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**THE HARD LOOK DOCTRINE:
HOW DISPARATE IMPACT THEORY CAN INFORM
AGENCIES ON PROPER IMPLEMENTATION OF NEPA
REGULATIONS**

*Monica Mercola**

“Many workers in the petrochemical plants . . . felt caught in a terrible bind. They loved their magnificent wilderness. They remembered it as children. They knew it and respect it as sportsmen. But their jobs were in industries that polluted—often legally—this same wilderness.”¹

INTRODUCTION

Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations—was issued to achieve “environmental protection for all communities”² by drawing federal attention to the environmental and human health effects brought about by federal agencies.³ The Executive Order instructs that:

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¹ ARLIE RUSSELL HOCHSCHILD, STRANGERS IN THEIR OWN LAND: ANGER AND MOURNING ON THE AMERICAN RIGHT 51 (2016).

² *Summary of Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, ENVTL. PROTECTION AGENCY, <https://www.epa.gov/laws-regulations/summary-executive-order-12898-federal-actions-address-environmental-justice> (last updated Sept. 17, 2018).

³ Federal agency means all agencies of the Federal Government. It does not mean the Congress, the Judiciary, or the President,

[t]o the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall 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.⁴

In addition to the call to identify and address disproportionate effects on these communities, the executive order directed each agency to implement a strategy of environmental justice and establish an Interagency Working Group on environmental justice chaired by the Environmental Protection Agency Administrator.⁵

Executive Order 12898 recognized that low-income and minority communities often do not have access to the same environmental standards as those living in wealthy or majority-white communities and are disproportionately affected by the negative impacts of federal programs, policies, and activities.⁶ Low-income communities are comparatively below-standard in areas that include, but are not limited to, access to clean drinking water, clean air, adequate living conditions, and better health and overall safety.⁷

including the performance of staff functions for the President in his Executive Office. It also includes for purposes of these regulations States and units of general local government and Indian tribes assuming NEPA responsibilities under section 104(h) of the Housing and Community Development Act of 1974.

Protection of Environment, 40 C.F.R. § 1508.12 (2018).

⁴ Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order No. 12,898, 59 Fed. Reg. 7629 (1994), amended by Exec. Order No. 12,948, 60 Fed. Reg. 6381 (1995).

⁵ *Summary of Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, *supra* note 2.

⁶ See *supra* text accompanying note 4.

⁷ See Jasmine Bell, *5 Things to Know About Communities of Color and Environmental Justice*, CTR. FOR AM. PROGRESS (Apr. 25, 2016), <https://www.americanprogress.org/issues/race/news/2016/04/25/136361/5-things-to-know-about-communities-of-color-and-environmental-justice/>.

Minority and low-income communities often face decades of disinvestment, both intentionally and unintentionally through local, state, and federal land-use policies.⁸ As a result, these communities have limited access to these environmental standards.⁹ However, the executive order's direction that federal agencies "identify[] and address[] . . . disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority populations and low-income populations" is not a mandate.¹⁰ Presently, several statutes and constitutional amendments are available to address environmental justice concerns, such as Title VI of the Civil Rights Act,¹¹ the Fair Housing Act ("FHA"),¹² and the Equal Protection Clause of the Fourteenth

⁸ Renee Skelton & Vernice Miller, *The Environmental Justice Movement*, NAT'L RESOURCE DEF. COUNCIL (Mar. 17, 2016), <https://www.nrdc.org/stories/environmental-justice-movement>.

⁹ See Ben Kessler, *Heat Waves Fall Hardest on Poor and Elderly, Experts Say*, NAT'L BROADCASTING COMPANY NEWS (July 20, 2019), <https://www.nbcnews.com/news/us-news/heat-waves-fall-hardest-poor-elderly-experts-say-n1031871>.

¹⁰ See *supra* text accompanying note 4.

¹¹ Title VI prohibits discrimination based on race, color, or national origin in programs or activities which receive federal financial assistance. 42 U.S.C. § 2000d (2017); Anyone can file a discrimination complaint with the EPA's External Civil Rights Compliance Office, formerly known as the Office of Civil Rights. *External Civil Rights Compliance Office (Title VI)*, ENVTL. PROTECTION AGENCY, <https://www.epa.gov/ogc/external-civil-rights-compliance-office-title-vi> (last updated Apr. 22, 2019). However, the Commission of Civil Rights found that "the Office has not adequately adjudicated Title VI complaints" and that it has "lost sight of its mission and priorities." EVALUATION OF THE EPA OFFICE OF CIVIL RIGHTS, DELOITTE CONSULTING LLP 1–2 (2011), <https://assets.documentcloud.org/documents/723416/epa-ocr-audit.pdf>.

¹² Title VIII of the Civil Rights Act (the Fair Housing Act) prohibits discrimination by public and private actors and requires that the Department of Housing and Urban Development "affirmatively further fair housing in all federal programs." 42 U.S.C. §§ 3604–3608 (2017). However, courts recently interpreted the FHA to "apply only to discrimination that occurs in connection with the initial sale or rental of a dwelling." Benjamin A. Schepis, *Making the Fair Housing Act More Fair: Permitting Section 3604(b) to Provide Relief for Post-Occupancy Discrimination in the Provision of Municipal Services—A Historical View*, 41 U. TOL. L. REV. 411, 411 (2010).

Amendment.¹³ However, these efforts have generally failed the intended goal of achieving environmental justice,¹⁴ in part because environmental law tends to look at an agency's procedure in making an environmental determination¹⁵ while civil rights law tends to look at the substance of the issue at hand,¹⁶ thwarting the compatibility of the two regimes.

The National Environmental Policy Act ("NEPA")¹⁷ is the United States' foundational federal environmental law¹⁸ that, in relevant part, aims to guide agencies in making informed decisions regarding environmental matters by "ensur[ing] that [each] agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts."¹⁹ Before NEPA, however, federal agencies were not

¹³ The Equal Protection Clause requires that the government not "deny to any person within its jurisdiction the equal protection of the laws." U.S. CONST. amend. XIV, § 1. However, proving discriminatory intent is particularly challenging in environmental justice cases because, in most cases, discriminatory intent is not present. Wyatt G. Sassman, *Environmental Justice as Civil Rights*, 18 RICH. J.L. & PUB. INT. 441, 451 (2015).

¹⁴ *Id.* at 442.

¹⁵ See *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227–28 (1980) ("[O]nce an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to [e]nsure that the agency has considered the environmental consequences; it cannot 'interject itself within the area of discretion of the executive as to the choice of the action to be taken.'" (quoting *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976))).

¹⁶ Proving discrimination often requires courts to look at the substantive definition of discrimination. See Melissa Hart, *Disparate Impact Discrimination: The Limits of Litigation, the Possibilities for Internal Compliance*, 33 J.C. & U.L. 547, 551 (2007).

¹⁷ 42 U.S.C. § 4321 (2017).

¹⁸ NEPA is often called the "Magna Carta" of federal environmental laws because, like the Magna Carta's intent to protect against monarchical rule, NEPA is intended to render federal projects transparent. Amanda Jahshan, *NEPA: The Magna Carta of Environmental Law*, NRDC (Jul. 26, 2013), <https://www.nrdc.org/experts/amanda-jahshan/nepa-magna-carta-environmental-law>. NEPA requires federal agencies "to assess the environmental effects of their proposed actions prior to making decisions." *National Environmental Policy Act: Welcome*, DEP'T ENERGY, <https://ceq.doe.gov/> (last visited Aug. 26, 2019) [hereinafter *NEPA: Welcome*].

¹⁹ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349–50 (1989); Protection of Environment, 40 C.F.R. § 1500.1(b)–(c) (2018).

required to consider environmental issues—instead, Congress directed federal agencies to conduct “mission” programs to achieve legislative objectives, regardless of their effect on the environment.²⁰

Under NEPA, when federal agencies develop proposals to take a major federal action,²¹ an environmental review must be conducted, which may consist of three different levels of analysis: (1) a categorical exclusion determination, (2) an environmental assessment (“EA”) or finding of no significant impact, and (3) an environmental impact statement (“EIS”).²² A categorical exclusion determination refers to a major federal action which “may be ‘categorically excluded’ from a detailed environmental analysis if the federal action does not[] ‘individually or cumulatively have a significant effect on the human environment.’”²³ If a categorical exclusion does not apply to a proposed action, an agency then may prepare an EA to determine “whether or not a federal action has the potential to cause significant environmental effects.”²⁴ An EA includes, among other topics, a brief discussion of the environmental impacts of the proposed action.²⁵ If the EA indicates that no significant impact is likely to result from the proposed action, the agency may take the proposed action after releasing a finding of no significant impact (“FONSI”). Only when the EA determines that the proposal will significantly affect the quality of the human

²⁰ DANIEL R. MANDELKER ET. AL., *NEPA LAW AND LITIGATION* 2–4 (2019).

²¹ A major federal action is one that significantly affects the environment. § 1508.18. This can be either a direct action such as construction or an indirect action such as permitting. *Id.*

²² *National Environmental Policy Act Review Process*, ENVTL. PROTECTION AGENCY, <https://www.epa.gov/nepa/national-environmental-policy-act-review-process#main-content> (last visited Aug. 26, 2019) [hereinafter *NEPA Review Process*] (summarizing the NEPA review process); see § 1508.18.

²³ *NEPA Review Process supra* note 22 (quoting § 1508.4).

²⁴ *Id.*

²⁵ *Id.*

environment²⁶ will the agency intending to act prepare an EIS.²⁷ An EIS is a detailed document with more rigorous requirements than those for an EA: agencies must explain their purpose and need for the proposed action, provide potential alternatives, describe the environment of the area to be affected by the available alternatives, and include a discussion of the proposed action's direct and indirect environmental effects and their respective significances.²⁸

NEPA does not impose any substantive requirements on federal agencies.²⁹ Instead, it simply exists to ensure a process, aiming to make sure that each agency will have available, and will consider, a carefully detailed compilation of information concerning significant environmental impacts.³⁰ It ensures that the information will then be made available to the public.³¹ After an agency issues a final EIS, environmental and other citizen organizations can attempt to delay or end the project by challenging the agency's EIS process.³² The

²⁶ *Id.*; In the NEPA context, whether a proposal “significantly” affects the quality of the human environment requires a consideration of both “context and intensity” of such proposal, where context looks at the effects on society as a whole, while intensity looks at the severity of the impact. § 1508.27. The human environment includes “the natural and physical environment and the relationship of people with that environment.” § 1508.14. *See also* *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 86 (9th Cir. 2005) (finding that an agency can consider factors to help understand the significance of a project, which include “the unique characteristics of the geographic area[;] . . . whether the action bears some relationship to other actions with individually insignificant but cumulatively significant impacts; the level of uncertainty of the risk and to what degree it involves unique or unknown risks; and whether the action threatens violation of an environmental law.”).

