Back to School at Trail Skills College

PACIFIC CREST TRAIL ASSOCIATION

FOREST SERVICE U S DEPARTMENT OF AGRICULTURE

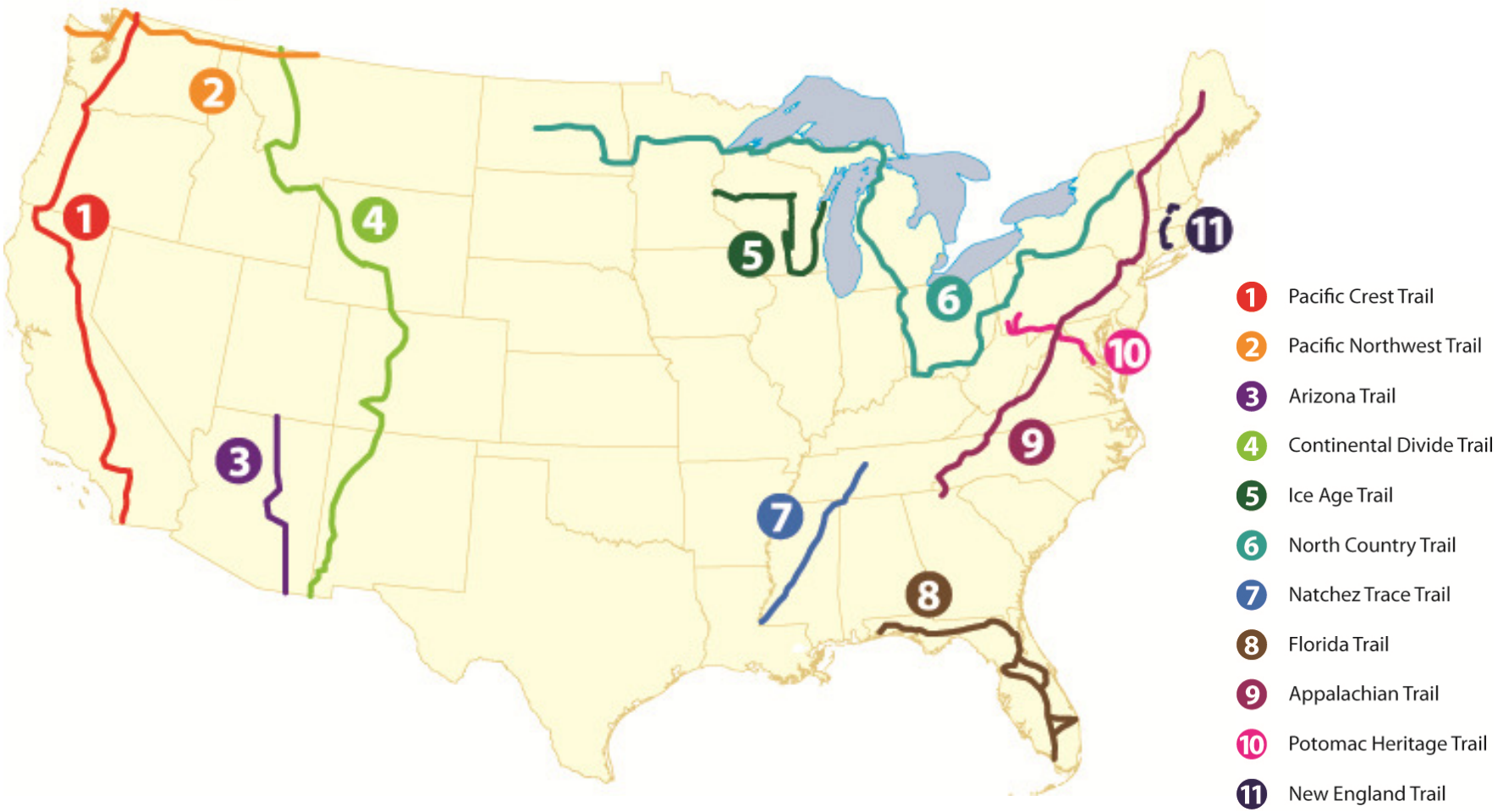
U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

REI

Overview

- The PCTA and what we do
- Trail Skills College concept
- Online resources

National Trails System



PACIFIC CREST TRAIL
ASSOCIATION

Mission

To protect, preserve and promote the PCT as an internationally significant resource for the enjoyment of hikers and equestrians, and for the value that wild and scenic lands provide to all people

PCTA's Partners

Trail Facts

- 2,650 Miles
- 33 Congressionally-Designated Wilderness Areas
- 26 National Forests
- 8 National Park Lands
- 5 BLM Districts
- 5 California State Park Lands
- 2 Native American Sovereignties
- County Parks
- Private Lands

