

# Trails- Connecting People to Land

## Presenters:

- Mark Robinson: Executive Director of The Compact of Cape Cod Conservation Trusts
- Kris Ramsay: Administrator of the Orleans Conservation Trust



# Why We Need Trails

Recreation trails are for all people. Trails allow us to:

- Go back to our roots
- Help make sense of a world increasingly dominated by automobiles and pavement
- Get in touch with our natural surroundings, soothe our psyches, and challenge our bodies
- Practice traditional skills



## Why Trails Need Us!

If you want to invite people to enjoy a property, you have a responsibility to design, install and maintain a safe, useful and attractive trail.

Some trails can maintain themselves over time through active use; others need us to help to keep them in good shape.

# Barnstable County initiative to connect up walking trails across the Cape, 1999-ongoing

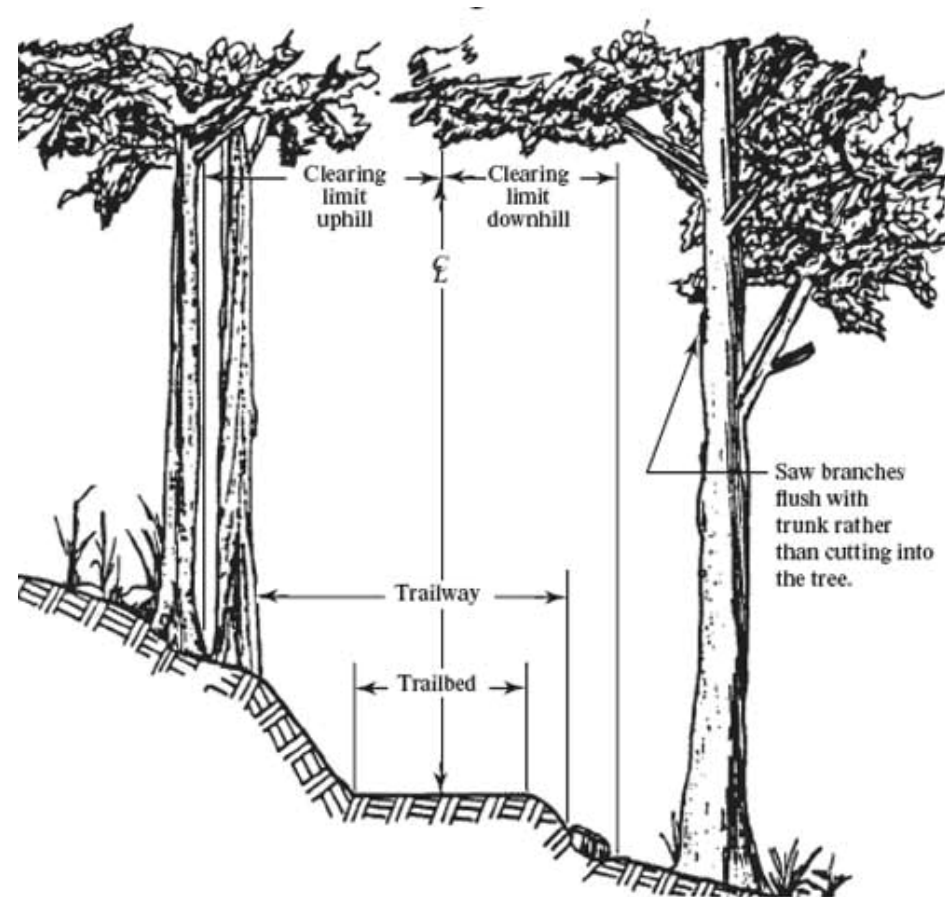


The annual guided CapeWalk is led over 8 – 9 days, from tip to tip.



# Deciding to have a trail or not?

- Location (*hard to get to, to find?*)
- Size (*too small to attract anyone?*)
- Connectivity (*we hate dead ends*)
- Habitat considerations (*wetlands, rare species, predator access*)
- Attractions (*worth seeing?*)
- Historical uses (*dikes useful; pre-existing trails for other uses may not be best for public walking*)
- Health & safety (*ADA; steep? ticks!*)
- Property tax exemption?



***Trail corridor dimensions***

# Design Principles

## Considerations- *Things we need to discuss*

- Avoiding Trail Disasters: Think ahead
  - Dimensions (length, width, height)
  - Looping trail
  - Slope
  - Grade
  - Materials
  - Multi-purpose/use
- 

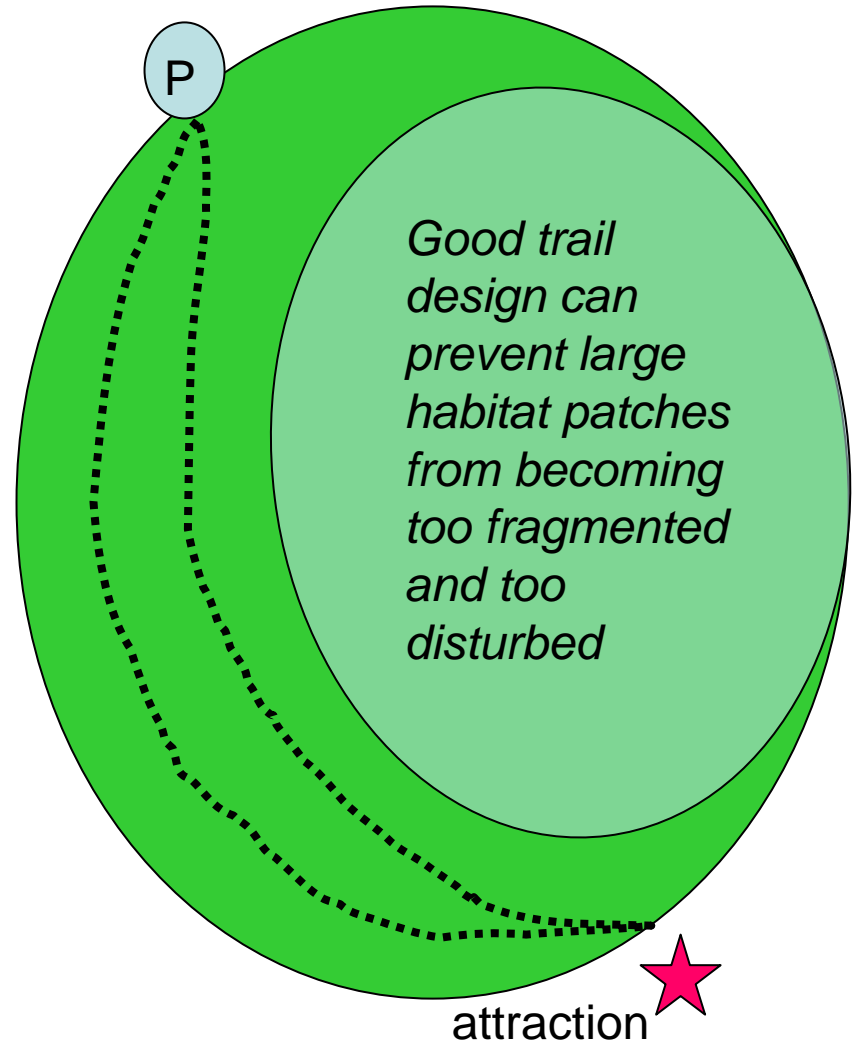
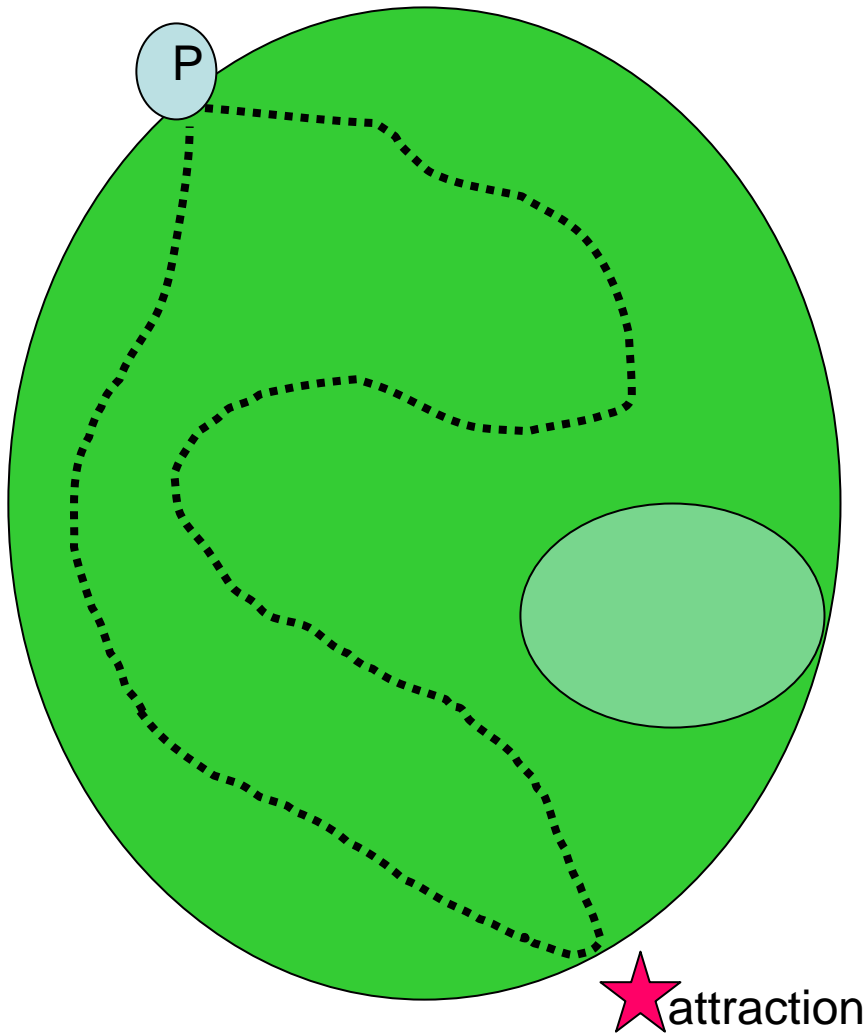
# Habitat considerations



A lush colony of Broom crowberry on a public open space.