²⁷ *NEPA Review Process*, *supra* note 22.

²⁸ § 1502.1; *see also NEPA Review Process*, *supra* note 22 (summarizing the NEPA review process).

²⁹ *See* *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 333 (2019) (“[I]t is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed—rather than unwise—agency action.”).

³⁰ *Id.*

³¹ *Id.*

³² David J. Scriven-Young, *Eighth Circuit Reaffirms That There Is No Right of Action Under NEPA Prior to Final Agency Action*, PECKAR & ABRAMSON, P.C. (July 10, 2019), <https://www.pecklaw.com/eighth-circuit-reaffirms-that-there-is-no-right-of-action-under-nepa-prior-to-final-agency-action/>.

traditional remedy for plaintiffs in a NEPA case is a court-ordered injunction.³³ Typically, a plaintiff seeking a preliminary injunction must show that irreparable injury is likely unless an injunction is granted.³⁴

The NEPA process encourages federal agencies to make informed environmental decisions before a major federal project is begun.³⁵ Yet the Council on Environmental Quality (“CEQ”)³⁶ has estimated that NEPA analyses conducted by federal agencies produce a categorical exclusion an estimated 95% of the time, an EA less than 5% of the time, and an EIS less than 1% of the time.³⁷ This indicates that, more often than not, agencies do not have to go through the rigorous review requirements of an EIS.³⁸ The decision not to conduct an EIS is reviewed in federal court under the Administrative Procedure Act (“APA”),³⁹ which provides that a reviewing court may hold unlawful and set aside an agency action found to be arbitrary, capricious, an abuse of discretion, otherwise not in accordance with the law, or without observance of procedure

³³ *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 155, 157 (2010).

³⁴ *Id.* at 156–57.

³⁵ *NEPA: Welcome*, *supra* note 18.

³⁶ NEPA established the Council on Environmental Quality (CEQ) within the Executive Office of the President to ensure that Federal agencies meet their obligations under NEPA. CEQ oversees NEPA implementation, principally through issuing guidance and interpreting regulations that implement NEPA’s procedural requirements. CEQ also reviews and approves Federal agency NEPA procedures, approves alternative arrangements for compliance with NEPA for emergencies, and helps to resolve disputes between Federal agencies and with other governmental entities and members of the public.

Id.

³⁷ U.S. GOV’T ACCOUNTABILITY OFF., GAO-14-370, NATIONAL ENVIRONMENTAL POLICY ACT: LITTLE INFORMATION EXISTS ON NEPA ANALYSES 7–9 (2014).

³⁸ *Id.*

³⁹ 5 U.S.C. § 706 (2018).

required by law.⁴⁰ The arbitrary and capricious standard of review⁴¹ is considered appropriate when resolving factual disputes when agencies have substantial expertise.⁴² Courts review this standard narrowly and may not substitute their own judgment for that of the agency.⁴³ In reviewing an EIS, it is the challenger's burden to prove the agency's decision is arbitrary and capricious.⁴⁴

Under NEPA, when preparing an EIS, an agency is "not required to select the course of action that best serves environmental justice, [but is] only [required] to take a 'hard look' at environmental justice issues."⁴⁵ The hard look doctrine is a principle of administrative law⁴⁶ whereby courts must examine the methodology and substance of agency decisions to ensure that they have adequate factual support.⁴⁷ However, it is currently unclear how much data is enough

⁴⁰ *Id.* (The reviewing court shall "(1) compel agency action unlawfully withheld or unreasonably delayed; and (2) hold unlawful and set aside agency action, findings, and conclusions found to be (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . . [or] (D) without observance of procedure required by law.").

⁴¹ *See* Nat. Res. Def. Council, Inc. v. U.S. Env'tl. Prot. Agency, 966 F.2d 1292, 1297 (9th Cir. 1992) (finding that under the arbitrary and capricious standard of the APA, courts must find a "rational connection between the facts found and the choice made" (quoting *Sierra Pac. Indus. v. Lyng*, 866 F.2d 1099, 1105 (9th Cir. 1989))).

⁴² *See, e.g.,* Marsh v. Or. Nat. Res. Council, 490 U.S. 360, 376, 378 (1989); Safari Aviation Inc. v. Garvey, 300 F.3d 1144, 1150 (9th Cir. 2002); *Ninilchik Traditional Council v. United States*, 227 F.3d 1186, 1194 (9th Cir. 2000).

⁴³ *U.S. Postal Serv. v. Gregory*, 534 U.S. 1, 6–7 (2001).

⁴⁴ *Native Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 960 (9th Cir. 2005) (quoting *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982)).

⁴⁵ *Sierra Club v. Fed. Energy Regulatory Comm'n*, 867 F.3d 1357, 1368 (D.C. Cir. 2017) (quoting *Latin Ams. for Social & Econ. Dev. v. Fed. Highway Admin.*, 756 F.3d 447, 475–77 (6th Cir. 2014) (holding that the agency's EIS was sufficient because it discussed the intensity, extent, and duration of the environmental effects of the proposed project on the environmental justice communities, yet suggesting that had the agency completely refused to discuss the demographics of the community, then the agency's EIS would have been deficient)).

⁴⁶ The hard look test was first applied to environmental law by the D.C. Circuit. *Nat. Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972).

⁴⁷ *Greater Bos. Television Corp. v. FCC*, 444 F.2d 841, 851 (D.C. Cir. 1970).

for a NEPA analysis; when an agency should collect more current, or arguably more representative, information; or how an agency should choose and apply appropriate methods and models for evaluating environmental effects.

This Note will propose that, to ensure environmental justice, a disparate impact analysis must be used by the courts instead of a hard look test when evaluating an EIS to clarify four key factors: (1) the data sufficiency; (2) data gaps; (3) stale data; and (4) the scientific integrity of models and methodologies.⁴⁸ This Note begins by introducing the concern that environmental issues disproportionately affect low-income and minority communities, yet environmental justice suits looking to remedy such disparate impacts often fail. Part I examines the history of the hard look test as it pertains to environmental law. Part II explains how the hard look test has evolved to potentially create a “harder look” test but posits that it is unclear whether the hard look test still offers a viable way for courts to analyze environmental issues. Part III explains the history of the disparate impact analysis, especially as it pertains to environmental law. Part IV suggests that judges incorporate a disparate impact analysis such that a modified *harder look* test is created for reviewing EISs. Part V explains how this proposed solution would not create a burdensome addition to the hard look test for agencies because it comports with NEPA’s goal of requiring deliberate agency decision-making. Finally, this Note concludes that a disparate impact analysis should be incorporated into the hard look test as it applies to environmental law to ensure that low-income and minority communities will receive environmental justice.

I. HISTORY OF THE HARD LOOK TEST IN ENVIRONMENTAL LAW

Generally, a federal agency’s decision to take an action with a significant environmental impact is challenged on the grounds that

⁴⁸ See generally MURRAY D. FELDMAN & KRISTIN A. NICHOLS, NEPA’S SCIENTIFIC AND INFORMATION STANDARDS—TAKING THE HARDER LOOK (ROCKY MT. MIN. L. FDN.) (2017), https://www.hollandhart.com/files/66008_RMMLF-NEPA_s-Scientific-and-Information-Standards--Taking.pdf (examining contemporary issues with data sufficiency, data gaps, stale data, and existing methodologies).

the EIS or its methodology was flawed.⁴⁹ When this occurs, courts defer to the agency's choice regarding the proper weight of scientific information and impact assessment determinations, especially if the subject is within the agency's area of expertise.⁵⁰ The role of the court is to ensure that a federal agency has thoroughly examined the relevant factors and provided a reasonable explanation for its actions.⁵¹ The relevant factors a court must ensure an agency has reviewed are whether the agency:

relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.⁵²

Agencies show their review of these factors by considering environmental issues such as noise impacts, visual impacts, or functional impacts.⁵³ However, agencies are afforded broad discretion when examining environmental facts and deciding whether or not they are to be considered in making an EIS.⁵⁴ For a court to review an agency's decision, a court must "steep itself in technical matters sufficiently to determine whether the agency has exercised reasoned discretion."⁵⁵ If it is found that an agency failed to make "a rational connection between the facts found and the

⁴⁹ See *id.* at 6- 5-6- 6.

⁵⁰ See *The Lands Council v. McNair*, 537 F.3d 981, 988 (9th Cir. 2008) ("Lands Council asks this court to act as a panel of scientists that instructs the Forest Service how to validate its hypotheses regarding wildlife viability.").

⁵¹ See *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983).

⁵² *Id.*; see also *McNair*, 537 F.3d at 1002 (holding that the Forest Service "did not fail to conduct a 'full and fair discussion' as NEPA requires" even when the agency failed to discuss two articles brought to the agency's attention by the plaintiff because "they did not raise uncertainties about its methodology.").

⁵³ See *Comm. to Pres. Boomer Lake Park v. U.S. Dep't of Transp.*, 4 F.3d 1543, 1556 (10th Cir. 1993).

⁵⁴ Richard N. Andrews L., *Agency Responses to NEPA: A Comparison and Implications*, 16 NAT. RESOURCES J. 301, 302 (1976).

