



OA Guide to Designing a Safety Management Program for an Outdoor Organization

by Rick Curtis

IThis article is designed to provide a short outline of the areas that should be evaluated in order to develop a comprehensive Safety Management Program for your organization. [Note: A number of legal issues are referred to in this article. Specific legal issues are far beyond the scope of this piece and because laws differ from state to state you will need to secure specific legal advice about these matters.]

I prefer the term Safety Management over Risk Management (which has a number of connotations). Safety Management has the more positive connotation of taking an active role to manage the safety of your program. At the same time, you cannot have a safe program without being aware of the potential risks and managing them as well as possible. No matter how well prepared we are, there will be accidents. By having a thorough Safety Management Program, you can significantly reduce the Accident Potential and the number and severity of accidents. [If you are not familiar with the Dynamics of Accidents Model developed by Alan Hale, please read the OA Guide to Outdoor Safety Management first.]

Every program is different—College and University outdoor programs, secondary school programs, professional outfitters, and recreational activity clubs (ex. Happy Hikers Tramping Club). Some have paid staff while others are all volunteer. Each organization will need to determine the amount of resources that can be reasonably allocated to a Safety Management Program. In order to determine the type of Safety Management Program to implement, every outdoor/adventure-based organization needs to do a thorough Risk Assessment Analysis.

Some might question the need for such an assessment. A recreational activity club might say, we only inform people about trips and all our folks are experienced, they sign a waiver and the club assumes no responsibility for them. My answer to that would be one still needs to do a thorough Risk Assessment. If, after that assessment, the club feels that its current policies and practices are sound, so be it. However, many clubs have simply adopted such practices by tradition without doing a thorough analysis.

As an outdoor program director, I feel that offering outdoor activities to client groups entails a responsibility to provide as safe an environment for enjoying that activity as possible. This is as true on a paid trip as it is with a free club trip, as it is when we go out with friends. I believe that those with greater knowledge and experience about the wilderness have an ethical obligation to share this knowledge with others to improve their capabilities to enjoy the wilderness safely.

1. Program Analysis

Safety Management begins with an in-depth program analysis to identify the areas of possible risk. This analysis should be performed on each activity that is offered. [In some cases, you might decide to do the analysis of your leaders first and then, based on the skill levels of your leaders, determine what activities you can offer at what levels (see below).] The analysis should include:

- **Activities** - the types of program activities (canoeing, hiking, rock climbing, etc.) will all have different types of Environmental Hazards and potential accidents
 - 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?
- **Populations** - there are a number of factors in the populations that you program for that can have impacts on safety. These include:
 - Age of participants
 - Previous experience - programs that are introducing new people to outdoor activities versus programs that are providing activities for experienced outdoorspersons or program with a mix of both.
 - Physical condition
 - Mental & emotional conditions
 - Willingness to participate - voluntary (free or paying to attend) versus required to attend
- **Locations** - the location of the activity is also an important factor
 - How much travel and what type of travel are required to get to the activity and return?
 - How will the participants or group travel? Individual cars, group vehicle, who is driving?
 - How remote is the activity? Activities that are more remote may require additional support and have less chance for rescue in an emergency. This may require the group to operate at a lower level of difficulty than in an area closer to “civilization.” For example, paddlers on remote whitewater rivers will often increase the rating of a rapid by one class because of the remoteness (a Class IV rapid would be considered a Class V in terms of the consequences if something goes wrong).
- **Weather** - typical weather for the activity, location, and season will be a significant factor in determining the experience level, physical condition, age, and experience level of those who are appropriate to go on a trip.

2. Participants

Who participates in the trip is important. There are a number of factors that define different levels of “relationship” between the participant and the sponsoring organization. As a result, there are different levels of responsibility both from an educational and ethical perspective and from a legal/contract perspective that develop between the participant and the sponsoring organization. These include:

- Is the participant paying a fee to go or is someone else paying (such as a parent), or is the person going at no cost?
- Is the person providing all their own equipment or is the sponsoring organization providing some or all equipment?
- How was the program advertised? Was it announced in some official publication or newsletter? Did the participant have to sign up or register in some way?
- Does the participant sign a waiver or release?
- What, if any, implied or explicit contract exists between the participant and the sponsoring organization?

