IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF NEW MEXICO

DINÉ CITIZENS AGAINST RUINING OUR ENVIRONMENT; SAN JUAN CITIZENS ALLIANCE; WILDEARTH GUARDIANS; and NATURAL RESOURCES DEFENSE COUNCIL,

Plaintiffs,

vs. No. CIV 15-0209 JB/SCY

SALLY JEWELL, in her official capacity as Secretary of the United States Department of the Interior; UNITED STATES BUREAU OF LAND MANAGEMENT, an agency within the United States Department of the Interior; and NEIL KORNZE, in his official capacity as Director of the United States Bureau of Land Management,

Defendants,

and

WPX ENERGY PRODUCTION, LLC; ENCANA OIL & GAS (USA) INC.; BP AMERICA COMPANY; CONOCOPHILLIPS COMPANY; BURLINGTON RESOURCES OIL & GAS COMPANY LP; AMERICAN PETROLEUM INSTITUTE; and ANSCHUTZ EXPLORATION CORPORATION,

Intervenor-Defendants.

MEMORANDUM OPINION AND AMENDED ORDER[1]

THIS MATTER comes before the Court on the Plaintiffs' Opening Merits Brief, filed April 28, 2017 (Doc. 112)("Diné Brief"). The primary issues are: (i) whether the Plaintiffs have standing to pursue their claims under the National Environmental Policy Act, 42 U.S.C. §§ 4321 to 4370m-12 ("NEPA") and the National Historic Preservation Act, 16 U.S.C. §§ 470 to 470x-6 ("NHPA"); (ii) whether the Plaintiffs are challenging final agency action within the meaning of the Administrative Procedure Act, 5 U.S.C. § 704 ("APA"); (iii) whether any of the Plaintiffs' challenges to various Applications for Permit to Drill ("APDs") are moot; (iv) whether Defendant United States Bureau of Land Management ("BLM") violated NEPA by failing to adequately consider the environmental impacts of hydraulic fracturing and horizontal drilling in developing the Mancos Shale in the San Juan Basin; (v) whether the BLM adequately involved the public in its NEPA process; (vi) whether the BLM violated the NHPA for failing to consider the indirect effects that well pads would have on Chaco Culture National Historic Park, Chacoan Outliers, the Chaco Culture Archaeological Protection Sites, and the Great North Road (collectively "Chaco Park and its satellites"); and (vii) if there is a NEPA or NHPA violation, whether the proper remedy is remand without vacatur, remand with vacatur, or a permanent injunction. The Court concludes that: (i) the Plaintiffs have standing to pursue their NEPA and NHPA claims; (ii) the Plaintiffs may challenge most, but not all, of the APDs under the APA; (iii) the Plaintiffs' APD challenges are not moot, except as to permanently abandoned wells; (iv)

[1]The Court previously issued an Order that granted in part and denied in part the requests in the Plaintiffs' Opening Merits Brief, filed April 28, 2017 (Doc. 112). See Order at 4, filed March 31, 2018 (Doc. 128)("Order"). In that Order, the Court stated that it would issue a Memorandum Opinion "at a later date more fully detailing its rationale for this decision." Order at 2 n.1. This Memorandum Opinion and Amended Order is the promised opinion, and details the Court's rationale for the previous Order, and also contains an amended decision and order.

the BLM complied with NEPA's requirements; (v) the BLM adequately involved the public in its NEPA process, as it gave notice of finalized Environmental Assessments' ("EAs") availability through its online NEPA logs, and sent notices of and hosted public meetings at each proposed well's site; (vi) the BLM did not violate the NHPA, because it considered the effects on historical sites within the wells' areas of potential effects; and (vii) if the BLM had violated NEPA or the NHPA, vacatur with remand would be the proper remedy for the NEPA violation, but remand without vacatur would be the proper remedy for the NHPA violation. Accordingly, the Court denies the requests in the Diné Brief.

FACTUAL BACKGROUND

The Court divides its factual background into five sections. First, the Court will introduce the parties. Second, it will discuss oil-and-gas development in the San Juan Basin -- a petroleum-rich geologic structural basin in the Four Corners region of the States of New Mexico and Colorado, which, although sparsely populated, is home to many Navajo Native Americans, also known as the Diné. See Diné Citizens Against Ruining Our Environment v. Jewell, No. CIV 15-0209, 2015 WL 4997207, at *2 (D.N.M. 2015)(Browning, J.)("Dine"). Third, it will explain the BLM's oil-and-gas planning and management framework. Fourth, it will outline the timeline of events giving rise to this case. Finally, it will discuss the BLM's relationship with the NHPA.

1. The Parties.

Plaintiff Diné Citizens Against Ruining Our Environment ("Diné CARE") is an organization of Navajo community activists in the Four Corners region. See Dine, 2015 WL 4997207, at *2. Diné CARE's stated goal is to protect all life in its ancestral homeland by

empowering local and traditional people to organize, speak out, and ensure conservation and stewardship of the environment through civic involvement. See Dine, 2015 WL 4997207, at *2. Plaintiff San Juan Citizens Alliance ("San Juan Alliance") is an organization dedicated to social, economic, and environmental justice in the San Juan Basin. See Dine, 2015 WL 4997207, at *2. Plaintiff WildEarth Guardians is a non-profit membership organization with over 65,000 members and activists and is based in Santa Fe, New Mexico, with offices throughout the western United States of America. See Dine, 2015 WL 4997207, at *3. Plaintiff Natural Resources Defense Council is a nonprofit environmental membership organization with more than 299,000 members throughout the United States, approximately 3,360 of whom reside in New Mexico. See Dine, 2015 WL 4997207, at *3.

a. The Plaintiff Organizations' Members.

Mike Eisenfeld is a member of San Juan Alliance and WildEarth Guardians. See Declaration of Mike Eisenfeld ¶ 1, at 1 (executed April 25, 2017), filed April 28, 2017 (Doc. 112-1)("Eisenfeld Decl."). He has visited Chaco Park -- a historic site in the San Juan Basin -- at least annually since 1997. See Eisenfeld Decl. ¶ 5, at 2. He last visited there in July, 2016. See Eisenfeld Decl. ¶ 5, at 2. He also regularly visits "the greater Chaco region, including areas in and around Counselor, Lybrook, and Nageezi," New Mexico.[2] Eisenfeld Decl. ¶ 5, at 2. He last visited the "Nageezi area" on April 20, 2017, and intends to return in May and June of

[2]Counselor is a town located along United States Route 550 ("Highway 550"), approximately twenty-five miles from Chaco Park. See Google Maps, https://www.google.com/maps/place/Counselor,+NM+87018/@36.1682738,-107.9418258,10z/data=!4m5!3m4!1s0x873cdade76ce96bf:0xfa26b13b4b45c9e3!8m2!3d36.2091806!4d-107.4578264. Nageezi is also a town located along Highway 550, approximately fifteen miles from Chaco Park. See Google Maps, https://www.google.com/maps/@36.1761681,-107.8701589,11z. Lybrook lies between Counselor and Nageezi.

2017. Eisenfeld Decl. ¶ 5, at 2. He contends that the BLM has approved various APDs after conducting EAs that were not available for the public, including himself, to review. See Eisenfeld Decl. ¶ 9, at 4-5. Specifically, Eisenfeld checked the BLM's website and visited its public reading room throughout 2014, and on October 2, 2014, "no NEPA documentation was available to the public." Eisenfeld Decl. ¶ 11, at 6.

According to Eisenfeld, the BLM's approval of these APDs "threatens to irreparably harm [his] personal and professional interest in an intact Chacoan landscape . . . by impacting important environmental (air, water, treasured landscapes), historical, and cultural resources." Eisenfeld Decl. ¶ 9, at 5 (alteration added). Eisenfeld states that he has visited hundreds of well sites in the "greater Chaco area" and has "frequented lands where many other Mancos Shale[3] wells are in view." Eisenfeld Decl. ¶ 12, at 6. Eisenfeld alleges that the BLM has allowed "APD proponents to flare natural gas in the greater Chaco area when drilling for oil." Eisenfeld Decl. ¶ 13, at 6. According to Eisenfeld, this flaring harms the air quality and his health, and "compromises the night sky" in the Chaco Park area. Eisenfeld Decl. ¶ 13, at 6-7. Eisenfeld states that the APD approvals have also "compromised noted archeological sites." Eisenfeld Decl. ¶ 13, at 7. Eisenfeld states that he is "harmed by the lack of government agency compliance in evaluating the direct, indirect, cumulative and connected impacts of operations approved by BLM." Eisenfeld Decl. ¶ 16, at 8.

[3]The Mancos Shale Formation is a geologic layer within the San Juan Basin containing oil and gas, is approximately 2300-2500 feet thick, and is composed of sandstone and limestone. See Farmington Proposed RMP/Final EIS Chapter 3 Affected Environment at 3-6 (A.R.0000908).

In 2010-2012, Eisenfeld visited some Mancos Shale wells amongst the communities of Counselor, Lybrook, and Nageezi. See Supplemental Declaration of Mike Eisenfeld ¶ 3, at 2 (executed July 26, 2017), filed July 28, 2017 (Doc. 117-3)("Eisenfeld Supp. Decl."). He visited "over 150 WPX [and] Encana[4] . . . wells being drilled and developed in the Mancos Shale." Eisenfeld Supp. Decl. ¶ 3, at 2 (alteration added). Specifically, he has visited well sites called "Encana Lybrook, Gallo Canyon Unit and Escrito wells, and WPX Chaco unit wells." Eisenfeld Supp. Decl. ¶ 3, at 2. At these well sites, Eisenfeld has seen "drilling, flaring, hydraulic fracturing, nitrogen treatment, fracking trucks, chemical storage and an endless stream of activity." Eisenfeld Supp. Decl. ¶ 4, at 2. Eisenfeld states that "the flaring of natural gas from the Mancos Shale oil wells have been visually apparent . . . [,] representing waste, pollution and lost revenue/royalties." Eisenfeld Supp. Decl. ¶ 6, at 3. Eisenfeld states that the resulting fumes, reckless truck travel, and even exploding wells have made him feel unsafe when traveling in the Mancos Shale area. See Eisenfeld Supp. Decl. ¶ 7, at 4. Eisenfeld notes that an explosion occurred on a well pad in Nageezi in 2016, and he states that he fears that additional explosions may follow "as long as Mancos Shale development is allowed to proceed unimpeded and unanalyzed." Eisenfeld Supp. Decl. ¶ 8, at 4. Eisenfeld also submits to the Court photographs that "show clustered WPX wells, a producing Mancos Shale oil well, a well site with three active flares, and a five-acre well pad where Mancos Shale oil is being drilled for." Eisenfeld Supp. Decl. ¶ 8, at 4.

[4]Intervener-Defendants WPX Energy Production, LLC and Encana Oil & Gas (USA) Inc. are oil companies that own leases or drilling permits over the Mancos Shale. See Dine, 2015 WL 4997207, at *3.

Jeremy Nichols is a member of WildEarth Guardians. See Declaration of Jeremy Nichols ¶ 2, at 2 (executed April 27, 2017), filed April 28, 2017 (Doc. 112-2)("Nichols Decl."). Nichols states that he visited "the Chaco outlier ruin of Pueblo Pintado" in March, 2017. Nichols Decl. ¶ 5, at 3. He visited Chaco Park in March, 2008, March, 2012, April, 2013, and May, 2015. See Nichols Decl. ¶ 5, at 4-5. Nichols states that he intends to continue visiting "the Greater Chaco region, including [Chaco Park] and its outliers . . . at least once a year for the foreseeable future." Nichols Decl. ¶ 6, at 6. He states that he intends to visit "this area" again in June, 2017, when he has a trip planned. Nichols Decl. ¶ 6, at 6. Nichols states that he does not recall any oil-and-gas development in the area in 2008, but by 2014, "there were rigs seemingly all over the place, around Nageezi and the road to [Chaco Park]." Nichols Decl. ¶ 7, at 6-7. According to Nichols, during his last visit, "there were extensive oil and gas well facilities and infrastructure in the area, particularly around Nageezi and Lybrook." Nichols Decl. ¶ 7, at 7. Nichols states that this new oil-and-gas development "has detracted significantly from [his] enjoyment of the Greater Chaco area," and has "significantly eroded the natural and remote nature of the region." Nichols Decl. ¶ 8, at 7 (alteration added). According to Nichols, the oil-and-gas development has also created "smells, dust, and more industrialization," which are "aesthetically displeasing." Nichols Decl. ¶ 9, at 7. Nichols states that, "[i]f the BLM were prohibited from approving new drilling permits in this area until it developed a new plan . . . [,] it would diminish the harms to [his] recreational enjoyment of the area and likely ensure that [his] future visits with friends and family will be more enjoyable than they currently are." Nichols Decl. ¶ 12, at 9 (alteration added).[5]

[5]Nichols also submits a map to the Court showing the proximity of wells approved since

Deborah Green represents that she is a member of the Natural Resources Defense Council. See Declaration of Deborah Green ¶ 3, at 2 (executed April 14, 2017), filed April 28, 2017 (Doc. 112-3)("Green Decl."). Green states that she visits Chaco Park "at least once a year." Green Decl. ¶ 4, at 2. Green intends to return to Chaco Park "this fall" (referring to fall 2017) and "in the future." Green Decl. ¶ 6, at 2. Green states that oil-and-gas development "in the Chaco Canyon[6] area/region and [Chaco Park]" would harm Green's visitor experience, because of potential air, noise, and light pollution, large truck traffic, and the possibility of "soil and groundwater contamination due to drilling practices." Green Decl. ¶ 7, at 2-3. Green states that she also has "concerns" regarding the use of hydraulic fracturing ("fracking")[7] "in the Chaco Canyon area/region and Chaco [Park]," because fracking may contaminate the area's groundwater. Green Decl. ¶ 8, at 3. Green explains that, if the Court vacates the BLM's approvals of APDs, then she "will be able to continue using the Chaco Canyon area/region and [Chaco Park] for hiking, camping, and spiritual contemplation." Green Decl. ¶ 9, at 3. Green states that she has experienced several environmental problems while driving along Highway 550 to Chaco Canyon, including air pollution from gas flares, exhaust from oil- and-gas trucks, noise pollution from heavy truck traffic, and light pollution from nighttime drilling. See

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January 1, 2009, to Chaco Park, as well as various photographs that he took of oil-and-gas development in the Chaco area. See Supplemental Declaration of Jeremy Nichols ¶ 7-10, at 2-11 (executed July 28, 2017), filed July 28, 2017 (Doc. 117-1)("Nichols Supp. Decl."). He adds that he visited the area again in June, 2017. See Nichols Supp. Decl. ¶ 8, at 5.

[6]Chaco Canyon is a canyon inside Chaco Park. See "Chaco Culture National Historical Park," Wikipedia, https://en.wikipedia.org/wiki/Chaco_Culture_National_Historical_Park (last viewed April 6, 2018).

[7]Fracking is discussed in more detail on page 12.

Supplemental Declaration of Deborah Green ¶ 8, at 3 (executed July 27, 2017), filed July 28, 2017 (Doc. 117-4)("Green Supp. Decl.").

Hope Miura represents that she lives in the Cochiti Pueblo,[8] which is "about a three hour drive . . . to the Chaco Canyon area/region." Declaration of Hope Miura ¶ 1, at 2 (executed April 17, 2017), filed April 28, 2017 (Doc. 112-4)("Miura Decl."). Miura states that she is a member of the Natural Resources Defense Council. See Miura Decl. ¶ 2, at 2. Miura states that she has visited Chaco Park, and she plans to return there "next year, and in the future." Miura Decl. ¶ 5, at 2. According to Miura, oil-and-gas development "in the Chaco Canyon area/region and [Chaco Park]" would "ruin the views and tranquility of the Chaco Canyon area." Miura Decl. ¶ 6, at 2. Miura states that she is concerned that fracking in the area may cause earthquakes, and "damage the rock formations and sacred sites where Native Americans have their ancestral ceremonies." Miura Decl. ¶ 7, at 2-3. Miura also states that she is "concerned about the effects of oil and gas development on air quality in the area, including toxic fumes." Miura Decl. ¶ 7, at 3. Miura contends that if the Court vacates the BLM's approvals of APDs, then she "would be able to continue to visit this area and feel much better about the air quality and the preservation of the archeology." Miura Decl. ¶ 8, at 3.

