Boston College Environmental Affairs Law Review

Volume 28 | Issue 1 Article 2

1-1-2000

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THE LINK BETWEEN PROTECTING NATURAL RESOURCES AND THE ISSUE OF ENVIRONMENTAL JUSTICE

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Abstract: Communities frequently raise environmental justice issues when decisions are made without taking into consideration how people, including people living in low-income and minority communities, are linked to their surrounding environment. Different communities use and relate to their environment in different ways and face different levels of environmental harms and risks. Thus, to avoid disproportionate impacts, it is critical that each community's environmental needs and vulnerabilities be understood and considered before decisions are made. Existing statutory authority provides ample opportunity for decisionmakers to involve communities in the decisionmaking process and to consider how they use and relate to their environment and the natural resources services that their environment provides. This article analyzes the integration of environmental justice concerns into the U.S. Environmental Protection Agency's decisionmaking process with special attention given to permits issued under the Resource Conservation and Recovery Act. In addition, through case study analysis, the article examines how environmental justice issues have been addressed by: EPA in the establishment of water quality criteria under the Clean Water Act; the Nuclear Regulatory Commission's and the Department of the Interior's application of the National Environmental Policy Act; and the Army Corps of Engineers' decisionmaking process under Section 404 of the Clean Water Act.

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I. Natural Resources and Environmental Justice

Recognition of the relationship between natural resources, people, and animals is not new. Marcus Vitruvius Pollio, a Roman architect and engineer, recognized this relationship as far back as the first century B.C. In his influential treatise entitled *The Ten Books on Architecture,* Vitruvius provided specific instructions on the selection of springs to provide houses with water:

> For it is obvious that nothing in the world is so necessary for use as water, seeing that any living creature can, if deprived of grain or fruit or meat or fish, or any one of them, support life by using other foodstuffs; but without water no animal nor any proper food can be produced, kept in good condition, or prepared. Consequently we must take great care and pains in searching for springs and selecting them, keeping in view the health of mankind.
>
> Springs should be tested and proved in advance in the following ways. If they run free and open, inspect and observe the physique of the people who dwell in the vicinity before beginning to conduct the water, and if their frames are strong, their complexion fresh, legs sound, and eyes clear, the spring deserves complete approval. . . .
>
> And if green vegetables cook quickly when put into a vessel of such water and set over a fire, it will be proof that the water is good and wholesome. Likewise if the water in the spring is itself limped and clear, if there is no growth of moss or reeds where it spreads and flows, and if its bed is not polluted by filth of any sort but has a clean appearance, these signs indicate that the water is light and wholesome in the highest degree.[1]

Thus, more than 2,000 years ago, Vitruvius realized that natural resources need to be protected in order for people and animals to survive and prosper. This link is important because it implicitly recognizes that natural resources are not static elements imbedded in the environment. Rather, they are vital "resource services" dynamically connected to all people and all things.[2]

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[1] Vitruvius, The Ten Books on Architecture 241–42 (Morris Hicky Morgan trans., Dover Publications, Inc. 1960).

[2] *See* Katharine K. Baker, *Consorting with Forests: Rethinking our Relationship to Natural Resources and How We Should Value Their Loss,* 22 Ecology L.Q. 677, 705 n.143 (1995).

Unfortunately, natural resources and the services which they provide have not been adequately protected. Certain populations of people and animals have become threatened and, at times, imperiled. Through enactment of a panoply of modern environmental laws, government (federal, state, local and tribal) has sought to protect not only the natural resources and the environment, but also the well-being of people, threatened species, and their habitats.

"Endangered" or "threatened" species, listed under the Endangered Species Act (ESA),[3] have been likened to the proverbial "canary in the coal mine."[4] The ESA informs us not only of the species' serious condition,[5] but also of the serious condition of the species' habitat—where it sleeps, lives, and what ecological resources it needs in order to nourish itself, successfully reproduce, and rear healthy offspring.[6] Congress, like Vitruvius, recognized that degradation of a species' habitat is inexorably linked to the species' health. Indeed, one congressional committee observed that "the events of the past few years have shown the critical interrelationship of plants and animals between themselves and with their environment. The hearings proved (if proof is still necessary) that the ecologists' shorthand phrase 'everything is connected to everything else' is nothing more than cold, hard fact."[7]

Recognizing the relationship between natural resources and populations, both human and otherwise, Congress placed declining species under the protection of the ESA, requiring human beings to modify their behavior to avoid further disruption of the protected species' habitats.[8] To respond and aid in the species' recovery, the

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[3] Endangered Species Act of 1973 (ESA), 16 U.S.C. §§ 1531–1544 (1974).

[4] Zygmunt J.B. Plater, *The Embattled Social Utilities of the Endangered Species Act—A Noah Presumption and a Caution Against Putting Gas Masks on Canaries in the Coal Mine,* 27 ENVTL. L. 845, 853–54 (1997). Just as coal miners historically used canaries to detect coal gas, because of the birds' sensitivity, a species' decline indicates that its habitat has become so degraded that the environment can no longer support the species. *See id.*

[5] *Id.*

[6] *Id.*

[7] H.R. REP. No. 93–412, at 6 (1973), *reprinted in* A Legislative History of the Endangered Species Act of 1973, as amended in 1976, 1977, 1978, and 1980, at 145 (1982). This point was brought out repeatedly in Congressional hearings, where "it was shown that many of these animals performed vital biological service[s] to maintain [the] 'balance of nature' within their environment." S. REP. No. 93–307 (1973). *See also* Barry Commoner, THE CLOSING CIRCLE: NATURE, MAN AND TECHNOLOGY 39 (1971) (noting the dynamic, systems-based relationship among man, animals, and natural resources).

[8] *See* 16 U.S.C. § 1538(a)(1)(B). The ESA makes it illegal to "harass, harm . . . , or to attempt to engage in any such conduct" on private land without specific authorizations and findings. *Id.*; *see also* 50 C.F.R. § 17.3 (1999) (defining "harass," within the meaning of

This article first outlines how federal regulators can use authority under current environmental laws to address a wide range of environmental justice concerns.[14] By taking action under the broad regulatory standards that the major environmental statutes establish, the needs, experiences, values, and circumstances of residents of various communities can be addressed, and disproportionate impacts avoided.[15] The first section argues that regulatory action can preserve and strengthen community health and well-being if regulators understand the robust and varied manner in which communities' needs correspond to, and quite literally "map onto," natural resources.

The following section explores in greater detail three examples in which the federal government has used existing laws to address environmental justice concerns and, by so doing, has buttressed the natural resources and ecological systems upon which the residents of the various communities depend.[16] The examples draw from three different statutory provisions: the Clean Water Act's water quality criteria standards;[17] the National Environmental Policy Act (NEPA) requirement of analysis of impacts in the decision-making process;[18] and the permitting process under Section 404 of the Clean Water Act.[19]

The case studies are organized to build on one another. The first demonstrates how race-neutral standards can nonetheless have disproportionate impacts on different communities. It also illustrates how the natural resources upon which communities depend are better protected when the variation among communities' needs, culture, and interests are taken into consideration. The second example explores how the analytical requirements of NEPA's decisionmaking process can expose disproportionate impacts caused by natural resource modification. Finally, the third case study illustrates how NEPA and the Clean Water Act, in the wetlands context, can produce environmentally just and ecologically wise natural resource decisions.

The article concludes that when the experiences, needs, and values of all communities are addressed in environmental and natural resources decisions, healthier communities and natural resource sys-

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[14] *See infra* notes 20-52 and accompanying text.

[15] *See infra* note 26 and accompanying text.

[16] *See* discussion *infra* Part III.

[17] *See* Clean Water Act, 33 U.S.C. §§ 1251–1387 (1994).

[18] *See* National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321–4370d (1994).

[19] *See* Section 304 of the Clean Water Act, 33 U.S.C. § 1344 (permits for dredge or fill material).

tems result. Moreover, the article suggests that the contrary is also true: when certain communities are not considered in the decision-making process, those communities, and the resources upon which they depend, suffer.

II. Statutory and Regulatory Authority

A. *Integrating Environmental Justice into Natural Resource and Environmental Decisionmaking*

Attention to minority and low-income communities and the natural resources upon which they depend is necessary because actions that adequately protect the general population may not always protect discrete segments of the population.[20] Disproportionate impacts on minority and low-income communities and their surrounding environment may result from a host of race-neutral factors, as well as, in some cases, a legacy of historical discrimination. Some of these factors include:

- cumulative risks from exposure to multiple sources of pollution, in addition to the applicant (or any specific) facility;[21]
- unique exposure pathways and scenarios;[22]
- vulnerability of populations and environments because of the lack of investment in infrastructures;[23]

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[20] *See generally* Samara F. Swanston, *Race, Gender, Age, and Disproportionate Impact: What Can We Do About the Failure to Protect the Most Vulnerable,* 21 Fordham Urb. L.J. 577 (1994).

[21] Cumulative risks, synergistic effects, and multiple pathways that affect the health of individuals may be the result of exposures to single or multiple contaminants from one or more sources. However, "[a]gency programs have generally considered site-specific risks without considering current exposure to other (non site-specific) pollution sources." http://www.epa.gov/werosps/ej/html-doc/execsum.htm#HEALTH.

[22] Minority and low-income communities may experience exposure to hazardous substances through a variety of pathways not typical of the general population. Among others, these may include: (1) consumption of plants and animals from sources near contaminated sites or polluted rivers and streams; (2) occupational exposure to pesticides; and (3) ingestion of lead paint from dwellings. *See* Robert D. Bullard, *Building Just, Safe, and Healthy Communities,* 12 Tul. Envtl. L.J. 373, 376–77 (1999).