2011 Accomplishments

- 118,000 volunteer & service hours
- 1,724 volunteers
- 1,095 miles maintained
- 75 miles reconstructed

Trail Skills College

Trail Skills College

- 26 trainings
  - Cascade Locks
  - Allingham
  - Westfir
  - Big Bend
  - Tahoe
  - So Cal
- 634 students

Trail Skills College

Curriculum Overview

- Overview document
- Terminology guide
- Courses & supporting documents
- Event planning guidebook

100-Level Courses

- 100 Intro to Trail Maintenance
- 101 Brushing & Scouting
- 102 Tread & Drainage
- 103 Basic Saw Crew Training
- 107 Hand Tool Field Maintenance

Advanced Courses

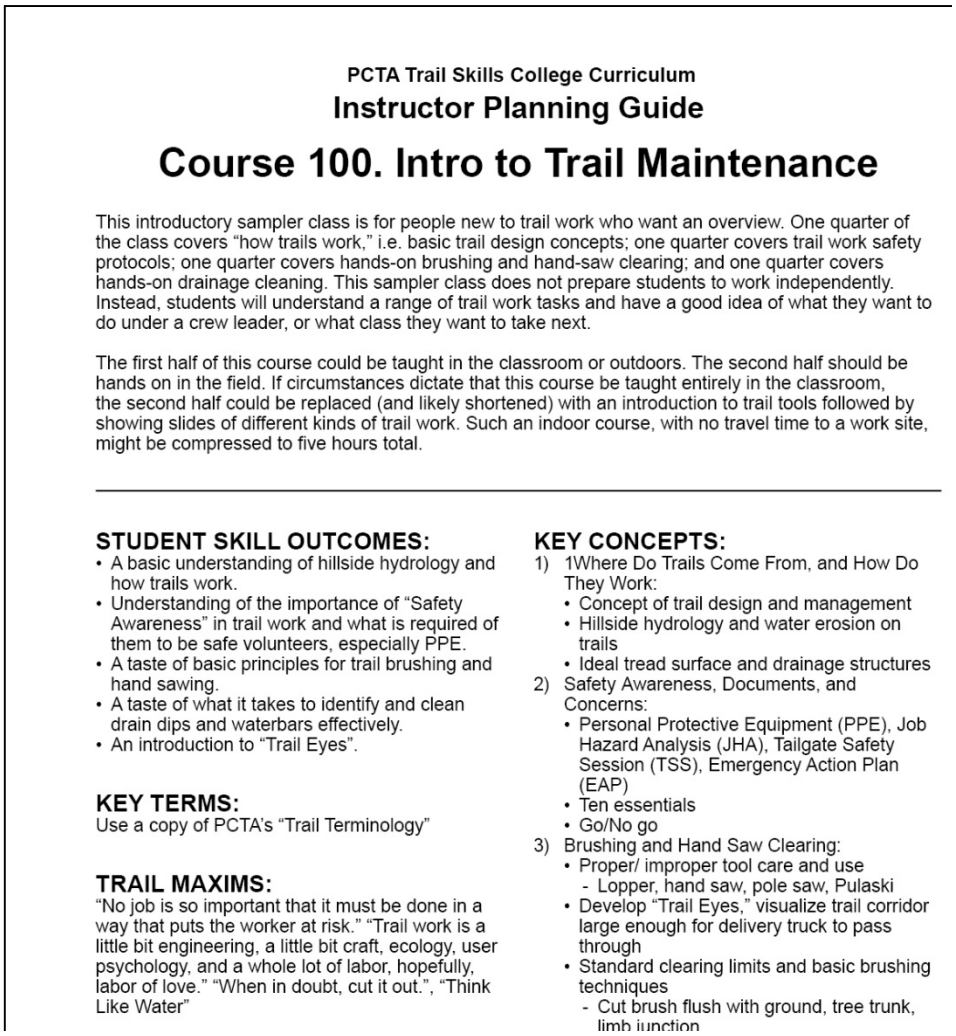
- 200 Basic Trail Design
- 201 Drainage Design & Drain Dips
- 203 Waterbars & Checks
- 205 Tread Reconstruction
- 207 Trail Decommission
- 208 Signage
- 300 Rock Retaining Walls
- 302 Drainage Crossings
- 304 Crew Leadership
- 400 Advanced Crew Leadership

Course Components

- Instructor Planning Guide
- Field Reference
- Additional material
  - Handouts
  - PowerPoint Presentation
  - Forms

Instructor Planning Guide

- Course description
- Student skill outcomes
- Key terms
- Tool list
- Key concepts
- Worksite requirements
- Additional handouts
- Background
- Teaching tips & techniques
- Trail fun
- Reference



PCTA Trail Skills College Curriculum

Instructor Planning Guide

Course 100. Intro to Trail Maintenance

This introductory sampler class is for people new to trail work who want an overview. One quarter of the class covers "how trails work," i.e. basic trail design concepts; one quarter covers trail work safety protocols; one quarter covers hands-on brushing and hand-saw clearing; and one quarter covers hands-on drainage cleaning. This sampler class does not prepare students to work independently. Instead, students will understand a range of trail work tasks and have a good idea of what they want to do under a crew leader, or what class they want to take next.