Gina Trujillo represents that she is the Director of Membership for the Natural Resources Defense Council. See Declaration of Gina Trujillo ¶ 1, at 1 (dated April 30, 2017), filed April 28, 2017 (Doc. 112-5)("Trujillo Decl."). Trujillo asserts that the Natural Resources Defense Council's mission is "to safeguard the Earth; its people, its plants and animals, and the natural

[8]The Cochiti Pueblo is located approximately twenty-two miles southwest of Santa Fe, New Mexico. See "Cochiti, New Mexico," Wikipedia, https://en.wikipedia.org/wiki/Cochiti,_New_Mexico (last viewed April 14, 2018).

systems on which all life depends." Trujillo Decl. ¶ 6, at 2. Trujillo states that protecting Chaco Park and the Chaco Canyon area from damaging oil-and-gas operations "is paradigmatic" of the organization's efforts "to defend endangered wild places and natural habitats." Trujillo Decl. ¶ 7, at 2.

Kendra Pinto represents that she is a member of the Navajo Nation and of Diné CARE. See Declaration of Kendra Pinto ¶ 1, at 1 (executed July 26, 2017), filed July 28, 2017 (Doc. 117-2)("Pinto Decl."). Pinto states that she lives in Twin Pines, New Mexico, which is located on Highway 550 at the San Juan County line. See Pinto Decl. ¶ 1, at 1. Pinto states that, since the "start of oil exploration in the Mancos Shale Formation, [she has] seen an increase in truck traffic, public safety risks, violent crimes, and drug use." Pinto Decl. ¶ 5, at 2 (alteration added). She adds that she has "noticed headaches, blurry vision, occasional stomach issues, fatigue, and allergies." Pinto Decl. ¶ 5, at 2. She states that she often sees "fracking truck traffic" on the highway, which "contributes to the fear of safety." Pinto Decl. ¶ 8, at 2. Pinto states that she has had "numerous encounters with this truck traffic" and was "almost rear ended by a truck carrying liquid nitrogen." Pinto Decl. ¶ 9, at 3. According to Pinto, "there is always a danger" where she lives. Pinto Decl. ¶ 9, at 3. Pinto states that she has been to areas that are "very potent in natural gas odors," and has seen "the giant pillars of fire" from flaring, which are "scary, loud, and excessive." Pinto Decl. ¶ 10, at 3. Pinto states that "there is no escaping the gases, traffic, noise pollution, and sound pollution." Pinto Decl. ¶ 10, at 3. Pinto states that she regularly visits Chaco Park and enjoys observing the dark sky from there, but "the lights staged at well sites can be as bright as stadium lights." Pinto Decl. ¶ 11, at 3. Pinto states that she has

also dealt with these bright lights being pointed at the highway, prohibiting her from seeing the road. See Pinto Decl. ¶ 11, at 3.

b. The Defendants.

Defendant Ryan Zinke is the Secretary of the United States Department of the Interior. See Diné Brief at 12 n.1. Defendant Michael Nedd is the Acting Director of the BLM. See Diné Brief at 12 n.1.[9] The BLM is an agency within the United States Department of the Interior that is responsible for managing public lands and resources in New Mexico, including federal onshore oil-and-gas resources. See 18 C.F.R. § 270.401(b)(15).

Intervenor-Defendant American Petroleum Institute ("the API") is the primary national trade association of the oil-and-gas industry, representing more than 625 companies involved in all aspects of that industry, including some that drill in the Mancos Shale. See Dine, 2015 WL 4997207, at *3. Intervener-Defendants WPX Energy Production, LLC, Encana Oil & Gas (USA) Inc., BP America Production Company, ConocoPhillips Company, Burlington Resources Oil & Gas Company LP, and Anschutz Exploration Corporation (collectively, "the Operators") are all oil companies, and each of them owns leases or drilling permits over the Mancos Shale. See Dine, 2015 WL 4997207, at *3.

[9]When this lawsuit was filed, Sally Jewell was the Secretary of the United States Department of the Interior, and Neil Kornze was the Director of the BLM. See Dine, 2015 WL 4997207, at *3. Because they are no longer in office, "[t]he officer's successor is automatically substituted as a party. Later proceedings should be in the substituted party's name, but any misnomer not affecting the parties' substantial rights must be disregarded." Fed. R. Civ. P. 25(d).

2. Oil-and-Gas Development in the San Juan Basin.

The San Juan Basin in northwestern New Mexico is one of the largest oil-and-gas fields in the United States and has been producing for over fifty years. See Farmington Proposed Resource Management Plan and Final Environmental Impact Statement at 1 (dated September, 2003)(A.R.0001945)("PRMP"). "Approximately 23,000 wells are currently producing." Finding of No Significant Impact WPX Energy Production, LLC's West Lybrook UT Nos. 701H, 702H, 703H, 704H, 743H and 744H at 2 (undated)(A.R.0232032)("FONSI").

Since fracking was introduced in 1949, "nearly every well in the San Juan Basin has been fracture stimulated." FONSI at 2 (A.R.0232032). Fracking is the process of "injecting fracturing fluids into the target formation at a force exceeding the parting pressure of the rock, thus inducing fractures through which oil or natural gas can flow to the wellbore."[10] Hydraulic Fracturing White Paper at 6 (dated October 1, 2014)(A.R.0149866)("White Paper"). Fracking and horizontal drilling are commonly used to access the Mancos Shale. See Unconventional Gas Reservoirs, Hydraulic Fracturing and the Mancos Shale at 7-8 (undated)(A.R.0155551-52)("Hydraulic Fracturing"). Horizontal drilling refers to a technique in which the wellbore is drilled down to the target formation, and then turns horizontally so that the well encounters as much of the reservoir as possible. See Hydraulic Fracturing at 6 (A.R.0155550).

"Vertical drilling places a well pad directly above the bottom hole, while directional and horizontal drilling allows for flexibility in the placement of the well pad and associated surface

[10]The parting pressure of the rock refers to "a pressure sufficient to induce fractures through which oil or gas can flow." White Paper at 8 (A.R.0149868). The wellbore refers to the hole produced when drilling an oil or gas well. See "Wellbore," Wiktionary, https://en.wiktionary.org/wiki/wellbore (last viewed April 16, 2018).

facilities." Environmental Assessment DOI-BLM-NM F010-2016-0204/IT4RM-FO10-2016-0081 at 16 (dated April, 2016)(A.R.0236483)("2016 EA"). "Directional or horizontal drilling often allows for 'twinning,' or drilling two or more wells from one shared well pad." 2016 EA at 16 (A.R.0236483). "Generally, the use of this technology is applied when it is necessary to avoid or minimize impacts to surface resources." 2016 EA at 16 (A.R.0236483). Indeed, one objective of horizontal drilling is to avoid surface occupancy "due to topographic or environmental concerns." Oil and Gas Resource Development for San Juan Basin, New Mexico a 20-year Reasonable Foreseeable Development Scenario Supporting the Resource Management Plan for the Farmington Field Office, Bureau of Land Management at 8.1 (dated July 2, 2001)(A.R.0000111)("RFDS"). San Juan Alliance once stated that "[a]lternative drilling methods such as horizontal drilling would, if used in the San Juan basin, reduce adverse impacts such as noise, air pollution, and scarred landscapes from wells and roads. Why can't several wells be drilled from one location? The BLM must consider/require feasible technical alternatives such as horizontal drilling." Appendix P-Public Comments and Responses Farmington Proposed RMP/Final EIS at P-123 (dated 2002)(A.R.0001847)("San Juan Comment").

The area in which the BLM has approved the Mancos Shale APDs already contains hundreds of existing wells. See Reasonable Foreseeable Development for Northern New Mexico Final Report at 19 (dated October, 2014)(A.R.0173844)("2014 RFDS"). Further, many proposed Mancos Shale wells use existing oil-and-gas infrastructure. See Environmental Assessment DOI-BLM-NM-F010-2015-0036 at 1 (dated November, 2014)(A.R.0140148)("2014 EA").

3. The BLM's Oil-and-Gas Planning and Management Framework.

The BLM manages onshore oil-and-gas leasing and development via a three-phase process. The first phase involves preparing a Resource Management Plan ("RMP") and an Environmental Impact Statement ("EIS"). 43 C.F.R. § 1601.0-6. "Resource management plans are designed to guide and control future management actions and the development of subsequent, more detailed and limited scope plans for resources and uses." 43 C.F.R. § 1601.0-2. "[W]herever possible, the proposed plan and related environmental impact statement shall be published in a single document." 43 C.F.R. § 1601.0-6.

> The EIS is the comprehensive, gold-standard document: it is subject to notice-and-comment provisions; "[i]t shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment"; and it "is more than a disclosure document," but rather, "[i]t shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions."

Dine, 2015 WL 4997207, at *40 (quoting 40 C.F.R. § 1502.1)(alterations in Dine). The BLM must prepare a supplement to its EIS if "the agency makes substantial changes in the proposed action that are relevant to environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c)(1)(i)-(ii).

In the second phase, the BLM sells and executes oil-and-gas leases. See 43 C.F.R. § 3120.1-1. The BLM "may require stipulations as conditions of lease issuance." 43 C.F.R. § 3101.1-3. Third, and at issue in this case, the lessee submits an APD to the BLM, and "no drilling operations, nor surface disturbance preliminary thereto, may be commenced prior to the authorized officer's approval of the permit." 43 C.F.R. § 3162.3-1(c).

4. The Timeline of Events Giving Rise to this Case.

In 2001, the BLM issued a Reasonably Foreseeable Development Scenario ("RFDS") as part of the process of revising its Resource Management Plan for the San Juan Basin. See RFDS at 1 (A.R.0000001). This document's purpose was to forecast the scope of oil-and-gas development in the San Juan Basin over the next twenty years, from approximately 2002 to 2022. See RFDS at vi (A.R.0000006).

The RFDS focuses on the New Mexico portion of the San Juan Basin "to determine the subsurface development supported by geological and engineering evidence, and to further estimate the associated surface impact of this development." RFDS at 6 (A.R.0000006). The RFDS discusses the Mancos Shale, and states that "most existing Manco Shale . . . reservoirs are approaching depletion and are marginally economic. Most are not currently considered candidates for increased density development or further enhanced oil recovery operations." RFDS at 5.24 (A.R.0000081). It notes, however, that "there is considerable interest in developing the Mancos Shale as a gas reservoir over a large part of the basin where it has not been previously developed." RFDS at 5.23 (A.R.0000080).

In 2003, the BLM issued its Resource Management Plan/Environmental Impact Statement. See Farmington Resource Management Plan with Record of Decision at 1 (dated December 2003)(A.R.0001931)("RMP/EIS"). The RMP/EIS provided for the development of 9,942 new oil-and-gas wells. See RMP/EIS at 2, 10 (A.R.0001946, A.R.0001954). Since the RMP/EIS was issued, "3,945 wells have been drilled in the planning area, or about 39 percent of the 9,942 wells predicted and analyzed in the RMP/EIS." Federal Defendant's Opposition to Plaintiff's Opening Merits Brief at 10-11, filed June 9, 2017 (Doc. 113)("BLM

Response")(citing Declaration of David J. Mankiewicz ¶ 3, at 3, filed June 9, 2017 (Doc. 113-2)("Mankiewicz Decl.")). The RMP/EIS addresses only the "cumulative impacts of the potential development of 9,942 new oil and gas wells," and "does not approve any individual wells. Each well will require a site-specific analysis and approval before permitting." RMP/EIS at 3 (A.R.0001947). See Dine, 2015 WL 4997207, at *6. The 2003 RMP/EIS itself "makes no explicit mention of drilling in the Mancos Shale." Dine, 2015 WL 4997207, at *6.

The Plaintiffs challenge over 300 APDs that the BLM approved seeking to drill wells into the Mancos Shale. See Third Supplemented Petition for Review of Agency Action ¶ 1, at 1, filed September 9, 2016 (Doc. 98)("Complaint"). For each APD, the BLM issued an EA. See, e.g., 2014 EA at 1 (A.R.0140148). These EAs are "tiered" to the 2003 RMP/EIS, meaning that they incorporate the EIS by reference. 40 CFR § 1508.28. The EAs address the site-specific and cumulative impacts of the proposed wells. See 2014 EA at 25 (A.R.0140172); id. at 23 (A.R.0140170). Although these EAs are tiered to the 2003 RMP/EIS, the BLM also considered newer studies when preparing the EAs, such as one relating to air quality. See 2014 EA at 19 (A.R.0140166).

Generally, an EA concisely analyzes the possible environmental impacts of a proposed action and weighs available alternatives. See 40 C.F.R. § 1508.9. An EA differs from an EIS in that the latter contains a big-picture analysis, whereas EAs focus narrowly on the possible repercussions that each individual action, here granting APDs, would have. See, e.g., 2014 EA at 25 (A.R.0140172). When drafting an EA, the BLM must determine whether to make a finding of no significant impact ("FONSI") or whether the proposal requires a new EIS. See 40 C.F.R. § 1508.9(a)(1). In this context, a FONSI briefly presents the reasons why an action "will not

have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared." 40 C.F.R. § 1508.13. If the BLM issues an EA with a FONSI instead of creating a new EIS, the EA tiers to the existing EIS. See 40 C.F.R. § 1508.28. In this case, "[f]or the APDs regarding the Mancos Shale, the BLM prepared FONSIs to accompany each EA." Dine, 2015 WL 4997207, at *7 (alteration added).

In 2014, the BLM decided to prepare an amendment to its 2003 RMP/EIS, because "improvements and innovations in horizontal drilling technology and multi-stage hydraulic fracturing have enhanced the economics of developing" the Mancos Shale. Notice of Intent to Prepare a Resource Management Plan Amendment and an Associated Environmental Impact Statement for the Farmington Field Office, New Mexico, 79 Fed. Reg. 10548 (dated February 25, 2014)(A.R.0173818). The BLM is now preparing the 2003 RMP/EIS amendment. See BLM Response at 12.

5. The BLM and the NHPA.

Section 106 of the NHPA requires federal agencies conducting an "undertaking" to "take into account the effect of the undertaking on any historic property." 54 U.S.C. § 306108. A historic property includes those in the "National Register of Historic Places maintained by the Secretary of the Interior." 36 C.F.R. § 800.16(l)(1). Chaco Park fits that definition. See World Heritage List Nomination Submitted by the United States of America Chaco Culture National Historical Park at 26 (dated November, 1984)(A.R.0217996)(noting that Chaco Park "is on the National Register of Historic Places"). One way to comply with Section 106 of the NHPA is to enter into a "programmatic agreement" with the Advisory Council on Historic Preservation. 36 C.F.R. § 800.14(b). "Compliance with the procedures established by an approved programmatic

agreement satisfies the agency's section 106 responsibilities for all individual undertakings of the program covered by the agreement until it expires or is terminated. . . ." 36 C.F.R. § 800.14(b)(2)(iii). The BLM has entered into such an agreement. See State Protocol Between Bureau of Land Management and the New Mexico State Historic Preservation Officer Regarding the Manner in which BLM will meet its responsibilities under the National Historic Preservation Act in New Mexico at 5 (A.R.0169217)("2014 Protocol")(noting that the BLM has entered into a programmatic agreement). Generally, the 2014 Protocol's purpose is to help the BLM comply with the NHPA. See 2014 Protocol at 6 (A.R.0169218). During BLM's consideration of the APDs at issue in this case, two protocols were in effect. The BLM entered into the first protocol in 2004, see Protocol Agreement Between the New Mexico Bureau of Land Management and New Mexico State Historic Preservation Officer at 1 (dated June 4, 2014)(A.R.0169038)("2004 Protocol"), which remained in effect until the 2014 Protocol superseded it. See 2014 Protocol at 5 (A.R.0169217)("This Protocol supersedes the 2004 Protocol Agreement between the New Mexico BLM and SHPO.").