[23] Failure to make infrastructure investments in minority and low income areas can contribute to environmental hazards, such as brownfield formation, unsanitary conditions, and can also contribute to the magnitude of or harm caused by industrial accidents. Infrastructure deficits may include: (1) transportation systems; (2) drainage, sewage, and water distribution systems; (3) medical facilities; and (4) parks and opens space. William W. Buzbee, *Urban Sprawl, Federalism, and the Problem of Institutional Complexity,* 68 Fordham L. Rev. 57, 67–77 (1999). Courts have found that failure to make such investments or the failure to ensure the equal delivery of municipal services can lead to civil rights violations. *See* Kessler v. Grand Cent. Dist. Mgmt. Ass'n, Inc., 158 F.3d 92, 129–30 (2d Cir. 1998) (cit-

- vulnerability of populations; [24] and
- lack of meaningful participation in the decisionmaking process.[25]

Thus, the use of large scale population averages and mainstream cultural values and experiences may create risk gradients and other disproportionate environmental burdens across variously situated populations, communities, and their environments.

B. Environmental Justice and Existing Statutory Authority

Many of the statutes that the U.S. Environmental Protection Agency (EPA) implements provide the Agency with the authority to address environmental justice concerns and to support the integrity of the environment and natural resources upon which minority and

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ing Hawkins v. Town of Shaw, 437 F.2d 1286, 1288 (5th Cir. 1971)), *aff'd on reh'g*, 461 F.2d 1171 (5th Cir. 1972) (en banc) (finding that (1) 99% of the town's white population had access to sanitary sewers compared to only 80% of the town's African-American population, and (2) 98% of the town's homes that fronted unpaved streets belonged to African Americans); Dowdell v. City of Apopka, 698 F.2d 1181, 1185 (11th Cir. 1983) (finding discrimination in street paving, water distribution, and storm drainage); United Farmworkers of Fla. Hous. Project, Inc. v. City of Delray Beach, 493 F.2d 799, 811 (5th Cir. 1974) (finding violation of farm workers' civil rights by city officials' refusal to extend water and sewage service to proposed federally funded low-income housing project); Baker v. City of Kissimmee, 645 F. Supp. 571, 588 (M.D. Fla. 1986) (finding discrimination against African Americans based on disparate access to street paving, resurfacing, and maintenance); Ammons v. Dade City, 594 F. Supp. 1274, 1301 (M.D. Fla. 1984), *aff'd*, 783 F.2d 982, 987–88 (11th Cir. 1986) (concluding that there was a civil rights violation based on a finding of disparate access to municipal services of street paving, street resurfacing and maintenance, and storm water drainage facilities on the basis of race); Johnson v. City of Arcadia, 450 F. Supp. 1363, 1379 (M.D. Fla. 1978) (finding discrimination in street paving, parks, and water supply); Selmont Improvement Ass'n v. Dallas County Comm'n, 339 F. Supp. 477, 481 (S.D. Ala. 1972) (finding discriminatory treatment because of the failure to pave roads in African-American communities).

[24] EPA has found that "several population groups identified as being sensitive to the health effects of air pollution seem to be disproportionately comprised of low-income or racial minority individuals. These groups include asthmatics, people with certain cardiovascular diseases or anemia, and women at risk of delivering low-birth-weight fetuses." ENVIRONMENTAL PROTECTION AGENCY, 2 ENVIRONMENTAL EQUITY: REDUCING RISK FOR ALL COMMUNITIES 21 (1992) [hereinafter ENVIRONMENTAL EQUITY]. *See generally* Swanston, *supra* note 20.

[25] Communities may have difficulties participating in existing environmental decisionmaking processes for many reasons. These difficulties can arise from a number of different sources, including: (1) language; (2) culture; (3) lack of technical resources; (4) historical non-inclusion; (5) time constraints; and (6) financial constraints. *See generally* John C. Duncan, Jr., *Multicultural Participation in the Public Hearing Process: Some Theoretical, Pragmatical, and Analeptical Considerations*, 24 COLUM. J. ENVTL. L. 169 (1999).

low-income communities depend.[26] These laws, which encompass the breadth of EPA's activities, include setting standards,[27] permitting facilities,[28] awarding grants,[29] and reviewing actions taken by other federal agencies, states, and tribal authorities.[30] Moreover, these laws require EPA to consider a variety of factors, including: public health;[31] cumulative impacts;[32] social costs;[33] welfare,[34] and general environmental or human health impacts.[35] Other statutes direct EPA and other executive branch departments and agencies to consider special risks posed to vulnerable populations, such as low-income and minority communities, in setting standards.[36] In all cases, how the Agency

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[26] Memorandum, From: Gary S. Guzy, General Counsel, Office of General Counsel, U.S. EPA, To: Steven A. Herman, Assistant Administrator, Office of Enforcement and Compliance Assistance; Robert Perciasepe, Assistant Administrator, Office of Air and Radiation; Timothy Fields, Jr., Assistant Administrator, Office of Solid Waste and Emergency Response; J. Charles Fox, Assistant Administrator, Office of Water (Dec. 1, 2000) (describing EPA statutory and regulatory authorities under which environmental justice issues may be addressed in permitting); *see also* Richard J. Lazarus & Stephanie Tai, *Integrating Environmental Justice into EPA Permitting Authority*, 26 ECOLOGY L.Q. 617 (1999) (reviewing EPA authority to consider environmental justice concerns).

[27] *See, e.g.*, Section 304(a)(1) of the Clean Water Act, 33 U.S.C. § 1314(a)(1).

[28] *See, e.g.*, Section 3005(c)(3) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6925(c)(3).

[29] *See, e.g.*, Section 117(e) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9617(e) (authorizing EPA to make Technical Assistance Grants of up to $50,000 to groups of citizens affected by Superfund sites).

[30] *See, e.g.*, Section 309 of the Clean Air Act (CAA), 42 U.S.C. § 7401 (1994) (directing EPA to review and comment on the environmental impacts of actions of other federal agencies, including proposals for legislation, proposed regulations, and projects subject to § 102(2)(C) of NEPA, 42 U.S.C. § 4321).

[31] The National Ambient Air Quality Standards (NAAQS), for example, are set to protect public health with an adequate margin of safety. *See* 42 U.S.C. § 7409(b)(1). This authority requires EPA to consider sensitive populations in the establishment of these standards. *See, e.g.*, American Lung Ass'n v. EPA, 134 F.3d 388, 388–89 (D.C. Cir. 1998) (stating "Congress defined public health broadly. NAAQS must protect not only average healthy individuals, but also 'sensitive citizens'—children, for example, or people with asthma, emphysema, or other conditions rendering them particularly vulnerable to air pollution") (quoting S. REP. No. 91–1196, at 1 (1970)); Lead Indus. Ass'n v. EPA, 647 F.2d 1130, 1152 (D.C. Cir. 1980) (finding the Senate report to be "particularly careful to note that especially sensitive persons such as asthmatics and emphysematics are included within the group that must be protected.").

[32] *See, e.g.*, Section 4(b)(2)(A) of the Toxic Substance Control Act (TSCA), 15 U.S.C. § 2603(b)(2)(A) (1994).

[33] *See, e.g.*, 42 U.S.C. § 7503 (a)(5).

[34] *See, e.g., id.* § 7408 (a)(2).

[35] *See, e.g.*, 40 C.F.R. § 1408.8 (regulations implementing the National Environmental Policy Act, 42 U.S.C. § 4321 (1994)).

[36] *See, e.g.*, Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. § 346a (1994); *see also* Safe Drinking Water Act (SDWA), 42 U.S.C. § 300(g)-1 (1994).

chooses to implement and enforce its authority (whether on a case-by-case basis or through a more general policy) can have substantial effects on the natural and environmental resources and the health of all communities.[37]

The Environmental Justice Executive Order[38] and the accompanying Presidential Memorandum[39] recognize that existing "[e]nvironmental and civil rights statutes provide many opportunities to address environmental hazards in minority communities and low-income communities."[40] Among other things, Executive Order 12898 directs EPA and other federal agencies:

> [t]o the greatest extent practicable and permitted by law . . . [to] make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations . . . .[41]

Thus, the Agency may affect the mutually reinforcing goals of protecting human health and the environment, and paying attention to communities with environmental justice concerns.

C. Integration of Environmental Justice Concerns into the Review of the Agency's Permit Programs

Recently, the Environmental Appeals Board (EAB) began reviewing, when petitioned, EPA actions to determine whether the Agency has taken environmental justice concerns into consideration when they arise.[42] This review includes examination of issues such as the adequacy of public participation,[43] and analysis of disproportionate impacts on minority and low-income communities.[44] On a case-by-case

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[37] *See supra* notes 18–29 and accompanying text.

[38] Exec. Order No. 12,898, 3 C.F.R. § 859, *reprinted in* 42 U.S.C. § 4321 (1994).

[39] Presidential Memorandum Accompanying Executive Order 12,898, 30 WEEKLY COMP. PRES. DOC. 279, 280 (Feb. 11, 1994) [hereinafter Presidential Memorandum].

[40] *Id.*

[41] Exec. Order No. 12,898, § 1–101.

[42] *In re* Chemical Waste Management of Indiana, Inc., 6 E.A.D. 144 (1995).

[43] *Id.*

[44] This review has been conducted pursuant to EPA policy and the Environmental Justice Executive Order, rather than as a requirement of statutory law. *See, e.g.*, Sur Contra La Contaminacion v. EPA, 202 F.3d 443, 444 (1st Cir. 2000). Since the Executive Order explicitly does not create any substantive or procedural rights or a right of judicial review against the United States, no federal court has overturned a federal action based solely upon an

basis, the EAB is checking and determining, one permit at a time, what the Executive Order requires: environmental resources (air, water, and land) that are protective of every community.

