

T3 WATERSHED EXPERIMENT

Call for Student Engagement



Olympic Experimental State Forest



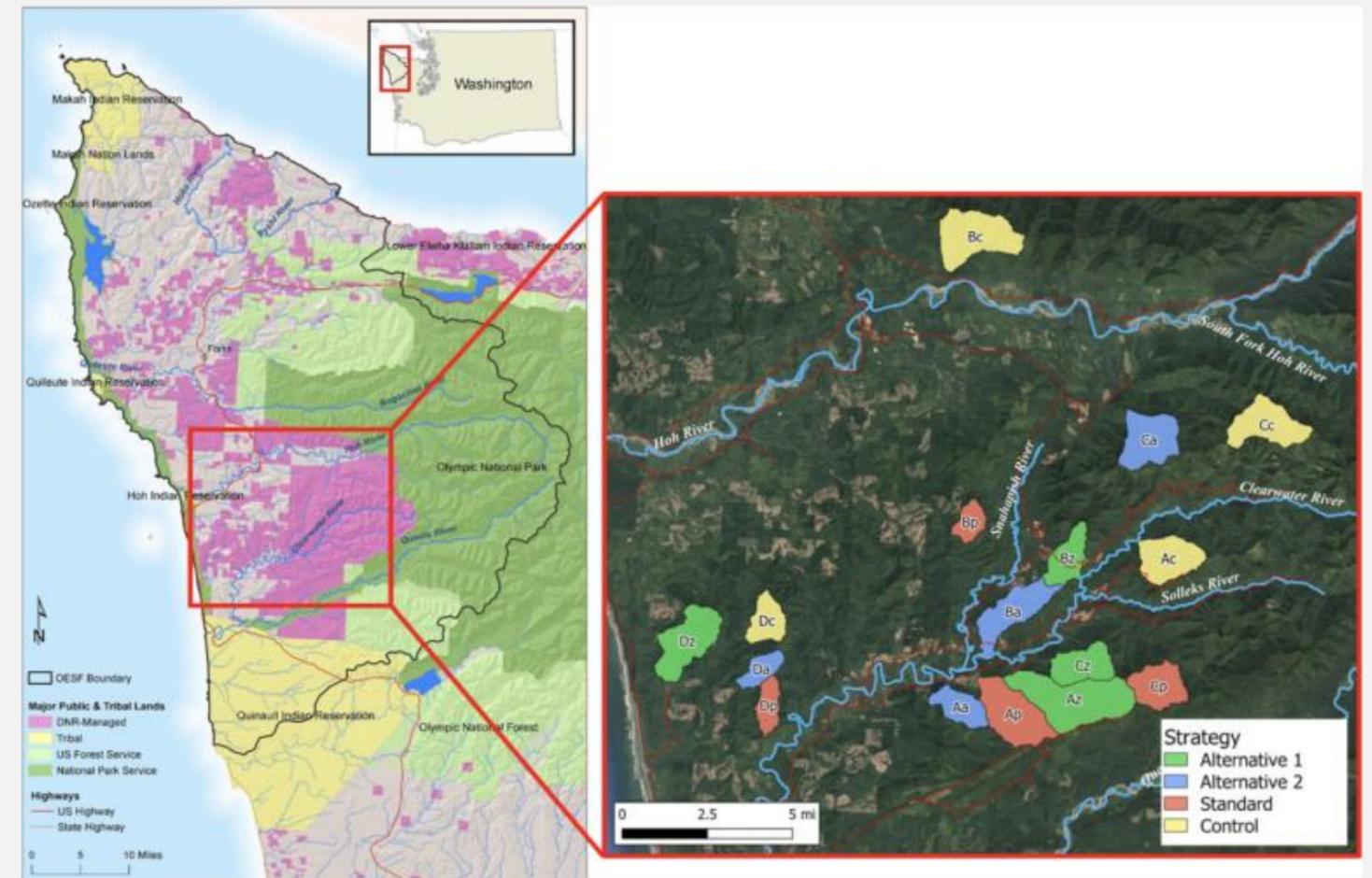


OVERVIEW



We are researchers and land managers with the T3 Watershed Experiment, a **20,000-acre experiment** on the Olympic Peninsula, WA, designed to **test alternative silviculture treatments at an operational scale.**

