Princeton University Outdoor Action

OA Guide to Running a Wilderness Orientation Program

by Rick Curtis

Over the past ten years wilderness orientation programs have expanded across the country. From colleges to secondary schools and now graduate programs have turned to this successful format to integrate new students to the campus. The diverse populations served and the differences between schools make these programs very different. Yet, there are still basic issues and concerns that all programs have in common. The goal of this article is to present these basic issues and provide planning information to schools about how to operate a Wilderness Orientation Program (WO). It is by now means all encompassing and should viewed as first step in helping you develop your program.

You will see some recurring themes throughout. Two major themes in developing a program are details and documentation. Running any large-scale WO requires attention to an incredible number of details. The other issue when running a program, especially starting one, is to document your planning and procedures carefully. Also remember to be professional and develop good working relationships with other offices and departments on your campus as well as with ranger and others in the wilderness areas you use.

Notes: Since activities and locations are so different, the language used in this paper focuses on backpacking trips as a generic category.

1. Establishing Program Goals

Before starting a WO it is essential to develop a coherent set of goals which drive the program. Each school will have different goals based on the population served, age of the participants, the size of the school, the type of school (secondary, college, professional), etc. The following are some of the goals used by other WO.[1]

General Program Goals

- Fun.
- Easing the transition to school.
- Transfer skills and ideas from the wilderness setting to the school setting.
- Develop a positive connection with the school as a whole.

Personal Growth Goals

- Increase self-confidence.
- Increase self-esteem.
- Assume responsibility for themselves and their choices.
- Enhance communication skills.
- Enhance decision making skills.
- Better understand strengths and weakness in coping with stress.
- Adjust and mature.
- Increase personal initiative.

Social Skills Goals

- Developing supportive relationships with peers.
- Establish friendships.
- Learn to work with others.
- Develop trust in others.
- Gain a sense of community early on in school.
- Develop acceptance of others.
- Learn small group skills.
- Reduce stereotyping.
- Develop group problem-solving skills.

Other Goals

- Teaching environmental stewardship.
- Wilderness skills education.
- Reducing attrition rate.
- Leadership development.
- Faculty & staff interaction with students.
- Discuss campus life issues such as substance abuse, sexual harassment, diversity, etc.

Academic Goals

Some programs integrate academic goals into the WO. There are a number of different approaches to this. Some schools give an assigned reading during the summer before the trip and use that as a point of discussion during the WO. Other schools have faculty participate either on the whole trip, or coming up for a shorter time. Administrative staff participating can also add to a trip. Whenever you have other University personnel along, it is essential that their role on the trip be very cler beforehand so as not to put the trip leaders into a difficult situation.

2. Leadership Staff

A. On-campus Staff vs. Outside Staff

The issue of leadership staff varies from program to program and is tied to the type of resources you have on your campus. At a school with a strong outdoor program, outing club, or degree program in outdoor education you may have a good pool of potential staff to draw from. In other settings you may have no real pool and have to either develop your own staff or locate outside staff.

In many cases when programs are just starting up there are not enough on-campus trained staff to run a program. Also, startup programs are often pilot projects where investments of time and funds to develop trained on-campus staff may not be initially warranted. In these cases, securing (which usually means hiring) outside staff from a professional outdoor program in your area may be the best solution to get the first program off the ground. These people can be invaluable in helping you plan all aspects of your program.

B. Pairing Outside Staff and On-campus Staff

Outside Staff:

When using outside staff you will need to pair the outdoor professional(s) with one or more people from your campus, upperclass students, faculty, or staff members. Since a core goal of all WO is to orient incoming students to campus, you need to have some people on the trip who are familiar with campus life and campus issues. Other identified goals may also require the presence of members of your campus community. This also means

that you have people on the trip who know the group and can provide follow up during the year. When dealing with outside staff you need to think through the following issues:

- Exactly what role is the outside staff to play? (wilderness skills, teaching, group dynamics, team building, safety, decision making). This must be made clear to both outside and on-campus staff before the program begins.
- What training or level of experience do outside staff need to have?

On-campus Staff paired with Outside Staff:

- Exactly what role in the on-campus staff to and in what areas? (wilderness skills, teaching, group dynamics, team building, safety, decision making). This must be made clear to both on-campus and outside staff before the program begins.
- What training or level of experience do on-campus staff need to have? It is recommended that on-campus staff have at least some familiarity with outdoor activities.

C. Training On-campus Staff

For those who decide to run WO with only on-campus staff you must look carefully at the issue of staff training. In many cases, these leaders are not paid staff, placing them in the category of paraprofessionals. As paraprofessionals, they cannot be expected to have the level of training that a professional outdoor educator such as a NOLS or OB instructor would have. At the same time, these paraprofessional leaders may be required to deal with the same types of problems on the trail. Finding the balance for what WO leaders should know and what they can realistically be required to learn is a challenge for all programs.

There are some programs that utilize “skilled outdoorspersons” on the campus without having a specific training program or requirements for leaders. On some campuses, particularly in areas where outdoor skill levels are naturally high such as the Rocky Mountain region and the Pacific Northwest, you may be able to provide reasonable staffing. However, this can still present some serious liability difficulties as well as administrative headaches. It leaves the program director in a position of having to ascertain whether Susan really has the skills she says she has. Without some testing or actual observation this can be difficult or time consuming. If the person has participated in a known outdoor program such as OB or NOLS or a summer camp that your are familiar with, you may feel more comfortable.

Still, having a skill and being able to teach it or having good judgment are not the same thing. Always remember, if there is an injury, lots of people will start asking how this person got put in charge of a trip, what their previous experience was, what their training was, etc. You have a responsibility to provide participants with a safe and positive experience. You want to avoid accidents by having good staff. Also part of the job of the program director is to make sure that the program can continue from year to year, not get cut at the first accident because the institution feels that your preparations are inadequate. Finally, if it comes to a lawsuit, you will be judged against the prevailing standards of what similar institutions due and be compared (and most likely held) to the highest standard.

OA Tip: In the long run I strongly believe that a program needs to establish some basic training or skill level requirements that leaders must comply with. This helps assure that all (not just some) of the participants will have a positive experience in the wilderness, provides for better safety management, and provides the school with better liability protection.

There are two basic model for developing on-campus staff training.

Select-then-train model - Many schools have an application process before leadership training similar to Resident Advisor selection. Students submit applications and may be interviewed. Only those selected as appropriate candidates are allowed to go through the training. This model usually results in fewer training programs each year (often only one) which can set limits on the number of trained staff you can generate each year and therefore the number of trips you can offer. One advantage is that with a small leader pool everyone may know everyone else so that there is a strong sense of camaraderie among the leadership staff. Also the program director may have personal knowledge of all students leaders which is helpful in the selection and pairing of staff.

