

The Canadian Adventure Racing Association

Environmental Charter
January 2006

Minimum Standards for the Conduct of
Environmentally Conscious Adventure Racing

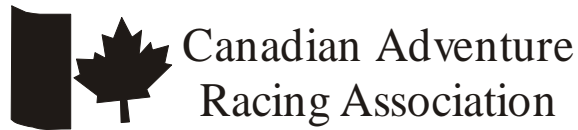


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Part 1 – Introduction

1 Overview

1.1 About the Canadian Adventure Racing Association

Incorporated in 2003, the goal of the Canadian Adventure Racing Association is to help ensure the sustainability of the sport in Canada through the establishment of national safety guidelines, an environmental charter, and continued advocacy for the sport at both the provincial and national level.

1.2 Scope

These guidelines provide the minimum requirements for the conduct of environmentally conscious adventure races. These guidelines do not specify the requirements for every conceivable activity or environmental condition. The onus is on all Race Management to ensure that they undertake a thorough assessment of the environment prior to activities to ensure that additional requirements are considered, and if required undertaken.

1.3 Purpose

- (a)** Adventure racing can occur in either an urban or a wilderness setting. Urban environments have been established for human usage and any additional impact to the environment from adventure racing in an urban setting would be considered negligible. This charter is primarily concerned with races that occur in a wilderness setting. These races will always include an inherent risk of disturbing the natural environment in which the race is set; however, most of these risks can be minimized with thorough planning, detailed communication, and a conscious effort by all involved in the race. Well-run races will:
 - (i)** Minimize environmental impact
 - (ii)** Ensure that participants respect the land, cultural resources, water and inhabitants, and
 - (iii)** Add to the enjoyment of the participants, most of whom enjoy and appreciate the natural landscape encountered during an adventure race
- (b)** The purpose of this charter is to promote environmentally conscious, well-run and enjoyable adventure races. This charter plays an important role in fulfilling the Canadian Adventure Racing Association’s mandate to promote an environmental consciousness within the sport. This charter:
 - (i)** Provides details on managing environmental concerns before, during and after a race
 - (ii)** Establishes minimum guidelines for specific modes of travel involved in adventure racing (e.g. off road travel on foot, water travel, etc.)

1.4 Definitions

- (a) **Adventure Racing:** any “multi-sport” event requiring competitors (teams or individuals) to navigate a wilderness, or urban race course marked by check points (CPs) from a designated starting point to a designated finishing point. The race route may or may not be provided to competitors in advance of the start. The duration of the event may range from several hours to multiple days.
- (b) **Association or CARA:** The Canadian Adventure Racing Association.
- (c) **Check Point (CP):** A checkpoint is a manned, or unmanned location on a racecourse designated by UTM (Universal Transverse Mercator) grid coordinates that must be visited by a racer during the event.
- (d) **Landowner or Land Management Agency:** The local person, business or organization that holds the title to the property upon which the race will take place.
- (e) **Race Management:** Person or persons responsible for managing a given event. This person is the ultimate decision maker before, during, and after the event.
- (f) **Racer:** an individual who is competing in a given event and has completed all necessary waivers, and documents required by CARA and the Race Management. A racer also has the necessary skills to participate in an event and is able to demonstrate these skills to the appropriate standard prior to competing.
- (g) **Remote location:** A region where there is infrequent contact with high volume roadways, homes, or town centers for competitors.
- (h) **Transition Area:** A manned checkpoint where competitors are required to switch sporting disciplines.

2 Environmental Considerations for Course Design and Management

2.1 Introduction

The purpose of this section is to provide general environmental guidelines that should be considered by all Race Management. Not all of the following items are necessarily required for each race and the Race Management should review the guidelines to determine what measures are appropriate for their type and level of event. This is a guideline for minimum environmental requirements and the Race Management is encouraged to use any additional environmental resources available. Please refer to the attached worksheet in Appendix A.

2.2 Definitions

1. Course design and management is defined as the manner in which a racecourse is set up, documented, permitted and staffed. It includes several considerations based on varying levels of event.
2. Race Administration is defined as any staff or volunteers who are overseeing the race.

2.3 Permits, Notification and Documentation

A permit must be obtained, if necessary, from the appropriate government jurisdictions and/or private landowners in the area of the course. Government agencies may include, but are not limited to, any of the following:

- Provincial Land Management Agencies (e.g. Sustainable Resources Development/Forestry Service, Ministry of Environment, Ministry of Natural Resources, etc.)
- Parks Canada/Parks and Protected Areas
- Coast Guard/Navigable Waterways Protection
- Municipal Districts and Counties
- Local Conservation Authorities.

This allows local officials to be prepared for the event and to give environmental suggestions. These agencies should also be allowed to express any concerns regarding the race and make specific binding conditions related to the issued permits. These conditions should be made in writing to avoid misunderstandings. Race Management should carefully review and follow these conditions. For specific contact information for some of these agencies, please see Appendix B.

At the end of each race, a race evaluation should occur to identify environmental concerns that occurred due to the race. These issues should be reviewed and discussed with the landowner or land management agency after the event. This will help to ensure the future use of the race site.