The first half of this course could be taught in the classroom or outdoors. The second half should be hands on in the field. If circumstances dictate that this course be taught entirely in the classroom, the second half could be replaced (and likely shortened) with an introduction to trail tools followed by showing slides of different kinds of trail work. Such an indoor course, with no travel time to a work site, might be compressed to five hours total.

STUDENT SKILL OUTCOMES:

- A basic understanding of hillside hydrology and how trails work.
- Understanding of the importance of "Safety Awareness" in trail work and what is required of them to be safe volunteers, especially PPE.
- A taste of basic principles for trail brushing and hand sawing.
- A taste of what it takes to identify and clean drain dips and waterbars effectively.
- An introduction to "Trail Eyes".

KEY TERMS:

Use a copy of PCTA's "Trail Terminology"

TRAIL MAXIMS:

"No job is so important that it must be done in a way that puts the worker at risk." "Trail work is a little bit engineering, a little bit craft, ecology, user psychology, and a whole lot of labor, hopefully, labor of love." "When in doubt, cut it out.", "Think Like Water"

KEY CONCEPTS:

1) 1Where Do Trails Come From, and How Do They Work:
   - Concept of trail design and management
   - Hillside hydrology and water erosion on trails
   - Ideal tread surface and drainage structures
2) Safety Awareness, Documents, and Concerns:
   - Personal Protective Equipment (PPE), Job Hazard Analysis (JHA), Tailgate Safety Session (TSS), Emergency Action Plan (EAP)
   - Ten essentials
   - Go/No go
3) Brushing and Hand Saw Clearing:
   - Proper/ improper tool care and use
     - Lopper, hand saw, pole saw, Pulaski
   - Develop "Trail Eyes," visualize trail corridor large enough for delivery truck to pass through
   - Standard clearing limits and basic brushing techniques
     - Cut brush flush with ground, tree trunk, limb junction

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TOOLS NEEDED (PER 8 STUDENTS):

Brushing: 3 loppers, 4 hand saws, 1 pole saws, 1 pulaski, 1 roll flagging tape, measuring tape. Tool numbers will depend on the clearing to be done.

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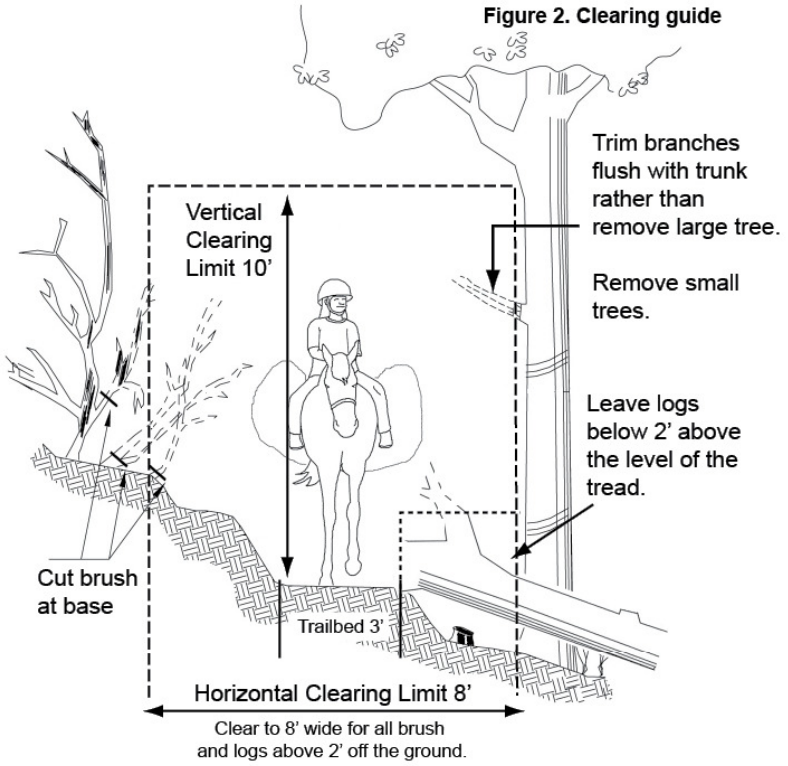
     - Recognize and safely remove spring poles
     - Log out small blow down and limb larger blow down
4) Cleaning Drain Dips and Waterbars:
   - Proper/improper tool care and use

to remove. PCT ***trail stewards*** must identify the portions of their trail section that need the most brushing and give them special attention with enough volunteers.

