



WINTER 2025 WEEKLY TIMELINE + SPRING-SUMMER ROUGH TIMELINE

WINTER 2025 (main goal: get through all planned TOMST analysis ideas)

- Week 1
 - Mount tree cores
- Week 2
 - Learning new concepts and methods for research application from new classes (Git + statistical analyses)
 - Coordinating new lab group meetings
 - Continue digging into Git vignettes for R analyses
- Week 3

- LTER GRA proposal
- Week 4
 - Prepare for committee meeting
 - Amend timeline, research questions
 - Share with committee
 - Attend and apply concepts from library concept on literature review
 - Reorganize file inclusion and annotation of literature (read and unread) in Zotero for better, more consistent, and more useful inclusion
- Week 5
 - Continue working in Git
 - Reorganization of files & file folders, making code more consistent and accessible, transferring work to Git repository with better organization
 - Consistent code practices and conventions across all files
 - E.g., axes labels, titles, functions for analysis / data transformation, etc
 - Work in newly organized directory
 - Analysis idea: water stress index VPD divided by upper 10cm SWC
 - Builds upon previous ideas of root weighted soil moisture profile
 - Read through recently emailed papers
 - Update draft of dendro paper to reflect what I have done since last edits (October) and send to Chris
 - Connect with Peter Beedlow to continue conversations from his EPA transect presentation in lab meeting
 - Discuss NW CASC
- Week 6
 - Update tomst analyses with more appropriate met stations (e.g, cenmet not primet)
 - Requires cleaning and adjustments of those met stations' data
 - Read through recently emailed papers
 - Experiment visualizations with various timelines
 - Apr 1 – oct 1

- Apr 15 – oct 15
- Experiment visualizations in general
 - Overlay of dendros and temperature
 - E.g., SDH; SVpdH; calendar year -> water year; etc.
- Dig deeper into DendroAnalyst package, plan process for implementation
 - Set up plan with mark to revisit ecomatik conversion steps for analysis in R
- Week 7
 - Focus on TOMST tables for timestamps of expansion/shrinkage
 - Note which dates represent what
 - Find patterns e.g., which dates are popular or at least months for each dendro
 - Prepare visualizations as appropriate
 - Pair with Ford et al paper on modeling initiation of growth
 - Coordinate meeting with connie Harrington to discuss her work on this relationship between growth and modeled initiation start
 - Perhaps focus on first date of negative growth increment to indicate stress issues
 - Submit abstracts for upcoming symposia
 - OSU biology grad student symposium (spring)
 - OSU/PNW WFGRS-RAFWE symposium (spring)
 - NW Science Conference (?) (winter)
- Week 8
 - Critical analysis of potential errors in TOMST analyses
 - Consider localized definition of heat wave using the method of calculating long-term mean and relative standard deviations
 - check output with temperature/precip data to try and judge whether bumps are accurate or not to determine whether or not to keep
 - dig deeper into TNP package for best practices to manually control smoothing

- consider filtering top 10% of values for dendro646 for example to adjust for inaccurate interpretation of really crazy data
 - check in with Amanda on tree core processing if haven't done already
 - discuss options for potential future coring
- Week 9
 - Critical analysis and selection of TOMST figures for paper inclusion
 - Based on previous outputs of brainstorming
 - E.g., accumulated data vs data “as-is”
 - E.g., figures with DOY x axis or DOWY x axis or raw timestamp x axis
 - Apply statistical analyses of linear regression learned in class and interpret results
 - Put into paper draft
 - TOMST analyses show potential usage for TNP while providing high resolution data exemplifying post-2021 growth changes
 - Goal is to identify presence or lack thereof of “trickle-down” Heat Dome effects
 - Make TOMST codes and files neatly accessible and legible as we think about focusing on ecomatik and/or cores
- Week 10
 - Have dendro paper draft intro + methods complete or mostly complete and sent to committee for feedback going into spring term

SPRING 2025 (main goal: connect TOMST analyses to Heat Dome via new analyses)

- Complete any unfinished TOMST tasks
- Ecomatik analyses based on revisit of code conversion with Mark
- Connect findings in ecomatik and tomst
- Prepare findings to be “paper ready”
 - Explore statistical significance, extract novel work eg new functions/code, select figures for inclusion, supplemental figures
 - Brainstorm and select best pathways for data comparisons in paper

- Old-growth vs secondary trees?
- TOMST vs ecomatik in terms of R cleaning & analyzing?
 - Generalized point vs band dendros?
- High elevation vs low elevation?
 - E.g., van is high elevation and may have a one-month delay in growth initiation as such
- Doug-fir vs hemlock?
- Make plan for preparing for end-of-degree steps
 - Thesis defense
 - Exams / quals'
- Tree core analysis
 - Lab work: measuring rings, making observations, etc
 - Computer work: analyze measurements taken in lab
 - Writing work: begin tree ring paper

SUMMER 2025 (main goal: submit dendro paper and get ready for thesis defense)

- Writing and editing dendro paper draft
 - Double check relevant and/or new papers are cited and included
- Submit dendro paper
- Continue working toward tree core analyses / writing / sending for review
- Prepare for, practice, and schedule end-of-degree steps
 - Thesis defense
 - Exams / Quals

FALL TIMELINE: NO SWITCH TO PHD

FALL 2025 (main goal: prepare tree ring paper; graduate)

- Collect more tree cores for tree ring paper (?)
- Defend thesis
- Complete qual exams
- Submit tree ring paper
- Graduate

FALL 2025+ TIMELINE: YES SWITCH TO PHD

FALL 2025 (main goal: field work for WH foliar scorch paper idea)

- Collect more tree cores for tree ring paper AND western hemlock scorch paper
 - Plan for Amanda's inclusion and compensation should be done beforehand
- Submit tree ring paper
- Collect other field data as necessary
 - E.g., biomass estimates, quantifying crown scorch, information for comparative irrigation study
- Organize process for WH scorch paper – what can be used from already discussed literature in other papers VS what I need to do / find for this paper specifically
 - E.g., will have already mentioned methodology for collecting tree cores for tree ring paper, but will need to add new literature for consequences of foliar scorch
- Prepare manuscript writing from literature already in “possession” so to speak (see above for examples on what I mean)
- Perhaps analyze more WH dendrometry e.g., manual bands

WINTER 2026 (main goal: submit WH foliar scorch paper)

- Writing and editing WH foliar scorch paper draft
 - Double check relevant and/or new papers are cited and included
- Submit WH foliar scorch paper