2.4 Assessment of Course Environment

The racecourse must be thoroughly scouted prior to the event to ensure that the Race Management is aware of environmental issues specific to the site of the race. It is also important to seek out local knowledge, maps and guidebooks to help understand any concerns that might not be readily apparent. Environmentally sensitive areas must be identified (e.g. wetlands, marshes, rare plant habitats, important wildlife areas, etc.) and be avoided to the greatest extent possible. If necessary, written instructions, signage and/or flagging will be used to prevent access to environmentally sensitive areas. If it is deemed that the race must travel through such areas, and permission is received to do so, sufficient precautions must be taken to minimize environmental impact (please see

Section 6 Travel Through Environmentally Sensitive Areas). Also, please note that some areas are protected by law and cannot be used for adventure racing.

All water crossings are the purview of the Navigable Waterways Protection branch of the Canadian Coast Guard and a permit must be obtained to establish such a crossing.

2.5 Checkpoint Planning

Since checkpoints are high traffic areas of the race, Race Management should carefully plan potential checkpoint locations. For the purposes of this document, locations will depend on the climate, terrain, wildlife, and any other environmental considerations, with the goal being to minimize erosion and reduce environmental disturbances, both at the checkpoint location, and along access and regress routes to the checkpoint.

Checkpoints are an effective method to avoid sensitive areas. When Race Management plan checkpoints, they should spent significant time assessing the impact that various potential checkpoints may have on the environment. When competitors take an extended rest period they tend to use the CP/TA to do so, therefore it is vitally important that Race Management realizes this when choosing the CP/TAs. Placing checkpoints around sensitive areas can ensure that most racers will not even be tempted to enter such areas.

2.6 Communications

Race Management should inform all racers of any race specific environmental concerns prior to the start of the race. This includes, but is not limited to, the general guidelines (e.g. concerning campfire, waste, wildlife, etc.) and the guidelines for specific modes of travel (e.g. off road travel on foot, off road travel on bicycles and water travel) that are covered in the remainder of this charter.

The onus of responsibility lies with the Race Management as well as the racers on the course. The Race Management is responsible for setting up an environmentally conscious course that will allow racers to use environmentally conscious race practices. Race Management should utilize the pre-race meeting to emphasize the importance of environmentally conscious race practices and should make it clear that each racer will soon be directly responsible for their own environment practices.

Part 2 – General Guidelines

These general guidelines are largely based on the recommendations of the Leave No Trace Center for Outdoor Ethics (<http://www.lnt.org/>), Adventure Racers for the Environment (ARFE) (<http://www.arfe.org>), and the environmental charter of the United States Adventure Racing Association (USARA) (<http://www.usara.com/>).

3 Campfires

3.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken when dealing with campfires. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

It should be noted that the use of campfires is not the norm for most adventure races. However, they may be deemed appropriate in very specific situations or in emergency situations. The inclusion of this section on campfires is not to encourage their use but simply to provide some guidelines for the rare cases in which campfires are used.

3.2 Definitions

The term “campfire” refers to any outdoor fire that is intentionally human-made and maintained. A campfire may be used for several reasons, such as for warmth or for cooking.

3.3 For Race Management

Prior to the race, it is the responsibility of the Race Management to be aware of any fire rules or restrictions. Race Management must follow all such rules or restrictions. It is the responsibility of the Race Management and appropriate government departments to clearly communicate these fire guidelines to the racers (i.e. some areas will put a campfire ban in place if there is a prolonged dry spell and forest fire risk is high), to be aware of how to report a wildfire, and to have a general communication and evacuation plan in place in the event of a wildfire.

3.4 For Racers

All racers should be informed of the campfire rules or restrictions of a particular race and, more importantly, all racers are to follow them. Racers should also know how to report a wildfire.

When deciding whether or not to build a fire, racers should remember that building a fire could potentially cause damage to the environment by utilizing natural resources and increasing the risk of forest fires. Racers should be aware that in many jurisdictions, the full cost of suppressing a wildfire could be billed to the person responsible for causing the fire. When permitted, use a camp stove, which is environmentally preferable to a campfire for cooking purposes. If racers are not permitted to use camp stoves and do decide to build a fire, care should be taken to minimize any damage the fire may cause.

If it is determined that a fire is permissible and necessary, local government guidelines regarding the handling of fires must be followed. In the absence of such guidelines, consider the following points:

1. Chose a fire site carefully. When available, use existing spots designated for campfires. If there is no such location, look for an area of bare ground (with no undergrowth) that ideally has at least a 3-meter (10-foot) diameter. If necessary, clear any grass, twigs, needles, firewood, organic soil or anything else that is flammable, from the circle and build the fire on mineral soil. Also ensure that there are not any trees or combustibles overhead. Remember that on windy days, sparks and other burning material could travel large distances. When it is extremely windy or you cannot clear a large enough area, do not build a fire at all.
2. Keep your fire as small as possible. Use only sticks from the ground that can be broken by hand. Do not use trees, standing or fallen, as they are home to birds and insects and should be left intact.
3. Always stay with your campfire. Have water and sand close by to keep the fire under control.
4. Try to burn all wood to ash before putting out the campfire. Thoroughly extinguish all fires by drowning the fires in water, sand, or dirt. If you simply cover the fire with sand or dirt instead of using water, the flame may extinguish, but heat will remain, and could re-ignite or cause someone harm. Also, never walk away from any smoldering embers. Don't leave a fire until it's "out cold". Placing your hand into the ashes in several places can help assess whether the fire is out. Ashes should be cool to warm, but not hot.
5. After the campfire is out cold, "disguise" the area by scattering the cold ash and unused wood.
6. The best campfires will leave no trace of their existence. Leave the area looking as natural as possible by doing things such as scattering unused wood and scattering fire circles.