⁵⁵ *Chemical Mfrs. Ass'n v. Env'tl. Prot. Agency*, 870 F.2d 177, 199 (5th Cir. 1989) (internal quotations and citation omitted).

choice made,” a court cannot uphold an agency’s decision.⁵⁶ However, if an agency takes a “hard look at the environmental consequences of the proposed action, the court will not second-guess the wisdom of the ultimate decision.”⁵⁷ Additionally, “[t]he APA does not allow the court to overturn an agency decision because it disagrees with the decision or with the agency’s conclusions about environmental impacts.”⁵⁸

The hard look doctrine has been applied to NEPA to ensure that each agency reviews the relevant environmental consequences when conducting a major federal action.⁵⁹ The test began applying to environmental law in the early 1970s, as articulated in *Natural Resource Defense Council, Inc. v. Morton*,⁶⁰ which held that, “[s]o long as the officials and agencies have taken the ‘hard look’ at environmental consequences mandated by Congress, the court does not seek to impose unreasonable extremes or to interject itself within the area of discretion of the executive as to the choice of the action to be taken.”⁶¹ For the purposes of this Note, the court’s role begins and ends on a determination of whether the agency took a hard look at the proposed action’s environmental consequences.⁶²

After *Natural Resource Defense Council, Inc.*, the hard look test developed for agencies to examine the critical question of what, if

⁵⁶ *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotations and citation omitted).

⁵⁷ *Utahns for Better Transp. v. U.S. Dep’t of Transp.*, 305 F.3d 1152, 1163 (10th Cir. 2002); *see also* *Ctr. for Biological Diversity v. Dep’t. of Interior*, 623 F.3d 633, 641 (9th Cir. 2010) (holding that the court’s role is to “ensure that the agency has taken a ‘hard look’ at the environmental consequences of its proposed action.” (citation omitted)).

⁵⁸ *River Runners for Wilderness v. Martin*, 593 F.3d 1064, 1070 (9th Cir. 2010).

⁵⁹ *Am. Rivers v. Fed. Energy Regulatory Comm’n*, 895 F.3d 32, 49 (D.C. Cir. 2018).

⁶⁰ *See Nat. Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 837–38 (D.C. Cir. 1972) (questioning the scope of NEPA as it applies to alternatives for oil and gas facilities on a coastal marsh complex).

⁶¹ *Id.* at 838 (internal citations omitted).

⁶² *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976) (quoting *Nat. Res. Def. Council, Inc.*, 458 F.2d at 838).

any, anticipated effects a project will have on the environment,⁶³ requiring under NEPA that an agency “take a hard look at the environmental consequences before taking a major action.”⁶⁴ Under the updated hard look test, an agency’s EIS will pass only if a “well-considered” and “fully informed” analysis took place;⁶⁵ however, this is often seen as an “imprecise exercise.”⁶⁶ Once an agency has taken a hard look at the potential environmental consequences of its actions, the agency is then able to move forward with the action, concluding that other interests outweigh the previously identified environmental costs.⁶⁷

Attempts have been made to evolve the hard look test within the NEPA context into a *harder look* test.⁶⁸ This was first seen in *Ecology Center, Inc. v. Austin*, where the Ninth Circuit held that the Forest Service, the federal agency in question, violated NEPA by using a scientifically unverified hypothesis to conclude that the thinning of an old-growth forest through commercial logging after a fire was necessary for the forest and beneficial to the dependent

⁶³ *Nat. Res. Def. Council, Inc.*, 458 F.2d at 827; see *Save Our Cumberland Mountains v. Kempthorne*, 453 F.3d 334, 341–42 (6th Cir. 2006) (“The company in this instance responded to initial concerns that the agency raised about the application, proposed measures to mitigate the near-term damage to the environment and proposed measures designed to restore the environment to its pre-mining state” and concluded that the short term consequences were minor and the long-term impacts were minimal.).

⁶⁴ *Mayo v. Jarvis*, 177 F. Supp. 3d 91, 107 (D.D.C. 2016) (internal quotations omitted); National Environmental Policy Act of 1969 § 102 (42 U.S.C. § 4332) (2017).

⁶⁵ *Myersville Citizens for a Rural Cmty., Inc. v. Fed. Energy Regulatory Comm’n*, 783 F.3d 1301, 1324–25 (D.C. Cir. 2015) (quoting *Nevada v. Dep’t of Energy*, 457 F.3d 78, 93 (D.C. Cir. 2006)).

⁶⁶ *Am. Rivers v. Fed. Energy Regulatory Comm’n*, 895 F.3d 32, 49 (D.C. Cir. 2018).

⁶⁷ See, e.g., *The Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008), *overruled on other grounds by Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 22–23 (2008); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989); *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983).

⁶⁸ *Amy Collier, Union Neighbors United, Inc. v. Jewell: A Hard Look at Procedural Compliance under NEPA*, 44 *ECOLOGY L.Q.* 527, 534 (2017).

species that lived there.⁶⁹ The Forest Service argued that this treatment was designed to leave most of the old-growth trees while also improving their health, while the plaintiffs challenging the action highlighted that this treatment was misleading and research about it was incomplete.⁷⁰ The court found that the Forest Service would have had to address, in a meaningful way, the scientific uncertainties regarding the treatment of the forest.⁷¹ This case was overruled by *The Lands Council v. McNair*,⁷² where the Ninth Circuit found that *Ecology Center*⁷³ made three key errors: (1) that the court read the holding of precedential case *Lands Council v. Powell*⁷⁴ too broadly; (2) that the court in expecting the Forest Service to address the scientific uncertainties “created a requirement not found in any relevant statute or regulation;”⁷⁵ and (3) that the court ignored well-established law regarding deference provided to agencies and their methodological choices by not providing deference to the Forest Service’s scientific analysis.⁷⁶ The court’s ruling in *McNair*⁷⁷ allows agencies to make environmental decisions with poorly researched science and removes the courts’ role in review of agency decisions.⁷⁸ The Ninth Circuit in *McNair* further

⁶⁹ See *Ecology Ctr., Inc. v. Austin*, 430 F.3d 1057, 1063–65 (9th Cir. 2005), overruled by 537 F.3d 981 (9th Cir. 2008) (“NEPA requires consideration of the potential impact of an action *before* the action takes place.” (internal quotations and citation omitted)).

⁷⁰ *Id.* at 1065.

⁷¹ *Id.*

⁷² *The Lands Council v. McNair*, 537 F.3d 981, 990 (9th Cir. 2008).

⁷³ *Ecology Ctr., Inc.*, 430 F.3d at 1065.

⁷⁴ See *Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005) (“[T]he Final [EIS] should have provided adequate data of the time, type, place, and scale of past timber harvests and should have explained in sufficient detail how different project plans and harvest methods affected the environment. The Forest Service did not do this, and NEPA requires otherwise.”).

⁷⁵ *McNair*, 537 F.3d at 991.

⁷⁶ See *id.* at 992 (“Were we to grant less deference to the agency, we would be ignoring the APA’s arbitrary and capricious standard of review.”).

⁷⁷ *Id.*

⁷⁸ See *id.* at 993 (“Essentially, we assessed the quality and detail of on-site analysis and made ‘fine-grained judgments of its worth.’ It is not our proper role to conduct such an assessment.”).

explained *Ecology Center*'s⁷⁹ errors by stating that the holding in *Powell*⁸⁰ did not require agencies to always verify the scientific methodology employed in making an assessment of environmental impacts and that the holding in *Powell*⁸¹ was limited to the specific facts of that case.⁸² Lastly, the court in *McNair* explained that if the court were to "grant less deference to the agency, [the court] would be ignoring the APA's arbitrary and capricious standard of review" and would instead place substantial requirements on the agency not imposed by NEPA.⁸³ Therefore, the Ninth Circuit in *McNair* found that a court's proper role in reviewing a federal agency's decision under NEPA is to ensure that the agency "made no 'clear error of judgment' [in the creation of the agency's EIS] that would render its action 'arbitrary and capricious.'"⁸⁴ *McNair* stopped the possibility of a court requiring an agency to take a harder look because *McNair* found it was not the court's role to assess the detail and quality of the relevant science.⁸⁵

In 2014, the CEQ clarified the hard look test in a Memorandum for the Heads of Federal Departments and Agencies.⁸⁶ This Memorandum stated that an EIS "should contain sufficient discussion of the relevant issues and opposing viewpoints to enable the decisionmaker to take a 'hard look' as the environmental effects

⁷⁹ See *Ecology Ctr., Inc. v. Austin*, 430 F.3d 1057, 1069–71 (9th Cir. 2005).

⁸⁰ *Lands Council v. Powell*, 395 F.3d 1019, 1035 (9th Cir. 2005).

⁸¹ *Id.*

⁸² See *The Lands Council v. McNair*, 537 F.3d 981, 991 (9th Cir. 2008) ("*Ecology Center* even suggests that such an analysis must be on-site, meaning *in the location of the proposed action*. There, we rejected the Forest Service's argument that its on-the-ground soil analysis was 'sufficiently reliable because it utilized data from areas with ecological characteristics similar to the proposed harvest units.'" (citation omitted)).

⁸³ See *id.* at 992–93.

⁸⁴ *Id.* at 993 (quoting *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 378 (1989)).

⁸⁵ *Id.* at 992.

⁸⁶ COUNCIL ON ENVTL. QUALITY, MEMORANDUM FOR HEADS OF FEDERAL DEPARTMENTS AND AGENCIES 32 (2014), https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_seachable.pdf.

and make a reasoned choice among alternatives.”⁸⁷ This meant that “[t]here should be enough detail to enable those who did not have a part in its compilation to understand and meaningfully consider the factors involved.”⁸⁸ A NEPA review that defers some decisions can still be considered to have involved a hard look at the environmental issues.⁸⁹ “NEPA merely prohibits *uninformed* agency actions, rather than unwise [ones];”⁹⁰ despite this, NEPA does not explain how agencies are supposed to inform themselves.⁹¹ That said, there are other statutes that may impose substantive obligations on federal agencies to review issues of disparate impact.⁹² Thus, by the combination of decisions like that in *McNair*⁹³ and the use of statutes that impose substantive obligations on federal agencies,⁹⁴ a *harder* look test can be created that would help bolster the goals of NEPA by providing minimum benchmarks. Not only would this provide a stricter standard that would comply with NEPA’s intent, but it would also help ensure the environmental justice of low-income and minority communities.⁹⁵

II. APPLICATIONS OF THE HARDER LOOK TEST IN ENVIRONMENTAL LAW

Despite *The Lands Council v. McNair*’s⁹⁶ overruling *Ecology Center, Inc. v. Austin*,⁹⁷ some courts have continued an attempt to

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *See id.* at 33.