Train-then-select model - This model provides training to any student who is interested and then accepts applications from all those who have completed the training. This model can be more open-ended in the number and time of training programs offered each year and can result in a larger staffing pool. It also means that students who might not be able to participate in a "once-a-year training" can become leaders (for example student athletes in a particular sport season). Students can be evaluated during the training process and then appropriate staff selected when they apply for the WO. Larger staff may mean less personal knowledge of each leader by the program director. This can be offset by using committees of student leaders to help the program director with selection and pairing. There may also be less camaraderie throughout the leader pool since not everyone may know each other.

In both models it is important to remember that the Leadership Training Program is just as important an outreach program as your WO. You are training on-campus staff in wilderness skills, safety and first aid, and group dynamics and leadership skills providing them with an important personal growth experience. These people will use these skills in a variety of ways on your campus.

Training Priorities:

On an multi-day WO the four skill areas below would be considered fundamental skills that leaders should have. Within each category, leadership training priorities would need to be established and concrete training methods and curriculum designed.

- Wilderness Skills
- Safety Management
- First Aid & Emergency Procedures
- Group Dynamics & Leadership

Training Assessment and Development Model:

In order to develop a training program it is important to follow a Training Assessment and Development Model. This model lets you develop your training program around a thorough examination of the activity.

Assess the Activity:

- What are the risk management factors in the activity? Which can be controlled and which cannot be controlled?
- What skills are needed by participants?
- What skills are needed by leaders?
- What equipment is needed?
- What training in the use of the equipment is needed by leaders, participants?

Brainstorm Training Possibilities:

- What modes of training are best suited to passing on this information—hands-on, simulations, lecture, discussion, etc.?
- How much time is required to develop a proper level of skill in the activity?
- How much ongoing training is need to maintain this level of skill?

- Beyond the basic skills of the activity, are there special skills staff need to be able to instruct (not just do) the activity? Are their special rescue/safety skills staff need to do the activity?

OA Tip: For a specific training model see LDRTRAIN.DOC the Leadership Training Program from the Outdoor Action Program at Princeton.

Pre-trip Refresher Training:

In most cases, trips go out before the start of the school year and leaders may not have had any training since the previous spring. Scheduling leaders to be back on campus early provides an opportunity to do some refresher training and "kick people back up into high gear" so that they run safe and effective trips. This is also a time to brief people on specific goals for the trip such as planned discussions, assigned readings, etc.

OA Tip: We focus our refresher skill training on areas that we have found are typically weak after the summer or are core skills that people need to be sharp on. These include stove use and basic field repair, map and compass, first aid issues (anaphylactic reactions, heat illnesses, water purification, blister care, and evacuation protocols). We also cover special discussion areas that we want leaders to explore with their groups.

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3. Equipment Needs

Equipment needs should be based on a through safety management analysis that includes:

- Activity(ies) - what equipment is needed
- Location
- Weather
- Equipment Resupply or Caching (can trips be resupplied in the field or do they need to be completely independent?)

A. Basic Equipment

Basic Group Equipment:

- Basic group equipment will fall into the following categories:
- Travel & Activity Equipment (map & compass, canoes, bikes, climbing gear, etc.)
- Shelter (tents, tarps)
- Cooking Equipment
- First Aid Equipment
- Repair Equipment

OA Tip: See GROUPEQP.DOC for the basic Outdoor Action Group Equipment List.

Personal Equipment:

- Basic personal equipment will fall into the following categories:
- Clothing items
- Footgear
- Storage Equipment (backpacks, river bags, panniers)
- Sleeping Bag

The other issue with personal equipment is what the participant must provide and what can the program provide.

In many cases, the personal equipment items typically provided by the program are activity equipment, storage equipment, and a sleeping bag. Other issues with participant equipment:

- What do you do if the person is on a hiking trip and doesn't show up with boots?
- What is someone's equipment is poor quality? At what point does this become a safety hazard? Be prepared to say no to participants or move them off a trip if their equipment is inadequate.

OA Tip: See PERSEQP.DOC for the basic Outdoor Action Group Equipment List. You should have a complete list with places for students to check off items as they assemble them. We have found it helpful to provide explanations for why students should bring certain items. For inexperienced participants, this results in better compliance.

B. Where to Get Equipment

Some WO exist on campuses with large outdoor programs that have much or all of the equipment needed. In other cases there is no equipment available. You will need to do some good sleuthing to see what is out there. In any case, you will somehow have to provide the basic group equipment described above and any specific activity equipment. There are three basic methods for equipment procurement.

- Rentals - This can be from a professional outdoor program in your area, summer camp, or other school that has WO (but not at the same time as yours).
- Swaps - Some WO programs use a swap arrangement—we'll use gear this week and you use all our gear next week.

OA Tip - If you are swapping gear, identify those items that you can really afford to swap to another WO or get swapped. One example is first aid equipment. If the other folks used it first, you would have to recheck and restock before your trip went out. It's the same with stoves, if you loan them first, you're likely to spend the night before the trip checking and repairing them. If you borrow them, you may still spend the night before the trip checking and repairing them.

- Purchasing - When you have to, buy it. In some cases and with some items, this is the only way to go. Look at on-campus resources for getting things at the cheapest prices. Many outdoor equipment manufacturers will sell at reduced prices when you make bulk orders especially on school purchase orders. If you don't have enough quantity, perhaps do a joint order with another school. Also, the school purchasing office or other campus offices may have leads for discounts.

OA Tip: Check with on-campus offices. For example, for years we bought those cheap plastic trowels from outdoor suppliers that always broke. Inexpensive, but we had to replace them constantly. We talked with the Grounds Department and found a discount garden supply catalog with great unbreakable metal trowels at a good price.

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4. Logistical Planning

Any large scale WO automatically adds levels of logistical complexity not normally experienced for most school outdoor program trips. In real estate it's "location, location, location." When dealing with large scale logistical planning it's "details, details, details." Here are just a few of the little scenarios that can impact your plans.

- You plan your routes for an area and rent a bus figuring 4 groups of 12 on the bus. Then the bus arrives and it has 47 seats and a bathroom.
- You order food from a distributor including some special order items. When the food arrives two days before the trip, you find that the order is incomplete.
- When you filed your route plan with the rangers, they had to change your final nights' campsite. So your group has a long morning hike on the last day. You forgot to tell the bus company that you were rearranging the pickup order.
- Fred is a participant on a hiking trip and the afternoon before the trip leaves, he sprains his ankle.