3. Leaders & Leader Training

Who “leads” a trip varies greatly from program to program. In some cases there is a paid leader, in others the leader is a volunteer, and in some there is no leader, everyone just meets some place and goes (typically referred to as the “common adventurer model”).

The common adventurer model is a format often used by recreational activity clubs where no one is designated as a leader or officially in charge. In some cases, where the experience level of all participants is high, the common adventurer model works extremely well. All of the participants have the knowledge and experience to do the activity safely and clearly understand and accept the potential risks. For many clubs however, the club serves to introduce beginners to the outdoors and I believe this creates at least an ethical obligation to structure activities to provide a safe environment for participants who do not have the experience and judgment (yet) to understand and protect themselves from potential risk. This means that the organization is not just the activity (ex. hiking), it is about educating people about how to do the activity and do it both safely and with proper respect for the wilderness. This is the role taken on by the trip leader, teaching skills to those with less experience and managing safety for the group.

In any activity in which a designated leader is provided, one can identify certain base skills that that individual(s) should have in order to safely lead the trip. Clearly, individuals who are paid for leading trips can be considered professionals and can be required by the organization to meet certain standards for training and certification (such as having Wilderness First Responder or Wilderness EMT) in order to lead trips. However, what happens when the individual is a volunteer? How much training can you ask or require that volunteer to have? This becomes a real issue of balance. The volunteer is a paraprofessional who cannot reasonably be required to have the same skills as a professional. However, if someone breaks their leg on a trip, the volunteer may need a similar range of skills to be able to deal with the situation. Each program will need to determine the reasonable balance of skills and training necessary to lead trips safely. It is essential to balance the difficulty level of the trip with the level of experience and training of the leaders. Also, organizations should always be striving to improve the quality of leader skills and training.

Finally, there are some basic skills and equipment that should be present on any excursion into the outdoors (first aid knowledge, first aid kit, experience with the particular activity, etc.). If the participants don't have the knowledge to do this, someone has to take responsibility to provide these things, which falls back to the sponsoring organization, and, ultimately, an identified trip leader.

Based on these arguments, if a group is going to provide leaders on an activity, you need look at the Base Skills that are required. These include:

- **Activity Skills** - hiking, canoeing, backpacking, climbing, etc.,
- **First Aid & Emergency Procedures**
- **Knowledge of the Dynamics of Accidents Model & Safety Management**
- **Leadership & Group Dynamics Skills**
- **Understanding the Philosophy of the Organization** - an understanding of the goals and philosophy of the organization is important for trip leaders to both articulate why things are done a particular way and to effectively enforce policies, procedures and guidelines of the organization (see below).

In addition there are other issues that you will need to deal with when working with a pool of leaders.

- **Leader Skills Records** - maintaining records on each leader including such things as first aid and CPR training and/or certifications, other trainings, field experience, and trips led
- **Ongoing leader assessment** - some form of feedback/assessment is important both to the growth and development of the individual leader and to the overall safety of the program. When an individual is doing well, they need positive feedback about their performance. If someone is doing a poor job of leading, they cannot be expected to improve without honest, constructive feedback and direction. Following that, if the person does not improve, someone in the organization may need to tell them that they cannot lead until they improve. This can be a difficult step, especially with volunteers. However, failure to address a safety problem in leader behavior could lead to an accident.

- **Skill Updates** - skills get rusty if not used on a regular basis so some method of skill review/practice
- **Manuals** - providing manuals and reference material to take into the field for additional information can be extremely valuable.

4. Pre-trip Information

Participants need to be informed about a number of things before a trip goes out.