⁹⁰ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989) (emphasis added).

⁹¹ Andrews L., *supra* note 54.

⁹² *Robertson*, 490 U.S. at 351.

⁹³ *The Lands Council v. McNair*, 537 F.3d 981, 991 (9th Cir. 2008).

⁹⁴ *See* Elizabeth M. Schneider, *The Changing Shape of Federal Civil Pretrial Practice: The Disparate Impact on Civil Rights and Employment Discrimination Cases*, 158 U. PA. L. REV. 517, 557 (2010) (“Substantive decisions can be ‘disguised as process’ and process decisions can operate as a proxy for substantive impacts.”).

⁹⁵ *See infra* Part I.

⁹⁶ *McNair*, 537 F.3d at 990.

⁹⁷ *Ecology Ctr., Inc. v. Austin*, 430 F.3d 1057, 1064 (9th Cir. 2005).

articulate a harder look test by stating the amount and type of information used within an EIS to be examined by a court.⁹⁸ To illustrate, the federal agency challenged in *Oregon Natural Desert Association v. Jewell*⁹⁹ planned to create a wind energy facility on a privately-owned tract which housed a large sage grouse¹⁰⁰ population that had seen a population decline from forty-five percent to eighty percent since 1950, largely due to habitat loss.¹⁰¹ The agency assumed the birds would migrate away from the subject territory during the winter and analyzed the project prospectively with respect to the absence of the birds. However, the court in *Oregon Natural Desert Association* found that some birds did not migrate and that the agency should have conducted its analysis using the presence of birds rather than basing the analysis on the assumption that the birds would migrate.¹⁰² Therefore, the court found the agency's decision, as based on its final EIS, to be arbitrary and capricious because no surveys were conducted prior to the beginning of the project to determine if the grouse would be present at the project site during the time at issue.¹⁰³ Similarly, the agency in *Great Basin Resource Watch v. Bureau of Land Management* approved a project planning to build facilities on public land despite concerns regarding the analysis of air impacts, water quality impacts, and funding aspects brought to light by plaintiffs and the Environmental Protection Agency.¹⁰⁴ The Ninth Circuit in *Great Basin Reservation Watch* found that the agency violated NEPA because, in the process of assessing the environment's baseline

⁹⁸ *Great Basin Res. Watch v. Bureau of Land Mgmt.*, 844 F.3d 1095, 1099–1100 (9th Cir. 2016); *Or. Nat. Desert Ass'n. v. Jewell*, 840 F.3d 562, 566 (9th Cir. 2016); *Pub. Emps. for Env'tl. Responsibility v. Hopper*, 827 F.3d 1077, 1083 (D.C. Cir. 2016); FELDMAN & NICHOLS, *supra* note 48, at 6–6.

⁹⁹ *Jewell*, 840 F.3d at 566.

¹⁰⁰ A large sage grouse is a species of bird found in the western United States. *Guide to North American Birds*, NAT'L AUDUBON SOC'Y, <https://www.audubon.org/field-guide/bird/greater-sage-grouse> (last visited Aug. 26, 2019).

¹⁰¹ *Jewell*, 840 F.3d at 566.

¹⁰² *Id.* at 569.

¹⁰³ *Id.* at 570.

¹⁰⁴ *Great Basin Res. Watch v. Bureau of Land Mgmt.*, 844 F.3d 1095, 1099–1100 (9th Cir. 2016).

conditions for purposes of the EIS, the bureau assumed baseline-zero pollutants and provided no support for its assumption whatsoever, rendering its analysis inadequate for purposes of an EIS, as NEPA calls for the public to be informed regarding the “underlying environmental data from which a [reviewing agency] expert derived her opinion.”¹⁰⁵

While NEPA provides deference to agencies, the court in *Jewell* stated that, “when undertaking scientific or technical analysis[,] . . . deference does not excuse the [agency] from ensuring the accuracy and scientific integrity of its analysis [A]ny such extrapolation must be based on accurate information and defensible reasoning.”¹⁰⁶ The Ninth Circuit in *Great Basin Resource Watch* took this a step further by stating that the agency’s discussion of cumulative impacts to other resources within the EIS did not comply with NEPA because it did not “quantify or discuss in any detail the effects of other activities” beyond the mining project at issue, like oil and gas development, that would aggregately impact the subject environment’s health.¹⁰⁷ Similarly, the D.C. Circuit in *Public Employees for Environmental Responsibility v. Hopper* held that the agency, in its EIS, failed its duty to take a hard look at every significant aspect of the potential environmental impacts of adding additional off-shore windmills because the agency inadequately considered the predictable consequences of its project when it relied on geophysical and geotechnical surveys that did not include

¹⁰⁵ See *id.* at 1103 (“We might reach a different conclusion had the NDEP official explained *why* an estimate of zero was appropriate, or had the BLM independently scrutinized that estimate and decided that it was reasonable, and then explained why.”); see also *Save Our Cabinets v. U.S. Dep’t of Agric.*, 254 F. Supp. 3d 1241, 1266–67 (D. Mont. 2017), *judgment entered*, No. CV 16-53-M (DWM), 2017 WL 2829681 (D. Mont. June 29, 2017), *dismissed sub nom* (“Because the agency’s choice did not rest on inaccurate information or indefensible reasoning, the use of data from the Little Cherry Creek site was not arbitrary and capricious.”).

¹⁰⁶ *Jewell*, 840 F.3d at 570.

¹⁰⁷ See *Bureau of Land Mgmt.*, 844 F.3d at 1105–06 (9th Cir. 2016) (holding that “[t]he cumulative air impacts portion of the [final EIS] fails to ‘enumerate the environmental effects of [other] projects’ or ‘consider the interaction of multiple activities.’” (quoting *Or. Nat. Res. Council Fund v. Brong*, 492 F.3d 1120, 1133 (9th Cir. 2007))).

sufficient data with regard to the affected seafloor.¹⁰⁸ Therefore, agency deference does not imply complete deference as agencies are still required to ensure some amount of scientific accuracy, or, at least, process.¹⁰⁹

In fact, courts have found that there are instances where little to no deference to an agency is warranted.¹¹⁰ The court in *Resource Investments, Inc. v. U.S. Army Corps of Engineers* found that no deference is warranted when the agency's actions are wholly unsupported by regulations, rulings, or administrative practice.¹¹¹ Limited deference may be warranted if an agency's interpretation of a rule or regulation conflicts with that agency's prior interpretation of that rule or regulation.¹¹² Lastly, the court in *Monex International, Ltd. v. Commodity Futures Trading Commission* found that "judicial deference is not necessarily warranted where courts have experience in the area and are fully competent to decide the issue."¹¹³ Therefore, a court need not always defer to an agency in its determination of environmental impacts of a proposed plan, as the environmental analysis must maintain scientific integrity, accuracy, and must be followed with reasonable decisions based off the information available.¹¹⁴ If a court does not need to defer completely to an agency decision, it may be able to compel additional procedural

¹⁰⁸ *Pub. Emps. for Env'tl. Responsibility v. Hopper*, 827 F.3d 1077, 1083 (D.C. Cir. 2016).

¹⁰⁹ *Jewell*, 840 F.3d at 570.

¹¹⁰ *See, e.g., United States v. Mead Corp.*, 533 U.S. 218, 226–28 (2001) (explaining a continuum of deference owed); *see also Pronsolino v. Nastri*, 291 F.3d 1123, 1131–32 (9th Cir. 2002) (explaining differing levels of deference).

¹¹¹ *Resources Invs., Inc. v. U.S. Army Corps of Eng'rs*, 151 F.3d 1162, 1165 (9th Cir. 1998); *see also Cmty. Hosp. of Monterey Peninsula v. Thompson*, 323 F.3d 782, 791 (9th Cir. 2003) (finding that when an agency has to interpret a policy statement, it is given less deference by the courts).

¹¹² *See Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 928, 933 (9th Cir. 2008); *Young v. Reno*, 114 F.3d 879, 883 (9th Cir. 1997).

¹¹³ *Monex Int'l, Ltd. v. Commodity Futures Trading Comm'n*, 83 F.3d 1130, 1133 (9th Cir. 1996) (internal quotation marks and citation omitted).

¹¹⁴ *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 378 (1989).

requirements under NEPA that will substantively affect the agency's decision.¹¹⁵

III. PREVIOUS APPLICATIONS OF DISPARATE IMPACT THEORY

Low income and minority groups have, for years, suffered disparate environmental impacts.¹¹⁶ As a result, regulations were created through Title VI to ensure that programs that receive federal financial assistance are not conducted in ways that discriminate against individuals on the basis of race, color, or national origin.¹¹⁷ Congress has allowed disparate impact challenges to proceed based solely on proof of discriminatory impact so that discriminatory practices can be fairly challenged in court, as discriminatory motives are often near-impossible to affirmatively prove.¹¹⁸

However, applying the disparate impact theory to environmental issues is more complex than the traditional employment contexts in which it often arises because courts require a control group for purposes of comparison, and “different disparate impacts may be revealed depending on what control population is arbitrarily selected for comparison.”¹¹⁹ Furthermore, it is possible that federal agencies may actually intend to pursue projects in low-income and minority communities in order to bring aggregate benefits, despite the environmental impacts (for example, public transit projects may intend to provide greater access to poor neighborhoods which often have fewer family cars); disparate impact analysis would fall apart, as there would actually be a disparate impact to white and wealthy

¹¹⁵ See *Schneider*, *supra* note 94, at 557 (“Substantive decisions can be ‘disguised as process’ and process decisions can operate as a proxy for substantive impacts.” (citation omitted)).

¹¹⁶ See Jim Erickson, *Targeting Minority, Low-Income Neighborhoods for Hazardous Waste Sites*, U. MICH. NEWS (Jan. 19, 2016), <https://news.umich.edu/targeting-minority-low-income-neighborhoods-for-hazardous-waste-sites/>.

¹¹⁷ *Title VI Legal Manual: Section VII: Proving Discrimination – Disparate Impact*, DEP’T JUSTICE, <https://www.justice.gov/crt/fcs/T6Manual7#I> (last updated Feb. 10, 2017).