OA Tip: When you talk about running 5 trips, things aren't too much of a problem, but when you are running dozens of trips, it can become a logistical nightmare. From an organizational standpoint, things are going to go wrong. If you have sweated the details, they will only be little things. My advice to program directors is to have absolutely nothing left to do when the trip rolls around and be on hand simply to deal with the things that come up. This means having adjunct staff that can handle the regular organization and departure of the trips (see Check-in and Check-out below).

A. How Many Trips?

The number of trips which can be offered is tied into a number of resource factors:
- Available Staff
- Available Equipment
- Available Transportation
- Available Wilderness Areas (trip loads that can be supported)
- Cost per trip and how much participants are willing to pay.

Staggered vs. Simultaneous Trips

There are two basic methods for developing trips, staggered or simultaneous. Staggered trips are spread out over a range of time versus trips which happen all at the same time.

Staggered Trips

Advantages

- Need less staff.
- Need less equipment.

Disadvantages

- Need staff for longer period (can be hard to get staff to come back early from summer vacations and jobs, especially if you don't pay leadership staff).
- What happens to students who come back for first session, do they go back home? What are the increased costs of students coming to campus and then going back home? This can eliminating some students from participating. Also can students get into their rooms and stay on campus? This gets into Housing Office policies, room availability, are there things for the students to do, etc. For schools who do this it often means taking people who live close by in the early sessions and sending them back home, then taking people from far away in the last sessions and letting them stay. This can reduce the diversity mixing of the program.
- Need to have trip infrastructure (support teams, emergency on call, etc.) operating for longer period of time.

Simultaneous Trips

Advantages

- Need staff for shorter period of time. May be able to get more staff to come back early from summer vacations/jobs since time commitment is less.
- Need to have trip infrastructure (support teams, emergency on call, etc.) operating for shorter period of time.
- Students arrive on campus at one time, participate in trip and begin regular school year. No extra transportation to and from home required.
- This allows for an overall diverse mixing of all participants.

Disadvantages

- Need more staff.
- Need more equipment.

B. Route Planning

Determine Trip Length:

The length of your trip is determined by many factors including program goals, school calendar, availability of leaders, trip costs, and what you can charge for trip fees. In most cases you will establish the trip length through analysis of these factors and then search for locations to hold the trips. The trip length has a direct bearing on what locations are suitable and in how long you may have to travel to get there (see below).

Identify Activities:

Depending on your location you may have a range of activities that can be utilized for WO programs such as backpacking, canoeing, kayaking, rock climbing, caving, bike touring, mountain biking, etc. Obviously each of these activities has its own requirements in terms of trip planning, equipment needed, staff training, safety issues, etc. This paper will focus on a generic backpacking trip to help you identify issues for planning your program.

Identify Locations:

The first place to start when developing a multi-trip program is to establish locations for your trips. Look at wilderness areas you are already familiar with that are close to campus. On a map, draw circles with a radius of 50, 100, 150, 200, 250, etc. miles out from your campus. This roughly corresponds to 1 hour, 2 hours, etc. of driving time. See what wilderness areas are within the circles and start gathering information about the areas. You will need to look at the following issues:

- Is the area large enough to support multiple groups?
- Is the area large enough for the planned trip length?
- Are there limitations on group size?
- Are permits or special fees required?
- Are there special regulations you must comply with?
- Do leaders have to have special certifications? (Example: In some states anyone paid for leading trips must be licensed guides.)

Establish Acceptable Driving Times:

The amount of time spent riding in a bus or van must be related to the length of the trip. As a basic formula use number of trip days to number of driving hours. If the trip is 3 days long then up to 3 hours of driving is acceptable, if the trip is 6 days long then up to 6 hours of driving is acceptable.

Develop Your Routes:

Route planning itself is a complicated process that is covered in other texts so it won't be repeated in detail here. There are two fundamental trip models for wilderness orientation programs, one is the Individual Trip model and the other is the Clustered Trip model.

Individual Trip - this model has individual trip routes that may be planned by the program director or by leadership staff. In many cases the trip may be completely self-contained and not be near any other trips. This model has lots of room for creative trip planning. It is best for programs running fewer groups. With many individual groups out you may increase logistical complications (each trip may need individual transportation, groups are spread out so supporting them in the field becomes more difficult, etc.).

Clustered Trip - this model places multiple trips in one wilderness area. In many cases trips overlap or are reverse routes. This model is often used for programs running many groups since it can simplify logistical planning (fewer routes need to be planned, transportation can be combined into a bus, field support staff in the area can cover a range of groups).

In either case you will need to develop a realistic daily mileage and Time Control Plan for each route that includes consideration of the following factors.

- Trip Goals - how much time is needed on a daily basis for teaching skills, holding discussions, etc.
- Physical Condition of participants - Routes will need to be developed that will accommodate both a range of physical condition and a range of experience in your participants. It is essential, therefore, that routes be evaluated as to the level of physical fitness required and participants evaluated and placed in appropriate trips.
- Previous Outdoor Experience of participants - You will need to tailor the level of the trip to the experience level of your participants. In most wilderness orientation programs the primary goal is easing the transition into school and developing new friendships, not having a hard core expedition experience. If that is the case for your program, don't compromise those primary goals for a secondary goal.
- Elevation Changes
- Trail Conditions
- Campsite Availability
- Weather Conditions
- Environmental Hazards
- Water Availability - When planning routes you should also look at the possibility of low-water conditions. Since most WO trips take place at the end of the summer, water levels may be low. In dry summers, this can compromise a route and you may need to either delete the route or make preparations for providing water caches for your trips. This type of planning should be done up front whenever possible.
- Emergency Access - As in all route planning, you want to anticipate the possibilities of evacuation. In most programs a major injury or illness will require evacuation by trained professionals. However, minor conditions, such as bad blisters, may require transportation by program staff (see Evacuations and Field Support Staff below).

Other things you will need to do when planning routes.

- Talk with area Rangers and establish a good working relationship: Establishing good relationships with are is important for your program development. Poor planning, improperly trained leaders, and shoddy practices reflect poorly on your school and on all other programs that use a particular wilderness area. Wilderness areas are receiving more and more "pressure" especially from large WO programs that can bring hundreds of students to a trail. We need to recognize the potential environmental impacts such groups have and respect the wilderness managers who must try to preserve these valuable resources for all users. Developing clean-up and trail maintenance projects as part of your program can help teach appropriate environmental conservation ethics to participants and demonstrate your willingness to cooperate. You may also need to work on details and jurisdiction issues for emergency evacuations.
- Emergency phone numbers for the area - rangers, local rescue squads, police, area hospitals, etc.