Running a trail through this patch of rare plant species could land you in jail!

# Wildlife Habitat: bigger is better



# Americans with Disabilities Act



Accommodate where and when you can without “*substantially altering the nature of the setting or the purpose of the facility.*”

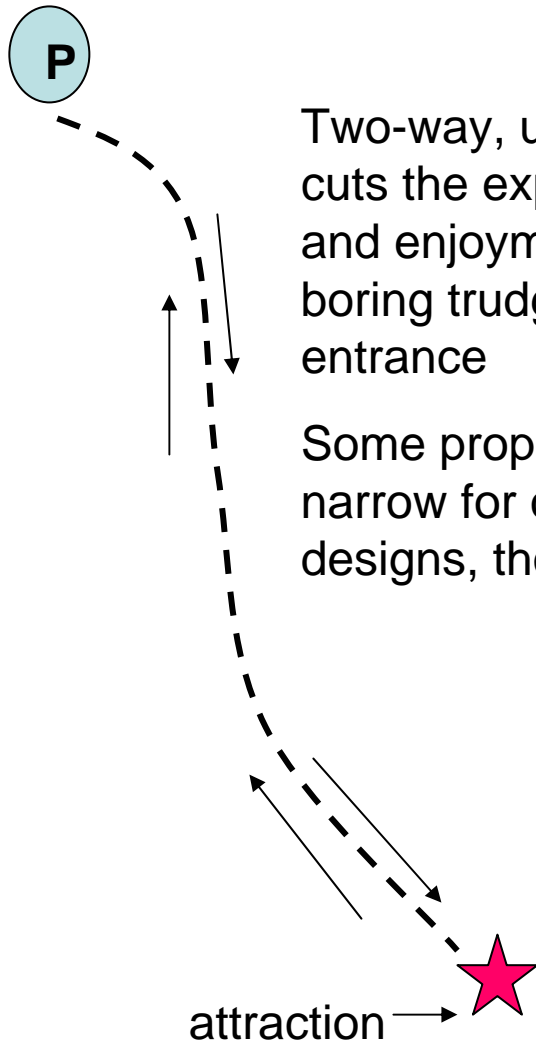


Remember that 95% of “less-abled” are not in wheelchairs. Consider our older but active users; resting benches might be best help



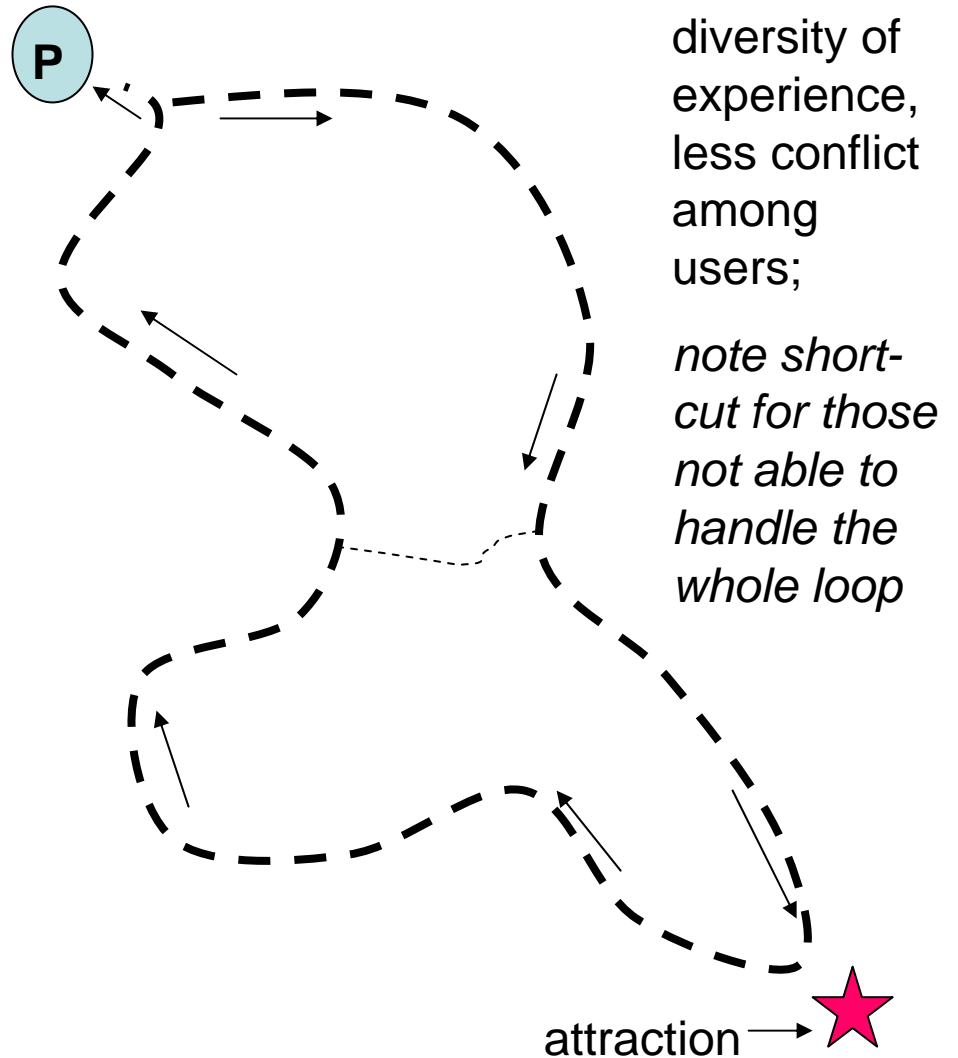


# Psychology of Design



Two-way, up-and-back cuts the experience and enjoyment in half; boring trudge back to entrance

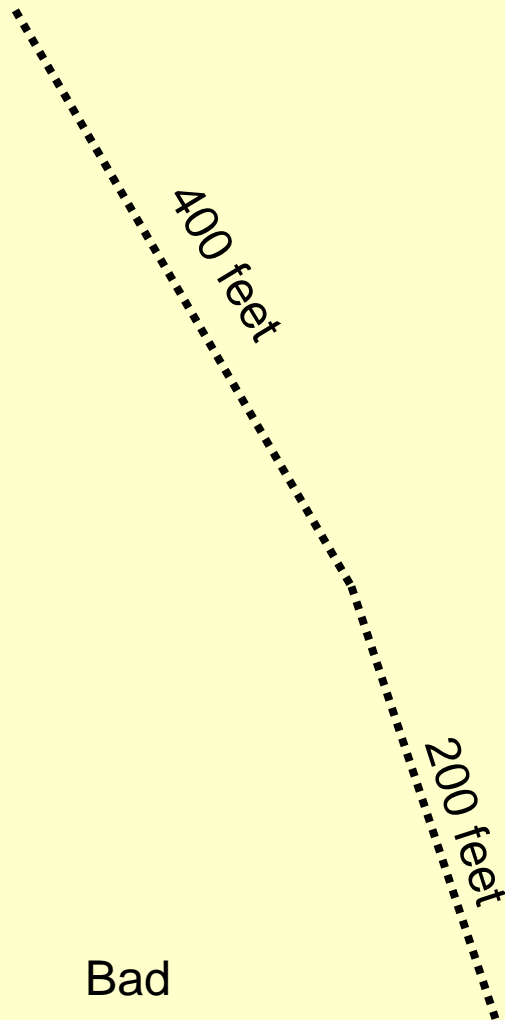
Some properties too narrow for other designs, though