PROCEDURAL BACKGROUND

The Plaintiffs filed their petition in this case on March 11, 2015. See Petition for Review of Agency Action, at 1, filed March 11, 2015 (Doc. 1)("Petition"). After amending their petition twice, they assert five claims: (i) the BLM violated NEPA by failing to analyze direct, indirect, and cumulative effects of Mancos Shale fracking; (ii) the BLM violated NEPA by not preparing an EIS on fracking the Mancos Shale; (iii) the BLM violated NEPA by taking action during the NEPA process; (iv) the BLM violated NEPA, because it did not involve the public in drafting the EAs; and (v) the BLM violated the NHPA, because it did not consider the indirect and

cumulative effects on Chaco Park and its satellites and did not consult with the New Mexico State Historic Preservation Officer ("SHPO"), Indian tribes, or the public vis-à-vis the effects the wells could have on Chaco Park and its satellites. See Complaint ¶¶ 127-65, at 36-43. The Plaintiffs subsequently filed a motion for a preliminary injunction, arguing broadly on the merits that the BLM violated NEPA for not analyzing the impacts of horizontal drilling and fracking. See Plaintiffs' Motion for Preliminary Injunction at 1, filed May 11, 2015 (Doc. 16); Plaintiff's Memorandum in Support of Motion for Preliminary Injunction at 19-21, filed May 11, 2015 (Doc. 16-1). The Court denied the preliminary injunction. See Diné, 2015 WL 4997207, at *1, *38-45. The Court made that decision, in part, because the Plaintiffs did not have a substantial likelihood of succeeding on the merits. See Diné, 2015 WL 4997207, at *40-45. It concluded that the Plaintiffs' case raises the following issues: (i) whether the APDs are proposals that "will significantly impact the human environment," requiring an EIS for the APDs as opposed to tiered EAs; and (ii) whether the BLM could tier its EAs to the 2003 RMP/EIS instead of the pending, amended RMP/EIS. Diné, 2015 WL 4997207, at *43. The Court determined that (i) the 2003 RMP/EIS fully analyzed the fracking's environmental impacts, and, (ii) while directional drilling was a new technology that the 2003 RMP/EIS did not analyze, it has a "net positive impact for the environment" when compared to vertical drilling. Dine, 2015 WL 4997207, at *44. Because an EIS is needed only when the level of environmental impact actually threatens to exceed levels contemplated in the prior EIS, the Court concluded that this lesser harm of horizontal drilling did not require a new EIS. See Diné, 2015 WL 4997207, at *45.[11]

[11]In explaining this point, the Court gave the following, helpful, example:

The Court acknowledged that, although more environmentally friendly than vertical drilling, horizontal drilling was also more profitable and, thus, could lead to a "quasi-Jevons Paradox"[12] where the operators' increased incentive to drill would lead to more horizontal drills, and thus increase, overall, environmental harm. Diné, 2015 WL 4997207, at *44. The Court concluded that, while that was possible, the likelihood of such a scenario was not likely enough to require the BLM to analyze such a possibility at the EIS level. See Diné, 2015 WL 4997207, at *44.

The Court also considered whether fracking combined with horizontal drilling produced a new kind of environmental impact that vertical drilling combined with fracking did not produce, and, thus, whether an EIS was needed for that harm. See Diné, 2015 WL 4997207, at *45. The Court concluded that the BLM analyzed the qualitative difference between the two varieties of drilling at the EA level and concluded that the impact difference between the two varieties of technology "are insignificant," and therefore an EIS analyzing those harms is superfluous. Diné, 2015 WL 4997207, at *45. Accordingly, the Court concluded that no new RMP/EIS was

> [I]f an EIS anticipates 1,000 instances of an activity causing an aggregate environmental impact of 10,000 units, and a new, more profitable technology were to come out for conducting the activity, and the new technology reduced the environmental impact of the activity from ten units per instance to four units per instance, the popularization of the new technology may merit a new EIS, but only when the aggregate total of proliferated activity's environmental impact threatens to exceed 10,000 units.

Diné, 2015 WL 4997207, at *45.

[12]A Jevons Paradox occurs when technological improvements make the use of a resource more efficient, but the overall consumption of that resource nonetheless rises, because the technological improvement increases demand for that resource. See Dru Stevenson, Costs of Codification, 2014 U. Ill. L. Rev. 1129, 1166 n.210 (2014)(citing Stanley Jevons, The Coal Question (A.W. Flux. Ed., 3d. rev. ed. 1906)).

needed, and that the BLM did not act arbitrarily and capriciously when it tiered its EAs to the 2003 RMP/EIS. See Diné, 2015 WL 4997207, at *45.

The Plaintiffs appealed the Court's determination to the United States Court of Appeals for the Tenth Circuit. See Plaintiffs' Notice of Appeal at 1, filed August 18, 2015 (Doc. 64). The Tenth Circuit affirmed the Court's order denying the Plaintiffs request for a preliminary injunction and agreed with the Court's determination that there was not a substantial likelihood of success on the merits. See Diné Citizens Against Ruining Our Environment v. Jewell, 839 F.3d 1276, 1282-85 (10th Cir. 2016)("Diné II").[13] It agreed with the Court that, "even with increased drilling in the Mancos Shale formation and the switch to horizontal drilling and multi-stage fracturing," the BLM did not act arbitrarily and capriciously, because "the overall amount of drilling and related surface impacts are still within the anticipated level" in the 2003 RMP/EIS. 839 F.3d at 1283. As to the increased air quality impacts, the Tenth Circuit ruled that "the agency considered these impacts in its environmental assessments and concluded that the approved drilling activities would not cause a significant increase in emissions over the amount anticipated in the RMP," and thus there was no NEPA violation. 839 F.3d at 1283. Finally, the Tenth Circuit agreed with the Court that there was insufficient evidence to conclude that the "new horizontal drilling and multistage fracturing technologies will lead to environmental impacts qualitatively different from the impacts assessed in the 2003 RMP." 839 F.3d at 1283-

[13]The Honorable Carlos Lucero, Circuit Judge for the Tenth Circuit, concurred in part and dissented in part. See Diné II, 839 F.3d at 1285. Judge Lucero disagreed that with the majority and the Court that the Supreme Court had, sub silentio, changed the preliminary injunction standard. See Diné II, 839 F.3d at 1285. He agreed with the majority and the Court, however, that the Plaintiffs did not demonstrate a substantial likelihood of success on the merits. See Diné II, 839 F.3d at 1288.

84. According to the Tenth Circuit, the Plaintiffs raised two arguments about this point on appeal:

> First, these technologies allow operators to extract significant amounts of oil from the Mancos Shale, while the RMP mainly anticipated the extraction of gas from other formations in a different region of the San Juan Basin. Second, horizontal drilling and multi-stage fracturing involve a number of complexities not associated with conventional wells that could result in additional environmental impacts that were not anticipated or analyzed when the agency analyzed the impacts of conventional drilling methods in the 2003 [RMP].

Diné II, 839 F.3d at 1284 (alterations in original). The Tenth Circuit rejected both arguments based on the "deferential agency standard of review at issue in this case." 839 F.3d at 1284. According to the Tenth Circuit, the Plaintiffs arguments failed, because they did not "present any argument or cite to any evidence as to how drilling in the Mancos Shale will cause different environmental impacts than drilling in other formations in the San Juan Basin . . . or [demonstrate] as to how additional oil wells will cause qualitatively different impacts from the smaller number of oil wells and larger number of gas wells in the RMP." 839 F.3d at 1284. The Tenth Circuit held that the Plaintiffs similarly failed to show how "horizontal drilling and multi-stage fracturing may give rise to different types -- rather than different levels -- of environmental harms when compared to the traditional vertical drilling and hydraulic fracturing techniques that have historically been used in the San Juan Basin." 839 F.3d at 1284. Accordingly, because the Plaintiffs hold the burden of proof in an environmental case challenging agency action, the Tenth Circuit determined that the Plaintiffs were not likely to succeed on the merits. See 839 F.3d at 1284. The Tenth Circuit cautioned, however, that the Plaintiffs could ultimately prevail if, later, the Plaintiffs uncovered additional evidence or developed their arguments. See 839 F.3d at 1285. The Plaintiffs subsequently filed a petition for review on the merits. See Diné Brief at 1.

1. The Diné Brief.

The Plaintiffs begin by arguing that they have standing to bring this action. See Diné Brief at 8-10. According to the Plaintiffs, they have alleged an injury, because "they use the affected area and are persons 'for whom the aesthetic and recreational values of the area will be lessened by the challenged activity.'" Diné Brief at 9 (citing Friends of the Earth Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. 167, 183 (2000); Southern Utah Wilderness Alliance v. Palma, 707 F.3d 1143, 1156 (10th Cir. 2013)). Specifically, they contend that they have alleged a concrete injury, because many of the Plaintiffs' members "live and work in the areas affected by the Mancos Shale drilling activities, as well as routinely hike, recreate, camp, research, derive inspiration, engage in cultural and spiritual practices and otherwise use areas on and near the parcels where the horizontal drilling" is occurring, and "from which the effects of this drilling are visible and audible." Diné Brief at 9 (citing Eisenfeld Decl. ¶¶ 2, 9, 13-14, at 1, 3-7; Nichols Decl. ¶¶ 3-5, 7; Green Decl. ¶¶ 3-5, 7 at 2-3; Miura Decl. ¶ 4, at 2). They contend that their injuries from the drilling include harming "their use and enjoyment of the areas" and arise from "concerns about threats to their health and safety." Diné Brief at 10. The Plaintiffs also argue that their injuries are traceable to the BLM's authorization of drilling permits, because the BLM has not first evaluated the drillings' impact to the environment. See Diné Brief at 10. The Plaintiffs aver that adjudication in their favor would redress the harm, because it would lessen the aesthetic, environmental, and recreational harms they are enduring. See Diné Brief at 10.

The Plaintiffs also argue that the BLM violated NEPA, because it failed to "take a hard look" at the potential environmental consequences resulting from authorizing the Mancos Shale

drilling. Diné Brief at 12 (emphasis omitted). Specifically, they contend that the 2003 RMP/EIS, which authorized 9,942 wells, did not analyze the effects of drilling in the Mancos Shale, as it was thought not to be an economical option in 2003. See Diné Brief at 13. The Plaintiffs add that, once fracking technology made the Mancos Shale well development an economically feasible option, the BLM needed to take a hard look at the additional environmental impact that 3,960 new wells in the Mancos Shale would have on the region. See Diné Brief at 13-14. According to the Plaintiffs, the BLM cannot rely on the 2003 RMP/EIS, because "[t]he 2003 RMP/EIS does not offer any analysis for the landscape-level impacts from drilling at this new scale, and therefore cannot be used as an underlying basis for analyzing Mancos Shale EAs and approving APDs." Diné Brief at 14.

The Plaintiffs argue that the Court and the Tenth Circuit erred when denying a preliminary injunction on the grounds that a new EIS is needed only "when the quantum of environmental impact exceeds that which the operative EIS anticipated," and that no new statement was needed, because the "Mancos Shell development had not yet exceeded the foreseeable impacts from 9,942 wells." Diné Brief at 15. According to the Plaintiffs, the Court and the Tenth Circuit erred, because the relevant regulations require the agency to consider "the impacts from *foreseeable* development" and not just the impacts from past development. Diné Brief at 15-16 (citing 40 C.F.R. § 1508.7)(emphasis in Diné Brief). The Plaintiffs argue, therefore, that, because the 2003 EIS did not anticipate horizontal drilling's and fracking technology's effects, and that the foreseeable impact of the Mancos Shale wells exceeds the quantum of environmental impacts anticipated and analyzed in the 2003 EIS, the authorization of the additional wells violates NEPA. See Diné Brief at 16-17 ("BLM has never analyzed the

environmental and human health impacts from the combined total of 13,902 reasonably foreseeable oil and gas wells across the San Juan Basin.").

The Plaintiffs also contend that the BLM violated NEPA when all of the EAs for the Mancos Shale wells "tiered" to the 2003 RMP/EIS. Diné Brief at 18-21. According to the Plaintiffs, tiering is only allowed when the "project being considered is part of the broader agency action addressed in the earlier NEPA document." Diné Brief at 18. The Plaintiffs argue that, because the 2003 RMP/EIS did not consider at length horizontal drilling's or fracking's effects on the environment, tiering was inappropriate and violated NEPA. See Diné Brief at 21.

The Plaintiffs contend that the BLM also violated NEPA, because it did not analyze the cumulative environmental and human health impacts resulting from horizontal drilling and fracking. See Diné Brief at 21-25. The Plaintiffs assert that the BLM's analysis needed to include an examination of the past, present, and future wells, but it did not. See Diné Brief at 22-23. They add that BLM failed specifically to consider "GHG emissions" in the 2003 RMP/EIS. Diné Brief at 24.

The Plaintiffs also argue that the BLM violated NEPA, because it failed to prepare an EIS for the 3,960 Mancos Shale wells. See Diné Brief at 27 ("BLM cannot continue to issue individual drilling approvals absent completion of an EIS."). They assert that the BLM has failed to issue a "convincing statement of reasons" for why the wells "will impact the environment no more than insignificantly," so an EIS is necessary. See Diné Brief at 27. Thus, according to the Plaintiffs, because none has been issued, the BLM has violated NEPA. See Diné Brief at 27-28.

The Plaintiffs add that the BLM violated NEPA, because it failed to satisfy that statute's "public notice and participation requirements." Diné Brief at 29. The Plaintiffs contend that, because BLM approved 362 Mancos Shale wells and 122 APDs without public involvement and by labeling them "routine projects," the BLM did not follow NEPA's command. Diné Brief at 29. The Plaintiffs contend that the BLM had notice as early as August 2012 that the public was interested in the Mancos Shale wells, but, according to the Plaintiffs, the BLM's only outward facing action was to make public its "decision documents" in 2015 several months or years after it had issued APD approvals. Diné Brief at 29-31 (citing 43 C.F.R. § 46.305 (stating that the agency must "notify the public of the availability of an environmental assessment and any associated finding of no significant impact once they have been completed")).

The Plaintiffs next argue that the BLM violated NHPA. See Diné Brief at 32-41. They contend that oil-and-gas development adversely affects Chaco Park, which is on the National Register of Historic Places. See Diné Brief at 34-35. The Plaintiffs assert that, despite the development's impact on those locations, the BLM did not conduct a "landscape-level" analysis, so the BLM's approval of APDs violates section 106 of NHPA. See Diné Brief at 35-36.

The Plaintiffs argue that, although the BLM can satisfy NHPA section 106 without conducting a landscape level analysis if it establishes a program alternative, the BLM has not complied with the 2004 or 2014 Protocols, which the BLM entered into as a program alternative to satisfy NHPA. See Diné Brief at 36. The Plaintiffs aver that the BLM has not satisfied the 2014 Protocol, because it requires the BLM to analyze "Mancos Shale development's indirect and cumulative effects" on Chaco Park and its satellite sites, but, according to the Plaintiffs, the BLM has analyzed only the "direct impacts to archaeological sites." Diné Brief at 36. The

Plaintiffs add that the BLM's failure to consider all of the development's indirect impacts to the sites "flows from the agency's arbitrary" definition of the Area of Potential Effect ("APE"). Diné Brief at 37. See id. at 38 ("No record evidence exists to indicate that BLM ever defined an APE for indirect effects, or that BLM ever analyzed the indirect adverse effects of Mancos Shale development on historic properties."). According to the Plaintiffs, because the BLM has ignored indirect effects on Chaco Park and its satellites, such as excess noise, air, and light pollution, the BLM has violated NHPA. See Diné Brief at 39-40.

Finally, the Plaintiffs argue that NHPA's regulations require the BLM to consider "reasonably foreseeable effects" of development, which BLM failed to consider. See Diné Brief at 40 (citing 36 C.F.R. § 800.5(a)(1)). They add that "even if a single APD might not indirectly cause an adverse effect" to Chaco Park, "the 362 APDs already approved by the BLM may *cumulatively* cause an adverse effect" to Chaco Park. Diné Brief at 40 (emphasis in original). They conclude that, even if the BLM may have considered direct effects of development, because BLM failed to consider indirect and cumulative effects, the BLM has violated NHPA. See Diné Brief at 40-41.

2. The BLM's Response.

The BLM responds that: (i) the Plaintiffs do not have standing; (ii) some of the Plaintiffs' challenges fail as they do not attack final agency action; (iii) some of the Plaintiffs' challenges fail as moot; and (iv) the BLM has not violated NEPA nor NHPA. See BLM Response at 1-44. First, the BLM asserts that the Plaintiffs do not have standing to challenge the APDs. See BLM Response at 8-13. BLM contends that the Plaintiffs have not alleged an injury-in-fact, because there is an insufficient geographical nexus between the Plaintiffs' purported harms and the well

developments. See BLM Response at 9-11. There is no geographic nexus, according to the BLM, between the wells and the Plaintiffs, because the Plaintiffs "all state vaguely that they visit an undefined Chaco Region or greater Chaco area," which, according to the BLM, is too undefined a declaration to meet the injury-in-fact requirement. BLM Response at 10-11. It adds that the only specific locations that the Plaintiffs identify are "at least eight miles away" from the challenged wells, so they are not geographically close enough to establish an injury. See BLM Response at 11.