OA Tip: Computerizing Your Trip Planning - Details, details, details. Here is one area where the computer can be a big help. It takes some time to computerize your trip routes and logistics, but as your program expands, the time that is saved and the problems averted can be worth it. Outdoor Action has developed a standard trip planning procedure that uses a spreadsheet program to document the trip including bus drop off, daily route, planned campsite, water availability, pickup location and pickup time. By using the linking capabilities of the spreadsheet you can easily track all of your groups. The other major advantage is that when you need to make a logistical change you can change it on the route and then change is reflected across the linkages made in the spreadsheet. *(See Computerizing Your Program).*

C. Transportation

Unless you are lucky enough to have a wilderness area adjacent to your campus, your are going to have to move your groups from campus to the trailhead. The type of transportation you use is related to many factors including the length of the trip, the number of groups, the number of participants, the acceptable driving distance, cost, and available types of transportation. There is also a direct connection between the type of transportation used and your route. As we discussed above, Individual Trips versus Clustered Trips can make different demands on transportation. Here are some of the issues to consider.

Primary Transportation:

Vans - Almost every WO will utilize vans to some extent, either as the primary transportation source for moving groups to the trail or as a secondary source to provide support while trips are in the field. Vans can be used either for Individual trips or Clustered Trips.

Van Advantages

- A group can be completely self-driving by using their own van.
- Cost for renting vans is generally less than for renting buses so for small programs this can be more cost effective.
- The trip can start and end at almost any trailhead location.

Van Disadvantages

- As a program gets larger, van transportation becomes logistically unfeasible. (If you have 50 trips it may be either impossible or too much of a headache to try and rent 50 vans in your location).
- Renting a large number of vans and allowing the trips to be self-driving can be cost-prohibitive (since you are generally charged by the day as well as mileage and you would be paying for days when the van is parked at the trailhead). However, if you just use the vans for drop-off and pick up you will need a driver for each van. The issue of drivers can be complicated (see liability concerns below).
- Equipment storage becomes a problem. With gear for a multi-day trip a 15-passenger van soon becomes a 12 or even less because of equipment storage. Otherwise you will need roof racks or a trailer.

Buses - Larger programs generally use buses and the Clustered Trip model. This is the most efficient method for moving large numbers of groups and by keeping trips in the same region you keep the rental fees on the bus down. A typical Clustered Trip scenario on a linear wilderness trail like the Appalachian Trail is the A-B-C Model. Your drop one group off at point A and they hike to point B. You drop two groups off at point B, one hike to A and the other to C and you drop one group off at C which hikes to B.

Bus Advantages

- As a program gets larger, buses may be the only realistic way of transporting large numbers of groups.

- You do not need to provide vehicle drivers.
- Equipment storage is generally ample on a standard charter bus (Greyhound type). School buses provide limited storage without using up seating space.

Bus Disadvantages
- A group cannot be self-driving.
- Cost for renting buses for longer distances is more expensive than van transportation.
- The trip must start and end at trailhead location that can accommodate a bus for parking, unloading, and, possibly, turning around.

As you can see, the type of transportation you use can have a major impact on your route planning. Careful route planning is required when using buses to assure that you have the necessary drop off and pick up sites.

Transportation Costs:
It is difficult to establish what transpiration costs will be in your area. Here are some ballpark figures based on what we have paid in the past. In both cases, the assumption is that either buses or van are bring used for drop off and pick up. As you can see the buses we have rented have been very competitive with van transportation for trips relatively close by. As the trip gets further way, the bus transportation charges increase.

OA Tip: Also remember that bus driver are only allowed to drive so many hours per day (which includes their transit time from the bus depot to your campus and the return back from your drop off or pick up point to the depot). On long trips, the bus driver may need to spend the night in a motel and this charge is typically passed on to you.

Bus Transportation Costs (based on bus company charter quotes)

One-way Mileage	One-way Cost	Both-way Cost	Passengers	Cost/Passenger
100	$395.00	$790.00	48	$16.46
120	$425.00	$850.00	48	$17.71
150	$650.00	$1,300.00	48	$27.08
235	$895.00	$1,790.00	48	$37.29
250	$1,195.00	$2,390.00	48	$49.79
275	$1,395.00	$2,790.00	48	$58.13
300	$1,495.00	$2,990.00	48	$62.29

Van Transportation Costs (assumes $60/day and $0.25/mile rental and $0.10/mile gas)

One-way Mileage	One-way Cost	Both-way Cost	Passengers	Cost/Passenger
100	$95.00	$190.00	12	$15.83
120	$102.00	$204.00	12	$17.00
150	$112.50	$225.00	12	$18.75
235	$142.25	$284.50	12	$23.71
250	$147.50	$295.00	12	$24.58
275	$156.25	$312.50	12	$26.04
300	$165.00	$330.00	12	$27.50

Transportation Suggestions:
- Try first to get transportation from on-campus sources. Some departments, especially Athletics often have vans or buses which can be rented at less than outside rates. Remember, establishing good relations with other offices on campus can be a big help.
- Talk with your Purchasing Office, Travel Office, or Athletic Department to see if there are discount contracts

with local van and bus rental companies.

- When using bus companies, make sure you give them very accurate directions and mileages, otherwise you bill may come in higher than you thought, and your group won't get to where they need to go. In many cases this means driving the route yourself to be able to give mileages and landmarks (especially for obscure trailhead locations).

OA Tip: My own experience for a large programs is that buses are the best way to go. Although it sets some restrictions on your route planning and can be expensive, it is easier than dealing with dozens of vans, the problems of equipment storage, and the potential liability of drivers.

Secondary Transportation:

Almost all programs will utilize vans for secondary transportation. In most cases this is for field support staff (see Field Support and Evacuations below). This is to provide basic field transportation in case of minor injuries and evacuations, to relocate groups if necessary, and for Activity Transportation (see below).

Activity Transportation:

Some routes require transportation for specific activities. One example would be relocating a group for a new activity, such as a dual backpacking/canoeing trip where the group needs to be picked up on the trail and transported to the river. Another example would be picking up a group and moving them to a rock climbing site for a day and then returning them to the trail.

