

(b) **Environmental Components**

Identify any project-environment or environment-project interactions by asking the question 'what, how, where, and when could the project's activities interact and affect environmental components?' Using basic information on the project and the existing environment, compare the location and timing of project activities with the location, sensitivity, seasonal presence and abundance of the environmental components.

An *environmental effect* is any change a project may cause on:

- water, noise, soil, air, vegetation, wildlife, and habitat;
- health, socio-economic, and physical and cultural heritage;
- current use of lands and resources for traditional or aboriginal purposes; and/or
- any structure, site or thing that is of historical, archeological, paleontological, or architectural significance.

Provide a brief description of existing environmental conditions that could potentially affect the project. Examples of these include, but are not limited to, periodic seismic activity, wind conditions, flooding. Determine if these condition(s) have posed a problem to structures within the vicinity of the proposed project. If so, have measures been taken to mitigate or preclude any adverse effects that might result from any environmental conditions that were cited in the screening report?

(c) **Significance**

Practically everything people do has an effect on the environment, and this will likely be true for the various activities carried out during a given project. The question is whether activities are **likely to cause significant adverse environmental effects after implementing mitigation measures?** Three sets of criteria are used to determine if the environmental effect is adverse, significant, and likely.

- (i) Are the environmental effects adverse? Compare the quality of the environment before the project with the predicted quality of the environment with the project in place.

**Adverse effects criteria:**

- loss of rare or endangered species;
- reductions in species diversity;
- loss of critical/productive habitat;
- transformation of natural landscapes;
- toxicity effects on human health;
- reductions in the capacity of renewable resources to meet the needs of present and future generations;
- loss of current use of lands and resources for traditional purposes by aboriginal persons; and
- foreclosure of future resource use or production.

- (ii) Are the adverse environmental effects significant? Environmental standards, guidelines, and objectives are commonly used to establish significance. Where no such threshold standards or guidelines exist, other methods, such as risk assessment, may need to be applied.

**Significance criteria:**

- magnitude;
- geographic extent;
- duration and frequency;
- irreversibility; and