The BLM also argues that the Plaintiffs have failed standing's traceability and redressability prongs. See BLM Response at 12-13. The BLM argues that the Plaintiffs fail the traceability requirement, because the Plaintiffs have not tied their injuries to the 382 specific wells at issue. See BLM Response at 12. Instead, according to the BLM, the Plaintiffs tie their injuries generally to "oil and gas development," which, again according to the BLM, is too vague to meet the standing requirement, because there are 23,000 active wells in the area. BLM Response at 12-13.

Next, the BLM argues that Plaintiffs' arguments challenging future APD approvals fail, because these approvals do not challenge final agency action. See BLM Response at 13. The BLM argues that the Court has jurisdiction, under the APA, to review only "final agency actions." BLM Response at 14 (citing 5 U.S.C. § 704). It follows, according to the BLM, that the Court lacks jurisdiction over the 28 future APD approvals, because those approvals are not final. See BLM Response at 14. The BLM also argues that the Plaintiffs' challenges to the completed wells -- wells that have already been drilled, fracked, or abandoned -- are moot. See BLM Response at 15. According to the BLM, the challenges to the 177 completed wells are

moot, because a court cannot enjoin, preclude, or "undo" a completed project. BLM Response at 15.

The BLM also argues that it complied with NEPA. See BLM Response at 16-36. First, it contends that the BLM took a hard look at the impacts of the challenged wells. See BLM Response at 16. The BLM argues that the Plaintiffs have not presented new evidence since the preliminary injunction stage. See BLM Response at 16. Thus, according to the BLM, "the Court's original analysis continues to apply." BLM Response at 16. It argues that, because the additional Mancos Shale wells will not exceed the impacts accounted for in the 2003 RMP/EIS, the BLM has not violated NEPA. See BLM Response at 16. According to the BLM, the 2003 RMP/EIS accounted for 5,997 wells in the San Juan Basin. See BLM Response at 17. The BLM asserts that, from those 5,997 wells projected, it follows that the 3,960 predicted wells either drilled or to be drilled falls within the original prediction, so the 2003 RMP/EIS remains valid and the BLM can rely upon it. See BLM Response at 17.

The BLM contends that the Plaintiffs' argument, which asserts that the BLM did not consider the foreseeable effect of the 3,960 wells, is incorrect. See BLM Response at 17. It argues that the record demonstrates that the 2001 RFDS concluded that the Mancos Shale "may have significant potential as a shale gas candidate," and that there may be reservoir zones in the Mancos shale not yet recognized. BLM Response at 17. According to the BLM, the RFDS also recognized the potential for horizontal drilling and fracking in the Mancos Shale. See BLM Response at 17-18. The BLM asserts, moreover, that the 2003 RMP/EIS "noted that the Mancos Shale was a source of both oil and gas." BLM Response at 18. The BLM concedes that the 2003 RMP/EIS did not consider developing the Mancos Shale specifically, but the BLM notes

that analyzing the Mancos Shale was not the RMP/EIS' goal. See BLM Response at 18. Rather, according to the BLM, the 2003 RMP/EIS' goal is to analyze the "impacts of all foreseeable oil and gas development on federal lands in the San Juan Basin, regardless of geological formations targeted or technologies used." BLM Response at 18. The BLM also argues that the 2003 RMP/EIS anticipated fracking and "directional drilling," in addition to "other innovative drilling techniques." BLM Response at 18. According to the BLM, "[t]he RMP/EIS did not exclude horizontal drilling and multistage fracking from its analysis because both were widely used in similar formations elsewhere in the United States by 2003, and foreseeable in the Mancos Shale as soon as the market made them economically feasible." BLM Response at 19.

The BLM next contends that tiering to the RMP/EIS is appropriate, because the 2003 EMP/EIS considered fracking and horizontal drilling. See BLM Response at 21. It adds, however, that, even if the 2003 RMP/EIS did not consider fracking and horizontal drilling, tiering is still appropriate, because the 2003 RMP/EIS' analysis of vertical drilling would not be qualitatively different from horizontal drilling and fracking. See BLM Response at 21. According to the BLM, because horizontal drilling and fracking "result in the same types of impacts as other type of oil and gas development," including vertical drilling, tiering to the 2003 RMP/EIS, which considered the effects of vertical drilling, remains appropriate. See BLM Response at 21. The BLM argues that the Plaintiffs present no admissible evidence that horizontal drilling and fracking are so different from vertical drilling that tiering is inappropriate. See BLM Response at 22. It also argues that there is no record evidence that horizontal drilling causes so much more harm than vertical drilling that impacts from horizontal drilling exceed the impacts of the 9,942 wells analyzed in the 2003 RMP/EIS. See BLM Response at 23.

The BLM also argues that that the 2003 RMP/EIS considered the cumulative impacts of the 3,960 Mancos Shale wells, including the region's past, present, and reasonably foreseeable future oil and gas development. See BLM Response at 24-25. The BLM adds that its EAs effectively supplement the 2003 RMP/EIS' analysis of fracking and horizontal drilling. See BLM Response at 25. It also argues that the EAs "explain that fracking in the Mancos Shale is not anticipated to impact groundwater," because the Mancos Shale is separate from the relevant aquifers. BLM Response at 25. The BLM asserts that, contrary to the Plaintiffs' arguments, the 2003 RMP/EIS took a "hard look" at the cumulative impact the wells would have on climate change, because the RMP/EIS estimated the wells' greenhouse gas emissions. See BLM Response at 27.

Next, the BLM asserts that it complied with NEPA's public involvement requirements. See BLM Response at 31. According to the BLM, it satisfied those requirements by: (i) maintaining and updating a NEPA log on its website; (ii) posting notices for proposed wells in a public reading room; and (iii) hosting public meetings at the site of each proposed well. See BLM Response at 31. The BLM contends that it did not need to solicit additional public comment about the Mancos Shale horizontal drilling and fracking, because fracking and horizontal drilling is "routine in the San Juan Basin." BLM Response at 32. The BLM also argues that it is only required to notify the public of final EA and FONSIs. See BLM Response at 31. It contends that it satisfied those specific requirements, because, once it issued an APD decision, the BLM marked the APD as approved on the online NEPA log, and it placed final EAs, FONSIs and decision records in its public reading room and on its website. See BLM Response at 32-33. The BLM also contends that, while there was "some delay" in posting

"certain EAs and FONSIs in the reading room and online," NEPA does not have a notice deadline. See BLM Response at 33. The BLM adds that, even if it failed to give the requisite notice, such an error is harmless, because there has been no evidence of prejudice to the Plaintiffs. See BLM Response at 34. According to the BLM, the error is also harmless, because the Plaintiffs and BLM worked to rectify posting process errors together and the BLM provided the Plaintiffs relevant documents. See BLM Response at 35.

Finally, the BLM argues that it complied with the NHPA. See BLM Response at 36. The BLM argues that it complied with the NHPA "by defining the APE for each challenged APD based on the location of the proposed well and the types of known and suspected historic properties in the area, and assessing the adverse effects to historic properties both within and without the APE." BLM Response at 37. It also argues that the NHPA does not require the BLM to issue a separate APE analysis for direct and indirect effects. See BLM Response at 38 (citing 36 C.F.R. §§ 800.4(a)(1), 800.16(d)). The BLM contends that it did not violate the NHPA by failing to consult with the State Historic Preservation Office ("SHPO") after defining an APE that accounts for direct effects, because a SHPO consultation is required only when defining the APE is complicated or controversial. See BLM Response at 38-39. BLM also contends that it did not contravene the NHPA, because the "vast majority of historic properties near the challenged APDs are not landscape level properties" but are archeological sites. BLM Response at 39. It follows, according to the BLM, that indirect and cumulative effects such as air pollution, noise, and visual disturbances do not affect the archaeological sites' historic characteristics, and thus the BLM did not violate the NHPA. See BLM Response at 39. The BLM also argues that air pollution, noise, and visual disturbances do not adversely affect the

historic characteristics of Chaco Park and its satellite locations, so there is no NHPA violation. See BLM Response at 40. The BLM adds that, even if air pollution, noise, and visual disturbances do affect Chaco Park and its satellite locations, it is not foreseeable that those disturbances would affect those sites, especially because they are miles away from the oil wells, so there is no NHPA violation. See BLM Response at 40-41. Finally, the BLM argues that it has considered effects on historic properties, which, according to the BLM, is all that NHPA requires. See BLM Response at 41-42 ("[T]he NHPA only requires that an agency take procedural steps to identify cultural resources; it does not impose a substantive mandate on the agency to protect the resources.").

3. The Operators' Response.

The Operators also filed a response. See Operators' Response Brief, filed June 23, 2017 (Doc. 114)("Operators' Response"). According to the Operators' the main issue is not whether "newer and more complex technologies are being used to drill Mancos Shale wells," but, instead "whether the environmental impacts of those methods were adequately considered in the project specific EAs, or the programmatic RMP/EIS to which the EAs were tiered." Operators' Response at 9. The Operators contend that the BLM complied with NEPA, because "the impacts of the approved wells fell within the scope of the 9,942 wells studied in 2003." Operators' Response at 8-9. Although the Operators concede that any one horizontal drill may have more impact than a single vertical well, as a horizontal well requires a larger well pad and longer drilling times, see Operators' Response at 6, they argue that horizontal drilling "*decreases*" the overall impact compared to vertical drilling, because "fewer wells are needed to develop the resource," Operators Response at 6-7 (emphasis in original). They also argue that the 2003

RMP/EIS accounted for the impacts of horizontal drilling, so, according to the Operators, there is no NEPA violation. See Operators Response at 9.

The Operators also argue that the tiered 2014 EAs properly updated the 2003 RMP/EIS analysis. See Operators' Response at 11. In support of that contention, they note that the EAs since 2014 incorporate by reference "detailed cumulative air impact analysis" from the BLM's 2014 Air Resources Technical Report ("ARTR"), which describes "the air quality impacts of 21,150 existing oil and gas wells in the Basin, . . . future oil and gas drilling (including in the Mancos Shale), as well as impacts of other greenhouse gas sources." Operators' Response at 11-12. According to the Operators, the 2014 ARTR accounted specifically for the Mancos Shale formation, so the BLM was justified in relying on that report. See Operators' Response at 12.

The Operators echo the BLM's argument that the BLM does not need to analyze the 3,960 potential Mancos Shale wells as additional wells to the 9,942 wells analyzed in the 2003 RMP/EIS. See Operators' Response at 13-14. They also argue that, with regard to cumulative impact studies, NEPA does not require individual APDs to include such an expansive cumulative analysis. See Operators' Response at 14-15. The Operators add that the BLM was not required to halt its decision-making processes once it started the RMP amendment process, because to "hold otherwise would jeopardize or impair BLM's ability to manage the public lands, since it is often engaged in plan amendment or revision." Operators' Response at 17. The Operators also argue that the BLM adequately involved the public in its EA process for the same reasons that the BLM articulated. See Operators' Response at 18-20.

The Operators contend that the BLM complied with NHPA. See Operators' Response at 20. First, they contend that the NHPA does not protect the "Greater Chaco Landscape" -- a

67,000 square-mile region -- as the Plaintiffs assert, because the Greater Chaco landscape is not an historic property. See Operators' Response at 20-21. The Operators also argue that, even if the landscape did qualify as a historic property, "Diné fails to demonstrate how the landscape itself would be adversely affected in a way that would disqualify it from listing on the National register." Operators' Response at 22. The Operators' argue that the Mancos Shale wells will not contribute to changing the region to such a degree that it loses its historic status, because the Mancos Shale area has already been "subject to extensive oil and gas development under pre-existing oil and gas leases." See Operators' Brief at 22. They also argue that many of the landscape alterations Diné asserts -- visual and noise effects associated with drilling and completion -- are temporary in nature, so they "will not permanently alter the character of the landscape." Operators' Brief at 23.

The Operators contend that there was no NHPA violation, because the BLM properly followed the 2004 and 2014 Protocols. See Operators' Brief at 24. According to the Operators, the State Protocol requires the BLM to consult with the State Historic Preservation Office if and only if the APE is "not precisely defined by the State Protocol." Operators' Brief at 24. The Operators argue that the 2014 Protocol defines the APE as "the area of direct effect (as precisely defined for specified actions), and known historic properties indirectly affected in the vicinity, if BLM cultural resource specialists determine it is appropriate to the Area of Potential Effect." Operators' Brief at 24-25. The Operators argue that each proposed APD "applied the direct Area of Potential effect," and the BLM did not identify known historic properties outside the direct APE zone that might be indirectly affected, so, according to the Operators, the BLM complied with the 2004 and 2014 Protocols. Operators' Brief at 25. The Operators also argue that the

BLM properly complied with section 106's requirement that it consult regarding the effects of oil and gas development, because the BLM affirmed seventy-nine specially designated areas, it recognized two sites as Areas of critical environmental concern, and oil and gas leasing was either eliminated in the seventy-nine sites or subjected to strict restrictions. See Operators' Brief at 25-26.

Finally, the Operators argue that, should the Court determine that the Plaintiffs prevail, remand is the appropriate remedy as opposed to an injunction or vacatur. See Operators' Brief at 26. They contend that any deficiencies in the well approvals are not serious enough for vacatur or an injunction, because the BLM has employed "robust cumulative impact analyses" in its most recent RFDs, and "any NEPA errors that may have existed at one time have now been corrected." Operators' Brief at 27. Thus, according to the Operators, "if any NEPA or NHPA error exists, it can be addressed on remand without upsetting the APD approvals." Operators' Brief at 27. They add that any BLM error must be weighed against the harm to the Operators if APDs are vacated. See Operators' Brief at 28. The Operators argue that the harm they would suffer is dire, because their contractors and employees "rely on the continued viability of oil and gas development in northwestern New Mexico." Operators' Brief at 28. They conclude that remand is "the only appropriate remedy." Operators' Brief at 28.

4. API's Response.

The API responds and asserts many of the same arguments as the BLM and the Operators. See Intervenor-Defendant American Petroleum Institute's Opposition to Plaintiffs' Opening Merits Brief at 1-23, filed June 23, 2017 (Doc. 115)("API Response"). It emphasizes that the Court should deny the Plaintiffs' relief, because the Diné Brief largely reasserts

arguments that the Court has already disposed of at the preliminary injunction stage. See API Response at 3-6 ("[T]he Plaintiffs continuously repeat -- sometimes verbatim -- evidence and argument from their preliminary injunction briefing before this Court and the Tenth Circuit."). The API contends that the only new arguments the Plaintiffs assert are that: (i) the BLM failed consider greenhouse emissions and climate change; (ii) the BLM failed to allow public comment; (iii) the BLM violated NHPA. See API Response at 7. Nevertheless, API considers the Plaintiffs' old NEPA arguments and contends that the Court must defer to the BLM's determinations. See API Response at 9-10. It also asserts that the BLM was not required to issue a new or supplemental EIS, because there was no new information compelling a conclusion that the new wells would have affected the environment in a significant manner which the 2003 RMP/EIS did not already address. See API Response at 10.

API also argues, as the Operators did, that the Plaintiffs have not established that the balance of equities favor an injunction or vacatur over remand should the Court determine that the BLM violated NEPA or NHPA. See API Response at 13. It contends that the Plaintiffs' purported environmental harms are not that significant, because the Plaintiffs have already experienced a great deal of oil and gas development, as the San Juan Basin has been subject to drilling for more than 60 years. See API Response at 15 ("Under these circumstances, the incremental environmental impacts of the additional challenged APDs are both relative limited in comparison to the oil and gas rigs seemingly all over the place before Plaintiffs ever filed this lawsuit."). API also contends that the Plaintiffs health and safety concerns are not enough to demonstrate irreparable harm, because extensive New Mexico regulations ensure that all wells are safe. See API Response at 16-17. API adds that the Plaintiffs' harms are outweighed by the

public interest, because the enormous economic benefits of drilling have already been recognized. See API Brief at 18 (citing MOO at 98 n.25, 2015 WL 4997207, at *50 n.25). API also argues that the San Juan Basin drilling is an enormous job creator for the state. See API Brief at 19. Thus, according to API, the public benefit arising from horizontal drilling and fracking outweighs the Plaintiffs' purported environmental injury. See API Brief at 20-22. API concludes that the Court should deny the request for vacatur or injunctive relief. See API Brief at 23.