D. Food

Menu planning is an art in itself that is well-covered in other text so I will touch only on the high points. There are four basic food planning approaches. Food can either be planning centrally by the program director or by each individual group and food can either be a specific daily menu or basic rations (NOLS model). Part of the decision for this is based on the number of trips and the length of the trip. On short trips (less than 7 days, it may be best to develop a specific menu and provide those food items). On longer trips you may want to provide general rations and let the group develop their own menu. In either case, I recommend that food be planned centrally by the program director. This allows you to consolidate your food order and pay less by ordering bulk supplies. In many cases the food service department at your school should have vendors that they purchase bulk supplies from. This is far cheaper than going to the grocery store. Here are some things to keep in mind about food purchases.

- When do you need to place your order? With bulk purchases, some items you want will be normal items that the distributor handles and others will be special order and requiring advanced ordering.
- What unit sizes does they items come in and how does that relate to what you need for each group? This is a complex issue that relates directly to size of your program and staffing resources. The cheapest way to buy food is a large bulk units. This is also the most environmentally responsible since it reduces packaging. However, it also requires major weighing and repackaging. With a smaller program you may be able to gather your leadership staff and have a "food packing party" the day before the trip. On larger programs this is not feasible and food will need to be separated ahead of time (see Food Packing below).
- Where are you going to store the food when it arrives and where can you store perishable items? This can be a big issue for programs. Most of us have limited storage space which is just barely enough for our own equipment. Try contact the food service department at your school to see if they can store food items for you. Many WO program occur before school starts when not all school dining units may be open and they may have space available including refrigeration space for perishable items. Remember establishing good relationships with other school offices will go a long way to helping you out.
- When should food be delivered? You may need to have a staggered delivery with dry goods coming early

enough for your to repackage them and perishable or frozen goods (fruit, cheese, vegetables and bread) arriving the day before the trip departs.

- How is food packaged? (see the OA Tip below). An important environmental consideration is to reduce, reuse and recycle. Purchase in bulk when you can to reduce packaging waste. Also make sure that you are purchasing food items in packages that can be recycled. Before the trip goes out you will need to develop a method for collecting and recycling packaging from items that get repackaged. During the trip you must develop a method for students to separate out recyclables from garbage and a collection method at the end of the trip for gathering up recyclables such as cardboard, cans, and plastic.

Menu Planning:

In addition to things like daily calorie intake keep in mind the following when you are planning your menu.

- How long is the trip and how mush food is realistic to carry? (Keep in mind the physical condition and previous outdoor experience of participants, and the trip activity—biking trips can carry less than canoeing trips.)
- Can groups be resupplied with food during the trip or can food be cached?
- Can food be purchased along the way (as in a bike touring trip)?
- How easy is it to cook?
- Does your menu handle vegetarians (including vegans) and kosher students?
- How long will perishable items stay fresh?
- How much does it weigh and how much space does it take up in packs?
- What is the food's "crush factor" That is, after 3 days in a pack will it still be edible or will it be crumbs.

OA Tip: Once again we use the computer to aid us when ordering food. This works best when doing a centralized food order. We use a spreadsheet program that includes the quantities and price of items that each group will need. Then we simply plug in the number of groups and the order total and cost is automatically calculated. If you use a similar menu each year it makes food calculations very easy. It is also useful for helping you look at your trip budget to estimate costs for the upcoming year since you can plug in different number of participants and see how food costs might change. (See SPREADSHEET.XLS)
We order extra amounts of non-perishable food to cover us for trips during the fall semester.

Food Packing:

There are two basic approaches to food packing, one is to buy in bulk and weigh it out for each group. The other is to buy in a unit that the group will need for the trip. The first method always requires repackaging and the second almost always does (to cut down on volume and weight). There are also some items like GORP which are generally mixed from ingredients (since pre-mixed is so expensive). Keep in mind that any food preparation or repackaging should be performed under appropriate sanitary conditions. For many programs our equipment storage areas on campus do not meet the state codes for such a task. Whenever possible try to use a licensed food service facility on campus for food preparation (see liability below). In most case food repackaging is done in plastic bags that can be tied closed or Ziplocks.

OA Tip: For a large program like ours, we have settled on a compromise between bulk food and environmental packaging issues. We order food in bulk but in the package sizes that each group needs (for example a 24 oz. box of instant rice rather than a 25 pound bag). We place the items in food boxes for each group: a breakfast & drinks box, a lunch box, and a dinner box. Each box is labeled on the outside with the list of items which are checked off as they are put in the box. This makes it easy for our small summer staff to prepare the food boxes of non-perishable items ahead of time. We don't have to do any weighing and separation of food (except for a few items that need to be prepared like GORP or powdered milk which we get in larger units). We give each group enough plastic bags for them to repackage their own food the night before the trip and then have then recycle all recyclable packaging.

OA Tip: It is useful to label items that look the same once placed in a plastic bag (powdered milk, Bisquick, lemonade mix).

D. Pre-trip Arrival

Leaders

It is useful to have leaders come back one or more days before the participants arrive. This provides an opportunity for briefing them on their route, distributing group equipment and food, and doing some refresher skills training.

Participants

Often the turn around time from the day the participants arrive to the day they leave on the trip is very short. You need to spend some time planning the Check-in Process when students arrive. Here are some of the issues to think about.

- Rooms - In a college setting, students may be required to come back early and need to move into their dorm Rooms. This may mean coordinating with the Housing Office or other dormitory staff.
- Storage - If students cannot move into their rooms, you may need to provide storage for them for personal belongings while they are out on the trip.
- Check-in - If you haven't provided the students with the information of their specific trip ahead of time. You will need to inform them of trip information, leader names and where to meet. Finding the proper site for this is also important. You may want to consider having the check-in site, the meeting site for groups, and the location for personal equipment distribution as the same site (school gyms or other large indoor spaces work best).
- Equipment Distribution - Personal equipment like packs and sleeping bags need to be distributed. Once again having one space where all of check-in can be accomplished is helpful. With a large program it is important to take the time to plan the flow of how you will get several hundred people fitted with packs, sleeping bags, etc. in the shortest amount of time.
- Participant Follow-up - There is often a need to have participants talk with the program director or other staff when they arrive to cover such items as last minute payment, parental signature, or medical questions. A *See Me* list should be prepared and used by the Check-in Manager (see below) to let participants know that they need to see someone. The program director should have an itemized list on each person.

OA Tip: With a large program like ours, students first go to the Housing Office to get their room keys. We have a pre-check-in table their to tell students their group number and give them a map of the gym showing them where to meet their trip leaders at Check-in. Seventy-five percent of the students go through this process which avoids huge lines when they must report to the gym.

E. Departure & Return

Large programs with many trips may have very complicated logistics. Having a good Departure and Return Plan makes sure that everything goes smoothly (people get on the right bus, in the right order, with the proper driving directions, etc.).

