

ATTACHMENT – What Makes an Impact Significant?

The significance of an impact is decided by evaluating the magnitude, duration, or likelihood of an impact occurring within the context (geographic scope, setting, and scale) of the project and project area. Each of these is described as follows:

Magnitude:

For each potential impact being evaluated, the reviewing official decides if it will be moderate or large. Magnitude reflects both the area of land as well as the amount of a particular resource or the number of people being impacted.

Moderate Impact: These are impacts that are of a size that will likely result in more impacts on one or more environmental resources but are more localized. Moderate impacts can occur when the project affects a portion of a parcel or even a larger area extending to a small area just beyond the parcel. Moderate environmental impacts may be either isolated (only in one location), or of neighborhood concern. Size is not the only aspect of magnitude, however. If a project affects a small area of land, but the resource being impacted is locally rare, for example, then the actual impact may be large. When reviewing an impact's magnitude, the reviewing agency should consider the size of the impact and resource, as well as the scope and context of the project. A proposed project that impacts a small number of people may also be considered a moderate impact. The resources affected often have broad local or regional concern and often are activities or resources that are regulated or protected by some local, state, or national agency.

Large Impact: These are impacts that may cover larger areas beyond the development plan, neighborhood or community or impact larger numbers of people. The resources affected often have broad local or regional concerns and often are activities or resources that are regulated or protected by some local, state, or national agency.

Duration:

For each potential impact being evaluated, the reviewing official shall decide if it will be short-term, medium-term, long-term, or irreversible.

Short-term Impact: Some actions may have short-term impacts. These are often due to the initial land disturbance or construction phase. Short-term impacts can occur for a few days, weeks or several months, and then improve quickly. In this case, short-term impacts may be of minor or negligible importance in a long time frame. It is very important to evaluate the duration of an impact in the context and scope of a project. A short-term impact in one situation may not be significant, but in other cases, may be very significant.

An example of a short-term impact would be stock-piling topsoil and placement of erosion control methods in one location during construction of a structure. After construction, the topsoil would be graded and re-seeded or landscaped. Short-term impacts would occur due to the initial disturbance of soil and vegetation, but within several weeks, it would be replaced.

Medium-term Impact: Some actions may have impacts that last longer but that are still not permanent or irreversible. Medium-term impacts can be measured in months, over several seasons, or perhaps a few years, but have an end-point where the conditions improve and adverse impacts dissipate.

An example of a medium-term impact would be construction of an access way using a single culvert over a small, non-regulated stream that has wooded streambanks. Construction of the culvert and driveway will require removal of some additional stream-side vegetation and disturbance to the water flow. Thus it could affect water temperature (by removal of the trees), increase turbidity, change water flow, and reduce habitats for fish and invertebrates. In this example, there could be both short-term and medium-term impacts. After construction, the water flow and turbidity issues would dissipate, but the changes to the streambank and stream bottom habitats could last months or seasons before the vegetation returns and habitats re-formed. If the applicant included stream bank and stream bottom restoration, use of best management practices for stream corridors, and re-planting of deciduous trees, then the adverse impacts could be moderated in duration.

Long-term Impact: These are impacts that last for years, or last as long as the activity that generates the impact continues to take place. Some projects continually impact the environment in an adverse way while the activity takes place, but then the environment improves after the operation ceases. Other actions may occur only for a short period of time, but the impacts last a very long time and it takes years for the environment to recover.

Examples of long-term impacts could include adverse changes in air quality while a manufacturing use operates, or continual production of noise levels above ambient levels while the use operates. Should the manufacturing cease operations, the air pollution and noise impacts end. Removal of large acreages of forest lands on a portion of a parcel to be planted in grass would likely be considered long term impact but the forest could regenerate if maintenance of the lawn stopped and trees were allowed to re-grow. Another example of a long-term impact would be a chemical spill that pollutes water or soils that would take decades before the natural resources are recovered.

Irreversible Impact: These are impacts that occur where the environment can't return to its original state at any time or in any way. Use of nonrenewable resources may be irreversible since it is unlikely that the resource can be used again. Impacts that generally commit future generations to similar uses may also be considered irreversible impacts. Projects where there is no potential for future restoration are also considered irreversible. In some cases, there may be difficulty distinguishing between a long-term impact and one that is irreversible, but generally, irreversible impacts are those that permanently result in an adverse change.

Examples of irreversible impacts include:

The extinction of an animal or plant species

Demolition of existing historical structures

Conversion of prime farmland soils to residential use

Construction of a structure that permanently alters a scenic view in a negative way

Other impacts may not fit neatly in the short, medium, or long term categories because they may be continuous, or intermittent. The reviewing official should use their best judgment to determine the category that fits the duration of the potential impact.

Likelihood:

For each potential impact being evaluated, the reviewing official shall decide if it will be unlikely to occur, will possibly occur, or will probably occur. Given the nature of the project, some impacts may be very likely to occur while others may possibly occur, and others are unlikely to occur. The reviewing agency may decide that unlikely impacts may be of large magnitude or long duration but are ultimately not significant because they are so unlikely to actually occur. In other cases, an unlikely impact may carry such a high risk that the reviewing agency may decide it is very significant.

Unlikely to Occur: These are impacts that have a very low chance of occurring now or in the future.

An example of an impact that is unlikely to occur could be a spillage of a toxic chemical used in a manufacturing process. There is an extremely low probability of this occurring.

Possibly will Occur: These are impacts that are possible, but not likely occur.

An example of an impact that possibly could occur would be the growth inducing aspects of a new 28-lot subdivision development in a town that has had very slow growth and is not near an urbanized area. The residential development may create consumer demands that will influence and promote development in another location in the community. There is the potential for impacts to the community long-term, but it is less likely to occur given the character and economy of the area.

Probably will Occur: These are impacts that are very likely to occur.

An example of an impact that probably will occur would be loss of fisheries due to a dredging operation in a water body that supports warm water fish species that require shallow water to survive.