5. The Plaintiffs' Reply.

The Plaintiffs reply that they have standing. See Plaintiffs' Reply at 1, filed July 28, 2017 (Doc. 117)("Reply"). They contend that to allege an injury-in-fact, they are not required to show that they have visited each well site; they argue that, instead, they need only allege that they have "traversed through or within view of parcels of land where oil and gas development will occur and plans to return." Reply at 2 (citing S. Utah Wilderness All. v. Palma, 707 F.3d 1143 1155 (10th Cir. 2013)). The Plaintiffs allege that they have traversed or seen those parcels as demonstrated in declarations. See Reply at 3-4. The Plaintiffs also contend they have met the traceability requirement, because causation under NEPA is tied to the BLM's failure to comply with NEPA and not to the specific oil wells. See Reply at 4.

The Plaintiffs reiterate that the BLM violated NEPA for not conducting an analysis on the 382 Mancos Shale wells before authorizing them. See Reply at 6. They argue again that the 2003 RMP/EIS never contemplated or analyzed the cumulative impacts form horizontal drilling and fracking, so the BLM cannot rely on that study and statement to contend that they adhered to NEPA. See Reply at 7. Thus, according to the Plaintiffs, the "BLM should have updated its

cumulative impacts analysis," but the BLM failed to do so and thus violated NEPA. Reply at 7. The Plaintiffs also argue that, although fracking and horizontal drilling were widely used in 2003, that fact does not demonstrate that the 2003 RMP/EIS adequately considered those techniques. See Reply at 8-9. They also assert that the BLM violated NEPA, because the "record conclusively demonstrates that the RMP/EIS was focused only on the foreseeable impacts from 9,942 wells developed in economically feasibly gas-bearing formations at that time, not on the Mancos Shale." Reply at 9.

The Plaintiffs also argue that the cumulative impact of the 3,960 horizontal wells added to the wells already drilled exceeds the cumulative impact that the 2003 RMP/EIS analyzed. See Reply Brief at 11. They contend -- with the tables reproduced below -- that the surface impact, the water consumption, and the pollution levels all exceed what the 2003 RMP/EIS considered.

Surface Impacts		
Well Type	Acres (Per Well)	Estimated Total Impacts (3,945 vert./3,960 horiz.)
Vertical	2	7,890
Horizontal	5.2	20,592
	Total Combined	**28,482**
	Considered (2003 RMP/EIS)	**18,577**
	Percentage Increase	**53%**

Water Consumption		
Well Type	Gallons (Per Well)	Estimated Total Impacts (3,945 vert./3,960 horiz.)
Vertical	283,500	1,118,407,500
Horizontal	1,020,000	4,039,200,000
	Total Combined	**5,157,607,500**
	Considered (2003 RMP/EIS)	**2,818,557,000**
	Percentage Increase	**82%**

Air Pollution					
Well Type	Well Construction	NOx (tpy)	CO(tpy)	VOC(tpy)	PM_{10} (tpy)
Vertical	9	2.30	0.63	0.20	0.92
Horizontal	25	6.13	1.64	0.55	2.54
Percentage Increase		267%	260%	275%	276%
Est. Total Impacts (3.945 vert.)		20,869	2,485	789	3,629
Est. Total Impacts (3,960 horiz.)		24,275	6,494	2,178	10,058
Total Combined		**45,144**	**8,979**	**2,967**	**13,687**
Considered (2003 RMP/EIS)		**22,866**	**6,263**	**1,988**	**9,146**
Percentage Increase		**97%**	**43%**	**49%**	**50%**

See Reply at 11-12 (footnotes omitted). The Plaintiffs add that site-specific EAs do not cure the deficiency, because the EAs conflate the direct and indirect impact analysis. See Reply at 12. The Plaintiffs also argue that the 2003 RMP/EIS did not consider climate change, so could not have accounted for the increased impact the horizontal drilling and fracking wells would have had on climate change. See Reply at 13.

The Plaintiffs contend that the Court owes the BLM no deference in the NEPA context. See Reply at 14 (citing Park County v. Dep't of Agric., 817 F.2d 609, 620 (10th Cir. 1987)). They also reiterate their contention that the BLM failed to involve the public in the NEPA process. See Reply at 15. The Plaintiffs argue that, although the BLM provided information to the public through the internet, onsite meetings, notices of staking for individual wells, such notice was insufficient under NEPA, because "none of these actions provided information about the context or potential impacts of APD development." Reply at 15-16 ("BLM failed to provide the public with meaningful information about the direct, indirect, and cumulative impacts of BLM's decisions, prior to approving the wells."). The Plaintiffs contend that this lack of

information was prejudicial, because "public participation and informed agency decisionmaking are the twin aims at the heart of NEPA." Reply at 17.

The Plaintiffs reiterate that the BLM violated NHPA, because the BLM ignored indirect and cumulative affects to the characteristics of the historic property. See Reply at 17-18. They argue that even if the distance between Chaco Park and its satellites insulates them from the adverse noise and light pollution of the wells, the BLM still violated NHPA, because the BLM did not analyze what effect, if any, those pollutions would have on the sites. See Reply at 19. The Plaintiffs add that the BLM did not follow the 2014 Protocol, because, under the 2014 Protocol, the BLM is required to consider indirect effects, which, according to the plaintiffs, the BLM did not consider. See Reply at 20-21. The Plaintiffs assert that the BLM did not meet its NHPA obligations when it spoke to the SHPO as part of the 2003 RMP/EIS, because the 2003 RMP/EIS did not discuss the impacts to landscape-level historic properties. See Reply at 21.

The Plaintiffs aver that their claims are not moot, even though 177 wells have already been drilled or abandoned, because the Plaintiffs' injuries are not confined to "the acts of drilling, and persist even once wells are complete." Reply at 22. They argue that an agency action is not moot if the violation of the applicable law "can be undone," even if doing so would be expensive or complex. Reply at 23. The Plaintiffs add that the Court has "broad discretion to order equitable relief short of" well removal, such as "mitigation measures and restrictions on well operations." Reply at 23. They also argue that the Court can still issue a declaratory judgment. See Reply at 23. They conclude that the BLM's actions are "capable of repetition but evading review." Reply at 23-24 ("If BLM's mootness argument for APDs with already-drilled

wells prevails, nothing would prevent BLM from 'ignor[ing] the requirements of NEPA.'")(citing Cantrell v. City of Long Beach, 241 F.3d 674, 678 (9th Cir. 2001)).

The Plaintiffs also argue that they are entitled to the remedies which they seek, because the BLM's alleged NEPA violations are egregious. See Reply at 25 ("Here, vacatur is the only remedy that serves NEPA's fundamental purpose of requiring agencies to look *before* they leap.")(emphasis in original). The Plaintiffs argue that departing from the typical vacatur remedy is only appropriate in "unusual and limited circumstances." Reply at 25. They conclude that, if the Court determines that the Plaintiffs are correct on the merits, "they respectfully ask the court to bifurcate the remedy phase and allow for additional briefing, at which point they will satisfy the required elements for a permanent injunction." Reply at 26 (citing Monsanto v. Geertson Seed Farms, 561 U.S. 139, 156-57 (2010)).

LAW REGARDING STANDING

A federal court may hear cases only where the plaintiff has standing to sue. See Summers v. Earth Island Institute, 555 U.S. 488, 492-93 (2009). The plaintiff bears the burden of establishing standing. See, e.g., Steel Co. v. Citizens for a Better Env't, 523 U.S. 83, 104 (1998). The plaintiff must "allege . . . facts essential to show jurisdiction. If they fail to make the necessary allegations, they have no standing." FW/PBS v. City of Dallas, 493 U.S. 215, 231 (1990)(internal citations and quotations omitted). Moreover, where the defendant challenges standing, a court must presume lack of jurisdiction "unless the contrary appears affirmatively from the record." Renne v. Geary, 501 U.S. 312, 316 (1991)(quoting Bender v. Williamsport Area Sch. Dist., 475 U.S. 534, 546 (1986))(internal quotation marks omitted). "It is a long-settled principle that standing cannot be inferred argumentatively from averments in the

pleadings but rather must affirmatively appear in the record." Phelps v. Hamilton, 122 F.3d 1309, 1326 (10th Cir. 1997)(Henry, J.)(quoting FW/PBS v. City of Dallas, 493 U.S. at 231)(citations omitted)(internal quotation marks omitted).

"Article III of the Constitution limits the jurisdiction of federal courts to Cases and Controversies." San Juan Cty., Utah v. United States, 503 F.3d 1163, 1171 (10th Cir. 2007)(en banc). See U.S. Const. art. III, § 2. "[A] suit does not present a Case or Controversy unless the plaintiff satisfies the requirements of Article III standing." San Juan Cty., Utah v. United States, 503 F.3d at 1171. To establish standing, a plaintiff must show three things: "(1) an injury in fact that is both concrete and particularized as well as actual or imminent; (2) a causal relationship between the injury and the challenged conduct; and (3) a likelihood that the injury would be redressed by a favorable decision." Protocols, LLC v. Leavitt, 549 F.3d 1294, 1298 (10th Cir. 2008)(Hartz, J.)(internal quotation marks omitted).

"Standing is determined as of the time the action is brought." Smith v. U.S. Court of Appeals, for the Tenth Circuit, 484 F.3d 1281, 1285 (10th Cir. 2007)(Seymour, J.)(quoting Nova Health Sys. v. Gandy, 416 F.3d 1149, 1154 (10th Cir. 2005)(Ebel, J.)). In Smith v. U.S. Court of Appeals, for the Tenth Circuit, the Tenth Circuit rejected a plaintiff's standing to challenge the Colorado appellate courts' practice of deciding cases in non-precedential, unpublished opinions, which the plaintiff asserted allowed courts to affirm incorrect decisions without interfering with official, "published" law. 484 F.3d at 1285. The Tenth Circuit noted that the plaintiff had recently taken his state appeal and, therefore,

> was in no position to challenge the adequacy of state appellate review in cases culminating in unpublished opinions unless he could show that he would in fact receive such review from the state court of appeals (and from the state supreme court as well, if it took the case on certiorari).

484 F.3d at 1285.

By contrast, in Nova Health Sys. v. Gandy, the Tenth Circuit concluded that abortion providers had standing to challenge an Oklahoma parental-notification law on the grounds that they were in imminent danger of losing patients because of the new law. See 416 F.3d 1154. Although determining that there was standing, the Tenth Circuit was careful to frame the issue as whether, "as of June 2001 [the time the lawsuit was filed]," Nova Health faced any imminent likelihood that it would lose some minor patients seeking abortions. 416 F.3d at 1155. Moreover, while focusing on the time of filing, the Tenth Circuit allowed the use of evidence from later events -- prospective patients lost because of the notification law after the lawsuit began -- to demonstrate that the plaintiff faced an imminent threat as of the time of filing. See 416 F.3d at 1155.

In construing the standing doctrine, the Court has determined that an attorney running for office as a Court of Appeals of New Mexico judge lacked standing when that attorney alleged that the New Mexico attorney disciplinary counsel harmed his chances of election when the counsel published a summary suspension petition about him. See League of United Latin American Citizens v. Ferrera, 792 F. Supp. 2d 1222, 1233-39 (D.N.M. 2011)(Browning, J.). It so concluded, because the suspension petition's facts "were already known to voters" through the aggressive campaign tactics of the attorney's election rival, so the harm was not "fairly traceable to the Defendant's action." 792 F. Supp. 2d at 1238-39. The Court has, however, determined that a woman had standing to challenge a New Mexico criminal statute's constitutionality, even though the state had not yet filed charges against the woman, because the district attorney had not attested that he would not bring charges under the challenged statute. See Payne v. Wilder,

2017 WL 2257390, at *38 (D.N.M. Jan. 3, 2017)(Browning, J.). The Court reasoned that an injury in fact existed, despite the lack of a charge, because the district attorney's refusal to foreswear a prosecution demonstrated a "credible threat of prosecution." Payne v. Wilder, 2017 WL 2257390, at *38. In addition to the cases listed above, the Court has adjudicated standing issues many times. See, e.g., Abraham v. WPX Production Productions, LLC, 184 F. Supp. 3d 1150, 1197 (D.N.M. 2016)(Browning, J.)(concluding that oil-well royalty owners had standing to assert a breach of the implied duty to market under New Mexico and Colorado law); Northern New Mexicans Protecting Land Water and Rights v. United States, 161 F. Supp. 3d 1020, 1042 (D.N.M. 2016)(Browning, J.)(concluding that an association lacked standing to sue on behalf of its members, because the relief sought was damages); Jarita Mesa Livestock Grazing Ass'n v. U.S. Forest Service, 140 F. Supp. 3d 1123, 1170-75 (D.N.M. 2015)(Browning, J.)(concluding that livestock association whose members had ancestral ties to grazing land in Northern New Mexico had standing to bring a NEPA claim); Alto Eldorado Partners v. City of Santa Fe, 2009 WL 1312856, at *21, 25 (D.N.M. March 11, 2009)(Browning, J.)(concluding that a developer did not have standing to challenge a city ordinance, because the ordinance would only affect him if he "lost his current permits," which, at the time of the lawsuit, he had not lost)

LAW REGARDING MOOTNESS

Article III, Section 2 of the Constitution of the United States limits the federal courts' jurisdiction to actual cases and controversies. See U.S. Const. art. III § 2. "Federal courts are without authority to decide questions that cannot affect the rights of litigants in the case before them." Ford v. Sully, 773 F. Supp. 1457, 1464 (D. Kan. 1991)(O'Connor, C.J.)(citing North Carolina v. Rice, 404 U.S. 244, 246 (1971). See Johansen v. City of Bartlesville, 862 F.2d 1423,

1426 (10th Cir. 1988); Johnson v. Riveland, 855 F.2d 1477, 1480 (10th Cir. 1988)). "To qualify as a case fit for federal-court adjudication, an actual controversy must be extant at all stages of review, not merely at the time the complaint is filed." Arizonians for Official English v. Ariz., 520 U.S. 43, 67 (1997). See Rio Grande Silvery Minnow v. Bureau of Reclamation, 601 F.3d 1096, 1121 (10th Cir. 2010). Accordingly, if a case is moot, or becomes moot during any stage of the case, the court does not have jurisdiction to hear the case. A case becomes moot "when the issues presented are no longer 'live' or the parties lack a legally cognizable interest in the outcome." County of Los Angeles v. Davis, 440 U.S. 625, 631 (1979)(citing Powell v. McCormack, 395 U.S. 486, 496 (1969)).

"Before deciding that there is no jurisdiction, the district court must look at the way the complaint is drawn to see if it is drawn so as to claim a right to recover under the Constitution and the laws of the United States." Bell v. Hood, 327 U.S. 678, 682 (1946). Jurisdiction is not dependent on whether the plaintiff will succeed in his cause of action; jurisdiction is determined before the cause of action's details, both in law and fact, are considered. See Bell v. Hood, 327 U.S. at 682.

The Tenth Circuit recognized a distinction between mootness and standing in Lucero v. Bureau of Collection Recovery, Inc.:

> Like Article III standing, mootness is oft-cited as a constitutional limitation on federal court jurisdiction. *E.g.*, *Building & Constr. Dep't v. Rockwell Int'l Corp.*, 7 F.3d 1487, 1491 (10th Cir. 1993)("Constitutional mootness doctrine is grounded in the Article III requirement that federal courts only decide actual, ongoing cases or controversies."); *see* Matthew I. Hall, *The Partially Prudential Doctrine of Mootness*, 77 Geo. Wash. L. Rev. 562, 571 (2009)(citing footnote 3 in *Liner v. Jafco, Inc.*, 375 U.S. 301 . . . (1964), as the first occasion in which the Supreme Court expressly derived its lack of jurisdiction to review moot cases from Article III). But although issues of mootness often bear resemblance to issues of standing, their conceptual boundaries are not coterminous. *See Friends of the*

> *Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 189-92 . . . (2000). Indeed, the Supreme Court has historically recognized what are often called "exceptions" to the general rule against consideration of moot cases, as where a plaintiff's status is "capable of repetition yet evading review," *S. Pac. Terminal Co. v. Interstate Commerce Comm'n*, 219 U.S. 498, 515 . . . (1911), or where a defendant has ceased the challenged action but it is likely the defendant will "return to his old ways" -- the latter often referred to as the voluntary cessation exception, *United States v. W.T. Grant Co.*, 345 U.S. 629, 632 . . . (1953); *see also, e.g., City of Erie v. Pap's A.M.*, 529 U.S. 277 . . . (2000). These exceptions do not extend to the standing inquiry, demonstrating the contours of Article III as it distinctly pertains to mootness. *Friends of the Earth, Inc.*, 528 U.S. at 191, 120 . . . .

