

NICOLE LAU

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EDUCATION

UNIVERSITY OF CALIFORNIA BERKELEY, BERKELEY, CA 2022 -
Master of Science, Energy & Resources Group | Rausser College of Natural Resources

UNIVERSITY OF WASHINGTON, SEATTLE, WA 2015 - 2019
Bachelor of Science with Honors in Environmental Science & Terrestrial Resource Management, with minor in Urban Ecological Design (under Dept. of Landscape Architecture)
Honors: cum laude | *Cumulative GPA: 3.80/Major GPA 3.94*

PRESENTATIONS & PUBLICATIONS

Zuest, F; Castanha C; **Lau N**; Kueppers L M (2021): Geospatial Data from the Alpine Treeline Warming Experiment (ATWE) on Niwot Ridge, Colorado, USA. Subalpine and Alpine Species Range Shifts with Climate Change: Temperature and Soil Moisture Manipulations to Test Species and Population Responses, *ESS-DIVE repository*. Dataset. doi: 10.15485/1804896.

Lau, Nicole. "Establishing a Long-Term Seedling Monitoring Protocol: A University of Washington-King County Partnership." Honors thesis project. Presented at the UW School of Environmental and Forest Sciences' Capstone Poster Symposium, Spring 2019.

AWARDS/HONORS/CERTIFICATIONS

- Wilderness First Aid certification and epinephrine auto-injector certification via NOLS (valid until 2024)
- Dean's list (2015-2019)
- Winning Team, Annual Silviculture Challenge held between the University of Washington & University of British Columbia. Malcolm Knapp Research Forest, Maple Ridge, BC, Canada (March 2018)

RESEARCH & FIELD EXPERIENCE

University of California Davis Safford Lab South Lake Tahoe & Placerville, CA
Laboratory Assistant III / Field Crew Lead | PI: Dr. Hugh Safford (Jun-Aug 2022)

- Completed fuel treatment effectiveness evaluations and common stand exams in the Lake Tahoe Basin Management Unit and Eldorado National Forest with two field crews
- Protocol sections include fuels transects, overstory evaluations, and point-line intercepts
- Led the Lake Tahoe Basin Management Unit crew: organized work schedules and digitized field data

University of California Berkeley Energy and Resources Group (Remote) Seattle, WA
Laboratory Assistant II | PI: Dr. Lara Kueppers (Jun 2020-Jun 2022)

- Compiled, organized, described, and published data from the Alpine Treeline Warming Experiment in CO
- Wrote and published a project-related data portal (on ESS-DIVE, a Dept. of Energy science data repository)
- Produced maps and published geospatial data from the Alpine Treeline Warming Experiment on ESS-DIVE

Herrera Environmental Consultants Seattle, WA
Environmental Scientist I | Water Group (Oct 2019-Aug 2020)

- Sampled stormwater in urban and suburban streams according to project needs (grab and meter-sampling)
- Conducted site setup, takedown, and sample collection for automatic water samplers in urban settings
- Completed flow measurements for streams located in suburban reserves during storm events

University of Washington Harvey Lab Seattle, WA
Research Assistant | PI: Dr. Brian Harvey (Oct-Dec 2019)

- Digitized and completed QA/QC on large quantities of data gathered across Washington state from 2019
- Managed and organized two large datasets

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University of Washington Pacific Wildland Fire Sciences Laboratory Seattle & Spokane, WA
Laboratory Assistant | PI: Dr. Ernesto Alvarado (Aug-Sept 2019)

- Completed surface fuels assessments (Brown's transects), tree measurements, and seedling surveys in Mt. Spokane State Park using a nested plot data collection system that I helped design
- Created datasheets fit for entry into the Forest Service's Forest Vegetation Simulator (FVS) software

University of Washington Harvey Lab Seattle, WA
Research Assistant | PI: Dr. Brian Harvey (Oct-Dec 2018)

- Organized and digitized thousands of datapoints gathered in Colorado over the 2018 summer field season
- Completed measurement data QA/QC using codes provided in the protocol

University of Washington Harvey Lab Fraser Experimental Forest, Fraser, CO
Field Assistant | PI: Dr. Brian Harvey (June-Aug 2018)

- Worked on two Masters thesis projects in stands severely affected by mountain pine beetle outbreaks
- Field work consisted of mapping trees using Field-Map, measuring, tagging, and evaluating tree health with predetermined condition codes, and collecting surface fuel data using Brown's transects
- Collected understory vegetation and tree regeneration data for fuel analyses

University of Washington Center for Sustainable Forestry at Pack Forest Eatonville, WA
Forest Resource Intern | Forest Director: Dr. Gregory Ettl (Jun-Aug 2017)

- Collected insect specimens and conducted detailed vegetation surveys for graduate research
- Worked with field crew and graduate assistants to complete 100+ Continuous Forest Inventory (CFI) plots
- Delineated timber harvest boundaries and cruised stands in preparation for harvest

Webster Forest Nursery Olympia, WA
Volunteer Assistant Researcher | PI: Nabil Khadduri (August 2017)

- Measured aboveground and belowground biomass of Douglas-fir seedlings via destructive sampling
- Used chlorophyll fluorometers to measure photosynthetic efficiency of red alder seedlings that have been treated with hormonal growth suppressants

OTHER RELEVANT EXPERIENCES

University of Washington Center for Sustainable Forestry at Pack Forest Eatonville, WA
Volunteer Field Assistant | Forest Director: Dr. Gregory Ettl (Oct 2019-Mar 2020)

- Took hemispherical photographs for a Master's thesis project studying seedling competition in Pacific Northwest-native tree species
- Used Gap Light Analyzer (GLA) to process hemispherical photos to generate canopy openness values

University of Washington partnership with King County Parks North Bend, WA
Student Planner (Mar-Jun 2019)

- Assisted in field evaluations, including the investigation of forest stand health in riparian zones
- Designed and helped write extensive land/forest management plan for the Three Forks Natural Area, in line with objectives laid out by King County Parks. Final findings and management decisions were presented to the agency and their collaborators.

University of Washington partnership with King County Parks Carnation, WA
Volunteer Field Assistant (Spring 2017)

- Evaluated tree health and understory vegetation of stands within the Tolt River Natural Area
- Assisted in developing a forest stewardship plan for specified natural areas within the Tolt River Watershed

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SKILLS & TECHNIQUES

- Working understanding of scientific protocols, data collection/management methods, and equipment used to assess forest ecosystems
- Knowledge of ESRI's ArcMap, QGIS, US Forest Service's Forest Vegetation Simulator (FVS), and Gap Light Analyzer (GLA) programs
- Knowledge of Field-Map stem mapping technology