The EAB review of a RCRA permit that Region V issued in *In re: Chemical Waste Management of Indiana* is typical of the EAB's consideration of environmental justice concerns. That case emphasized the important point that environmental justice concerns relate, at least in the first instance, not to a community's demographic characteristics (e.g., racial composition or income status),[45] but rather to attributes frequently associated with low-income and minority communities that may place such communities at special risk.[46] Environmental risk factors and tolerance to stressors in minority or low-income communities may differ from communities in the general population. Consequently, the EAB noted that an assessment of effects that looks only at "a broad analysis might mask the effects of the facility on a disparately affected minority or low-income segment of the community."[47] Following this reasoning, the EAB made two basic rulings, the first procedural, and the second substantive:

> 1. *Public Participation:* "When the Region has a basis to believe that operation of the facility may have a disproportionate impact on a minority or low-income segment of the affected community, the Region should, as a matter of policy,

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underlying defect in an environmental justice analysis conducted pursuant to the Executive Order. *Id.*; *see also* Morogo Band of Mission Indians v. FAA, 161 F.3d 569, 575 (9th Cir. 1998); Air Trans. Ass'n of Am. v. FAA, 169 F.3d 1, 8–9 (D.C. Cir. 1999). Courts do, of course, review allegations relating to environmental justice concerns pursuant to underlying environmental laws, other state and Federal statutes, and common law causes of action, just as they would any other issue in dispute. In *Sur Contra La Contaminacion,* for example, the court reviewed many of the issues raised by the petitioning community group under Section 165(a)(2) of the Clean Air Act and Administrative Procedures Act. *See* 202 F.3d at 447–48; *see also* Montana v. EPA, 137 F.3d 1135, 1141 (9th Cir. 1998), *cert. denied,* 119 S. Ct. 275 (1998) (finding that tribes may set water quality standards that affect upstream states); Neighbors for a Toxic Free Cmty. v. Vulcan Materials Co., 964 F. Supp. 1448, 1451–53 (D. Colo. 1997) (finding that a community organization had standing to bring an action under the Emergency Planning Community Right-to-Know Act); In the Matter of Rubicon, Inc., 670 So.2d 475, 481–83 (1st Cir. LA 1996) (remanding agency decision to exempt facility from land disposal restrictions based on agency's failure to make specific findings required under state constitution and public trust doctrine).

[45] *Chemical Waste Mgmt.,* 1995 WL 395962, at *5.

[46] *See id.* at *6. Some of the factors that could place communities at risk include those described *supra* in the text accompanying notes 22–23.

[47] *See id.*

exercise its discretion to assure early and ongoing opportunities for public involvement in the permitting process."[48]

2. *Environmental Justice Review:* "When a commentor submits at least a superficially plausible claim that operation of the facility will have a disproportionate impact on a minority or low-income segment of the affected community, the Region should, as a matter of policy, exercise its discretion under Section 3005(c)(3)[49] to include within its health and environmental impacts assessment an analysis focusing particularly on the minority or low-income community whose health or environment is alleged to be threatened by the facility."[50]

The EAB has considered a broad range of environmental justice issues in the permitting context,[51] and has examined the effects of proposed permits on the communities' natural resources. While the EAB has remanded one permit based on environmental justice concerns relating to the sufficiency of the record upon which EPA based its decision, the tribunal has not overturned a permit based on a finding of disproportionate impact.[52] The EAB decisions, however, do establish the important point that existing environmental laws can and do address environmental justice issues because those authorities

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[48] *See id.* at *5.

[49] Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3) [hereinafter Omnibus clause], provides that "[e]ach permit issued under this section shall contain such terms and conditions as the Administrator (or the State) determines necessary to protect human health and the environment." The provision allows the permitting authority to establish conditions, beyond any pre-established environmental standard, necessary to protect the community.

[50] *Chemical Waste Mgmt.*, 1995 WL 395962, at *6 (internal footnotes added).

[51] *See, e.g., In re* Knauf Fiber Glass, GmbH, PSD Appeal Nos. 99–8 through 99–72, 2000 WL 291422 (EAB, Mar. 14, 2000); *In re* AES Puerto Rico, L.P., PSD Appeal Nos. 98–29 through 98–31, 1999 WL 345288 (EAB, May 27, 1999); *In re* Knauf Fiber Glass, GmbH, PSD Appeal Nos. 98–3 through 98–20, 1999 WL 64235 (EAB, Feb. 4, 1999); *In re* Environmental Disposal Sys., Inc., UIC Appeal Nos. 98–1 & 98–2, 1998 WL 723912 (EAB, Oct. 15, 1998); *In re* Ash Grove Cement, RCRA Appeal Nos. 96–4 & 96–5, 7 E.A.D. 387, *available at* 1997 WL 732000 (EAB, Nov. 14, 1997); *In re* EcoElectica, L.P., PSD Appeal Nos. 96–8 & 96–13, 7 E.A.D. 56, *available at* 1997 WL 160751 (EAB, Apr. 8, 1997); *In re* Campo Landfill Project, Campo Band Indian Reservation, NSR Appeal Nos. 95–1, 6 E.A.D. 505, *available at* 1996 WL 344522 (EAB, June 19, 1996) (although Campo Landfill Project does not address the New Source Review air permit at issue under the rubric of Executive Order 12898, the case considers matters very much analogous to those alleging disproportionate impacts to minority and low-income communities and is the sole example of the EAB's review under § 173 (a)(3) of the Clean Air Act).

[52] *See generally* Knauf Fiber Glass, 1999 WL 64235 .

are designed to protect all communities. In the next section, a broader range of activities will be explored.

III. Protecting a Diversity of Habitats—Starting at Home

A. Fish Consumption Under the Clean Water Act

Starting from water, the most basic natural resource, Vitruvius' message tells us that when we protect natural resources that sustain our health, we take steps toward maintaining the health of the environment.[53] By contrast, if we degrade the resources upon which we rely, we expose ourselves, through the food chain, to the accumulated contamination of each link which ultimately finds its anchor in natural resources. This relationship has distributive risk implications because each community is linked differently to each component of the ecosystem. Therefore, what is protective of one group almost certainly will not be as protective for another.

The environmental justice implications of Vitruvius' message rings clear with respect to exposure to pollution through fish consumption, because of the direct link between water quality and fish contamination levels, and variation in the amount of fish consumed among communities. The syllogism runs like this: contaminated rivers and streams (riparian habitats) create unhealthy fish and potentially unhealthy fish consumers. Following naturally from each communities' distinctive characteristics, including tolerance for, exposure to, and consumption of contaminated fish, each community will necessarily receive different levels of exposure to pollution from water of the same quality.

Environmental justice advocates frequently criticize EPA's evaluation of diverse communities' consumption of fish in the methodology used to establish national Ambient Water Quality Criteria (AWQC), upon which permitting authorities may establish water quality standards.[54] The criticism typically points out that assumptions used to establish AWQC do not correspond to the amount of fish or portions of fish typically eaten by certain populations.[55] Further, the problem

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[53] Vitruvius, *supra* note 1.

[54] *See, e.g.*, Catherine A. O'Neill, *Variable Justice: Environmental Standards, Contaminated Fish, and Acceptable Risk to Native Peoples*, 19 Stan. Envtl. L.J. 3, 55–57 (2000); *see also* Brian D. Israel, *An Environmental Justice Critique of Risk Assessment*, 3 N.Y.U. Envtl. L.J. 469, 501 (1995).

[55] *See* O'Neill, *supra* note 54, at 55–57. These populations frequently include groups of Native Americans, Asian Americans, Pacific Islanders, and African Americans. *See id.*

with the low or inaccurate consumption values is amplified because AWQC development methodology historically has failed to take into account the actual level of bio-accumulation of contaminants in fish. Thus, environmental justice advocates argue that by not taking into account how certain communities are linked to their environment, those communities are less well-protected than the general public.

1. Establishment of Ambient Water Quality Criteria

EPA publishes AWQC[56] that can be, and often are, used as default criteria by states in the establishment of water quality standards.[57] The state regulatory authorities use EPA criteria to establish acceptable ambient levels of pollution, based on the water body's designated use.[58] If a state finds that its water bodies are so polluted that federal technology-based discharge controls will be insufficient to meet water quality standards,[59] the regulatory authority must establish the Total Maximum Daily Load (TMDL) for each pollutant.[60] The TMDL is then divided among point sources,[61] and incorporated into each discharging facility's National Pollution Discharge Elimination System (NPDES) permit.[62]

The establishment of national AWQC requires EPA to make decisions at the cutting edge of science.[63] In addition to scientific questions, data gaps surrounding the variability of consumption habits of different populations[64] make a definitive assessment of the effect of discharges on health tremendously challenging.[65] A difficulty fre-

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[56] *See* 33 U.S.C. § 1314.

[57] EPA will approve a state or tribe's criteria if they are based on scientifically defensible data and are protective of designated uses. *See* 42 U.S.C. 303(c). A number of states, however, have opted simply to adopt EPA's recommended criteria, because of the lack of technical resources. The majority of states have set their own ambient water quality criteria for at least some pollutants. *See* Oliver A. Houck, *The Regulation of Toxic Pollutants under the Clean Water Act,* 21 ELR 10528 nn. 245, 257 (1991).

[58] *See* 33 U.S.C. § 1313(c)(2)(A) (requiring the permitting authority to establish the designated use of water bodies); 33 U.S.C. § 1313(c)(2) (requiring the use of criteria in establishing ambient water quality levels).

[59] *See* 33 U.S.C. § 1313(d).

[60] If established by a state, 33 U.S.C. § 1313(d)(1)(C) is applicable. If established by EPA, 33 U.S.C. § 1313(d)(2) is applicable.

[61] 33 U.S.C. § 1314.

[62] *Id., see also* 40 C.F.R. § 123.45.

[63] Houck, *supra* note 57, at 10,537.

[64] *See* O'Neill, *supra* note 54, at 55–57.

