

Barebones 2012: excerpt from Permit Application:

A statement of how the park environment, or visitors, may be affected by the event and what efforts will be made to mitigate that effect;

Minimal impact on the environment:

Orienteering relies fundamentally on being able to access wilderness terrain. Therefore issues of environmental impact have been subject to various studies and the International Orienteering Federation's Environment Commission (web: <http://orienteering.org/about-the-iof/commissions/environment-commission/>) maintains a record of these studies and provides event organizers around the world with information regarding the environmental impact of the sport and best practises in planning and executing events to further reduce the impact. Of particular interest are two reports by Brian Henry Parker, Chairman of the IOF Environment Commission:

1. "Orienteering, A nature sport with low ecological impact" (2010).

WebURL: <http://orienteering.org/wp-content/uploads/2010/12/IOF-ENV-007-Orienteering-a-nature-sport-with-low-ecological-impact.pdf>

Summary: A view expressed by some ecologists is that orienteering, by its off-track nature and often with large numbers of competitors, has the potential for damaging flora and fauna. This potential appears not to be realised in practice. In the many thousands of orienteering events that are held worldwide each year ecological incidents resulting in unacceptable damage are extremely rare, close to zero. This document gives reasons why this is so and tests the expectation that orienteering has low ecological impact against a summary of reported scientific studies.

2. "Review of Research into the Ecological impact of orienteering" (2005)

WebURL: <http://orienteering.org/wp-content/uploads/2010/12/IOF-ENV-002-Review-of-research-into-the-ecological-impact-of-orienteering.pdf>

Summary (excerpt): Research has been conducted in the three main areas of environmental concern: the trampling of vegetation, the disturbance of large mammals and the disturbance of birds. Some studies are reported in refereed journals but most of the others are only available in documentation with very limited circulation. Those studies which have come to the notice of the IOF are critically reviewed and, for each of the three areas of concern, are used to test the hypothesis that orienteering does cause significant long-term ecological damage.

The conclusion to be drawn from the general vegetation impact studies is that orienteering has low to very low impact with generally rapid recovery. With

respect to sensitive vegetation, the sport takes precautionary measures and no evidence of significant long-term damage has been reported. The hypothesis is rejected.

With respect to the disturbance of large mammals the sport takes precautionary action and no evidence of long-term detriment has been reported. The hypothesis is rejected.

In general these studies show that there is minimal impact on the environment. To give some of the highlights from the 2010 report, this is due to several factors including:

- Dispersal in space. A wide range of courses are offered to accommodate different ages and abilities (the youngest age group is under 10 and the oldest is over 80). The combination of many control points, different courses, and the individual inter-control route choice results in competitors being spread out in the terrain and not concentrated as in a cross country race or a marathon.
- Dispersal in time. Most orienteering races are a “time trial” format which uses a staggered start with intervals between competitors on the same course of at least one minute or more. This disperses the athletes in time so that there are never large groups of runners travelling together.
- Low competitor density. The dispersal in time and space results in a low competitor density at any point in the competition terrain, far less than might be envisaged by those not familiar with the conduct of the sport.
- Episodic, short period activity. Orienteering is episodic, it is infrequent. It is also short in duration, an event completing in a few hours.
- Refuges for large mammals. Guidelines are followed during the course planning stages as follows:
 - i. If the terrain covered by the various courses is large, then refuge areas should be provided for animals. Ideally these will be areas of thick forest. These will be marked as out of bounds on the maps and courses will be designed so all sensible route choices will stay away from these areas. Courses that go past these refuge areas will be designed to circulate around them in the same direction.
 - ii. If the terrain covered by the various courses is relatively small (perhaps 2-3 sq km or less) then no refuge areas are required as animal flight distances will take them outside of the competition terrain.
- Sensitive areas. If sensitive areas are notified to the planners, they will place controls not only outside the notified areas but also in such positions that the logical route choices do not pass through them.