You will need to think about the following issues:

- When you plan your trip routes, look at the mileage on the first and last days and think about what the proper bus drop off and pick up order should be. Also look at what the most efficient driving route will be for both.
- How far will different buses or vans travel? Should there be a staggered departure to get those with longer

driving times out first?

- What about directions and maps for the van or bus? In the case of buses, you should send this information out to the charter company ahead of time, but also have one of the trip leaders have a duplicate on the bus. A leader should help provide directions to the driver, especially when heading to obscure trailhead drop-offs.
- How long will the drive be and do you need to provide bathroom or food stops, wither on the way out or the way back. (On the pickup, 1 bus bathroom may not be enough after many days in the woods).
- It is helpful to establish a load order for a bus, last out means first in. This means that packs are stored in the proper order underneath the bus so it is easiest to get them unloaded.
- Make sure drivers are very clear on locations for pick ups at the end of the trip. A leader in the first group to be picked up can have bus directions for the return to help the driver locate the other groups.
- Have a call-in protocol for what people are to do if they don't get picked up on time. This helps if the bus gets lost or breaks down and keeps your groups from having to wait for hours without knowing what is going on.

OA Tip: By utilizing as spreadsheet for your route planning, you can simplify your Departure and Return Plans. The spreadsheet can link the information for Groups A, B, and C in terms of their bus number, drop off point, pick up point. pick up time, etc. This makes it easier to track logistical planning changes and make sure your transportation information is correct (see SPREADSHEET.XLS).

OA Tip: Make sure you have the telephone number for the bus dispatcher so that you can make last minute changes to pick up sites if groups have to change their route during the trip.

I. Trip Return to Campus

When everyone gets back, now you have a whole new set of major jobs. Careful pre-planning will make this process go smoothly. Managers (see below) can be helpful in handling many of these areas. Here are some of the issues to be prepared for:

- Return - Like Check-in you want to have a location with enough space to handle your groups and the inevitable mess and chaos of groups de-issuing equipment. The goal is for the space and the process to control the chaos so that things go quickly and smoothly.
- Equipment De-issue - You want to make sure that you get all of your equipment back, that it is sorted out properly, and that damaged items are properly labeled and set aside. Finding a good space for your return and de-issue is also important.
- Recycling Procedures - Develop good procedures for dealing with garbage, left-over food, and recycling (see Food above).
- Participant & Leader Evaluations - Getting written feedback is helpful in future planning. It also can provide you with quotes and anecdotal information about how valuable your program is.
- Leader Post-trip Debriefing - Getting good information back from the leaders about their trip, how it went, food, equipment, route, etc. *while it is still fresh in their minds*, is essential for helping to make improvements for the next year.

Collection of Accident Reports and Information Reports - Gather this information and debrief leaders over problems. Any incidents should be evaluated by the program Safety Committee and recommendations made for the future.

F. Support in the Field

Whenever you have groups out, you need to be prepared to respond to problems that happen in the field. This

can include the following:

- Moving groups from place to place.
- Changing activities (from trail to the river).
- Resupply with water, equipment or food.
- Transport of minor medical problems. In case of a serious medical emergency, you should utilize rescue professionals (see Evacuation below).

If the groups are close to campus (within 1-2 hours drive) you can provide transportation and support services from campus. As your groups get farther from your campus, you should think about establishing field support staff that are close to the groups in a particular area. This cuts down on the transport time and can help keep your groups on their planned route and schedule which can prevent problems later. If you have to drive 4 hours to pick up a hiker with a stomach problem, drive them to the hospital for examination and then drive them back to the group (presuming they are OK), the group may be so off schedule as to need to be relocated in order to make their planned pick up point. [If you are using vans for drop-off and pick-up of individual groups, you may have lots of flexibility for them to take out at another site. If you are using buses, you may not.]

Field support staff can stay in a variety of locations including campgrounds, summer camps, or motels. You should establish a reliable method of communication between the program director and support. This can be by phone, pager, or cellular phone. It is best to have 24 hour contact ability. If the support crew is staying at a campground and only has access to a pay phone, you may have a hard time getting in touch. It is also a good policy to make sure that people call in whenever they have been out on the road before they head back to base in case something has come up while they were out.

Support staff can be recruited from a variety of sources. Some schools require it for students who want to be leaders. Others recruit students who have not completed the leader training requirements. We have had some success recruiting students who participated in the previous year's WO. You may need to make sure that support staff have the proper training in such things as van driving, and the proper call-in and response protocols (see Liability and Insurance below). Remember, this is a field transport and resupply service, not an ambulance. Don't take on more than your staff is trained and equipped to handle.

G. Managers

With all the details, details, details, it is helpful for the program director to be removed from much of the logistical goings on particularly for Check-in and Departure. Managers provide a solid resource for this. Here are some of the Manager Roles we utilize for the Outdoor Action Program.

Manager Coordinator (MC) - Schedules people for their different Manager roles and making sure that they know where and when to be places and what they are supposed to do. Make sure everyone is set for Frosh Check-in at the gym. Act as a floater to help where needed or reassign people as required. Make sure everyone is set for Depart on Wednesday. Act as a floater to help where needed or reassign people as required.

Transportation Manager (TM) - The TM is responsible for coordinating the bus and van. The TM will screen groups as they arrive on the morning of trip departure, inform them of their bus/van and what loading order they should use (groups getting off last load first etc.). The TM will collect valuables envelopes from each group, label them and give them to the program director. Before any vehicle leaves a proper participant count must be done by each group's leaders and the TM informed if all are present. When a bus or van is properly loaded the TM will give the word for it to depart.

Check-in Manager (CM) - During the day the CM will be manning a table for pre-check-in for frosh. At this

table the frosh will be checked off so that we know they have arrived and each frosh will be given a map of the main floor of the gym with the number and location of their group area circled. Also cross check frosh against the *see program manager list* and let them know to check in with program manager when they arrive at 5:00 PM. When check-in begins at the gym at 5:00 PM any frosh who have been through pre-check-in may go directly to their groups. The CM will be on location until 4:30 PM then will shut down and move the operation to the gym.

Equipment Manager (EM) - Distributing group equipment to all trip leaders. At this time s/he must tell leaders to check their equipment supplies against the list provided. Supervise personal equipment check out at to participants at the gym. Equipment will be distributed by group and records will be kept of what items are checked out to each group. The EM is responsible for transporting extra equipment to departure site in case there are any last minute equipment needs. The EM is responsible for checking each group's equipment back in after the trip returns. The EM will make sure that items are sorted properly and that any items borrowed from other programs are separated from OA equipment. When the group is finished the leaders will be sent to see program director for their valuables.