[65] The science underlying the relative safety or harm of various chemicals, in different concentrations, is still developing. These evolving scientific issues include synergistic, antagonistic, and cumulative effects, and dose and response. *See id.* at 28.

quently seized upon by environmental justice advocates whose communities are dependent on fish as a major source of protein is that the establishment of AWQC is inherently contextual, and involves issues of risk distribution.[66]

While the Clean Water Act requires EPA to establish recommended national AWQC that are protective of public health, the meaning of the phrase "protective of public health" is question-begging.[67] The Clean Water Act does not define what levels of risk are protective in an absolute sense, much less identify which communities should represent the public. Therefore, if some risk is to be tolerated, that risk will be experienced differently across communities depending on fish consumption patterns, in addition to the sensitivities, vulnerabilities, and the relationship between a given community and its river or estuary resources.[68]

2. Current AWQC Management of Risk Distribution

In making these difficult policy and scientific decisions, courts have acknowledged EPA's technical expertise and given the agency substantial discretion to establish standards. Moreover, the courts have also sanctioned risk gradients across differently situated populations so long as all segments are "adequately protected." In *Dioxin/Organochlorine Center v. Clarke*,[69] environmental and industry plaintiffs[70] challenged EPA's establishment of TMDLs for discharges of dioxin into the Columbia River.[71] The environmental groups, Dioxin/Organoclorine Center and Columbia River United (DOC),

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[66] *See, e.g.*, Cass R. Sunstein, *Is the Clean Air Act Unconstitutional?*, 98 MICH. L. REV. 303, 319 (1999). Exploring the question "how safe is safe" under the standards of the Clean Air Act, Professor Sunstein observes that safety standards are, in large part, contextual, involving the exercise of judgement on what constitutes an acceptable risk and for which segment of the population. *See id.*

[67] *Id.*

[68] *See* O'Neill, *supra* note 54, at 28–33. Professor O'Neill suggests that risk to high fish consuming communities may be compounded based on data gap uncertainties: where professional judgement is exercised in the absence of knowledge, the values, experience, and biases of the expert decisionmakers will tend not to reflect those of high fish consuming communities. *See id.* at 25.

[69] Dioxin/Organochlorine Ctr. v. Clarke, 57 F.3d 1517, 1524 (9th Cir. 1995).

[70] *See id.* at 1519–20 (since the industry claims do not pertain to fish consumption, but rather to the appropriateness of the use of TMDLs, they are not discussed further).

[71] *See id.* at 1519. EPA established TMDLs based on a finding by the State of Washington that water quality standards were not being met largely from the discharge of paper mills. *See id.* While the state could have issued the TMDLs under its own authority, the state developed the TMDLs with EPA, and EPA issued the restrictions. *See id.* at 1520.

claimed that the TMDLs established by EPA failed to conform to the state's water quality standards, which permit no more than a one-in-a-million risk of cancer in the general population. DOC argued that because EPA based its TMDLs on the average American fish consumption rate of 6.5 grams of fish per day,[72] the Native American populations, who consume more than this amount, would not receive adequate protection.[73]

In response, EPA made two different arguments. First, EPA argued that because of the extremely conservative "potency estimates" (the amount of contamination per fish) used in the establishment of AWQC, the standards would adequately protect the Native American fish eating populations.[74] Furthermore, EPA asserted that it was unlikely that each fish eaten would be fully contaminated. Thus, based on the conservative estimates underlying the TMDLs, the Agency argued that there was no reason to believe that Native Americans would have a higher risk of cancer than the general population.

Second, even assuming that Native Americans consumed the 150 grams of fish per day asserted by DOC, and that the fish eaten were fully contaminated, EPA argued that the risk level would be only twenty-three excess deaths per million for the Native American population. While higher than the one in a million level set for the general population, EPA posited that the "risk level mandated by the state water quality standards for the general population does not necessarily reflect state legislative intent to provide the highest level of protection for all sub-populations but could reasonably be construed to allow for lower yet adequate protection of specific subpopulations."[75] The Ninth Circuit upheld EPA's position, finding that the "ambient dioxin concentrations cannot be considered arbitrary and capricious with regard to the effect of dioxin on human sub-populations, nor was the decision based on an unreasonable interpretation of state water stan-

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[72] EPA's current AWQC are based on the assumptions from a USDA Nation Purchase Dairy Survey that a person consumes 6.5 grams of a fish fillet per day, and that this person weighs 70 kilograms (about 154 pounds). *See* ENVIRONMENTAL EQUITY, *supra* note 24, at 13. The fish consumption number of 6.5 grams of fish per day represents the national average fish consumption calculated from data collected in the 1977–1978 national survey conducted by the U.S. Department of Agriculture. *See id.*

[73] *See Dioxin/Organochlorine Ctr.*, 57 F.3d at 1524.

[74] *Id.* The Agency argued that the potency factors used by other agencies or foreign governments would have resulted in a standard between five and sixteen hundred times less stringent. *See id.*

[75] *Id.*

dards."[76] The Ninth Circuit deferred to EPA's expertise and adopted the "lower yet adequate" protection standard for the fish consuming Native American populations.[77]

In *Natural Resources Defense Council v. EPA*,[78] the Fourth Circuit also considered claims that subsistence fishing communities would be injured because of the low fish consumption values underlying AWQCs. In a ruling similar to *Dioxin/Organochlorine Center*, the Fourth Circuit found that "it must give due weight to EPA's interpretation and administration of this highly complex statute, particularly when its determination appears to be reasonable and is supported by substantial evidence in the administrative record."[79] The court elaborated, explaining that its role is merely to "ensure that the underlying criteria . . . are scientifically defensible and are protective of the designated uses."[80] Thus, the Fourth and Ninth Circuits both have evinced an acceptance of the "lower yet adequate" standard and employed a deferential standard to EPA's scientific analysis.

3. Towards Establishment of AWQS from the Perspective of the Affected Community

EPA has recognized the equity issues associated with variations among different populations.[81] The agency has also improved its understanding of the way water pollution enters the food stream. With improved scientific techniques, a more accurate understanding of fish consumption patterns, and a recognition of the underlying risk distribution issues, EPA is revisiting the national AWQC.[82]

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[76] *Id.*

[77] O'Neill, *supra* note 54, at 54–57.

[78] Natural Resources Defense Council v. EPA., 16 F.3d 1395 (4th Cir. 1993).

[79] *Id.* at 1401 (citing Shanty Town Assocs. Ltd. v. EPA, 843 F.2d 782, 790 (4th Cir. 1988)).

[80] *Id.* at 1402.

[81] *See* ENVIRONMENTAL EQUITY, *supra* note 24, at 12–13.

[82] *See* Notice, Draft Water Criteria Methodology Revisions, 63 Fed. Reg. 43,756, 43,807 (Aug. 14, 1998). EPA proposed changing its methodology for calculating pollution levels in fish, focusing primarily on bioaccumulation for "certain chemicals where uptake from exposure to multiple media is important." *Id.* By contrast, the bioconcentration factor (BCF) used in the present AWQC measures the "uptake and retention of a chemical by an aquatic organism from water only." *Id.* at 43,806. The bioaccumulation factor (BAF) "reflects the uptake and retention of a chemical by an aquatic organism from all surrounding media (e.g., water, food, sediment)." *Id.* In 1991, EPA recommended a methodology for establishing the food chain multiplier (FCM), which can be used to estimate BAF when field-measured BAF is not available. *See id.* The FCM takes into account the fact that larger fish often eat smaller fish, and the smaller fish may have a higher concentration of toxins in its system which is then transferred to the larger fish. *See id.* However, BAFs are consid-

Based on data from a new fish consumption study, EPA has proposed raising the default fish consumption rate almost threefold, to 17.80 grams per day.[83] This value represents the 90th percentile for consumption of freshwater and estuarine fish by the general population.[84] In addition, EPA has also proposed a new default fish consumption rate of 86.30 grams per day for "subsistence fishers/minority anglers," in recognition of variations among populations.[85] This value represents the ninety-ninth percentile for consumption of freshwater and estuarine fish by the general population.[86]

Further, in order to accommodate fish consumption variations among communities, EPA's draft AWQC urges states and tribes "to use a fish intake level derived from local data on fish consumption in place of these default values when deriving AWQC, ensuring that the fish intake level chosen be protective of highly exposed individuals in the population."[87] To this end, EPA suggests the use of data follow this four-tier hierarchy of preferences: (1) local data; (2) data reflecting similar geographic/population groups; (3) data from national surveys; and (4) proposed default intake rates. By looking to circumstances within specific communities and developing standards based on the actual relationship between the use of natural resources and the community, all communities can receive protection according to their needs.

While EPA has not deviated from the "lower but adequate" position adopted in *Dioxin/Organochlorine Center v. Clarke*,[88] its proposed

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ered "better predictors of chemical concentrations in fish tissue than BCFs since BAFs include consideration of contaminant uptake from all routes of exposure." *Id.* at 43,807.

[83] *See id.* at 43,762. This value is derived from a diet recall study conducted by the United States Department of Agriculture entitled, "The Continuing Survey of Food Intake by Individuals for the Years 1989, 1990, and 1991." *See id.*

[84] *Id.*

[85] *Id.*

[86] *Id.*

[87] *Id.* at 43,892.

[88] 57 F.3d 1517 (9th Cir. 1995). The group assembled to peer review the Agency's proposal criticized the "lower but adequate" standard, concluding that:

> EPA should make clear that the States must set standards to protect sensitive populations, specifically those individuals and communities that consume more fish and seafood than the general population. These communities need to be protected at the 95 percentile level of exposure and as a matter of policy, they should be protected at 10^{-6}, not 10^{-4}, for cancer risks [as the Agency proposed]. The objective should be to protect these communities at the same level as the general population.

recommendations recognize the presence of populations composed of other than the "average American." It also presents a framework for addressing differences between populations. Combined with the recently affirmed right of tribes to set water quality standards on tribal lands,[89] the proposed AWQC points the way for increased health in subsistence and other communities and the resources they depend upon.

B. *National Environmental Policy Act*

Federal agencies are increasingly attentive to the differences among communities' experiences, cultures, and vulnerabilities when conducting reviews under the National Environmental Policy Act.[90] The result of the government's attention to these differences, as specifically required under NEPA and emphasized in the President's Memorandum accompanying the Environmental Justice Executive Order, is that residents of low-income or minority communities and their environments are better protected and understood by decisionmakers.

NEPA mandates that for every proposed major federal action significantly affecting human health or the environment, government decisionmakers must consider the "environmental impact . . . , any adverse environmental effects which cannot be avoided . . . , alternatives, and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."[91] These requirements accommodate easily the consideration of existing conditions, vulnerabilities, and differences among communities which, in part, define how environmental burdens will be distributed. By considering these issues, NEPA can serve as a window into the effects that a government action will have on a community's environment and provide an opportunity to mitigate or avoid adverse consequences. Moreover, if an agency fails to consider the social, economic, and environmental impacts on minority or low-income communities, decisionmakers may not be able to accurately conduct the limited balancing of costs and benefits required under NEPA.

