Forest and Conservation Technicians

The Related and Supplemental Instruction (RSI) detailed below supports preparing for the competencies applied in on-the-job paid apprenticeship hours. The required **150 unpaid RSI per year** is delivered via a combination of online and in-person studies, activities, events, and collaborative projects with Open Source Ag.

The intent of this document is for you to consider whether work in this sector is something you're interested in exploring and practicing.

Competency Exploration and Practice = 150 hours

Forest and Conservation Technician Skills: 50 +- hours

- Thin and space trees and control weeds and undergrowth, using manual tools and chemicals.
- Support seasonal activities, such as planting tree seedlings, putting out forest fires, and maintaining recreational facilities.
- Learn about regulations, such as those concerning environmental protection, resource utilization, fire safety, and accident prevention.
- Patrol park or forest areas to protect resources and prevent damage.
- Map forest tract data using digital mapping systems.
- Measure distances, clean sightlines, and record data to help survey crews.
- Support forest protection activities, including fire control, fire crew training, and fire detection public education programs.
- Perform reforestation or forest renewal, including nursery and silviculture operations, site preparation, seeding and tree planting programs, cone collection, and tree improvement.
- Select and mark trees for thinning or logging, drawing detailed plans that include access roads.
- Learn forest nursery operations, timber harvesting, land use activities such as livestock grazing, and disease or insect control programs.
- Inspect trees and collect samples of plants, seeds, foliage, bark, and roots to locate insect and disease damage.
- Measure distances, clean sightlines, and record data to help survey crews.
- Survey, measure, and map access roads and forest areas such as burns, cut-over areas, experimental plots, and timber sales sections.
- Provide support to forestry research programs in areas such as tree improvement, seed orchard operations, insect and disease surveys, or experimental forestry and forest engineering research.
- Support laboratory or field experiments with plants, animals, insects, diseases, and soils.
- Install gauges, stream flow recorders, and soil moisture measuring instruments, and collect and record data from them to assist with watershed analysis.
- Operate Vehicles, Mechanized Devices, or Equipment.

O*NET

The skillsets below reflect priorities requested by employers and noted in the O*NET code for this sector: https://www.onetonline.org/link/summary/19-4071.00

Microsoft Office Suite: 20+- hours

- Project Management Software: Utilize Microsoft Teams and Outlook to schedule and attend meetings, collaborate with team members, manage project tasks, and track progress.
- Presentation software: Microsoft PowerPoint: Create engaging visualizations.
- Spreadsheet software: Use Microsoft Excel to analyze data, create spreadsheets, and perform calculations.
- Word processing software: Use Microsoft Word to create and edit professional documents, reports, and correspondence.

Technology: 20+- hours

- Support and maintain computer databases and analytical or scientific software.
- Utilize public and private databases and artificial intelligence to gather information related to pollution and conservation.
- Communicate projects and progress utilizing computer aided design CAD software.
- Utilize Geographic Information Systems (GIS) to communicate and share data.
- Utilize graphics, photo imaging, or mapping software to communicate and share information.

Communication: 20+- hours

- Communicating with Supervisors, Peers, or Subordinates: Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Establishing and Maintaining Interpersonal Relationships: Developing constructive and cooperative working relationships with others.
- Communicating with People Outside the Organization: Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources.
- Resolving Conflicts and Negotiating with Others: Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.
- Performing for or Working Directly with the Public: Performing for people or dealing directly with the public.
- Interpreting the Meaning of Information for Others: Translating or explaining what information means and how it can be used.

Analysis: 20+- hours

- Identifying Objects, Actions, and Events — Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.
- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Analyzing Data or Information — Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.
- Organizing, Planning, and Prioritizing Work — Developing specific goals and plans to prioritize, organize, and accomplish your work.

- Making Decisions and Solving Problems — Analyzing information and evaluating results to choose the best solution and solve problems.
- Evaluating Information to Determine Compliance with Standards — Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
- Processing Information — Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.

Operations: 20+- hours

- Inspecting Equipment, Structures, or Materials: Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Monitoring Processes, Materials, or Surroundings: Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Documenting/Recording Information: Entering, transcribing, recording, storing, or maintaining information.
- Estimating the Quantifiable Characteristics of Products, Events, or Information: Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.
- Repairing and Maintaining Mechanical Equipment: Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily based on mechanical (not electronic) principles.