** 2020. Reconsidering stocktype sizes: Long-term results from a stocktype comparison study in northern Idaho. *Inland Empire Reforestation Council Meeting*. Coeur d'Alene, ID. March 3. (~150 attendees)
24. **Nelson, A.S.** 2020. Choosing reforestation stocktypes for family forests – Results from the Inland Northwest stocktype study. *Family Forests Workshop*. Coeur d'Alene, ID. January 24. (~80 attendees)

2019

23. Durnin, B.A.* and **Nelson, A.S.** 2019. Understory floristic diversity in planted blister-rust resistant western white pine stands. *Inland Empire Tree Improvement Cooperative Conference*. Coeur d'Alene, ID. March 6
22. **Nelson, A.S.** 2019. Inland Northwest conifer stocktype study: 11 and 12 year results. *Intermountain Container Seedling Growers' Association Meeting*. Pendleton, OR.
21. **Nelson, A.S.** 2019. Incorporating competition and seedling quality into a Inland Northwest seedling growth and survival model. *Inland Empire Reforestation Council Meeting*. Coeur d'Alene, ID. March 5.
20. **Nelson, A.S.** 2019. The importance of seedling quality in the Inland Northwest. *Inland Empire Christmas Tree Association Winter Meeting*. Coeur d'Alene, ID. February 23.
19. **Nelson, A.S.** 2019. Vegetation diversity in transmission rights-of-way. *Avista Corporation*. Spokane, WA. January 22.

2018

18. Cherico, J.* and **Nelson, A.S.** 2018. The effects of site preparation on the long-term growth and productivity of interior Douglas-fir and western white pine. *Intermountain Forestry Cooperative Technical Meeting*. Moscow, ID. March 27.
17. **Nelson, A.S.** 2018. The importance of seedling quality for successful reforestation in the Inland Northwest. *Setting Stands Up for Success—From Seed to PCT: Applied Early Stand Silviculture in the Inland Northwest*. Spokane, WA. December 13.
16. **Nelson, A.S.** 2018. Rapid root growth potential testing of Inland conifers with aeroponic mist chambers. *Joint meeting of the Western Forestry and Conservation Nursery Association and the Intermountain Container Seedling Growers' Association*. Coeur d'Alene, ID. October 25-26.
15. Regan, D. and **Nelson, A.S.** 2018. Nursery production timelines: Tips for successful grower and buyer partnerships. *Inland Empire Reforestation Council Meeting*. Coeur d'Alene, ID. March 6.

14. **Nelson, A.S.** 2018. Forest regeneration competition thresholds: Concepts and integration into reforestation plans. *Wilbur-Ellis Professional Markets Technical Seminar*. Spokane, WA. January 25.

2017

13. Brooks, R., Collins, C., James, S., **Nelson, A.S.**, and Brooks, S. 2017. Using Actigraph Readibands to connect wildland firefighter sleep patterns and physiology. *Off the Grid workshop: Real-time positioning and mobile data solutions for natural resources*. Coeur d'Alene, ID. November 2.
12. McDonough, T., Regan, D., and **Nelson, A.S.** 2017. Blue elderberry propagation at the Pitkin Forest Nursery. *Intermountain Container Seedling Growers' Association Meeting*. Moscow, ID. (oral)
11. **Nelson, A.S.** 2017. Assessing competition thresholds when establishing Inland Northwest conifers. *Current Topics in Forest Health: 2017 Workshop*. University of Idaho Extension. Coeur d'Alene, ID. December 15.
10. **Nelson, A.S.** 2017. Defining tipping points in seedling survival and growth with competition thresholds. *Intermountain Forestry Cooperative Technical Meeting*. Moscow, ID. March 28.
9. Regan, D. and **Nelson, A.S.** 2017. Operational research projects at the Pitkin Forest Nursery. *Intermountain Container Seedling Growers' Association Meeting*. Moscow, ID. (oral)

2016

8. **Nelson, A.S.** 2016. Advancing the science and management of Inland Northwest forests. *Intermountain Forestry Cooperative Technical Meeting*. Moscow, ID. March 29.

2015

7. **Nelson, A.S.** 2015. Future of silviculture at the University of Idaho. *Inland Empire Society of American Foresters Annual Meeting*. Plummer, ID. September 18.

2012

6. Wagner, R.G. and **Nelson, A.S.** 2012. Improving the composition of beech-dominated northern hardwood understories in northern Maine. *Maine Society of American Foresters Fall Meeting*. Orono, ME.
5. Wagner, R.G. and **Nelson, A.S.** 2012. Improving the composition of beech-dominated northern hardwood understories in northern Maine. *Maine Pesticide Recertification Meeting*. Bangor, ME.

2010

4. **Nelson, A.S.**, and Wagner, R.G. 2010. CFRU Beech Control Study - 3rd year results. *Maine Pesticide Recertification Meeting*. Bangor, ME.
3. **Nelson, A.S.** 2010. Managing beech bark disease with silviculture in Maine. *Northeastern Forest Pest Council Meeting*. York, ME.

2009

2. **Nelson, A.S.**, and Wagner, R.G. 2009. Managing American beech in the beech bark disease aftermath forests of Maine. *Northeastern Forest Health Field Workshop: Using Silviculture to Reduce Risks from Pests*. Schoodic Peninsula, ME.
1. **Nelson, A.S.** 2009. The beech dilemma: ecology and management of a native weed species. *Maine Division of the New England Society of American Foresters Forest Forum*. Caribou, ME.

PROFESSIONAL DEVELOPMENT:

Teaching:

- *Teaching for Learning: Making the Most of the New Science of Learning* seminar. Presented by Dr. Todd Zakrajsek. University of Idaho Center for Excellence in Teaching and Learning. 8 November 2017.

Administration/Management:

- Praesidium Workshop: Managing the Risk of Minors. Led By Aaron Lundberg. University of Idaho Risk Management. 16 October 2017
- Creating an Inclusive Team and Promoting a Culture of Respect. Led By: Kepro. 12 April 2021