Subject: Campsite Selection and Areas of Camp

Canny Title:

Presenters Name:

When to teach this topic: This topic should be taught when the group gets to camp the first night and then evaluated the rest of the trip.

Who is this for (level of experience and age of participants): For those interested in the outdoors from 6th grade on.

Resources:
- NOLS – Soft Paths book
- LNT Teaching book – in class resources and for use at the Expeditionary
- Leave No Trace webpage - http://lnt.org/
- Web research

Materials needed:

Outcomes: Things for you to know and teach so that all participants will be able to know and do each following bullet by the end of this lesson.

- Leaders will know how to select campsites based on safety from water, falling objects and other environmental hazards.
- Leaders will know how to select campsites which fit with the LNT ethic.
- Leaders will understand the how to choose campsites on the coast versus the mountains.
- Leaders will know the sequence necessary for choosing a campsite in relation to its impact, safety, and desirability compared to other sites.
- Leaders will understand the difference between backcountry, low and high use areas and when to use each area.
- Leaders will understand the importance of appropriate campsite foot wear (closed toed shoes) for safety and LNT reasons.
- Leaders will understand how to leave a camp site with a large group making sure that the area has been scoured for micro-trash and lost items.
- Leaders will understand when and where campfires are appropriate.
- Leaders will understand how to build campfires in a LNT appropriate manner if appropriate.
**Introduction/Hook:** If you are going to take a horse to water...make sure it’s thirsty. Make sure you are doing this at a time when the participants need this information and are ready to hear it (are people warm, hydrated and well fed?).

**Very short activity/introduction:**

**Procedures & Activities:** Steps, e.g. models, structured practice, guided practice, independent work. Include time allotments for all steps in each section. Usually 5-10 minutes per section. Timing is very important.

Explain & Demonstrate:

Step 1: __ minutes

Step 2: __ minutes

Step 3: __ minutes

Step 4: __ minutes

Practice (individually if appropriate):

**How to Assess each individual’s skills:**

**Closure/Evaluation:** How will you close the lesson? How will the students remember what they learned today? Homework? Summary? Quiz? When? Usually allow at least 5 to as much as 10 minutes for this section.

**Evaluation:** Analyze the strengths and weakness of the lesson as it actually happened. Include things to avoid next time you teach the lesson, and what went particularly well. How was the timing of the lesson?
Selecting and Using a Campsite

An experienced leader in the backcountry often shows puzzling behavior as the day draws to a close. Campsite after campsite, all of which are acceptable to other members of the group, may be passed up. Perhaps this tenting area may not be the flattest, the tired and disgruntled say, but rearrangement of a few boulders will make it comfortable. Or if the nearest spring lies just beyond a muddy trail through a wet meadow, they offer to make a new path. What kind of perfect campsite is this leader looking for, anyway?

*Perfect* may not be the proper term, since seldom is a site ideal from everyone’s perspective. Yet certain characteristics are generally agreed upon: level spots for tents, ample room for camp chores, water nearby for washing and cooking, deadwood for fires, protection from weather, a beautiful view, and last but not least, seclusion from campers outside your group. How do you arrange each camp to provide all these qualities? You don’t. As author John Hart says, “The perfect camp is found, not made.”

The more you travel in the backcountry, the more you are on the lookout for naturally comfortable, isolated campsites—
those that require few alterations to be suitable. If it is true that your campsites are what you remember most about a wildland journey, then a night spent sliding down a steep slope, worrying about a leaning tree above your tent, or listening to a noisy group nearby is not soon forgotten. As your experience grows, you begin to watch for good campsites throughout your traveling day, even stopping early if you come across one that has exceptional attributes.

But simply finding an isolated and comfortable campsite is not enough these days. The site must be durable as well—durable in both an environmental and a social sense. Your campsite must not be damaged by your stay, nor should it harm the wilderness experience of others.

**When Campsites Suffer**

Your impact on other people can be particularly pronounced at campsites. Several studies have found that wilderness visitors are much more sensitive to meeting other groups in camp than to meeting them on the trail. Most people feel that camping near one other group diminishes their sense of solitude as much as meeting three groups on the trail.

In a 1980 survey of wilderness managers, researchers Randy Washburne and David Cole found that more than 70 percent of those surveyed listed vegetation loss and soil compaction at campsites as frequent problems. Such problems are, if anything, more severe today. Research indicates that the number of impacted wilderness campsites has increased greatly in the last few decades. For example, around ten lakes in the Lee Metcalf Wilderness, Montana, the number of impacted campsites increased from fifty in 1972 to ninety-two in 1988. Moreover, the number of highly impacted sites increased from twelve in 1972 to twenty-eight in 1988.

The initial effects of camping on an undisturbed site seem insignificant. Most visitors hardly notice them—some minor trampling of vegetation, blackening of a few rocks used to build a fire ring, or a little less firewood close to camp. With more use, however, the impacts become harder to miss. Vegetation disappears from large portions of the campsite, and the plants that survive are different from those growing just beyond the camp's perimeter. Under increased trampling stress, the organic layers of soil—surface litter, such as leaves, twigs, and needles; and subsurface duff, or decomposing litter—disintegrate and erode away, exposing bare mineral soil. This soil becomes increasingly compacted as trampling intensifies, restricting the movement of air and water to plant roots. As less water percolates into the soil, surface runoff increases. That runoff, in turn, increases erosion. Once soil erodes away, the prospects for the site's recovery are grim.

Impact can reach alarming levels. In the Eagle Cap Wilderness in Oregon, David Cole found that more than 90 percent of the ground vegetation in campsites had been destroyed by trampling. In addition, 95 percent of the trees had been damaged by people collecting firewood, tethering horses, or hacking the trees with axes. What was particularly
disturbing was that more than one-third of the trees had actually been cut down.

In addition to vegetation damage, soil compaction and erosion were prominent in Eagle Cap's impacted sites. Roots were exposed on more than one-third of the remaining trees. The campsites were large, many of them had multiple fire rings, and some sites had actually merged to form huge compacted and disturbed areas.

Such degradation happens quickly. Investigating newly opened campsites at the Delaware Water Gap—two hours outside of New York City—researcher Jeff Marion found that most damage occurred in the first year the sites were open.

Larry Merriam and his associates at the University of Minnesota found similar evidence of rapid deterioration at campsites in the Boundary Waters Canoe Area in Minnesota. Moreover, Merriam concluded that once deterioration occurred, recovery took a long time; little improvement was expected for a minimum of ten to fifteen years. Disturbed alpine areas in Colorado and elsewhere may take as long as one thousand years to recover.

Why are some campsites more seriously damaged than others? Researchers conclude that three major factors influence how much change occurs at any given campsite: the amount of use the site receives, the behavior of its users, and the site's environmental characteristics (its vegetation, soil, and topography).

**Amount of Use**
Common sense would dictate that of all factors, the amount of use a campsite receives is the most important—the more people using the site, the greater the impact. Actually, this is only partly true. Many frequently used sites are in much better condition than some sites used infrequently. Although almost all campsites sustain noticeable damage when camped on for more than one or two nights a year, after a certain amount of camping, careful further use doesn't have much added effect.

Studies from wildlands in such diverse locations as the Pacific Northwest, the Rocky Mountains, the Southwest deserts, the Northwoods of Minnesota, and the eastern deciduous forest all have come to similar conclusions: Additional use of sites that are already camped consistently—perhaps ten nights per year—seldom causes much further deterioration to the site itself. In the Boundary Waters Canoe Area in Minnesota, for example, campsites used fifteen nights per year lost 81 percent of their vegetation, whereas campsites used as many as seventy-five nights per year—five times as often—lost only a little more vegetation, roughly 91 percent.

