

Washington Contract Loggers Association

Master Logger Program

Logger Training Curriculum (Revised May 15, 2015)

To fulfill the initial requirements for the MLP, a person must complete the curriculum shown below.

The course curriculum includes about thirty-two hours (4 days) of training in the following areas:

- Ecology, Silviculture and Forest management (@8 hours)
- Logging/Log Road Construction and Transportation Safety, WA Department of Safety & Health Regulations, and Worker's Compensation Regulations and Claims Management (@8 hours)
- Washington Forest Practices Act rules and regulations (@8 hours)
- Business management (@8 hours)

First aid training: In addition, a participant must also have a valid first aid card that includes CPR training. First aid training is not offered as part of the four-day curriculum.

Ecology, Silviculture and Forest Management

- Principles of forest ecology and succession
 - Forest ecosystems
 - Factors in the development of forests
 - Factors affecting tree growth
 - Forest productivity
 - Site index/Site class
 - Energy & carbon cycle
 - Nutrient cycle
 - Hydrologic cycle
 - Forest succession
 - Basic tree physiology
 - Forest zones and major ecosystems
 - Silvicultural characteristics of tree species
- **Silvicultural Systems and Stand Management**
 - Definition of silviculture
 - Forest ownership in WA
 - Principles of thinning

- Pre-commercial and commercial
 - Tree pruning
 - Harvest regeneration systems
 - Even aged & uneven aged stand management
 - Clearcutting, shelterwood, seed tree, selection,
 - Variable retention silviculture
 - Aesthetics
- **Forest Soils**
 - Soil description
 - What trees need for growth
 - Soil formation
 - Soil compaction
 - Soil porosity
 - Organic matter and nutrient maintenance
 - Use of fertilizer
- **Wildlife Habitat in Managed Forests**
 - Species dependent on forestland
 - Habitat requirements
 - Important habitat types
 - Snags/Wildlife tree
 - Cavity and platform users
 - Coarse woody debris
 - Users
 - Understory vegetation
 - Users
 - Management of habitat during final harvest
 - Requirement for wildlife reserve trees, green recruitment trees and downed logs
 - Creating habitat during harvest
 - Use of feller bunchers to create short snags
 - Topping and girdling
 - Thinning to enhance habitat
 - Standard and variable density
 - Pruning
 - Aquatic environments
 - Strategies and opportunities to provide habitat
- **Regeneration: Establishing and Protecting New Forests**
 - Forest Practice regulations
 - Common causes of plantation failure
 - Basic forest establishment steps
 - Limiting site factors
 - Controlling site factors
 - Selecting species and stock type
 - Natural and artificial regeneration

- Species tolerance
 - Seed zones
 - Stocking level guidelines
 - Forest practice regulation
 - Site preparation
 - Proper handling and planting of seedlings
 - Controlling animal damage and competing vegetation
- **Forest Insects and Diseases**
 - Forest entomology and pathology
 - Forest health
 - Maintaining vigorous trees
 - Monitoring/Surveying tree damage in WA
 - Bear damage
 - Root diseases
 - Tree damage
 - Heart and butt rots
 - Insect damage and management
 - Wood borers and defoliators
 - Invasive species

Logging/Log Road Construction and Transportation Safety, WA Department of Safety & Health Regulations, and Worker's Compensation Regulations and Claims Management

- **Logging Safety**
 - Accident prevention program requirements
 - Safety and health training requirements
 - Hazard recognition for timber felling, yarding, road construction, hauling and maintenance facilities
 - Safe work procedures
 - Complying with regulations
 - Accident investigation procedures
- **Transportation safety**
 - Federal Motor Carrier Safety Regulations
 - Washington State regulations
- **Workers' compensation regulations and claims management**
 - Overview of workers' comp
 - Risk classifications
 - Base rates
 - Experience rating
 - What effects your rates
 - Claims management
 - Return to work programs

- Injured worker benefits
- Legal rights and responsibilities
- Employer recordkeeping and reporting

