

Julia R. Chandler, PhD

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PROFESSIONAL SUMMARY

Forest ecologist, university educator, and analytical builder with a PhD in ecosystem modeling. More than two decades of teaching across three universities, spanning environmental science, biology, ecology, sustainability, geology, soil science, geography, and quantitative methods. Research focuses on wildfire and forest resilience, disturbance ecology, and the berry-producing shrubs that sustain grizzly bear habitat, applying statistical modeling and geospatial analysis to long-term ecological data. Founder of CustodyGuard, bringing the same rigor to product design and data infrastructure.

RESEARCH INTERESTS

Forest ecosystem dynamics; disturbance ecology; wildfire and forest resilience; vegetation responses to climate change; forest structure and biodiversity; carbon cycling; spatial ecology; remote sensing and geospatial analysis; quantitative ecological modeling.

ACADEMIC APPOINTMENTS

Assistant Professor — Point Park University, Pittsburgh, PA	2020–Present
Faculty — Unity Environmental University, New Gloucester, ME	2025–Present
Adjunct Faculty — Slippery Rock University, Slippery Rock, PA	2017–2019

RESEARCH EXPERIENCE

Quantitative Ecologist — Grizzly Bear Forage Project 2023–2025

- Modeled relationships among forest structure, logging practices, climate, and berry-producing shrubs.
- Investigated implications for wildlife habitat and ecosystem function.
- Applied statistical modeling and geospatial analysis of ecological datasets.
- Compiled the underlying data from government records and authored the reports and extension notes.

Quantitative Ecologist — Burning Questions Project 2018–2020

- Evaluated ecological consequences of wildfire and prescribed burning across BC forests.
- Integrated long-term monitoring data with spatial and statistical analyses.
- Collaborated with ecologists, land managers, and policy stakeholders to inform sustainable wildfire management strategies.

PRODUCT & ENGINEERING EXPERIENCE

Founder & Product Lead — CustodyGuard 2025–Present

A court-document management tool for self-represented (pro se) litigants in family-law proceedings

- Scoped, designed, and shipped a single-page web application (HTML, CSS, JavaScript) that organizes custody documents into searchable, court-ready records.
- Owned the full product lifecycle: requirements, UX design, AI-assisted build, testing, git workflow, deployment, and DNS.
- Applied domain expertise in custody and family law to define requirements and compliance considerations.

Volunteer Software Developer (Data Infrastructure) 2025–Present

International nonprofit human-rights advocacy organization

- Contributed to data infrastructure supporting human-rights documentation and advocacy.

EDUCATION

PhD — Forest Sciences (Ecosystem Modeling), University of British Columbia 2014

Dissertation: Vascular plant response to slashburning and clearcutting in central British Columbia: a 20-year study of plant functional type resilience

MS — Spatial Statistics / Soil Science, Simon Fraser University 2007

Thesis: Influence of bigleaf maple on soil properties in conifer forests of southwestern British Columbia

BA — Geography, Simon Fraser University 2004

GIS Certificate — Simon Fraser University (2004) • Associate Degree, Environmental Studies — Douglas College (2002) • Advanced Certificate, Habitat Restoration — Douglas College (2000)

TECHNICAL SKILLS

Statistical & Computational: R, SQL, CART/decision-tree modeling, ecological modeling, reproducible workflows

Geospatial & Remote Sensing: ArcGIS, QGIS, spatial analysis, geospatial data management

Web Development: HTML, CSS, JavaScript, single-page application architecture, PDF/file handling

DevOps & Tooling: Git version control, deployment workflows, DNS configuration, AI-assisted development

Product & Design: UX design, requirements analysis, user research, product lifecycle management

Field Ecology: Vegetation surveys, soil sampling, long-term ecological monitoring, habitat assessment, wetland delineation

Instructional Technology: Learning management systems, Zoom facilitation, online and hybrid course delivery

SELECTED PUBLICATIONS & EXTENSION OUTPUTS

Chandler J, Hamilton E, Mowat G, Skaen C. (in press). Black huckleberry: implications of logging, site and climatic factors on plant cover and berry abundance in British Columbia.

Chandler J, Hamilton E, Mowat G, Skaen C. (in press). Buffaloberry: implications of logging, site and climatic factors on plant cover and berry abundance in British Columbia.

Hamilton E, Chandler J, Newman R, Haeussler S. (2018). Burning questions: effects of fire on components of BC ecosystems. Final report — FESBC. Decision-support tool: lorax.shinyapps.io/cwd1

Chandler JR, Haeussler S, Hamilton EH, Feller M, Bradfield G, Simard SW. (2017). Twenty years of ecosystem response after clearcutting and slashburning in conifer forests of central British Columbia, Canada. PLoS ONE 12(2):e0172667. [View](#)

Chandler J. (2014). Vascular plant response to slashburning and clearcutting in central British Columbia: a 20-year study of plant functional type resilience. PhD dissertation, University of British Columbia. [View](#)

Chandler JR, Schmidt MG, Dragicevic S. (2008). Spatial patterns of forest floor properties and litterfall amounts associated with bigleaf maple in conifer forest of southwestern British Columbia. Can J Soil Sci 88(3):295–313. [View](#)

Chandler J. (2007). Influence of bigleaf maple (*Acer macrophyllum* Pursh.) on soil properties in a conifer forest of southwest British Columbia. MS thesis, Simon Fraser University. [View](#)

SELECTED PRESENTATIONS

Chandler J, Hamilton E, Haeussler S, Newman R. Integrated fire management: developing landscape-level wildfire resiliency in British Columbia. Wildfire Canada 2019; Ottawa, ON.

Chandler J, Hamilton E, Haeussler S, Newman R. Burning questions: a step on the path to sustainable fire management of our future forests. ESA & USSEE Joint Meeting 2019; Louisville, KY.

Chandler J. Reducing ecological complexity: through the looking glass of plant functional types. Botany BC Conference 2017; Cathedral Lakes Lodge, BC.

Chandler J. Ecosystem recovery after disturbance: a long-term study of resilience after clearcut and slashburn. CanforWest 2010; Harrison Hot Springs, BC.

Chandler J. Ecosystem recovery after disturbance: thresholds for biodiversity and resiliency indicators. 7th North American Forest Ecology Workshop 2009; Utah State University, Logan, UT.

Chandler J. Modeling ecological resilience. BC Forest Sciences Program Board 2008; University of British Columbia, Vancouver, BC.

PROFESSIONAL DEVELOPMENT & TRAINING

- Snowflake: Build Comprehensive Snowflake Intelligence Agents (2025)
- NASA: Assessing Impacts of Fire on Watershed Health (2023)
- Wetland Institute: Wetland Delineation Field Course (2021)
- NASA: Remote Sensing for Conservation & Biodiversity (2019)
- ESA: R to Access and Work with NEON Data (2019)
- NWPA GIS Conference: Python for ArcGIS (2019)

PROFESSIONAL SERVICE

- Volunteer software developer (data infrastructure) for an international human-rights nonprofit.
- Peer reviewer for ecology and environmental-science journals.
- Collaborator with land managers on forest disturbance, fire, and resilience projects.
- Mentor for undergraduate and graduate student research in quantitative ecology.

AWARDS & HONORS

- Faculty Fellow Award — Slippery Rock University (2019–2020)
- Graduate Research Assistantship — University of British Columbia (2007–2010)
- BC Forest Science Program — Forest Investment Account (2007–2010)
- PhD Tuition Award — University of British Columbia (2007–2009)
- Accelerate BC Award and Travel Awards — MITACS (2007–2008)