These results suggest two practical choices for minimizing damage. First, in order to keep impact as small as possible, we can spread ourselves so widely that no one campsite is used more than one or two nights per year. Alternately, we can camp over and over again on the same few sites, recognizing that these places will be significantly impacted but that our impact will be confined to a very small part of the backcountry. A third option, camping on lightly to moderately impacted sites, is not a viable long-term strategy. Such sites are vulnerable to rapid deterioration with only minor increases in use—minor increases that transform lightly impacted sites into heavily impacted ones.

An investigation at Mirror Lake in the Eagle Cap Wilderness illustrates this last point. In 1975, there were 42 campsites around this popular subalpine lake. During the latter part of the 1970s, visitors were encouraged to avoid highly impacted campsites around the lake and find their own sites back from its shores. This attempt to disperse camping among a larger number of sites was successful, but its effects on the land were unexpected and unfortunate. The number of campsites around the lake tripled in just five years. By 1990, there were
144 campsites around Mirror Lake—sites that were as highly impacted as the original 42. If campers had stuck with the original campsites, deterioration could have been confined to those frequently used areas, leaving the surrounding land in a relatively pristine condition. In a popular place such as Mirror Lake, spreading use merely spreads impact.

**Type of Use**

Frequently used campsites are affected far more by what campers do when they are there than by how many times the sites are used. Campsites used by horse parties are often in worse condition than backpacker sites. In the Lee Metcalf Wilderness in Montana, for example, researcher Sidney Frissell found that horse camps were ten times larger than hiker camps, with seven times as much bare ground.

In most wilderness, the majority of groups visiting the area are small—usually between two and four people. But large groups do visit wilderness, and their potential to disturb campsites differs from that of small groups. Although the effect of party size on campsites has never been formally studied, it makes sense that a large group can cause impacts on an undisturbed site more rapidly than a small group. For example, along the New River in West Virginia, the area of vegetation loss on sites used by large commercial rafting companies was more than four times larger than the area on sites used by small groups of fishermen. At well-established campsites, however, a big group need not be a problem, as long as activities are confined within the boundaries of the existing site. The important thing is to find a site that is large enough to handle the size of your group. On pristine sites, if you are in a large group, it is a good idea to split up into camping and cooking subunits on durable surfaces to minimize impact.

Activities involving all members of the group can be short in duration and located on a durable site.

**Campsite Location**

Of the three factors that affect the severity of campsite impacts, location may be the most critical. Most people like to camp by lakes, streams, or other water sources. One study in Montana by Perry Brown and John Schomaker suggests that lakes may be the single most important factor in campsite selection. Ninety percent of all campsites had views of a lake, while only 6 percent lacked a view of any water. In the Boundary Waters Canoe Area, the most popular campsites are on islands—with water on all sides. Such findings explain why campsites in the worst condition are often found at the edge of water.

Views are also desirable at campsites. This may explain why meadows tend to be popular locations. Until a few years ago, visitors were admonished to avoid camping in meadows. Even today this is common advice. Yet recently, researchers have found sites in meadows to be less altered by visitor impacts than those in forests. In the Bob Marshall Wilderness in Montana, David Cole learned that campsites in grasslands and open forests with a grassy understory lost less than half as much vegetation as campsites located in dense forests. In the Wind River Range in Wyoming, forested sites camped on for one night lost most of their vegetation, whereas meadow sites used for four nights experienced little vegetation loss. Similar findings have been reported for the White Mountains in New Hampshire, the banks of the Delaware River, and at campsites along the lakes of the Boundary Waters.

**The Land Manager’s Response**

From this brief look at the impacts of camping and how those impacts vary with use and environmental characteristics, it should be obvious that the choice of a campsite is more complex than just finding an isolated and comfortable place to spend the night. To complicate the picture, sometimes the
choice of where to camp isn’t left up to the visitor at all, especially in areas that are the most crowded. For instance, land managers often discourage camping near all water sources. In fact, almost half of the national parks prohibit camping within a specified distance of all lakes and streams (usually a one-hundred-foot buffer). Many observers believe it won’t be long before we see this regulation in almost all backcountry.

Other restrictions limit users to specific campsites. Thus a few areas are sacrificed so that the rest of the land remains undisturbed. Most damage occurs with dispersed use, some managers argue, and if everyone camps wherever they want, a greater proliferation of impacted camping sites will be the end result. The consequence of this way of thinking is that a quarter of our national parks allow camping only at designated sites in the backcountry. Another 30 percent of them restrict camping to designated sites in at least some parts of the backcountry.

What’s the alternative if you don’t wish to be told where to camp? There isn’t one in those areas where numerous past visitors have acted irresponsibly and impact is severe. These places are so damaged that managers are no longer willing to risk the possibility of additional impact. They have already decided to restrict all camping—even careful camping—to certain sites. Where this decision has been made, we can only hope that it is limited to those specific places where it is necessary. For the vast majority of our backcountry lands—lands where impacts are less severe and unregulated camping still predominates—users must take responsibility before their impacts mark the land and make restrictions common fare.

**Choosing a Campsite**

Selecting an appropriate campsite is probably the most difficult and most critical aspect of minimum-impact backcountry use. The choice often requires weighing conflicting variables, making trade-offs between environmental and social impacts, and using good judgment.

Your decision should be based on the intensity and type of recreational use in the area, the fragility of vegetation and soil, the likelihood of disturbance of wildlife and of other visitors, the amount of previous impact on the site and the general area, and a candid assessment of your party’s potential to cause impact. All of these criteria must be evaluated if you wish to avoid causing unnecessary additional damage to a campsite. Thus, deciding where to spend the night obviously is not an easy thing to do.

Where to begin? The idea is to choose a campsite that won’t be damaged by your stay. Research suggests that you’ll cause the least degradation if you camp either on pristine sites that are durable and show no sign of previous use or on well-worn sites that have already been impacted to the point where further use will cause little additional deterioration. Low or moderately impacted sites (those that show obvious signs of prior use but with a substantial amount of vegetation still surviving) should be avoided. Such sites deteriorate rapidly with further use; if unused, however, they eventually recover.

**When and How to Select an Established Site.** Well-worn sites are the ones where most of us grew up camping—ones with prominent fire pits surrounded by compacted dirt and little vegetation. They are in prime locations—next to lakes, trail junctions, and scenic views—because they were the first sites selected when campers began using the area. Their primary drawback is that they look more like a developed campground than a pristine wilderness. Nevertheless, if kept
clean, they make nice, impact-resistant campsites. Typically, they have lost most of their vegetation, so it is usually possible to set up several tents without having to trample any more plants or shrubs. Trails radiate to water and back to the main trail, so you can carry out camp chores without having to create new paths. Fire pits usually are in place, so you can sometimes have an evening campfire without causing further scarring.

Well-worn sites are the optimal campsite choice in areas that are popular. These places are readily accessed by trails, have many obvious campsites, and are where you expect to encounter other people. They are at the destinations mentioned in guidebooks: alpine lakes, desert oases, waterfalls, viewpoints, and trail junctions. Heavily visited wildernesses have many such places, but even remote areas may have a few.

Such popular places typically present many camping alternatives. You can select between well-worn sites, lightly impacted sites, and sites that have never been used before. Although the temptation may be strong to select a pristine or lightly impacted campsite, don't! It is always better to choose a well-worn site in popular areas than it is to risk turning a pristine or lightly impacted one into yet another hardened campsite. The proper strategy in such places is to concentrate use and impact.