- **Activity** - type of activity, location, duration
- **Skill level/Difficulty level of the activity** - a measure of the difficulty of the activity (such as a Class III river trip or a Level C hiking trip). Having some rating mechanism, either universal, or developed by your organization or a detailed description of the trip is essential to help participants select a trip appropriate to their physical abilities and their experience level. It is also invaluable in screening participants (see below). In some cases the difficulty of the trip is not determined until the participants sign up in which case you will need to do a careful screening to determine what level of trip you can safely run with those participants.
- **Equipment Needed** - what the participant needs to provide and what if anything the organization will provide. In some cases, participants who do not have the proper equipment would not be permitted to go.
- **Policies** - participants need to be informed in advance of policies of the organization (such as no alcohol or drugs, no non-members, etc.)
- **Waivers, Assumption of Risk forms, etc.** - any such documents used but the organization should be administered to participants before the activity begins when they have an opportunity to read and carefully consider it and to decide whether to sign or not. If they choose not to sign, the organization's policies (see below) may indicate that the person cannot attend. Clearly it is best for this to happen beforehand not at the trailhead.

5. Participant Screening

Pre-trip screening of participants is important both to maintain safety for the individual and also for the rest of the group. If someone has a problem on the trail, the other group members may be called on to deal with it that could place them at risk. Part of the screening process is to educate the participant to decide whether a particular activity is right for them. If your obese brother wanted to get in shape by running in a road race, you would not suggest that he start by running a marathon. Rather you would guide him to work up at a reasonable pace of running until he was ready for a short race like a 5K. Self-screening is very useful which is why pre-trip information and a rating system can be very important (see above). Screening also means that you need to be able to "just say no" if you believe that person is not ready for the activity at that level or that their participation could create an unacceptable level of risk for other participants. Participant screening should include:

- **Medical History Information** - in order to get accurate information from participants it must be understood that this information will be kept confidential. As a trip leader, I may need to know that someone has a seizure disorder and understand what to do if they have a seizure on the trip. At the same time, the individual may not wish the entire group to know about their condition. This is another reason why a designated leader is useful. It establishes someone in the group who has responsibilities including the need to maintain confidentiality. Some of the things you may need information on include:
 - Health History
 - Allergies
 - Medications
 - Dietary restrictions
 - Required Immunizations
- **Physical Condition** - it is important to have an assessment of the participant's current physical condition (basic aerobic condition). This serves as a check on whether the person is physically capable of safely participating in the activity at the indicated difficulty level or, if the activity itself is based on the participants who

sign up, what level of trip should be planned.

- **Previous Experience** - a check on previous experience with the activity, how much, how frequently, at what level of difficulty and how recently is important. If someone signs up for a Class IV paddling trip and they haven't paddled Class IV in over 5 years, only a few Class II runs, you may want to really check out that person before letting them go on the trip, or "just say no." The most positive way to do this is to have the person go on a Class II warm-up trip first and see how s/he does.
- **Other Information** -
 - Address and phone
 - Medical Insurance Provider
 - Who to contact in an emergency
 - Permission for medical treatment
 - Equipment Needs
 - Special Needs

6. Trip Planning

Trip planning is essential to operating a safe program. There are a number of issues

- **Route**
- **Weather**
- **Equipment Needed**
 - Personal Equipment - what does the individual provide, what (if anything) does the organization provide.
 - Group Equipment - what (if anything) does the organization provide such as first aid kit.
- **File a Trip Plan** - whenever a trip goes out, a trip plan indicating the planned route and planned time of return should be filed with someone. This person should be contacted when the group returns. If the group does not return by a designated time, a procedure should be in place for what to do (call the rangers, etc.)
- **Who is in Charge?** - it is important that everyone understand who is in charge and under what circumstances. In the case of a trip with designated leaders they would typically be in charge unless someone else in the group has more experience (for example, a participant with more medical experience such as a EMT or physician might be the most appropriate one to take charge in the case of a medical emergency). In the case of a "common adventurer" trip there should be discussion about who is generally in charge for the trip and/or who is in charge in an emergency. All serious expeditions consider this an essential part of running a safe trip.
- **Emergency Protocols** - there should be some understood protocols for dealing with common emergencies (see policies, procedures, and guidelines below).