¹¹⁸ *Id.*

¹¹⁹ Michael W. Steinberg, *Making Sense of Environmental Justice*, 15 FORUM FOR APPLIED RES. & PUB. POLICY 82, 84 (2000).

communities.¹²⁰ Nevertheless, by having judges act as statisticians in the review of an agency's EIS, disparate impact theory can prohibit facially neutral practices that create discriminatory effects.¹²¹

Noting these inherent difficulties in the environmental law context, courts have narrowed the grounds on which plaintiffs can bring claims for discrimination in environmental suits and have determined that plaintiffs are required to prove discriminatory intent.¹²² However, discriminatory intent is extremely difficult for plaintiffs to prove: not only are officials unlikely to memorialize discriminatory intent, but intent to discriminate, especially on the scale of a federal agency, usually stems from multiple acts and actors as well as historical and political systems and structures.¹²³ Rather than filing suits under Title VI, environmental justice

¹²⁰ *Id.*

¹²¹ See Jennifer L. Peresie, *Toward a Coherent Test for Disparate Impact Discrimination*, 84 IND. L.J. 773, 778–79 (2009) (discussing judges' use of statistics in cases involving disparate impact theory); see also John Ruple & Mark Capone, *NEPA—Substantive Effectiveness Under a Procedural Mandate: Assessment of Oil and Gas EISs in the Mountain West*, 7 GEO. WASH. J. ENERGY & ENVTL. L.J. 39, 50 (2016) (“NEPA compliance does appear to produce final decisions that are substantially less impactful on the environment when compared to initially proposed projects.”).

¹²² See, e.g., *Gonzaga Univ. v. Doe*, 536 U.S. 273, 273 (2002) (announcing a new test that appears to eliminate the possibility that plaintiffs could use 42 U.S.C. § 1983 to enforce these disparate impact regulations); *Alexander v. Sandoval*, 532 U.S. 275, 275 (2001) (holding agency regulations interpreting Title VI to prohibit programs that give rise to mere discriminatory effects are not enforceable by a private right of action).

¹²³ See Tseming Yang, *The Form and Substance of Environmental Justice: The Challenge of Title VI of the Civil Rights Act of 1964 for Environmental Regulation*, 29 B.C. ENVTL. AFF. L. REV. 143, 156 (2002);

[T]he discriminatory intent requirement is premised on the existence of a particular, identifiable bigoted actor or a bigoted act that can be blamed for the discriminatory result. The requirement purposefully ignores the fact that discriminatory outcomes are frequently the result of processes that cannot be traced to any specific actor or act, but are instead the result of institutions and processes that are biased against racial minorities.

Id.

communities have begun to file administrative complaints with the EPA's External Civil Rights Compliance Office ("ECRCO").¹²⁴ However, according to an evaluation of ECRCO by the Center for Public Integrity, the "office hadn't made a formal finding of discrimination in [twenty-two] years, despite having received hundreds of complaints."¹²⁵ While ECRCO has rejected complaints for procedural reasons, such as being outside of ECRCO's jurisdiction, the agency's inaction is, in essence, a denial of discrimination, or at the very least a hindrance to its remedy.¹²⁶

Neither disparate impact claims nor administrative complaints filed with ECRCO have prevailed in discrimination suits because of the ways courts narrowly construe Title VI in the environmental law context and because of ECRCO's procedural delays.¹²⁷ It is possible to include a disparate impact analysis within the NEPA process

¹²⁴ Albert Huang, *Environmental Justice and Title VI of the Civil Rights Act: A Critical Crossroads*, AM. BAR ASS'N (2012), https://www.americanbar.org/publications/trends/2011_12/march_april/environmental_justice_title_vi_civil_rights_act/. The External Civil Rights Compliance Office ("ECRCO") was known as the Office of Civil Rights before December 2016. *External Civil Rights Compliance Office (Title VI)*, *supra* note 11.

¹²⁵ Talia Buford, *EPA Works to Remake Troubled Office of Civil Rights*, CTR. FOR PUB. INTEGRITY (Jan. 20, 2017), <https://www.publicintegrity.org/2017/01/20/20604/epa-works-remake-troubled-office-civil-rights>.

¹²⁶ Kristen Lombardi et al., *Environmental Racism Persists, and the EPA Is One Reason Why*, CTR. FOR PUB. INTEGRITY (Sept. 4, 2015), <https://publicintegrity.org/environment/environmental-racism-persists-and-the-epa-is-one-reason-why/>; *see also* *Rosemere Neighborhood Ass'n v. U.S. Env'tl. Prot. Agency*, 581 F.3d 1169, 1175 (9th Cir. 2009) ("[D]iscovery has shown that the EPA failed to process a single complaint from 2006 or 2007 in accordance with its regulatory deadlines."); *Californians for Renewable Energy v. U.S. Env'tl. Prot. Agency*, No. C 15-3292 (SBA), 2018 WL 1586211, at *15 (N.D. Cal. Mar. 30, 2018) ("It is well documented that the EPA has been sued repeatedly for failing to investigate Title VI complaints in a timely manner.").

¹²⁷ *See Alexander v. Sandoval*, 532 U.S. 275, 275 (2001); *Rosemere Neighborhood Ass'n*, 581 F.3d at 1175 (The court found that the "isolated instance of untimeliness" has since bloomed into a consistent pattern of delay by the EPA. [The Plaintiff] has twice encountered that pattern whereby it files a complaint, hears nothing for months, and then only after filing a lawsuit does the EPA respond."); *Californians for Renewable Energy*, 2018 WL 1586211, at *15 ("The EPA often takes years to act on a complaint—and even then, acts only after a lawsuit has been filed.").

because agencies are required to “[r]igorously explore and objectively evaluate” impacts that will be regulated further under environmental laws.¹²⁸ Therefore, to guarantee that discrimination is taken into consideration as intended by Executive Order 12898, courts must hold agencies accountable throughout the NEPA process by ensuring agencies use a disparate impact analysis¹²⁹ premised on discriminatory impact when making environmental decisions.

IV. AGENCIES SHOULD INCLUDE A DISPARATE IMPACT REPORT IN ENVIRONMENTAL IMPACT STATEMENTS TO BOLSTER DATA AND SCIENTIFIC INTEGRITY

There is a basic distinction between challenging the adequacy of an EIS and challenging the promulgating agency’s decision on its merits; the factors discussed below are procedural issues critical to the success of the adequacy of an EIS rather than its merits.¹³⁰ While it may seem that the decision in *The Lands Council v. McNair* rendered a harder look test no longer viable because it found it was not the court’s role to determine the scientific quality used when forming an EIS,¹³¹ *Marsh v. Oregon Natural Resources Council* found that a court’s proper role is controlled by the “arbitrary and capricious” standard under section 706(2)(A) of the APA.¹³² Despite *McNair*,¹³³ courts in the Ninth Circuit and elsewhere have continued to articulate a “harder look” standard that requires agencies to provide quality and current science, and they have explored how agencies should discuss elements of EISs including data sufficiency, data gaps, stale data, and the scientific integrity of models and

¹²⁸ Protection of Environment, 40 C.F.R. § 1502.14 (2018).

¹²⁹ *Title VI Legal Manual: Section VII: Proving Discrimination – Disparate Impact*, *supra* note 117.

¹³⁰ See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 333 (1989) (“[I]t is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed—rather than unwise—agency action.”).

¹³¹ *The Lands Council v. McNair*, 537 F.3d 981, 992 (9th Cir. 2008).

¹³² *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 376 (1989).

¹³³ See *McNair*, 537 F.3d at 992.

methodologies used in the creation of impact statements.¹³⁴ To remedy the disproportionate harms that federal agency projects have on low-income and minority communities, courts need to modify the hard look doctrine with the disparate impact theory under Title VI. This way, facially neutral environmental policies may be considered discriminatory because of their disparate effects, regardless of underlying intent.

The court in *Public Employees for Environmental Responsibility v. Hopper* found that the EIS conducted by the U.S. Bureau of Ocean Energy Management failed to take a “hard look” at the proposed project’s environmental impact because the agency’s initial decision to offer a lease for the construction of new off-shore windmills did not include any additional geophysical surveys that would review the consequences of the action.¹³⁵ The D.C. Circuit in *Hopper* held that, while a federal agency is not required to be “clairvoyant,” it must “consider the predictable consequences of [its] decision.”¹³⁶ Building on *Hopper*, the D.C. Circuit in *Ogala Sioux Tribe v. U.S. Nuclear Regulatory Commission* noted that the following environmental effects must be assessed: “aesthetic, historic, cultural, economic, social, [and] health.”¹³⁷ Yet, both before and after *McNair*,¹³⁸ courts and the CEQ have remained silent as to exactly how agencies are supposed to assess this information.¹³⁹ The court in *McNair* specifically stated that there is “no legal basis” to require an agency to conduct any specific type of test to better understand the environmental consequences of a proposed

¹³⁴ FELDMAN & NICHOLS, *supra* note 48; *see, e.g.*, Great Basin Res. Watch v. Bureau of Land Mgmt., 844 F.3d 1095, 1103–04 (9th Cir. 2016); Or. Nat. Desert Ass’n v. Jewell, 840 F.3d 562, 566 (9th Cir. 2016); Pub. Emps. for Envtl. Responsibility v. Hopper, 827 F.3d 1077, 1083 (D.C. Cir. 2016).

¹³⁵ *Pub. Emps. for Envtl. Responsibility*, 827 F.3d at 1083.

¹³⁶ *Id.*

¹³⁷ *Ogala Sioux Tribe v. U.S. Nuclear Regulatory Comm’n*, 896 F.3d 520, 530 (D.C. Cir. 2018) (quoting Protection of Environment, 40 C.F.R. § 1508.8(b) (2018)).

¹³⁸ *The Lands Council v. McNair*, 537 F.3d 981, 991 (9th Cir. 2008).