4 Campsites

4.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken when choosing and staying at a campsite. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

4.2 Definitions

The term “campsite” refers to any outdoor, area that is chosen as a place to stop or rest at.

4.3 For Race Management

Prior to the race, it is the responsibility of the Race Management to be aware with the landowner or land management agency about any campsite rules, restrictions or preferable practices. This may include local government or park guidelines. Race Management must follow all such rules, restrictions or preferable practices. It is their responsibility to inform all racers of acceptable campsite practices. This should be done prior to the start of the race. If there are certain restrictions on where a campsite can be made, Race Management should provide the racers with a written description of these details and/or post prominent signs in these areas to notify racers.

4.4 For Racers

All racers should be informed of the campsite rules or restrictions of a particular race and, more importantly, all racers are to follow them. Local government or park guidelines regarding camping must be adhered to.

When deciding whether or not to stop, racers should remember to minimize any damage to the campsite area, and therefore chose a campsite carefully. A good campsite is one on a durable surface, 200 feet (~70 adult steps) from water, minimally vegetated and away from obvious animal habitat. Expanses of rock, gravel or sand are all excellent choices. Avoid camping on sensitive vegetation and soils (such as crytobiotic soil [a dark, castle-like crust commonly found in the desert], islands of vegetation or within the green ribbons of desert creeks or streams).

Remember that good campsites are found, not made. Altering the site should not be necessary.

5 Leave What You Find

5.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken before, during and after the race to ensure the least amount of environmental disruption occurs as a result of the race. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

5.2 Noise Control and Other Users

Please be aware of the level of noise disruption. Land users should respect and not disturb other land users. In areas frequented by other land users, Race Management and

racers should be kind and courteous at all times, and recognize the group impacts on the “wilderness” experience of other wilderness users

5.3 For Race Management

Before the race begins, all Race Management visiting the site for the purposes of design or preparation should attempt to plan their race such that it causes as little environmental disruption as possible. The natural environment should not be changed or altered to fit the race; the race should be created to fit the natural environment. Always remember this rule when planning the race. The importance of the planning stage for Race Management cannot be stressed enough. This is their opportunity to spend an adequate amount of time considering environmental conditions. This means it is the Race Management responsibility to learn about the region. For more details on setting a racecourse, please consult section 3.4 from the Canadian Adventure Racing Association Safety Guidelines. For your convenience, a brief has been included below.

The racecourse must be thoroughly scouted prior to the event to ensure that the race administration is aware of potential environmental hazards. It is also important to seek out local knowledge, maps and guidebooks to help understand any environmental hazards that might not be readily apparent. Areas where there is a likelihood of encounters between racers and other area users must be identified (i.e.: popular dirt bike/quad trails, forestry equipment). The Race Management must understand what the likely nature of this encounter will be. The course must not go through areas that put the racers in high-risk situations such as cliffs, waterfalls, rockslides or water that is difficult to navigate or contains numerous obstacles. If necessary, written instructions, signage and/or flagging will be used to steer racers away from hazards. If it is deemed that the race must travel through such an area, sufficient warning must be given to racers so that they can make informed route choices.

All structures erected as part of the race, e.g. signs, tents, check point areas, etc., should be temporary and easy to remove. Access points to the racecourse should be pre-existing roads or trails and should be travelled on only by vehicles designed for that access.

Convey the importance of shared stewardship and responsibility with the racers. Approach the issues from the perspective of it being the “right thing to do” rather than “the land manager says we have to.” Good manners, and good environmental ethics, are contagious. Where possible enlist racers and enthusiasts to be active participants in environmental planning, operations and clean up.

After the race, the site of the race should be cleaned up so that there is no trace of the event. All structures erected as part of the race should be removed. Any litter or loose debris should be disposed of and removed from the site. Natural objects should not be disturbed or removed. Stapling or nailing signage to trees should be avoided. Any flagging tape used should also be removed.

Again, it is important that organizers follow-up with land management agencies directly after the event to ensure sites are left in satisfactory condition.

5.4 For Racers

Racers, organizers, and the sport itself are viewed in light of how we impact the land, waters, wildlife and other land users. Please do your part, do your best, and encourage others to do the same.

Natural settings are filled with rocks, plants and other items of interest. Allow others to enjoy these objects by leaving them as you found them.

Do not alter the environment but work with what you have. Do not build any structures, furniture, or dig trenches. If you do move something, be sure to put the item back how you found it.