DNR Forest Practices

- **Introduction to DNR and Forest Practices**
 - Mission, responsibilities, forest practices
 - Organizational setup in each region
 - Forest Practices Board
 - Forest and Fish Report
- **Forest Practice Application/Notification**
 - FP definition
 - FP activities
 - Application requirements
 - Forest practice classes
 - Application requirements for each class
 - Threatened and endangered species management plans
 - Archaeological information
 - Moratoriums
- **Forest roads**
 - Potential sediment delivery source
 - Examples of problem roads
 - Resource issues
 - Sediment sources
 - Avoiding sediment delivery
 - Properly designed and installed cross-drains
 - Drainage
 - Outsloped, insloped, & crowned roads
 - Relief culverts
 - Ditch outs and water bars
 - Disconnect road drainage from stream crossings
 - General road maintenance
 - Functional ditch, culvert maintenance, grading, new rock where needed & install drainage structures
 - Road construction
 - Road design
 - Water/Stream crossing
 - Wetlands
 - Construction technique
 - Road abandonment
 - Road maintenance and abandonment plans (RMAPs)
- **Bank full width, water types and channel migration zones**
 - Defining and identifying BFW
 - Water typing

- Definition/description of each water type
 - Guidelines for determining fish use
 - Channel migration zones
 - Definition/description
 - Identifying CMZs
- **Riparian Management Zones**
 - Goals of riparian areas
 - Functions
 - Riparian management zones (core, inner, outer)
 - Zone widths
 - Protection measures and management options
 - Wetland protection
 - Desired future condition
- **Cultural Resources and Historical Sites**
 - Definition
 - Importance
 - Related forest practice rules
 - Examples of cultural sites and activities
 - Examples of historical sites
 - Assistance
- **Enforcement**
 - What to expect from a FP forester
 - Enforcement tools
 - Common forest practice violations
- **Small Forest Landowner Office**
 - Mission
 - Alternate plans
 - Forestry Riparian Easement Program
 - Case studies
 - Funding
 - Family Forest Fish Passage Program
 - Who/What qualifies
 - How projects are prioritized
 - Funding

Business Management

- **Taxes**
 - Forest excise tax
 - Business and occupation tax
 - Public Utility Tax
 - Retail sales and use tax
 - Manufacturer's sales and use tax exemption

- **Financial Management**
 - Identity theft
 - Phishing
 - Credit reports
 - Credit scoring
 - What effects your score
 - Improving your credit score
 - Applying for a loan
 - Application
 - Business plan
 - 5 C's of credit (character, capital, capacity, collateral, conditions)
 - Payment schedules
 - Balance sheets and income statements
 - Financial ratios (debt coverage, liquidity ratio, debt to equity ratio, owner's equity)
 - Collateral valuations

- **Business practices**
 - Personnel management
 - Hiring practices
 - Employment laws
 - Independent contractors
 - Who is considered an independent contractor versus an employee
 - Responsibility for unpaid workers' comp premiums
 - Corporate officers and workers' comp coverage
 - Written contracts
 - Timber trespass

- **Emerging technologies**
 - State and Federal energy objectives
 - Renewable energy
 - Forest biomass
 - Biomass power
 - Ecosystem services
 - Carbon markets

- **Current economic conditions**
 - Log, lumber, & housing markets

- **Awareness of SFI and sustainable forestry principles** (Presented by WA SIC participant)
 - Forest certification programs
 - SFI requirements
 - Spill Kits
 - Invasive plants
 - Endangered Species Act and Forests with Exceptional Conservation Value
 - Awareness of rare forested natural communities identified by state agencies, NatureServe, The Nature Conservancy, or other credible organizations.

- Achievements
- Public policy and outreach
- **Spill Kits**
 - Potential impacts of spills
 - Ensure adequate supply of spill kits
 - Comply with landowner requirements
 - Comply with landowner/DOE reporting requirements
 - Preventing spills
 - Handling spills
 - Control,contain,clean-up