EPA, Revisions To The Methodology For Deriving Ambient Water Quality Criteria For The Protection Of Human Health § 6.5 (EPA-822-R-99-015) (1999), *available at* http://www.epa.gov/ost/humanhealth/peer.html.

[89] *See* City of Albuquerque v. Browner, 97 F.3d 415 (10th Cir. 1996).

[90] *See* National Environmental Policy Act, 42 U.S.C. § 4321.

[91] *Id.* § 4332(C).

1. Consideration of the Human Environment

Observers have long commented on the breadth[92] of NEPA's scope and upon the opportunities[93] it provides to consider and address adverse impacts on affected communities.[94] However, many, including some environmental justice advocates,[95] have criticized the federal government's record of considering socio-economic effects that may not be felt equally among communities and populations.[96] The issuance of the Environmental Justice Executive Order and the response of the federal departments and agencies gives reason to believe, however, that NEPA can serve as an effective tool for identifying, avoiding, or mitigating disproportionate impacts.

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[92] NEPA requires documentation and consideration of a range of possible impacts, including "ecological, aesthetic, historical, cultural, economic, or health, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8. A variety of federal activities are excepted from NEPA or are only required to comply with its substantive components. *See* EPA, GUIDANCE FOR INCORPORATING ENVIRONMENTAL JUSTICE CONCERNS INTO EPA'S NEPA COMPLIANCE ANALYSIS 5–10 (1998) [hereinafter EPA Guidance], *available at* http://www.es.epa.gov/oeca/ofa/ej.html. The Council on Environmental Quality guidance, however, states that in circumstances where such an exception exists "and disproportionately high and adverse human health or environmental impact on low-income populations, minority populations, or Indian tribes exist, agencies should augment their procedures as appropriate to ensure that the otherwise applicable process or procedure for federal action addresses environmental justice concerns." COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL JUSTICE: GUIDANCE UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT, 16 (1997) [hereinafter CEQ Guidance], *available at* http://www. whitehouse. gov/CEQ/ December.

[93] Federal actions within NEPA's ambit include a wide range of activities beyond those directly carried out by federal agencies. These include activities, whether or not sponsored or implemented by a federal agency, that "cannot begin or continue without prior approval by a [f]ederal agency and the agency possess authority to exercise discretion over the outcome." New Jersey Dep't of Envtl. Prot. and Energy v. Long Island Power Auth., 30 F.3d 403, 418 (3d Cir 1994); *see also* National Ass'n for the Advancement of Colored People v. Medical Ctr., 584 F.2d 619 (3d Cir. 1978) (finding that the issuance of a permit to a private hospital constitutes a federal action).

[94] An analysis of the workings of NEPA is beyond the scope of this article. For a more detailed analysis of how NEPA's various elements apply to environmental justice concerns, see CEQ Guidance, *supra* note 92;.*see also* Cheryl A. Calloway & Karen L. Ferguson, *The 'Human Environment' Requirements of the National Environmental Policy Act: Implications for Environmental Justice*, DETROIT COLLEGE L. MICH. STATE U. L. REV. 1147 (1997).

[95] Robert D. Bullard, *Building Just, Safe, and Healthy Communities*, 12 TUL. ENVTL. J. 373, 374–75 (1999) (criticizing EPA and arguing that "EPA was never given the mission of addressing environmental policies and practices that result in unfair, unjust, and inequitable outcomes"). The author further suggests that the Environmental Justice Executive Order's focusing "the spotlight back on [NEPA]" is a hopeful sign that the identification and prevention of disproportionate impacts may increase. *Id.*

[96] *See id.* at 377–78.

The President's Memorandum accompanying the Environmental Justice Executive Order[97] directly addresses the environmental justice community's criticism of NEPA's implementation. The President's Memorandum directs federal agencies to undertake four specific actions:

> (1) analyze environmental effects, including human health, economic, and social effects of federal actions, including effects on minority communities and low-income communities, when such analysis is required by NEPA;[98]
> (2) develop mitigation measures outlined or analyzed in Environmental Assessments (EA),[99] Environmental Impact Statements (EIS),[100] or records of decisions, whenever feasible, which address significant and adverse environmental effects of proposed federal actions on minority and low-income communities;[101]
> (3) provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with effected communities and improving accessibility of public meetings, official documents, and notices to affected communities;[102] and,
> (4) EPA, as directed by the President under its authority pursuant to section 309 of the Clean Air Act,[103] must "ensure

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[97] *See* Presidential Memorandum, *supra* note 39, at 280.

[98] *See id.*

[99] *See* CEQ Guidance, *supra* note 92, at 8. An Environmental Assessment (EA) may precede the preparation of an Environmental Impact Statement (EIS). Alternatively, it may result in a finding that the proposed action is not a major federal action or will not have a significant environmental impact. Under these circumstances the EA, in combination with such a finding, acts as an endpoint in itself. *See id.*

[100] *See* 40 C.F.R. § 1502. An EIS is an action-forcing document designed to ensure, with the aid of the public comment, that the full range of an action's impacts are considered by the decisionmaker. *See id.*

[101] *See* Presidential Memorandum, *supra* note 39, at 1.

[102] *See* Exec. Order No. 12,898, §§ 1-102 & 1-103.

[103] Section 309(a) of the Clean Air Act, 42 U.S.C. § 2609, directs the EPA Administrator to:

> review and comment in writing on the environmental impact of any matter ... contained in any (1) legislation proposed by any Federal department or agency, (2) newly authorized Federal projects for construction and any major Federal agency action to which [NEPA] applies, and (3) proposed regulations published by any department or agency of the Federal Government.

Id. If the Administrator determines that the action is "unsatisfactory from the standpoint of public health or welfare or environmental quality[, the matter] shall be referred to the

> that the involved agency has fully analyzed environmental effects on minority communities and low-income communities."[104]

The President's Council on Environmental Quality issued guidance to implement the Executive Order.[105] While the guidance, by its own terms, is not supposed to be used as a formula, the following four principles stand out. The guidance provides that federal departments and agencies should determine:

> (1) whether there are vulnerable populations present in the affected area, and, if so, whether there may be disproportionately high and adverse effects on those populations;[106]
> (2) whether there is the potential for multiple or cumulative exposure to human health or environmental hazards;[107]
> (3) whether there are inter-related cultural, social, occupational, historical, or economic factors that may amplify the physical environmental effects of the proposed action;[108] and,
> (4) Agencies should assure meaningful community representation in the process, and develop effective public participation strategies.[109]

These principles direct federal agencies to take into consideration the context, values, experience, practices, and vulnerabilities of the subject populations and their relationships with the environment. Thus, from the perspective of the community, federal agencies can take actions that maintain the natural and environmental resources upon which communities depend.

Council on Environmental Quality." *Id.*; *see* EPA, GUIDANCE FOR CONSIDERATION OF ENVIRONMENTAL JUSTICE IN CLEAN AIR ACT SECTION 309 REVIEW (1999), *available at* www.epa.gov/oeca/ofa/ej_nepa.html.

[104] *See* Presidential Memorandum, *supra* note 97, at 2.

[105] *See* CEQ Guidance, *supra* note 92, at 8–10.

[106] *See id.* at 9.

[107] *See id.*

[108] *See id.* The CEQ Guidance states that these factors "should include the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community." *Id.*

[109] *Id.* With respect to public participation, the CEQ Guidance notes that "barriers may range from agency failure to provide translation of documents to the scheduling of meetings at times and in places that are not convenient to working families." *Id.* at 13.

2. Administrative Litigation: Environmental Justice in the NEPA Context

The Environmental Justice Executive Order does not "create a right of judicial review against the United States."[110] Therefore, no federal court has remanded a federal action based upon an agency's failure to consider disproportionate impacts in the NEPA process.[111] However, at least two administrative tribunals have held that agency actions must adequately consider environmental justice issues, pursuant to the Executive Order and as part of the agency's NEPA analysis.[112] In these cases, the agency tribunals expressed a willingness to review agency NEPA analyses for disproportionate impacts.[113] However, like the EAB, the agency tribunals looked only to the nexus between the community and the environment, and the way in which the government action affects that relationship.[114] The tribunals have not examined allegations of outright discrimination on the part of the state or local regulatory agency responsible for approving a facility's siting.

a. *Nuclear Regulatory Commission*

For example, a panel of three Nuclear Regulatory Commissioners, sitting as an appellate body, reviewed an Atomic Safety and Licensing Board's ("Board") determination that an EIS for a uranium enrichment facility failed to adequately consider disproportionate socio-economic impacts on a low-income, minority community.[115] The preferred alternative placed the facility on a 70-acre parcel of land located on a larger 442-acre woodland area and between two unin-

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[110] Exec. Order No. 12,898, § 6–609.

[111] *See, e.g.*, Morongo Band of Mission Indians v. FAA, 161 F.3d 569, 575–81 (9th Cir. 1998); *see also* Air Trans. Ass'n of Am. v. FAA, 169 F.3d 1, 8–9 (D.C. Cir. 1999).

[112] *See, e.g.*, San Carlos Apache Tribe, et al., 149 IBLA 29 (1999); Antonio J. Baca, 144 IBLA 35 (1998). By contrast, another agency, the Federal Energy Regulatory Commission (FERC), has found that the:

> order does not apply to independent agencies, such as the Commission, and the President's memorandum that accompanies it states that it is intended to improve the internal management of the Executive Branch, and does not create any legally enforceable rights. Therefore, [an] EIS is not deficient for failing to include a specific discussion of this issue.

City of Tacoma, Washington, 86 FERC P 61,311 (1999).

[113] *Id.*

[114] *Compare, e.g., In re* Chemical Waste Management of Indiana, 6 E.A.D. 144 (1995), *with In re* Louisiana Energy Servs. (Claiborne Enrichment Center), 47 NRC 77 (1998).

