40 CFR 1508.14:

§ 1508.14 Human environment.

Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of "effects" (§ 1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

§ 1508.8 Effects.

Effects include:

- (a) Direct effects, which are caused by the action and occur at the same time and place.
- (b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

§ 1508.7 Cumulative impact.

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 other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

§ 1508.27 Significantly.

Significantly as used in NEPA requires considerations of both context and intensity:

- (a) *Context*. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
- **(b)** *Intensity.* This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
- (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
- (2) The degree to which the proposed action affects public health or safety.

- (3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
- (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- (5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- (6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- (7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- (8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- (9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- (10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

36 CFR 219.13 - Plan amendment and administrative changes

- (a) *Plan amendment*. A plan may be amended at any time. Plan amendments may be broad or narrow, depending on the need for change, and should be used to keep plans current and help units adapt to new information or changing conditions. The responsible official has the discretion to determine whether and how to amend the plan. Except as provided by paragraph (c) of this section, a plan amendment is required to add, modify, or remove one or more plan components, or to change how or where one or more plan components apply to all or part of the plan area (including management areas or geographic areas).
- **(b)** Amendment process. The responsible official shall:
- (1) Base an amendment on a preliminary identification of the need to change the plan. The preliminary identification of the need to change the plan may be based on a new assessment; a monitoring report; or other documentation of new information, changed conditions, or changed circumstances. When a plan amendment is made together with, and only applies to, a project or activity decision, the analysis prepared for the project or activity may serve as the documentation for the preliminary identification of the need to change the plan;
- (2) Provide opportunities for public participation as required in $\S 219.4$ and public notification as required in $\S 219.16$. The responsible official may combine processes and associated public notifications where appropriate, considering the scope and scale of the need to change the plan; and
- (3) Amend the plan consistent with Forest Service NEPA procedures. The appropriate NEPA documentation for an amendment may be an environmental impact statement, an environmental assessment, or a categorical exclusion, depending upon the scope and scale of the amendment and its likely

effects. A proposed amendment that may create a significant environmental effect and thus require preparation of an environmental impact statement is considered a significant change in the plan for the purposes of the NFMA.

36 CFR 219.7 - New plan development or plan revision.

- (a) *Plan revisions*. A plan revision creates a new plan for the entire plan area, whether the plan revision differs from the prior plan to a small or large extent. A plan must be revised at least every 15 years. But, the responsible official has the discretion to determine at any time that conditions on a plan area have changed significantly such that a plan must be revised (16 U.S.C. 1604(f)(5)).
- **(b)** *New plan development*. New plan development is required for new NFS units. The process for developing a new plan is the same as the process for plan revision.
- (c) Process for plan development or revision.
- (1) The process for developing or revising a plan includes: Public notification and participation (§§ 219.4 and 219.16), assessment (§§ 219.5 and 219.6), developing a proposed plan, considering the environmental effects of the proposal, providing an opportunity to comment on the proposed plan, providing an opportunity to object before the proposal is approved (subpart B), and, finally, approving the plan or plan revision. A new plan or plan revision requires preparation of an environmental impact statement.
- (2) In developing a proposed new plan or proposed plan revision, the responsible official shall:
- (i) Review relevant information from the assessment and monitoring to identify a preliminary need to change the existing plan and to inform the development of plan components and other plan content.
- (ii) Consider the goals and objectives of the Forest Service strategic plan (§ 219.2(a)).
- (iii) Identify the presence and consider the importance of various physical, biological, social, cultural, and historic resources on the plan area (§ 219.6), with respect to the requirements for plan components of §§ 219.8 through 219.11.
- (iv) Consider conditions, trends, and stressors ($\S 219.6$), with respect to the requirements for plan components of $\S\S 219.8$ through 219.11.
- (v) Identify and evaluate lands that may be suitable for inclusion in the National Wilderness Preservation System and determine whether to recommend any such lands for wilderness designation.
- (vi) Identify the eligibility of rivers for inclusion in the National Wild and Scenic Rivers System, unless a systematic inventory has been previously completed and documented and there are no changed circumstances that warrant additional review.
- (vii) Identify existing designated areas other than the areas identified in paragraphs (c)(2)(v) and (c)(2)(vi) of this section, and determine whether to recommend any additional areas for designation. If the responsible official has the delegated authority to designate a new area or modify an existing area, then the responsible official may designate such area when approving the plan, plan amendment, or plan revision.
- (viii) Identify the suitability of areas for the appropriate integration of resource management and uses, with respect to the requirements for plan components of §§ 219.8 through 219.11, including identifying lands that are not suitable for timber production (§ 219.11).
- (ix) Identify the maximum quantity of timber that may be removed from the plan area (§ 219.11(d)(6)).

- (x) Identify questions and indicators for the plan monitoring program (§ 219.12).
- (xi) Identify potential other content in the plan (paragraph (f) of this section).

36 CFR 219.10 Multiple use.

While meeting the requirements of §§ <u>219.8</u> and <u>219.9</u>, the plan must provide for ecosystem services and multiple uses, including outdoor recreation, range, timber, watershed, wildlife, and fish, within Forest Service authority and the inherent capability of the plan area as follows:

- (a) Integrated resource management for multiple use. The plan must include plan components, including standards or guidelines, for integrated resource management to provide for ecosystem services and multiple uses in the plan area. When developing plan components for integrated resource management, to the extent relevant to the plan area and the public participation process and the requirements of §§ 219.7, 219.8, 219.9, and 219.11, the responsible official shall consider:
- (1) Aesthetic values, air quality, cultural and heritage resources, ecosystem services, fish and wildlife species, forage, geologic features, grazing and rangelands, habitat and habitat connectivity, recreation settings and opportunities, riparian areas, scenery, soil, surface and subsurface water quality, timber, trails, vegetation, viewsheds, wilderness, and other relevant resources and uses.
- (2) Renewable and nonrenewable energy and mineral resources.
- (3) Appropriate placement and sustainable management of infrastructure, such as recreational facilities and transportation and utility corridors.
- (4) Opportunities to coordinate with neighboring landowners to link open spaces and take into account joint management objectives where feasible and appropriate.
- (5) Habitat conditions, subject to the requirements of § 219.9, for wildlife, fish, and plants commonly enjoyed and used by the public; for hunting, fishing, trapping, gathering, observing, subsistence, and other activities (in collaboration with federally recognized Tribes, Alaska Native Corporations, other Federal agencies, and State and local governments).
- (6) Land status and ownership, use, and access patterns relevant to the plan area.
- (7) Reasonably foreseeable risks to ecological, social, and economic sustainability.
- (8) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of the terrestrial and aquatic ecosystems on the plan area to adapt to change (§ 219.8);
- (9) Public water supplies and associated water quality.
- (10) Opportunities to connect people with nature.

(b) Requirements for plan components for a new plan or plan revision.

- (1) The plan must include plan components, including standards or guidelines, to provide for:
- (i) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character. Recreation opportunities may include non-motorized, motorized, developed, and dispersed recreation on land, water, and in the air.
- (ii) Protection of cultural and historic resources.
- (iii) Management of areas of tribal importance.
- (iv) Protection of congressionally designated wilderness areas as well as management of areas recommended for wilderness designation to protect and maintain the ecological and social characteristics that provide the basis for their suitability for wilderness designation.
- (v) Protection of designated wild and scenic rivers as well as management of rivers found eligible or determined suitable for the National Wild and Scenic River system to protect the values that provide the basis for their suitability for inclusion in the system.
- (vi) Appropriate management of other designated areas or recommended designated areas in the plan area, including research natural areas.
- (2) Other plan components for integrated resource management to provide for multiple use as necessary.

36 CFR 219.8 Sustainability.

The plan must provide for social, economic, and ecological sustainability within Forest Service authority and consistent with the inherent capability of the plan area, as follows:

- (a) Ecological sustainability.
- (1) *Ecosystem Integrity*. The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account:
- (i) Interdependence of terrestrial and aquatic ecosystems in the plan area.
- (ii) Contributions of the plan area to ecological conditions within the broader landscape influenced by the plan area.
- (iii) Conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area.
- (iv) System drivers, including dominant ecological processes, disturbance regimes, and stressors, such as natural succession, wildland fire, invasive species, and climate change; and the ability of terrestrial and aquatic ecosystems on the plan area to adapt to change.
- (v) Wildland fire and opportunities to restore fire adapted ecosystems.
- (vi) Opportunities for landscape scale restoration.
- (2) Air, soil, and water. The plan must include plan components, including standards or guidelines, to maintain or restore:
- (i) Air quality.
- (ii) Soils and soil productivity, including guidance to reduce soil erosion and sedimentation.
- (iii) Water quality.
- (iv) Water resources in the plan area, including lakes, streams, and wetlands; ground water; public water supplies; sole source aquifers; source water protection areas; and other sources of drinking water (including guidance to prevent or mitigate detrimental changes in quantity, quality, and availability).

(3) Riparian areas.

- (i) The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of riparian areas in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account:
- (A) Water temperature and chemical composition;
- (B) Blockages (uncharacteristic and characteristic) of water courses;
- (C) Deposits of sediment;
- (D) Aquatic and terrestrial habitats;
- (E) Ecological connectivity;
- (F) Restoration needs; and
- **(G)** Floodplain values and risk of flood loss.
- (ii) Plans must establish width(s) for riparian management zones around all lakes, perennial and intermittent streams, and open water wetlands, within which the plan components required by paragraph (a)(3)(i) of this section will apply, giving special attention to land and vegetation for approximately 100 feet from the edges of all perennial streams and lakes.
- (A) Riparian management zone width(s) may vary based on ecological or geomorphic factors or type of water body; and will apply unless replaced by a site-specific delineation of the riparian area.

- (B) Plan components must ensure that no management practices causing detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment that seriously and adversely affect water conditions or fish habitat shall be permitted within the riparian management zones or the site-specific delineated riparian areas.
- (4) Best management practices for water quality. The Chief shall establish requirements for national best management practices for water quality in the Forest Service Directive System. Plan components must ensure implementation of these practices.
- (b) Social and economic sustainability. The plan must include plan components, including standards or guidelines, to guide the plan area's contribution to social and economic sustainability, taking into account:
- (1) Social, cultural, and economic conditions relevant to the area influenced by the plan;
- (2) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character;
- (3) Multiple uses that contribute to local, regional, and national economies in a sustainable manner;
- (4) Ecosystem services;
- (5) Cultural and historic resources and uses; and
- (6) Opportunities to connect people with nature.

36 CFR 219.3 Role of science in planning.

The responsible official shall use the best available scientific information to inform the planning process required by this subpart. In doing so, the responsible official shall determine what information is the most accurate, reliable, and relevant to the issues being considered. The responsible official shall document how the best available scientific information was used to inform the assessment, the plan decision, and the monitoring program as required in §§ 219.6(a)(3) and 219.14(a)(4). Such documentation must: Identify what information was determined to be the best available scientific information, explain the basis for that determination, and explain how the information was applied to the issues considered.

36 CFR 219.2 Levels of Planning and Responsible Officials

- (a) National strategic planning...
- (b) National Forest System unit planning.
- (1) NFS unit planning results in the development, amendment, or revision of a land management plan. A land management plan provides a framework for integrated resource management and for guiding project and activity decisionmaking on a national forest, grassland, prairie, or other administrative unit. A plan reflects the unit's expected distinctive roles and contributions to the local area, region, and Nation, and the roles for which the plan area is best suited, considering the Agency's mission, the unit's unique capabilities, and the resources and management of other lands in the vicinity. Through the adaptive planning cycle set forth in this subpart, a plan can be changed to reflect new information and changing conditions.

 36 CFR 219.2 (b)(2) A plan does not authorize projects or activities or commit the Forest Service to take action. A plan may constrain the Agency from authorizing or carrying out projects and activities, or the manner in which they may occur. Projects and activities must be consistent with the plan (§ 219.15). A plan does not regulate uses by the public, but a project or activity decision that regulates a use by the public

- under 36 CFR Part <u>261</u>, Subpart B, may be made contemporaneously with the approval of a plan, plan amendment, or plan revision. Plans should not repeat laws, regulations, or program management policies, practices, and procedures that are in the Forest Service Directive System.
- (3) The supervisor of the national forest, grassland, prairie, or other comparable administrative unit is the responsible official for development and approval of a plan, plan amendment, or plan revision for lands under the responsibility of the supervisor, unless a regional forester; the Chief; the Under Secretary, Natural Resources and Environment; or the Secretary acts as the responsible official. Two or more responsible officials may undertake joint planning over lands under their respective jurisdictions.
- (c) *Project and activity planning*. The supervisor or district ranger is the responsible official for project and activity decisions, unless a higher-level official acts as the responsible official. Requirements for project or activity planning are established in the Forest Service Directive System. Except as provided in the plan consistency requirements in § 219.15, none of the requirements of this part apply to projects or activities.
- 36 CFR 219.15 Project and activity consistency with the plan.
- (a) Application to existing authorizations and approved projects or activities. Every decision document approving a plan, plan amendment, or plan revision must state whether authorizations of occupancy and use made before the decision document may proceed unchanged. If a plan decision document does not expressly allow such occupancy and use, the permit, contract, and other authorizing instrument for the use and occupancy must be made consistent with the plan, plan amendment, or plan revision as soon as practicable, as provided in paragraph (d) of this section, subject to valid existing rights.
- **(b)** Application to projects or activities authorized after plan decision. Projects and activities authorized after approval of a plan, plan amendment, or plan revision must be consistent with the plan as provided in paragraph (d) of this section.
- (c) *Resolving inconsistency*. When a proposed project or activity would not be consistent with the applicable plan components, the responsible official shall take one of the following steps, subject to valid existing rights:
- (1) Modify the proposed project or activity to make it consistent with the applicable plan components;
- (2) Reject the proposal or terminate the project or activity;
- (3) Amend the plan so that the project or activity will be consistent with the plan as amended; or
- (4) Amend the plan contemporaneously with the approval of the project or activity so that the project or activity will be consistent with the plan as amended. This amendment may be limited to apply only to the project or activity.
- (d) *Determining consistency*. Every project and activity must be consistent with the applicable plan components. A project or activity approval document must describe how the project or activity is consistent with applicable plan components developed or revised in conformance with this part by meeting the following criteria:
- (1) *Goals, desired conditions, and objectives.* The project or activity contributes to the maintenance or attainment of one or more goals, desired conditions, or objectives, or does not foreclose the opportunity to maintain or achieve any goals, desired conditions, or objectives, over the long term.
- (2) Standards. The project or activity complies with applicable standards.

- (3) *Guidelines*. The project or activity:
- (i) Complies with applicable guidelines as set out in the plan; or
- (ii) Is designed in a way that is as effective in achieving the purpose of the applicable guidelines (§ 219.7(e)(1)(iv)).
- (4) Suitability. A project or activity would occur in an area:
- (i) That the plan identifies as suitable for that type of project or activity; or
- (ii) For which the plan is silent with respect to its suitability for that type of project or activity.
- (e) Consistency of resource plans within the planning area with the land management plan. Any resource plans (for example, travel management plans) developed by the Forest Service that apply to the resources or land areas within the planning area must be consistent with the plan components. Resource plans developed prior to plan decision must be evaluated for consistency with the plan and amended if necessary.

from http://www.npi.org/nepa/assessment:

The CEQ regulations, at Section 1508.27, define the word "significantly" as used when the Act refers to "major Federal action significantly affecting the quality of the human environment." Since it is such actions that require preparation of an EIS, the definition of "significantly" indicates how the significance of impacts should be measured in an EA. If the effects are not significant when measured against the definition, then a Finding of No Significant Impact (FONSI) can be issued and the project proceeds with no further NEPA review. If the definition is met, then an EIS is needed.

The definition is framed in terms of "context" and "intensity."

Context means the geographic, social, and environmental contexts within which the project may have effects. The regulations refer to:

- · Society as a whole, defined as including all human society and the society of the nation
- The affected region
- Affected interests, such as those of a community, Indian tribe, or other group
- The immediate locality

The regulations also say that both short-term and long-term impacts must be considered – in other words, impacts must also be considered in the context of time.

It is important not to think of the various contexts as a hierarchy. An impact on society as a whole is not necessarily more important than an impact on a particular interest or locality.

"Intensity" refers to the severity of the impact, in whatever context(s) it occurs. The regulations require that a number of variables be addressed in measuring intensity. Impacts that may be both beneficial and adverse:

- Effects on public health and safety;
- "Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas";

- The potential for controversy on environmental grounds;
- Uncertainty about effects or unique risks;
- The potential for establishing a precedent or representing a decision in principle that defines the parameters of a further action;
- Cumulative impacts;
- Potential adverse effects on "districts, sites, highways, structures, or objects listed in or
 eligible for listing in the National Register of Historic Places," and the potential for "loss or
 destruction of significant scientific, cultural, or historical resources"
- Potential adverse effects on an endangered or threatened species or its habitat, or on a critical habitat; and
- Potential for violation of a Federal, state, or local law or requirement "imposed for the protection of the environment." (40 CFR 1508.27)

NEPA requires that a broad range of effects be considered:

- Direct effects such as actually changing an ecosystem, filling a wetland, knocking down a building, or digging up an archeological site;
- Indirect effects such as causing economic change in a community that changes the environment over the long run (through development, increased taxes, etc.) or causing long-term erosion in a watershed; and
- Cumulative effects the "straws that break the camel's back." An individual action may not have
 much effect, but it may be part of a pattern of actions whose effects are significant. For example,
 widening a bridge may not itself have much effect, but it may be the last piece of highway
 improvement that allows rampant development of a pristine valley.

Note that impacts on "historic or cultural resources" are explicitly identified as attributes that must be addressed in order to measure the significance of a project's potential environmental effect. Hence such impacts must be considered in an EA.

Note also that it is "historic or cultural resources." The two terms are not synonymous.

The regulations go on to identify factors to consider in measuring the intensity of potential impacts: the possibility of controversy; the presence of uncertainty or unknown risks; cumulative effects; adverse effects on historic properties; scientific, cultural, or historical resources; endangered and threatened species; and potential violations of law or other requirement designed to protect the environment.

Controversy is generally understood to mean controversy about the environmental effects of a project – not mere unpopularity.

Cumulative effects refer to the role of a project's effects in contributing to a pattern of effects of multiple projects, programs, or trends.

Ideally, the definition of "significantly" at 40 CFR 1508.27 should provide an outline for an EA. Going through the outline – asking oneself, "Are we likely to affect this measure of intensity?" with respect to each measure, in each context – should bring the analyst to a logical conclusion about whether there will be a significant effect. Unfortunately, many agencies do not use the definition this way.