When selecting a well-worn site, look for one in a concealed, forested location with comparatively little ground vegetation, preferably in thick forest litter and duff. Try to find a flat location; not only will you be more comfortable, but you will also minimize erosion. If mineral soil exposure is kept to a minimum, soil compaction and erosion will also be reduced. If a site with thick duff isn't present, try to find one that naturally lacks vegetation and duff—one on bedrock, gravel, or sand. If possible, avoid areas with obvious soil erosion or serious root exposure. In the most popular areas, however, these may be the only sites available.

Avoid well-worn sites in meadows and on the edges of forests. Other visitors will easily see you, so social impact can be severe in these places, and they are often critical wildlife habitat as well. Camp away from water sources, trails, other campers, and scenic spots such as waterfalls and viewpoints. These places are frequented by other people, so take extra time to seek a more secluded site.

**How to Use an Established Site.** When setting up camp at a well-worn site, don't sprawl out. The objective is to confine impact to places that already show use and thus avoid enlarging the area of disturbance. Take care to select a site that is large enough to accommodate your group without risking damage to its edges; such damage always leads to site enlargement. Set up your tents and "kitchen" in places that have already lost their vegetation, where there is either barren ground or well-developed paths between tents and the cook-

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*In many places, heavily impacted sites have become designated sites, such as this spot in New England.*

*Peter Forbes*
ing area. Wear soft-soled footwear when walking around camp. Step between plants rather than on them. Be particularly careful not to trample on tree seedlings. Seedlings are extremely fragile and are killed by trampling. As a result, many longtime campsites have no young trees to replace mature ones when they die.

Before leaving camp, make sure that it is clean and attractive and will appeal to the next group. Pick up litter, and clean up charcoal and other remains of fires. On many well-worn sites, it is appropriate to clean up the site and dismantle excess fire rings, as well as constructed seats and tables. Properly located facilities such as a single fire ring should be left alone, however. Dismantling them only causes additional impact, for they will most likely be rebuilt. Remember—you want to encourage others to use your site rather than to create a new one.

Camping on well-worn sites often proves frustrating if you're an experienced camper. You may feel you are just contributing to the growing problem of abuse. The truth is, there's not a lot you can do to improve a hardened site; it won't recover unless it is closed to all use for a long time. Still, there is a great deal you can do to keep the damage from spreading. Be satisfied that you're helping to decrease the total number of damaged areas by camping on just a few selected sites and by choosing ones that are the least visually obtrusive. You can encourage others to do the same by leaving the site as clean and appealing as possible. If you simply dislike well-worn campsites, plan a trip that avoids popular destinations.

**When and How to Select a Pristine Site.** Compared with camping on a well-worn site, use of a pristine campsite requires considerable skill and judgment. Pristine sites are those that have never been camped on before, or if they have been used, it was so long ago that any previous impact is impossible to detect. Pristine sites are not identifiable as campsites, and you want to keep it that way.

The best pristine campsites are located on durable surfaces, such as dry grass, snow, or rock. They show no sign of previous use and probably will not be camped on more than one or two nights a year. Glenn Goodrich

Pristine sites are the appropriate choice in parts of the wilderness that receive little recreational use. These are the places that are off-trail, that have few obvious campsites, and where you would be surprised to find other people. Some such areas are accessed by trails, but they are places where few people ever stop to camp. They include the bulk of wilderness lands that lie beyond the trail corridors where most people spend their time.

In the most remote places, there may be no evidence of campsite impact. Here every site is a pristine one. In other places, there may be a few places where impact is light to moderate, where people have obviously camped. Sometimes all that can be seen is some trampled vegetation or some scattered charcoal. Stay off these sites; let them recover.
This low- or moderate-impact campsite shows obvious signs of use, but a substantial amount of vegetation still survives. If the campfire ring is dismantled and the wood and rocks are scattered, it should eventually recover. With continued use, however, it will soon deteriorate into a high-impact site. (David Cole)

When selecting a pristine site, make sure that it is well away from popular places and well-worn sites. Don't walk a couple hundred yards away from a lakeshore laced with impacted sites and make camp in an untouched spot. A pristine camp must be as durable as possible. Surfaces without vegetation or well-developed soils are ideal. Rock outcrops rate the best. Gravel bars, sandy beaches, snow, and ice periodically change or are removed by natural events—floods, tides, snowfall, and snowmelt—and they are also durable.

Surfaces with developed soils but no vegetation, although less desirable, are relatively durable. Your stay may cause minor soil compaction, but vegetation won’t be disturbed, and recovery should be rapid. In the East, many dense forests have virtually no undergrowth, because of the lack of sunlight. Such an area is often the best choice for a pristine site. Be careful not to damage a site with sparse vegetation, however. Scattered plants uproot more easily than those found in dense mats. This is particularly true of plants growing on a forest floor. Such plants are typically tall, leafy, and spreading (characteristics that help them capture forest light) and crush easily. If you camp in a forest, choose a site with no vegetation or seek a more resistant alternative.

Dry grass is always more durable than a vegetated forest floor. Grasses (and closely related plants like sedges) often grow in mats or tufts and have tough, densely clustered leaves and stems. Grass provides a cushioning effect, and its roots keep soil particles bound together. Thus, densely matted grass meadows, if they are dry, are always better choices than forests with sparse undergrowth. Camping in such meadows may have a visual impact on other visitors, and this should be considered, but the environmental effect of a night or two of careful camping on dry grass is likely to cause less damage than a night or two in the adjacent forest.

Plant structure determines vegetation resistance. Some plants are woody; others are not. We've already discussed the relative resistance of grasslike plants to trampling. Broad-leaved nonwoody plants, on the other hand, from common wildflowers to rare orchids, don’t survive trampling well. Their erect, succulent stems snap off underfoot, and the broad leaves quickly shred. Woody plants seem resistant, but they, too, are often fragile. The major exception to this are the shrubs and trees that are large enough to avoid being trampled. Once damaged, woody plants recover slowly, and new ones usually must grow from seed. Therefore, tree seedlings and low-growing shrubs are often the most susceptible to trampling.

Studies conducted in the Cascade Mountains of Washington found that two hundred people walking through vegetation killed 90 to 100 percent of the broad-leaved nonwoody plants. The same level of trampling killed about 50 percent of the woody plants but only about 5 percent of the grasslike plants. The woody plants were more fragile than these numbers suggest, however: Half of the surviving plants died within a year.

The rule of thumb for pristine sites? Always try to find a nonvegetated campsite. If you have no choice but to select a vegetated site, look first for dense patches of dry grass, and avoid vegetated forest floors or sites with low-growing shrubs.
How to Use a Pristine Site. On pristine sites, it is best to sprawl out, but carefully. The objective is to minimize the number of times any part of the site is trampled. Spread out tents and cooking areas, avoid using the same routes, and move camp every night if you suspect damage to plants or soil. As you can see, these practices are exactly opposite from those used in well-worn sites. Since repeated compression of soil and vegetation is the culprit in campsite deterioration, spreading out and frequently moving should minimize impact. Wear soft-soled shoes, such as running shoes, around camp. Watch where you put your feet; take care to step between rather than on plants.

Disturbances tend to concentrate in the cooking area and in places where packs are stashed, so it is vital that these places be durable. A rocky outcrop is perfect for a kitchen or a place to prop up a pack. When you are in these activity-intensive areas or moving between them, watch where you walk to avoid crushing vegetation, and alternate your routes. It is also important to vary your path when going for water. You can reduce the number of trips you have to make to water by carrying a large, collapsible container. If paths or "social trails" start to develop, move the whole camp, the tent, or the kitchen elsewhere.

