

Three Rules for Cumulative Impacts under NEPA

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Cumulative impacts are among the most difficult topics to handle in a typical NEPA analysis. Even experienced practitioners get confused, and inexperienced practitioners often feel overwhelmed and hopeless. I am here today to provide some clarity to the confused and some hope to the hopeless.

The basic rules are simple. First, projects can have only two kinds of impacts: direct (here and now) and indirect (there and/or later). These are the two kinds of project-specific impacts that NEPA requires you to analyze. While you may hear other terms floating about, such as “secondary” impacts (used by transportation planners) and “residual” impacts (used by some land managing agencies), these terms really are just variations on the main theme.

Cumulative impact is defined in the Council on Environmental Quality regulations at 40 CFR 1508.7 as follows:

“Cumulative impact” is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significance actions taking place over a period of time.

Therefore I sometimes say that cumulative impacts “don’t exist” because they are not in fact a distinct type of impact but simply represent the combination of all the direct and indirect impacts from *your* action with those of *other actions affecting the same resources*.

Second, whereas a typical NEPA analysis for direct and indirect impacts focuses on the *project footprint* and identifies all the *resources that may be affected by the project*, a cumulative impacts analysis focuses on the *resources* and identifies all the other *projects that may also affect those resources*. This usually means that direct and indirect impact analyses are geographically broad with a short time-depth and based on field work, while cumulative impact analyses are more narrowly focused with a longer time-depth and based on trend analysis, models, or other analytical tools (see Table 1).

Third, it is appropriate to analyze cumulative impacts in both EISs and EAs. In an EIS context, the direct and indirect impacts from your project may be either significant or not; in an EA context, the whole point is to determine whether they are significant, or to make sure they are mitigated below the threshold of significance. But in either case they may exist at some level greater than zero and thus contribute to the incremental impact on that resource. Thus, the third rule is that you must analyze cumulative impacts for all impacts greater than zero.

Table 1 summarizes these rules.

Table 1. Comparison of Impacts under NEPA

Impact	Geographic Focus	Time Depth	Typical Analysis Tools
Direct	Broad, based on project footprint	Short, they last for the duration of the project itself (which may, of course, be a long time and should include end-of-life decommissioning)	Field work, statistical or lab analysis, scientific literature, past monitoring reports, GIS
Indirect	Broader, based on project footprint and the extent of resources impacted (which may be further away from the project itself)	Longer, includes the duration of other project impacts which may extend later in time	Same as above
Cumulative	Narrow, focused only on those resources where an incremental impact exists (i.e. where mitigation cannot reduce the impact to zero)	Longest, includes the duration of impacts from your project plus all other future projects affecting the same resource(s)	Usually no new field work or laboratory analysis; CEQ guidance (1997) outlines 7 Primary methods (questionnaires, checklists, matrices, networks, modeling, trend analysis, overlay mapping) and 4 Special methods (carrying capacity analysis, ecosystem analysis, economic impact analysis, social impact analysis)

Remember that cumulative impact analysis is a fledgling art. Although the legal requirements to conduct such analyses have been in place literally for decades, conceptual guidance and examples have only recently been produced, and there are many ways to do it right.

For better or for worse, litigators and judges are still more likely to look for evidence that you did *any* analysis than to second-guess the depth and quality of your analysis. This is changing somewhat, as evidenced by the decision in *Lands Council v. Powell* (2004). There, the court found that the Forest Service had “failed to take its required ‘hard look’ with respect to prior timber harvests” because it did not display detailed results of those harvests in the EIS for the proposed action. [Note: in September, 2005 the CEQ issued a Memorandum - available on their web site, below - that clarifies the requirements for analyzing past projects.]

So the bottom line for cumulative effects analysis, like for the rest of NEPA, is to understand the basic concepts, take the requirements seriously, do the right thing, and show your work. Good luck.

References:

Considering Cumulative Impacts under the National Environmental Policy Act. 1997. Council on Environmental Quality, Washington DC. Available for download at <http://www.nepanet.gov>

Lands Council v. Powell, August 13, 2004. 379 F. 3rd 738