6 Travel Through Environmentally Sensitive Areas

6.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken when traveling through environmentally sensitive areas. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

On all types of terrain, but especially in remote locations, the goal of environmentally conscious travel is to practice minimum impact travel. Avoid places where impact is just starting to show. Always chose to travel on the most durable surfaces available: rock, gravel, sand, compacted soil, dry grasses, or snow.

6.2 Definition

The term “environmentally sensitive areas” refers to areas, land or water, which remain largely untouched but humans (i.e. this would exclude trails, roads or bridges that are man-made). Environmentally sensitive areas may include, but are not restricted to, alpine/mountain areas, coastlines, deserts, wetlands, river corridors and coastal rainforests. Environmentally sensitive areas can also include wildlife nesting sites, gathering and wintering areas. It is up to the Race Management to identify those areas that are deemed as “environmentally sensitive areas” as they are unique to their area.

6.3 Alpine

Alpine areas refer to high mountain areas above the timberline. While travelling through alpine terrain, please keep in mind that the growing season is short at high altitudes and the environment can be extremely cold. This short growing season often results in stunted and slowed growth for plant species in this environment. Soils also tend to be

thin, wet or otherwise vulnerable to erosion. If there are designated hiking and biking trails, stay on them and give the fragile ecosystem an opportunity to thrive. Otherwise, try to spread out to avoid creating concentrated trails.

6.4 Coastal

Coastal areas include all land areas that border oceans and lakes. Minimize your travel time in such areas, which can be easily impacted.

When you must travel in coastal areas, travel on the most durable surface possible and avoid stepping on vegetation. Along stretches of coastline where there are no designated trails, spread out to reduce concentrated erosion. Hiking at low tide is generally best because the hard sand, gravel or rock of the intertidal zone (the area between the highest and lowest tides) is exposed. In this area you should still be careful to avoid crushing intertidal life such as mussels and barnacles. Hiking at high tide usually causes greater impact because the higher ocean level may force you to walk on fragile vegetation.

Dune erosion occurs when coastal wind and wave action causes dune blowouts and sand drifts that wear away at the delicate coastland. Vegetation acts as an important natural buffer by absorbing the effect of short-term coastal erosion, allowing the area to repair itself naturally. Thus, it is extremely important to avoid trampling vegetation, which performs a protective function against erosion.

6.5 Desert

A desert is a landscape form or region that receives little precipitation. Cryptobiotic soil can be found in the desert and looks like a dark, castle-like crust that is a conglomeration of algae, fungi and moss. Cryptobiotic soil is an important barrier to direct erosion, and is one of the only things in the desert that fixes nitrogen, transforming the sand into soil. This is invaluable to the dry desert ecosystem. One footprint can easily destroy a natural soil-stabilizing process that involves years of growth. Take great care to avoid stepping on cryptobiotic soil. If it is absolutely necessary that you travel on cryptobiotic soil, it is best for people to follow one another so that the smallest area of this soil is affected.

6.6 River Corridor

A river corridor consists of the narrow strips of land and corresponding bands of vegetation that are found along the edges of a river. Because river corridors are so narrow, there can be little room to disperse human activities. Due to their sensitivity, river corridors may be strictly regulated. However, even unregulated rivers corridors should be treated sensitively.

If you must travel along a river corridor, travel on the most durable surface possible and avoid areas of vegetation. If designated trails are not available, spread out to reduce erosion.

6.7 Wetland

Wetlands include marshes, swamps, and bogs and are transitional areas between land and water bodies and are homes and nesting sites of innumerable animals. They may be covered in shallow water most of the year, or be wet only seasonally. Wet meadows and other fragile vegetation show the effects of travelling much faster than more durable dry grasses. Therefore, you should only cross a wetland when absolutely necessary.

When you must travel through wetlands, avoid vegetation wherever possible, especially on steep slopes where the effects are magnified.

6.8 Critical Habitat

Some plant and animal species require specific environmental conditions that limit the geographic area or times in which they are able to live, breed, feed or raise their young. Race Management is asked to try to plan the racecourse such that racers are able to navigate using minimum impact travelling. Local wildlife and land management agencies are able to assist in the identification and avoidance of these areas. In some cases, agencies may want to minimize ‘broadcasting’ the details of this information to reduce the numbers of curious two-legged visitors. Please respect these wishes. In other cases, damage to certain species is not only detrimental but may be illegal (as per the Species at Risk Act available at http://www.sararegistry.gc.ca/default_e.cfm).

6.9 For Race Management

Try to plan the racecourse such that racers are able to navigate using minimum impact travelling. Contact the landowner or land management agency to inquire about sensitive environmental areas. Respect the requests of the landowner or land management agency and design a racecourse in which environmentally sensitive areas clearly as out-of-bounds.

Avoid placing a checkpoint or transition area in an environmentally sensitive location. This can greatly reduce the amount of disturbance caused by the race.

6.10 For Racers

While racing, always heed the above guidelines to practice minimum impact travelling. The majority of the time, you will be travelling in a remote location. Appreciate the landscape and make an effort to leave no trace on it. Also, try to avoid taking breaks or stopping in the middle of an environmentally sensitive area. You want to reduce the amount of time spent in such areas. If you must pause, try to do so on the most durable surface available and away from vegetation.