[115] *In re* Louisiana Energy Servs., 47 NRC 77 (1998).

corporated African-American communities in Louisiana.[116] The EIS alluded to a number of environmental impacts to surface and groundwater, and to air quality.[117] However, before the Board and the Nuclear Regulatory Commissioners, the project proponents and petitioners were most concerned with issues relating to disproportionate impacts of a socio-economic nature.

The Commissioners found a link between social and economic impacts and environmental quality issues. Specifically, the Commissioners found:

> Necessarily . . . agencies frequently do consider proposed project's social and economic effects, even if only to a limited extent, given that NEPA generally calls for at least a broad and informal balancing of environmental costs of a project against its technical, economic or other public benefits. Misleading information on the economic cost of a project, therefore, could skew an agency's overall assessment of a project's costs and benefits, and potentially result in approval of a project that otherwise would not have been approved because of its adverse environmental effects.[118]

Without consideration of impacts that especially affect low-income or minority communities, the impacts might be permitted where, in truth, the total costs of the project outweigh the benefits. The Commissioners also found that because "adverse impacts that fall heavily on minority and impoverished citizens call for particular close scrutiny," such issues must be included within NEPA's ambit.[119] Thus, the Commissioners agreed with the Board that issues of disproportionate impact needed to be addressed.

Concurring with the Board that the EIS failed to adequately consider issues of disproportionate impacts, the Commissioners paid close attention to the impact of a road closing (called for in the proposal) on the social and economic fiber of the two minority communities. The Commissioners found that by not analyzing the impact of the transportation corridor's closure on pedestrian traffic, the EIS failed to adequately consider the indirect impact of the facility on the

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[116] *Id.* at 83.

[117] In addition to remanding the decision based on the EIS' failure to address concerns of disproportionate impacts adequately, the Commissioners' opinion also ordered that the EIS more fully address the nature of the environmental impacts. *See id.* at 85.

[118] *In re Louisiana Energy Servs.*, 47 NRC at 89, 106 (internal citations omitted).

[119] *Id.* at 107.

communities' social, cultural, and economic life. The Commissioners noted that while a road closing might be only a minor inconvenience for people who drive, the closing would create significant life issues for approximately one-third of the local African-American population who did not own automobiles, as well as for the "old, ill or otherwise infirm."[120] Without understanding the effect of the closing from the communities' perspective, the Commissioners, like the Board, found that a reasoned decision based on the environmental impacts of the proposal could not be made.[121]

However, the Commissioners did not uphold the Board's order for additional investigation with respect to allegations of racial discrimination in the siting process.[122] Although they did not find the Board's analysis with respect to the claims of discrimination to be necessarily flawed, the Commissioners recognized that NEPA is designed to review impacts associated with projects, not the underlying motives of the action. Therefore, examination of possible discriminatory intent within the context of NEPA was not appropriate.[123]

b. *Bureau of Land Management*

The Department of the Interior, like the Nuclear Regulatory Commission, reviews NEPA analysis for consideration of disproportionate impacts on minority and low-income communities both under the policy established by the Executive Order and as a matter of course.[124] In *Southern Utah Wilderness Alliance* (SUWA),[125] the Department of the Interior Board of Land Appeals (IBLA) reviewed and remanded a Bureau of Land Management (BLM) decision to construct a visitor station at Kane Gulch on the Grand Gulch Plateau, Utah. In that case, environmental organizations and the Navajo Nation, among others, objected to BLM's decision to construct a visitor center in Utah's canyon country because of possible harm to cultural and natural resources. Specifically, the appellants objected to BLM's failure to consider, in an EA prepared for the facility, the possible harm to natu-

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[120] *Id.*

[121] *See id.*

[122] *See id.* at 100.

[123] The Commissioners found that discrimination, though important, is "far removed from NEPA's core interest the physical environment, the world around us, so to speak." *Id.* at 102 (internal citations omitted).

[124] *See infra* note 113.

[125] Southern Utah Wilderness Alliance, 150 IBLA 158 (1999) [hereinafter SUWA].

ral and cultural resources caused by the potential increase in the number of visitors to the area.[126]

Degradation from increased use has caused significant impacts to substantial portions of Utah's canyon lands. According to local accounts:

> The confluence and narrows are being hammered by too much use. . . . Sandbars, or benches, which offer the only place to camp above the river bed, suffer the most impact. Campers erode trails across vegetated areas, leave messy 'cat holes' with toilet paper sticking out, and build rings for illegal campfires.[127]

The loss of desert habitat is of special concern to local tribes who "gather pinyon nuts from the canyons for food and collect herbs indigenous only to [Cedar Mesa] for traditional medicines and blessing rituals."[128]

Preparing the NEPA analysis for the visitor center, BLM identified potential impacts to resources as a concern and entered into a dialogue with local tribes.[129] However, BLM expressly decided not to address the possibility that "new facilities would increase visitor use, because it assumed that visitor use would increase with or without construction of the facility."[130] Therefore, BLM did not consider the facility's potential impact on cultural values caused by possible increased use and damage to natural resources. Consistent with this understanding, "BLM also declined to address environmental justice concerns, stating that a 'new visitor contact station would have no adverse impacts to minority or low income populations'."[131] Further, because it concluded that the facility would not injure any natural or cultural resources, BLM decided to respond to issues on a continuing basis and as the need arose rather than completing consultation with the tribes.[132]

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[126] *See id.* at 161.

[127] Brian Maffly, *Outdoors*, THE SALT LAKE TRIB., May 4, 1999, at B1.

[128] Christopher Smith, *Blanding*, THE SALT LAKE TRIB., Jan. 20, 1997, at D1.

[129] *See* SUWA, 150 IBLA at 166.

[130] *Id.* at 167–68. IBLA found that BLM relied on an overall plan for the area, thus neglecting to consider the management of visitors coming to the area. *Id.*

[131] *Id.* at 161, n. 9.

[132] *See id.* at 169. IBLA noted that BLM had met with tribe members and representatives on several occasions, both at the site and in local communities, to reduce impacts and to discuss how best to develop a culturally sensitive interpretation of the area. *See id.*

Noting that BLM had described the proposed visitor center as an "effective portal to the world-class resources of the Cedar Mesa 'outdoor museum'" and planned to provide potable water in the high desert canyon land,[133] IBLA found that the EA should have determined whether the facility would, in fact, attract more visitors. Perhaps presupposing an answer, IBLA expressed concern that the EA did not consider the direct effect or indirect effects on cultural resources of the increased number of visitors.[134] Moreover, IBLA was "troubled by BLM's treatment of Native concerns, since it expressly declined to address these issues and effectively acknowledged that, as of the issuance of the decision to go ahead, it had not fully resolved those concerns, but that it would do so in the future."[135] Remanding the decision to BLM, IBLA ordered BLM to complete the dialogue entered into with the tribes, consider the effect of increased visitors to the area, and identify vulnerable cultural resources likely to be impacted by increased use of the area.[136] Thus, if BLM constructs the visitor center, the impacts to the land will be understood and addressed from the perspective of the local community.

Both the IBLA and the NRC have recognized that the Environmental Justice Executive Order carries no third party rights of action in federal court. However, they found that executive branch agencies were bound by the President's Executive Order. Moreover, as SUWA makes clear, where an action's impact to a natural resource creates an adverse social or cultural change to a distinct community, those impacts must be examined from the communities' point of view. By examining and avoiding those impacts, both the community and the natural resources upon which the community depends may be maintained .

C. Resource Specific Analysis

Regulation of specific natural or environmental resources[137] can act to protect ecosystems and the people whose lives are intertwined

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[133] *Id.* at 159, 162.

[134] *See* SUWA, 150 IBLA at 167–68.

[135] *Id.* at 169.

[136] *See id.* at 170.

[137] Resource protection would include the protection of specific types of natural or environmental resources based on an ecological or place-specific basis. This type of regulation includes, for example, management of public land under the Federal Land Policy Management Act of 1976 (FLPMA), 43 U.S.C. §§ 1701–1785, Wild and Scenic Rivers Act,

with them.[138] Federal regulation of place-based resources typically limits its use, not only to activities that are protective of human health and the environment, but also to those uses of natural resources that are found to be in the public interest.[139] Based upon increasingly common cultural understandings[140] and executive branch policy, as stated in the Environmental Justice Executive Order, this public interest requirement may either limit or require examination of activities that disproportionately impact minority and low-income communities. Thus, the public interest determination requirement, imbedded in most place-based or resource-based acts, can give substance to the impacts identified through NEPA's procedural requirements.[141]

1. Environmental Justice and Public Interest Considerations in Issuance of Section 404 Permits to Dredge and Fill Wetlands—A Case Study

Planning for expected regional growth, the City of Newport News and a group of counties and cities in Virginia's lower peninsula formed the Regional Raw Water Study Group (RRWSG)[142] to develop a municipal water source that would satisfy the predicted demand for water through 2040. Projecting a 39.8 million gallon per day water supply deficit,[143] the RRWSG proposed a 1,526-acre impoundment on Cohoke Creek—the King William Reservoir. The site was selected, in part, because of the deeply incised valley through which the Cohoke Creek, a tributary of the Pamunkey River, flows. In addition to the

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16 U.S.C. § 1271, and Section 404 of the Clean Water Act, 33 U.S.C. § 1344, pertaining to permits for dredge or fill material.

[138] *See, e.g.*, 42 U.S.C. § 4321.

[139] *See, e.g.*, 43 U.S.C. § 1712.

[140] *See* J.B. Ruhl, *The Seven Degrees of Relevance: Why Should Real-World Environmental Attorneys Care Now About Sustainable Development Policy?*, 8 DUKE ENVTL. L. & POL'Y F. 273, 285 (1998) (finding that environmental justice, at first a social movement and then a cultural norm, is also a government-sanctioned policy).