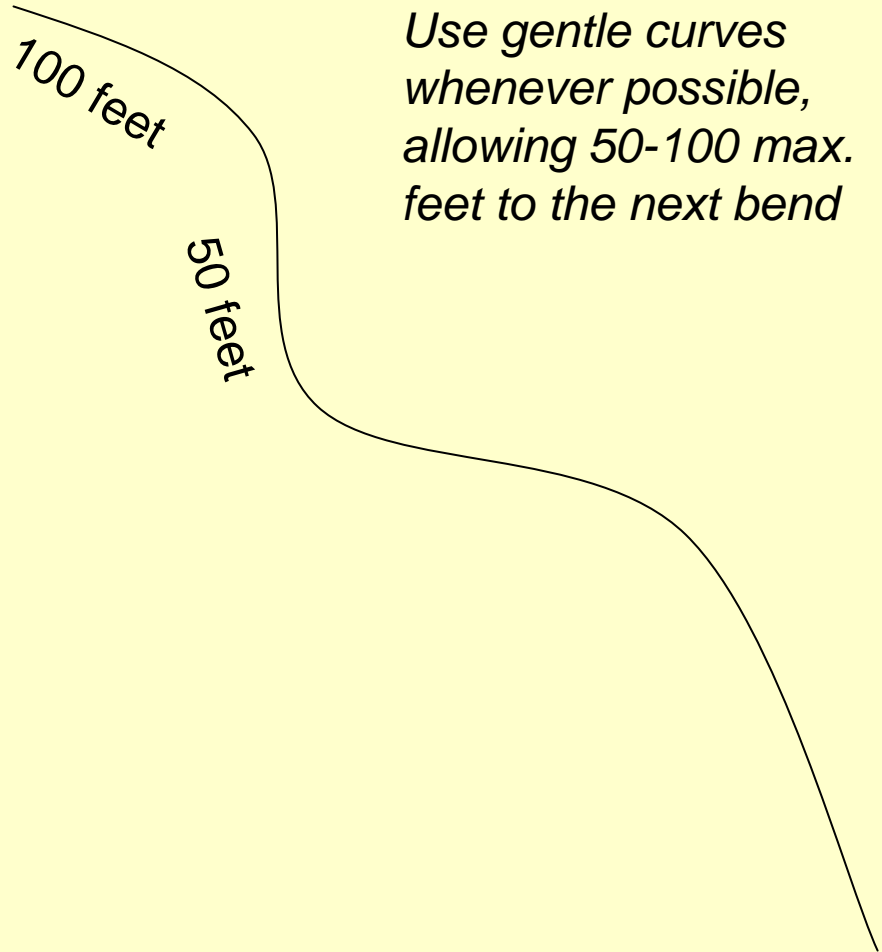
One-way loop encourages continuous diversity of experience, less conflict among users;

*note shortcut for those not able to handle the whole loop*

# Straight is boring: “highway effect”



Bad



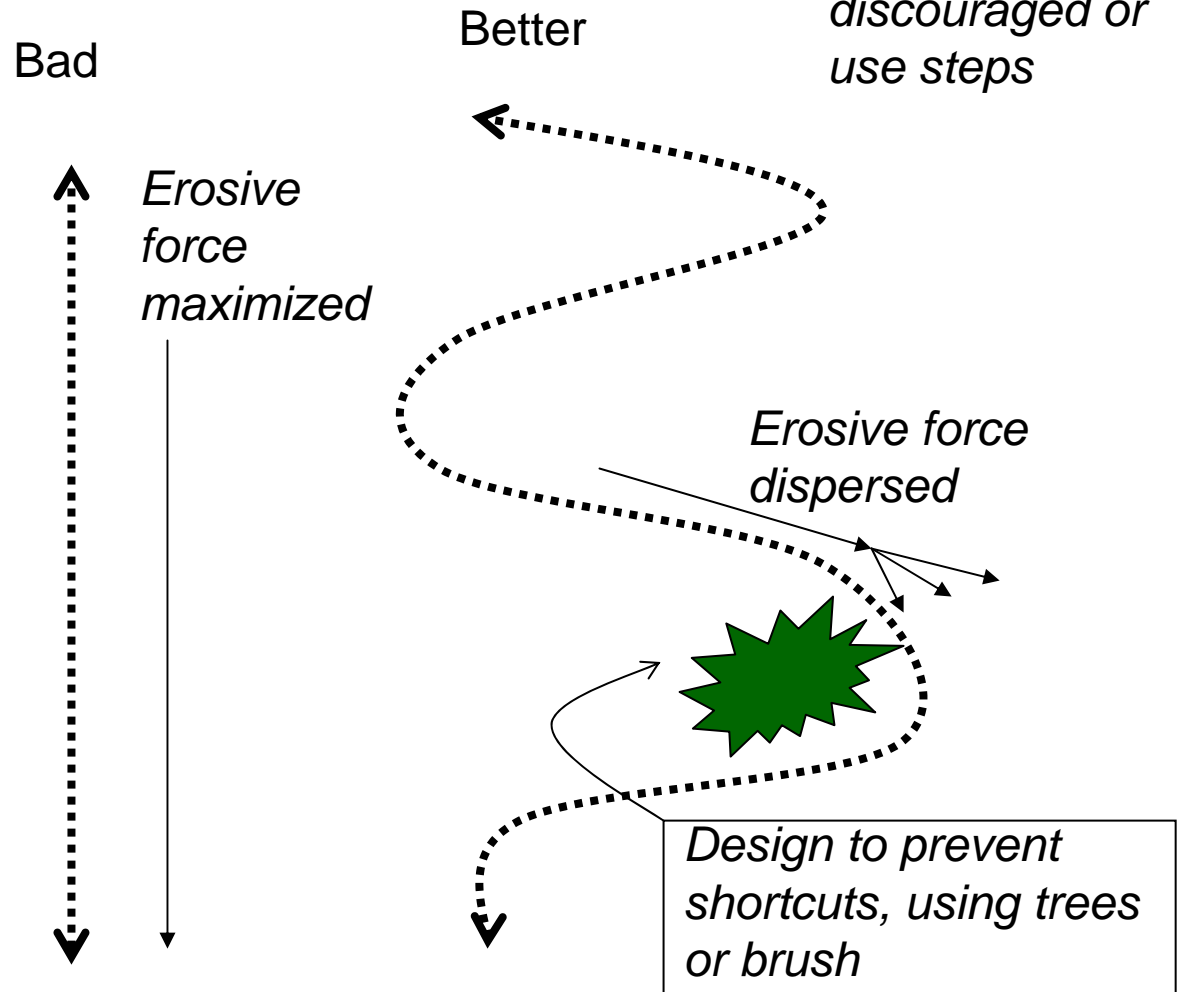
*Use gentle curves  
whenever possible,  
allowing 50-100 max.  
feet to the next bend*