Proper use of pristine sites can be a real challenge for large groups. If not careful, such a group can create a long-lasting impact in just one night. Both dispersal of activities and short stays are particularly important for large groups in pristine areas.

When leaving a pristine site, camouflage the area by covering any scuffed-up places with duff or other native materials. If you are camping in a grassy meadow, use your fingers or a fallen branch to rake the compressed areas where tents have flattened the grass. Remember—you are trying to camouflage your campsite so that no one will be likely to choose it again. Your efforts will mitigate signs that otherwise could take days or weeks to erase.

Keep in Mind

In any kind of campsite, pristine or well worn, it almost goes without saying that you should leave the area as clean as you found it, even cleaner if possible. Never dig trenches for tents or excavate shoulder or hip depressions. Don't cut or break standing trees or branches, or pull up plants or embedded rocks to make a more pleasant camp. If you clear the sleeping area of surface rocks, twigs, or pine cones, replace these before leaving. Remember that young vegetation is easily damaged; in spring, camp on snow to avoid trampling plants early in their life cycle.

A backcountry camp always benefits from being well organized. If you have laundry to dry or equipment to air out, try to keep these items out of sight of other visitors, especially around lakeshores or open meadows. Always make sure your food is protected from animals.

Finally, stop early enough each day to choose an adequate camp. You must have sufficient time and energy to find a resistant site. Too often, tired travelers pulling in at the end of a long day on the trail shortchange themselves, the rest of us, and all our remaining wildlands by not taking the time to select a campsite that is appropriate. The approach of darkness tends to increase impact by even the most skilled and committed users. Ironically, many of these same travelers would never think of so much as dropping a piece of coconut out of their trail food.
Will you ever find that “perfect” campsite? Sure. They’re sometimes few and far between, but they do exist. In the meantime, consider what you mean by perfect. It may mean only that you take one last look as you pack for another day of travel, knowing that whoever comes upon your campsite will never imagine anyone had camped there the night before.

**SUMMARY**

**Campsite Impact**
Three major factors influence the type and extent of campsite impact:
1. The amount of use the site receives.
2. The behavior of its users.
3. The environmental characteristics of the site (soil, vegetation, topography, and so on).

**Minimizing Impact**
To minimize your impact, observe the following practices when camping:
• In popular areas, spreading use merely increases the area that is impacted. Camp in preexisting, well-worn sites that are large enough to accommodate your group.
• Well-worn sites can be identified by a lack of vegetation and the presence of fire rings, trails, and barren ground.
• In such areas, confine activities to the well-worn sites and avoid enlarging the area of disturbance. Leave campsites clean and attractive so that others will use them after you are gone.
• In a lightly used area, the goal is to minimize the number of times the site is trampled. Select a previously unused pristine site that is durable.

• The most durable sites are unvegetated and lack well-developed soil. Such sites include rocky outcrops, gravel bars, sandy beaches, ice, and snow.
• When it is impossible to avoid vegetation completely, consider the types of plants in the area before choosing your campsite. Grasslike plants are the most tolerant of trampling. Woody plants and broad-leaved herbs are much more vulnerable.
• On pristine sites, spread out and vary your paths around camp. Place kitchens and packs—areas that see the most concentrated use—on durable surfaces such as rock or gravel. Limit the length of your stay.
• Avoid areas where signs of impact are just beginning.
CAMPSITE SELECTION

According to the Leave No Trace Skills and Ethics Series, published by the National Outdoor Leadership School, selecting a campsite is probably the most difficult and critical aspect of Leave No Trace backcountry use. The choice requires the greatest use of judgment and information and involves trade-offs between environmental and social impacts. Before your trip, find out about local regulations for camping. For example, in the Catskills in New York, there is no camping above 3,500 feet (1,067 meters) and no camping within 150 feet (46 meters) of a trail. In some cases, a legal or required campsite may violate some of the general guidelines for a Leave No Trace camp; it may be right next to the trail or near water. This is especially true on corridor trails like the Appalachian Trail. Campsites in these areas are considered high-impact sacrifice areas and are selected by land managers as the best way of protecting the rest of the area.

HIGH-IMPACT CAMPSITES

- High-impact areas are frequently used campites where most of the ground vegetation has been lost to trampling. Often these sites are equipped with fire rings and other signs of human activity. Whenever possible, choose an impacted site rather than risk creating a new site in a pristine area. If a site has already been highly impacted, it will show little or no additional impact, if you are careful. Continuing to use a high-impact campsite is the lesser of two evils—maintaining one high-impact site instead of creating a new site with new damage. On the other hand, by choosing to use a high-impact site you are in effect deciding to impact it further and not let it recover. Leave the high-impact site in good shape so that others will use it. A trashy camp might encourage the next group to create a new site nearby, further increasing impact.

- Low- or moderate-impact sites showing obvious signs of use may eventually recover if closed to human use. If you come to a campsite that is “just starting,” don’t camp there. Each time you camp on a site that is trying to recover, you interrupt or even reverse the recovery. It’s best to look for a high-impact site. If you can’t find one, it may be better to camp on an undisturbed site carefully repair and camouflage the area to prevent other people from camping, thereby allowing the site to recover.

PRISTINE CAMPSITES

- A pristine campsite is one that shows no signs of previous camping. People often go looking for the “no one else has ever been here” campsite, not realizing how much damage they can do to the environment.

- When selecting a pristine campsite, your goal is to find a durable site that won’t carry signs of your use. Select a site that has no vegetation (such as rock outcroppings, gravel bars, beaches, or snow) or durable vegetation cover (grassy areas, leaf-covered forest duff—with minimal plant seedlings). Avoid fragile areas.

- If you are with a group, be careful of overcamping. If you are staying in the same area for more than one night, it may be best to move your campsite (even if only a half a mile) before the impact becomes noticeable. Never spend more than a few days at a pristine backcountry campsite.

- When you leave, the pristine campsite should show no long-lasting signs of previous use. Cover up scuffed areas with duff or other natural materials to camouflage human activity and leave the area pristine for future visitors.

GENERAL CAMPSITE GUIDELINES

- Plan to arrive with enough daylight to set up a good Leave No Trace campsite. Arriving tired and in the dark makes this much more difficult.

- Choose a campsite at least 200 feet (61 meters) from water sources, trails, and scenic spots. The choicest camping spots are often prime areas for animal forage or for other hikers to stop and enjoy the view. Take the extra time to find a more camouflaged area. Be aware of animal runs that may be prime highways for the “local” inhabitants. This can be especially hazardous in bear country.

- Set up your camp thoughtfully in terms of traffic patterns. Think about where to situate the shelter, cooking area, handwashing area, bear-bag site, and where the water source is. Minimize the traffic patterns you create internally and how often you walk them to reduce your impact. Use the most durable part of the campsite as your kitchen area, and a place to store packs (large rocks are especially good).

- Lug-soled hiking boots can do considerable damage to soil and vegetation. Remove hiking boots and change to soft-soled shoes such as running shoes or sandals as soon as you get into camp to reduce damage to fragile vegetation and soil.

- A backcountry campsite should be reasonably organized. If you have laundry to dry or equipment to air out, make sure these items are not in sight of other campers or hikers.
• Avoid spending more than a few days at any one campsite unless it is an established campsite or sacrifice area.
• Leave the area as you found it or better. Do not trench around tents, cut live branches, or pull up plants to make a pleasant campsite. If you do clear the sleeping area of sticks, pinecones, and the like, be sure to scatter these items back over the area before you leave.

