

# Washington Contract Loggers Association

## **Master Logger Program**

### Logger Training Curriculum (Revised 1/23/2018)

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

## **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
  - 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