Better

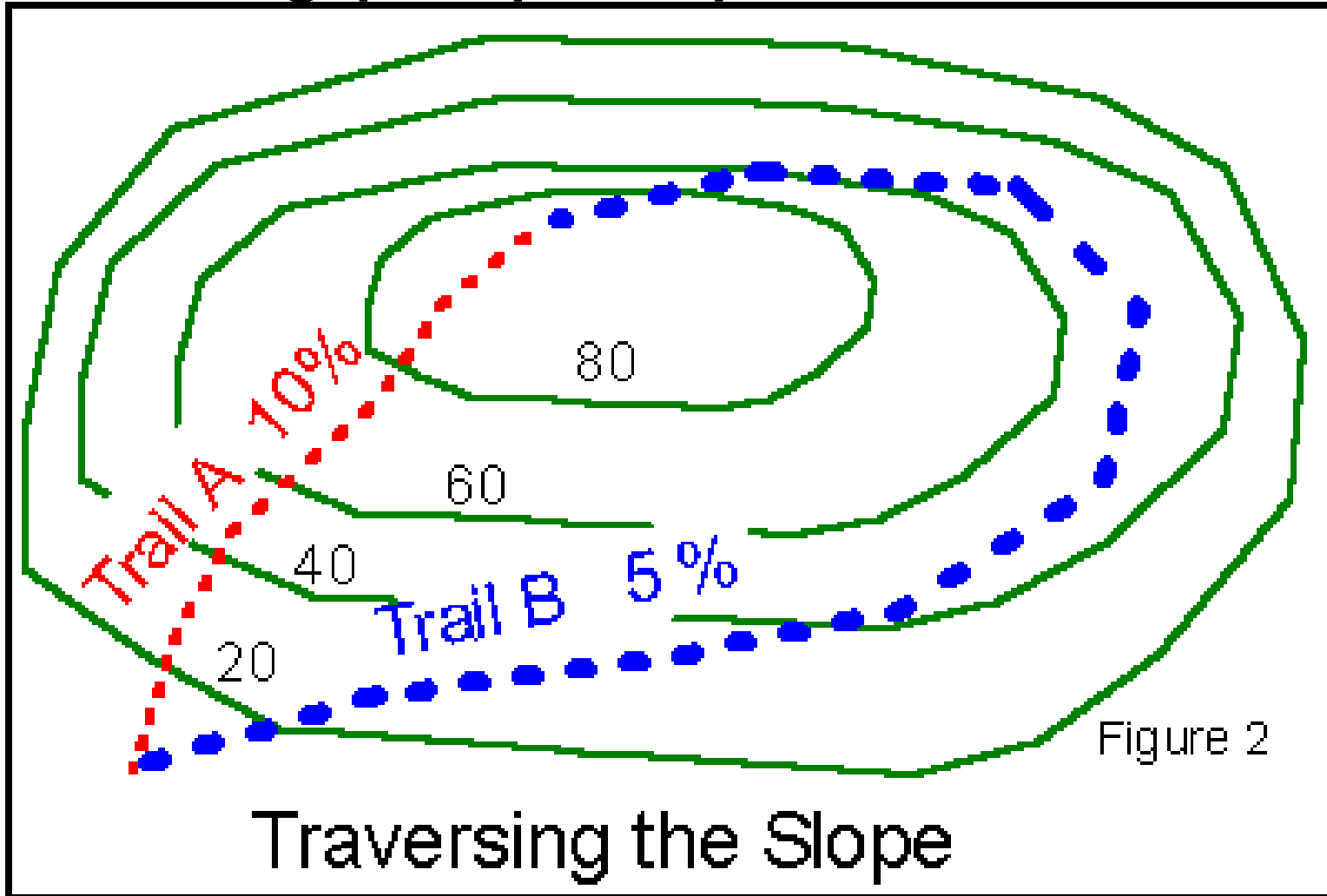


# Getting people up and down slopes

*Note: grades steeper than 10% are discouraged or use steps*



# Getting people up and down slopes



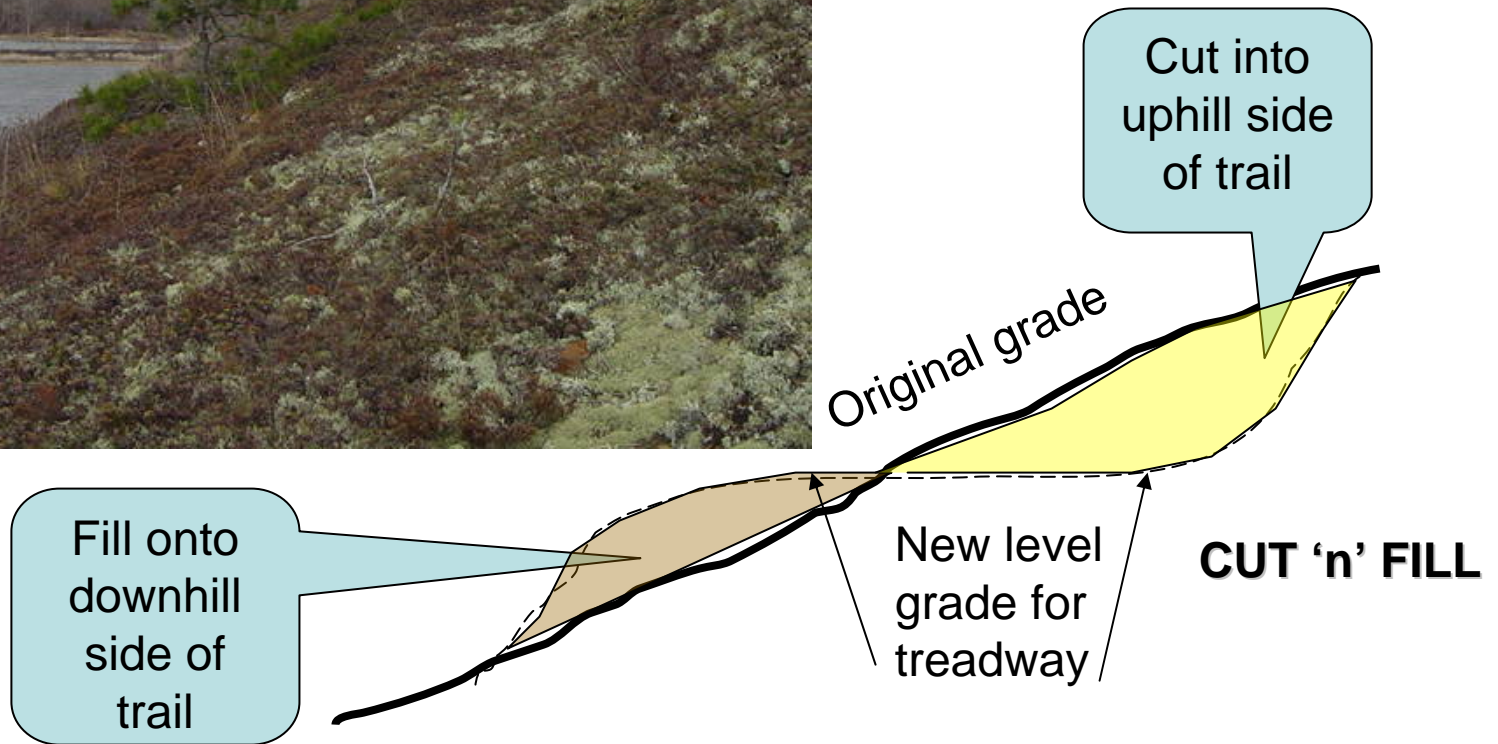
The key is to “flatten the slope” by traversing the contours instead of going straight up and down them.

Trail A would need steps.

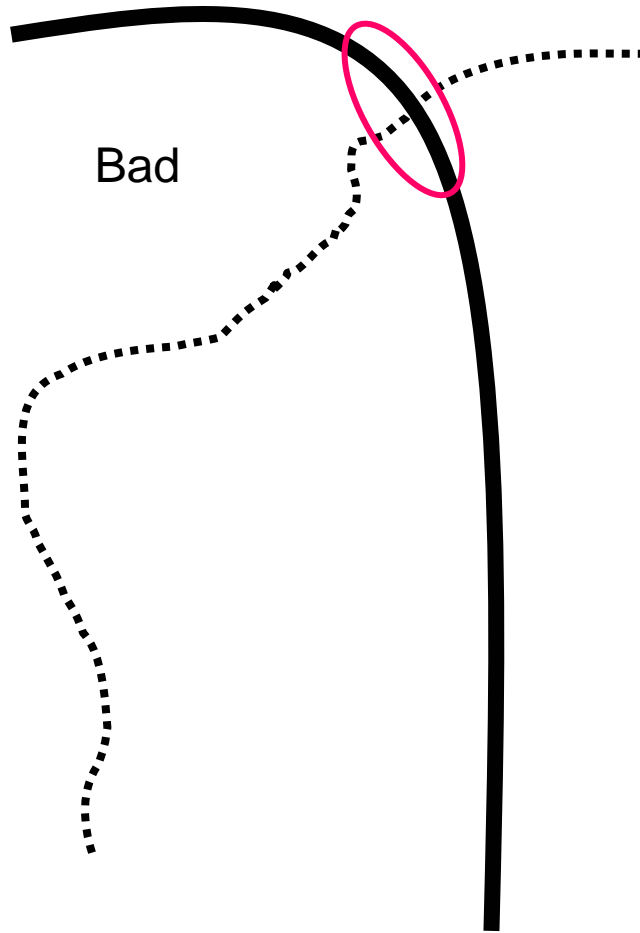
# Handling side-slopes, if you must



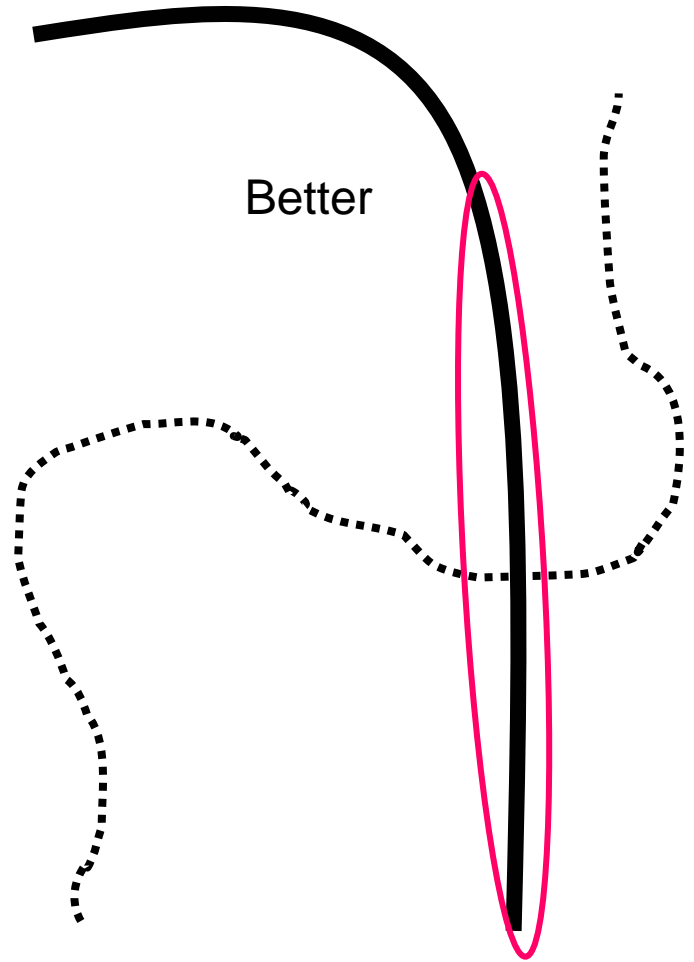
*Rule: if your ankles start to roll, there is too much sideslope to your trail*



# Road crossings: sight distance



Sight distance:  
being able to see 500 feet in each direction, esp. for busy roads with fast cars!