DEALING WITH HUMAN WASTE

Disposing of human waste in the wilderness must be done with good judgment and common sense. Newcomers to the wilderness are often embarrassed and unsure of how to cope without a bathroom. It's a subject that most of us don't spend a lot of time talking about. However, failure to learn the proper techniques can not only damage the environment but also lead to gastrointestinal illnesses from improper hygiene (see Gastrointestinal Infections, page 316; Keeping Yourself Clean, page 78). One of the sources for the spread of Giardia in backcountry water is the improper disposal of human feces.

Know your ecosystem and any camping regulations for the area. The techniques described here are the general recommendations for subalpine temperate forests in three-season conditions (spring, summer, and fall). In other ecosystems, such as glaciers, deserts, or seacoasts, the procedures may be very different. (For details on human waste disposal in other ecosystems, see the Bibliography.)

URINE

Urine is "relatively" free of microorganisms (unless the individual has a kidney or urinary tract infection). As a result, urine can be considered "clean," but not sterile. The major issues with urine are the smell it leaves and the concentration of salts left behind when the water evaporates, which can attract animals.

• Location Urinate wherever possible, but at least 200 feet (61 meters)—about 70 steps for an adult—away from the trail and any water sources. Urinate on rocks or in areas with thick humus layers and drainage (decaying leaf piles, dirt piles). Try to avoid fragile vegetation, because the acidity of urine can affect plant growth. Avoid urinating on plants to prevent animals from defoliating or digging up the plants.
• Techniques Urinating outdoors is simpler for men than for women. In her book How To Shit in the Woods, Kathleen Meyer devotes a whole chapter to the subject. One technique for women is to sit on the edge of a rock or log with your feet propped up on another rock or log in front. This prevents the dreaded problem of peeing in your boots. Another technique is to use a plastic funnel to direct the urine stream. Funnels such as the Sani-Fern are made specifically for women. These can also be used with a pee bottle in a tent (handy in bad storms or cold weather).

FECES

Human feces can create a significant impact on the environment. They can contaminate water sources, spread disease, and affect other wilderness travelers, both visually and by smell. Your goal should be to prevent contamination of the environment by limiting contact between your feces and insects, animals, people, and water sources. The other goal is to maximize the ability for the feces to decompose naturally.

Fecal decomposition is affected by a number of factors—sunlight (warmth), dryness, and soil bacteria—so different ecosystems require different methods of disposal. In three-season, subalpine temperate forests, the best answer is to bury feces or to pack it out. Burying slows down the decomposition, but it alleviates the problem of visual impact and reduces the chances for contaminating water sources. (For more information on human waste disposal in other ecosystems, see the Bibliography.)

Remember that bacteria is likely to be on your hands afterward, even when you've used toilet paper. Wash your hands after going to the bathroom to protect yourself and other members of your group from gastrointestinal infections.

Locations

Find a site far enough from the trail, away from water sources, perhaps with a good view, and with abundant natural toilet paper materials. In some cases, it can involve some pretty complicated acrobatics to keep your balance and do your business.

• Outhouses When available, you should always use existing outhouses. They concentrate use to minimize impact.
• Catholes—small pit toilets for individual use—are often the best solution. The cathole means smaller, less concentrated waste disposal, usually ensuring more rapid decomposition.
• Latrines—larger pit toilets dug for group use—are best if you're camping with a large group, or if you are remaining in the same camp over a number of days. This is not generally recommended, since this higher concentration of feces will decompose very slowly.
2. Campsite Selection

I. GOAL: To have participants select, establish, maintain, and break down campsites with consideration for group safety, avoiding damage to equipment, and minimizing harm to the environment.

II. OBJECTIVES:
   A. Participants will be able to list the considerations in selecting a low-impact campsite.
   B. Participants will be able to list the considerations in selecting a safe and comfortable campsite.
   C. Participants will demonstrate an ability to establish a camp in relation to the group’s physical and emotional state, time of day, and other factors.
   D. Participants will understand the role local rules and regulations play in determining campsite selection.
   E. Participants will be able to list the considerations in breaking camp.

III. CONTENT:
   A. The Low-Impact Campsite
      Selecting a low-impact campsite at first may appear to be determined by rules, but instead should be based on an ethic, using guidelines as a framework in making decisions. Low-impact campsite considerations include:
      1. Established campsites vs. pristine campsites
         One of the first decisions to be made is whether impact will be minimized by camping at an established campsite or at a pristine or "virgin" campsite where no one has ever camped before. WEA has no set policy regarding established vs. pristine campsites but offers these considerations:
5. **Wildlife**  
Will use of the site have an adverse effect on wildlife and their habits?

6. **Slope**  
Will the group subject the site to erosion?

7. **Wood**  
Can wood for fires be used without having an adverse impact on the area's fuel supply?

**B. Safety and Comfort**  
It is critical from a liability standpoint and for the group's emotional well-being, that the site is safe and reasonably comfortable. Safety and comfort considerations include:

1. **Weather**  
Is the site reasonably protected from elements of wind, precipitation, lightning, and flash floods?

2. **Water**  
Is a suitable water source within a reasonable distance?

3. **Widowmakers** (a dead tree or tree limb(s) that could potentially fall and cause injury). Are tent sites free of dangerous widowmakers?

4. **Slope**  
Can reasonably comfortable tentsites and meeting areas be found?

5. **Aspect** (the direction the campsite faces). How is the camp's location in relation to the sun, weather, views, etc.?

6. **Geology**  
Is the campsite safe from falling rocks, etc.?

7. **Privacy**  
Is there sufficient space available to afford privacy for individuals in the group and the group as a whole (also considering social/psychological impact of those outside the group that may encounter the site).

**C. When to Camp**

1. **Before the group is overtired**
   a. If the leader has to ask if the group is ready to camp, it is probably time to do so.
   b. Group members may be afraid to admit they are tired, or others may not realize how tired they are.
c. The potential for accidents, injury, and environmental damage increases when the group is tired; therefore, if in doubt, set up camp.

2. **Before darkness**
   a. Few enjoy setting up camp in the dark, especially after a hard day.
   b. The potential for safety and environmental damage increases after sunset.
   c. Setting up camp in the early afternoon allows the group to:
      - enjoy the area
      - explore
      - get personal and group chores done
      - replenish energy and enthusiasm
      - get a good campsite in crowded areas

D. **Rules and Regulations**
   1. Local rules and regulations are usually implemented to protect the wilderness user or the wilderness resource; therefore every attempt should be made to follow them.
   2. If rules are not followed by the group, a double standard results and sets a tone of “do as I say, not as I do.”
   3. If for some reason rules are not followed, be sure to discuss the reason with the group so they understand the justification.
   4. Discuss local rules and regulations pertaining to campsites at this time.

E. **Breaking Camp**
   1. To make sure that every attempt has been made to minimize signs of the group’s presence, when breaking camp it is the LOD’s responsibility to check:
      - every tentsite
      - kitchen areas
      - meeting areas
      - the latrine

   2. Have campers restore trails and other areas to hide signs of the group’s presence. Restoring should leave a natural look.

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IV. **INSTRUCTIONAL STRATEGIES & MATERIALS:**

A. **Timing**
   1. While safety and low-impact considerations in campsite selection need to be taught immediately, campsite selection as a class should be taught after students have had an opportunity to select campsites and have had a little experience with both good and bad campsites. This reinforces the information in this lesson and gives it more meaning.
   2. Early safety and low-impact considerations can be taught informally on a small group basis, but it is essential to have a formal class on campsite considerations to reinforce this knowledge.