We are looking for **student engagement** (undergraduate and grad) to help **process and analyze datasets**, formulate and answer **research questions**, and engage with our **local stakeholders.**



FIELDS OF INVESTIGATION*

- Silviculture
- Fisheries
- Remote sensing
- Botany
- Ornithology
- Social sciences
- Ecology
- Ecosystem history
- Riparian restoration and management
- Aquatics
- GIS

* This is a list of potential fields of investigation. Actual projects/data are at different levels of preparation; please contact us for current details



WHAT WE HAVE - EXPERTISE

LEARNING-BASED COLLABORATION AND THE T3 LEARNING GROUPS

- **Learning-based collaboration** is defined as *“where natural resource managers and practitioners, researchers, stakeholders, and tribes engage with one another focusing on asking and answering questions about options and effects of management choices through scientifically valid comparisons”* (Minkova et al., 2024)
- **Learning Groups** are groups focused on a specific topic connected to the T3 Experiment that worked towards **shared goals of learning together**. Groups typically consist of researchers, managers, stakeholders, and/or tribes. **Learning groups:**
 - Aquatics, Carbon, Cedar, Economics and Operations, History, Invasive species, Tribal

We find our projects to be most successful when we can connect students with our Learning Groups, and let **student power guided by local expertise** drive projects and research.



WHAT WE NEED

- Students!
- Potential scenarios:
 - Individual student interested in **undergraduate capstone or research project**
 - Graduate student interested in research and collaboration for a **thesis, dissertation, or final capstone**
 - **Class** interested in datasets or group research projects
 - Internships, including **summer field work**



EXAMPLE PROJECT IDEAS

MONITOR STREAM CHEMISTRY AND
CONNECTED RIPARIAN AREAS

BIOCHAR CARBON STORAGE STUDY

WILDLIFE RESPONSES TO FOREST
MANAGEMENT

MAPPING FOREST CHARACTERISTICS
THROUGH DRONE LIDAR AND IMAGERY

LIT REVIEW: CARBON STORAGE IN
INVASIVE SPECIES

CEDAR THEFT ANALYSIS - EXTENT,
DISTRIBUTION, AND IMPLICATIONS





OUR DATASETS

For use in projects,
research, and/or
classes



WHAT WE HAVE - RIPARIAN DATA

Instream

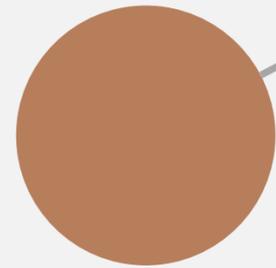
Stream discharge, fine sediment in pools, channel morphology, habitat surveys, above-stream light measurements, stream canopy closure, eDNA

Temperature

Water and air temperature

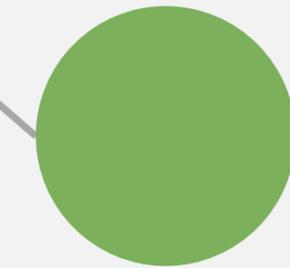
Leaf Litter

Quantity and decomposition rates



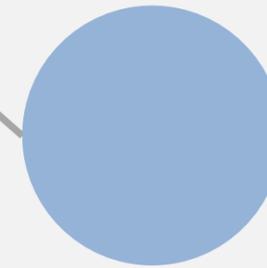
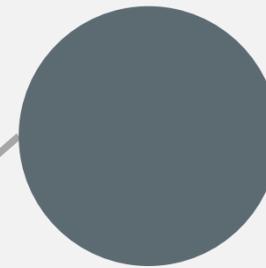
Water Chemistry

Nutrients, oxygen



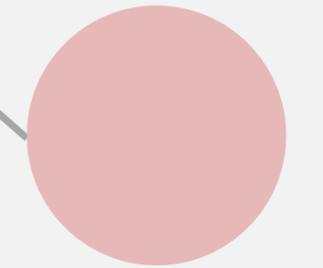
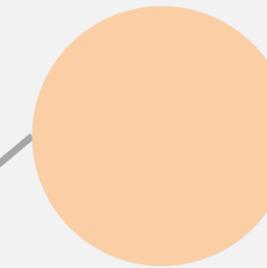
Vegetation