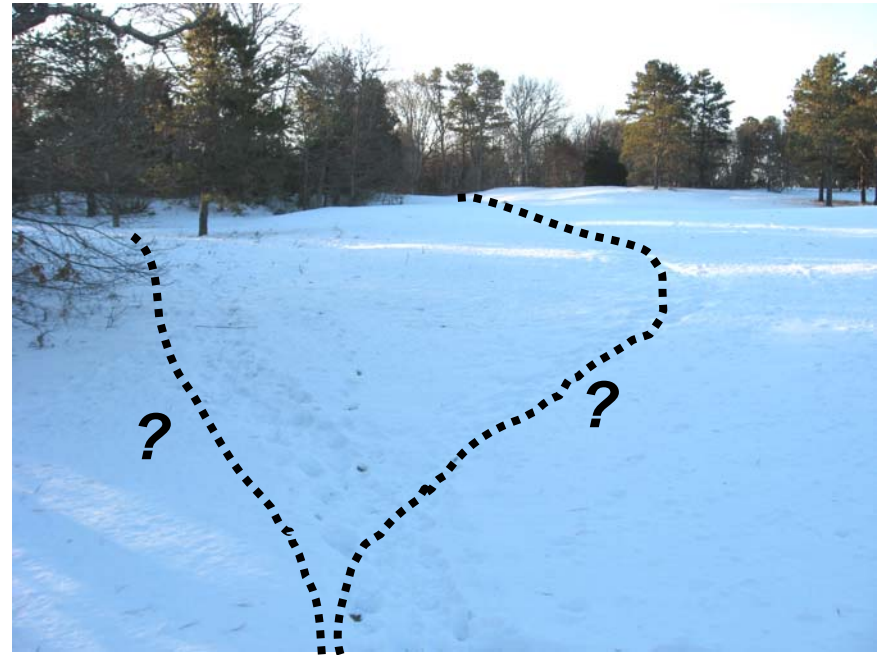
# Trail segments through some areas need markers when path not obvious



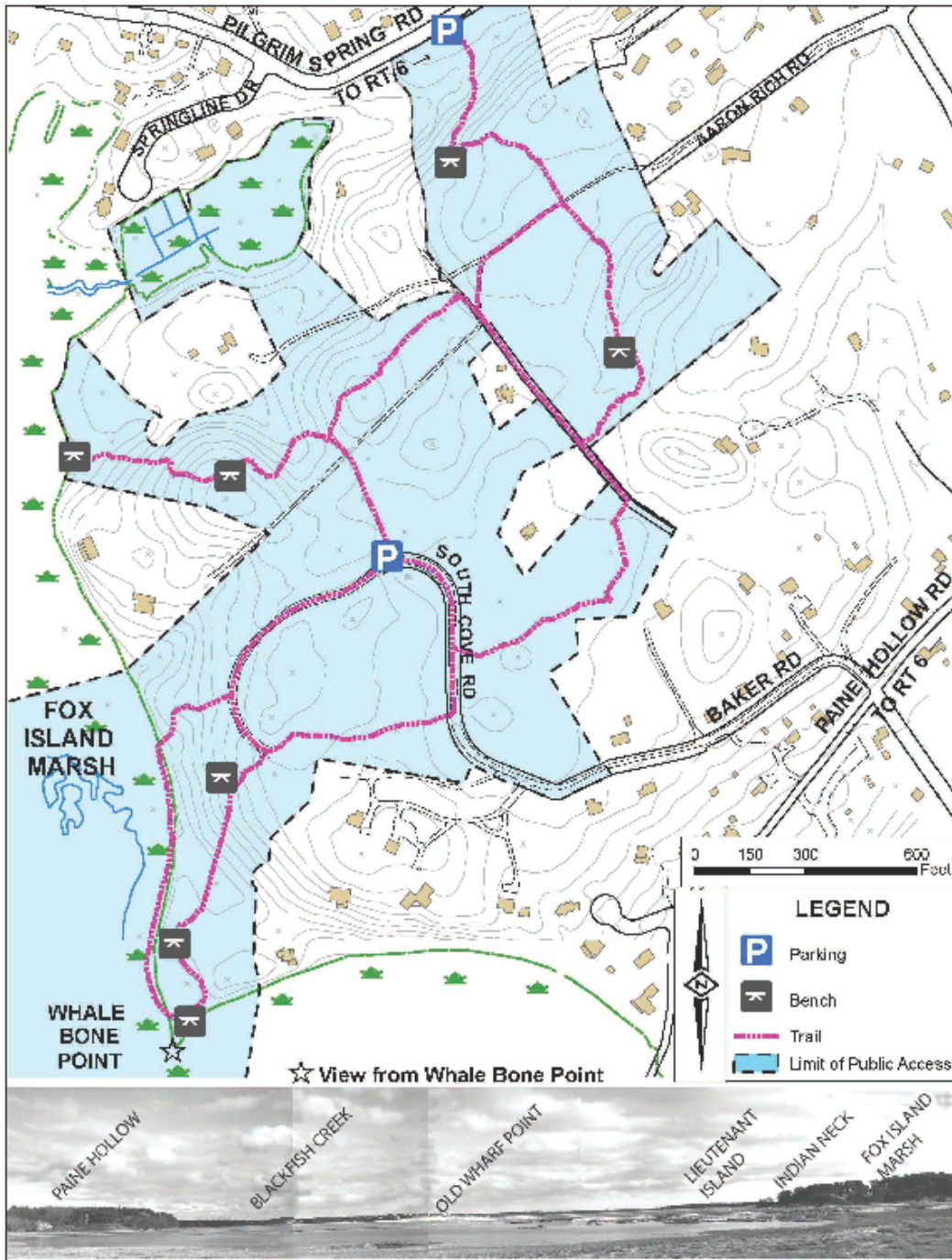
Use fallen timber to guide work on new trails



Part of this trail loops along the edge of salt marsh



Will walkers know which way to cross open field in snow conditions?



# Connectivity

This 1.75-mile public trail has a lot of good design:

- 1) all segments connect, loops added to loops
- 2) benches spaced for variety of distance views or resting on slopes
- 3) trails kept away from inholdings (homes) as much as possible
- 4) re-use of existing carpaths disturbs less habitat
- 5) switchbacks used to mount and descend slopes to reduce erosion



# Bourne Sisters Woodland

Very clean, simple, but informative trail map

Parking

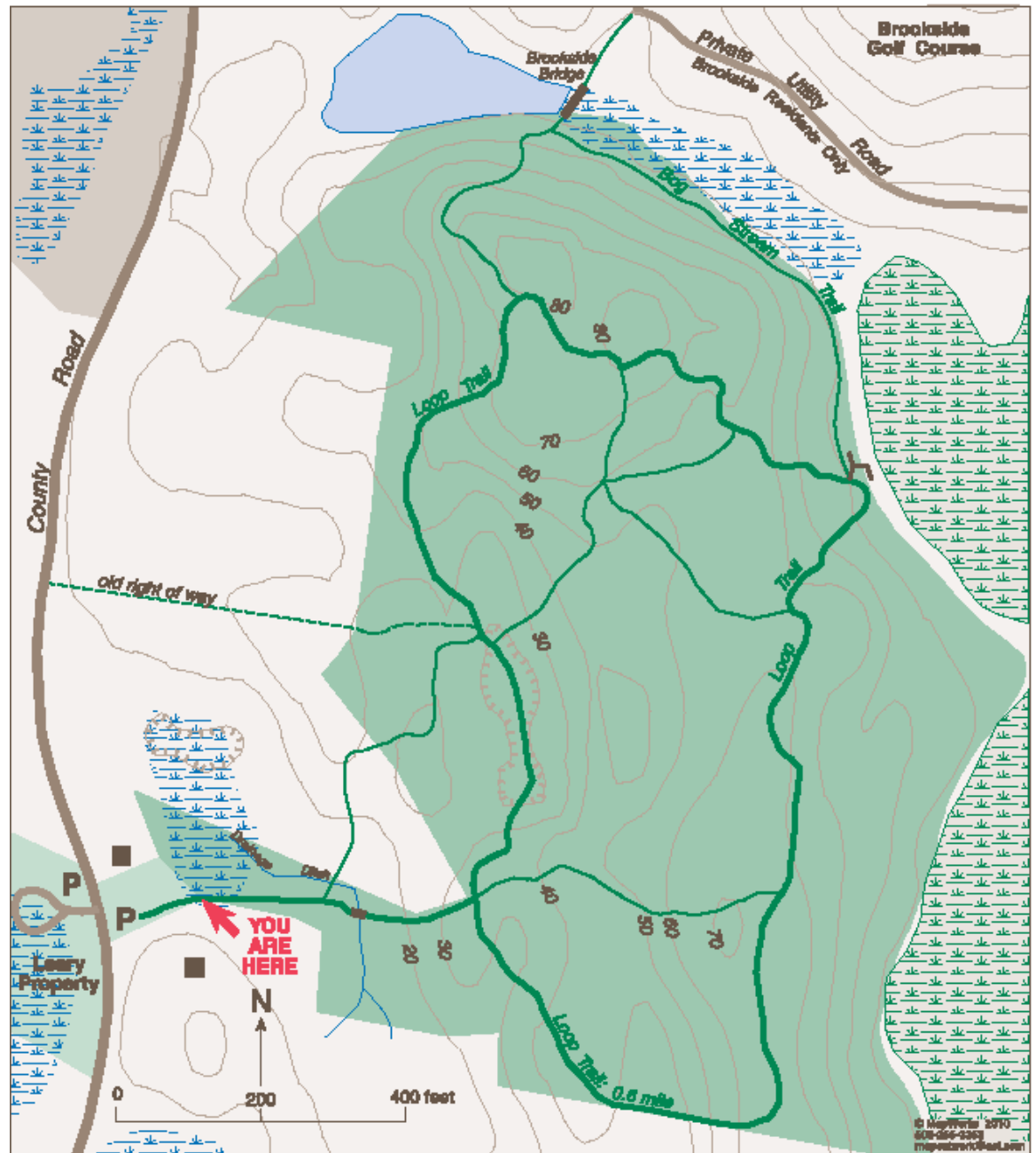
Trails (main and minor)