B. **Strategies**
   1. In grizzly bear country or country where black bears present a problem:
      a. Avoid setting up tents in bear habitat or bedding areas. Bears are attracted to secure, cool areas that provide thick, low, ground cover (e.g., thick woods or brush, under deadfall, near water, etc.). Extreme care should be taken in choosing a site in bear country, since virtually all areas may be habitat (Peacock, 1990).
      b. Set up tent sites away from areas where food has been eaten, stored, or prepared. Also avoid putting tents between these areas and bear habitat.
      c. Where possible, group the tents together in a line so bears can easily avoid the area and not become inadvertently surrounded by tents.

C. **Activities**
   1. Let the LOD or their delegate select the campsite and have the group critique it at the next debriefing.
   2. Take the whole group through the campsite just before leaving and have them evaluate how well they camouflaged their sites and what could be done to improve it.

D. **Materials**
   Campsite(s)
Transference

Environmental Leadership: What does a responsible NOLS Alum look like?

Marco Johnson

In the fall of 1987 I received a letter from a semester student I had taught in 1986. The student was writing to tell me about an environmental issue she had become involved in. It seems that a new off ramp, for a local highway, was to be built near the college she was attending. The construction was going to destroy open space and disrupt local fauna. This student chose not only to involve herself in the particular issue, but also to rally like-minded students from her college. The off ramp did get built. While this can be seen as a defeat, I see the overall process as a huge success. This NOLS alumna showed environmental leadership. She directly attributed her desire to get involved to her NOLS semester and the skills she had learned.

Environmental Studies at NOLS encompasses natural science, ecological principles, a relationship to the land, Leave No Trace camping, personal ethics clarification, and cultural issues. Should a student weave all of these threads into any environmental leadership they show? Is a student’s environmental leadership just as effective if they base their decisions and choices on those beliefs and knowledge areas that are most important to them and the particular issue?

In my opinion, she demonstrated a relationship to the land, a personal land ethic, and a desire to lessen impact on the land. Were some of her decisions also driven by any of the classes we might have taught on natural science or ecological principles? What was most important was that this student acted on a belief that she had, a belief that she could make a difference on an issue that was important to her. She then went on to broaden her impact by getting others involved. She educated others on the pros and cons of the off ramp and rallied a group of people to take a stand on a particular issue. She was able to empower others. Isn’t this what we want for all of our students? Having worked just over two years at NOLS at that time, this episode was a huge re-enforcement that what I was involved in was worthwhile.

Using the adage of “Think Globally, Act Locally” instructors can discuss possible initiatives students can become involved in. Some examples are:

- Exercise your own life to see where one can make an impact. (Personal recycling, less water use, etc…)
- Is there recycling in the students’ home or in their school? Is there a program that exists or is there a need to start from scratch?
- Open or green space issues in a student’s local area. Is there a local environmental organization to work for or with?
- Is there an environmental curriculum where the student attends school? How might one go about advocating for environmental classes to be included in the school curriculum?
- Are there local opportunities to guide others in outdoor experiences to give them the opportunity to increase their personal connections to the Earth?

Making Your Expedition A Leave No Trace Trainer Course

Darran Wells

As outdoor instructors, our job on expeditions should entail not just teaching good Leave No Trace camp and travel skills, but also training students to teach LNT to others. This article will give tips and curriculum progression ideas for instructors to certify students as LNT Trainers.

The LNT Trainer Course is a shortened version of the LNT Master Course. Successful graduates of the Trainer Course gain the skills to teach Leave No Trace techniques and ethics to their clients, friends and family. Students should learn the concepts of Leave No Trace and be prepared to teach LNT principles in a variety of settings: schools, camps, parks, wilderness and front country areas.

To teach LNT well, instructors need to be able to explain the history of LNT (See the LNT Inc. Timeline and LNT Inc. Mission and Structure notes below). Additionally, students should be able to tell others where to get LNT resources—such as, the LNT Skills & Ethics Booklets, The Leave No Trace Training Cookbook, and the Soft Paths book and video. The website (www.LNT.org) provides current information on courses, educational skills and ethics literature, research, LNT partners and more. Application forms for LNT courses, scholarships and material donations are also accessible. The content of all LNT materials, including the Skills & Ethics booklets and succinct reference tags, is posted on the website and can be downloaded for printing and distribution. If you do not already have an LNT Master’s Notebook, you should familiarize yourself with the website before your course and download information, such as Development of the U.S. Leave No Trace Program: An Historical Perspective, to take into the field.

Although the general Leave No Trace principles are universal, the Leave No Trace Skills & Ethics booklet series (approximately 24 pages) offers techniques for specific regions or outdoor activities. They are available at each NOLS branch or from the NOLS-LNT Office in Lander. Although new booklets in this series are being written all the time, the current Skills & Ethics booklets available are: Alaskan Tundra, Backcountry Horse Use, Caving, Desert and Canyon Country, Lakes Regions, Mountain Bicycling, North American, Northeast Mountains, Pacific Northwest, Rock Climbing, Rocky Mountains, Southeastern States, Sierra Nevada Mountains, Temperate Coastal Zones, Tropical Rainforests and Water Rights. Click on Sustainability, and select Close.
booklets are the primary field resource for teaching LNT. As you prepare for your course, consider taking at least one booklet for each tent group, which allows students to familiarize themselves with the principles early and prepare student presentations and activities more easily.

As you plan your curriculum progression, keep in mind the following information listed in the National Leave No Trace Program Training Guidelines (January 2000):

Core Components for Trainer Course Curriculum
1. A minimum of 16 total hours of experiential instruction.
2. Overview of the national Leave No Trace program.
3. The role and function of Leave No Trace, Inc.
4. The principles of Leave No Trace.
5. Teaching skills and techniques and student learning styles.
6. At least one student led teaching exercise by each participant.
7. The role and function of a Leave No Trace Trainer.

Completion of the Trainer Course
Upon successful completion of a LNT Trainer course, each participant will become a Leave No Trace Trainer and receive a completion certificate from LNT, Inc. Successful completion of the course requires participation in all course activities and teaching exercises. Those who complete the Trainer course are equipped to:
- Understand, demonstrate, and teach state of the art minimum impact backcountry techniques for friends, family or community groups;
- Lead a discussion of wilderness ethics and help others explore their own personal outdoor ethic.

Instructors of a LNT Trainer course reserve the right to deny a Trainer completion certificate if in the eyes of both instructors, the participant has not 1) attended the entire course; 2) displayed the skills necessary to conduct outreach programs or otherwise carry forward the LNT message in a productive way; 3) exhibited behavior consistent with the LNT philosophy.

Let’s examine the “Core Components” listed above and how to insure that they are all included in your course.

By teaching LNT with the NOLS core curriculum, Component #1 and most of #4 can be taken care of without any extra formal classes from your instructor team. The LNT Principles overlap with and should be taught in conjunction with basic classes like, Time Control Plans, Map and Compass Use, Pack Packing, Campsite Selection, Stove Use and Care, Sanitation, and Cooking and Baking.

Core Components #2, 3, and 4 can be taught in one formal LNT class such as the one outlined in the Wilderness Educator Notebook. This class should happen some time during the first few days of the course to insure that everyone is aware of ALL principles and to give students time to formulate questions and decide on an aspect of LNT they would like to present to the group. Other information you might include in this class is listed in the LNT Timeline and Mission and Structure synopsis (see below).

