Hiking & Backpacking

Environmental Ethics

- **Ethics**: agreed upon restrictions on behavior for the overall good of a community
  - values; knowing "right & wrong"
- **Land Ethic**: behavior is right when it preserves the integrity, stability, & beauty of the outdoor environment
  - knowing the "impact"

Backcountry Behavior

- **Observing** others & **recognizing** our own backcountry behaviors.
  - Consider:
    - Trail use
    - Campsites
    - Use of fire
    - Sanitation

Consequences of environmental impact

1. **Minimizing** impact on the environment
   - Preserves:
     - "natural" character
     - quality & purity of natural resources
   - Increases capacity to support rec. use.
2. **Ignoring** one's impact on the environment
   - Deteriorates:
     - "natural" character
     - quality & purity of natural resources
   - Decreases capacity for rec. use.

“Leave No Trace”

- USFS awareness campaign that fosters an *attitude*, or “land ethic,” with regard to:
  - planning
  - food
  - equipment & land use
  - campsite set-up & clean-up

General “LNT” Principles:

- plan ahead & prepare
- impact high-use areas
- avoid places where impact is new
  - avoid or spread out impact in pristine areas
- "pack it in, pack it out"
  - trash=inorganic
  - garbage=organic
- proper disposal of un-packable waste
- don't change the environment
- leave what you find
- use fire responsibly
- limit group size when possible
- learn about your ecosystem
- prepare for the season
- know camping regulations

7 Excursion Behavior

- Good group behavior: "...the motivation & character to be concerned for others as one is for oneself" (Petzoldt, 1984)
- Promote good group behavior
  - Set the tone
    - set expectations & group norms
  - Contribute as an individual
    - tolerance
    - conflict resolution

8 Hiking & Trail Technique

1 Conserve Energy
- rhythmic breathing
- pace
- rest step, breaks
- eating & drinking

- Hiking
  - follow trail
    - watch for markers
    - careful attention to map
    - trail courtesy
  - uphill
    -stand straight to allow for recovery of footing (use rest step)
    -small steps
  - downhill
    -bend knees/small steps
    -minimize friction (boots)
    -contouring
  - impact considerations
    -stay on trail (treadway)
    -trail litter
    -human waste

9 Trail Logistics

1 Responsible to others in group
2 Group size concerns
– safety
– environ. impact
– psych. impact
– managing agency policies

2 Group roles
– Leader
– Scout
– Smoother
– Logger (record keeper)
– Sweep

10 Packs
■ Two basic types:
– external
  • rigid & stable aluminum frame
  • distributes weight evenly
– internal
  • concealed frame in wall of pack
  • flexible (can be conformed to back)
  • more adjustable to torso length
  • rests closer to back

11 Stoves
■ Two basic types:
– liquid fuel
  • white gas, kerosene, alcohol
  • pro: fuel is readily available
  • con: high maintenance
– compressed gas
  • butane or propane
  • pro: easy on/off, low maintenance, easy temp. control
  • con: hard to tell level of fuel, cannister disposal
– alcohol or butane do not burn well at high elevation (7000 feet)

12 Guidelines for stove use
■ Know how to use/assemble your stove.
■ Make sure there is enough fuel
■ Work from the side, not over the top, of your stove.
■ Do not re-light a hot stove until it has cooled.
■ Do not use your stove inside your tent.
■ Emergency:
  – douse: water/sand; put an empty pot over stove (lack of oxygen)

13 Water
■ Pack it in or find a water source.
■ Why should water be treated?
  – Giardia (bacteria) & intestinal viruses
Treatment
- boiling (a full boil expends fuel)
- filtration (easy but slow with some risk)
- chemical treatment (easy but takes time, affects taste, and can be risky)
  - iodine tabs
  - chlorine tabs

Food
What to consider.
- length of trip
- preparation
- weight
- packing/re-packing
- spoilage

Food protection & disposal
Considerations for protection
- ethics (feeding wildlife)
- safety (rabid animals)
- sanitation (animals licking your pots)
Protection (hanging food/waste)
- 200+ feet away
- 12 feet high & 6 feet away from tree
Disposal
- drain waste water away from site
- pack out food waste, or burn in hot fire

Cooking
- hygiene
- burning, or sticking
- spices
- efficiency (keep a pot on stove)
- pack fuel away from food
- cooking at altitude
  - for dinners that cook in 20 min. or less at sea level, add 1 min. per 1000’ of elevation.
  - 20 minutes or more add 2 min. per 1000’.

Eating
Breakfast: cereals, oatmeal, grits, etc.
Lunch & Trail: granola, fruit (dried), heavy breads, tuna, food bars (energy), cheese, GORP, etc.
Dinner: pasta, rice (brown), soups, beans, dehydrated meals, cheese, salami, etc.
*Misc.* sugar, coffee/tea, powdered milk, drink mix, spices, oil, butter, etc.

### 18 Clothing

**Material Characteristics**
- **Wool** *Pros:* good insulator, retains warmth when wet, *Cons:* is bulky, can shrink.
- **Cotton** *Pros:* comfortable, conducts heat away from body, *Cons:* absorbs water and sweat & loses insulative value.
- **Synthetics** *Pros:* lightweight, absorb no water, help conserve heat, dry quickly, *Cons:* cost, can melt/burn from heat.
  - Polypropylene shirts, undergarments
  - Nylon/Gore-Tex shells

### 19 Fires

**Considerations**
- dead wood, safe location, environmental impact, permitted?

**Functions**
- emergency, food prep., aesthetic value, heat (warmth & drying).

**Site Considerations**
- type of soil, wind, distance from camp, established fire sites.

**Restoration**
- burn wood to ash, douse until cool, spread.

### 20 Latrines

**Impact of improper disposal**
- aesthetics
- physical (contamination can cause illness)
- environmental (animals affected)

**Cat-holes**
- small hole 6+” deep
- used only once
- away from camp, water, trails, etc.
- cover hole, pack out TP

**Urination (all use same area)**

### 21 Packing the Backpack

**Consider weight distribution**
- **Flat terrain**
  - Higher center of gravity
    - load light gear in bottom of pack; stack heavier gear on top.
- **Steep terrain**
  - Lower center of gravity
    - load heavier items lower in pack & closer to body