[141] *See* 43 CFR § 1601.0–6, providing that:

> [a]pproval of a resource management plan is considered a major federal action significantly affecting the quality of the human environment. The environmental analysis of alternatives and the proposed plan shall be accomplished as part of posed plan and related environmental impact statement shall be published in a single document.

Id.

[142] The RRSWG consists of James City County and York County, and the cities of Williamsburg, Newport News, Hampton, and Poquson.

[143] Joint federal/state notice of availability of Final Environmental Impact Statement, Jan. 24, 1997, *available at* http://www.mpra.org/notice1.htm.

geologic suitability of the river valley for impoundment purposes, the apparent availability of supplemental raw water (75 million gallons per day) from the nearby Mattaponi River[144] made the location desirable from an engineering perspective.[145]

The King William Reservoir would have a substantial effect on regional ecological resources.[146] The impoundment would create a 1,526-acre lake[147] and result in a loss of a total of 437-acres of highly diverse wetlands and uplands.[148] In fact, the Army Corps of Engineers (Corps) found that the project ranks as the largest single destruction of wetlands and their associated habitat ever evaluated in the Norfolk District.[149]

Animal and plant species would be significantly impacted by the project as well. The Department of the Interior's Fish and Wildlife Service found that the Small Whorled Pogonia[150] and Sensitive Joint-Vetch,[151] both listed as "threatened" under the ESA, are located in and around the project area.[152] Further, the project may have the potential to impact the local shad population both from direct effects and, potentially more seriously, from the indirect effects.[153] "The significance of these impacts is amplified by the alarming rate of habitat loss, particularly of wetland resources, in the Chesapeake Bay [area],"[154] where the proposed reservoir would be located.

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[144] The proposed reservoir required additional water because of the limited size of the drainage area (8.92 square miles). Regina Poeska, Unprecedented Preliminary Decisions Involving NEPA on Controversial Reservoir Project, North American Wildlife and Natural Resources Conference 1, 3 (Mar. 25–28, 2000) (on file with author).

[145] *RRSWG, The King William Reservoir Project, "Project Description," available at* http://www.kwreservoir.com/projectvid.html.

[146] Briefing paper prepared by Norfolk District Army Corps of Engineers for Assistant Secretary of Army for Civil Workings (May 28, 1999) (on file with author) [hereinafter Position Paper].

[147] *Id.*

[148] *Id.*

[149] *See id.*

[150] The Small Whorled Pognia is a woodland orchid, listed as a threatened species since 1994. *See* http://endangered.fws.gov/i/q/saq1q.html.

[151] The Sensitive Joint-Vetch, a plant in the bean family having the unusual property of sensitivity to touch, was listed in 1992. *See* http://endangered.fws.gov/i/q/ saq95.html.

[152] Position Paper, *supra* note 146, at 2.

[153] *See id.*

[154] Poeska, *supra* note 144, at 3.

Two Native American tribes recognized by the State of Virginia,[155] the Mattaponi and Pamunkey, would also be impacted.[156] Members of the Mattaponi have subsisted on a 150-acre reservation on the banks of the Mattaponi River[157] since entering into a treaty with the then colony of Virginia in 1677.[158] The Mattaponi are decedents of Chief Powhatan, father of Pocahontas and ruler of large portions of what is now tidewater Virginia.[159]

The river for which the Mattaponi tribe is named,[160] as well as the surrounding land, have special meaning to the tribe, at levels cultural, spiritual, and physical. The Mattaponi "have fished, farmed, hunted, gathered, and worshiped in this area for hundreds of years, making its land the cultural and economic base of the Tribe."[161] Moreover, the potentially impacted area contains archaeological sites potentially eligible for inclusion in the National Register of Historic Places.[162] Among other spiritual and cultural resources, the Mattaponi revealed that the area includes a sacred site, which the Corps found to be of extreme archaeologic and anthropologic importance.[163]

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[155] *See* Letter from Frank S. Ferguson, Deputy Attorney General to John Dosset, Esq., June 3, 1997 (acknowledging that the Mattaponi and other Indian tribes in the Commonwealth stand in a position somewhat different for other citizens.), citing 1917–1018 Op. Va. Att'y Gen 161, 1919 Op. Va. Att'y Gen. 179, and 1976–1977 Op. Att'y Gen. 107.

[156] Letter from John R. Pomponio for Stanley Laskowsi, EPA Region III, to Col. Robert H. Reardon, Jr., District Engineer, Norfolk District, Corps of Engineers (commenting on Final Environmental Impact Statement (FEIS) for the King William Reservoir Water Supply Project) (on file with author) [hereinafter Reardon Letter]. While both the Mattaponi and Pamunkey would be substantially impacted the analysis here in is limited to the Mattaponi, which have been the more active of the two tribes in opposing the reservoir. *Id.*

[157] Position Paper, *supra* note 146.

[158] The Treaty of 1677, between the Mattaponi Indian and Pamunkey tribes and the English Crown, is known as the "Treaty at Middle Plantation." The Commonwealth stands as the successor to the Crown. *See* 1976–1977 Op. Va. Atty. Gen. 107, 108–109, *see also* Barker v. Harvey, 181 U.S. 481 (1901).

[159] *See* Poeska, *supra* note 144, at 3.

[160] The name Mattaponi means "People at the Landing Place," and indicates the tribe's location on the river. Petition and Complaint at 1, 13, Mattaponi Tribe v. Virginia (EPA, June 16, 1998) (on file with author).

[161] *Id.* at 2.

[162] Position Paper, *supra* note 146; *see also* Reardon Letter, *supra* note 156. The project area was also found to include "Traditional Cultural Properties," which are eligible for inclusion in the National Register because of "their association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community." U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE, NATIONAL REGISTER BULLETIN NUMBER 38, GUIDELINES FOR EVALUATING AND DOCUMENTING TRADITIONAL CULTURAL PROPERTIES *available at* http://www2.cr.nps.gov/tribal/bull3803.html.

[163] *See* Position Paper, *supra* note 146; *see also* Lawrence Latane III, *Sacred Indian Site Enters Public Debate Reservoir a Threat, Mattaponi Declare,* RICHMOND TIMES-DISPATCH, Sept. 27,

The Mattaponi perceived the proposed project as having the potential to cause a catastrophic impact on its way of life. The Corps characterized the tribe's view of the project, as follows:

> [T]he reservoir would destroy their way of life through the loss of hunting, gathering and fishing habitat, by changing the rural setting from increased residential growth around their reservations, and by severing ties to their ancestors. . . . Also, the Mattaponi people believe that their subsistence shad fishery and hatchery operation will be lost or irreparably harmed by changes in salinity and impacts to shad eggs and fry associated with the raw water intake on the Mattaponi River.[164]

Because the Mattaponi are profoundly connected to the local ecology, it follows that adversely affecting the natural resources surrounding them would also adversely impact the tribe.

2. Review of the Environmental Impact Statement for the Proposed Permit

The Corps issued the Final EIS on January 24, 1997.[165] The document, which recommended the preferred alternative of the RRWGS, would have permitted the construction of the reservoir.[166] In July 1997, the Corps accepted comments submitted by, among others, the Mattaponi,[167] a number of environmental and natural resources organizations,[168] an environmental law clinic,[169] and EPA Region III, which filed comments pursuant to Section 309 of the Clean Air Act.[170] The environmental and natural resources advocate organizations submitted studies that called into question the assumptions that the

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1999, at A1 (addressing both the importance of the site to the Mattaponi and the tribe's reluctance to make details of the site knows because of historical distrust and the intensely private nature of the issues involved).

[164] *See* Position Paper, *supra* note 146.

[165] NEPA analysis is required for a § 404 permit pursuant to 33 C.F.R. § 325, App. B, to the extent the agency has control over the wetland.

[166] *See* U.S. ARMY CORPS OF ENGINEERS, NORFOLK DISTRICT, FINAL ENVIRONMENTAL IMPACT STATEMENT, REGIONAL RAW WATER STUDY GROUP LOWER VIRGINIA PENINSULA REGIONAL WATER STUDY PLAN MAIN REPORT (1997) [hereinafter FEIS].

[167] *See id.*

[168] These include the Sierra Club and the Rocky Mountain Institute. *See* EPA, Technical Comments, attached to Reardon Letter, *supra* note 156.

[169] Georgetown Law Center, the environmental law clinic, also filed a Title VI complaint which was dismissed for lack of ripeness.

[170] Position Paper, *supra* note 146; *see also* Reardon Letter, *supra* note 156.

project proponents used in deriving the anticipated future demand for water.[171] Additionally, the groups raised many concerns relating to the proposed project's impacts to the ecology of the watershed and its indirect effects on the Mattaponi.

While noting the concerns raised by the other commentors with respect to the assessment of water needs, EPA Region III deferred to the technical expertise of the Corps.[172] Rather than focusing on the predicted availability and demand for water, EPA analyzed the project's direct and indirect effects on cultural,[173] water quality,[174] hydrology,[175] fisheries,[176] and wetland resources.[177] Moreover, in its comments, EPA extensively addressed the intricate relationship between the local ecology and the Mattaponi under the rubric of environmental justice.[178] On this issue, EPA found that the Environmental Justice Executive Order and the accompanying memorandum "sets up a clear mandate for the Army Corps of Engineers to look seriously at this issue within the context of the . . . NEPA document."[179] While the project proponents had made a good faith effort to achieve some of the stated principles, EPA found that "key components of *identifying* and *addressing concerns, in consultation with the affected communities* have yet to be completed."[180]

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[171] Position Paper, *supra* note 146.

[172] *See id.*

[173] EPA expressed concern that the FEIS "has not explored the likelihood or presence of traditional cultural properties," notwithstanding the Virginia State Historic Preservation Officer's determination that such resources may be in the affected area. *Id.* at 2.

[174] EPA found that uncertainty existed with respect to the accuracy of estimated salinity changes caused by diversion of water from the Mattaponi River. *See id.* Noting this uncertainty, the agency addressed additional concerns raised by potential salinity increases effect on fisheries and, thus, the Mattaponi. *See id.* at 2.