Core Component #5 is covered by giving the Outdoor Teaching Techniques class, which is already part of the basic leadership curriculum and is mandatory for educator courses. Teaching this class prior to starting student presentations lessens the need for instructors to do as much time-consuming, individual coaching and helps students feel better prepared to teach to the group. Students will be more excited about this class if they are reminded that teaching and public speaking skills will serve them well in a variety of settings after NOLS.

Core Component #6 can be met in a variety of ways (see the Student Teaching section of the WEN). Student presentations need not be more than 5-10 minutes long and may be spread out on different days like nature nuggets, or done all at once. Instructors often choose to have students present short skits which illustrate each principle. If you have more than 7 students, not everyone gets to plan a presentation on their own. Ask yourself if students will really be prepared to teach LNT to others after only participating in 30-second skits with their tent group on digging catholes in a hurry. Consider bringing The LNT Training Cookbook, (smaller and lighter than the Leadership Toolbox), and outlines more than 40 games and activities dealing with everything from Wilderness Ethics to specific LNT principles. The Cookbook is practically an assortment of outlines for fun student classes. Lastly, perhaps with the help of an instructor, one student should demonstrate how to build an LNT fire so that everyone has a chance to see one.

Core Component #7 can be discussed during a transferece class on one of the last nights in the field, or when LNT Trainer Certificates are awarded along with diplomas. See the article, TAKING LNT ETHICS HOME. The pertinent information for students to know about being trainers is that they ARE certified to teach LNT skills to friends, family, clients, and community groups and should be prepared to lead brief discussions on wilderness ethics. They ARE NOT equipped (as you are by virtue of your Instructor’s Course) to train LNT Trainers—for that they would need to take a LNT Masters Course, which they can find out about on the LNT website. Interested students, need to be encouraged to at least buy the Skills & Ethics booklets for their geographic area or activity and perhaps The LNT Training Cookbook, which should be available at each NOLS branch, or through the LNT website.

Sending forth the gospel of minimum impact is one of the most rewarding things we can do as field instructors. Clearly, the extra time and energy it takes to certify students as trainers is minimal when you look at how much the LNT curriculum overlaps with NOLS core curriculum.
**LNT Inc. Timeline**

**Synopsis of “Development of the U.S. Leave No Trace Program: An Historical Perspective”**

By Jeffrey Marion and Scott Reid

1924  Recreation visits to US Forest Service Lands are 4.6 million this year.

1950  Recreation visits to National Park Service areas are 33 million this year.

1960’s  Hiking, camping, and backpacking becomes popular in US for the first time.

1965  NOLS is founded.

1960’s-1980’s  USFS, BLM, and NPS develop brochures, Wilderness Manners, Wilderness Ethics, Minimum Impact Camping, and No Trace Camping.

1970  Recreation visits to NPS areas jumps to 172 million.


Mid 70’s  USFS educational program has “Wilderness Information Specialists” seek out wilderness visitors to provide information including no-trace travel and camping tips.

1974  Sierra Club’s *Walking Safely in the Wilderness* (Hart) is published.

1979  USFS Wilderness Specialist, Jim Bradley writes about the need for an educational approach for managing recreation impacts.

Early 80’s  More formal “No-Trace” program evolves emphasizing new wilderness ethics and more sustainable travel and camping practices.

1980’s  Numerous scientific papers are published on minimum impact wilderness use.

1985  USFS creates national education program, Tread Lightly, for motorized visitors.

1987  USFS, NPS, and BLM cooperatively develop and distribute a pamphlet entitled, Leave No Trace Land Ethics.

1988  *Soft Paths* (Hampton and Cole) is published by NOLS.

1990  Recreation visits to NPS areas is 258 million. USFS approaches NOLS to develop hands-on minimum impact training, which eventually becomes the LNT Master’s Course.

1991  Memorandum of Understanding (MOU) is signed by NOLS and USFS to develop a written LNT educational curriculum for wildland users.

First LNT Masters course is taught to BLM and USFS staff in September in the Winds.

NOLS teaches 5 more LNT Masters courses, including one for non-agency personnel.

First LNT Outdoor Skills & Ethics booklet is produced by NOLS.

1993  Outdoor recreation summit is convened to raise funding for LNT involving NOLS, the Outdoor Recreation Coalition of America (ORCA), the Sporting Goods Manufacturers Association (SGMA) and other outdoor manufacturing representatives.

1994  LNT Inc. is registered as a 501(c)3 non-profit educational program and begins fundraising with seed money from NOLS, ORCA, and SGMA.

1996  LNT has 2 full-time staff and a budget of $108,425 supported largely from 35 outdoor recreation manufacturers and retailers.

1999  Recreation visits to USFS Lands reach 900 million.

Visits to NPS areas hit 287 million.

2001  As of January, 1122 individuals have LNT Master’s course training, and over 100,000 people have been formally trained in LNT skills and ethics.

**LNT Inc. Mission and Structure**

LNT Inc.'s current mission statement is “to promote and inspire responsible outdoor recreation through education, research, and partnerships. LNT's organizational structure consists of a Board of Directors, LNT Partners, LNT Educators, and LNT members.”

The LNT Inc. Board of Directors currently consists of 12 members from federal agencies, NOLS, ORCA, USGS, the International Mountain Biking Association, Subaru, Boy Scouts, Walt Disney, and others. LNT Partners are corporations and organizations who sponsor LNT and support LNT information dissemination. Members are educators and private individuals who use public lands. They receive newsletters, T-shirts, stickers, and discounts on all LNT materials and pay an annual membership fee (Basic membership = $15). NOLS students and instructors who become LNT trainers or Masters are NOT automatically LNT members and must pay the membership fee if they wish to join.

**Leave No Trace Action Plans For NOLS Students**

Peggy Savanieck

**Introduction**

An action plan can stimulate and organize ideas on how to spread the Leave No Trace message. Developing a detailed vision of your planned event can increase your confidence in this leadership position. Hopefully this activity will assist your discovery of a realistic, attainable goal and be a practical tool to help you stay focused when you return to a more complex home environment.

The activity by adding or deleting questions to meet your needs. Don’t forget that your passion for the natural world and belief in the LNT mission is contagious.

**Steps**

1. Brainstorm
2. Choose a goal (How do you want to share the LNT mission?)
3. Analyze your audience
5. List resources needed
6. Develop a timeline

1. Brainstorm

Brainstorm impacts that occur in a recreational area you've visited.
Brainstorm groups you may be able to teach to.

2. Choose a goal

Looking at your lists above and either pick an impact or group. If you choose an impact, identify what audience you may be able to educate in order to reduce that impact. If you pick group, identify what aspects of LNT you would like to share with them.

Here are examples created by NOLS students:

a. Teach LNT to a sister's 6th grade class.
b. Organize a volunteer clean up at a county park; have LNT information available.
c. Have a LNT display at a college Earth Day event and organize a weekend campout to teach and practice the LNT principles.
d. Informally teach LNT to family and/or friends on a campout.
e. Encourage the outdoor retailer that you work for to be a LNT partner and create a store LNT display.

3. Analyze your audience

a. How many people would you expect to teach?
b. What is the age group? Does it vary? How long is their attention span?
c. What interests the group? Why would they be interested in LNT? What interest do you have in common with this group?
d. What is their past experience: knowledge with camping, LNT, recreational impacts? Is everyone have a similar knowledge or does the knowledge vary within the group?
e. Who are the leaders? How can they help you? What is the best approach in asking for support?
f. What questions may the group ask prior to and during the training? What are potential answers to those questions?