Quality Work: Clarify ***Clearing Limits***, just how wide and how high shrubs, small trees and tree limbs need to be cut back. Three feet wide from ground level to 24" (about knee height); eight feet wide from 24" to ten feet overhead. Show students that their arm span, finger tip to finger tip, is equal to their height and thus allows them to calculate eight feet easily by adding whatever amount is needed beyond their finger tips. Holding a tool outstretched overhead can allow an approximation of ten feet. Most knees are about 24" high and three feet can be estimated using a pulaski or pair of loppers.

Figure 2. Clearing guide



** These are general trail-wide clearing guidelines, please work with your local land manager to determine if different guidelines are used in your local area.*

Additional clearing width may be needed through areas of high fire hazard, such as the brush fields of southern California. In these and other areas where brush is particularly fast growing, clearing limits need to be expanded to allow for growth. Alternatively, brushing crews need to work the area every year or two.

Brushing: Many species of brush grow very fast, closing off a trail corridor in just a few years. Thus brushing generally needs to be very aggressive. Cut brush close to the base, even if the base is outside the clearing limits. Never just cut off the tips of branches; it is a huge waste of time. Ideally, cut where a single stem at the base removes several branches. Better to make one cut than three (and way better than six for the person brushing in a couple years when the brush grows back.)

Some shrub species will re-grow two or more stems for every one cut, sometimes several feet long in a year or two. Returning each year to find twice as much brush as the previous year growing in the trail corridor can be very frustrating. If such an area is outside of wilderness, it may be worthwhile to get trained using a power brusher. This a moderately dangerous tool so not suitable for every volunteer. An alternative, if you have enough volunteers, is to grub out such shrubs using a pulaskis or pick mattocks.

Part of brushing includes removing tree saplings in the trail corridor, ideally before they grow above 24". All sapling stumps must be cut as flush as practical with the ground to prevent unsightly tripping

Field Reference

- Student skill outcomes
- Key terms defined
- Key concepts
- Diagrams, drawings

PCTA Trail Skills College Curriculum

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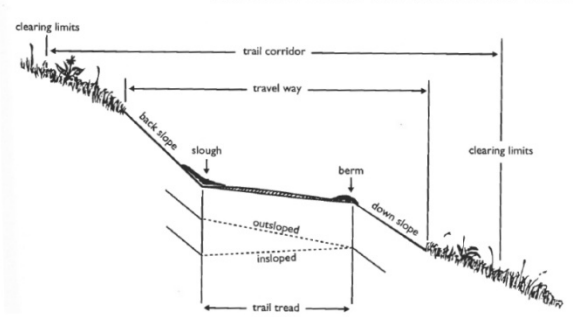
4) Cleaning Drain Dips and Waterbars:
   - Proper/improper tool care and use
     - Shovel, McLeod, adze hoe, Rheinhard, Pulaski
   - Develop "Trail Eyes," suggest hiking in rain to better understand water on trails
   - Clear dip and outfall ditch of any plants, roots, debris
   - Reestablish the apron, pack soil well – 20 – 30' in length, 15% or greater out-slope to help self clean
   - If present, keep inside ditch clear of plants, roots, debris
5) Report Work Promptly

Figure 1. Trail Structure Terms (IMAGE COURTESY OF THE SCA)



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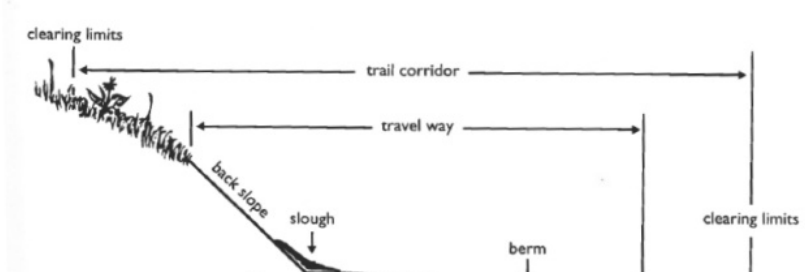

Planning Guidebook

- Planning timeline
- Partners
- Committee chair roles
- Budget planning
- Selecting a location
- Choosing instructors
- Outreach
- Sample forms

Questions?

www.pcta.org/trail-skills-college/

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