Riparian vegetation and algae



Invertebrates

Macroinvertebrates, stream flow



Fish

Fish population, biomass, and diet

Most data spans multiple collection years from 2020-2024



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WHAT WE HAVE - UPLAND DATA

Vegetation

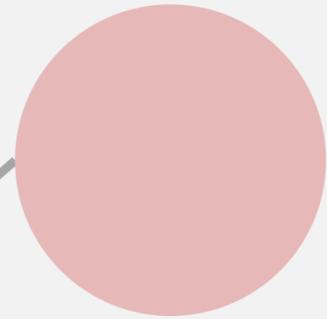
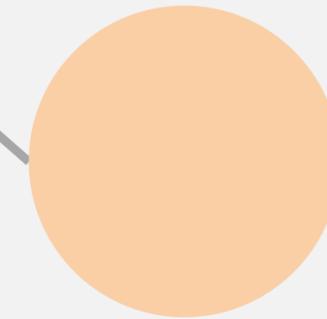
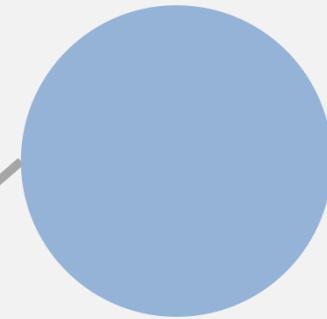
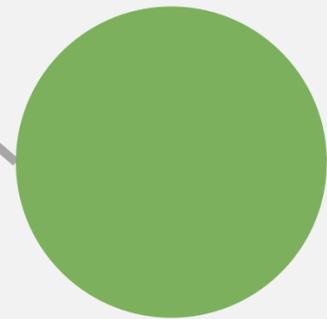
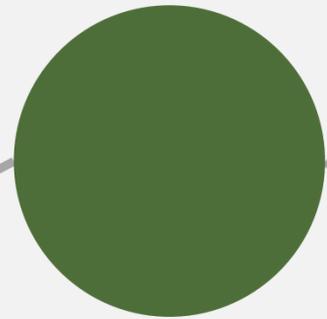
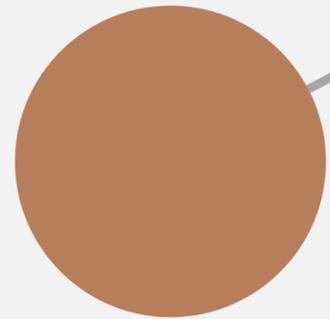
Tree and understory species, biodiversity, and biomass

Remote Sensing

Drone LiDAR data, multispectral imagery

Economic Analyses

Management costs and revenue



Amphibians

Woodland salamanders occupancy

Soils

Pre-treatment soil organic matter and nitrogen

Passive Acoustic Monitoring

Bird species and community response

Most data spans multiple collection years from 2020-2024



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SCREENING PATHWAYS

There are two primary screening pathways for students to work with us:

- 1. Through an already-existing program.** An example of this would be the UW Program on the Environment Capstone that has an existing structure that the student applies through. We will work within that screening process; there is no need for the student to apply directly with us.
- 2. Direct contact with us.** An example of this would be a student interested in working with us for a thesis that they are required to find their own project/data/supervisor for. Because there is not an already-existing structure for these students, they are required to send us a **resume and cover letter** with the following: 1) what project idea/datasets they are interested in; 2) their qualifications to work with that data; and 3) their motivation for why they would like to complete this work. Qualified students will then be matched with our researchers/experts, potentially with an interview beforehand.

All projects are dependent upon 1) student experience and time commitment; and 2) our availability of data and a committed supervisor.



FOR MORE INFORMATION, PLEASE VISIT

- Our webpage with an overview of the [T3 Watershed Experiment](#)
- Our [2016–2023 Implementation Report](#)
- Past Student Research: [Capstones](#) and [Graduate Theses](#)
- Webpage on [Learning Groups](#)
- Overview of the [Olympic Experimental State Forest](#)



THANK YOU

Please contact Courtney Bobsin,
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information



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