¹³⁹ COUNCIL ON ENVTL. QUALITY, *supra* note 86, at n.44; *see, e.g.*, Sierra Club v. Fed. Energy Regulatory Comm’n, 867 F.3d 1357, 1367 (D.C. Cir. 2017); Nat. Res. Def. Council, Inc. v. Morton, 458 F.2d 827, 838 (D.C. Cir. 1972).

project.¹⁴⁰ While *McNair* frames this as a substantive requirement which “cannot be derived from the procedural parameters of NEPA,”¹⁴¹ a court cannot adequately assess whether an agency has considered “accurate information and defensible reasoning” without direction.¹⁴² Including an analysis in the EIS regarding the disparate impacts of a proposed project would be effective in showing agencies the potential consequences stemming from their environmental decisions because they would have statistical evidence regarding how their actions would affect communities in disproportionate ways.¹⁴³

A court’s deference to agency decision-making can have grave consequences when viewed through a disparate impact lens, especially considering that courts rely on an agency’s determination when there is a “high level of technical expertise” involved, and they will be “most deferential” when reviewing scientific judgments and technical analyses within the “agency’s expertise.”¹⁴⁴ However, a determination of how a particular scientific judgment or technical analysis affects the civil rights of low-income and minority groups is not the same as an analysis of the science and technical skill that agencies use when making their decisions.¹⁴⁵ While *McNair* found that the APA’s arbitrary and capricious standard of review would be effectively passed over if agencies were no longer privileged by a court’s deference,¹⁴⁶ a disparate impact claim is not reviewed by the

¹⁴⁰ See *McNair*, 537 F.3d at 992.

¹⁴¹ *Id.* (citation omitted).

¹⁴² *Or. Nat. Desert Ass’n v. Jewell*, 840 F.3d 562, 570 (9th Cir. 2016).

¹⁴³ U.S. CONST. amend. XIV, § 1; 42 U.S.C. § 2000d (2017); 42 U.S.C. § 3604 (2018).

¹⁴⁴ *McNair*, 537 F.3d at 993–94.

¹⁴⁵ See *League of Wild. Defs./Blue Mountains Biodiversity Project v. Connaughton*, 752 F.3d 755, 763 (9th Cir. 2014) (“In some contexts, NEPA’s ‘hard look’ standard requires agencies to conduct new scientific studies in order to ‘full[ly] and fair[ly]’ analyze the impacts of a particular project.” (citation omitted)); *cf.* *Latin Ams. for Soc. & Econ. Dev. v. Adm’r of Fed. Highway Admin.*, 858 F. Supp. 2d 839, 861 (E.D. Mich. 2012), *aff’d*, 756 F.3d 447 (6th Cir. 2014) (finding that the administrator’s highway construction plan, which disproportionately affected low-income and minority communities, was not arbitrary and capricious because alternatives were considered and a mitigation plan was established).

¹⁴⁶ *McNair*, 537 F.3d at 992.

arbitrary and capricious standard, and courts have determined disparate impact cases without deferring to agencies.¹⁴⁷ However, as seen in *Hopper*, courts have the power to require agencies to use sufficient data, fill data gaps, not use stale data, and ensure the scientific integrity of models and methodologies.¹⁴⁸ Therefore, courts can, and should, use a disparate impact analysis to determine what qualifies as proper data and scientific integrity for an agency's EIS.

A. Sufficient Data

The Supreme Court in *Alexander v. Sandoval* closed the window for private individuals to bring environmental justice claims pursuant to Title VI, and by extension disparate impact claims, because the Court found that Congress only intended Title VI to include a private remedy.¹⁴⁹ However, under NEPA, agencies are still required to determine how to properly consider "accurate information and defensible reasoning" within an EIS to not be considered arbitrary or capricious.¹⁵⁰ As Rachael Moshman and John Hardenbergh discuss in *The Color of Katrina: A Proposal to Allow Disparate Impact Environmental Claims*, to apply a disparate impact theory to environmental issues, courts would need to meet

¹⁴⁷ See also *Smith v. City of Jackson*, 544 U.S. 228, 239 (2005) (finding that the Age Discrimination in Employment Act authorized recovery for disparate impact claims, declining to follow the Department of Labor's interpretation of the Act); *Jones v. City of Bos.*, 752 F.3d 38, 52 (1st Cir. 2014) ("The [agency's] rule itself has some practical utility. There is simply nothing in that utility, however, to justify affording decisive weight to the rule to negate or establish proof of disparate impact in a Title VII case.").

¹⁴⁸ *Great Basin Res. Watch v. Bureau of Land Mgmt.*, 844 F.3d 1095, 1105 (9th Cir. 2016); *Or. Nat. Desert Ass'n v. Jewell*, 840 F.3d 562, 570 (9th Cir. 2016); *Pub. Emps. for Env'tl. Responsibility v. Hopper*, 827 F.3d 1077, 1083 (D.C. Cir. 2016).

¹⁴⁹ *Alexander v. Sandoval*, 532 U.S. 275, 275–76 (2001).

¹⁵⁰ *Jewell*, 840 F.3d at 570; accord *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 333 (1989) ("[I]t is well settled that NEPA itself does not impose substantive duties mandating particular results, but simply prescribes the necessary process for preventing uninformed—rather than unwise—agency action.").

threshold requirements.¹⁵¹ First, a court should determine if a major federal action had a disparate adverse impact on a racial minority or low-income community.¹⁵² Second, it should be determined whether the person(s) affected is a member of the racial minority group or low-income community affected.¹⁵³ If these two elements are proven, the burden should shift to the federal agency to prove that “the decision was justified by environmental necessity or other compelling governmental interest.”¹⁵⁴

If a court were to consistently review an EIS for disparate adverse impacts, agencies would, in turn, be required to put the disparate impact-relevant information within the EIS such that the EIS would not be considered arbitrary or capricious.¹⁵⁵ Agencies would determine whether major federal actions have a disparate adverse impact on a racial minority or low-income community.¹⁵⁶ Then, if the EIS were challenged, a court would review for scientific accuracy and reasonable sources.¹⁵⁷ When plaintiffs seek preliminary injunctive relief, as typical in a NEPA case,¹⁵⁸ courts should conduct a balancing test—and considering that there is no adequate remedy at law, the balance of equities favors the moving party and the public interest.¹⁵⁹ However, NEPA does not specify as to how such considerations should be pursued, as there are concerns that issues related to disparate impact additions would be considered substantive rather than procedural.¹⁶⁰

¹⁵¹ Rachael Moshman & John Hardenbergh, *The Color of Katrina: A Proposal to Allow Disparate Impact Environmental Claims*, 6 SUSTAINABLE DEV. L. & POL’Y 15, 15–16 (2006).

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 16.

¹⁵⁷ *Id.*

¹⁵⁸ *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 155, 157 (2010).

¹⁵⁹ *Crutchfield v. U.S. Army Corps of Eng’rs*, 192 F. Supp. 2d 444, 456 (E.D. Va. 2001).

¹⁶⁰ *See League of Wilderness Defs./Blue Mountains Biodiversity Project v. Connaughton*, 752 F.3d 755, 763 (9th Cir. 2014) (“In some contexts, NEPA’s ‘hard look’ standard requires agencies to conduct new scientific studies in order to ‘full[y] and fair[ly]’ analyze the impacts of a particular project.” (citation omitted)).

To integrate a disparate impact theory into the planning and review of federal agency projects, agencies and reviewing courts would need to determine the need for statistical evidence and review the relevant comparator population.¹⁶¹ The legally relevant population base refers to the “persons subject to the challenged . . . practice.”¹⁶² Agencies and reviewing courts should begin their review of the EIS by asking whether projects are environmentally appropriate with regard to “the subset of the population that is affected by the disputed decision.”¹⁶³ This is because the ultimate issue is “whether the policy has a discriminatory effect within the population it affects,” an analysis which ideally would include comparison groups, but those that do not extend beyond the total impacted group.¹⁶⁴ This would likely fulfill the President’s intent expressed through Executive Order 12898¹⁶⁵ because agencies would take environmental justice into greater consideration.

Next, to complete the agency’s EIS review, courts should confirm whether those who are disparately adversely affected belong to a racial minority group or low-income community. In order to do so, courts could follow the Department of Justice’s suggestion that, “[w]hen, and only when, an agency can reasonably conclude that everyone in the jurisdiction is potentially affected, investigating agencies can rely on . . . disparate impact cases to support using an entire jurisdiction as the relevant population base.”¹⁶⁶ The Supreme Court has clarified that federal agencies have significant discretion when determining disparate impact

¹⁶¹ *Title VI Legal Manual: Section VII: Proving Discrimination – Disparate Impact*, *supra* note 117.

¹⁶² *Carpenter v. Boeing Co.*, 456 F.3d 1183, 1196 (10th Cir. 2006).

¹⁶³ *Hous. Inv’rs, Inc. v. City of Clanton*, 68 F. Supp. 2d 1287, 1299 (M.D. Ala. 1999).

¹⁶⁴ *Title VI Legal Manual: Section VII: Proving Discrimination – Disparate Impact*, *supra* note 117.

¹⁶⁵ Exec. Order No. 12,898, *supra* note 4.

¹⁶⁶ While agencies and reviewing courts could use general population data to understand the make-up of the communities affected, courts have rejected using this type of data when the disparate impact claim challenges a more focused policy. *Title VI Legal Manual: Section VII: Proving Discrimination – Disparate Impact*, *supra* note 117.

standards.¹⁶⁷ Therefore, by reviewing an EIS with a disparate impact analysis, agencies would have a clearer understanding of what is required of them, provide fuller data to the public, and make better-informed project decisions.

B. Data Gaps

When evaluating reasonably foreseeable significant adverse effects in projects in the context of an EIS, agencies must address incomplete or insufficient information.¹⁶⁸ Courts often apply a “rule of reason” and decline to second-guess an agency’s choice to omit information when an agency omits non-essential information in an EIS.¹⁶⁹ If impacts are uncertain, information is lacking, and the agency discusses potential mitigation measures, then courts will still uphold an agency’s NEPA analysis.¹⁷⁰ However, when an agency incorrectly concludes that data is not relevant to its NEPA analysis, then courts have found that the agency action may be set aside.¹⁷¹ Additionally, courts have gone further to state that agencies violate NEPA when they fail to disclose relevant incomplete information.¹⁷²

Including a disparate impact reporting requirement for agencies within NEPA would provide greater clarity to decisionmakers considering federal agency projects and to reviewing courts. Through the use of statistical significance tests, agencies can avoid falling back on a claim of insufficient information as such tests can

¹⁶⁷ See *Alexander v. Choate*, 469 U.S. 287, 293–94 (1985) (“Title VI had delegated to the agencies in the first instance the complex determination of what sorts of disparate impact upon minorities constituted sufficiently significant social problems, and were readily enough remediable, to warrant altering the practices of the federal grantees that had produced those impacts.”).