When areas of the racecourse are marked as out-of-bounds, they are done so for a reason. Respect both the instructions of the Race Management and the fragility of the land by staying out of these areas. Participants shall not deliberately enter any areas that have visible signs or are shown on the race map as out-of-bounds. Also, participants are not to

relocate or remove any signs that indicated an area is out-of-bounds. A participant who realizes they have entered an out-of-bounds area should leave the area immediately, following the guidelines above.

7 Travel on Roads and Established Trails

7.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken when traveling on roads. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

7.2 Definition

The term “roads and established trails” refers to identifiable routes constructed for the purpose of concentrated use. Roads and established trails may include, but are not restricted to, major highways, gravel or dirt trails, paved driveways and bridges.

Staying on the road reduces the likelihood that multiple routes will develop and damage the landscape. Even if the road or trail is wet or muddy, stick to the road or trail to avoid widening it.

7.3 For Race Management

Try to plan the racecourse such that racers can take advantage of any already existing roads. The majority of sites will consist of largely untouched wilderness and will give participants plenty of opportunity to enjoy the natural terrain. If roads do exist, try to incorporate them to minimize impact on the area.

Place prominent signs and/or use a map to indicate where racers should be using roads. For example, you may wish to indicate on a map, given to racers prior to the start of the race, where mountain bikes are to follow a gravel biking trail. Signs should then also be placed around the trail to encourage participants to stay on the trail.

For more details on cycling safety while on roads, please consult Section 3.7 Communicating with Vehicular Traffic During the Race from the Canadian Adventure Racing Association Safety Guidelines.

7.4 For Racers

When available, use roads, trails, designated crossings, and bridges to minimize impact. Allow enough space on the road for other racers or other people who may be using common roads. Respect both the instructions of the Race Management and the fragility of the land by staying on roads when available.

8 Waste

8.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken when dealing with waste. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

Just as it is encouraged that you leave what you find, it is also extremely important that everyone involved in the race clean up after himself or herself. Remember: “pack it in, pack it out”. Always carry out with you any extra material that you brought in.

8.2 Definition

The term “waste” refers to anything that humans have brought into the environment that does not naturally belong there. Waste may include, but is not restricted to, human waste, trash, food leftovers and litter.

8.3 Animal Waste

When a domesticated animal is brought onto the site of a race, all care must be taken to clean up after the animal. For example, all animal waste and excrement should be removed from the site and disposed of. Waste removal/management should be in accordance with the specification of the landowner or land management agency.

8.4 Food Waste

All food waste, including leftover food or food packaging, should be packed up and removed from the site of the race. Sort cans, glass, plastic and compost recycling after you have left the race site. Littering is not tolerated.

8.5 Human Waste

Proper disposal of human waste is important to avoid pollution of water sources, minimize the possibility of spreading disease, minimize aesthetic impact and maximize the rate of decomposition.

Catholes

In most locations, burying human feces is the most effect disposal method. Catholes should be dug to create a hole about 6-8 inches deep and 4-6 inches in diameter. It is important to locate catholes at least 200 feet (~ 70 adult steps) from water, trails and campsites. Try to find an inconspicuous site where other people are not likely to walk or camp. Ideally, a site with deep organic soil (usually dark and rich in colour, and more

common in forested areas that desert areas) and maximum sun exposure will help decomposition.

In arid lands, human waste does not decompose as quickly. Therefore, in the desert, catholes should be only 4-6 inches deep. This allows the heat and sun to hasten the decay process and kill pathogens. South-facing slopes and ridge tops tend to have more sun and heat exposure.

Once used, the cathole should be covered with the original dirt and disguised with natural material such as sticks or rocks. To further aid decomposition, try to keep catholes dispersed from one another.

Toilet Paper

Use toilet paper sparingly. Only plain, white, non-perfumed brands or natural toilet paper should be used. Popular types of natural toilet paper include stones, vegetation and snow. Toilet paper should either be placed in a plastic bag and carried out or buried thoroughly in the cathole. Do not burn toilet paper.

In arid lands, placing toilet paper in plastic bags and carrying it out as trash is the best way to dispose of toilet paper.

Feminine Products

Feminine products should also be placed in plastic bags and carried out as trash.

Urine

Urine usually has little direct impact on vegetation but may erode or rapidly biodegrade soil. However, some wildlife species are attracted to the salts in urine and will then dig up nearby plants or soil. It is best to urinate on rocks, pine needles or gravel, which are less likely to attract wildlife. When possible, dilute urine with water from a water bottle to minimize negative effects.

8.6 Wastewater

If necessary, disperse dishwater at least 200 feet (~ 70 adult steps) from any water source such as springs, streams, rivers or lakes. If you use soap, use only small amounts of biodegradable soap, also 200 feet away from water.

8.7 For Race Management

Prior to the race, it is the responsibility of the Race Management to be aware of waste rules or restrictions imposed by the landowner or land management agency. Race Management must follow all such rules or restrictions. It is their responsibility to inform all racers of waste management practices. For example, solid human waste in narrow river canyons may need to be packed out instead of buried. Racers should be informed of such practices prior to the start of the race.

