Amount of use affects development of unwanted trails, but is not a highly influential factor. Therefore we consider all of the tactics under strategies I (Reduce Use of the Entire Wilderness) and II (Reduce Use of Problem Areas) to be secondary tactics in most cases. There are situations, however, where problems with informal trail networks in popular destinations might be alleviated with dramatic reductions in use of these problem areas.

Campsite Deterioration

As with trail deterioration, there are problems with both the deterioration of desired campsites and the development of undesired campsites. These two subproblems are (1) excessive deterioration of individual sites and (2) the proliferation of more sites than are desired or needed. The definition of what constitutes either excessive deterioration or an excessive number of sites will depend on management objectives, the realities of area-specific use, and environmental factors.

SUBPROBLEM 1-EXCESSIVE DETERIORATION OF CAMPSITES

The primary causes of excessive deterioration of individual sites are inappropriate use, visitors spreading out on sites (enlarging campsites), and camping in fragile places. The most pronounced ongoing impact on long-established sites is site enlargement, caused by spreading out (Cole 1986). The amount of use a site receives has little effect on amount of impact, except where use levels are very low (Cole and Fichtler 1983; Marion and Merriam 1985). Erosion, for example, is unlikely to occur on a properly located site, regardless of how frequently it is used. On a poor location, however, pronounced erosion can occur even with light use. Similarly, one party of visitors can chop down more trees for firewood and tent poles and do more damage than countless parties of knowledgeable and concerned visitors. Parties that travel with stock also tend to cause more impact than backpackers (Cole 1983b). Because the most important influences on amount of deterioration are type of use, how visitors behave, and where they camp, the primary tactics are:

Strategy III. Modify the Location of Use Within Problem Areas

16. Discourage or prohibit camping (or only camping with stock) on certain campsites or locations (for example, places that are prone to erosion or, in lightly used areas, sites that have already been disturbed) (page 32).

17. Encourage or permit camping (or only camping with stock) only on certain campsites or locations (for example, on designated sites in popular destination areas) (page 34).

18. Locate campsites on durable sites (page 35).

19. Concentrate and channel use through site design (for example, design traffic flow on sites so that impacts do not spread) (page 36).

20. Discourage or prohibit particularly damaging practices (for example, cutting down trees or use of axes or saws) (page 42).

21. Discourage or prohibit stock (page 46).

22. Encourage or require particular behavior, skills, and/or equipment (for example, carrying and knowing how and when to use camp stoves) (page 43).

23. Teach a wilderness ethic (for example, stress the fragility of vegetation and the need to minimize impact) (page 44).

24. Discourage or require a party size and/or stock limit (page 45).

25. Discourage or prohibit overnight use (page 48).

Strategy VIII. Maintain or Rehabilitate the Resource

37. Maintain or rehabilitate campsites (page 54).

A number of secondary tactics are also available. All of the tactics under strategy I (Reduce Use of the Entire Wilderness) would tend to reduce campsite problems, but not substantially. The tactics under strategy II (Reduce Use of Problem Areas) could have more pronounced positive effects on sites in problem areas. But use reductions would have to be substantial and benefits would probably be more than offset by increased impact in areas to which use was dispersed.

The tactics under strategy II may be most useful in lightly used areas because campsite impact can be negligible if very low use levels (often no more than 1 night of use per year [Cole in press]) can be maintained. To be successful, limitations on use must be combined with tactic 16 (discouraging visitors from camping on sites with evidence of previous use), tactic 17 (encouraging visitors to camp on resistant sites), and tactics 25, 26, and 27 (teaching a wilderness ethic that will help visitors learn how to avoid damage and leave minimal evidence of their stay).

Increasing the resistance of the resource (for example, by building tent platforms or hardening sites with wood chips or gravel) could also be an effective means of avoiding excessive deterioration. Because there are other options, and extensive resource manipulation compromises wilderness goals, we consider this to be of secondary importance.