¹⁶⁸ Protection of Environment, 40 C.F.R. § 1502.22 (2018).

¹⁶⁹ *Webster v. Dep’t of Agric.*, 685 F.3d 411, 425–26 (4th Cir. 2012); see also *Habitat Educ. Ctr. v. U.S. Forest Serv.*, 673 F.3d 518, 531 (7th Cir. 2012) (“[C]ompliance with § 1502.22 is subject to the ‘rule of reason.’” (quoting § 1502.22(b))).

¹⁷⁰ See *Backcountry Against Dumps v. Jewell*, 674 F. App’x 657, 661 (9th Cir. 2017); *Okanogan Highlands All. v. Williams*, 236 F.3d 468, 477 (9th Cir. 2000).

¹⁷¹ *Mont. Wilderness Ass’n v. McAllister*, 666 F.3d 549, 554–55 (9th Cir. 2011).

¹⁷² *Id.* at 559–60.

show disparate impact.¹⁷³ When conducting a test of statistical significance concerning disparate impact, researchers “commonly use the ninety-five percent confidence level, which is also termed the five percent (0.05) level of significance.”¹⁷⁴ A statistical significance test allows a court to determine with sufficient confidence that an adversely affected party was disparately discriminated against because the court can be ninety-five percent certain that a disparity in the pool reflects a real disparity in practice.¹⁷⁵ While a statistical significance test does not provide practical significance,¹⁷⁶ disparate impact analysis includes an additional test—the four-fifths test¹⁷⁷—which can determine whether a disparity is sufficiently large and critical to show disparate impact of a federal project.¹⁷⁸ Furthermore, if plaintiffs can explain the significance of missing information within an EIS, and the consequentiality of the omission were to be readily available to the reviewing court, the “rule of reason” may no longer apply.¹⁷⁹ Therefore, if agencies include disparate impact analyses and courts review such analyses, courts would address concerns regarding insufficient data because disparate impact can be evaluated to a statistically significant degree.

Data gaps also may refer to missing discussions regarding “natural resources” as well as “cultural, economic, social, or health”

¹⁷³ Peresie, *supra* note 121, at 785.

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at 786.

¹⁷⁶ Statistical significance quantifies if a result is likely due to chance while practical significance looks at whether the difference is large enough to be important for businesses. Amy Gallo, *A Refresher on Statistical Significance*, HARV. BUS. REV. (Feb. 16, 2016), <https://hbr.org/2016/02/a-refresher-on-statistical-significance>.

¹⁷⁷ The four-fifths rule explains that:

A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.

Judicial Administration, 28 C.F.R. § 50.14(4)(D) (2019).

¹⁷⁸ Peresie, *supra* note 121, at 777–78.

¹⁷⁹ *Webster v. Dep’t of Agric.*, 685 F.3d 411, 426 (4th Cir. 2012).

effects as required by NEPA.¹⁸⁰ Often times it is rather unclear how human actions (and thus agency proposals) will affect the human environment.¹⁸¹ Disparate impact theory allows for data gaps and uses statistical analysis “administered in a scientifically reliable manner by experts without attorney involvement.”¹⁸² However, there is no one rule that combats missing information in disparate impact cases, as judges have dealt with data gaps on a case-by-case basis.¹⁸³ The American Bar Association recommends that the best way to deal with missing data for disparate impact cases is:

to determine how important the missing data is likely to be, how defensible the use of a proxy would be, whether underlying paper information is likely to be reasonably complete and, if not, is likely not to be systematically skewed, and the cost of inputting the data from the paper records.¹⁸⁴

Therefore, just as disparate impact theory creates ways to address data gaps, it can supplement an agency’s EA and EIS so that low-income and minority communities can be considered, as can be the effects projects have on them specifically.

C. Stale Data

The Ninth Circuit has previously stated that using non-current scientific data is not a NEPA violation when there is no relevant

¹⁸⁰ Protection of Environment, 40 C.F.R. § 1508.8 (2018).

¹⁸¹ Brian Palmer, *Determining the Environmental Impact of a Product is a Complex Process*, WASH. POST (Feb. 27, 2012), https://www.washingtonpost.com/national/health-science/determining-the-environmental-impact-of-a-product-is-a-complex-process/2012/02/07/gIQA0APSeR_story.html?utm_term=.ba195dc1e5ff.

¹⁸² MICHAEL D. LIEDER, HOT ISSUES CONCERNING USE OF STATISTICAL EVIDENCE IN EMPLOYMENT DISCRIMINATION CLASS ACTION LITIGATION 7 (2009) https://www.americanbar.org/content/dam/aba/administrative/labor_law/meeting_s/2009/ac2009/103.pdf.

¹⁸³ *Id.*; see also *Smith v. Xerox Corp.*, 196 F.3d 358, 365–66 (2d Cir. 1999), *overruled on unrelated grounds by Meacham v. Knolls Atomic Power Lab.*, 461 F.3d 134, 141 (2d Cir. 2006) (Courts have considered and used both the four-fifths rule and standard deviation calculations to determine whether a disparate impact calculation’s results are sufficient to establish disparate impact.).

¹⁸⁴ LIEDER, *supra* note 182.

recent scientific data.¹⁸⁵ However, the Ninth Circuit has noted that reliance on stale or outdated data is considered arbitrary and capricious, even when there is no relevant recent scientific data.¹⁸⁶ Therefore, an agency can violate NEPA when it “fail[s] to properly update the data with additional studies and surveys.”¹⁸⁷

The statistical significance test in a disparate impact theory context would still be subject to stale or outdated statistics,¹⁸⁸ but this does not mean that the test would automatically be excluded from use. Understanding how the data is analyzed and “apply[ing] that information to prevent cognitive mistakes” could resolve this uncertainty.¹⁸⁹ Courts are well versed in applying statistical significance tests to disparate impact theory claims in civil rights contexts; transferring that process to an environmental claim would not only be simple, but just.¹⁹⁰

Additionally, under the Obama Administration, a working group was created to examine how Big Data¹⁹¹ would be able to solve discrimination regarding access to credit, higher education, employment, and criminal justice.¹⁹² The working group identified outdated information for civil rights issues within those four areas.¹⁹³ “The decision to use certain inputs and not others can result

¹⁸⁵ League of Wilderness Defs./Blue Mountains Biodiversity Project v. Connaughton, 752 F.3d 755, 763 (9th Cir. 2014).

¹⁸⁶ N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1085–86 (9th Cir. 2011).

¹⁸⁷ *Id.* at 1086.

¹⁸⁸ Jeff Leek et al., *Five Ways to Fix Statistics*, NATURE (Nov. 28, 2017), <https://www.nature.com/articles/d41586-017-07522-z>.

¹⁸⁹ *Id.*

¹⁹⁰ Smith v. Xerox Corp., 196 F.3d 358, 366 (2d Cir. 1999); Strand v. Interlachen Country Club, No. C0-01-1826 (HSC), 2002 WL 1365637, at *6–7 (Minn. Ct. App. June 25, 2002); Kohn v. City of Minneapolis Fire Dep’t, 583 N.W.2d 7, 13 (Minn. Ct. App. 1998).

¹⁹¹ Big Data refers to large data sets that are analyzed to reveal patterns or trends, often relating to human behavior. EXEC. OFFICE OF THE PRESIDENT, BIG DATA: A REPORT ON ALGORITHMIC SYSTEMS, OPPORTUNITY, AND CIVIL RIGHTS 8 (2016), https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/2016_0504_data_discrimination.pdf.

¹⁹² *Id.* at 10.

¹⁹³ *Id.*

in discriminatory outputs,”¹⁹⁴ and such is particularly true regarding access to high environmental standards such as clean air.¹⁹⁵ Use of Big Data (as suggested by the working group) compiled with the public outreach portion of NEPA would likely help resolve issues with stale or outdated data.¹⁹⁶

D. *Scientific Integrity of Models and Methodologies*

When conducting an EIS, agencies have a “duty to ensure the ‘scientific integrity’ of the [EIS’s] discussions and analysis.”¹⁹⁷ Agencies must identify the methodologies used along with the sources relied on for conclusions in an EIS.¹⁹⁸ While courts are unlikely to overturn agency decisions, they do scrutinize the technical aspects of their scientific integrity and methodology.¹⁹⁹ Courts are deferential to an agency’s choices as long as the agency shows it has performed a “requisite investigation” of the proposed environmental impact.²⁰⁰ A “requisite investigation” is interpreted

¹⁹⁴ *Id.*

¹⁹⁵ See ALEX KARNER ET AL., TRANSPORTATION AND ENVIRONMENTAL JUSTICE: HISTORY AND EMERGING PRACTICE 8 (2017), https://www.researchgate.net/publication/325540110_Transportation_and_Environmental_Justice_History_and_Emerging_Practice.

¹⁹⁶ See *id.*;

A promising way forward can be found in emerging community-based responses to environmental injustice that are founded on the principle of achieving meaningful public participation in the transportation planning process Although this type of meaningful participation is not a panacea for all transportation injustice . . . it has generated promising and concrete wins in several planning processes and related to specific projects.

Id.

¹⁹⁷ *Save the Peaks Coal. v. U.S. Forest Serv.*, 669 F.3d 1025, 1037–38 (9th Cir. 2015).

¹⁹⁸ Protection of Environment, 40 C.F.R. § 1502.24 (2018).

¹⁹⁹ *Native Ecosystems Council v. Weldon*, 697 F.3d 1043, 1049–50 (9th Cir. 2012); *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1080 (9th Cir. 2011); *Greater Yellowstone Coal. v. Lewis*, 628 F.3d 1143, 1150 (9th Cir. 2010).