Contours

Scale

Features

Ownership



# Powerlines: perfect trails? *NOT.*



## **Advantages:**

cover long distances  
maintained by others  
wide, good footing  
long-distance views

## **Concerns:**

Mostly on private land; no legal right to use; power companies not cooperative

Weather extremes: very hot in summer, very cold in winter

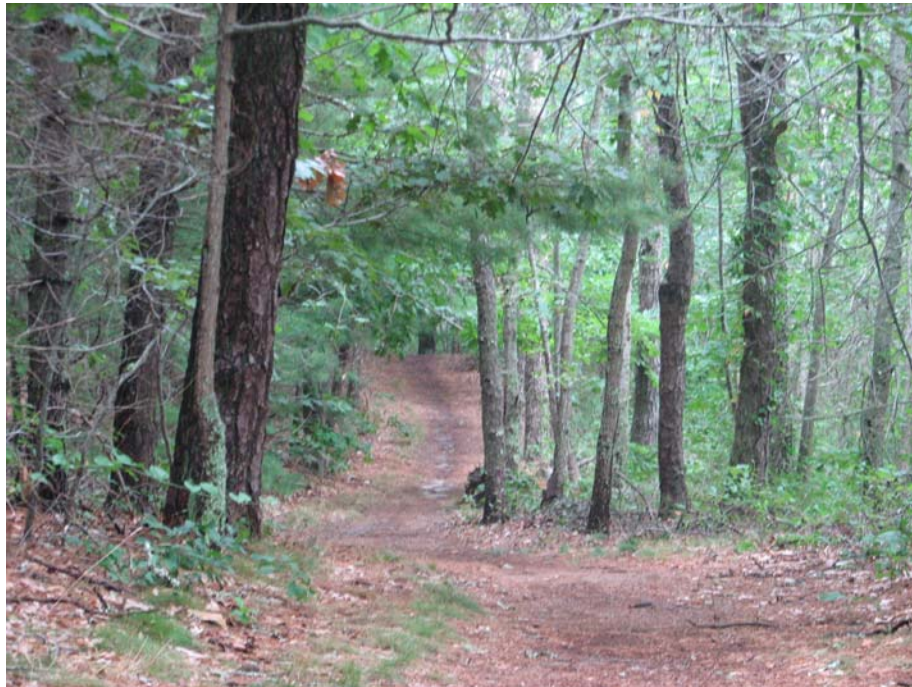
Safety: ATVs, dirt bikes frequent users



# Trails Just Appear Don't They?

## Trail Planning

A good trail may appear to have "just happened," but that appearance belies an incredible amount of work in scouting, design, layout, construction, and maintenance.



A useful trail must be easy to find, easy to travel, and interesting to use.



# Budgeting For Trail Design

## BUDGET:

\*Please note that all purchases will be tax-exempt due to HCT's 501c3 charitable status

Description of budget item:	Time in hours or material	Estimated cost (or VALUE)	Estimated total cost	HCT Match (or VALUE)	DCR grant request portion
<b>Consultant for drafting trail plan</b>	160	\$50/hr.	\$8,000.00	cash = \$1000	\$7,000.00
<b>AmeriCorps partnering with HCT: trail creation</b>					
BREAKDOWN: 4 volunteers x 8 hrs.x 4 days = 128 hours	128	\$10/hr.	\$1,280.00	value = \$1280	0
26 volunteers x 8 hrs. x 1 day = 208 hours	208	\$10/hr.	\$2,080.00	value = \$2080	0
<b>Parking area: creating 12-space lot w/vehicular access</b>					
BREAKDOWN: front-end loader plus operator	24	\$70/hr.	\$1,680.00		\$1,680.00
dumptruck plus operator	24	\$70/hr.	\$1,680.00		\$1,680.00
surveyor/engineer	24	\$60/hr.	\$1,440.00		\$1,440.00
blue stone road (100 ft. long x 10 ft. wide) = 25 tons	3/4 in.dense pk	\$12/ton	\$300.00		\$300.00
blue stone parking area (3000 sq. ft.) = 75 tons	3/4 in.dense pk	\$12/ton	\$900.00		\$900.00
split rail fence sections to delineate lot, road	300 feet	\$30/10 ft. section	\$900.00		\$900.00
<b>Trailhead:</b>					
BREAKDOWN: 5 ft x 5 ft trail map kiosk(materials: lumber, laminate, map)	materials	\$900	\$900.00		\$900.00
5 ft x 5 ft trail map kiosk (labor)	labor	\$30/hr. labor (20 hr)	\$600.00		\$600.00
				materials donation = \$600	0
benches x 4 (materials: lumber, fasteners, bolts, cement)	materials	\$150/bench x 4	\$600.00	value = \$400	0
benches x 4 (AmeriCorps labor)	labor	\$10/hr.	\$400.00		\$400.00
4 ft x 5 ft composite material road sign with post	materials/labor	\$1,000.00	\$1,000.00		\$1,000.00
1 ft x 1.5 ft aluminum trail signs x 4 @ \$50 each	materials/labor	200	\$200.00		\$200.00
			<b>Estimated total cost</b>	<b>HCT Match (or VALUE)</b>	<b>DCR grant request portion</b>
<b>TOTALS:</b>			\$21,960	\$5,360	\$16,600

# Trail Maintenance

Trail maintenance means trail maintenance

- Even the most seasoned trail workers will attest to the singular will and incredible power of plants. No sooner is a trail corridor cleared of plants than new ones rush toward this avenue of sunlight.



Before



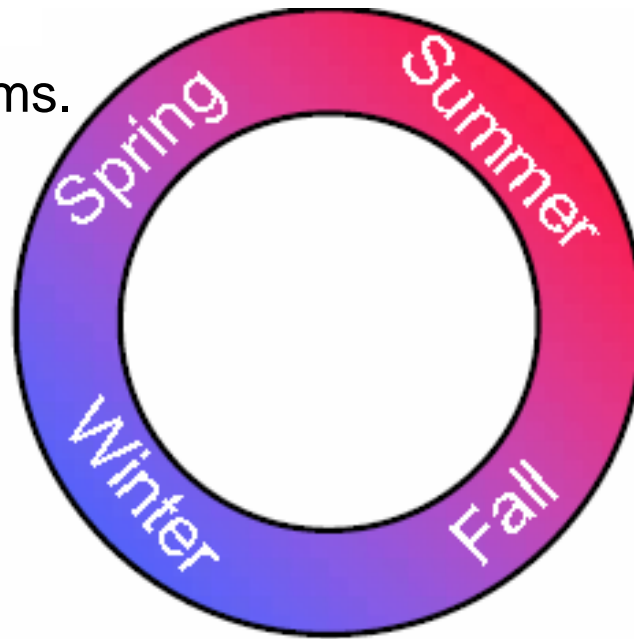
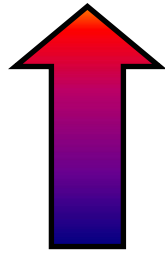
After



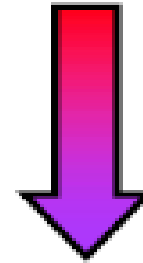
# I Have To Maintain The Trail All Year Round?

YES- Trail maintenance is a year round obligation

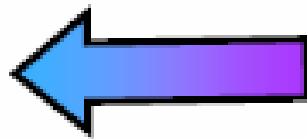
- Inspect for and clean up winter and spring storm damage.
- Look for water problems.
- Plan projects



- Clip after spring and early summer growth.
- Best time for blazing.