[175] EPA "strongly recommended" that an ecosystem-based flow regime be used in the management of dam operations, finding that the proposed model was "not . . . sufficiently protective of the River." *See* Position Paper, *supra* note 146, at 3.

[176] EPA noted that "[a]ny impacts to shad in this area could devastate [the tribe's fish hatcheries] and cause significant hardship to the [t]ribe as well as impact the rate of shad recovery in the Chesapeake Bay and its tributaries." *Id.* at 5.

[177] EPA found the wetlands mitigation plan submitted in the FEIS unacceptable because it failed to compensate for the quality and type of wetlands that would be lost. *Id.* at 6. Moreover, EPA maintained that the wetland resources proposed for inundation would qualify as an Aquatic Resource of National Importance, due to its "uniqueness/heritage values." The issue of whether EPA would exercise its veto authority under § 404(c), upon a finding of "unacceptable adverse" environmental effects was not reached.

[178] *See id.* at 9–12.

[179] *Id.* at 9.

[180] Position Paper, *supra* note 146, at 10.

Significantly, EPA found that the Corps should prepare a supplement to the EIS addressing unresolved questions relating to the impact the ecological modifications on the affected Native American communities. In anticipated preparation of this additional analysis, EPA urged the Corps "to work directly with the affected communities as well as seek professional assistance in this matter as they would any other environmental issue."[181] In particular, EPA recommended examination of the following:

> (a) impacts or possible violation of a community's customs or religious practices;
> (b) impacts to cultural and historic properties and areas, the degree to which the effects of the actions can be absorbed by the affected population without harm to its cohesiveness;
> (c) impacts to fish and wildlife on which a minority population or low-income population depends, cultural differences in environmental expectations (endangered species vs. traditional hunting or ceremonial use);
> (d) impacts on the health and sustainability of ecosystem or watershed within which a population is located (e.g. religious use of natural resources); and
> (e) degradation of aesthetic values.[182]

3. Response to Comments on the FEIS

In response to comments received, the Corps prepared supplemental studies[183] and conducted additional public outreach.[184] In addition, the deciding official of the Corps met with the Mattaponi and Pamunkey tribes in person to hear the concerns of the tribes and vis-

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[181] *Id.* EPA noted that the methods used to engage the affected populations may need to be tailored to the communities' culture and experiences. Because the tribes engaged in traditional and cultural practices not well understood by the government, direct communication with the tribe was viewed by EPA as essential to determine the effects of the proposed project. *Id.*

[182] *Id.* at 11.

[183] Among these, the Corps investigated further the location and nature of traditional cultural properties. Underscoring the complexity of the NEPA process caused by historical distrust, the Mattaponi strongly objected to the use of consultants funded by the RRSWG to conduct the study. While typically the project proponent would fund such an analysis to encourage the tribe's participation, EPA, Region III, paid for the study. *See* Poeska, *supra* note 144, at 11.

[184] Telephone Interview with Regina Poeske, Environmental Specialist, EPA Region III (May 5, 2000).

ited the cultural sites identified by the impacted communities.[185] The Corps also used the services of its research arm, the Institute for Water Resources ("Institute"), to evaluate the need for and alternatives to the proposed reservoir.[186]

The Institute concluded that the consortium "significantly overestimated future demand and that the stated need is not supported by their data."[187] Rather than the 39.8 million gallon per day deficit predicted by the consortium, the Institute found that the RRSWG only convincingly demonstrated a need for an additional 17 million gallons per day in 2040.[188] According to the Institute's measures, that level of deficit corresponds roughly to the amount of water the consortium estimated that could be obtained through conservation measures (7 million to 11.1 million gallons per day) and the amount that could be developed from fresh and brackish ground water supplies (10.1 million gallons per day).[189]

4. Position to Deny

On June 4, 1999, Colonel Allan B. Carroll of the Corps stated the Corps' position to deny the consortium's request for permits to construct the proposed reservoir.[190] The Corps issued the position to deny based on regulations governing wetlands and information compiled as part of the NEPA review process.[191] Specifically, it considered "the lack of a demonstrated need to destroy 437 acres of wetlands as well as the cumulative adverse environmental impacts of the project, particularly the potential for a disproportionately high and adverse effect to an American Indian minority population."[192]

For such projects, two broad findings must be met before the Corps will issue a federal permit to dredge and fill a wetland. The

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[185] *Id.*

[186] INSTITUTE FOR WATER RESOURCES, U.S. ARMY CORPS OF ENGINEERS, EVALUATION OF CONFLICTING VIEW ON FUTURE WATER USE IN NEWPORT NEWS, VA (1999) [hereinafter WATER USE REPORT]. The use of the Army Corps of Engineers' Institute for Water Resources appears to be directly responsive to the water-demand critiques submitted by commentors on the EIS. *See* Position Paper, *supra* note 146, at 3.

[187] Position Paper, *supra* note 146, at 4.

[188] *Id.*

[189] *Id.*

[190] Letter from Col. Allan B. Carroll, District Engineer, U.S. Army Corps of Engineers, to R.W. Hildbrant, Assistant City Manager, City of Newport News (June 4, 1999) *available at* http://www.mpra.org/deny.htm [hereinafter Position to Deny].

[191] *Id.* at 1–2.

[192] *Id.* at 1.

regulations implementing Section 404 of the Clean Water Act provide that the Corps must determine: (1) whether a practicable alternative exists that would have less adverse impact on the environment;[193] and (2) whether the project is in the public interest.[194] Factors that the Corps must consider under the public interest determination include, among other things, "conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, . . . recreation, water supply and conservation, water quality, . . . considerations of property ownership, and, in general, the needs and welfare of people."[195]

The Corps, which based its position to deny the permit on the Institute's analysis of future water demand and supplemental cultural studies, found that the consortium had overstated the projected need by more than a factor of two.[196] Moreover, the Corps found that conservation and "non-reservoir [sources] would meet the 2040 deficit."[197] Consequently, the Corps found that there "does not appear to be a supportable, demonstrated need for the destruction of 437-acres of wetland and the functions they perform."[198]

Furthermore, the Corps found that the reservoir would not be in the public interest.[199] First, the Corps' position to deny enumerated the ecological and cultural impacts of the proposed reservoir project.[200] Next, the Corps addressed these resources from the tribes' perspective, and found that:

> The project has the potential to impact a sacred site, traditional hunting, gathering and religious practice, subsistence fisheries, and the way of the Mattaponi. . . . Because the proposed reservoir is located between Virginia's only two American Indian Reservations, and the proposed intake is located upstream of the Mattaponi Reservation, the project

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[193] *See* 33 C.F.R. § 320.4 (j) and 40 C.F.R. § 230.10(a) (providing that no individual permit will be issued "if there is a practicable alternative to the proposed discharge which would have less adverse impact . . . .").

[194] 33 C.F.R. § 320.4 (a). It should be noted, however, that a permit will be "granted unless the district engineer determines that it would be contrary to the public interest." *Id.* at § 320.4(a)(1).

[195] *Id.*

[196] *See* Position to Deny, *supra* note 190, at 2.

[197] *Id.*

[198] *Id.*

[199] *See id.* at 2–3.

[200] *See id.* at 2.

> has the potential to result in disproportionately high and adverse environmental effects to minority populations as described in Executive Order 12898.[201]

The legal weight given to the Environmental Justice Executive Order by the Corps is debatable. For example, it is not entirely clear whether the Corps interpreted the Executive Order as creating a policy finding that disproportionate impacts are necessarily or presumptively against public interest under Section 404 of the Clean Water Act. However, their decision was clearly based on the principle that actions that disproportionately impact the resources of minority or low-income communities are against the public interest.[202] In the case of the Mattaponi, the Corps clearly found environmental justice concerns to have a great bearing on the public interest determination under Section 404 of the Clean Water Act.[203]

CONCLUSION

These examples do not define the universe of environmental statutes that have environmental justice implications on natural resources. To the contrary, the point is that all environmental laws have

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[201] *Id.* at 3.

[202] According to an editorial in the *Richmond Times-Dispatch,* when the Mayor of the City of Newport News asked what additional information the City could provide to bolster its case for the reservoir, Colonel Allan Carroll replied that "simply changing projection of water need would not suffice. Other considerations—the effect on the environment and on the Mattaponi Indians—also bear on the matter." Editorial, RICHMOND TIMES-DISPATCH, Mar. 2, 2000, at A12.

[203] Indeed, the Corps recently clarified that environmental justice concerns and ecological impacts that underlie the public interest finding constitute an independent basis for its Position to Deny the permit. Responding to inquiries and information provided by the RRWSG and the Town of Newport News, the Corps noted:

> Before you go to any additional expense related to providing additional information on water need, please be aware that even if the need issue were resolved completely in favor of the Regional Raw Water Study Group (RRWSG), I would still recommend denial of this permit. I do not want to mislead you or create a false impression that resolving the water need issue will change my position on the King William Reservoir. I believe the cumulative environmental impact of this project and the potential risk to the culture and economy of the Tribes would be too great. I do not believe that the ecology and diversity of the affected habitat could be replicated or that the losses that the Tribes would experience as a result of the project could be adequately compensated or mitigated.

Letter from Col. Allan B. Carroll, District Engineer, U.S. Army Corps of Engineers, to Mayor Joe S. Frank, City of Newport News (Feb. 3, 2000), *available at* http://www.mpra.org/ carroll.htm.

environmental justice implications imbedded within them. The only question is how we will use them. If statutes are applied using broad, generic averages, as the EAB points out, minority or low-income populations may well be excluded and environmental injustices will occur. However, if regulators view the environmental and natural resources services from the communities' point of view, the health of both the residents and the resources will be maintained.

The examples are also not meant to imply that the use of environmental statutes to protect sub-populations is new. The opposite is true. In most cases, protective environmental laws, regulations, and policies, if they are appropriately and fairly applied and equally enforced, *do* protect all people, including minority and low-income populations. What is new, however, is the increasing awareness of federal agencies that inattention to issues faced by minority or low-income populations can lead to disproportionate exposure to environmental harms and risks. As a consequence of that awareness, the environmental and natural resources of those populations are beginning to benefit.