4. Teaching techniques

a. Brainstorm some teaching techniques.
b. Brainstorm who may be able to help you with this training (Other NOLS students, Master educators, outing club, outdoor retailer)
c. How much time do you have to teach? Is time amount flexible?
d. Where will you be teaching? Amount of space? Outside, inside, private or public space? If outside, what the weather possibilities do you need to plan for?
e. What activities or topics would excite this group about LNT?
d. How would you teach the principles? If you're teaching experientially you may want to use the common NOLS model: explain, demonstrate, do, and reflect.
e. Describe your personal outdoor ethic?
f. What techniques could you use to teach ethics?

5. Resources needed

a. What equipment or materials do you need? You may need to order LNT Skills & Ethics Booklets.
b. Do you need any teaching supplies? Would you like to pass out stickers and tags?
c. Would you like to show the video, “Soft Paths?”
d. Order any materials you need from LNT well in advance.
e. Are there any costs involved? You may need to charge a small fee to cover your expenses.
f. Consider using the LNT Training Cookbook, which outlines a number of classes, games, and activities you could use to do your presentation.

6. Create a timeline

Visualize your plan, make a list of actions you'll need to accomplish your goal including:
- date of action
- where
- who will participate or co-teach
- how you will invite your participants
- what resources you will need

Have fun, be organized, spontaneous, and flexible.
GOOD LUCK!

Environmental Websites
Jim Chisholm

www.envirolink.org one of the best sources of links and info on the web
www.ecolink.net - also great source of links
www.earthwatch.org - review of global issues and action
www.worldwatch.org - global issues, news and action
www.greenpeace.org - outstanding site on global news, info and action
www.monkeyfist.com - online alternative living and enviro news
www.gristmagazine.com - online alt. Magazine, enviro news
www.cites.org - info, news of endangered species
www.netforchange.com - environmental news and sharing of...
www.cokespotlight.org – enviro info on this particular soft drink
www.orionsociety.org – env org with news info and action
www.about.com – links and news to tons of stuff
www.oneworld.org – online global newspaper with lots of stuff about nature
www.greenmarketplace.com – online enviro consumer friendly products
www.ourplanet.com – online environmental magazine
www.epa.gov – lots of stuff on pollutants
www.bluegreen.weblogs.com – news and opinions
www.1800cleanup.org – news and info on clean-ups
www.tnp.com – info on natural medicines and health alternatives, on line store
www.fnafriends.org – helping to save one of the great rivers of the world

www.oceanalliance.org – ocean based environmental projects
www.eng.org – links and news on the environment
www.reefscfief.org – ocean conservation and news
www.webdirectory.com – environmental website search engine
www.whoi.edu – excellent ocean research and conservation site
www.thelugersite.com – click for companies to donate food to countries in need
www.therainforestsite.com – click for companies to buy rainforest for protection
www.ancientforests.org – org. working to preserve forests
www.zpg.org- news and such on zero population growth

Leave No Trace Trainer Resources for NOLS Alumni

What is a Leave No Trace Trainer?
Successful graduates of the LNT Trainer Course understand, demonstrate, and can teach minimum impact techniques to friends, family, or community groups. Trainers should be able to lead a discussion on outdoor ethics and help others explore their own personal outdoor ethic.

Resources for Leave No Trace Trainers
Trainers should be able to tell others where to get LNT resources—such as, the LNT Skills & Ethics Booklets, The Leave No Trace Training Cookbook, and the Soft Pads book and video. The website (www.lnt.org) provides current information on courses, educational materials, research, LNT partners, and more. Application forms for LNT courses, scholarships, and material donations are also available. The content of some LNT educational materials along with succinct reference tags, is posted on the website and can be downloaded for printing and distribution. Call LNT Inc. for membership information at (800)332-4100.

NOLS' Historical Support of Leave No Trace
In 1990, the US Forest Service approached NOLS to develop curriculum for and to promote its 'Leave No Trace' program. The LNT principles were developed by NOLS and ecologists David Cole and Jeff Marion, and the first LNT Masters Course was taught by NOLS in September 1991. LNT grew as part of NOLS, supported by the BLM, USFS, USFWS, and NPS, and in 1994, LNT Inc. was incorporated in Colorado. While NOLS continues in its role as a provider of Leave No Trace Master Educator Courses and as a primary developer of educational materials for the LNT program, LNT Inc. is now an independent, non-profit organization. Its current mission is "to promote and inspire responsible outdoor recreation through education, research, and partnerships." LNT Inc.'s organizational structure is made up of a Board of Directors.

LNT Partners, LNT Educators, and LNT members. The LNT Inc. Board of Directors currently consists of 12 members from federal agencies, NOLS, ORCA, USGS, JIMBA, BSA, Subaru, Disney, and others. LNT Partners are corporations and organizations who sponsor LNT and support LNT information dissemination. Members are educators and private individuals who use public lands. They receive newsletters, stickers, and discounts on all LNT T-shirts and materials and pay an annual membership fee (Basic = $15). NOLS students and instructors who become LNT Trainers or Masters are not automatically LNT members and must pay the membership fee to join.

Leave No Trace Principles

Plan Ahead and Prepare
- Know the regulations and special concerns for the area you visit.
- Prepare for extreme weather, hazards, and emergencies.
- Schedule your trip to avoid times of high use.
- Visit in small groups. Split larger parties into groups of 4-6.
- Repackage food to minimize waste.
- Use a map and compass to eliminate the use of marking paint, rock cairns or flagging.

Leave What You Find
- Preserve the past: examine, but do not touch, cultural or historic structures and artifacts.
- Leave rocks, plants and other natural objects as you find them.
- Avoid introducing or transporting non-native species.
- Do not build structures, furniture, or dug trenches.

Be Considerate of Other Visitors
- Respect other visitors and protect the quality of their experience.
- Be courteous. Yield to other users on the trail.
- Step to the downhill side of the trail when encountering pack stock.
- Take breaks and camp away from trails and other visitors.
- Let nature's sounds prevail. Avoid loud voices and noises.

**Travel and Camp on Durable Surfaces**
- Durable surfaces include established trails and campsites, rock, gravel, dry grasses or snow.
- Protect riparian areas by camping at least 200 feet from lakes and streams.
- Good campsites are found, not made. Altering a site is not necessary.

**In popular areas:**
- Concentrate use on existing trails and campsites.
- Walk single file in the middle of the trail, even when wet or muddy.
- Keep campsites small. Focus activity in areas where vegetation is absent.

**In pristine areas:**
- Disperse use to prevent the creation of campsites and trails.
- Avoid places where impacts are just beginning.

**Dispose of Waste Properly**
- Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food, and litter.
- Deposit solid human waste in catholes dug 6 to 8 inches deep at least 200 feet from water, camp, and trails. Cover and disguise the cathole when finished.
- Pack out toilet paper and hygiene products.
- To wash yourself or your dishes, carry water 200 feet away from streams or lakes and use small amounts of biodegradable soap. Scatter strained dishwater.

**Minimize Campfire Impacts**
- Campfires can cause lasting impacts to the backcountry. Use a lightweight stove for cooking and enjoy a candle lantern for light.
- Where fires are permitted, use established fire rings, fire pans, or mound fires.
- Keep fires small. Only use sticks from the ground that can be broken by hand.
- Burn all wood and coals to ash, put out campfires completely, then scatter cool ashes.

**Respect Wildlife**
- Observe wildlife from a distance. Do not follow or approach them.
- Never feed animals. Feeding wildlife damages their health, alters natural behaviors, and exposes them to predators and other dangers.
- Protect wildlife and your food by storing rations and trash securely.
- Control pets at all times, or leave them at home.
- Avoid wildlife during sensitive times: mating, nesting, raising young, or winter.

**Leave No Trace, Inc.**

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