Lucero v. Bureau of Collection Recovery, Inc., 639 F.3d at 1242-43.

A claim may become moot if "(i) it can be said with assurance that there is no reasonable expectation that the alleged violation will recur, and (ii) interim relief or events have completely and irrevocably eradicated the effects of the alleged violation." Cty. of L.A. v. Davis, 440 U.S. 625, 631 (1979). The burden of establishing mootness is a heavy one. See Cty. of L.A. v. Davis, 440 U.S. at 631. Courts are permitted to take into account the relative likelihood of the events which a party asserts keep the dispute from becoming moot. See Golden v. Zwickler, 394 U.S. 103, 109 (1969)("We think that under all the circumstances of the case the fact that it was most unlikely that the Congressman would again be a candidate for Congress precluded a finding that there was 'sufficient immediacy and reality' here."). A case can become moot based on intervening events, such as settling the case, see U.S. Bancorp Mortgage Co. v. Bonner Mall P'ship, 513 U.S. 18, 25 (1994)("Where mootness results from settlement, the losing party has voluntarily forfeited his legal remedy by the ordinary processes of appeal . . . ."), or becoming a resident of the State whose residency laws one is challenging, see Sosna v. Iowa, 419 U.S. 393, 399 (1975)("If appellant had sued only on her own behalf, both the fact that she now satisfies the one-year residency requirement and the fact that she has obtained a divorce elsewhere would

make this case moot and require dismissal."). In comparison, while mootness, a statute of limitations, or some other legal doctrine may eventually bar a suit, one cannot lose standing once one has it. See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. at 190-92, ("Furthermore, if mootness were simply 'standing set in a time frame,' the exception to mootness that arises when the defendant's allegedly unlawful activity is 'capable of repetition, yet evading review,' could not exist.").

The Court has concluded that a due process claim is not moot where the plaintiff does not receive the precise remedy he has requested. See Salazar v. City of Albuquerque, 776 F. Supp. 2d 1217, 1235-36 (D.N.M. 2011)(Browning, J.)("Salazar"). In Salazar, a city bus driver brought a due process claim against the City of Albuquerque after being fired from his job. See 776 F. Supp. 2d at 1223. Although the employee was later reinstated, the Court determined that his due process claim was not moot, because he had asked for more than just reinstatement; he had also asked for punitive and back-pay damages. See 776 F. Supp. 2d at 1235-36. The Court has also determined that a claim is not necessarily moot even when a state court has previously dismissed the claim for lack of prosecution and for failure to appear, because there was still time for the plaintiff to seek reconsideration of the decision or an appeal. See Nieto v. University of New Mexico, 727 F. Supp. 2d 1176, 1191 (D.N.M. 2010)(Browning, J.).

LAW REGARDING JUDICIAL REVIEW OF AGENCY ACTION

Under the APA,

> [a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground

> that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: Provided, that any mandatory or injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance. Nothing herein (1) affects other limitations on judicial review or the power or duty of the court to dismiss any action or deny relief on any other appropriate legal or equitable ground; or (2) confers authority to grant relief if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.

5 U.S.C. § 702. The APA states that district courts can:

> (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;
> >
> > (B) contrary to constitutional right, power, privilege, or immunity;
> >
> > (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;
> >
> > (D) without observance of procedure required by law;
> >
> > (E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or
> >
> > (F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

5 U.S.C. § 706.

Under Olenhouse, 42 F.3d at 1560, "[r]eviews of agency action in the district courts [under the APA] must be processed as appeals. In such circumstances the district court should govern itself by referring to the Federal Rules of Appellate Procedure." 42 F.3d at 1580. See WildEarth Guardians v. U.S. Forest Serv., 668 F. Supp. at 1323. "As a group, the devices

appellate courts normally use are generally more consistent with the APA's judicial review scheme than the devices that trial courts generally use, which presume nothing about the case's merits and divide burdens of proof and production almost equally between the plaintiff and defendant." Northern New Mexicans Protecting Land and Water Rights v. United States, 2015 WL 8329509, at *9 (D.N.M. 2015)(Browning, J.).

1. Reviewing Agency Factual Determinations.

Under the APA, a reviewing court must accept an agency's factual determinations in informal proceedings unless they are "arbitrary [or] capricious," 5 U.S.C. § 706(2)(A), and its factual determinations in formal proceedings unless they are "unsupported by substantial evidence," 5 U.S.C. § 706(2)(E). The APA's two linguistic formulations amount to a single substantive standard of review. See Ass'n of Data Processing Serv. Orgs., Inc. v. Bd. of Govs. of the Fed. Reserve Sys., 745 F.2d 677, 683-84 (D.C. Cir. 1984)(Scalia, J.)(explaining that, as to factual findings, "there is no *substantive* difference between what [the arbitrary or capricious standard] requires and what would be required by the substantial evidence test, since it is impossible to conceive of a 'nonarbitrary' factual judgment supported only by evidence that is not substantial in the APA sense" (emphasis in original)). See also id. at 684 ("[T]his does not consign paragraph (E) of the APA's judicial review section to pointlessness. The distinctive function of paragraph (E) -- what it achieves that paragraph (A) does not -- is to require substantial evidence to be found *within the record of closed-record proceedings* to which it exclusively applies." (emphasis in original)).

In reviewing agency action under the arbitrary-or-capricious standard, a court considers the administrative record -- or at least those portions of the record that the parties provide -- and

not materials outside of the record. See 5 U.S.C. § 706 ("In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party."); Fed. R. App. P. 16 ("The record on review or enforcement of an agency order consists of . . . the order involved; . . . any findings or report on which it is based; and . . . the pleadings, evidence, and other parts of the proceedings before the agency."); Ass'n of Data Processing Serv. Orgs., Inc. v. Bd. of Govs. of the Fed. Reserve Sys., 745 F.2d at 684 ("[W]hether the administrator was arbitrary must be determined on the basis of what he had before him when he acted."). See also Franklin Sav. Ass'n v. Dir., Office of Thrift Supervision, 934 F.2d 1127, 1137 (10th Cir. 1991)("[W]here Congress has provided for judicial review without setting forth . . . procedures to be followed in conducting that review, the Supreme Court has advised such review shall be confined to the administrative record and, in most cases, no de novo proceedings may be had."). Tenth Circuit precedent indicates, however, that the ordinary evidentiary rules regarding judicial notice apply when a court reviews agency action. See New Mexico ex. rel. Richardson v. Bureau of Land Mgmt., 565 F.3d 683, 702 n.21 (10th Cir. 2009)(citing Fed. R. Evid. 201(b))("We take judicial notice of this document, which is included in the record before us in [another case]."); id. at 702 n.22 ("We conclude that the occurrence of Falcon releases is not subject to reasonable factual dispute and is capable of determination using sources whose accuracy cannot reasonably be questioned, and we take judicial notice thereof."). In contrast, the United States Courts of Appeals for the Ninth and Eleventh Circuits have held that taking judicial notice is inappropriate in APA reviews absent extraordinary circumstances or inadvertent omission from the administrative record. See Compassion Over Killing v. U.S. Food

& Drug Administration, 849 F.3d 849, 852 n.1 (9th Cir. 2017); National Min. Ass'n v. Secretary U.S. Dep't of Labor, 812 F.3d 843, 875 (11th Cir. 2016).

To fulfill its function under the APA, a reviewing court should engage in a "thorough, probing, in-depth review" of the record before it when determining whether an agency's decision survives arbitrary-or-capricious review. Wyoming v. United States, 279 F.3d 1214, 1238 (10th Cir. 2002)(citation omitted). The Tenth Circuit explains:

> In determining whether the agency acted in an arbitrary and capricious manner, we must ensure that the agency decision was based on a consideration of the relevant factors and examine whether there has been a clear error of judgment. We consider an agency decision arbitrary and capricious if the agency relied on factors which Congress had 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.

Colo. Envtl. Coal. v. Dombeck, 185 F.3d 1162, 1167 (10th Cir. 1999). Arbitrary-or-capricious review requires a district court "to engage in a substantive review of the record to determine if the agency considered relevant factors and articulated a reasoned basis for its conclusions," Olenhouse, 42 F.3d at 1580, but it is not to assess the wisdom or merits of the agency's decision, see Colo. Envtl. Coal. v. Dombeck, 185 F.3d at 1172. The agency must articulate the same rationale for its findings and conclusions on appeal upon which it relied in its internal proceedings. See SEC v. Chenery Corp., 318 U.S. 80 (1943). While the court may not supply a reasoned basis for the agency's action that the agency does not give itself, the court should "uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned." Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc., 419 U.S. 281, 286 (1974)(internal citations omitted).

2. Reviewing Agency Legal Interpretations.

In promulgating and enforcing regulations, agencies must interpret federal statutes, their own regulations, and the Constitution, and Courts reviewing those interpretations apply three different deference standards, depending on the law at issue. First, the federal judiciary accords considerable deference to an agency's interpretation of a statute that Congress has tasked it with enforcing. See United States v. Undetermined Quantities of Bottles of an Article of Veterinary Drug, 22 F.3d 235, 238 (10th Cir. 1994). This deference is known as Chevron deference, named after the supposedly seminal case, Chevron, U.S.A., Inc. v. Natural Resource Defense Council, Inc., 467 U.S. 837 (1984)("Chevron"). [14] Chevron deference is a two-step process[15] that first asks whether the statutory provision in question is clear and, if it is not, then asks whether the agency's interpretation of the unclear statute is reasonable. As the Tenth Circuit has explained,

[14]The case itself is unremarkable, uninstructive, does not explicitly outline the now-familiar two-step process of applying Chevron deference, and does not appear to have been intended to become a "big name" case at all. Its author, the Honorable John Paul Stevens, former Associate Justice of the Supreme Court, insists that the case was never intended to create a regime of deference, and, in fact, Justice Stevens became one of Chevron deference's greatest detractors in subsequent years. See generally Charles Evans Hughes, Justice Stevens and the Chevron Puzzle, 106 Nw. U. L. Rev. 551 (2012).

[15]There is, additionally, a threshold step -- the so-called step zero -- which asks whether Chevron deference applies to the agency decision at all. See Cass R. Sunstein, Chrevron Step Zero, 92 Va. L. Rev. 187 (2006). Step zero asks: (i) whether the agency is Chevron-qualified, meaning whether the agency involved is the agency charged with administering the statute -- for example, the EPA administers a number of statutes, among them the Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392; (ii) whether the decision fits within the category of interpretations afforded the deference -- interpretation of contracts, the Constitution, and the agency's own regulations are not afforded Chevron deference, see, e.g., U.S. West, Inc. v. FCC, 182 F.3d 1224 (10th Cir. 1999)("[A]n unconstitutional interpretation is not entitled to *Chevron* deference."); and (iii) whether Congress intended the agency to "speak with the force of law" in making the decision in question, United States v. Mead Corp., 533 U.S. 218, 229 (2001) -- opinion letters by the agency, for example, do not speak with the force of law and are thus not entitled to Chevron deference, see Christensen v. Harris Cty., 529 U.S. 576 (2000). An affirmative answer to all three inquiries results in the agency's decision passing step zero.

> we must be guided by the directives regarding judicial review of administrative agency interpretations of their organic statutes laid down by the Supreme Court in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 . . . (1984). Those directives require that we first determine whether Congress has directly spoken to the precise question at issue. If the congressional intent is clear, we must give effect to that intent. If the statute is silent or ambiguous on that specific issue, we must determine whether the agency's answer is based on a permissible construction of the statute.

United States v. Undetermined Quantities of Bottles of an Article of Veterinary Drug, 22 F.3d at 238 (citation omitted).

Chevron's second step is all but toothless, because if the agency's decision makes it to step two, it is upheld almost without exception. See Ronald M. Levin, The Anatomy of Chevron: Step Two Reconsidered, 72 Chi.-Kent L. Rev. 1253, 1261 (1997)("[T]he Court has never once struck down an agency's interpretation by relying squarely on the second *Chevron* step." (footnote omitted)); Jason J. Czarnezki, An Empirical Investigation of Judicial Decisionmaking, Statutory Interpretation, and the Chevron Doctrine in Environmental Law, 79 U. Colo. L. Rev. 767, 775 (2008)("Due to the difficulty in defining step two, courts rarely strike down agency action under step two, and the Supreme Court has done so arguably only twice."). Courts essentially never conclude that an agency's interpretation of an unclear statute is unreasonable.

Chevron's first step, in contrast, has bite, but there is substantial disagreement what it means. In an earlier case, the Court noted the varying approaches that different Supreme Court of the United States Justices have taken in applying Chevron deference:

> The Court notices a parallel between the doctrine of constitutional avoidance and the Chevron doctrine. Those Justices, such as Justice Scalia, who are most loyal to the doctrines and the most likely to apply them, are also the most likely to keep the "steps" of the doctrines separate: first, determining whether the statute is ambiguous; and, only then, assessing the merits of various permissible

> interpretations from the first step. These Justices are also the most likely to find that the statute is unambiguous, thus obviating the need to apply the second step of each doctrine. Those Justices more likely to find ambiguity in statutes are more likely to eschew applying the doctrines in the first place, out of their distaste for their second steps -- showing heavy deference to agencies for Chevron doctrine, and upholding facially overbroad statutes, for constitutional avoidance.

Griffin v. Bryant, 30 F. Supp. 3d 1139, 1193 n.23 (D.N.M.2014)(Browning, J.). A number of policy considerations animate Chevron deference, among them: (i) statutory interpretation, i.e., that Congress, by passing extremely open-ended and vague organic statutes, grants discretionary power to the agencies to fill in the statutory gaps; (ii) institutional competency, i.e., that agencies are more competent than the courts at filling out the substantive law in their field; (iii) political accountability, i.e., that agencies, as executive bodies which the President of the United States of America heads, can be held politically accountable for their interpretations; and (iv) efficiency, i.e., that numerous, subject-matter specialized agencies can more efficiently promulgate the massive amount of interpretation required to maintain the modern regulatory state -- found in the Code of Federal Regulations and other places -- than a unified but Circuit-fragmented federal judiciary can.

Second, when agencies interpret their own regulations -- to, for example, adjudicate whether a regulated party was in compliance with them -- courts accord agencies what is known as Auer or Seminole Rock deference. See Auer v. Robbins, 519 U.S. 452 (1997)("Auer"); Bowles v. Seminole Rock & Sand Co., 325 U.S. 410 (1945). This deference is applied in the same manner as Chevron deference and is substantively identical. There would be little reason to have a separate name for this doctrine, except that its logical underpinnings are much shakier, and its future is, accordingly, more uncertain. Justice Scalia, after years of applying the doctrine followed by years of questioning its soundness, finally denounced Auer deference in 2013 in his

dissent in Decker v. Northwest Environmental Defense Center, 568 U.S. 597 (2013). The Court cannot describe the reasons for Justice Scalia's abandonment of the doctrine better than the Justice himself:

> For decades, and for no good reason, we have been giving agencies the authority to say what their rules mean, under the harmless-sounding banner of "defer[ring] to an agency's interpretation of its own regulations." *Talk America, Inc. v. Michigan Bell Telephone Co.*, [564] U.S. [50], 131 S. Ct. 2254, 2265 . . . (2011) (Scalia, J., concurring). This is generally called *Seminole Rock* or *Auer* deference.
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> . . . .
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> The canonical formulation of *Auer* deference is that we will enforce an agency's interpretation of its own rules unless that interpretation is "plainly erroneous or inconsistent with the regulation." But of course whenever the agency's interpretation of the regulation is different from the fairest reading, it is in that sense "inconsistent" with the regulation. Obviously, that is not enough, or there would be nothing for *Auer* to do. In practice, *Auer* deference is *Chevron* deference applied to regulations rather than statutes. The agency's interpretation will be accepted if, though not the fairest reading of the regulation, it is a plausible reading -- within the scope of the ambiguity that the regulation contains.
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> Our cases have not put forward a persuasive justification for *Auer* deference. The first case to apply it, *Seminole Rock*, offered no justification whatever -- just the *ipse dixit* that "the administrative interpretation . . . becomes of controlling weight unless it is plainly erroneous or inconsistent with the regulation." Our later cases provide two principal explanations, neither of which has much to be said for it. First, some cases say that the agency, as the drafter of the rule, will have some special insight into its intent when enacting it. The implied premise of this argument -- that what we are looking for is the agency's intent in adopting the rule -- is false. There is true of regulations what is true of statutes. As Justice Holmes put it: "[w]e do not inquire what the legislature meant; we ask only what the statute means." Whether governing rules are made by the national legislature or an administrative agency, we are bound by what they say, not by the unexpressed intention of those who made them.
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> The other rationale our cases provide is that the agency possesses special expertise in administering its "'complex and highly technical regulatory program.'" That is true enough, and it leads to the conclusion that agencies and not courts should make regulations. But it has nothing to do with who should interpret regulations -- unless one believes that the purpose of interpretation is to

make the regulatory program work in a fashion that the current leadership of the agency deems effective. Making regulatory programs effective is the purpose of rulemaking, in which the agency uses its "special expertise" to formulate the best rule. But the purpose of interpretation is to determine the fair meaning of the rule -- to "say what the law is." Not to make policy, but to determine what policy has been made and promulgated by the agency, to which the public owes obedience. Indeed, since the leadership of agencies (and hence the policy preferences of agencies) changes with Presidential administrations, an agency head can only be sure that the application of his "special expertise" to the issue addressed by a regulation will be given effect if we adhere to predictable principles of textual interpretation rather than defer to the "special expertise" of his successors. If we take agency enactments as written, the Executive has a stable background against which to write its rules and achieve the policy ends it thinks best.