²⁰⁰ *Native Ecosystems Council*, 697 F.3d at 1052; *N. Plains Res. Council*, 668 F.3d at 1080; *Greater Yellowstone Coal.*, 628 F.3d at 1150.

as conducting a “thorough review of extensive modeling studies” and “ask[ing] an outside consultant to evaluate [the critic’s] concerns.”²⁰¹ Conversely, agencies violate NEPA if they fail to discuss the relevant shortcomings of the selected methodology in the analysis.²⁰²

Using a disparate impact theory would require agencies and reviewing courts to look at environmental discrimination through a statistical significance test.²⁰³ This would allow agencies and courts to adequately address the adverse disparate impact of low-income and minority communities²⁰⁴ while maintaining the “professional integrity” necessary for compliance with NEPA.²⁰⁵ While it has been argued that statistical significance tests are no longer as relevant as they once were,²⁰⁶ statistical significance tests are “useful . . . when [the] effects are large and [can] vary little under the conditions being studied.”²⁰⁷ The disparate impact on low-income or minority communities caused by federal programs can be very large and may not vary drastically.²⁰⁸ Additionally, courts and agencies still use statistical significance tests to assist in the determination of both environmental claims²⁰⁹ and disparate impact

²⁰¹ See *Greater Yellowstone Coal.*, 628 F.3d at 1150.

²⁰² *Native Vill. of Point Hope v. Jewell*, 740 F.3d 489, 503 (9th Cir. 2014); see also *Barnes v. U.S. Dep’t of Transp.*, 655 F.3d 1124, 1139 (9th Cir. 2011) (holding that the agency’s EA was sufficient because the discussion of climate change in terms of percentages was adequate to show greenhouse gas effects, despite not being specific to the locale at issue, because climate change is a global issue).

²⁰³ *Supra* Section IV.B.

²⁰⁴ Peresie, *supra* note 121, at 777.

²⁰⁵ Protection of Environment, 40 C.F.R. § 1502.24 (2018).

²⁰⁶ *How Significant is Statistical Significance?*, ENAGO ACAD. <https://www.enago.com/academy/how-significant-is-statistical-significance/> (last updated May 21, 2018).

²⁰⁷ Leek et al., *supra* note 188.

²⁰⁸ Willie A. Gunn, *Environmental Justice: Use of Race Conscious Remedies*, 22 OHIO N.U. L. REV. 1315, 1321 (1996).

²⁰⁹ See *San Juan Citizens Alliance v. U.S. Bureau of Land Mgmt.*, 326 F. Supp. 3d 1227, 1248 (D.N.M. 2018) (discussing statistical significance regarding climate change).

claims.²¹⁰ Therefore, if agencies and reviewing courts implement a disparate impact theory into NEPA, the statistical significance test would both be consistent with and maintain the scientific integrity required by NEPA.

V. A HARDER LOOK TEST IS NOT BURDENSOME TO AGENCIES
BECAUSE NEPA'S OBJECTIVE IS TO FOSTER CAREFUL AND
OPEN AGENCY DECISION-MAKING

A modified “hard look” test will not create an inefficient or excessively burdensome test for agencies during the NEPA process.²¹¹ Environmental law often creates the opportunity for lengthy, bureaucratic, seemingly inefficient, and burdensome tests, as seen with the Clean Water Act²¹² and the Clean Air Act,²¹³ to serve a critical end: protection against environmental hazards.²¹⁴ NEPA is no different. This, in part, is due to the fact that the original objective of NEPA was to require more deliberate agency decision-making and create more opportunities for public debate and discussion in response to a concern that federal agencies failed to take the time to consider appropriate alternatives to their proposals.²¹⁵ “Thus, complaints about the delays produced by NEPA may simply reflect disagreement with NEPA’s goal of fostering

²¹⁰ See *Frappied v. Affinity Gaming Black Hawk, LLC*, No. 17-CV-01294 (RM) (NYW), 2018 WL 3093326, at *4–5 (D. Colo. June 22, 2018) (holding that because plaintiffs failed to offer any statistically significant evidence, their disparate impact claim failed).

²¹¹ *The Lands Council v. McNair*, 537 F.3d 981, 1001 (9th Cir. 2008) (“[T]o require the [agency] to affirmatively present every uncertainty in its EIS would be an onerous requirement, given that experts in every scientific field routinely disagree; such a requirement might inadvertently prevent the [agency] from acting due to the burden it would impose.”).

²¹² 33 U.S.C. § 1251 (2017).

²¹³ 42 U.S.C. § 7401 (2017).

²¹⁴ Richard L. Revesz & Jack Lienke, *The Tragic Flaw of the Clean Air Act*, REG. REV. (May 17, 2016), <https://www.theregreview.org/2016/05/17/revesz-lienke-tragic-flaw-clean-air-act/>.

²¹⁵ *U.S. Cong. House. Committee on Resources: Oversight Hearing on NEPA: Lessons Learned and Next Steps*, 109th Cong. 1 (2005) (statement of Robert G. Dreher, Georgetown University Law Center).

more careful, and more open, federal decision-making.”²¹⁶ Additionally, according to studies by the Federal Highway Administration, environmental reviews take up a quarter of the total time dedicated to completing a major highway project.²¹⁷ As such, environmental reviews do not obstruct an agency from the completion of a major federal action by causing delays or imposing excessive cost.²¹⁸ Significant delays, though a subject of frequent complaint, often come about because of funding deficits, subordinated priority, and community disagreement, not necessarily because of the time taken by environmental reviews.²¹⁹ The NEPA process integrates a wide range of planning and review requirements that may be seen as resulting in lengthy delays to the outside observer, but there is no evidence that NEPA burdens agencies beyond Congress’s original intention.²²⁰

There is a perceived tension between environmental regulation and competitive business,²²¹ but it is established that “well-designed environmental regulation” can lead to more innovation and the enhancement of competition.²²² While the definition of “well-designed environmental regulation” is unclear, such regulation ideally not only protects the environment, but also enhances profits

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ *Id.*

²²⁰ *Id.*

²²¹ See Ledyard King, *Back in Power, Democrats Want Answers on Administration’s Environmental Decisions*, USA TODAY (Nov. 8, 2018), <https://www.usatoday.com/story/news/politics/elections/2018/11/08/election-results-2018-democrats-vow-rigorous-environmental-oversight/1918292002/> (“We want crystal clean water, we want beautiful perfect air At the same time, we don’t want to put ourselves at a disadvantage to other countries who are very competitive with us and who don’t abide by the rules at all.”).

²²² STEFAN AMBEC ET AL., *THE PORTER HYPOTHESIS AT 20: CAN ENVIRONMENTAL REGULATION ENHANCE INNOVATION AND COMPETITIVENESS?* 3, 16 (2011), <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-11-01.pdf>.

and competition by either improving the products of federal projects themselves or the production process.²²³

Furthermore, the issuance of Executive Order 12898 shows that the federal government is concerned about environmental justice issues, particularly by the creation of a working group intended to provide guidance to federal agencies for “identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.”²²⁴ Additionally, in 1994, the Attorney General directed agency heads to “ensure that the disparate impact provisions in . . . regulations are fully utilized so that all persons may enjoy equally the benefits of federally financed programs.”²²⁵ The Attorney General further stated that enforcement:

is an essential component of an effective civil rights compliance program Frequently discrimination results from policies and practices that are neutral on their face but have the *effect* of discriminating[.] Those policies and practices must be eliminated unless they are shown to be necessary to the program’s operation and there is no less discriminatory alternative.²²⁶

The Clinton Administration, after the issuance of Executive Order 12898, intended that disparate impact be used to require agencies to review their facially neutral policies on their own, thereby requiring courts to review plaintiff suits regarding agency decisions with disparate impacts.²²⁷ Lastly, disparate impact claims have generally

²²³ *Id.*; see *Economics: Making it Profitable to Protect Nature*, ENVTL. DEF. FUND, <https://www.edf.org/approach/markets> (last visited Aug. 26, 2019) (noting that creating incentives can make conservation of the environment profitable).

²²⁴ Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 11, 1994), amended by Exec. Order No. 12,948, 60 Fed. Reg. 6381 (Jan. 30, 1995).

²²⁵ *Memorandum For Heads of Departments and Agencies That Provide Federal Financial Assistance*, DEP’T JUSTICE (July 14, 1994), <https://www.justice.gov/archives/ag/attorney-general-july-14-1994-memorandum-use-disparate-impact-standard-administrative-regulations>.

²²⁶ *Id.*

²²⁷ See *id.* (“This Administration will vigorously enforce Title VI. As part of this effort, and to make certain that Title VI is not violated, each of you should

been limited in scope,²²⁸ and that would be no different if disparate impact theory were incorporated into NEPA.

CONCLUSION

Disparate impact theory would provide both agencies planning projects and reviewing courts with an understanding of how to proceed in areas that NEPA does not explicitly explain by giving additional information regarding data sufficiency, data gaps, stale data, and the scientific integrity of models and methodologies. This would not only offer an explanation as to how to conduct an EIS under NEPA, but it would also pave clearer avenues to relief for those in low-income or minority communities which are adversely affected by environmental policy and regulations. Agencies would be able to act on complete information with regard to low-income and minority communities, no longer regretting decisions after disparate impacts are understood but “too late to correct.”²²⁹ While there are concerns about the statistical tests used by disparate impact theory, civil rights law requires that agencies following NEPA’s hard look test consider environmental justice concerns. By including a disparate impact standard when reviewing an EIS, the burden to prove discriminatory conduct or policy would be placed on agencies while maintaining the procedural aspect of NEPA’s regulations, thereby creating a harder look test that places a greater emphasis on the harms experienced by low-income and minority communities. It is time to ensure the full implementation of Executive Order 12898

ensure that the disparate impact provisions in your regulations are fully utilized so that all persons may enjoy equally the benefits of federally financed programs.”).

²²⁸ See *Tex. Dep’t of Hous. & Cmty. Affairs v. Inclusive Cmty. Project, Inc.*, 135 S. Ct. 2507, 2522 (2015) (“Disparate-impact liability mandates the ‘removal of artificial, arbitrary, and unnecessary barriers,’ not the displacement of valid governmental policies.” (quoting *Griggs v. Duke Power Co.*, 401 U.S. 424, 431 (1971))).

²²⁹ *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9th Cir. 1998) (“NEPA emphasizes the importance of coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that ‘the agency will not act on incomplete information, only to regret its decision after it is too late to correct.’” (quoting *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371 (1989))).

and protect minority and low-income communities from disparate environmental impacts resulting from federal projects.