- Inspect trail (if conditions permit)



- Inspect trail
- Clean up
- Complete projects



# Why is Maintenance Important?

- Provides for a pleasant and complete hiking experience
- Makes trail safe for users
- Limits potential for lost hikers
- Minimizes or addresses erosion issues
- Educates hikers
- Reports trail abuse
- Prevents the likelihood of attracting ticks



Million Dollar Trail Not Maintained



# What happens when we don't keep our trails open through use and/or maintenance?



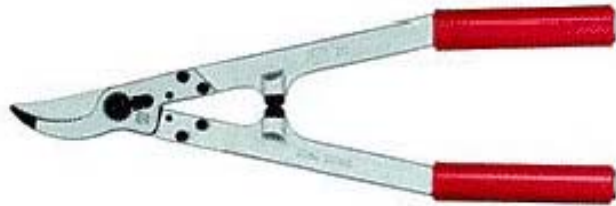
*It is easier to keep a trail open than to try to re-open it after being abandoned.*



# Tools For Trail Maintenance

## Tools every maintainer needs

- Loppers



- Hand pruners



- Bow saw (24-inch blade best)



## Other tools you might want

- Weed whip or pruning shears for low-growing plants
- Folding pruning saw
- Pick-mattock or shovel

- Blazing tools
  - Tag blazes, hammer, nails
  - or –
  - Painting tools
- Litter bags
- Leather work gloves

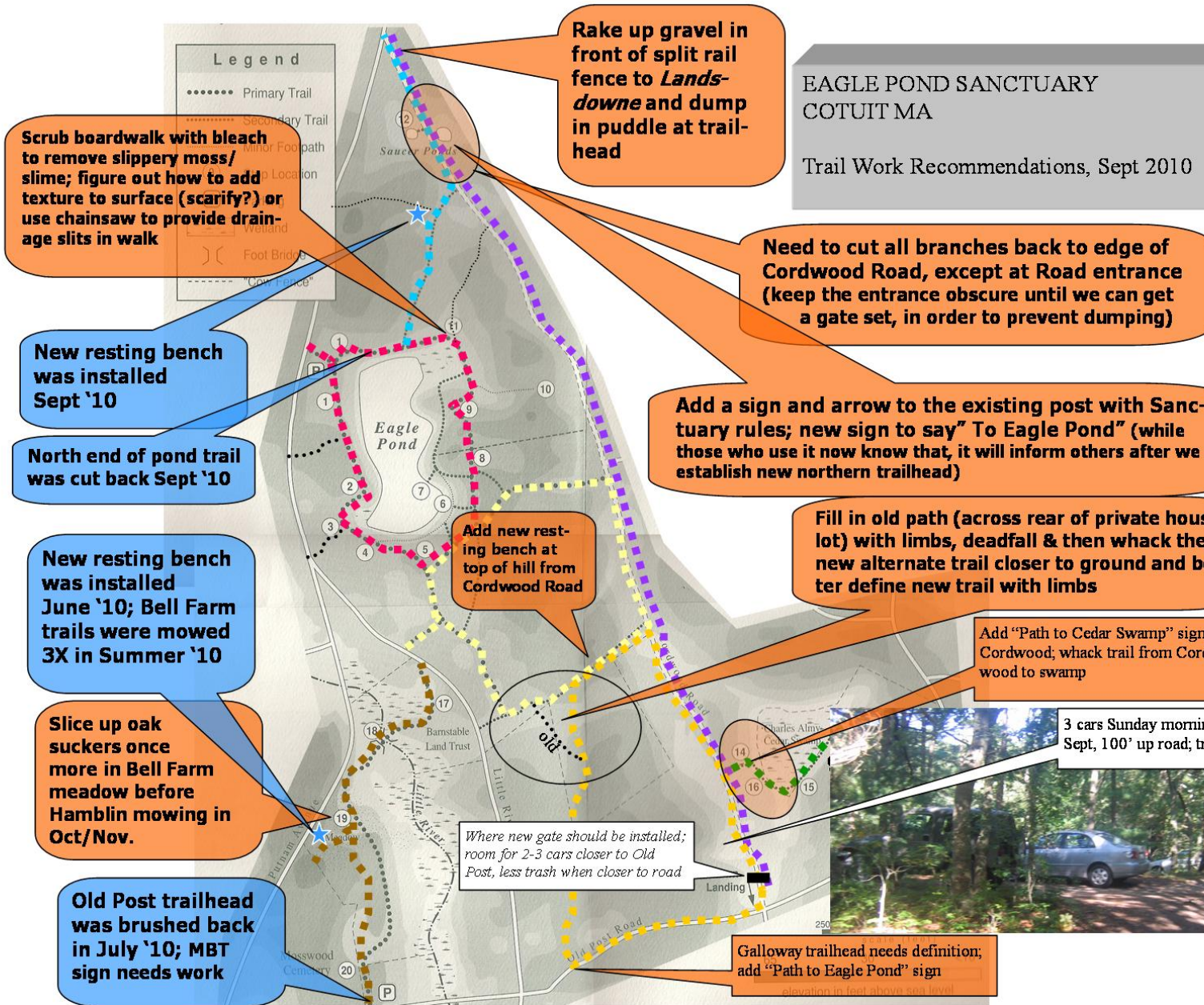
# How Can I Possibly Maintain All These Trails By Myself?

YOU CANT! Reach out and get help from:

- Volunteers of all ages
- Stewards
- Americorps
- Local landscapers
- Town Departments
- Sled Dogs



# Planning for Trail Maintenance



Work in blue has been completed;

Work in orange still needs to be done

*Planning ahead of time maximizes efficient use of staff and volunteers*



# Don't Be Afraid to Move a Trail

- Consider the amount of time and money trouble spots take up.
- Consider the impact the trail has on the surrounding plant and animal species
- **Nature will have the last word**



Left- Steep eroding trail



Right- Water bar installation



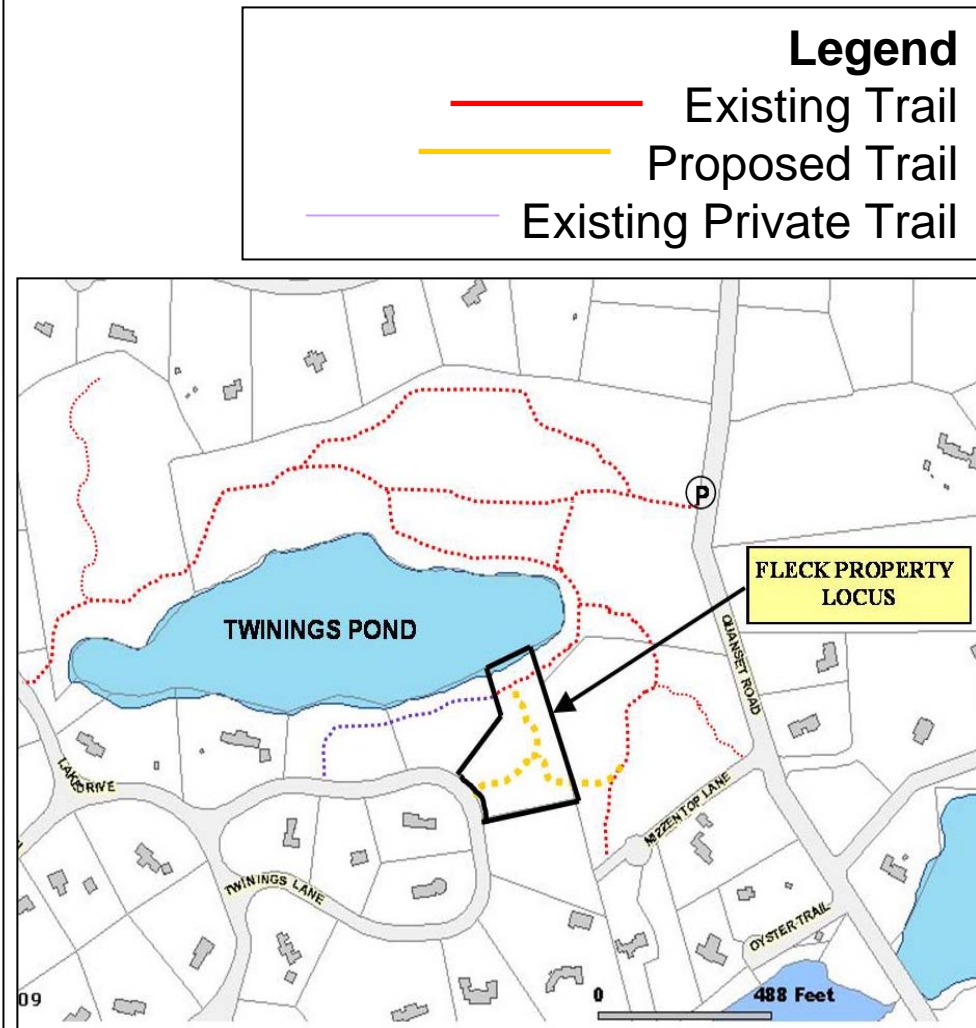
Left- Blocked eroding trail



Right- End of old eroding trail

# What Do You Mean My Trail's on Your Property?

- Before building a trail/ or continuing to maintain a trail, understand where the properties boundaries are.