Another conceivable justification for *Auer* deference, though not one that is to be found in our cases, is this: If it is reasonable to defer to agencies regarding the meaning of statutes that Congress enacted, as we do per *Chevron*, it is a fortiori reasonable to defer to them regarding the meaning of regulations that they themselves crafted. To give an agency less control over the meaning of its own regulations than it has over the meaning of a congressionally enacted statute seems quite odd.

But it is not odd at all. The theory of *Chevron* (take it or leave it) is that when Congress gives an agency authority to administer a statute, including authority to issue interpretive regulations, it implicitly accords the agency a degree of discretion, which the courts must respect, regarding the meaning of the statute. While the implication of an agency power to clarify the statute is reasonable enough, there is surely no congressional implication that the agency can resolve ambiguities in its own regulations. For that would violate a fundamental principle of separation of powers -- that the power to write a law and the power to interpret it cannot rest in the same hands. "When the legislative and executive powers are united in the same person . . . there can be no liberty; because apprehensions may arise, lest the same monarch or senate should enact tyrannical laws, to execute them in a tyrannical manner." Montesquieu, *Spirit of the Laws* bk. XI, at 151-152 (O. Piest ed., T. Nugent transl. 1949). Congress cannot enlarge its own power through *Chevron* -- whatever it leaves vague in the statute will be worked out by someone else. *Chevron* represents a presumption about who, as between the Executive and the Judiciary, that someone else will be. (The Executive, by the way -- the competing political branch -- is the less congenial repository of the power as far as Congress is concerned.) So Congress's incentive is to speak as clearly as possible on the matters it regards as important.

But when an agency interprets its own rules -- that is something else. Then the power to prescribe is augmented by the power to interpret; and the incentive is to speak vaguely and broadly, so as to retain a "flexibility" that will enable "clarification" with retroactive effect. "It is perfectly understandable" for an agency to "issue vague regulations" if doing so will "maximiz[e] agency power." Combining the power to prescribe with the power to interpret is not a new evil: Blackstone condemned the practice of resolving doubts about "the construction of the Roman laws" by "stat[ing] the case to the emperor in writing, and tak[ing] his opinion upon it." 1 Wm. Blackstone, *Commentaries on the Laws of England* 58 (1765). And our Constitution did not mirror the British practice of using the House of Lords as a court of last resort, due in part to the fear that he who has "agency in passing bad laws" might operate in the "same spirit" in their interpretation. The Federalist No. 81, at 543-544 (Alexander Hamilton)(J. Cooke ed. 1961). *Auer* deference encourages agencies to be "vague in framing regulations, with the plan of issuing 'interpretations' to create the intended new law without observance of notice and comment procedures." *Auer* is not a logical corollary to *Chevron* but a dangerous permission slip for the arrogation of power.

It is true enough that *Auer* deference has the same beneficial pragmatic effect as *Chevron* deference: The country need not endure the uncertainty produced by divergent views of numerous district courts and courts of appeals as to what is the fairest reading of the regulation, until a definitive answer is finally provided, years later, by this Court. The agency's view can be relied upon, unless it is, so to speak, beyond the pale. But the duration of the uncertainty produced by a vague regulation need not be as long as the uncertainty produced by a vague statute. For as soon as an interpretation uncongenial to the agency is pronounced by a district court, the agency can begin the process of amending the regulation to make its meaning entirely clear. The circumstances of this case demonstrate the point. While these cases were being briefed before us, EPA issued a rule designed to respond to the Court of Appeals judgment we are reviewing. It did so (by the standards of such things) relatively quickly: The decision below was handed down in May 2011, and in December 2012 the EPA published an amended rule setting forth in unmistakable terms the position it argues here. And there is another respect in which a lack of *Chevron*-type deference has less severe pragmatic consequences for rules than for statutes. In many cases, when an agency believes that its rule permits conduct that the text arguably forbids, it can simply exercise its discretion not to prosecute. That is not possible, of course, when, as here, a party harmed by the violation has standing to compel enforcement.

In any case, however great may be the efficiency gains derived from *Auer* deference, beneficial effect cannot justify a rule that not only has no principled basis but contravenes one of the great rules of separation of powers: He who writes a law must not adjudge its violation.

Decker v. Nw. Envtl. Def. Ctr., 568 U.S. 597, 616-21 (Scalia, J., dissenting)(alterations in original)(citations omitted). Although the Court shares Justice Scalia's concerns about Auer deference, it is, for the time being, the law of the land, and, as a federal district court, the Court must apply it.[16]

Last, courts afford agencies no deference in interpreting the Constitution. See U.S. West, Inc. v. FCC, 182 F.3d 1224, 1231 (10th Cir. 1999)("[A]n unconstitutional interpretation is not entitled to *Chevron* deference. . . . [D]eference to an agency interpretation is inappropriate not only when it is conclusively unconstitutional, but also when it raises serious constitutional questions." (citing, e.g., Rust v. Sullivan, 500 U.S. 173, 190-91 (1991))). Courts have superior competence in interpreting -- and constitutionally vested authority and responsibility to interpret -- the Constitution's content. The presence of a constitutional claim does not take a court's review outside of the APA, however -- § 706(2)(B) specifically contemplates adjudication of constitutional issues -- and courts must still respect agency fact-finding and the administrative record when reviewing agency action for constitutional infirmities; they just should not defer to the agency on issues of substantive legal interpretation. See, e.g., Robbins v. U.S. Bureau of Land Mgmt., 438 F.3d 1074, 1085 (10th Cir. 2006)("We review Robbins' [constitutional] due process claim against the [agency] under the framework set forth in the APA.").

[16]Clarence Thomas, Associate Justice of the Supreme Court, and Neil Gorsuch, Associate Justice of the Supreme Court, have recently echoed Justice Scalia's concerns with Auer deference and have called on the Supreme Court to reconsider and overrule Auer. See Garco Construction, Inc. v. Speer, 138 S. Ct. 1052, 1052-53 (2018)(dissenting from denial of certiorari).

3. **Waiving Sovereign Immunity.**

The APA waives sovereign immunity with respect to non-monetary claims. See 5 U.S.C. § 702. The statute provides:

> An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States:

5 U.S.C. § 702. Claims for money damages seek monetary relief "to substitute for a suffered loss." Normandy Apartments, Ltd. v. U.S. Dep't of Hous. & Urban Dev., 554 F.3d 1290, 1298 (10th Cir. 2009)(emphasis in original). Claims that do not seek monetary relief or that seek "specific remedies that have the effect of compelling monetary relief" are not claims for monetary damages. Normandy Apartments, Ltd. v. U.S. Dep't of Hous. & Urban Dev., 554 F.3d at 1298. To determine whether a claim seeks monetary relief, a court must "look beyond the face of the complaint" and assess the plaintiff's prime object or essential purpose; "'[a] plaintiff's prime objective or essential purpose is monetary unless the non-monetary relief sought has significant prospective effect or considerable value apart from the claim for monetary relief.'" Normandy Apartments, Ltd. v. U.S. Dep't of Hous. & Urban Dev., 554 F.3d at 1296 (quoting Burkins v. United States, 112 F.3d 444, 449 (10th Cir. 1997)).

The APA's sovereign immunity waiver for claims "seeking relief other than money damages" does not apply, however, "if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought." 5 U.S.C. § 702. The Tucker Act, 28 U.S.C. §§ 1346, 1491, permits district courts to hear some claims against the United States, but it also

states that "district courts shall not have jurisdiction of any civil action or claim against the United States founded upon any express or implied contract with the United States." 28 U.S.C. § 1346(a)(2). It follows that the APA does not waive the United States' sovereign immunity as to contract claims even when those claims seek relief other than money damages, such as declaratory or injunctive relief. See Normandy Apartments, Ltd. v. U.S. Dep't of Hous. & Urban Dev., 554 F.3d at 1295. Consequently, two questions determine whether the APA waives the United States' sovereign immunity as to a particular claim: "First, does [the] claim seek 'relief other than money damages,' such that the APA's general waiver of sovereign immunity is even implicated? Second, does the Tucker Act expressly or impliedly forbid the relief that Normandy seeks, such that the APA's waiver does not apply?" Normandy Apartments, Ltd. v. U.S. Dep't of Hous. & Urban Dev., 554 F.3d at 1296 (quoting 5 U.S.C. § 702).

LAW REGARDING PERMANENT INJUNCTION

> To attain a permanent injunction, a plaintiff must demonstrate:
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> > (i) that it has suffered an irreparable injury; (ii) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (iii) that, considering the balance of hardships between the plaintiff and the defendant, a remedy in equity is warranted; and (iv) that the public interest would not be disserved by a permanent injunction.

eBay, Inc. v. MercExchange, LLC, 547 U.S. 388, 391 (2006). The Tenth Circuit has formulated that test as: "(1) actual success on the merits; (2) irreparable harm unless the injunction is issued; (3) the threatened injury outweighs the harm that the injunction may cause the opposing party; and (4) the injunction if issues, will not adversely affect the public interest." Southwest Stainless, LP v. Sappington, 582 F.3d 1176, 1191 (10th Cir. 2009). See Klein-Becker USA, LLC v. Englert, 711 F.3d 1153, 1164 (10th Cir. 2013). "The decision to grant or deny

permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion." eBay, Inc. v. MercExchange, LLC, 547 U.S. at 391. See Southwest Stainless, LP v. Sappington, 582 F.3d at 1191 ("The district court's discretion in this context is necessarily broad and a strong showing of abuse must be made to reverse it."). "An injunction is an extraordinary remedy to prevent future violations, and should be used sparingly." Copar Pumice Co., Inc. v. Morris, No. 07-0079, 2009 WL 5201799, at *15 (D.N.M. October 23, 2009)(Browning, J.)(citing Ute Indian Tribe of the Uintah & Ouray Reservation v. Utah, 144 F.3d 1513, 1522 (10th Cir. 1997)).

"A district court may find irreparable harm 'based upon evidence suggesting that it is impossible to precisely calculate the amount of damage plaintiff will suffer.'" Southwest Stainless, LP v. Sappington, 582 F.3d at 1191 (quoting Equifax Servs., Inc. v. Hitz, 905 F.2d 1355, 1361 (10th Cir. 1990)). In Copar Pumice Co., Inc. v. Morris, for example, the Court denied a permanent injunction, because the plaintiff did not demonstrate that damages could not compensate the Fourth-Amendment search injury it had suffered. See 2009 WL 5201799, at *15. The Court further concluded that the plaintiff had "shown few, if any, damages other than attorney's fees and costs," and, accordingly, the extraordinary remedy sought -- a permanent injunction -- was inappropriate. 2009 WL 5201799, at *15.

Injunctive relief requested is subject to Article III mootness. See WildEarth Guardians v. Public Service Co. of Colorado, 690 F.3d 1174, 1190-91 (10th Cir. 2012); State of N.N. ex rel. New Mexico State Highway Dept. v. Goldschmidt, 629 F.2d 665, 669 (10th Cir. 1980). A case becomes moot "when the issues presented are no longer 'live' or the parties lack a legally cognizable interest in the outcome." Cty. of L.A. v. Davis, 440 U.S. 625, 631 (1979).

> Like Article III standing, mootness is oft-cited as a constitutional limitation on federal court jurisdiction. *E.g.*, *Building & Constr. Dep't v. Rockwell Int'l Corp.*, 7 F.3d 1487, 1491 (10th Cir. 1993)("Constitutional mootness doctrine is grounded in the Article III requirement that federal courts only decide actual, ongoing cases or controversies). . . . But although issues of mootness often bear resemblance to issues of standing, their conceptual boundaries are not coterminous. . . . [T]he Supreme Court has historically recognized what are often called 'exceptions' to the general rule against consideration of moot cases, as where a plaintiff's status is 'capable of repetition yet evading review,' *S. Pac. Terminal Co. v. Interstate Commerce Comm'n*, 219 U.S. 498 (1911), or where a defendant has ceased the challenged action but it is likely the defendant will 'return to his old ways' -- the latter often referred to as the voluntary cessation exception, *United States v. W.T. Grant Co.*, 345 U.S. 498, 515 (1911).

Lucero v. Bureau of Collection Recovery, Inc., 639 F.3d 1239, 1242 (10th Cir. 2011). When injunctive relief does not redress plaintiffs' particular injuries, the injunctive relief requested is rendered moot. See WildEarth Guardians v. Public Service Co., 690 F.3d at 1191 (citing United States v. Vera-Flores, 496 F.3d 1177, 1180 (10th Cir. 2007)). Similarly, if the injunction would have no present-day effect, the injunctive relief request is also rendered moot. See Utah Animal Rights Coalition v. Salt Lake City Corp., 371 F.3d 1248, 1257 (10th Cir. 2004)("The alleged violation took place in 2001, the Olympics have come and gone, and neither temporary restraining order, preliminary injunction, nor permanent injunction could have any present-day effect.").

As already noted, mootness is subject to the voluntary-cessation exception. See Brown v. Buhman, 822 F.3d 1151, 1166 (10th Cir. 2016). Under that exception, "voluntary cessation of challenged conduct does not ordinarily render a case moot because a dismissal for mootness would permit a resumption of the challenged conduct as soon as the case is dismissed." Brown v. Buhman, 822 F.3d at 1166. "This rule is designed to prevent gamesmanship. If voluntary cessation automatically mooted a case, 'a defendant could engage in unlawful conduct, stop

when sued to have the case declared moot, then pick up where he left off, repeating this cycle until he achieves his unlawful ends." Brown v. Buhman, 822 F.3d at 1166 (quoting Already, LLC v. Nike, Inc., 568 U.S. 85, 91 (2013)). Nevertheless, a defendant's voluntary cessation may render a case moot, if "the defendant carries the formidable burden of showing that it is absolutely clear the allegedly wrongful behavior could not reasonably be expected to recur." Brown v. Buhman, 822 F.3d at 1166 (quoting Already, LLC v. Nike, Inc., 568 U.S. 85, 91 (2013)).

LAW REGARDING NEPA

NEPA requires federal agencies to

> include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --
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> > (i) the environmental impact of the proposed action,
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> > (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
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> > (iii) alternatives to the proposed action,
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> > (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
> >
> > (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332(C). "Although labeled an 'environmental' statute, NEPA is in essence a *procedural* statute; it does 'not require agencies to elevate environmental concerns over other appropriate considerations.'" Park Cty. Res. Council, Inc. v. U.S. Dep't of Agric., 817 F.2d 609, 620 (10th Cir. 1987)(emphasis in original)(quoting Baltimore Gas & Elec. Co. v. Nat. Res. Def.

Council, Inc., 462 U.S. 87, 97 (1983)). NEPA's procedural requirements exist to prevent "precipitous federal decision making at the agency level which may fail to adequately consider the environmental ramifications of agency actions." Park Cty. Res. Council, Inc. v. U.S. Dep't of Agric., 817 F.2d at 620. "NEPA merely prohibits uninformed -- rather than unwise -- agency action." Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351 (1989)(Stevens, J.).