8.8 For Racers

In general, racers are to know and abide by the above waste management practices unless specifically told of a modification by the Race Management. Changes may be made to suit environmental concerns specific to the location.

9 Wildlife (Flora and Fauna)

9.1 Introduction

The purpose of this section is to provide written descriptions of the environmental precautions that should be taken to ensure all wildlife are respected. These are overall guidelines, and more specific environmental precautions may be appropriate depending on the climate, terrain, wildlife and any other environmental considerations. Race Management and individual racers should review these precautions and are responsible for determining what measures are applicable and appropriate.

9.2 Definitions

The term “wildlife” refers to all living things (except people) that are undomesticated. Wildlife includes both flora (local vegetation) and fauna (animal wildlife).

“Animal wildlife” or “fauna” refers to all animals that are undomesticated. Animal wildlife may include, but is not restricted to, birds, mammals, amphibians, reptiles, and fish.

“Vegetation” or “flora” refers to all plant life living in the area.

9.3 Animal Wildlife

Since quick movements and loud noises can be very stressful to animals, it is important to take all reasonable precautions not to alter the normal activities of local animal wildlife.

Observe wildlife from afar such that they are not scared and forced to flee (for an exception to this, please see **Section 9.5 Bears**). Do not touch or feed wild animals – wild animals should stay wild. Feeding wild animals can damage the animals’ health, disturb natural behaviours and expose the animals to predators and other dangers.

9.4 Vegetation and Water Sources

Vegetation is habitat and food to wildlife and stabilizes the soil. Do not damage trees, making an extra effort to avoid damaging bark or roots. If using horses, tie the animals to highlines rather than directly to trees. It is unacceptable to carve into the bark of a tree. Also, do not uproot any vegetation, including small plants and flowers. The effects of picking a few flowers will have significant cumulative effects on the natural vegetation in the area. If you encounter a plant that you know is edible, take care not to deplete the

plant as a resource and do not disturb plants that are rare or slow to reproduce. Please bear in mind that certain species (and sometimes entire areas) are under legal protection.

Take precautions to prevent introducing invasive species to areas. Non-native seeds, pods, burs and the like can stick to clothing, gear or vehicles and be present in animal feed. After habitat loss, the introduction of exotic species is the number one reason for species extinction. Help keep the backcountry from looking like a roadside ditch by cleaning clothing, vehicles and gear between events and using weed-free feed for horses.

If you choose to stay in one area for an extended period of time, never scrape away or clean sites of organic litter like leaves. This organic litter helps to cushion the ground from trampling, limits the compactability of soils, releases plant nutrients and reduces the erosive effects of rainfall. Also minimize moving rocks or gravel, that can be difficult to replace and can disturb lichens and varnish.

Care should be taken not to disrupt an animal's natural habitat, including food and water sources. Allow animals free access to water sources by giving them space to feel secure. If possible, camps should be located 200 feet (~ 70 adult steps) or more from existing water sources. In the desert, it is especially important to reduce human impact on animals' drinking habits. By avoiding water holes at night, you will be less likely to frighten desert dwellers, which are usually most active after dark.

Many watercourses also serve as drinking water sources for residents and communities. Take efforts to prevent anything from entering these waters that you would not be willing to drink.

9.5 Bears

Under normal circumstances, Race Management and racers are encouraged not to disturb wild animals. However, when travelling in a region that is known to have a bear population, it is suggested that you make some noise (e.g. sing or talk loudly). Other bear guidelines include:

- Travel in groups when possible.
- Use caution near natural bear foods such as berries, nut crops and fish.
- Keep food and leftovers properly sealed, stored away, and out of reach. Although it is not usual to be camping for an extended period of time in an adventure race, if this situation does occur, it is best to tie your food up high with a line strung between two trees. If trees are not tall enough, place food in several layers of zip lock bags (to reduce food smells). Food is best stored away from your actual campsite, ideally several hundred meters away.
- Stay away from any dead animals, as bears are known to defend carcasses.
- Watch for bear signs such as tracks, scat (bear droppings), fresh diggings, large overturned rocks or rotten logs. Be especially cautious where cubs may be present.
- Do not try to attract a bear but respect its space and its habitat.

Grizzly bears usually avoid contact with humans when possible. However, if a grizzly is cornered, threatened, or surprised, it can be very aggressive, and will usually stand its ground or charge. Black bears are often less aggressive and tend to flee from danger. However, because they are more curious and adaptable, they may develop aggressive food-seeking habits if they become accustomed to human activity. Thus, the potential for personal injury exists in both black bear and grizzly country. The precautions in this section should be taken when traveling in any area that is known to have a bear population.

If you happen to encounter a bear, the worse thing you can do - and probably your first instinct - is to turn and run. Ensure the bear has an escape route and then begin to yell and wave your arms to appear as large as possible. You want to appear as a threat to the bear. Slowly back away from the animal. If bold, the bear may charge. Greater than 90% of all charges are bluffs but you want to be prepared. Leaving behind an object such as a backpack or jacket can buy you time to retreat. Your last possible course of action is to physically attack the bear with anything you can find.