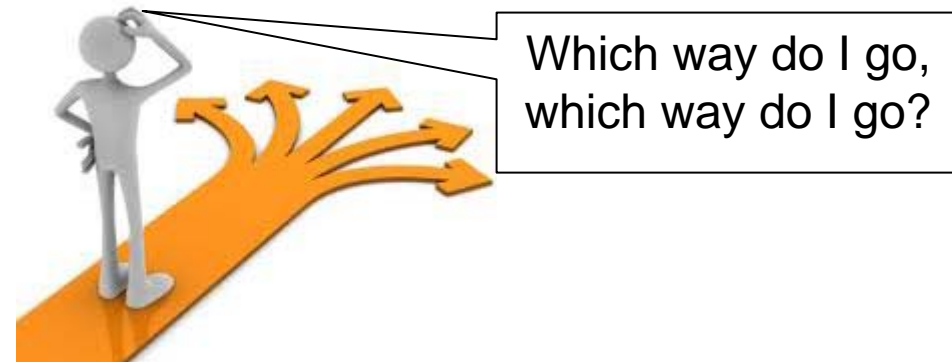


# Why Would I Need Signs I Know Where I Am Going?

## Signage:

- Lets visitors know about the rules and regulations
- Informs walkers of unique locations
- Gives a history of the land
- Can be used as an educational tool
- Is important in emergency situations
- \*Makes visitors feel comfortable\*

## Bad Signage



Good Signage

# Why Would I Need Signs? I Know Where I Am Going II

Post trail uses at trail head

Bad Example



WTHSigns.com

Simple & Clear

**Multi-Use Trail Permitted Uses** *MaineDOT*

All motorized vehicles must be registered as ATV's.

**Winter Use Only with Snow Cover**

Bureau of Parks and Lands  
Off-Road Vehicle Division

Suggested for extensively used long trails



# Blazing a Trail

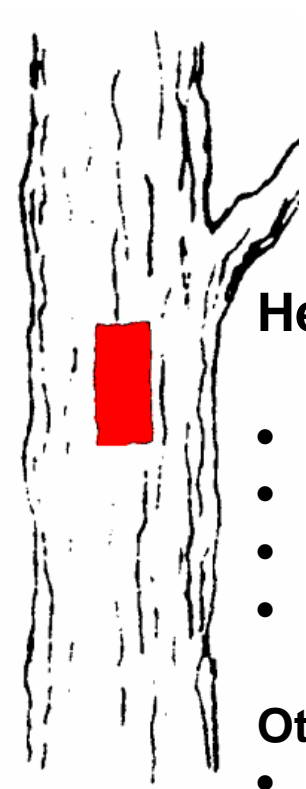


## Helpful Hints

- Don't over blaze or under blaze
- Rule of thumb: When passing a blaze, next blaze should be visible
- Fewer blazes on woods roads, more in difficult areas
- \*Trailheads and trail crossings must be blazed clearly\*

## Other Suggestions

- Blazes should be eye level or above
- Blaze trees which catch the eye, preferably large trees near the trail with dark-colored bark
- Never blaze dead trees
- Make a separate trip for blazing, preferably with two people
- Blaze one direction, then the other direction
- Don't just repaint blazes; take a fresh, objective look yearly

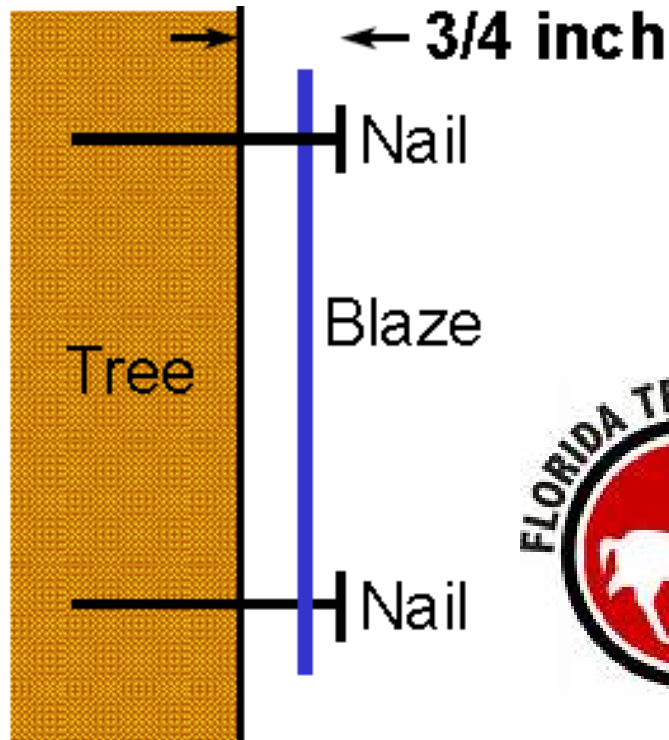




# Blazing Options

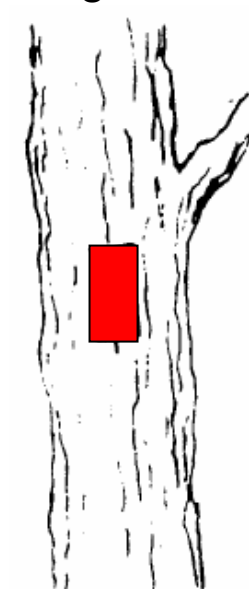
## Tag Blazing

- Do not nail tight against tree--allow at least 3/4 inch for growth
- Use 2 nails, one near top and one near bottom, never at sides

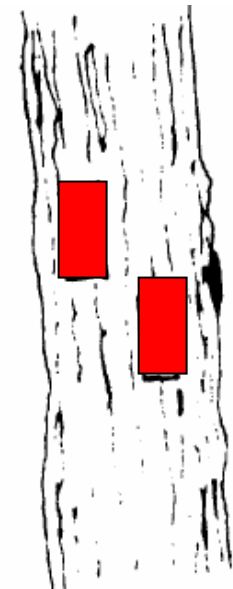


## Paint Blazes

- Scrape trees with rough bark; never scrape through the bark
- Supervisor will indicate proper color and type of paint
- Water-based paint is now preferred
- Use a template to get accurate blaze size and shape
- Paint using a small brush
- Avoid blazing if rainy or temperature is below 50 degrees



Standard Blaze



Left Turn

# Something to Think About

## Trail Benches: Resting, ADA, honor, view enjoyment



Metal & wood



Rough Granite; memorial



Pressure-treated wood; scenic overlook

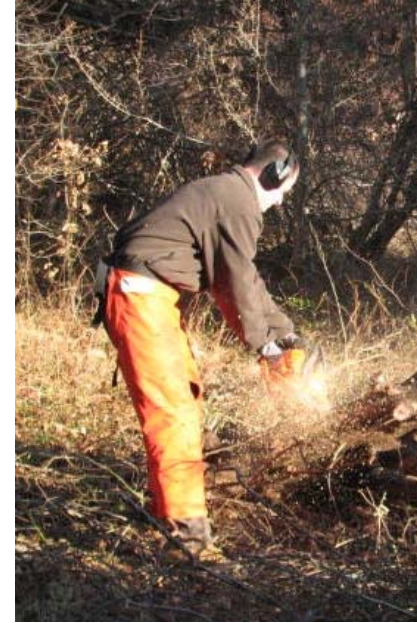


Metal & composite

# Safety

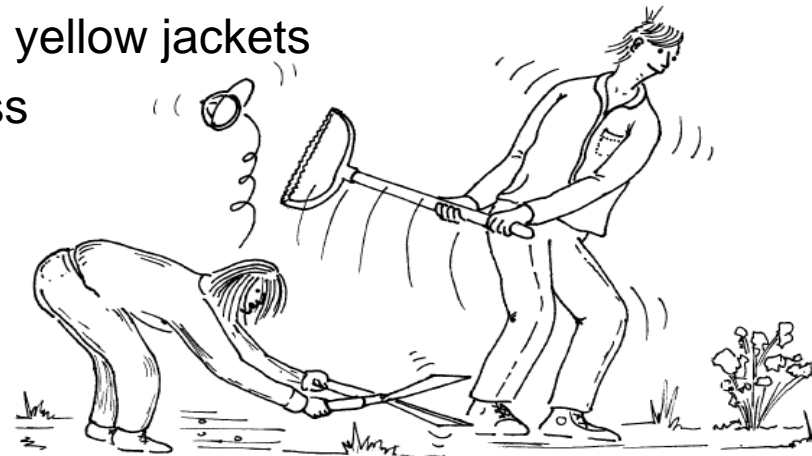
## Learn safe practices and use common sense

- Use the proper tools and learn to use them safely
- Do not work too close to others in your group
- Use great care in clearing poison ivy
- Know your limitations--ask for help if you need it



## Follow normal safe hiking practices

- Avoid maintaining alone and tell others where you are going
- Be aware of health risks due to heat and cold
- Take plenty of water
- Take first aid kit, flashlight, and other critical gear
- Avoid poisonous snakes, rabid animals, and yellow jackets
- Check for ticks; be aware of tick-borne illness



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