



# Trainings available:

## Sustainable Trail Design and Layout

This workshop focuses on teaching the principles of sustainable trail design and the concept of the rolling contour trail. The workshop covers:

- The difference between legacy trails and sustainably designed trail
- Water and erosion dynamics
- How landform shape can be used to the advantage of the trail
- Trail slope/tread grade, outslope, cross slope, side hill slope, backslope
- The half rule and Trail Slope Alignment
- Importance of soil type
- Grade reversals
- Tread watershed
- Design elements such as gateways, edges, anchors and go/no-go areas
- Designing the trail to meet user needs and designing the trail to go where users want to go
- Importance of avoiding flat areas
- User-driven design
- Sinuosity, undulation, harmonious material
- Maps and layout tools

Time: Two days. Generally one day in the class room with a slide show and maps, then actual flagging of a trail on the second day.

Facilities and site features needed: Classroom space (indoors for projector use) and hillside on which to layout a trail

Class size: Up to twelve

## Field Leadership: Tailgate Safety Talk & Leading a Work Trip

This workshop focuses on planning and leading a safe and effective work trip. Projecting a sense of professionalism, as well as careful planning and fostering safety culture makes all participants feel safer, and contributes to more efficient and productive work.

The workshop covers:

- Planning elements: Teaches the nuts and bolts of preparedness for trail work, including additional considerations when working away from vehicular access.
- Crew leadership: Explores the importance of making participants feel safe, welcome, useful, and valued and ways to do so
- Worksite leadership: Teaches methods of effective work site leadership for trail work including how to avoid getting bogged down in narrow tasks when leading a large crew
- Tailgate safety talk: Teaches participants how to recognize and mitigate potential hazards, how to work safely, effectively and cooperatively together
- Establishing a strong safety ethic: Delves into what makes for a strong safety ethic across a crew or team, the benefits and how to do it.

Time: Half day.



Facilities and site features needed: Classroom space for projector use

Class size: Up to thirty

### **Legacy Trail Maintenance and the SET Test for Improved Sustainability**

This workshop teaches participants on how to access and repair trail issues on typical non-sustainable trail (legacy trails) in ways that improve their sustainability and reduce overall maintenance. Generally these issues center on water management, but the SET principles can be applied to basically any trail feature. The SET concept:

- Sustainable:** It should last and be effective for a long time, a generation or more, with minimal maintenance.
- Effective:** It should serve the purpose for which it was intended. It needs to work. Get water off the trail, reduce erosion, get folks across the muddy areas, etcetera.
- Traversable:** The feature has to be easy to cross; ideally the user will not even notice it. Features which are difficult to traverse often force users off the trail to go around them. Not only is this unsightly, and leads to trail widening, additional site disturbance, but also often gives water a path to bypass the feature as well.

The workshop covers:

- Safety and PPE
- Tools and tool maintenance
- Vegetation management
- Blazing
- Blowdown management and reporting
- Building SET rolling grade dips
- Understanding when it might be appropriate to rehabilitate water bars to pass the SET test
- Check dams
- Trail edge berm removal and knicks

Time: Two days. Generally half day in the classroom with a slide show, then actual work on a trail for the rest of the time.

Facilities and site features needed: Classroom space for projector use and a trail on which to work, tools and PPE\* for the crew

Class size: Up to twenty

\*Basic PPE required:

- hardhats
- safety glasses
- sturdy work boots
- work gloves with dexterity



## **Hand-Built Trail Construction Workshop**

This workshop teaches the basic of hand-built sustainable trail construction. It would be beneficial if at least a few students have also taken Sustainable Trail Design and Layout.

The workshop covers:

- Safety and PPE
- Corridor clearing
- Pin flagging the layout
- Tools
- Maximum trail grade, trail out slope, back slope
- Grade reversals
- Full bench construction
- Water crossings
- Why not to line the trail with rocks/logs
- Spoil coverage and naturalization
- Closing old trail

Time: Two days. Generally half day in the classroom with a slide show, then actual work on a trail for the rest of the time

Facilities and site features needed: Classroom space for a projector and a trail on which to work (ideally a trail not yet built or one laid out by the Sustainable Trail Design and Layout workshop). Tools and PPE\* for the crew.

Class size: Up to twenty

\*Basic PPE required:

- hardhats
- safety glasses
- sturdy work boots
- work gloves with dexterity

## **Light Rigging for Trail Work**

The light rigging class teaches the use of the Maasdam rope puller. Light weight rigging is used for tree work, moving logs, and moving smaller rocks. The workshop explores foundational concepts of safe rigging and covers:

Safety and PPE

- anchor points
- working load limits of gear and how to use design factor
- mechanical advantage
- safety concepts
- gear inspection



- what gear to use and how

Time: One and a half days. Generally half day in the classroom with a slide show, then actual work on a trail for the rest of the time.

Facilities and site features needed: Classroom space and area with trees in which to work, rocks larger than carry-size also helpful. PPE\* for the crew.

Class size: Up to twelve

### **Heavy Rigging for Trail Work**

The heavy rigging class teaches the use of the grip hoist. The grip hoist can pull up to 4000 pounds and is used for moving logs, and large rocks, washed out bridges, pulling stumps, and for setting up a high line. The workshop explores grip hoist rigging and covers:

- Safety and PPE
- anchor points
- working load limits of gear and how to use design factor
- mechanical advantage
- safety concepts
- gear inspection
- what gear to use and how

Time: Four days. Generally two half days in the classroom with a slide show, then actual work on a trail for the rest of the time.

Facilities and site features needed: Classroom space and area with trees/rocks in which to work. PPE for the crew.

Class size: Up to twelve

\*Basic PPE required for rigging workshops:

- hardhats
- safety glasses
- sturdy work boots (steel toe preferred)
- work gloves with dexterity

### **Chainsaw Safety Training and Techniques**

This workshop focuses on safe chainsaw use, so is applicable to experienced as well as new sawyers. We teach using either the National Park Service curriculum or the Nation Forest Service curriculum, depending on class needs.



Training includes:

- Familiarity with the parts of the saw and safety features
- Required personal protective gear (PPE)
- Understanding the forces of a running chainsaw and the forces present in the wood
- Hazard analysis and mitigation, including the physical environment and human factors
- Chainsaw basic maintenance and chain sharpening
- Hands-on practice with blowdown scenarios, from simple to complex, and how to gauge complexity

Time: Three to four days depending on the curriculum. One half-day in the classroom with a slide show, a half-day for saw maintenance, then sawing outside for hands-on practice for the balance of the time

Facilities and site features needed: Classroom space, work bay space, and area with trees in which to work. PPE\*, saws, and saw equipment for the crew

Class size: Up to eight

### **Advanced Chainsaw Techniques**

The advanced chainsaw workshop is for experienced sawyers and teaches how to approach more complex sawing scenarios including:

- multiple comingled blowdowns
- hung up trees
- blowdowns on steep slopes

Note: The light weight rigging class is a prerequisite.

Time: One day. All outside

Facilities and site features needed: Outdoor area with trees in which to work. PPE\* and saw gear for the crew.

Class size: Up to eight

\*PPE required for chainsaw classes

- hardhats
- hearing protection
- ANZI Z87 rated safety glasses
- chainsaw chaps
- work gloves with dexterity
- boot requirements that meet land manager standards for chainsaw operations (example: steel toe, 8" leather, etc.)



## **Trail Structure Workshop**

We also teach construction of bridges, puncheon, steps, stepping stone crossings. We would need to discuss your specific project needs to come up with a plan/time to execute/cost.