

Baseline Conditions

Baseline conditions may also be referred to as the *environmental setting*, *existing conditions*, and other similar terms. The baseline conditions are the physical, chemical, biological, social, economic, and cultural setting in which the proposed project is to be located, and where local impacts (both positive and negative) might be expected to occur.

These conditions are the standard against which are compared projected future conditions from project alternatives. Their description and characterization are necessary for decision-makers, reviewers, and others who are unfamiliar with the project site and surrounding landscape.

Unfortunately, there are few published directions or guidelines on how to apply the descriptions of the baseline conditions. To understand why directions or guidelines are necessary requires examination of what roles the baseline conditions play in the EIA process.

Every impact assessment is (or, at least, should be) conducted with reference to a standard: the current environment of the area in which the proposed project is to be located. The baseline conditions usually includes components in the broad categories of physical-chemical, biological, cultural, and socioeconomic factors. Considerations in describing the baseline conditions are:

1. What components are to be included or excluded.
2. How the necessary data are to be collected and analyzed.
3. How the baseline conditions can be objectively compared with future conditions under alternative scenarios.

4.1 What To Include

Many, if not most, regulatory agencies have a list of environmental components to be considered in an environmental impact assessment. In the western United States the initial list of components is usually based on the type of environment in which the specific agency regulates development and by the type of project proposed. The components are usually assembled into a checklist based on statutory requirements, administrative regulations, public scoping or the anticipated impacts of the project. A representative example of an existing approach is the list used by the Battelle Method for water resource development projects ([10]), which includes—

ECOLOGY

Terrestrial Species and Populations

- Browsers and grazers
- Crops
- Natural vegetation
- Pest species
- Upland game birds

Aquatic Species and Populations

- Commercial fisheries
- Natural vegetation
- Pest species
- Sport fish
- Waterfowl

Terrestrial Habitats and Communities

- Food web index

AESTHETICS

Land

- Geological surface material
- Relief and topographic character

- Width and alignment

Air

- Odor and visual
- Sounds

Water

- Appearance of water
- Land and water interface
- Odor and floating material
- Water surface area
- Wooded and geologic shoreline

PHYSICAL/CHEMICAL

Water Quality

- Basin hydrologic loss
- Biochemical oxygen demand
- Dissolved oxygen
- Fecal coliforms
- Inorganic carbon
- Inorganic nitrogen
- Inorganic phosphate
- Pesticides