SUBPROBLEM 2-PROLIFERATION OF CAMPSITES

In most cases, the primary cause of campsite proliferation is too much use of destination areas in which use is not concentrated on a relatively small number of campsites. Usually, proliferation can be avoided simply by concentrating use. In very popular places, it may also be necessary to reduce use levels. In very lightly used places, however, proliferation can be avoided if visitors camp on sites that show no evidence of disturbance. Because the most important influence on site proliferation is where and how people camp, the primary tactics are:

Strategy V. Modify Type of Use and Visitor Behavior

25. Discourage or prohibit particularly damaging practices and/or equipment (for example, cutting down trees or use of axes or saws) (page 42).

26. Encourage or require certain behavior, skills, and/or equipment (for example, carrying and knowing how and when to use camp stoves) (page 43).

27. Teach a wilderness ethic (for example, stress the fragility of vegetation and the need to minimize impact) (page 44).

28. Encourage or require a party size and/or stock limit (page 45).

29. Discourage or prohibit stock (page 46).

31. Discourage or prohibit overnight use (page 48).

Strategy VIII. Maintain or Rehabilitate the Resource

37. Maintain or rehabilitate campsites (page 54).
Strategy III. Modify the Location of Use Within Problem Areas

16. Discourage or prohibit camping on previously impacted campsites (this applies to low-use areas only) and on fragile sites (this applies everywhere) (page 32).
17. Encourage or permit camping only on sites that are already well-impacted or designated (this is particularly important in high-use areas) and on resistant sites (this applies everywhere) (page 34).

Strategy V. Modify Type of Use and Visitor Behavior
25. Discourage or prohibit littering (and perhaps prohibit cans and bottles) (page 42).
26. Encourage or require certain behavior, skills, and/or equipment (for example, encourage visitors to pick up other visitors’ litter or require litter bags) (page 43).
27. Teach a wilderness ethic (stress the importance of not littering) (page 44).

Strategy VIII. Maintain and Rehabilitate the Resource
36. Remove litter (page 52).

Strategies I and II, by reducing use where littering is a problem, would tend to reduce litter problems, but the effect would not be substantial. These tactics do not seem worth the cost—both to visitors and managers—of implementing actions.

Crowding and Visitor Conflict

Social research has demonstrated that whether visitors feel crowded or not is a function of more than how many other people they meet (Manning 1985; Stankey and Schreyer 1987). The location of the encounter makes a difference; encounters at campsites are less acceptable than those that occur while traveling, and encounters in the core of the wilderness are less acceptable than those near access points. Crowding is also affected by the type of party encountered; encounters between certain types of parties constitute visitor conflict. Encounters with large parties, parties with stock, and parties with pets are potentially more dissatisfying for some parties than encounters with parties without these characteristics. Encounters with parties that are similar to one’s own party usually are most acceptable. Visitor expectations also influence the extent to which the number and type of encounters contribute to crowding (Manning 1985). Consequently, there are two relatively distinct subproblems: (1) too many encounters and (2) encounters with parties that are particularly bothersome (conflicting encounters).

SUBPROBLEM 1--TOO MANY ENCOUNTERS

The primary cause of too many encounters is simply too many people in one place at one time. This situation is influenced by the number of visitors, as well as when they visit and where they go. Consequently, the primary tactics are:

Strategy II. Reduce Use of Problem Areas
7. Inform potential visitors of the disadvantages of problem areas and/or the advantages of alternative areas (for example, inform visitors of high use levels in problem areas) (page 23).
8. Discourage use of problem areas (for example, have rangers at portals ask visitors not to visit problem areas) (page 24).
9. Limit number of users in problem areas (for example, issue a limited number of permits) (page 25).
10. Encourage or require a length-of-stay limit in problem areas (page 26).

Litter

Of all major wilderness problems, litter is potentially the simplest one to manage. The “pack-it-in, pack-it-out” policy appears to have been quite successful in reducing problems with litter; many wilderness visitors consider litter to be less abundant than it was in the past (Lucas 1985). Some of this improvement reflects the fact that wilderness rangers spend a large proportion of their time picking up litter. Clearly, visitors who leave their litter are the primary cause of litter problems. Therefore, the primary tactics are: