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Threshold Determinations Under the National Environmental Policy Act

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THRESHOLD DETERMINATIONS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

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I. INTRODUCTION

The National Environmental Policy Act (NEPA) is approaching its twentieth anniversary. NEPA case law evolved slowly during the 1980's as the Act lost much of the notoriety gained during the 1970's when courts ordered unwilling agencies to incorporate NEPA procedures into their decisionmaking processes.[1] Judicial interpretations are occasionally controversial[2] but, in general, NEPA case law is slowly refining broad concepts laid down in early NEPA opinions.[3]

One area of NEPA case law that has evolved slowly but steadily involves threshold determinations. The level set for threshold determinations by federal courts and agencies is critical to NEPA's

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[1] *See, e.g.*, Scientists' Inst. for Pub. Information v. Atomic Energy Comm'n, 481 F.2d 1079, 1090 (D.C. Cir. 1973) (fast breeder reactor program could not proceed to technology development stage until AEC complied with NEPA); Calvert Cliffs' Coordinating Comm'n, Inc. v. Atomic Energy Comm'n, 449 F.2d 1109, 1117 (D.C. Cir. 1971) (court criticized AEC for its "crabbed interpretation of NEPA").

[2] *See* Brock, *Abolishing the Worst Case Analysis*, 2 NAT. RESOURCES & ENV'T 22, 64–66 (Spring 1986) (criticizing Southern Ore. Citizens Against Toxic Sprays v. Clark, 720 F.2d 1475 (9th Cir. 1983), *cert. denied*, 469 U.S. 1028 (1984)).

[3] *See, e.g.*, Calvert Cliffs' Coordinating Comm'n, Inc. v. Atomic Energy Comm'n, 449 F.2d 1109, 1118 (D.C. Cir. 1971) (requiring agency compliance with NEPA to the fullest extent possible); Environmental Defense Fund, Inc. v. Corps of Eng'rs, 325 F. Supp. 749, 759 (E.D. Ark. 1971) ("[a]t the very least, NEPA is an environmental full disclosure law"), *vacated*, 342 F. Supp. 1211 (E.D. Ark.), *aff'd*, 470 F.2d 289 (8th Cir. 1972).

implementation because the Act does not apply to federal actions unless they "significantly [affect] the quality of the human environment . . . ."[4] If a determination is made that an action does not have significant environmental effects, compliance with NEPA is not required.

This Article reviews the current state of the law regarding NEPA threshold determinations. Section II discusses the methodology used by agencies to make threshold determinations. Section III examines the types of federal actions requiring threshold determinations. Section IV discusses the nature of the effects to be considered in threshold determinations. The final Section examines the criteria used by federal agencies to make threshold determinations. The Article concludes that the refinement of case law on threshold determinations has expanded the range of actions to be considered by federal agencies involved in those determinations. No general threshold level has been defined beyond which it may be concluded that actions significantly affect the environment. Consideration of the criteria developed by the Council on Environmental Quality (CEQ) and the courts, however, ensures that most, if not all, areas of environmental concern are addressed in threshold determinations.

II. Methodology for Threshold Determinations

NEPA requires federal agencies to prepare a detailed statement for "major Federal actions significantly affecting the quality of the human environment . . . ."[5] Before proceeding with a proposed action, therefore, a federal agency must make a threshold determination whether the action has a potentially significant effect on the environment. If such an effect is indicated, the agency must prepare a detailed statement, known as an Environmental Impact Statement (EIS).[6] If the agency determines that the effect will be insignificant,

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[4] 42 U.S.C. § 4332(2)(C) (1982). The Council of Environmental Quality (CEQ) regulations advocate a one-part test for "major Federal actions significantly affecting the quality of the human environment": if a federal action significantly affects the quality of the human environment, it is a major federal action. 40 C.F.R. § 1508.18 (1986). Most courts apply this test. *See* Minnesota Pub. Interest Research Group v. Butz, 498 F.2d 1314, 1321–22 (8th Cir. 1974); Colorado River Indian Tribes v. Marsh, 605 F. Supp. 1425, 1430–32 (C.D. Cal. 1985).

Even when courts apply a two-pronged test, a decision usually turns on whether an action "significantly affects" the environment. *See* City of Alexandria v. Federal Highway Admin., 756 F.2d 1014, 1020 n.5 (4th Cir. 1985). *See generally* Note, *The CEQ Regulations: New Stage in the Evolution of NEPA*, 3 Harv. Envt'l L. Rev. 347, 359 (1979).

[5] 42 U.S.C. § 4332(2)(C) (1982).

[6] *Id.* The EIS analyzes (1) the action's significant environmental impacts including any unavoidable adverse effects; (2) alternative actions; (3) the relationship between local short-

it may proceed with its action, usually after explaining and justifying why it has concluded no significant environmental effects exist.

Federal agencies are aided in making threshold determinations by the CEQ, a small agency in the Executive Office of the President. Under authority derived from NEPA and an Executive Order,[7] the CEQ issues regulations to aid federal agencies in implementing NEPA.[8] The regulations, which bind federal agencies and which are accorded substantial deference by the courts,[9] establish procedures for the entire NEPA process. Because the CEQ regulations are less detailed for procedures involving threshold determinations than for procedures involving the preparation of EISs, agencies have more discretion in structuring methodology for threshold determinations. Thus, federal agency regulations implementing NEPA generally supplement the CEQ procedures for making threshold determinations.[10]

Federal actions can be roughly divided into three groups for NEPA purposes. At one extreme are actions that normally have a significant effect on the environment. If an agency determines that a proposal for action falls into this category, the agency proceeds directly to the EIS process detailed in the CEQ regulations.[11] Agencies typically include lists of such actions in their guidelines or regulations implementing NEPA.[12]

At the other extreme are actions that normally do not have a significant effect on the environment, either individually or cumu-

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term uses of natural resources and the maintenance and enhancement of the resource's long-term productivity; and (4) any irreversible and irretrievable commitment of resources involved in the action's implementation.

[7] 42 U.S.C. § 4342 (1982); Exec. Order 11,514, 3 C.F.R. 902 (1970), *as amended by* Exec. Order 11,991, 3 C.F.R. 123 (1978), *reprinted at* 42 U.S.C. § 4321 app. at 508–10 (1982).

[8] 40 C.F.R. §§ 1500–08 (1986).

[9] Andrus v. Sierra Club, 442 U.S. 347, 357 (1979). The courts do not necessarily adhere rigidly to the regulations, and often use the regulations in conjunction with judicial precedent. *See, e.g.*, Thomas v. Peterson, 752 F.2d 754, 758–60 (9th Cir. 1985) (applying CEQ regulations and Ninth Circuit precedents).

[10] *See, e.g.*, Federal Highway Administration, Environmental Impact and Related Procedures, 23 C.F.R. § 771.119(b) (1987) (suggesting use of scoping in Environmental Assessment process); Department of the Interior, National Environmental Policy Act; Revising Implementing Procedures, 49 Fed. Reg. 21,437, 21,439 (1984) (same) [hereinafter Revised Procedures]; National Oceanic and Atmospheric Administration, revised NOAA Directive Implementing the National Environmental Policy Act, 49 Fed. Reg. 29,644, 29,649 (1984) [hereinafter Revised NOAA Directive] (same).

[11] 40 C.F.R. § 1502 (1986).

[12] *See, e.g.*, Corps of Engineers, Policy and Procedures for Implementing NEPA, 33 C.F.R. § 230 (1987); Department of the Interior, Notice of Instructions for the Minerals Management Service, 51 Fed. Reg. 1855, 1856 (1986); Revised NOAA Directive, 49 Fed. Reg. 29,644, 29,651 (1984).

latively. The CEQ regulations permit agencies to designate such actions as categorical exclusions.[13] Agencies must publish their lists of categorical exclusions (usually in the *Code of Federal Regulations* or the *Federal Register*), making the actions exempt from the NEPA process.[14] Agency procedures, however, must provide for the occurrence of extraordinary circumstances in which a categorical exclusion may have a potentially significant environmental effect and, therefore, would not be exempt.[15] The CEQ recommends that agencies submit draft lists of categorical exclusions to the CEQ for review in order that the lists may be reviewed for compliance with the CEQ regulations.[16]

In 1983, the CEQ criticized the agencies' widespread use of lists of categorical exclusions as potentially inflexible. In lieu of lists, the CEQ recommended the use of broadly defined criteria to characterize the types of actions which normally do not cause environmental effects. The CEQ suggested that agencies supplement the criteria with examples of frequently conducted activities that normally fall under the specified criteria.[17]

One agency that has developed criteria is the Federal Highway Administration (FHWA). The FHWA defines categorical exclusions as categories of actions not involving "significant environmental impacts or substantial planning, time or resources."[18] Such actions "will not induce significant foreseeable alterations in land use, planned growth, development patterns, or natural or cultural resources."[19]

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[13] 40 C.F.R. § 1501.4(a)(2) (1986). The Environmental Protection Agency (EPA) defines categorical exclusions as: "actions which do not individually, cumulatively over time, or in conjunction with other Federal, State, local, or private actions have a significant effect on the quality of the human environment and which have been identified as having no such effect [according to agency procedures]." *Id.* § 6.107(a). This definition does not bind other agencies, however.

[14] 40 C.F.R. § 1508.4 (1986). *See, e.g.*, Corps of Engineers, Policy and Procedures for Implementing NEPA, 33 C.F.R. pt. 230, app. D (1987); Federal Highway Administration, Environmental Impact and Related Procedures, 23 C.F.R. § 771.115 (1987); Revised NOAA Directive, 49 Fed. Reg. 29,644, 29,652 (1984).

[15] 40 C.F.R. § 1508.4 (1986).

[16] Council on Environmental Quality, Guidance Regarding NEPA Regulations, 48 Fed. Reg. 34,263, 34,265 (1983) [hereinafter NEPA Regulations].

[17] *Id.* at 34,264–65. *See also* Council on Environmental Quality, Memorandum for Agency and General Counsel Liaison on National Environmental Policy Act Matters, Recommendations for Improving Agency NEPA Procedures, *reprinted in* 3 Env't Rep. (BNA) 82, 83 (May 19, 1972) (recommending that agencies list full range of potential impacts for typical agency actions).

[18] 23 C.F.R. § 771.117(a) (1987).

[19] *Id.*

The regulations' criteria for extraordinary circumstances in which a categorical exclusion would not be exempt includes "substantial controversy on environmental grounds,"[20] and inconsistencies with federal, state, or local laws or administrative determinations relating to the environment.[21] In a challenge to the FHWA's categorical exclusion regulation, a court determined that the accompanying list of categorical exclusions in the regulations gave adequate meaning to the agency's general definition of substantiality. The court deferred to the agency's definition of substantiality rather than adopting its own definition or that of the challenger to the agency's action.[22]

Another agency, the Federal Aviation Administration (FAA), has a more detailed definition of "substantial controversy on environmental grounds."[23] An action is exempt from the FAA's categorical exclusions when it is "highly controversial on environmental grounds." Highly controversial is defined as opposition to an action by a federal, state or local agency, or "a substantial number of the persons affected by such action . . . ."[24] In other words, opposition must be of an "extraordinary" nature.[25] In construing the FAA's regulation, a court determined that opposition was not extraordinary when no governmental agencies objected, and when the number of people objecting was small compared to the area affected by the action.[26]

If conditions exist that may exempt a proposed action from being a categorical exclusion, then an agency must address those conditions. For example, the National Marine Fisheries Service issued a permit to Sea World for scientific research on killer whales.[27] The permit would also allow public display of some of the whales.[28] Permits for scientific research and public display are one of the agency's categorical exclusions.[29] The Ninth Circuit affirmed the district court's denial of the permit until the agency addressed public con-

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[20] *Id.* § 771.117(c)(2).

[21] *Id.* § 771.117(c)(4).

[22] City of Alexandria v. Federal Highway Admin., 756 F.2d 1014, 1019–20 (4th Cir. 1985).

[23] West Houston Air Comm'n v. FAA, 784 F.2d 702, 705 (5th Cir. 1986) (citing FAA Order No. 5050.4 ¶ 23n).

[24] *Id.*

[25] *Id.*

[26] *Id.*

[27] Jones v. Gordon, 792 F.2d 821, 827–29 (9th Cir. 1986).

[28] *Id.*

[29] *Id.*

troversy concerning the environmental consequences of the agency's action.[30]

Between the two extremes of significance and nonsignificance lies a large gray area in which threshold determinations are made on a case-by-case basis. The CEQ regulations require agencies to prepare Environmental Assessments (EAs) to aid decisionmakers in determining whether the threshold of significance has been passed by a proposed action.[31] As with actions requiring EISs and categorical exclusions, agencies frequently list actions requiring preparation of an EA.[32]

An EA is "a concise public document" briefly providing the evidence and analysis necessary to make a threshold determination.[33] The document must include brief discussions of the proposal's necessity, alternative proposals, environmental impacts of the proposed and alternative actions, and a list of agencies and private parties consulted.[34] Environmental agencies and the public must be involved in the preparation of an EA "to the extent practicable . . . ."[35] The CEQ recommends the use of scoping—a pluralistic decisionmaking process used to identify the range of actions, alternatives, and impacts covered in an EIS—to identify alternatives or potentially significant environmental impacts that may have been overlooked by the agency in preparing an EA.[36]

Although the CEQ regulations do not specify the appropriate length for an EA, the CEQ recommends ten to fifteen pages, with

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[30] *Id.*

[31] 40 C.F.R. § 1501.4(b) (1986). If another agency has already prepared an EA for an action relating to the same project, the agency with the proposed action may adopt the other agency's EA instead of preparing a separate one. However, the adopting agency should independently evaluate the information in the EA, and assume full responsibility for the information's scope and content. NEPA Regulations, *supra* note 16, at 34,265–66.

[32] *See, e.g.*, Corps of Engineers, Policy and Procedures for Implementing NEPA, 33 C.F.R. § 230.7 (1986); Revised NOAA Directives, *supra* note 10, at 29,651.

[33] 40 C.F.R. § 1508.9(a) (1986).

[34] *Id.* § 1508.9(b).

[35] *Id.* § 1501.4(b). For example, in the Ninth Circuit, certain EAs must provide for a 45-day comment period. Save Our Ecosystems v. Clark, 747 F.2d 1240, 1244–47 (9th Cir. 1984).

[36] Council on Environmental Quality, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,030 (1981) [hereinafter NEPA Questions]. *See also* 40 C.F.R. § 1501.7 (1986). To facilitate public and agency involvement in the NEPA process, appendices to the CEQ regulations list federal and federal-state agencies with jurisdiction over, or special expertise in, environmental issues. Council on Environmental Quality, Appendices to Regulations, 49 Fed. Reg. 49,750 (1984). The appendices also list federal and federal-state agency NEPA contacts, and federal and federal-state agency offices for receiving and commenting on other agencies' environmental documents. *Id.* at 49,750.

background data incorporated by reference.[37] If an agency determines, after it has prepared an EA, that its proposed action will not have a significant effect on the environment, it must prepare a Finding of No Significant Impact (FONSI) setting out the reasons for its determination.[38] If certain factors are given greater weight than others in making the determination, the agency must explain the reasons for the background decisions.[39] The EA may be attached to the FONSI and incorporated by reference or it may be summarized in the FONSI. Other relevant environmental documents must be noted.[40]

The FONSI, as well as the EA, must be made available to the public.[41] The CEQ permits agencies to choose the best method of accomplishing this as long as they ensure that all interested or affected parties are notified.[42] The CEQ recommends mailing notices of the documents' availability to interested national groups as well as publication in the *Federal Register* and national publications for actions with a national scope.[43] Notice of availability of EAs and FONSIs for regional or site-specific proposals may be provided by publication in local newspapers.[44] The system is more formal in the Second Circuit, where notice and comment procedures must be followed.[45]

Under certain circumstances the CEQ recommends that FONSIs be published thirty days before an agency's final decision not to prepare an EIS. The CEQ provides five examples: borderline cases where a reasonable argument exists for preparation of an EIS; unusual cases (for example, new types of actions or precedent-setting cases such as minor development in a pristine area); cases involving public or scientific controversy; cases similar to those that normally require preparation of an EIS;[46] and cases in which an agency has adopted another agency's EA.[47]

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[37] NEPA Questions, *supra* note 36, at 18,037.
[38] 40 C.F.R. § 1508.9(a)(1) (1986).
[39] NEPA Questions, *supra* note 33, at 18,037.
[40] 40 C.F.R. § 1508.13 (1986).
[41] *Id.* § 1501.4(e)(1).
[42] NEPA Questions, *supra* note 36, at 18,037.
[43] *Id.*
[44] *Id.*
[45] *See* Hanly v. Kleindienst, 471 F.2d 823, 836 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973). *See generally* City of West Chicago v. NRC, 701 F.2d 632, 648 n.15 (7th Cir. 1983) (commenting on Second Circuit's procedures for publishing FONSIs).
[46] 40 C.F.R. § 1501.4(e)(2) (1986); NEPA Questions, *supra* note 36, at 18,037.
[47] NEPA Regulations, *supra* note 16, at 34,266.

If an agency determines on the basis of an EA that its proposed action may significantly affect the environment, the agency must prepare an EIS.[48] The EIS must address all potentially significant environmental effects, including short-term and long-term impacts.[49] If adverse effects, alternatives, and public comments regarding those effects and alternatives are adequately considered, however, the agency has complied with NEPA and may proceed with its action.[50]

EAs and FONSIs are, of course, subject to judicial scrutiny. Courts review EAs and FONSIs to ensure that adequate consideration has been given to all potential environmental effects of a proposed action.[51] If a substantial environmental concern is raised, the agency must address it in the EA and show why it will not be significant.[52] Likewise, all potential environment effects must be addressed in FONSIs.[53]

Consideration of environmental factors must be documented in the administrative record in existence at the time the determination of no significant impact is made. The detailed analysis necessary in an EIS is not required in an EA, but the EA must not be conclusory or perfunctory.[54] Rather, the agency must show that sufficient information has been generated by its investigation and data gathering processes on which to base a determination that its action will not have a significant environmental effect.[55] A court may go outside an agency's record to see if the research or analysis adequately supports the agency's conclusions.[56] If convincing documentation supports a reasoned elaboration of why an action will not have significant effects, then it will be upheld.[57] In other words, the agency must show

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[48] 40 C.F.R. § 1508.9(a)(1) (1986).

[49] Sierra Club v. Morton, 510 F.2d 813, 820–21 (5th Cir. 1975).

[50] *See, e.g.*, California v. Watt, 712 F.2d 584, 609 (D.C. Cir. 1983) (Department of Interior adequately addressed Oregon's and Washington's concerns on environmental effects of five-year offshore oil and gas leasing program in a supplemental EIS); Pack v. Corps of Eng'rs, 428 F. Supp. 460, 466 (M.D. Fla. 1977) (Corps adequately considered fisherman's loss of shrimp caused by dredge and fill activities).

[51] Foundation on Economic Trends v. Heckler, 756 F.2d 143, 153 (D.C. Cir. 1985).

[52] *Id.*

[53] Citizen Advocates for Responsible Expansion, Inc. v. Dole, 770 F.2d 423, 435 (5th Cir. 1985).

[54] *Id.* at 434; Sierra Club v. Mason, 351 F. Supp. 419, 426 (D. Conn. 1972).

[55] American Pub. Transit Ass'n v. Goldschmidt, 485 F. Supp. 811, 835 (D.D.C. 1980); Get Oil Out, Inc. v. Andrus, 468 F. Supp. 82, 86 (C.D. Cal. 1979); McDowell v. Schlesinger, 404 F. Supp. 221, 250 (W.D. Mo. 1975).

[56] *See* Headwaters, Inc. v. BLM, 665 F. Supp. 873, 876 (D. Or. 1987).

[57] Town of Orangetown v. Gorsuch, 718 F.2d 29, 35 (2d Cir. 1983), *cert. denied*, 465 U.S. 1099 (1984).

that it has taken a "hard look" at environmental concerns raised by its proposed action,[58] identified relevant environmental concerns, and made a convincing argument that the impact of each concern will be insignificant.[59]

If an agency's threshold determination is challenged, a critical factor in judicial review is the degree to which other agencies and the public participated in the determination. For example, courts accord greater weight to an agency's determination of nonsignificance if the agency held public hearings,[60] or if environmental agencies did not consider the action's effects to be potentially significant.[61] Lack of public comments on a proposal, however, does not demonstrate that a proposed action is unlikely to have significant environmental effects.[62] If an agency ignores negative comments made by the public and other agencies, especially agencies with environmental expertise, the agency's determination is unlikely to survive judicial review.[63] Although the comments are not determinative,[64] agencies must show that they were considered. If the comments are adequately considered, the agency does not violate NEPA by rejecting them.[65]

Courts generally uphold EAs and FONSIs unless a challenger can show one of the following: (1) the proposed action may have a significant environmental effect;[66] (2) an environmental factor may be significantly degraded;[67] or (3) an environmental concern has been raised but not adequately addressed.[68] Inadequate consideration of

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[58] Fritiofson v. Alexander, 772 F.2d 1225, 1238 (5th Cir. 1985); McDowell v. Schlesinger, 404 F. Supp. 221, 250 (W.D. Mo. 1975).

[59] Maryland-Nat'l Capital Park & Planning Comm'n v. United States Postal Serv., 487 F.2d 1029, 1040 (D.C. Cir. 1973).

[60] *See* River Road Alliance, Inc. v. Corps of Eng'rs, 764 F.2d 445, 451 (7th Cir. 1985), *cert. denied*, 106 S. Ct. 1283 (1986).

[61] *See* Rucker v. Willis, 484 F.2d 158, 162 (4th Cir. 1973); Quinones Lopez v. Coco Lagoon Dev. Corp., 562 F. Supp. 188, 192 (D.P.R. 1983).

[62] *See* Mahelona v. Hawaiian Elec. Co., 418 F. Supp. 1328, 1333 (D. Haw. 1976).

[63] *See* Thomas v. Peterson, 753 F.2d 754, 759 (9th Cir. 1985); Sierra Club v. Corps of Eng'rs, 701 F.2d 1011, 1030 (2d Cir. 1983).

[64] *See* Save the Bay, Inc. v. Corps of Eng'rs, 610 F.2d 322, 325 (5th Cir. 1980), *cert. denied*, 449 U.S. 900 (1980).

[65] *See* Hart & Miller Islands Area Envt'l Group, Inc. v. Corps of Eng'rs, 505 F. Supp. 732, 758 (D. Md. 1980).

[66] Kentucky *ex rel.* Beshear v. Alexander, 655 F.2d 714, 720 (6th Cir. 1981); City of Davis v. Coleman, 521 F.2d 661, 673 (9th Cir. 1975); Dardar v. LaFourche Realty Co., 639 F. Supp. 1525, 1530 (E.D. La. 1986).

[67] *See* Save Our Ten Acres v. Kreger, 472 F.2d 463, 467 (5th Cir. 1973).

[68] *See* Fritiofson v. Alexander, 772 F.2d 1225, 1238 (5th Cir. 1985); Foundation on Economic Trends v. Heckler, 756 F.2d 143, 154 (D.C. Cir. 1985).

environmental effects may be shown by proving that the agency relied on materially false or inaccurate information, that its conclusions ignored the differing views of other expert agencies,[69] or that it merely concluded that an environmental effect was insignificant without assessing the effect.[70]

If an agency's scope of inquiry into the potential environmental effects of a proposed action is adequate, courts examine the agency's determination of nonsignificance[71] according to fairly deferential standards of review. The standard varies between the different circuits. Some circuits apply the arbitrary and capricious standard,[72] while others apply the more searching reasonableness standard.[73] Even within a circuit, the application of a test can result in inconsistencies.[74] The result is a state of general confusion that three justices of the Supreme Court have indicated they would like to address.[75]

III. Types of Actions Requiring Threshold Determinations

A determination of whether a proposed action and its environmental effects are to be considered alone or in conjunction with other actions and effects is critical to a threshold determination of whether an EIS must be written. An unconnected action may impact temporarily only on a small section of an identified natural resource. If the action is one of many agency actions in the same area, however, the environmental effects may be synergistic.

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[69] *See* Sierra Club v. Corps of Eng'rs, 701 F.2d 1011, 1030 (2d Cir. 1983) (adequacy of EIS).

[70] *See Foundation on Economic Trends*, 756 F.2d at 153; Southern Ore. Citizens Against Toxic Sprays, Inc. v. Clark, 720 F.2d 1475, 1479 (9th Cir. 1983), *cert. denied*, 469 U.S. 1028 (1984); *see also* Get Oil Out, Inc. v. Andrus, 468 F. Supp. 82, 886 (C.D. Cal. 1979) (Geological Survey's conclusions that environmental effects of constructing offshore oil platforms were insignificant were inadequate without basis for conclusions).

[71] An agency's determination of whether an action may have significant environmental effects is a factual issue. *See Fritiofson*, 772 F.2d at 1248.

[72] *See* Hanly v. Kleindienst, 471 F.2d 823, 829 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); First Nat'l Bank of Chicago v. Richardson, 484 F.2d 1369, 1373 (7th Cir. 1973); Maryland-Nat'l Capital Park & Planning Comm'n v. U.S. Postal Serv., 487 F.2d 1029, 1035 (D.C. Cir. 1973).

[73] *See* Save Our Ten Acres v. Kreger, 472 F.2d 463, 465 (5th Cir. 1973); Minnesota Pub. Interest Research Group v. Butz, 498 F.2d 1314, 1320 (8th Cir. 1974); Wyoming Outdoor Coordinating Council v. Butz, 484 F.2d 1244, 1249 (10th Cir. 1973).

[74] *See* Comment, *Shall We Be Arbitrary or Reasonable: Standards of Review for Agency Threshold Determinations Under NEPA*, 19 Akron L. Rev. 685, 691–92 (1986).

[75] Gee v. Boyd, 471 U.S. 1058, 1060 (1985) (White, J., joined by Brennan & Marshall, JJ., dissenting from denial of certiorari). *See also* River Road Alliance, Inc. v. Corps of Eng'rs, 106 S. Ct. 1283, 1284 (1986) (White, J., dissenting from denial of certiorari) (reiterating desire to resolve scope of inquiry issue).

Neither NEPA nor its legislative history defines in detail which types of federal actions require EISs. The Act merely requires detailed statements for "proposals for legislation and other major Federal actions . . . ."[76] Many tests have been devised for deciding when an action should be considered separately or together with other actions for purposes of NEPA. Creation of the tests began in the courts and continued with the CEQ regulations. As a result, courts tend to apply their precedent together with the CEQ regulations when deciding particular fact situations.[77]

A. Judicial Tests for Joint Actions

One of the earliest tests for considering the environmental effects of joint actions was introduced in *Scientists' Institute for Public Information, Inc. v. Atomic Energy Commission*.[78] The "irretrievable commitment" test is derived from NEPA's language requiring EISs to include discussion of "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."[79] In *Scientists' Institute*, the District of Columbia Circuit ordered the Atomic Energy Commission to prepare an EIS for its liquid metal fast breeder reactor research and development program.[80] The court reasoned that the long-term commitment of resources to the program had the effect of foreclosing later alternative energy options.[81]

The "irretrievable commitment" test has been widely used in highway segmentation cases. For example, the Second Circuit upheld a district court's determination that potential alternatives to highway development could be foreclosed by federal funding of local highway projects.[82] The court viewed the funding as an irretrievable commitment of resources for which a comprehensive EIS might never be prepared.[83] The court, accordingly, required the agency to consider the potential broad environmental effects of the projects.[84]

Another test, the "irrational or unwise" test, is similar to the "irretrievable commitment" test. The purpose of the "irrational and

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[76] 42 U.S.C. § 4332(2)(C) (1982).

[77] *See infra* text accompanying notes 107–150 (discussing CEQ regulations for types of actions to be considered under NEPA).

[78] 481 F.2d 1079 (D.C. Cir. 1973).

[79] 42 U.S.C. § 4332(2)(C)(v) (1982).

[80] 481 F.2d at 1090.

[81] *Id.*

[82] Conservation Soc'y of Southern Vt., Inc. v. Secretary of Transp., 508 F.2d 927 (2d Cir. 1974), *vacated on other grounds*, 423 U.S. 809 (1975).

[83] *Id.* at 935.

[84] *Id.*

unwise" test is to determine if a proposed action is so dependent on subsequent phases "that it would be irrational, or at least unwise, to undertake the first phase if subsequent phases were not also undertaken."[85] If the response is positive, the environmental effects of the dependent phases must be considered together in one EIS.[86] In addition, actions that could be considered largely independent must be considered together if they are part of a larger scheme requiring the long-term commitment of similar resources in the area.[87]

The Ninth Circuit has used the "irrational or unwise" test to find that it was not irrational for an agency to consider the first phase of a dam and reservoir project separately from the second phase.[88] The court determined that the first phase, consisting of constructing the dam and reservoir and filling it to a capacity of 100,000 acre feet, did not depend on the second phase in which an additional 100,000 acre feet of water was to be added.[89] In a subsequent case, the Ninth Circuit determined that it would be irrational for the environmental effects of mining in one area to be considered separately when contractual obligations also required vast areas of surrounding land to be mined.[90] In another case, the court required the United States Forest Service to consider the environmental effects of a road construction project and a timber sale in one EIS.[91] The court considered it irrational for the Forest Service to construct a road to access timber and then not to sell the timber accessed by the road.[92]

A third judicial test is the "independent utility" test under which the environmental effects of proposed actions must be considered together if the actions are functionally or economically related to other actions.[93] The test, which is widely used in connection with highway projects, focuses on identifying segments of projects—mostly highways—which are large enough to have viable alternatives.[94]

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[85] Trout Unlimited v. Morton, 509 F.2d 1276, 1285 (9th Cir. 1974). A variation of this test is the "bandwagon" test, which focuses on whether a proposed project will have the effect of causing future actions to proceed by the project's own momentum. *See* Natural Resources Defense Council v. Callaway, 524 F.2d 79, 89 (2d Cir. 1975).

[86] *Trout Unlimited*, 509 F.2d at 1285.

[87] Cady v. Morton, 527 F.2d 786, 795 (9th Cir. 1975).

[88] *Trout Unlimited*, 509 F.2d at 1284–85.

[89] *Id.*

[90] *Cady*, 527 F.2d at 795.

[91] Thomas v. Peterson, 753 F.2d 754, 759 (9th Cir. 1985).

[92] *Id.*

[93] *See* Piedmont Heights Civic Club, Inc. v. Moreland, 637 F.2d 430, 440 (5th Cir. Unit B Feb. 1981).

[94] Daly v. Volpe, 514 F.2d 1106, 1110 (9th Cir. 1975).

The test has several criteria. To have independent utility, an action must fulfill its purpose. For example, if a highway is designed to provide access between two towns or other logical termini, the proposed route cannot be segmented in order to avoid preparing an EIS; the segment of highway considered in one threshold determination must also have substantial independent utility without relying on other segments.[95] The segment must also be large enough to allow a broad scope of environmental consequences to be considered.[96] Similarly, when permitting the construction of power plants by public utilities, the Corps of Engineers requires EAs to consider the environmental effects of an entire plant, not merely a single segment such as an outfall pipe.[97]

Courts also review independent utility cases to determine whether actions are proposed separately and whether they are designed to accomplish a single purpose.[98] For example, the fact that a state has an overall highway plan does not mean that the environmental effects of the entire plan must be considered together. Because highway plans are largely dependent on federal and state funding, and are subject to extensive modification, courts allow some degree of segmentation,[99] depending on the scope of the project.[100] The issue, thus, is not whether individual segments can be aggregated to form a highway system in which one segment facilitates movement onto other segments, but whether one segment has an independent purpose even if related segments are not built.[101]

The above discussion of judicial tests includes the most widely-used tests in existence for determining which actions must be considered together for NEPA purposes. The tests have similarities,[102] but they occasionally conflict, resulting in situations in which the outcome of a case is determined by the test being applied.[103] It is

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[95] *Piedmont Heights*, 637 F.2d at 440.

[96] *Daly*, 514 F.2d at 1109 (citing Federal Highway Administration criteria).

[97] 33 C.F.R. § 230, app. B, ¶ 8(a) (1986).

[98] *Piedmont Heights*, 637 F.2d at 440; *see also* Thompson v. Fugate, 347 F. Supp. 120, 124 (E.D. Va. 1972) (city's beltway cannot be segmented for NEPA purposes).

[99] *See* Indian Lookout Alliance v. Volpe, 484 F.2d 11, 19 (8th Cir. 1973); *see also* Taxpayers Watchdog, Inc. v. Stanley, 819 F.2d 294, 299–300 (D.C. Cir. 1987) (urban mass transit system).

[100] *See* Sierra Club v. Callaway, 499 F.2d 982, 987 (5th Cir. 1974) (river basin project).

[101] *See* Coalition on Sensible Transp., Inc. v. Dole, 826 F.2d 60 (D.C. Cir. 1987).

[102] *See* Fritiofson v. Alexander, 772 F.2d 1225, 1242 (5th Cir. 1985) (comparing connected actions test of CEQ regulations and independent utility test); Friends of the Earth v. Coleman, 513 F.2d 295, 299 n.4 (9th Cir. 1975) (comparing irrational or unwise test and irretrievable commitment test).

[103] *See* Note, *Program Environmental Impact Statements: Review and Remedies*, 75 MICH. L. REV. 107, 113–15 (1976) (arguing that the same fact situation could fail the irreversible commitment test but pass the independent utility test).

common for courts to apply more than one test to the same fact situation,[104] or even to create hybrid tests.[105] Compliance with one test, however, does not necessarily mean compliance with other tests. To comply with NEPA, agencies must follow their jurisdiction's judicial test as well as the tests outlined in the CEQ regulations.[106]

B. CEQ Tests

The CEQ tests for determining which actions to consider together in one EIS are designed for use in the scoping process—the pluralistic decisionmaking process held to determine the range of alternatives, effects, and actions to be considered in the EIS.[107] The process is used to reach a determination of significance. As discussed previously, the CEQ advocates the use of scoping where appropriate in making threshold determinations.[108]

The CEQ regulations require federal agencies to consider three types of actions in determining the scope of EISs: connected, cumulative, and similar actions.[109] A fourth category of unconnected single actions is necessarily considered.[110]

1. Connected Actions

The CEQ defines connected actions as closely related actions that: (1) automatically trigger other actions with a potentially significant effect on the environment, (2) are unable to or do not proceed without prior or simultaneous actions, or (3) are an interdependent part of a larger action justifying them.[111]

One example of the use of the connected actions test is a court requiring the United States Forest Service to prepare an EIS on the environmental effects of road construction and timber sales in an area accessed by the road.[112] The court determined that the

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[104] *See* Minnesota Pub. Interest Research Group v. Butz, 541 F.2d 1292, 1306 (8th Cir. 1976), *cert. denied*, 430 U.S. 922 (1977) (applying independent utility test and irretrievable commitment test).

[105] *See* Conner v. Burford, 605 F. Supp. 107, 109 (D. Mont. 1985) (creating "significant and irreversible impact" test from judicial precedent and CEQ regulations).

[106] *See* Thomas v. Peterson, 753 F.2d 754, 758–60 (9th Cir. 1985) (applying CEQ regulations and Ninth Circuit precedents).

[107] 40 C.F.R. §§ 1501.7, 1508.25 (1986).

[108] *See supra* text accompanying notes 36–38.

[109] 40 C.F.R. § 1508.25(a) (1986).

[110] *Id.*

[111] *Id.*

[112] Thomas v. Peterson, 753 F.2d 754, 759 (9th Cir. 1985).

proposals fulfilled the second and third criteria of the test because each action justified the other: the timber sale could not proceed without the road construction; justification for the road depended on timber sales.[113] The court, therefore, required the Forest Service to examine the potential environmental effects of the connected actions together. In another case involving timber sales and a Forest Service road, a court found that the actions were not connected.[114] The court declared that the road already existed even though it was not paved, it served interests other than timber harvesters, and timber sales were not sufficiently definite when the paving was proposed.[115]

2. Cumulative Actions

Under the CEQ regulations, a proposed action is cumulative if it has cumulatively significant impacts when it is viewed with other proposed actions.[116] The leading case, and the basis for the CEQ regulation on cumulative actions, is *Kleppe v. Sierra Club*.[117]

Kleppe involved the issue of whether a comprehensive EIS was required for the Department of the Interior's coal mining activities on the Northern Great Plains.[118] The Department had prepared a comprehensive EIS for its nationwide coal-leasing program,[119] as well as site-specific EISs for individual actions such as approval of mining plans and right-of-way permits.[120] The Sierra Club challenged the Department's failure to prepare a programmatic EIS for the Northern Great Plains region on the basis that coal-related activity in the area was environmentally, geographically, and programmatically related.[121]

The Supreme Court rejected the Sierra Club's argument and upheld the trial court's finding that existing and proposed coal development projects in the region were not interrelated.[122] The Court stated in dicta that if the Department proposed a regional program with a cumulative or synergistic environmental impact, the agency must consider the environmental consequences of the program in one EIS, but that a comprehensive EIS was not required for con-

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[113] *Id.* at 758–59.
[114] Vance v. Block, 635 F. Supp. 163, 167–68 (D. Mont. 1986).
[115] *Id.*
[116] 40 C.F.R. § 1508.25(a)(2) (1986).
[117] 427 U.S. 390 (1976).
[118] *Id.* at 397–98.
[119] *Id.*
[120] *Id.* at 399.
[121] *Id.* at 412.
[122] *Id.* at 400–01.

templated actions.[123] The Court reasoned that requiring EISs for contemplated actions would result in the unnecessary preparation of a large number of EISs, as well as unwarranted judicial intrusion into day-to-day agency activities.[124] Although the Court noted with approval the Department's use of drainage areas and basins in defining the geographic area to be included in individual EISs, it affirmed the broad discretion accorded agencies in defining the scope of their EISs.[125]

The cumulative actions test differs from the connected actions test by focusing on the environment affected by an action rather than the type of action causing the impact. An action, therefore, may be cumulative even though it has independent utility.[126]

Courts apply the cumulative actions test to two types of determinations: scoping (as in *Kleppe*) and threshold determinations. As detailed in the CEQ regulations,[127] the test is designed for determining whether to prepare a comprehensive EIS in addition to site-specific EISs. If an agency proposes various actions which are so interrelated that they comprise a local,[128] regional, or national program,[129] the agency must consider the effects of the cumulative actions in a comprehensive EIS. Because a central issue is whether a program in fact exists, cases often turn on that issue[130] or on whether actions are proposed or contemplated.[131]

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[123] *Id.* at 410.

[124] *Id.* at 406.

[125] *Id.* at 412.

[126] *See* Council on Environmental Quality, Memorandum on "Kleppe v. Sierra Club" and "Flint Ridge Development Co. v. Scenic Rivers Ass'n. of Oklahoma," 42 Fed. Reg. 61,069, 61,070 (1977) [hereinafter CEQ Memorandum]. *See also* Manatee County v. Gorsuch, 554 F. Supp. 778, 793 (M.D. Fla. 1982) (rejecting Corps of Engineers' argument that the ocean dumping projects were not interdependent in light of the cumulative or synergistic effect of the material being dumped at the same place).

[127] CEQ Memorandum, *supra* note 126.

[128] *See* Citizens for Responsible Area Growth v. Adams, 477 F. Supp. 994, 1002 (D.N.H. 1979) (projects for different areas of airport complex were part of same action for NEPA purposes).

[129] *See* Fritiofson v. Alexander, 772 F.2d 1225, 1249 (5th Cir. 1985); Committee for Auto Responsibility v. Solomon, 603 F. Supp. 992, 1001 n.37 (D.C. Cir. 1979), *cert. denied*, 445 U.S. 915 (1980); *see also* American Pub. Transit Ass'n v. Goldschmidt, 485 F. Supp. 811, 833 (D.D.C. 1980) (regulations concerning access of handicapped persons to federally assisted mass transit program comprise national program as defined by *Kleppe*).

[130] *See* Sierra Club v. Hodel, 544 F.2d 1036, 1040–41 (9th Cir. 1976) (no regional plan for supply of hydorelectric power by Bonneville Power Administration exists); Peshlakai v. Duncan, 476 F. Supp. 1247, 1258 (D.D.C. 1979) (no comprehensive plan exists for uranium mining and milling activities in New Mexico and Colorado).

[131] *See* South La. Envt'l Council, Inc. v. Sand, 629 F.2d 1005, 1015 (5th Cir. 1980) (levee extension would have a cumulative environmental effect as well as a direct and significant

The cumulative actions test is less well-suited to threshold determinations, for which the CEQ regulations specify using the cumulative impacts test.[132] A determination of whether actions are cumulative focuses on the proposed actions, whereas a determination of whether impacts are cumulative focuses on the resource affected by actions. Courts apply the cumulative actions test to threshold determinations by applying a different remedy and by varying the criteria from those used in scoping decisions.

If a court determines at the threshold level that an agency's action may have cumulatively significant effects, the agency must prepare an EIS analyzing those effects in lieu of preparing EAs and FONSIs for individual actions.[133] In making its decision, a court examines the agency's record for evidence of cumulative effects, including effects predicted by commenting agencies.[134] In addition to reviewing programmatic actions,[135] courts also review repetitive actions which do not have significant environmental effects when examined individually.[136]

The law is unsettled on which actions to consider in a cumulative actions analysis at the threshold level. For example, one court determined that an agency did not have to consider contemplated projects outside its control when it was considering the proposed action on which the contemplated projects were based.[137] The court reasoned that the contemplated projects would be subject to environmental review if they were subsequently proposed.[138] Another court determined that a one hundred page EA prepared for leasing an exploratory oil well in a national forest was adequate without

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impact on navigation channel, but does not require consideration because extension was only one of several flood protection schemes under consideration); Hart & Miller Islands Area Envt'l Group, Inc. v. Corps of Eng'rs, 505 F. Supp. 732, 754 (D. Md. 1980) (expansion of proposed dike is contemplated but not proposed). *But see* Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 89 (2d Cir. 1975) (action must be considered in EIS because, although it is not approved, it is beyond speculation stage).

[132] 40 C.F.R. § 1508.27(b)(7) (1986); *see infra* text accompanying notes 294–311 for a discussion of cumulative effects.

[133] *See* Thomas v. Peterson, 753 F.2d 754, 759 (9th Cir. 1985).

[134] *See id.* (comments of other agencies suggested that road construction and timber sales would have cumulative environmental impact).

[135] *See* City of Rochester v. United States Postal Serv., 541 F.2d 967, 972 (2d Cir. 1976) (construction of new postal facility and abandonment of old facility are cumulatively significant actions).

[136] *See* Manatee County v. Gorsuch, 554 F. Supp. 778, 793 (M.D. Fla. 1982) (repetitive dumping of dredged material on ocean dump site); Sierra Club v. Bergland, 451 F. Supp. 120, 129–30 (N.D. Miss. 1978) (repetitive channelization of watershed).

[137] Crounse Corp. v. ICC, 781 F.2d 1176, 1194–95 (6th Cir. 1986).

[138] *Id.* at 1194–95.

discussion of the environmental effects of full field development.[139] The court stated that such development was speculative and would receive further study under NEPA if it was subsequently proposed.[140] In contrast, another court found that an EA and FONSI for an oil and gas lease in a different national forest was inadequate because it was in the first stage in a process which would have significant environmental effects.[141]

At the threshold level, a decision that actions are not cumulative means that EISs may not be prepared for any of the actions involved. The possibility that cumulative effects may not be analyzed in subsequent EISs may be enough to change a court's decision. For example, in a scoping case involving an ocean dumping site used by the Corps of Engineers and its permittees, a court required preparation of a comprehensive EIS when EAs rather than site-specific EISs were sometimes prepared for individual actions.[142]

3. Similar Actions

The CEQ defines similar actions as proposed or reasonably foreseeable agency actions with a common feature, such as timing or geography.[143] If an agency determines that it is advantageous to consider the combined impacts of similar actions or reasonable alternatives together, it may do so at its discretion.[144] Because the regulation is precatory, case law defining the regulation is scarce. Courts that have considered similar actions seem to use the regulation as an additional factor in decisions ruling that the cumulative effects of several proposed actions must be considered together.[145]

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[139] Park County Resource Council, Inc. v. United States Dep't of Agric., 613 F. Supp. 1182 (D. Wyo. 1985), *aff'd*, 812 F.2d 609 (10th Cir. 1987). The court noted that even though discussion of full field development was not required, the agency's environmental review included the discussion. *Id.* at 1188.

[140] *Id.* at 1187–88.

[141] Conner v. Burford, 605 F. Supp. 107, 108–09 (D. Mont. 1985). *See also* Sierra Club v. Peterson, 717 F.2d 1409, 1414 (D.C. Cir. 1983) (after oil and gas leases were issued for national forest, Forest Service could not prevent surface disturbing activities; therefore EA and FONSI were inappropriate because subsequent development may have significant environmental effects).

[142] National Wildlife Fed'n v. Benn, 491 F. Supp. 1234, 1251–52 (S.D.N.Y. 1980).

[143] 40 C.F.R. § 1508.25(a)(3) (1986).

[144] *Id.*

[145] *See, e.g.*, Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 88–89 (2d Cir. 1975) (similarity of dredge dumping operation to others using the same ocean dump was one factor requiring cumulative environmental effects of actions to be considered together); National Wildlife Fed'n v. United States Forest Serv., 592 F. Supp. 931, 942 (D. Or. 1984) (federal timber sales and private timber harvesting on adjacent land were actions resulting

4. Unconnected Single Actions

Unconnected single actions, or individual actions, are not defined by the CEQ. Their definition, however, can be determined by reversing the CEQ's definition of connected actions. Unconnected single actions, therefore, are actions that: (1) do not automatically trigger other actions potentially requiring EISs, (2) are not interdependent parts of larger actions on which they depend for their justification, and (3) do not require prior or simultaneous actions to be taken in order for them to proceed.[146]

Unconnected single actions are wide-ranging but can be roughly divided into two categories: entrepreneurial and regulatory actions.[147] Professor McGarity describes the federal agencies' entrepreneurial actions as resource bestowing.[148] Construction and transportation projects are entrepreneurial actions as are project grants to states and private parties, as well as the lease, sale, or donation of federally owned resources.[149] Regulatory actions, meanwhile, encompass agency rulemaking activities affecting classes of activities as well as adjudicatory actions such as granting individual permits.[150]

C. Actions Affecting the Status Quo

A difficult problem occasionally faced by agencies is determining whether an action changes the status quo sufficiently to trigger NEPA. Decisions vary according to individual situations. The Ninth Circuit held that the Federal Energy Regulatory Commission's relicensing of a hydropower dam on the Columbia River was a change in the status quo.[151] The court applied the irretrievable commitment

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in similar cumulative threats to fish habitat), *order vacated in part and appeal dismissed*, 801 F.2d 360 (9th Cir. 1986).

[146] *See* 40 C.F.R. § 1508.25(a) (1986). *See also supra* text accompanying notes 112–14 for a discussion of the distinction between unconnected single actions and connected actions.

[147] *See* McGarity, *The Courts, the Agencies, and NEPA Threshold Issues*, 55 TEX. L. REV. 801, 840 (1977).

[148] *Id.* at 840–41.

[149] *See id.*

[150] *See id.*

[151] Confederated Tribes & Bands of the Yakima Indian Nation v. Federal Energy Regulatory Comm'n, 746 F.2d 466, 476–77 (9th Cir. 1984), *cert. denied*, 471 U.S. 1116 (1985); *see also* Louisiana v. Lee, 758 F.2d 1081, 1086 (5th Cir. 1985), *cert. denied sub nom.* Dravo Basic Materials Co. v. Louisiana, 106 S. Ct. 1259 (1986) (renewal of shell dredging permits is not maintenance of status quo because damage could spread beyond currently affected area; if permits were not renewed, benthos could recover), *cert. denied*, 106 S. Ct. 1259 (1986).

test to determine that an EIS was required.[152] The dam, which had been licensed for many years, was to be relicensed for forty years.[153]

In a case involving a bridge to a barrier island, however, the Fifth Circuit determined that the status quo included the twenty-four year old bridge before its destruction by a hurricane.[154] The new bridge was similar in design to the destroyed bridge.[155] In another case involving construction of a fishing pier in an area already used for fishing, a court agreed with the Environmental Protection Agency that the new pier would not significantly affect the environment.[156] One factor considered was the continuation of the existing use of the area.[157]

IV. Nature of Effects to be Considered in Threshold Determinations

The CEQ regulations require EISs to consider direct and indirect effects.[158] The effects may be ecological, aesthetic, cultural, economic, social, health-related, or historic resources. They may be beneficial as well as detrimental.[159] Direct and indirect effects may also be cumulative. The difference in considering direct and indirect effects and in considering cumulative impacts is that a cumulative impacts analysis requires consideration of the effects of other actions. Consideration of the direct and indirect effects of an action is limited to the proposed action.[160] Because a threshold determination focuses on identifying whether environmental effects are significant, not whether they are direct or indirect, categorization of actions under direct or indirect effects in an EA or EIS is not mandatory, although consideration of them is.[161]

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[152] *Confederated Tribes*, 746 F.2d at 476.

[153] *Id.* at 476–77.

[154] Sierra Club v. Hassell, 636 F.2d 1095, 1099 (5th Cir. 1981). *See also* Committee for Auto Responsibility v. Solomon, 603 F.2d 992, 1002–03 (D.C. Cir. 1979) (change in lessee of government parking lot does not change status if government's parking policy remains the same), *cert. denied*, 445 U.S. 915 (1980).

[155] *Hassell*, 636 F.2d at 1099.

[156] Durnford v. Ruckelshaus, 5 Env't Rep. Cas. (BNA) 1007, 1010 (N.D. Cal. 1972).

[157] *Id.*

[158] 40 C.F.R. §§ 1502.16(a)–(b) (1986).

[159] *Id.* § 1508.8.

[160] Fritiofson v. Alexander, 772 F.2d 1225, 1246 (5th Cir. 1985). *See supra* text accompanying notes 116–42 (cumulative actions) and *supra* text accompanying notes 116–142 (cumulative needs).

[161] *See* Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974).

A. Direct Effects

Direct effects occur at the same time and place as a proposed action, and are caused by it.[162] Examples include increased traffic caused by the change in location of jobs, urban blight caused by abandonment of inner city facilities, and inner city residents moving to the suburbs because of the loss of job opportunities.[163] If the effect of the action will be offset by preexisting conditions in the area, however, the potential pressures may be shown to be nonexistent. For example, the potential pressure on services caused by the creation of new jobs may be offset by high unemployment in the area.[164] Similarly, the potential increase in development pressure caused by expanding a county's sewage treatment system may be offset by an overburdening of the county's existing system.[165]

The common denominator in the above examples of direct effects is their threat to an area's physical resources.[166] If the threat is to an area's socioeconomic environment, however, the position changes. The CEQ does not require preparation of an EIS if the only effects of a proposed action are socioeconomic.[167] Thus, if the only effect of closing an air force base would be local unemployment, an EIS is not required.[168] If an action's physical effect on the environment requires preparation of an EIS, however, socioeconomic effects may also need to be considered.[169]

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[162] 40 C.F.R. § 1508.8(a) (1986).

[163] City of Rochester v. United States Postal Serv., 541 F.2d 967, 973 (2d Cir. 1976).

[164] *See* Brandon v. Pierce, 725 F.2d 555, 563 (10th Cir. 1984).

[165] *See* Town of Orangetown v. Gorsuch, 718 F.2d 29, 38 (2d Cir. 1983), *cert. denied*, 465 U.S. 1099 (1984).

[166] *See* Goodman Group, Inc. v. Dishroom, 679 F.2d 182, 185 (9th Cir. 1982).

[167] 40 C.F.R. § 1508.14 (1986). *See* Como-Falcon Community Coalition, Inc. v. United States Dep't of Labor, 609 F.2d 342, 346 (8th Cir. 1979), *cert. denied*, 446 U.S. 936 (1980).

[168] Image of Greater San Antonio, Texas v. Brown, 570 F.2d 517, 522 (5th Cir. 1978). *See also* Breckinridge v. Rumsfeld, 537 F.2d 864, 865 (6th Cir. 1976) (reduction in jobs and transfers of personnel from army depot does not require EIS), *cert. denied*, 429 U.S. 1061 (1977); Nucleus of Chicago Homeowner's Ass'n v. Lynn, 372 F. Supp. 147, 149–50 (N.D. Ill. 1973) (socioeconomic characteristics of occupants of proposed low-income housing project are not an environmental effect of construction of the project), *aff'd*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976).

[169] The CEQ regulations require the consideration of socioeconomic effects if an action has a physical effect on the environment. 40 C.F.R. § 1508.14 (1986). However, the Eighth Circuit considers that the Supreme Court decision of Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766 (1983), may have read the requirement out of existence. Olmstead Citizens for a Better Community v. United States, 793 F.2d 201, 206 (8th Cir. 1986).

B. Indirect Effects

Indirect effects are also caused by an action but are reasonably foreseeable effects occurring at a later time and greater distance. Examples of indirect effects are "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."[170] The lost value to science, education, and recreation of destroyed resources is an indirect effect, as is the public's loss of knowledge that the resource exists.[171] Although the CEQ regulations tend to aggregate indirect effects, the effects should also be considered individually where appropriate.[172]

In making a threshold determination, an agency should identify all known indirect effects in addition to an action's direct effects. The CEQ recognizes that some indirect effects may be uncertain, but encourages agencies to make a good faith attempt to identify those effects which are reasonably foreseeable.[173] In other words, there must be a "reasonably close causal relationship between a change in the physical environment and the effect at issue."[174] Agencies do not need to consider highly speculative or indefinite effects.[175] In identifying which effects are too speculative, agencies should consider: (1) the degree of confidence in predicting the effects' occurrence; (2) the available knowledge with which to describe the impacts in a manner useful to the decisionmaker; and (3) the feasibility of the decisionmaker meaningfully considering an analysis of environmental effects later in the action without being obligated to continue the action because of past commitments.[176]

Applying the above test, the indirect effects of an action would not be too speculative if the action would necessarily result in development of an area, and the development pattern could be described based on existing plans or trends.[177] For example, if an

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[170] 40 C.F.R. § 1508.8(b).

[171] Minnesota Pub. Interest Research Group v. Butz, 498 F.2d 1322 & n.27 (8th Cir. 1974).

[172] Sierra Club v. Marsh, 769 F.2d 868, 878 (1st Cir. 1985).

[173] NEPA Questions, *supra* note 36, at 18,031.

[174] Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 774 (1983).

[175] *See* Sierra Club v. Marsh, 769 F.2d at 878.

[176] *Id. Cf.* Trout Unlimited v. Morton, 509 F.2d 1276, 1284 (9th Cir. 1974) (no significant change in land use patterns or population trends shown when no plan existed and no probability of change was demonstrated).

[177] Sierra Club v. Marsh, 769 F.2d at 878–80.

agency action is a stepping stone to an area's development,[178] or necessarily accelerates development,[179] the action's indirect effects are reasonably foreseeable. Similarly, if an agency contracts to supply power to a company, the environmental effects of the company's use of that power are reasonably foreseeable.[180] Effects may be too speculative if they involve an additional step, however, even if that step is reasonably foreseeable. For example, an increase in Hawaii's permanent population resulting from an increase in tourism was too speculative to be an indirect effect of enlarging an airport, even though the increase in tourism was reasonably foreseeable.[181]

If an indirect action is not too remote, its environmental effects must be considered in a threshold determination and analyzed in an EIS if one is required.[182] Remoteness is generally identified in terms of the probability of environmental effects occurring and the causal chain between the effects and an action, not the amount of time between an action and the occurrence of its direct effects on the environment.[183] Because of the speculative nature of indirect effects, the analysis of environmental effects need not be as detailed as when they are known.[184]

As in direct effects, the significance of an agency's action may be offset by preexisting conditions in the area. For example, the growth inducing potential of a rural water system may be offset by local zoning regulations requiring development projects to comply with local standards.[185] Similarly, the development triggering potential of a new highway project may be offset by the constraining effect of the infrastructure servicing the highway.[186]

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[178] *See* City of Davis v. Coleman, 521 F.2d 661, 675 (9th Cir. 1975). *See* Colorado River Indian River Tribes v. Marsh, 605 F. Supp. 1425, 1433 (C.D. Cal. 1985).

[179] Conservation Council of N. Carolina v. Costanzo, 398 F. Supp. 653, 672 (E.D.N.C. 1975), *aff'd*, 528 F.2d 250 (4th Cir. 1975).

[180] Port of Astoria v. Hodel, 5 Envtl. L. Rep. (Envtl. L. Inst.) 20,657, 20,660 (D. Ore. 1975). *See also* National Forest Preservation Group v. Butz, 485 F.2d 408, 411 (9th Cir. 1973) (effects of planned recreational development on land to be exchanged by Forest Service must be considered under NEPA).

[181] Life of the Land v. Brinegar, 485 F.2d 460, 469 (9th Cir. 1973), *cert. denied*, 416 U.S. 961 (1974). *See also* Glass Packaging Inst. v. Regan, 737 F.2d 1083, 1091 (D.C. Cir.) (possibility that deranged criminal would inject poison through walls of plastic bottles was not a significant environmental effect of permitting use of bottles), *cert. denied*, 469 U.S. 1035 (1984).

[182] Sierra Club v. Marsh, 769 F.2d 868, 879–80 (1st Cir. 1985).

[183] *See* Scientists' Inst. for Pub. Information, Inc. v. Atomic Energy Comm'n, 481 F.2d 1079, 1090 (D.C. Cir. 1973).

[184] Enos v. Marsh, 769 F.2d 1363, 1373 (9th Cir. 1985).

[185] *See* Sierra Club v. Cavanaugh, 447 F. Supp. 427, 432 (D.S.D. 1978).

[186] *See* Coalition on Sensible Transp., Inc. v. Dole, 826 F.2d 60 (D.C. Cir. 1987).

V. Criteria for Determining the Significance of an Environmental Effect

"Significance" is an amorphous term neither defined in NEPA nor its legislative history.[187] The CEQ has recommended applying the term in order to avoid unanticipated environmental effects.[188] Professor McGarity, meanwhile, advocates that a determination of significance should be related to the need for information concerning the action's environmental effects.[189] One court defined the term as "[a]ny action that substantially affects, beneficially or detrimentally, the depth or course of streams, plant life, wildlife habitats, fish and wildlife, and the soil and air" as well as "actions having an important or meaningful effect, direct or indirect, upon a broad range of aspects of the human environment . . . ."[190] Other courts do not attempt a definition but merely state that an action is significant.[191] Because NEPA requires conclusions to be based on evidence and analysis, however, challengers to an agency's determination of nonsignificance may not simply conclude that an effect may be significant.[192] Whether a court specifies the criteria it uses or not, if all potentially significant consequences have been considered, the threshold determination is a question of fact, not law.[193] Cases, therefore, tend to be determined on an ad hoc basis.

To aid the agencies in identifying those actions which may have significant environmental effects, the CEQ published a list of crite-

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[187] *See* Hanly v. Kleindienst, 471 F.2d 823, 830 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); Council on Environmental Quality, *Environmental Quality: Third Annual Report* 231 (1972).

[188] Council on Environmental Quality, *Environmental Quality: Third Annual Report* 231 (1972).

[189] McGarity, *supra* note 147, at 848; *accord* Citizens Against 2, 4-D v. Watt, 527 F. Supp. 465, 468 (W.D. Okla. 1981); Joseph v. Adams, 467 F. Supp. 141, 154 (E.D. Mich. 1978).

[190] Natural Resources Defense Council, Inc. v. Grant, 341 F. Supp. 356, 367 (E.D.N.C. 1972). *See also* Gifford-Hill & Co. v. FTC, 389 F. Supp. 167, 174 (D.D.C. 1974) (interpreting "significantly affecting" as "having a reasonably substantial relationship to the quality of the environment"), *aff'd*, 523 F.2d 730 (D.C. Cir. 1975).

[191] *See, e.g.*, Louisiana Wildlife Fed'n v. York, 761 F.2d 1044, 1053 (5th Cir. 1985) ("we have no doubt that the potential effect of the [action] is 'significant'"); City of West Chicago v NRC, 701 F.2d 632, 650 (7th Cir. 1983) (action "clearly will have a significant impact on the environment"); City of Davis v. Coleman, 621 F.2d 661, 674–75 (9th Cir. 1975) ("it is obvious that constructing [a highway in an undeveloped area] will have a substantial impact on a number of environmental factors").

[192] *See* Township of Lower Alloways Creek v. Public Serv. Elec. & Gas Co., 687 F.2d 732, 747 (3d Cir. 1982).

[193] Fritiofson v. Alexander, 772 F.2d 1225, 1248 (5th Cir. 1985); Town of Orangetown v. Gorsuch 718 F.2d 29, 35 (2d Cir. 1983), *cert. denied*, 465 U.S. 1099 (1984); Vine Street Concerned Citizens, Inc. v. Dole, 630 F. Supp. 24, 28 (E.D. Pa 1985).

ria.[194] These criteria, based on CEQ's reading of the case law minus marginal decisions,[195] have two divisions—context and intensity—both of which must be considered in threshold determinations.[196]

A. Context of an Action

Agencies determine the context of an action by analyzing it in relation to its setting—local, regional, and/or national—and the interests it affects. The context of an action is also influenced by the short- and long-term nature of its effects.[197]

1. Local or Regional Effects

A project's locale plays a critical role in determining whether an environmental effect is significant. Locale is determined by the geography of an area and the nature of an action.[198] For example, if an action will destroy habitat, the significance of the loss will not be determined in relation to the extent of the habitat in general. Instead, the locale for a site-specific action is the area directly affected by the action plus its immediate surroundings.[199]

The condition of the site where the activity will take place is also relevant. If an area is damaged by past government actions, but has the potential to reestablish itself, a determination of significance is not qualified by the current state of the environment.[200] Alternatively, if the agency's action will stabilize the area's environment by relieving pressure on organisms such as animals or plants, the action may be considered nonsignificant.[201] If the action's environmental effects will be mitigated because of natural conditions occurring at the same time, the action's effect may be insignificant. For example, the effect of road salt entering streams may be offset by the high water flows of spring runoff.[202]

If a project affects a natural resource that is prevalent over a large area without clearly identifiable boundaries, the locale of the

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[194] 40 C.F.R. § 1508.27 (1986).

[195] *See* Note, *The CEQ Regulations: New Stage in the Evolution of NEPA*, 3 HARV. ENVTL. L. REV. 347, 362 (1979).

[196] 40 C.F.R. § 1508.27 (1986).

[197] *Id.* § 1508.27(a).

[198] *See* Sierra Club v. Marsh, 769 F.2d 868, 881 (5th Cir. 1985).

[199] *Id.*

[200] Louisiana v. Lee, 758 F.2d 1981, 1086 (5th Cir. 1985), *cert. denied sub nom.* Dravo Basic Materials Co. v. Louisiana, 106 S. Ct. 1259 (1986).

[201] American Horse Protection Ass'n v. Frizzell, 403 F. Supp. 1206, 1219 (D. Nev. 1975).

[202] *See* Mont Vernon Preservation Soc'y v. Climents, 415 F. Supp. 141, 148 (D.N.H. 1976).

action may be less critical. For example, a court determined that the adverse impact of a Corps of Engineers' dredging program on benthic organisms was insignificant because of the vast area inhabited by the organisms which would not be affected and the lack of any threatened or endangered species in the affected area.[203]

Although local opposition to a project will not make an insignificant effect become significant,[204] the project's effect on a local community may trigger the EIS process if challengers to the action can show that the community and its inhabitants may be harmed.[205] The harm may include a deterioration in the quality of life caused by a construction project,[206] a substantial decrease in a community's tax base,[207] or a change in the character of one of the community's neighborhoods.[208] The effect need not be significant when viewed in the context of the agency's entire action as long as it is shown to be significant to the community.[209]

2. Short- or Long-Term Effects

The fact that an agency's temporary action has short-term effects is insufficient, standing alone, to make those effects insignificant.[210] If the action continues a long trend of environmental deterioration, the action's environmental significance is not lessened because of that deterioration.[211] Thus, a discussion of temporary effects in an EIS has been adjudged adequate when environmental effects were shown to be similar to those occurring in nature, and when displaced organic communities were shown to have the potential to repopulate within a short period with only minimal long-term damage.[212] The temporary effects on the scenic qualities of a river caused by oper-

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[203] Louisiana *ex rel.* Guste v. Lee, 635 F. Supp. 1107, 1121–22 (E.D. La. 1986).

[204] *See Mont Vernon*, 415 F. Supp. at 148. *See infra* text accompanying notes 241–50 (controversiality factor).

[205] *See Mont Vernon*, 415 F. Supp. at 147–49. Effects of Highway reconstruction project through community were not significant because plaintiffs did not show harm to town's economy or ambiance. *Id.* at 149.

[206] *See* Hanly v. Mitchell, 460 F.2d 640, 647 (2d Cir.), *cert. denied*, 409 U.S. 990 (1972) (proposed jail construction).

[207] Township of Springfield v. Lewis, 702 F.2d 426, 449 (3d Cir. 1983).

[208] Goose Hollow Foothills League v. Romney, 334 F. Supp. 877, 879–80 (D. Or. 1971).

[209] *Township of Springfield*, 702 F.2d at 449 n.48. *See also* Smith v. City of Cookeville, 381 F. Supp. 100, 111 (M.D. Tenn. 1974) (assessing significance in context of size of affected area and life styles of its inhabitants).

[210] *See* Louisiana *ex rel.* Guste v. Lee, 635 F. Supp. 1107, 1121 (E.D. La. 1986).

[211] *See* Louisiana v. Lee, 758 F.2d 1091, 1086 (5th Cir. 1985), *cert. denied sub. nom.* Dravo Basic Materials Co. v. Louisiana, 106 S. Ct. 1259 (1986).

[212] Pack v. Corps of Eng'rs, 428 F. Supp. 460, 466 (M.D. Fla. 1977).

ating a barge fleeting facility were also adjudged insignificant when the facility's eventual removal was shown not to damage the river's scenic qualities.[213]

B. Intensity of an Action

An action's significance is measured by its intensity as well as its context. The intensity of an action is the severity of its impact.[214] The CEQ lists ten criteria for determining whether an action's potential environmental effects are severe enough to be significant. In evaluating intensity agencies should consider the action's: (1) beneficial or adverse effects; (2) effect on public health and safety; (3) effect on a unique geographical area; (4) controversial effects on the human environment; (5) uncertain, unique, or unknown risks; (6) precedential effects; (7) cumulative effects; (8) effect on historic, scientific, or cultural resources; (9) effect on endangered species; and (10) compliance with federal, state, or local law.[215] The criteria provide a framework for making threshold determinations which is widely used by federal agencies. The fact that an environmental effect may be classified under one or more of the criteria does not mean that it is necessarily significant,[216] but courts may use the criteria as examples of factors requiring consideration in a threshold determination.[217]

Some agencies publish further guidance on defining when an action is significant. For example, the National Oceanic and Atmospheric Administration includes the following additional criteria for fishery management plans and amendments:

> (1) The proposed action may be reasonably expected to jeopardize the long-term productive capability of any stocks that may be affected by the action.
> (2) The proposed action may be reasonably expected to allow substantial damage to the ocean and coastal habitats.
> . . .
> (4) The proposed action may be reasonably expected to affect adversely an endangered or threatened species or a marine mammal population.

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[213] *See* River Road Alliance, Inc. v. Corps of Eng'rs, 764 F.2d 445, 451 (7th Cir. 1985), *cert. denied*, 106 S. Ct. 1283 (1986).

[214] 40 C.F.R. § 1508.27(b) (1986).

[215] *Id.*

[216] *See* Puna Speaks v. Hodel, 562 F. Supp. 82, 85 (D. Haw. 1983).

[217] *See* Found. on Economic Trends v. Weinberger, 610 F. Supp. 829, 841 (D.D.C. 1985).

> (5) The proposed action may be reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target resource species or any related stocks that may be affected.[218]

The Department of Interior expands the criteria involving an area's unique character to require consideration of wilderness areas, sole or principal drinking water aquifers, and ecologically significant areas, in addition to the areas detailed by the CEQ.[219] The Minerals Management Service of the Department of the Interior requires consideration of the effects of activities described in a development plan, including the probable construction of new onshore processing, storage, treatment, or transportation facilities resulting from offshore development and its effect on the marine, coastal, and human environment. In addition, adverse effects with a greater magnitude, duration, or nature from those previously analyzed must be considered.[220]

1. Beneficial or Adverse Effects

Recognizing that environmental impacts may be simultaneously beneficial and adverse, the CEQ regulations require consideration of both effects in threshold determinations even if an agency believes the effect is more beneficial than adverse.[221] The focus of the determination is on whether either effect may be significant. Beneficial economic effects of an action cannot be balanced against adverse environmental effects at the threshold determination stage.[222] If a beneficial effect may be significant, it must be discussed in an EIS.[223]

2. Effect on Public Health and Safety

The CEQ regulations require consideration of the degree to which a proposed action affects the public health or safety.[224] Public health was identified in NEPA's legislative history as a primary reason for

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[218] Revised NOAA Directives, *supra* note 10, at 29,656.

[219] Revised Procedures, *supra* note 10, at 21,439. *See* 40 C.F.R. § 1508.27(b)(3) (1986) (discussed *infra* in text accompanying note 234).

[220] 30 C.F.R. § 250.34-4(c) (1986).

[221] 40 C.F.R. § 1508.27(b)(1) (1986). *See also* Hiram Clarke Civic Club v. Lynn, 476 F.2d 421, 427 (5th Cir. 1973) (NEPA mandates consideration of all potential environmental effects); Goose Holow Foothill League v. Romney, 334 F. Supp. 877, 879 (D. Or. 1971) (agency must consider all significant effects, beneficial as well as adverse).

[222] Sierra Club v. Marsh, 769 F.2d 868, 880 (1st Cir. 1985).

[223] Environmental Defense Fund v. Marsh, 651 F.2d 983, 993 (5th Cir. 1981).

[224] 40 C.F.R. § 1508.27(b)(2) (1986).

NEPA's enactment,[225] and has been referred to as the most important subject covered by the Act.[226]

Although physical health is definitely within NEPA's ambit, it is unclear whether psychological health is also included. The problem lies not with a distinction between physical and psychological health, but with the causal chain between a physical effect on the environment and its effect on psychological health. For example, the Supreme Court ruled that the causal chain between restarting a nuclear reactor at Three Mile Island and the effect on residents' psychological health posed by the risk of an accident was too attenuated to be covered by NEPA.[227] Similarly, the effect on residents' psychological health of constructing a jail or low-income housing in a neighborhood is too attenuated to be within the scope of NEPA.[228]

While NEPA may not cover psychological health, it does include beneficial psychological effects. The quality of life is within NEPA's scope,[229] as is the public's awareness that a resource exists.[230] Aesthetic values are also included.[231] Because of their subjective nature, aesthetic effects do not require preparation of statistical analyses.[232] Aesthetic effects rarely trigger the duty to prepare an EIS unless combined with other potentially significant effects.[233]

3. Unique Character of an Effect

In making a threshold determination, the CEQ regulations require consideration of a geographic area's unique characteristics.[234] Unique

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[225] 115 Cong. Rec. 19,009 (1969) (statement of Sen. Jackson) ("What is involved is a congressional declaration that we do not intend, as a government or as a people, to initiate actions which endanger the continued existence or the health of mankind . . . . An environmental policy is a policy for people. Its primary concern is with man and his future.").

[226] Citizens Against Toxic Sprays, Inc. v. Bergland, 428 F. Supp. 908, 927 (D. Or. 1971).

[227] Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 775 (1983).

[228] *Id.* at 776–77.

[229] Hanly v. Kleindienst, 471 F.2d 823, 827 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973). *See also* Highland Cooperative v. City of Lansing, 492 F. Supp. 1372, 1379 (W.D. Mich. 1980) (highway construction would potentially affect quality of life of community).

[230] Minnesota Pub. Information Research Group v. Butz, 498 F.2d 1314, 1322 n.27 (8th Cir. 1974).

[231] *See* Maryland-Nat'l Capital Park & Planning Comm'n. v. United States Postal Serv., 487 F.2d 1029, 1038 (D.C. Cir. 1973). *See also* Mahelona v. Hawaiian Elec. Co., 418 F. Supp. 1328, 1334 (D. Haw. 1976) (recognizing "undeniably significant aesthetic consequences" of constructing a 7–10 foot high wall, 150 feet out to sea for a discharge facility).

[232] City of New Haven v. Chandler, 446 F. Supp. 925, 930 (D. Conn. 1978).

[233] River Road Alliance, Inc. v. Corps of Eng'rs, 764 F.2d 445, 451 (7th Cir. 1985), *cert. denied* 106 S. Ct. 1283 (1985).

[234] 40 C.F.R. § 1508.27(b)(30) (1986).

characteristics include the area's proximity to historic or cultural resources, prime farmlands, park lands, wild and scenic rivers, wetlands, or ecologically critical areas.[235] For example, an EA and FONSI were declared inadequate because they did not consider the environmental and social effects of an expanded highway project in Dallas, Texas.[236] The expanded highway's increased proximity to a popular city park and several historic properties would have affected the area's use because of the highway's visual, aesthetic and noise effects.[237]

Any effect on an area's unique characteristics, however, will not trigger an agency's duty to prepare an EIS. The effect must significantly affect the unique characteristic.[238] If the action continues an existing use, the effect may be nonsignificant. For example, when the major change between old and new roads through parkland is only increased traffic capacity, the proposed road construction may not necessarily have a significant effect on the parkland.[239] Although an action's effect upon an area's unique character may trigger an EIS, an effect may be significant even though no unique characteristics exist. For example, if an area's pollution problems are so severe that another pollution source would "represent the straw that breaks the back of the environmental camel" the effect may be significant.[240]

4. Controversiality of an Effect

In making threshold determinations, agencies should consider the degree to which the environmental effects of their proposed actions may be controversial.[241] The term "controversial" applies to the environmental effects, nature, and size of a proposed action, not to the proposed action itself.[242] Thus, if opposition to a proposed action exists but the nature of its effects is not disputed, one court has

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[235] *Id.*

[236] Citizen Advocates for Responsible Expansion, Inc. v. Dole, 770 F.2d 423, 435–36 (5th Cir. 1985).

[237] *Id.*

[238] *See* Town of Orangetown v. Gorsuch, 718 F.2d 29, 36–37 (2d Cir. 1983) (effect on wetlands of expansion of sewage treatment system was not significant), *cert. denied*, 465 U.S. 1099 (1984).

[239] *See* Falls Road Impact Comm. v. Dole, 581 F. Supp. 678, 696 (E.D. Wis.), *aff'd*, 737 F.2d 1476 (7th Cir. 1984).

[240] Hanly v. Kleindienst, 471 F.2d 823, 831 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

[241] 40 C.F.R. § 1508.27(b)(4) (1986).

[242] *Hanly*, 471 F.2d at 830; *see also* Revised NOAA Directive, *supra* note 10, at 29,647 (controversial does not refer to the propriety of a proposed action).

ruled that the CEQ regulations do not require the opposition to be a factor in determining the effects' significance.[243]

Individual agencies, however, may recommend factoring local opposition to a project into a decision to prepare an EIS. For example, NOAA recommends considering the controversial nature of an action in a threshold determination.[244] Controversiality is partially determined by consideration of socioeconomic factors.[245]

The controversiality criteria is useful in triggering an EIS in marginal cases where the duty to prepare an EIS is unclear.[246] To trigger the regulation, however, opponents of a projected action must provide evidence showing the existence of a scientific controversy about the action's environmental effects; mere speculation is insufficient to make an action's effects controversial.[247] Such evidence can consist of disagreements with a nonsignificance determination by other agencies and knowledgeable members of the public.[248] If a court finds controversy over the effects of an action, the potential uncertainty of the effects triggers the CEQ regulation on uncertain, unique, or unknown risks.[249] If opposition to a project does not occur, an agency may not conclude that the action lacks significance; lack of opposition is not necessarily lack of significance.[250]

5. Uncertain, Unique, or Unknown Risks

The CEQ regulations require agencies to consider the degree to which the possible environmental effects of their actions are highly uncertain or involve unique or unknown risks.[251] The procedures to be followed if information is incomplete or unavailable after a decision has been made to prepare an EIS have been subject to dispute

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[243] *See* Bosco v. Beck, 475 F. Supp. 1029, 1038 (D.N.J. 1979), *aff'd*, 614 F.2d 769 (3d Cir. 1980), *cert. denied*, 449 U.S. 822 (1980).

[244] Revised NOAA Directive, *supra* note 10, at 29,656.

[245] *Id.*

[246] Lynch, *The 1973 CEQ Guidelines: Cautious Updating of the Environmental Impact Statement Process*, 11 CAL. W.L. REV. 297, 312 n.83 (1975).

[247] *See* Town of Orangetown v. Gorsuch, 718 F.2d 29, 39 (2d Cir. 1983), *cert. denied*, 465 U.S. 1099 (1974).

[248] *See* Foundation for N. Am. Wild Sheep v. United States Dep't of Agric., 681 F.2d 1172, 1182 (9th Cir. 1982).

[249] *See* Jones v. Gordon, 621 F. Supp. 7, 12 (D. Alaska 1985), *aff'd in part and rev'd in nonpertinent part*, 792 F.2d 821 (9th Cir. 1986). *See* 40 C.F.R. § 1508.27(b)(5) (1986) (discussed *infra* in text accompanying notes 251–89).

[250] *See* Mahelona v. Hawaiian Elec. Co., 418 F. Supp. 1328, 1333 (D. Haw. 1976).

[251] 40 C.F.R. § 1508.27(b)(5) (1986).

during the past few years. The dispute has also raised questions of whether a worst case analysis must be prepared in an EA.

The CEQ regulations formerly mandated preparation of a worst case analysis when scientific uncertainty existed.[252] If scientific uncertainty or gaps in relevant information were discovered by an agency when it was "evaluating significant adverse effects on the human environment" the uncertainty and/or gaps had to be disclosed.[253] If the relevant unavailable information was "essential to a reasoned choice among alternatives and . . . the overall costs of obtaining it [were] not exorbitant," the information had to be included in the EIS.[254]

If the costs were exorbitant, or if important information was unavailable because it was beyond the state-of-the-art, the agency was to "weigh the need for the action against the risk and severity of possible adverse impacts were the action to proceed in the face of uncertainty."[255] A decision to proceed obligated the agency to include a worst case analysis in the EIS, together with an indication of the probability of the adverse impacts occurring.[256] In essence, the worst case analysis regulation addressed agency actions with the potential for low probability but catastrophic environmental consequences, where important information regarding such consequences was unknown or conflicting. If an agency's actions involved a leap into the unknown, the worst environmental consequences of that leap had to be analyzed.[257]

The CEQ withdrew the worst case analysis regulation in 1986.[258] The new regulation requires that, if unavailable information is "essential to a reasoned choice among alternatives and . . . the overall costs of obtaining it are not exorbitant," the information must be included in the EIS.[259] This requirement, which was contained in the old regulation, has not been changed.

The new regulation also provides that if the costs of obtaining the information are exorbitant, or if important information is unavailable

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[252] 40 C.F.R. § 1502.22 (1985) (superseded).

[253] *Id.*

[254] *Id.* § 1502.22(a).

[255] *Id.* § 1502.22(b).

[256] *Id.*

[257] *See* Yost, *Don't Gut Worst Case Analysis*, 13 Envtl. L. Rep. (Envtl. L. Inst.) 10,394, 10,394 (1983).

[258] *See* Council on Environmental Quality, National Environmental Policy Act Regulations; Incomplete or Unavailable Information, 51 Fed. Reg. 15,618 (1986) [hereinafter NEPA Regulations—Incomplete Information].

[259] 40 C.F.R. § 1502.22(a) (1986).

because it is beyond the state-of-the-art, the agency must: disclose the fact that information is incomplete or unavailable; state the relevance of such information; summarize "credible scientific evidence" relevant to an evaluation of reasonably foreseeable significant adverse impacts; and evaluate the impacts by the use of "theoretical approaches or research methods generally accepted in the scientific community."[260] "Reasonably foreseeable" is defined to include environmental effects of low probability but catastrophic consequences if an analysis of such effects "is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason."[261]

It is not yet clear what the practical difference will be between the new regulation and the old regulation. Arguably, the analysis mandated by the old regulation will continue to be required in order for federal agencies to comply with NEPA case law.[262] For example, scientific uncertainty[263] and significant scientific risks[264] must be disclosed and weighed in a decision to proceed with an action.[265] A good faith effort to describe reasonably foreseeable environmental impacts must be made even if it requires speculation.[266] If significant environmental effects are the subject of scientific conflict, an EIS must disclose the uncertainty by including "responsible opposing views."[267] Courts generally defer to an agency's decision about which scientific opinion the agency chooses[268] unless the agency's discussion of scientific data is cursory and conclusive.[269]

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[260] *Id.* § 1502.22(b).

[261] *Id.*

[262] The Ninth Circuit considers that the old regulation codified prior case law. Oregon Natural Resources Council v. Marsh, 820 F.2d 1051, 1058 n.8 (9th Cir. 1987). Therefore, continued compliance with the requirements of the withdrawn regulation is required in at least the Ninth Circuit.

[263] *See* Scientists' Inst. for Pub. Information, Inc. v. Atomic Energy Comm'n, 481 F.2d 1079, 1092 (D.C. Cir. 1973); *See* Save the Niobrara River Ass'n v. Andrus, 483 F. Supp. 844, 852 (D. Neb. 1979).

[264] Baltimore Gas & Elec. Co. v. Natural Resources Defense Council, Inc., 462 U.S. 87, 100 (1983).

[265] Alaska v. Andrus, 580 F.2d 465, 473 (D.C. Cir. 1978), *vacated on other grounds, sub nom.* Western Oil & Gas Ass'n v. Alaska, 439 U.S. 922 (1978). *See* Enos v. Marsh, 769 F.2d 1363, 1373 (9th Cir. 1985).

[266] Scientists Inst. for Pub. Information, Inc. v. Atomic Energy Comm'n, 481 F.2d at 1092.

[267] Committee for Nuclear Responsibility, Inc. v. Seaborg, 463 F.2d 783, 787 (D.C. Cir. 1971).

[268] *Baltimore Gas & Elec. Co.*, 462 U.S. at 103; Webb v. Gorsuch, 699 F.2d 157, 160 (4th Cir. 1983).

[269] Association Concerned About Tomorrow, Inc. v. Dole, 610 F. Supp. 1101, 1111 (N.D. Tex. 1985).

The new CEQ regulation is directly opposed to a Ninth Circuit ruling that worst case analyses are required in EAs.[270] The EAs at issue in the Ninth Circuit cases, however, were not the type used to make traditional threshold determinations. Instead, the EAs were used for individual actions in a comprehensive program. After NEPA procedures had been followed for the broad program, EAs were prepared for individual actions within that program.[271] Thus, if the environmental concerns at issue had been adequately considered in the comprehensive EIS, the EAs could have "tiered" to that EIS, eliminating the necessity for further consideration of the concerns.[272] In effect, the EAs were functional equivalents of EISs.

If courts extend the Ninth Circuit rule of requiring worst case analysis in EAs that are the functional equivalent of EISs to EAs used in threshold determinations, the new CEQ regulation could affect threshold determinations involving uncertainty. Arguably, however, NEPA's full disclosure mandate[273] means that compliance with the more stringent provisions of the old regulation would still be required.[274]

Some courts have established a framework for considering scientific uncertainty in threshold determinations. These courts weigh the probability of an adverse environmental effect or a risk against its

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[270] 40 C.F.R. § 1502.22 (1986). *See* NEPA Regulations–Incomplete Information, *supra* note 258, at 15,625. The superseded regulation did not mention that worst case analyses were required in EAs.

[271] Southern Ore. Citizens Against Toxic Sprays, Inc. v. Clark, 720 F.2d 1475, 1480–81 (9th Cir. 1983), *cert. denied*, 469 U.S. 1028 (1984) (EAs were prepared for annual spraying; EIS had been prepared for 10-year spraying program); National Wildlife Fed'n v. United States Forest Serv., 643 F. Supp. 653, 653 (D. Or. 1984) (amended judgment), *vacated in part and appeal dismissed*, 801 F.2d 360 (9th Cir. 1986) (EAs were prepared for timber sales; court ordered EIS prepared for area's timber sale program).

[272] 40 C.F.R. § 1508.28 (1986); *see* Texas v. United States Forest Serv., 654 F. Supp. 289, 298 (S.D. Tex. 1986).

[273] *See* Columbia Basin Land Protection Ass'n v. Schlesinger, 643 F.2d 585, 594 (9th Cir. 1981); Silva v. Lynn, 482 F.2d 1282, 1285 (1st Cir. 1973).

[274] Under the new regulation, federal agencies could conceivably exclude from consideration scientific evidence they believed to be incredible. *See* 40 C.F.R. § 1502.22 (1986) (analysis must be "supported by credible scientific evidence"). However, although courts traditionally defer to agency expertise on determinations involving evidence at the cutting edge of science, they require agencies to have adequately considered the scientific evidence in dispute. Foundation for Economic Trends v. Heckler, 756 F.2d 143, 153–54 (D.C. Cir. 1985); *see* Reserve Mining Co. v. Environmental Protection Agency, 514 F.2d 492, 519–20 (8th Cir. 1975) (deferring to agency decision involving evidence at the "frontiers of scientific knowledge"). Thus, agencies that do not consider scientific evidence because they believe it to be incredible may be faced with a court making the credibility determination for them. *See* Save Our Ecosystems v. Watt, 13 Envtl. L.R. (Envtl. L. Inst.) 20,887, 20,888 (1983), *aff'd in part and rev'd in part sub nom.* Save Our Ecosystems v. Clark, 747 F.2d 1240 (9th Cir. 1984).

severity. Under this analysis, if scientific uncertainty exists regarding whether a risk has significant environmental effects, the determination of whether the risk itself is significant may turn upon its probability. In *New York v. United States Department of Transportation*, the Second Circuit upheld the Department of Transportation's decision not to prepare an EIS for transporting radioactive materials by highway through urban areas.[275] The agency concluded, and the court agreed, that the certain consequences of the action were insignificant.[276] The court stated that agencies must consider possible environmental effects of their actions, but because the effects involved scientific uncertainty, it deferred to the agency's determination that the risk of accidentally releasing radioactive materials in an urban area was too remote to require an EIS.[277] Because the issue involved a threshold decision, the court stated that it was precluded from imposing its choice of risk analysis on the agency.[278] The agency could select its own methodology for risk assessment as long as it was justified in light of current scientific opinion.[279] The District of Columbia Circuit had adopted a similar test. The court requires agencies to determine the sum of all reasonably foreseeable effects which can be feasibly determined.[280] The probability of the effects occurring is then discounted from the determination, to calculate whether the effects are significant.[281] The detail accompanying consideration of each effect is based on the remoteness of the effect and the severity of its potential environmental effects.[282]

Although an agency may not be obligated to prepare an EIS if significant environmental effects would only occur in the event of a remote risk, the agency must fully discuss the basis for its determination of nonsignificance in the EA. Failure to address environmental concerns because of their speculative nature,[283] or because they are unknown,[284] is inadequate because a potential environmental effect cannot be determined to be nonsignificant unless it is

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[275] 715 F.2d 732, 746 (2d Cir. 1983), *appeal dismissed and cert. denied*, 465 U.S. 1055 (1984).

[276] *Id.* at 752.

[277] *Id.* at 746 n.14, 752.

[278] *Id.* at 751.

[279] *Id.*

[280] Potomac Alliance v. Nuclear Regulatory Comm'n, 682 F.2d 1030, 1037 (D.C. Cir. 1982); *see also* Carolina Envtl. Study Group v. United States, 510 F.2d 796, 799 (D.C. Cir 1975) (recommending that probabilities be considered as well as consequences).

[281] *Potomac Alliance*, 682 F.2d at 1037 n.36.

[282] *Id.*

[283] American Pub. Transit Ass'n v. Goldschmidt, 485 F. Supp. 811, 833 (D.D.C. 1980).

[284] Foundation on Economic Trends v. Heckler, 756 F.2d 143, 155 (D.C. Cir. 1985).

known. The EA must discuss relevant data.[285] If an assessment cannot predict reliable results unless inventories are conducted in the areas where the action is scheduled, the inventories must be completed before the threshold determination is made.[286] In a decision regarding an EIS, however, a lengthy study of biological effects was not required when an agency determined that the physical effects of its action were minor.[287] The court determined that the agency had adequately identified the scientific uncertainty inherent in its decision as well as describing potential biological problems resulting from the physical effects.[288]

If an agency decided to conduct a test to evaluate the environmental effects of a contemplated action, the potential significance of the test's effects would have to be considered under NEPA. In a test involving the use of an airstrip, a court determined that the environmental effects were insignificant because the experts concluded that no long-range effects on health would occur if the test ended when stated, the length of the test was reasonable to fulfill its purposes, and actual testing was more accurate than computer modeling.[289]

6. Precedential Nature of an Effect

The effects of actions which may establish a precedent for future actions with significant effects or which represent "a decision in principle about a future consideration" must be evaluated in determining an effect's intensity.[290] This type of effect can occur when construction of a facility—such as a port—ensures that an area will continue to be developed in lieu of other areas.[291] Similarly, continued investment in a project makes it increasingly difficult for decisionmakers to order the project stopped—as in offshore oil and gas leasing programs.[292] EISs may be required for further stages of the

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[285] Foundation for N. Am. Wild Sheep v. United States Dep't of Agric., 681 F.2d 1172, 1178 (9th Cir. 1982).

[286] Jones v. Gordon, 621 F. Supp. 7, 12 (D. Alaska 1985), *aff'd in part and rev'd in nonpertinent part*, 792 F.2d 821 (9th Cir. 1986). *See also* Save the Niobrara River Ass'n v. Andrus, 483 F. Supp. 844, 860–61 (D. Neb. 1979) (requiring inclusion in EIS of inventory of wildlife and wildlife habitat in area affected by proposed dam).

[287] Izaak Walton League of Am. v. Marsh, 655 F.2d 346, 375–76 (D.C. Cir.), *cert. denied sub nom.* Atchison, T. & S.F. R.R. v. Marsh, 454 U.S. 1092 (1981).

[288] *Id.*

[289] City of Irving v. FAA, 539 F. Supp. 17, 29–31 (N.D. Tex. 1981).

[290] 40 C.F.R. § 1508.27(b)(6) (1986).

[291] *See* Sierra Club v. Marsh, 769 F.2d 868, 879 (1st Cir. 1985).

[292] *See* Massachusetts v. Watt, 716 F.2d 946, 952–53 (1st Cir. 1983).

project, but the commitment of resources stimulates further stages being agreed to by the decisionmaker.[293]

7. Cumulative Effects

When agencies make a threshold determination, they must consider whether the proposed "action is related to other actions with individually insignificant but cumulatively significant impacts,"[294] that is, whether the environmental effects of the action under consideration will be significant when the effects are considered together with the environmental effects of other actions. If the agency determines that a cumulatively significant impact on the environment can be reasonably anticipated, significance exists.[295] Similarly, if the sum of the cumulative effects plus the project's direct effects may result in a significant environmental impact, significance exists.[296]

The CEQ's definition of cumulative effects is considerably broader than its definition of cumulative actions. Cumulative actions include only related actions proposed by the federal agency proposing the action under consideration.[297] The CEQ's definition of cumulative effects, however, includes incremental impacts of proposed agency action on the environment "when added to other past, present, and reasonably foreseeable future actions regardless of" the agency or person conducting the action.[298] Although cumulative impacts may be individually minor, they are considered significant when conducted collectively over a period of time.[299]

In making a cumulative effects determination, an agency need not engage in the detailed analysis required in an EIS.[300] Instead, its EA must identify: (1) the area affected by the proposed project; (2) impacts anticipated in the area by the proposed project; (3) other past, proposed, and reasonably foreseeable actions affecting the area; (4) actual and anticipated impacts caused by other actions; and (5) the overall impact that would probably result from the cumulation of the individual impacts.[301]

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[293] *Sierra Club*, 769 F.2d at 879.

[294] 40 C.F.R. § 1508.27(b)(7) (1986).

[295] *Id.*

[296] Hanly v. Kleindienst, 471 F.2d 823, 830–31 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973).

[297] 40 C.F.R. § 1508.25(a) (1986). See *supra* notes 116–42 and accompanying text for discussion of cumulative actions.

[298] 40 C.F.R. § 1508.25(a) (1986).

[299] 40 C.F.R. § 1508.7 (1986).

[300] Fritiofson v. Alexander, 772 F.2d 1225, 1245 n.15 (5th Cir. 1985).

[301] *Id.* at 1245.

The size of the area to be considered may be determined by factors such as the character of the landscape, identified ecosystems within the area, proposals to expand the proposed project or to conduct other projects in the same area, and the type of pollution problems caused by other actions in relation to those caused by the proposed action.[302] Cumulative effects may be identified, not only by reviewing direct effects such as the loss of a population of organisms due to an agency's action but also the effect on other populations caused by the loss of the directly affected organisms. For example, the loss of benthic organisms caused by shell dredging affects organisms such as shrimp, crab, and bottom-feeding fish which feed on the benthos.[303]

The inclusion of other actions in a cumulative effects analysis is not determined by the public or private nature of those actions, or whether the parties conducting them are subject to NEPA.[304] For example, in conducting a cumulative effects analysis for one area of a national forest, a court required the Forest Service to consider the forestry activities of other federal and state agencies as well as private parties because the activities impacted on fish habitat in the area.[305] Similarly, the Navy was required to consider the actions of other federal agencies and private parties involving an ocean dump used by the Navy to dispose of materials dredged during enlargement of a river channel.[306] An agency need not consider the potential environmental effects of actions that it determines are not reasonably foreseeable, however, as long as its determination is not arbitrary or capricious.[307]

Not only is the interrelatedness between various parties unimportant in a cumulative effects analysis, but so is the interrelatedness between the actions. As long as an action contributes to a cumulative effect on an identified natural resource, it need not be connected to any other action considered in that analysis.[308] The cumulative

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[302] *Id.* at 1246–47; National Wildlife Fed'n v. United States Forest Serv., 592 F. Supp. 931, 942 (D. Or. 1984), *order vacated in part and appeal dismissed*, 801 F.2d 360 (9th Cir. 1986). *See also* North Slope Borough v. Andrus, 642 F.2d 589, 600–01 (D.C. Cir. 1980) (EIS analyzed cumulative impacts of other energy development projects in Alaska's North Slope area).

[303] Louisiana *ex rel.* Guste v. Lee, 635 F. Supp. 1107, 1122 n.34 (E.D. La. 1986).

[304] *See National Wildlife Fed'n*, 592 F. Supp. at 942.

[305] *Id.*

[306] Natural Resources Defense Council, Inc. v. Callaway, 524 F.2d 79, 87 (2d Cir. 1975).

[307] *See* North Carolina v. Hudson, 665 F. Supp. 428, 439–40 (E.D.N.C. 1987).

[308] *Cf.* Northwest Indian Cemetary Protective Ass'n v. Peterson, 795 F.2d 688, 696 (9th Cir. 1986) (on rehearing) *cert. granted sub nom.*, Lyng v. Northwest Indian Cemetary Protective Ass'n, 107 S. Ct. 1971 (1987) (although the environmental effects of road construction

impact establishes the relationship between the disparate actions.[309]

If a threshold determination identifies cumulatively significant effects involving the proposed action, the effects must be analyzed in an EIS.[310] One court held that such an analysis must include a list of projects with cumulative or related impacts, a concise summary of the listed projects' anticipated environmental impacts (incorporating additional information on impacts by reference where appropriate), and an analysis of the cumulative or combined effects of the listed projects.[311]

8. Effects on Historic, Scientific, or Cultural Resources

An effect's intensity is also measured by the degree to which an action may cause the loss or destruction of significant scientific, historical, or cultural resources or to which it may affect structures, sites, districts, highways, or objects listed in or eligible for listing in the National Register of Historic Places.[312] Thus, if a project will seriously impair an ecologically rich area to the detriment of resident wildlife,[313] the significance of the effects must be considered.

If an action would raze an historic building in an urban area, significance may not necessarily be found. One court enjoined demolition of an historic building pending consideration of alternatives.[314] Another court, however, found that the impacts of an historic building's demolition did not need to be considered.[315] The court reasoned that because the only environmental effects of demolition were architectural and historic, the effects were social.[316] Standing alone, social effects do not require preparation of an EIS.[317] In another case, a court found that simply because an action will affect historic buildings, it does not mean that the action will have a sig-

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and timber sales must be considered together because they are cumulative, the court does not discuss whether projects need to be connected).

[309] *See Natural Resources Defense Council*, 524 F.2d at 89, n.9.

[310] *National Wildlife Fed'n*, 592 F. Supp. at 942.

[311] Akers v. Resor, 443 F. Supp. 1355, 1360 (W.D. Tenn. 1978).

[312] 40 C.F.R. § 1508.27(b)(8) (1986).

[313] *See* Patterson v. Exon, 415 F. Supp. 1276, 1281–82 (D. Neb. 1976).

[314] *See* Boston Waterfront Residents Ass'n v. Romney, 343 F. Supp. 89, 91 (D. Mass. 1972). *See also* Aertsen v. Harris, 467 F. Supp. 117, 121 (D. Mass. 1979) (agency must consider effect of demolition of historic building as well as effect of replacing it).

[315] Committee to Save the Fox Bldg. v. Birmingham Branch of Fed. Reserve Bank, 497 F. Supp. 504, (N.D. Ala. 1980).

[316] *Id.* at 511.

[317] 40 C.F.R. § 1508.14 (1986) (discussed *supra* notes 167-69 and accompanying text).

nificant effect.[318] Where better examples of a building's features existed in other retained historic buildings, or where features integral to the building's historic, cultural, or architectural significance would not be affected, the court found the agency's determination of nonsignificance to be reasonable.[319]

9. Effect on Endangered Species

The CEQ regulations require agencies to evaluate the degree to which actions may adversely affect endangered or threatened species or critical habitat identified under the Endangered Species Act.[320] The possibility that an endangered species may be present in an area may not necessarily amount to a significant effect under NEPA.[321] Neither does the existence of an endangered species in the affected area necessarily require preparation of an EIS.[322] If an agency shows on the basis of an adequate EA that the existence of the endangered species will not be seriously threatened by the agency's action, the duty to prepare an EIS is not triggered.[323]

10. Compliance with Federal, State, or Local Law

A final criterion for determining the significance of an action's environmental effects is whether the action has the potential to violate federal, state, or local environmental protection laws.[324] Agencies aid compliance with other environmental laws by listing relevant laws in their NEPA compliance criteria.[325] In some cases, other laws and regulations will have detailed criteria for compliance which approximate the NEPA process for a threshold determination. For example, the Environmental Protection Agency (EPA) promulgated extensive criteria for the evaluation of permit applications for ocean dumping under the Marine Protection, Research and Sanctu-

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[318] Preservation Coalition, Inc. v. Pierce, 667 F.2d 851 (9th Cir. 1982).

[319] *Id.* at 860.

[320] 40 C.F.R. § 1508.27(b)(9) (1986). *See also* 16 U.S.C. § 1536(c)(1) (1985).

[321] *See* Falls Road Impact Comm. v. Dole, 581 F. Supp. 678, 696 (E.D. Wis.), *aff'd*, 737 F.2d 1476 (7th Cir. 1984).

[322] Friends of Endangered Species, Inc. v. Jantzen, 596 F. Supp. 518, 524 (N.D. Cal. 1984), *aff'd*, 760 F.2d 976 (9th Cir. 1985).

[323] *Id.*

[324] 40 C.F.R. § 1508.27(b)(10) (1986).

[325] *See, e.g.*, Department of the Interior, National Environmental Policy Act; Revised Implementing Procedures [hereinafter Revised Implementing Procedures], 45 Fed. Reg. 27,541, 27,545–27,548 (1980).

aries Act.[326] The criteria which expand on the Act are followed by the EPA and the Corps of Engineers in permit decisions.[327]

Agencies may combine their NEPA procedures with procedures required by other laws.[328] Although compliance with other laws does not ensure compliance with NEPA,[329] that compliance is relevant to determining if an agency's threshold determination was reasonable.[330]

An agency's compliance with local zoning ordinances is especially relevant to threshold determinations. By complying with local ordinances, an agency demonstrates that it is acting in accordance with the demands of the community's residents regarding land use, construction safeguards, aesthetics, population density, crime control, and neighborhood cohesiveness.[331] Under these circumstances, courts are more likely to uphold an agency's determination of nonsignificance.[332] Violation of zoning ordinances, however, does not necessarily mean that an environmental effect is significant.[333]

C. Measures to Mitigate Adverse Environmental Effects

The CEQ defines mitigation to include: (1) a decision not to take all or part of a proposed action; (2) limitation of the action's implementation and either its degree or magnitude in order to minimize impacts; (3) repair, rehabilitation, and restoration of an affected environment; (4) preservation and maintenance operations conducted during an action's implementation to reduce or eliminate its effects over time; and (5) replacement or provision of substitute resources

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[326] 40 C.F.R. § 227 (1986). *See* 33 U.S.C. §§ 1401–1445 (1982 & Supp. III 1986).

[327] 40 C.F.R. § 220.1(a) (1986); 33 C.F.R. § 209.145(e)(2) (1986); Corps of Engineers, Final Rule for Regulatory Programs of the Corps of Engineers, 51 Fed. Reg. 41,206, 41,236 (1986) (to be codified at 33 C.F.R. § 324.4).

[328] 40 C.F.R. § 1500.5(g) (1986); *see also* 33 C.F.R. § 230.20 (1986) (Corps of Engineers regulation requiring cooperation with state and local agencies in NEPA procedure).

[329] *See* Manatee County v. Gorsuch, 554 F. Supp. 778 (M.D. Fla. 1982) (NEPA was violated during ocean dumping actions by EPA and Corps under the Marine Protection, Research and Sanctuaries Act).

[330] *See* Preservation Coalition, Inc. v. Pierce, 667 F.2d 851, 859 (9th Cir. 1982) (compliance with National Historic Preservation Act is relevant to review of a threshold determination under NEPA); Conservation Law Found. v. Clark, 590 F. Supp. 1467, 1476–77 (D. Mass. 1984) (compliance with Cape Cod National Seashore Act adds weight to agency's decision not to prepare an EIS).

[331] Maryland-Nat'l Capital Park & Planning Comm'n v. United States Postal Serv., 487 F.2d 1029, 1036–37 (D.C. Cir. 1973).

[332] *Id.*; Goodman Group, Inc. v. Dishroom, 679 F.2d 182, 186 (9th Cir. 1982).

[333] Stewart v. United States Postal Serv., 508 F. Supp. 112, 116 (N.D. Cal. 1980).

or environments in order to compensate for an action's impact.[334] It is not clear whether mitigation measures must include all the above items, or whether one item can be selected in lieu of the others. The Corps of Engineers uses the last form of mitigation (known as "compensatory" mitigation) to require construction, enhancement, or dedication to public use of wetlands in cases in which the mitigation is necessary to ensure that the proposed action for which a permit has been applied is not inconsistent with the public interest.[335] Compensatory mitigation can be on-site or off-site.[336]

The record of an agency's decision to impose mitigation measures differs according to whether the measures are included in an EIS or an EA. When an agency makes a decision to proceed with an alternative outlined in an EIS, it must state whether it has adopted "all practicable means to avoid or minimize environmental harm" included under its selected alternative.[337] If an agency makes mitigation a part of its action, it must ensure that mitigation measures are included in permits, grants, and the like, and that funding is conditioned on compliance with the measures.[338] When an agency decides to proceed with an action based on an EA, the CEQ recommends that it use the above described process, even though the environmental effects of its action were shown to be insignificant before use of the mitigation measures.[339] Commenting and cooperating agencies may request monitoring of mitigation measures proposed by them.[340]

If mitigation measures are used to reduce the environmental effects of an action below the significance level, the CEQ permits an agency to rely on those measures in not preparing an EIS only if the measures are imposed by statute or regulation, or were contained in the original proposal.[341] The CEQ recommends that EAs and FONSIs containing mitigation measures be made publicly available thirty days before the action proceeds.[342] If mitigation measures

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[334] 40 C.F.R. § 1508.20 (1986).

[335] Corps of Engineers, Final Rule for Regulatory Programs, 51 Fed. Reg. 41,206, 41,208 (1986) (to be codified at 33 C.F.R. § 320.4). *See* Friends of the Earth v. Hintz, 800 F.2d 822, 837–38 (9th Cir. 1986) (offsite mitigation is proper under appropriate circumstances). *See also* Friends of Endangered Species, Inc. v. Jantzen, 589 F. Supp. 113, 116–17 (N.D. Cal. 1984) (in exchange for permission to develop, developers agreed to dedicate open space, to preserve area as undisturbed habitat of endangered species, and to restore and maintain habitat).

[336] *Id.*

[337] 40 C.F.R. § 1505.2(c) (1986).

[338] *Id.* § 1505.3(a)-(b).

[339] NEPA Questions, *supra* note 36, at 18,037–38.

[340] 40 C.F.R. § 1505.3 (1986).

[341] NEPA Questions, *supra* note 36, at 18,038.

[342] *Id.*

are added to a proposal during the EA process or scoping, they do not obviate the need to prepare an EIS.[343] According to the CEQ, if a proposed action is redefined during scoping to include mitigation measures, the entire proposal must be resubmitted, and the EA and FONSI made publicly available for thirty days.[344]

All courts do not follow the CEQ's information advice regarding the type of mitigation measures which may be considered in a threshold determination.[345] According to courts which permit the use of other types of mitigation measures, the measures may offset otherwise significant impacts as long as the measures are fully considered before an action proceeds,[346] and the action is conditioned on them.[347] The mitigation measures need not completely compensate for all the action's adverse environmental effects.[348]

When a court reviews an EA and FONSI which relies on mitigation measures to reduce an action's environmental effects, it examines the likelihood of the mitigation measures occurring and the participation of other agencies and the public in the procedure. Contractual obligations,[349] design modifications,[350] and measures planned in close cooperation with the local community,[351] therefore, may be considered in the threshold determination. Mitigation measures based on good intentions may not be considered.[352]

The informational purpose of NEPA requires mitigation measures to be subject to public comment. Thus, measures based on planned scientific studies alone are inadequate because they preclude involvement by other agencies and the public.[353] Descriptions of the mea-

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[343] Id.

[344] *Id.*

[345] *See* Louisiana v. Lee, 758 F.2d 1081, 1083 (5th Cir. 1985), *cert. denied sub nom.*, Dravo Basic Materials v. Louisiana 106 S. Ct. 1259 (1986); Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson, 685 F.2d 678, 682 (D.C. Cir. 1982). *But see* Sierra Club v. Marsh, 769 F.2d 868, 880 (1st Cir. 1985) (following CEQ advice).

[346] *Cabinet Mountains*, 685 F.2d at 683. *See also* Mardis v. Big Nance Creek Water Mgmt. Dist., 578 F. Supp. 770, 787 (N.D. Ala. 1983), *aff'd*, 749 F.2d 732 (11th Cir. 1984) (interagency team aided agency in designing mitigation measures).

[347] *Cabinet Mountains*, 685 F.2d at 684; Louisiana v. Lee, 758 F.2d at 1083.

[348] Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 987 (9th Cir. 1985).

[349] *Lee*, 758 F.2d at 1083; Preservation Coalition, Inc. v. Pierce, 667 F.2d 851, 861 (9th Cir. 1982).

[350] Town of Orangetown v. Gorsuch, 718 F.2d 29, 37 (2d Cir. 1983), *cert. denied*, 465 U.S. 1099 (1984); Bosco v. Beck, 475 F. Supp. 1029, 1037 (D.N.J.), *aff'd*, 614 F.2d 769 (3d Cir. 1979), *cert. denied*, 449 U.S. 822 (1980).

[351] City & County of San Francisco v. United States, 615 F.2d 498, 501 (9th Cir. 1980).

[352] *Preservation Coalition, Inc.*, 667 F.2d at 860.

[353] Jones v. Gordon, 621 F. Supp. 7, 12–13 (D. Alaska. 1985), *aff'd in part and rev'd in nonpertinent part*, 792 F.2d 821 (9th Cir. 1986).

sures must be provided; a listing is inadequate.[354] Measures must also be evaluated to determine how they will mitigate environmental effects.[355] Conclusory statements regarding their effects are inadequate.[356]

D. Monitoring Programs

Agencies may conduct monitoring programs to ensure that their decisions are being executed. The CEQ encourages the use of monitoring in actions for which an EIS has been prepared,[357] and the use of monitoring and enforcement programs for actions involving mitigation measures.[358] If monitoring and enforcement programs are adopted in a decision to proceed with an action involving mitigation, they should be summarized in the record of decision.[359] The result of relevant monitored actions should be made available to the public on request.[360]

Monitoring programs may not take the place of informed decisions regarding an action's environmental consequences. In cases in which an agency has proposed discontinuing a project if a certain result is evidenced by a monitoring program, the agency has been found to have made a determination to proceed without knowing the full environmental effects of its action.[361] A court may reach a contrary result, however, if the same type of monitoring program is formulated to comply with an act other than NEPA even in cases where compliance with NEPA means that the action proceeds after an EA

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[354] *See* Northwest Indian Cemetary Protective Ass'n v. Peterson, 795 F.2d 688, 697 (9th Cir. 1986), *cert. granted*, 107 S. Ct. 1971 (1987). *See also* Simmans v. Grant, 370 F. Supp. 5, 21 (S.D. Tex. 1974) (requiring full discussion of mitigation measures in EA and FONSI).

[355] Steamboaters v. Fed. Energy Regulatory Comm'n, 759 F.2d 1382, 1394 (9th Cir. 1985).

[356] Foundation for N. Am. Wild Sheep v. United States Dep't of Agric. 681 F.2d 1172, 1180–81 (9th Cir. 1982); Nat. Wildlife Fed'n v. United States Forest Serv., 592 F. Supp. 931, 943 (D. Or. 1984), *order vacated in part and appeal dismissed*, 801 F.2d 360 (9th Cir. 1986); Joseph v. Adams, 467 F. Supp. 141, 156 (E.D. Mich. 1978).

[357] 40 C.F.R. § 1505.3 (1986).

[358] *Id.* § 1505.2(c).

[359] *Id.* § 1505.2. The record of decision is the published record accompanying an agency's decision to proceed with an action, based on an EIS.

[360] *Id.* § 1505.3(d).

[361] *See* Foundation for N. Am. Wild Sheep v. United States Dep't of Agric., 681 F.2d 1172, 1181 (9th Cir. 1982) (basing future of action on results of monitoring program "represents an agency decision to act now and deal with the environmental consequences later"); Sierra Club v. Bergland, 451 F. Supp. 120, 131 (N.D. Miss. 1978) (basing future of action on results of monitoring program "is a virtual confession [that the project would proceed] without the responsible federal officials knowing the pluses and minuses of the pertinent environmental factors").

and FONSI.[362] The difference lies in whether the monitoring plan is prepared to comply with NEPA or with another act.

VI. CONCLUSION

The methodology for making threshold determinations is relatively settled throughout the federal agencies, as is the nature of effects considered in making such determinations. Less settled is the scope of actions to be addressed in threshold determinations. Some agencies and courts focus on the type of action involved, but a trend is growing which focuses on the affected natural resources regardless of the type of action affecting them.

The courts have been at the forefront of this trend, basing their decisions on criteria contained in the CEQ regulations. By extending the scope of actions which an agency must consider in making a threshold determination, the courts have required agencies to consider the cumulative environmental effects of individually insignificant actions on identifiable natural resources. Integration of the extended scope of actions considered in a threshold determination into agency procedures is resulting in increased environmental protection, which is the cornerstone of NEPA.

The list of criteria considered by agencies and courts in threshold determinations adheres closely to that contained in the CEQ regulations. The CEQ criteria are unchanged since their publication in 1977. The CEQ criteria, together with procedures contained in the CEQ regulations, provide a basis for federal agencies to make threshold determinations. The criteria and procedures are supplemented by individual agencies in order to address specific concerns of those agencies. The resulting framework for making threshold determinations has been further supplemented and refined by the courts. The broad scope of actions subject to NEPA means that the framework will never be complete. The federal agencies' consideration of the framework's criteria, and compliance with its procedures, ensures that most, if not all, areas of environmental concern are addressed in threshold determinations.

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[362] *See* Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 983 (9th Cir. 1985).