9.6 Sick or Injured Animals

If you find a sick or injured animal or an animal in trouble it is best to notify the correct authorities – such as a Park Warden, Conservation Officer, etc. If you are a racer, you can notify race personnel including Race Management, staff, or check-point volunteers such that they will notify the correct authorities. Sick or injured animals may still carry diseases or may wound a well-meaning person. Parents may abandon young animals if humans get too close to them. Although these animals may seem “orphaned” already, the mother is often not too far away. Under no circumstances should wildlife be picked up or moved. It is important to notify the proper authorities as they are trained to deal with these issues.

9.7 Domesticated Animals

Besides horses or other beasts of burden that may be part of the race, it is uncommon to allow other domesticated animals onto the site of an active adventure race. However, pre- and post-race visitors and all race spectators should keep pets controlled or not bring these pets along at all. Do not allow any domestic animals to run loose. Domesticated animals may frighten wild animals or alter the wild animals’ natural habitat. Racers crossing areas where domesticated animals are present should ensure that all gates and fences are left as found.

For written instructions on how to deal with animal waste, please see **Section 8.3 Animal Waste**.

9.8 For Race Management

Before the race, Race Management should carefully design their race to avoid routes that greatly disturb known populations of wildlife or species at risk. Race Management should inquire with local agencies, such as provincial land management agencies or Parks Canada, as well as any Fish and Wildlife agencies, to inquire about the local wildlife.

Race Management are to respect the designations of such authorities and plan their race accordingly. Special consideration should be taken to avoid wildlife during sensitive times (e.g. when mating, raising young).

In preparation for the race, do not introduce non-native species (plant or animal) to the area. Likewise, do not transport existing vegetation or animal wildlife to accommodate the race. The race should accommodate existing wildlife.

9.9 For Racers

During the race, it is important that racers take the above wildlife precautions. Also, racers should be mindful of storing food properly. Food should be tightly sealed and safely secured. Open containers and loose food can unnecessarily attract wildlife and disrupt their natural environment. For instructions on dealing with food waste, please see **Section 8.4 Food Waste**.

Part 3 – Specific Modes of Travel

10 Off-Road Travel on Foot

Keep in mind that roads and established trails should be utilized whenever possible (please see **Section 7 Travel on Roads and Established Trails**). However, when they are not available, both Race Management and racers should take all possible precautions to minimize erosion and damage caused by off-road travel on foot. Essentially, everyone involved in the race are encouraged to practice minimum impact travelling and to tread lightly. For more specifics on this, please refer to **Section 6 Travel Through Environmentally Sensitive Areas**.

11 Off-Road Travel on Bicycles

11.1 For Race Management

Plan to use established trails whenever possible. However, seasonal and weather conditions should be considered before selecting mountain bike routes. Trails should not be ridden when they are still soft (this is usually when the trails have just thawed in spring). Wet and muddy trails should also be avoided as riding on such trails can cause unnecessary trail widening and erosion that may lead to long-lasting damage. Consult with the landowner or land management agency as bike travel may be prohibited in some areas.

11.2 For Racers

Racers should ride on established trails whenever possible. Ride in the middle of the trail to avoid widening the trail and unnecessary erosion. Do not cut switchbacks (i.e. do not short-cut a zigzagging trail by riding straight through the trail). Avoid hard breaking and locking up your wheels. Be especially careful on soft, wet trails by riding gently and never skidding. If you encounter a puddle, ride straight through it, not around it. If everyone goes around the outskirts of a puddle, it damages the sides of the trail and

widens it. Going through the puddle keeps the trail at the same width and minimizes trail damage.

When there is no existing trail, ride on the most durable surface possible, choosing to avoid wet and muddy areas. If you must cross a stream, choose a location with a hard bottom and gentle banks.

12 Water Travel

12.1 For Race Management

Race Management should mark entry and landing sites very clearly when possible so that markers can be seen from a distance. Sloped, vegetation free, or man-made entry and landing sites are best, as they will not promote excessive erosion.

Race Management should also encourage use of existing trails when available for portages (carrying boats). These trails should also be clearly marked to ensure that travel occurs along these trails to minimize erosion and creation of new trails.

12.2 For Racers

A boat on the water is a good way to leave no trace, but use care at entry and landing sites, where there is a higher risk of damage. If applicable, follow the instructions or signs from Race Management when choosing entry and landing sites. Choose a sandy, rocky or established landing site, below the high-water line if possible. Avoid tide pools, coral reefs or sites rich in wildlife when pulling boats ashore. Boats on land should rest on durable surfaces.

Also follow Race Management instructions concerning portages (carrying boats). Stay on trail to minimize erosion.

13 Vehicle Use

Vehicles, while not part of the race itself, can still have significant adverse environmental effects when used by Race Management, emergency personnel, participants, and spectators. Race Management must check with the landowner or land management agency about where vehicles are allowed and must also obtain all necessary vehicle permits. Checkpoints, transition areas and any other areas where support or spectator vehicles are permitted should be set up in areas where damage will be non-existent/minimized (e.g. existing parking lots/campgrounds, etc). Please see **Section 2.5 Checkpoint Planning**.