Food Manager (FM) - The FM is responsible for the distribution of group food boxes to the trip leaders. The FM is also responsible for distributing perishable items and breakfast to all groups on the morning of departure. At the end of the trip, the FM is responsible for making sure groups return unused food, through out garbage, and properly recycle items.

H. Evacuations vs. Transports

Programs need to develop an appropriate protocol for how to deal with students who need to be removed from the trip, whether this is for a minor medical problem, behavior problem, family emergency, etc. In general, this is job of the field support staff. The term, "evacuation" may be somewhat erroneous since it suggests a medical emergency. I suggest that your staff not handle such things. The liability is simply to great. Have rangers or rescue squads handle evacs from the trail and have the proper local rescue authorities handle serious medical transports.

You should develop a protocol for the following:

- How do leaders contact the program director during the trip? (The program director should be accessible 24 hours a day).
- Do leaders contact field support directly if there is a problem or work through the program director.
- Emergency phone numbers for each area.
- When to arrange for a professional medical evacuation.
- When to contact field support for a transport.
- What injuries/illnesses need evacuation.
- When do you let someone walk out on their own versus calling for professional help.

OA Tip: We developed an evacuation flow chart to help leaders determine how to handle evacuations versus transports. See the Evacuation Flow Chart.

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5. Participants

The types of participants that will come on your program are related to your school population and the goals of the program. In most cases one assumes that the program is either required of all students or open to all incoming students. Obviously the numbers of students you can accommodate are related to such factors as staff avail-

ability, equipment availability, routes within a reasonable driving distance, and budget.

A. Application Forms

Application forms are an essential aspect of gathering important pre-trip information on your participants. Your application form should provide the following information:

- Address
- Phone
- Equipment Needs
- Financial Aid Request (if applicable)
- Previous Experience
- Health History
- Allergies
- Medications
- Dietary restrictions
- Special Needs
- Physical Condition
- Required Immunizations
- Release signed by student **and** parent

See FROSHAPP.DOC for sample application. You will need to customize the application for your specific program. Check with your legal office about the appropriate waiver/release language for your state.

OA Tip: It is useful to think about the information participants provide in their application form and a computer database. For large programs, having the info in a database is essential. A database will allow you to run reports on medical problems, dietary restrictions, help you in placing people in trips of their choice, etc. The database should correspond closely to the application form to make data entry easier. There is a sample WO database Program available for those working with Microsoft Access (FROSHTRP.MDB).

OA Tip: If your trip is first-come, first-served, applications should be processed by postmark date in order to avoid complaints from participants.

B. Participant Screening

Participants should be placed in trips that are at an appropriate level for them. This means taking into account their physical condition, age, medical history, and previous outdoor experience. When screening participants you will need good information about the route areas and possible contraindications for placement. For example, if some routes have a history of bee sting problems, you might not want to assign people with bee sting allergies to that area.

It is important to develop a good relationship with the Health Services Department or Infirmary on your campus. You may need to discuss particular medical conditions with a physician or health care professional in order to make the proper decision about whether the person can attend the trip, if there are any special restrictions for the person, or any special precautions you will need to take.

The other screening area is physical condition. You want to place people in routes that will not be overly challenging for them physically. Having a thorough set of screening questions is essential in evaluating participants' condition. Generating some numerical condition value can be helpful especially if your trips are rated on the same

scale. This allows you to match people to the physical level of the trip.

Outdoor Action uses two screening formulas. One was developed by Dr. Cooper in his book on Aerobics. Dr. Cooper uses the following questions to ascertain the highest activity level the participant can comfortably attain.

CURRENT PHYSICAL CONDITION: Please check the highest activity level in each category that you feel you can comfortably attain.

Walking (average 3 mph)	❑ 2 miles in 40 minutes	❑ 4 miles in 80 minutes	✓ 6 miles in 120 minutes	❑ Unsure
Jogging (average 5 mph)	❑ 1 mile in 12 minutes	✓ 3 miles in 36 minutes	❑ 5 miles in 60 minutes	❑ Unsure
Cycling (average 10 mph)	❑ 5 miles in 30 minutes	❑ 10 miles in 60 minutes	❑ 20 miles in 120 minutes	✓ Unsure

We give students a score of 1 for each activity in the first column, 2 as the score in the second column, 3 in the third and 0 for unsure. We use the following formula to calculate a score.

$$\text{Physical Condition} = \frac{(\text{Walking score}) + (\text{Jogging score}) + (\text{Cycling score})}{3} + 1$$

In the example above the student receives:

$$\frac{(\text{Walking score- 3}) + (\text{Jogging score - 2}) + (\text{Cycling score - 0})}{3} + 1 = 2.6$$

The other formula we use is Body Mass Index. This was described in the July/August 1994 issue of the Wilderness Medicine Newsletter. The Body Mass Index uses height and weight to establish whether a person is underweight, ideal weight or overweight. This can also help as corroboration to the scale above (or not as the case may be).

$$\text{Body Mass Index (BMI)} = \frac{704 \times (\text{your weight in lbs.})}{(\text{height in inches}) \times (\text{height in inches})}$$

Your height should be barefoot and your weight should be naked weight. We use our database to calculate the BMI score for each participant. Here is the score values and what they mean.

BMI	**Points to ponder**
less than 20	Below ideal range. Seek to gain muscle mass and perhaps some fat by weight training and good quality nutrition.
20 - 26	Ideal range.
26 - 30	Moderately overweight. Increase aerobic (fat burning) exercise and maintain good quality nutrition.
30 or more	Truly overweight. Adopt a structured exercise and diet program. You could be at medical risk.

The other scoring mechanism is the Harvard Step Test which measures Recovery Index. This was also described in the July/August 1994 issue of the Wilderness Medicine Newsletter. This test requires that participants actually complete it and send you the results (which may be difficult). It also might be possible to test students when they arrive on campus. depending on the organization of your trips, you might assign participants to trips after the test. Here are the details of the test.

Locate (or build) a sturdy bench with a height that places one upper leg (top of thigh) slightly below (about 5 degrees) the horizontal with its foot flat on the bench and the other leg straight with its foot flat on the floor. The outside angle at your raised knee (between thigh top and shin) should be about 85 degrees to avoid knee injury. The height is important to standardize the exertion.

Without support or pushing with your hands on your knees, step from the floor onto the bench top bringing both

feet up (one at a time—of course) and then step down bringing both feet to the floor (again, one at a time). This is one cycle. Do this at a steady rate of 30 cycles per minute for 4 minutes. Change the lead leg every 10 cycles.