7. Participant Training

Whenever some of the participants are less experienced than the leaders or others in the group, education becomes an important role for the trip leaders and an essential part of a Safety Management Program. Your goal is to have the participants be looking out for their own safety. One of the important things to do is to teach the Dynamics of Accidents Model to all participants. There are a number of things to think about when teaching skills:

- Teach the Dynamics of Accidents Model - this encourages participants to actively manage their own safety.
- Utilize a Teaching Plan - develop a teaching plan that presents skills in a logical and orderly manner, building on skills that came before. This is important for successful skill mastery by the participants.

8. Policies, Procedures, & Guidelines

An important part of a Safety Management Program is defining policies, procedures, and guidelines for operation. These are defined below in descending order of strictness:

- **Policy** - a statement that establishes definitive parameters for program operation. For example, all participants and leaders on kayaking trips must wear a life jacket or all trip participants must sign an Assumption of Risk form. In general, something which is important enough to be considered a policy should be adhered to uniformly and consistently. Liability often arises from inconsistent application of policies.
- **Procedure** - a method for acting in a particular situation. Procedures are typically less mandatory than policies. For example, when doing a stream crossing with a backpack, the hip belt should be undone. Having this as a procedure gives some of the decision-making to the trip leaders. If the stream has only 6 inches of water in it, this procedure may not be necessary.
- **Guidelines** - a recommendation for how to proceed in a situation. For example, food should be hung in bear bags at night (sometimes this may not be possible).

There should be policies, procedures, and guidelines for each activity the organization engages in (hiking, canoeing, kayaking, rock climbing, etc.). What policies, procedures, and guidelines to use varies greatly from organization to organization. What one organization might use as a policy (ex. there must be two leaders with first aid certification on each trip) might be a guideline for another organization.

In terms of specific activities such as hiking, canoeing, kayaking, rock climbing, etc., there are a number of policies, procedures, and guidelines that are generally accepted within the outdoor industry. It is important for all organizations to understand that many of these exist as published standards. Regardless of whether your leaders are paid or volunteer or common adventurers, if you are doing an activity you will be held to that standard. For example, if an Outward Bound group goes top rope climbing and next to them on the cliff a Boy Scout group is climbing the accepted industry standards for setting up and operating both climbs would be the same regardless of the fact that the Outward Bound leader is paid and the Boy Scout leader is a volunteer.

The most complete documentation for these standards is found in *The Manual of Accreditation Standards for Adventure Programs* published by the Association for Experiential Education. There are also a number of agencies and organizations that provide similar standards such as the American Camping Association and the Girl Scouts of America for a broad range of outdoor activities, and groups that set standards for specific activities such as the American Canoe Association, the British Canoe Union for paddling. You should also seek out organizations similar to yours to determine what they are doing and how successful (or not) their policies, procedures, and guidelines have been to their Safety Management Program.

9. Incident Data Collection & Analysis

When an accident occurs, it is essential to collect detailed information about what happened, analyze it carefully, and determine if there are changes that need to be made in the program to reduce the possibility of a similar incident occurring in the future.

- **Accident Reporting** - there needs to be a reporting structure that includes a written report of the incident. There also needs to be an established threshold for what should be reported (obviously every Band-Aid or piece of Moleskin applied in the field does not require a written report).
- **Close Call Reporting** - there are more close calls and near misses than there are actual accidents. If you only analyze accidents, you are missing the big picture and may be leaving important safety issues unresolved. There should be a reporting structure that may include a written report. For example, a kayaking boat pin

where no one was injured counts as a near miss and should be carefully analyzed.

- **Data Analysis** - a structure should be developed for routinely examining accident and close call reports to evaluate Environmental Hazards and Human Factor Hazards that contributed to the incident and to determine if there are policies, procedures, guidelines, training, or equipment which could help either prevent the incident in the future or give leaders a better ability to respond to it if it happens again. In the kayaking pin example above, this might mean that although pins cannot be prevented, leaders could be trained in river rescue techniques to extricate a person from a pin. Often the data analysis is performed by a Safety Officer or Safety Committee.
- **Implementing Program Change** - following data analysis there needs to be structure for implementing the recommendations into the trip operation. The implementation of program change may be done by a Safety Officer, Safety Committee, or another body within the organization.

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