Race Management should also ensure that all vehicle operators are made aware of where they are permitted to use their vehicles, road conditions, closures and any special alerts (e.g. animal danger). This can be done through signage along the racecourse or communication prior to the beginning of the race (e.g. written instructions, maps, etc.). It is the Race Management's responsibility to set-up the course such that all vehicle users can travel on durable surfaces and cause minimal erosion and environmental disturbance.

However, all individual drivers must respect the Race Management's instructions regarding vehicle use. They must also be alert to the road conditions, animal populations and any other environmental/ecological factors while driving.

APPENDIX A
RACE MANAGEMENT CHECKLIST

1. Land use/access permit obtained from appropriate jurisdiction? List all that apply.

N/A _____

2. Has the racecourse been scouted prior to the event?
Yes _____ No _____
3. Have you designed the course around environmentally sensitive areas?
Yes _____ No _____
4. If it is deemed that the race must travel through such environmentally sensitive areas, have sufficient precautions been taken to minimize environmental impact?
Yes _____ No _____
5. Have you made competitors aware of local/park/private policies regarding:
- | | | |
|---------------------------------|-----------|----------|
| Campsites? | Yes _____ | No _____ |
| Campfires? | Yes _____ | No _____ |
| Litter/waste disposal? | Yes _____ | No _____ |
| Sensitive areas? | Yes _____ | No _____ |
| Wildlife concerns? | Yes _____ | No _____ |
| Additional environmental issues | Yes _____ | No _____ |
6. Have you set up appropriate signage or indicated to racers clearly on their maps where certain restrictions are (e.g. out-of-bounds, landing areas, etc.)?
Yes _____ No _____
7. Have you checked with the landowner or land management agency about vehicle use and access and then obtained the appropriate permits?
Yes _____ No _____
8. Have you set up appropriate signage or indicated to all vehicle operators clearly where they are permitted to use their vehicles, road conditions, closures and any other special alerts (e.g. animal danger)?
Yes _____ No _____
9. Are all structures, booths, and signage that will be erected as part of the race temporary and easy to remove?
Yes _____ No _____

10. Have you arranged for appropriate clean up after the race?
Yes _____ No _____
11. Have you taken the appropriate measures to ensure that all racers understand that they are to leave no trace on the racecourse?
Yes _____ No _____
12. Have you followed-up with the landowner or land management agencies after the event to ensure the site and course are left in satisfactory condition or better?
Yes _____ No _____

APPENDIX B
CONTACT INFORMATION

Adventure Racers for the Environment<http://www.arfe.org>

P.O. Box 52
Croton Falls, New York
10519

Tel.: (917) 873 8812**Email:** yishun@arfe.org**Canadian Coast Guard,
Fisheries and Oceans Canada**<http://www.ccg-gcc.gc.ca/>

200 Kent Street, 13th Floor, Station 13228
Ottawa, Ontario
K1A 0E6

Tel. (general inquiries): (613) 993-0999**Tel. (Office of Boating Safety Infoline):**

1-800-267-6687

Email: obs-bsn@dfo-mpo.gc.ca**Canadian Forest Service,
Natural Resources Canada**<http://www.nrcan.gc.ca/cfs-scf/>

580 Booth Street, 8th Floor
Ottawa, Ontario
K1A 0E4

Tel.: (613) 947-7341**Fax:** (613) 947-7397**TTY:** (613) 996-4397 (Teletype for the
hearing-impaired)**Canadian Wildlife Service,
Environment Canada**<http://www.cws-scf.ec.gc.ca/>

National Office – Environment Canada
Ottawa, Ontario
K1A 0H3

Tel.: (819) 997-1095**Fax:** (819) 997-2756**Environment Canada**<http://www.ec.gc.ca/>

National Office – Environment Canada
Ottawa ON,
K1A 0H3

Tel.: 1 (800) 668-6767 or (819) 997-2800**Fax:** (819) 953-2225**TTY:** (819) 994-0736 (Teletype for the
hearing-impaired)**Government of Canada**<http://www.canada.gc.ca/>

Links to provincial land management
agencies and parks can normally be found
through the government Web sites of
Canada's provinces and territories, which are
available at:

http://canada.gc.ca/othergov/prov_e.html**Navigable Waters Protection Program
(NWPP),****Marine Safety (AMSEG),****Transport Canada**[http://www.tc.gc.ca/marinesafety/Ships-
and-operations-standards/nwp/menu.htm](http://www.tc.gc.ca/marinesafety/Ships-and-operations-standards/nwp/menu.htm)

Tower C, Place de Ville
330 Sparks Street

Ottawa, Ontario

K1A 0N8

Tel.: (613) 990-5929**Fax:** (613) 998-0637**Parks Canada National Office**<http://www.pc.gc.ca/>

25 Eddy Street
Gatineau, Quebec
K1A 0M5

Tel.: (888) 773-8888**Email:** information@pc.gc.ca

**United States Adventure Racing
Association**

12403 Bluestone Cir

Austin, TX 78758

Tel.: (512) 873-1205

Fax: (512) 873-1205

E-mail: tfadventure@aol.com

APPENDIX C
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