As soon as your finish, sit quietly for 1 minute, then count your heart beats (not the hear rate in beats per minute) for 30 seconds. Continue to sit quietly. At the 2 minute mark, after your finish stepping, count your heart beats again for 30 seconds. Repeat the same 30 second count at the 3 minute mark. Compute the Recovery Index with the following formula:

$$\text{Recovery Index (RI)} = \frac{50 \times (\text{duration of stepping in seconds})}{(\text{Sum of heart beat at 1, 2, and 3 minutes marks})}$$

Evaluate your condition using the following table

RI	**Ranking**
60 or less	Poor
60 to 70	Fair
70 to 80	Good
80 to 90	Very Good
90+	Excellent

OA Tip: Keep in mind that some people underestimate and others overestimate their condition. Depending on when you send you materials out, the condition might look good if the person is active in sports but then during the summer they might be a couch potato.

6. Institutional Issues

A. Liability & Insurance:

Any program that takes groups into the wilderness must recognize that there are some risks. A carefully thought out program, with good staff, good equipment, and proper safety management, can be very safe. Unfortunately, outdoor activities are often misunderstood as inherently "high risk" even though it can be safer than many standard school sports programs (lower injury rates). Properly managed, the benefits from a WO can far offset the risks. As mentioned above, you need to do a thorough risk analysis to determine the potential hazards of your activities and determine the proper training, equipment, etc. required to operate with an effective margin of safety. If you are starting a new program, demonstrating your thoroughness will be an important part of gaining approval from your school.

Risk Assessment

It is important from an institutional prospective to identify the areas for possible liability and to take positive steps to reduce the possibility. Here are a few liability areas that have been mentioned above.

- Leader Training - Make sure your have staff that are properly trained. Keep you activities operating at a level that is appropriate for your staff.
- Drivers - Proper training and/or screening of drivers is essential if you will be transporting your students.
- Food Preparation - Poor sanitary practices either in food packing or food preparation on the trip can lead to the spread of communicable diseases.
- Screening & Placement - Proper screening and placement makes sure that participants are in a trip that they can handle.
- Environmental Hazards - Be aware of and prepared for the environmental hazards in your areas (bees, Lyme Disease, Giardia, etc.).
- Evacuations - make sure the proper emergency personnel are handling medical evacuations and transports.

OA Tip: We provide all participants with a handout at the end of the trip that explains the sins and symptoms of Giardiasis and Lyme Disease since the indications may not come up until well after the trip. See GIARLYME.DOC

Insurance

All programs will need some form of insurance coverage. This may be through the school's general liability policy or through a special policy just for the program. If you are doing a pilot project and hiring a professional outdoor program to run your pilot, insurance coverage may be provided by that program. In any case, develop a good relationship with your Risk Management or Insurance Office and with school legal counsel to make sure that your coverage, waivers, etc. are properly prepared.

7. Support & Funding

Cost for the program will vary greatly depending on institutional support, availability of staff, equipment, food and transportation costs etc. You will need to plan a careful budget to make sure that any fees properly offset costs.

OA Tip: Keeping close track of expenses on a spreadsheet will help you estimate costs for next year's program more easily. See EXPENSES.XLS.

A. Funding Sources

Programs may be funded by any or all of the following sources. Look carefully at your campus to determine where best to go for funds.

- Fees charged to participants
- Budget from the school
- Grants

B. Costs

Only your analysis will indicate what the program will cost. The sample spreadsheet showing the Outdoor Action Frosh Trip budget will give you some idea of the costs for a large program. (See EXPENSES.XLS.) Here are some of the categories you will need to consider.

- Printing & Mailings
- Food
- First Aid Equipment
- Group Equipment
- Facilities Usage
- Equipment Rentals
- Camping - fees & permits
- Bus Rental
- Van Rental
- Field Support Expenses
- Post Trip Expenses
- T-shirts
- Summer Labor
- Miscellaneous

Fees for the program must be determined based on a careful analysis of cost and income sources. It is possible for a WO to generate capital for funding other areas of the program. Also keep in mind what students will be comfortable paying and what levels of financial aid you can provide. The other question is how much of your overall program infrastructure costs are covered by the WO. For example:

- Leader Training Costs
- Full-time staff salaries
- Large equipment purchases

C. Financial Aid

When fees are charged, you should look at what provisions need to be made to provide financial aid for participants. A primary goal for most programs is that all interested students should be able to participate. In some cases, the fee for the program is higher than the cost and excess funds are used for financial aid. In other cases the school Financial Aid Office may provide funding.

8. Program Follow-up & Research

Debriefing

Debriefing is an essential part of the processing of a wilderness orientation experience. The debriefing process can take many forms, the essential parts of it are a sequnced series of questions that cause the participant to focus first on what happened during the trip, then on how they felt about the experiences, and finally what they feel they have learned from the experience. In order to provide the most effective transference of learning from the trip back to campus, trip leaders need to be properly trained in effective debriefing techniques. Sufficient time should be set aside on the trip for a debriefing at the end of the experience.

Post-trip Follow-up

Research throughout the outdoor education field indicates that follow-up is essential to maintain the levels of change in individuals. Colleges have a unique opportunity to maintain connection with trip participants over an extended period of time. There are a number of options for follow-up activities that reinforce the learning that takes place during the trip.

- Culminating Events - picnics, dances, talent shows, etc. that bring all of the groups together
- Group Reunions
- Multi-group events
- Community Service Projects
- Future Trips as a group

Studies

There have been a number of studies done on the effectiveness of Outdoor Orientation Programs

Effects of a Wilderness Orientation Program, Mike Gass, Journal of Experiential Education, 1987.
The Longitudinal Effects of an Orientation Program on the Retention of Students, Mike Gass, Vol. 31 - pp. 33-38, Journal of College Student Development, 1990.
Adventure Education, Miles & Priest, *Adventure Programs in Higher Education,* pp. 385-401, 1990.
The Outdoor Action Frosh Trip: Experimental Study of a Growth Experience, Rick Curtis, unpublished indepen-

dent work, Princeton University, 1978.

Other Resources

Wilderness New Student Orientation Programs: American Colleges and Universities, Jennifer Davis-Berman & Dene Berman, University of Dayton, September, 1995 available at http://www.princeton.edu/~rcurtis/berman.html

Processing the Adventure Experience,

[1] Adapted from An Assessment of Freshman Wilderness Orientation Programs in Higher Education: A Descriptive Delphi Study, Martha A. O'Keefe, University of Maine, 1989.