Regulations provide guidance on NEPA's implementation. See 40 C.F.R. §§ 1500-08. Those regulations are entitled to substantial deference. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 355-56 (1989); Andrus v. Sierra Club, 442 U.S. 347, 358 (1979). CEQ regulations set out three ways that agencies can comply with § 4332(C)'s "detailed statement" requirement for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(C). First, an agency can satisfy that statutory requirement by preparing a detailed statement, called an EIS, that conforms to regulations regarding its format, content, and methodology. See 40 C.F.R. § 1502, 1508.11.

Second, if an agency is unsure whether an EIS is required for a proposed action, i.e., whether the action qualifies as a "major Federal action[] significantly affecting the quality of the human environment," 42 U.S.C. § 4332(C), the agency may prepare an EA, see 40 C.F.R. §§ 1503(a), 1501.4(b). An EA "provide[s] sufficient evidence and analysis for determining whether to prepare" an EIS or, alternatively, "a finding of no significant impact," 40 C.F.R. § 1508.9(a)(1), which is "a document . . . briefly presenting the reasons why an action . . . will not have a significant effect on the human environment [such that an EIS] therefore will not be prepared," 40 C.F.R. § 1508.13. See 40 C.F.R. § 1502.2 (stating that, "[a]s in a finding of no significant impact," in an EIS' treatment of "other than significant issues[,] . . . there should be

only enough discussion to show why more study is not warranted"). EAs also facilitate the preparation of an EIS when one is necessary, and they help agencies comply with NEPA when an EIS is not necessary. See 40 C.F.R. § 1508.9(a)(2)-(3). An EA needs to include "brief discussions of the need for the proposal, of alternatives as required by [42 U.S.C. § 4332(E), and] of the environmental impacts of the proposed action and alternatives." 40 C.F.R. § 1508.9(b). Section 4332(E) requires agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. § 4332(E).

Third, an agency can determine that an EIS is not required without needing to prepare an EA when the proposed action falls within a categorical exclusion ("CE"). See 40 C.F.R. § 1508.4. A CE is "a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in [NEPA] procedures adopted by a Federal agency." 40 C.F.R. § 1508.4. See Utah Envtl. Cong. v. Russell, 518 F.3d 817, 821 (10th Cir. 2008); WildEarth Guardians v. U.S. Forest Serv., 668 F. Supp. 2d at 1321-22.

LAW REGARDING THE NHPA

The NHPA "requires each federal agency to take responsibility for the impact that its activities may have upon historic resources, and establishes the Advisory Council on Historic Preservation . . . to administer the Act." Nat'l Mining Ass'n v. Fowler, 324 F.3d 752, 755 (D.C. Cir. 2003)(internal quotation marks omitted). Like NEPA, the NHPA is a procedural statute, and not a substantive one. See Friends Of The Atglen-Susquehanna Trail v. Surface Transp. Bd., 252 F.3d 246, 252 (3d Cir. 2001). In general, the NHPA requires that a federal agency take into

account any adverse effects on historical or culturally significant sites before taking action that might harm such sites. See Friends Of The Atglen-Susquehanna Trail v. Surface Transp. Bd., 252 F.3d at 252; Pueblo of Sandia v. United States, 50 F.3d 856, 859 (10th Cir. 1995). To comply with this requirement, federal agencies must engage in consultation with parties such as the SHPO and any potentially affected Indian Tribes -- through a process referred to as "Section 106 consultation" -- to determine whether historic properties or traditional cultural properties exist in the area of the planned activity.

Under § 106 of the NHPA, the Secretary of the Interior must consult with the SHPO on "federal undertakings" that may affect historic properties. The Department of the Interior must identify the historic properties that the undertaking might affect, assess the property's historical significance, determine if there will be an adverse effect to the property, consider ways to reduce or avoid such effects, and provide an opportunity for the Advisory Council on Historic Preservation to review and comment on the undertaking. This process should include "background research, consultation, oral history interviews, sample field investigations, and field surveys." 36 C.F.R. § 800.4.

An Indian Tribe may assume all or part of the SHPO's functions with regard to Tribal lands if, among other things, the Tribe designates a Tribal preservation official to administer the program. In such cases, the Tribal Historic Preservation Officer ("THPO") is the official representative for purposes of § 106 consultation. 36 C.F.R. §§ 800.2(c)(2)(i)(A), 800.3(c)(1). Consultation with an Indian Tribe must recognize the government-to-government relationship between the United States and the Tribe, and the consultation should be conducted in a manner "sensitive to the concerns and needs of the Indian tribe." 36 C.F.R. § 800.2(c)(2)(ii).

Consultation should provide the Tribe with "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(2)(ii). Tribal consultation should be conducted concurrently with NEPA analyses, as historic and cultural resources are expressly included among the factors to be considered in an EIS. See 36 C.F.R. § 800.8.

ANALYSIS

The Court concludes that the Plaintiffs have standing, because they have shown an "alleged increased environmental risk" and an aesthetic injury, which are constitutionally cognizable injuries, Committee to Save the Rio Hondo v. Lucero, 102 F.3d 445, 449 (10th Cir. 1996); see Lujan v. Defenders of Wildlife, 504 U.S. 555, 562-63 (1992)("Lujan"), that are fairly traceable to the "agency's alleged failure to follow the National Environmental Policy Act's procedures," Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452, and which a favorable ruling could likely redress. The Plaintiffs are also challenging final agency action within the APA's meaning for most, but not all, of the relevant APDs. The Court also concludes that the Plaintiffs' claims are not moot, except as to the challenged wells which have been permanently abandoned, because only permanent abandonment makes it "absolutely clear that the allegedly wrongful behavior could not reasonably be expected to recur," Friends of the Earth, Inc. v Laidlaw Environmental Services (TOC), Inc., 528 U.S. 167, 189 (2000)(internal quotations omitted).

The BLM did not violate NEPA, because the BLM appropriately analyzed the impacts of horizontal drilling and hydraulic fracturing, and "any difference in environmental impacts between the new technology and the technology that the 2003 RMP/EIS analyzed are insignificant," Dine, 2015 WL 4997207, at *45. The BLM complied with NEPA's public involvement requirements, because it posted information about its proposed wells on its public website and invited the public to meetings about proposed wells. Although there was a delay in furnishing final EAs to the public, such delay did not violate NEPA, as the BLM made those EAs available promptly on request. The BLM also did not violate the NHPA, because it defined an APE for each well, considered the effects on historic sites within that APE, and made determinations of no effect, no adverse effect, and adverse effect, as appropriate. Because Chaco Park and its satellites are outside those wells' APEs, the BLM was not required to consider the indirect effects the wells would have on Chaco Park and its satellites. The APEs drawn for those wells did not violate the NHPA by excluding Chaco Park and its satellites, because the BLM followed the 2004 and 2014 protocols in drawing those APEs. Finally, if the Court were to conclude that the BLM had violated NEPA or the NHPA, vacatur with remand would be the proper remedy for the NEPA violation, but remand without vacatur would be the proper remedy for the NHPA violation. The balance of harms favors vacatur for a potential NEPA violation, but not for the aesthetic NHPA violation. Accordingly, vacatur is proper for a NEPA violation, but not the NHPA violation. A permanent injunction would be improper, because the presumption favors vacatur and, in this case, vacatur more properly addresses the harm.

I. THE PLAINTIFFS HAVE STANDING TO PURSUE THEIR NEPA AND NHPA CLAIMS.

The Court concludes that the Plaintiffs have standing to pursue both their NEPA and NHPA claims. The "irreducible constitutional minimum of standing contains three elements." Lujan, 504 U.S. at 560. The first is a concrete and particularized injury, which is "actual or imminent," and not "conjectural or hypothetical." Lujan, 504 U.S. at 560. "[A] plaintiff claiming injury from environmental damage must use the area affected by the challenged activity and not an area roughly in the vicinity of it." Lujan, 504 U.S. at 555-56. "While generalized harm to the forest or the environment will not alone support standing, if that harm affects the recreational or even the mere esthetic interests of the plaintiff, that will suffice." Summers v. Earth Island Institute, 555 U.S. 488, 494 (2009). That a plaintiff "had visited the areas of the projects before the projects commenced proves nothing." Lujan, 504 U.S. at 564 (internal quotation marks omitted). Professing an intent "to return to the places they had visited before . . . is simply not enough. Such 'some day' intentions -- without any description of concrete plans, or indeed even any specification of *when* the some day will be -- do not support a finding of the 'actual or imminent' injury that our cases require." Lujan, 504 U.S. at 564 (emphasis in original).

The Tenth Circuit has held that, "under the National Environmental Policy Act, an injury of alleged increased environmental risks due to an agency's uninformed decisionmaking may be the foundation for injury in fact under Article III." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. "[A] plaintiff must not only show that the agency's disregard of a procedural requirement results in an increased risk of environmental harm, but a plaintiff must also show the increased risk is to the litigant's concrete and particularized interests." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. "To demonstrate that the increased risk of harm injures

the plaintiff's concrete interests, the litigant must establish either its 'geographical nexus' to, or actual use of the site where the agency will take or has taken action such that it may be expected to suffer the environmental consequences of the action." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449.

> Ultimately then, the injury in fact prong of the standing test of Article III breaks down into two parts: (1) the litigant must show that in making its decision without following the National Environmental Policy Act's Procedures, the agency created an increased risk of actual, threatened, or imminent environmental harm; and (2) the litigant must show that the increased risk of environmental harm injures its concrete interests by demonstrating either its geographical nexus to, or actual use of the site of the agency action.

Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449.

Second, the injury must be "fairly . . . trace[able] to the challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court." Lujan, 504 U.S. at 560 (alterations in original). "[O]nce the plaintiff has established the likelihood of the increased risk for purposes of injury in fact, to establish causation . . . the plaintiff need only trace the risk of harm to the agency's alleged failure to follow the National Environmental Policy Act's procedures." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452.

Third, "it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." Lujan, 504 U.S. at 561 (internal quotations omitted). Under NEPA, "a plaintiff need not establish that the ultimate agency decision would change upon National Environmental Policy Act compliance. Rather, the [plaintiff] must establish . . . that its injury would be redressed by a favorable decision requiring the [agency] to comply with National Environmental Policy Act[] procedures." Committee to Save the Rio Hondo v. Lucero,

102 F.3d at 452 (alterations added). "The party invoking federal jurisdiction bears the burden of establishing these elements." Lujan, 504 U.S. at 561.

Here, the Plaintiffs have standing to pursue their NEPA claim. "[A]n association has standing to bring suit on behalf of its members when: (a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization's purpose; and (c) neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." Hunt v. Washington State Apple Advertising Com'n, 432 U.S. 333, 343 (1977). First, the interests that the plaintiff organizations seek to protect are clearly germane to the organizations' purposes. Diné CARE's stated goal is "to protect all life in its ancestral homeland by empowering local and traditional people to organize, speak out, and assure conservation and stewardship of the environment through civic involvement . . . and oversight of government agencies' compliance with all applicable environmental laws." Dine, 2015 WL 4997207, at *2. San Juan Alliance is an organization dedicated to social, economic, and environmental justice in the San Juan Basin. See Dine, 2015 WL 4997207, at *2. WildEarth Guardians' mission is "to protect and restore the wildlife, wild places, wild rivers, and the health of the American West." Nichols Decl. ¶ 2, at 2. The Natural Resources Defense Council's mission is "to safeguard the Earth; its people, its plants and animals, and the natural systems on which all life depends." Trujillo Decl. ¶ 6, at 2. Protecting Chaco Park and the Chaco Canyon area/region from damaging oil and gas operations "is paradigmatic" of the organization's efforts "to defend endangered wild places and natural habitats." Trujillo Decl. ¶ 7, at 2. The organizations' interests in this suit are therefore "germane

to the organization[s'] purpose[s]." Hunt v. Washington State Apple Advertising Com'n, 432 U.S. at 343 (alterations added).

Second, "neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." Hunt v. Washington State Apple Advertising Com'n, 432 U.S. at 343. The parties do not contest this point, and the Court sees no reason why individual members would need to participate in this suit. The crux of the standing issue is thus whether the plaintiff organizations' members "would otherwise have standing to sue in their own right." Hunt v. Washington State Apple Advertising Com'n, 432 U.S. at 343.

A. THE PLAINTIFFS HAVE SHOWN AN INJURY IN FACT.

First, the Plaintiffs have shown that, "in making its decision without following the National Environmental Policy Act's Procedures, the agency created an increased risk of actual, threatened, or imminent environmental harm." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. Here, the agency decision that the Plaintiffs challenge under NEPA is the "BLM's ongoing approval of Mancos Shale drilling permits." Diné Brief at 25. Eisenfeld asserts that the BLM's approval of these APDs "threatens to irreparably harm [his] personal and professional interest in an intact Chacoan landscape . . . by impacting important environmental (air, water, treasured landscapes), historical, and cultural resources." Eisenfeld Decl. ¶ 9, at 5 (alteration added). Eisenfeld also alleges that the BLM has allowed "APD proponents to flare natural gas in the greater Chaco area when drilling for oil." Eisenfeld Decl. ¶ 13, at 6. According to Eisenfeld, this flaring harms the air quality, Eisenfeld's health, and "compromises the night sky" in the Chaco Park area. Eisenfeld Decl. ¶ 13, at 6-7.

Nichols does not recall any oil and gas development in the area in 2008, but, by 2014, he asserts that, "there were rigs seemingly all over the place, around Nageezi and the road to [Chaco Park]." Nichols Decl. ¶ 7, at 6-7. According to Nichols, during his last visit, "there were extensive oil and gas well facilities and infrastructure in the area, particularly around Nageezi and Lybrook." Nichols Decl. ¶ 7, at 7. According to Nichols, this new oil-and-gas development "has detracted significantly from [his] enjoyment of the Greater Chaco area," and has "significantly eroded the natural and remote nature of the region." Nichols Decl. ¶ 8, at 7 (alteration added). According to Nichols, the oil-and-gas development has also created "smells, dust, and more industrialization," which is "aesthetically displeasing." Nichols Decl. ¶ 9, at 7.

According to Green, oil-and-gas development "in the Chaco Canyon area/region and [Chaco Park]" would harm Green's visitor experience, because of potential air, noise, and light pollution, large truck traffic, and the possibility of "soil and groundwater contamination due to drilling practices." Green Decl. ¶ 7, at 2-3. Green states that she also has "concerns" regarding the use of hydraulic fracturing "in the Chaco Canyon area/region and Chaco [Park]," because fracking may contaminate the area's groundwater. Green Decl. ¶ 8, at 3.

According to Miura, oil-and-gas development "in the Chaco Canyon area/region and [Chaco Park]" would "ruin the views and tranquility of the Chaco Canyon area." Miura Decl. ¶ 6, at 2. Pinto states that she regularly visits Chaco Park and enjoys observing the dark sky from there, but that "the lights staged at well sites can be as bright as stadium lights." Pinto Decl. ¶ 11, at 3. Pinto states that she has also dealt with these bright lights being pointed at the highway, prohibiting her from seeing the road. See Pinto Decl. ¶ 11, at 3.

These alleged injuries are ones of "alleged increased environmental risk" or aesthetic injury, which are both cognizable under Article III. Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. See Lujan, 504 U.S. at 562-63. The Plaintiffs also show that the alleged increased environmental risk exists because of the BLM's alleged failure to follow NEPA. See Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 450. Eisenfeld asserts that "the agency's current 2003 RMP never contemplated or analyzed oil development in the greater Chaco area as required by NEPA." Eisenfeld Decl. ¶ 7, at 9. See Diné Brief at 17 ("BLM continues to approve Mancos Shale drilling permits at an intense pace and without the required environmental review under NEPA."). The Plaintiffs have therefore established that "the affiants suffer a threatened increased risk of environmental harm due to the [BLM's] alleged failure to follow the National Environmental Policy Act's procedures." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 450.

That oil-and-gas production has existed in the San Juan Basin for over fifty years and thousands of wells are currently producing there does not alter that result. See PRMP at 1 (A.R.0001945). Importantly, the Tenth Circuit's injury-in-fact test under NEPA requires showing an "increased risk of environmental harm." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449 (emphasis added). Regardless whether some risk of harm may already exist, adding a few hundred wells increases the risk. In short, that other producing wells exist in the area is immaterial for injury-in-fact purposes.

The Plaintiffs must also show that "the increased risk of environmental harm injures its concrete interests by demonstrating either its geographical nexus to, or actual use of the site of the agency action." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. The

Plaintiffs have established a geographical nexus. Eisenfeld has visited Chaco Park at least annually since 1997. See Eisenfeld Decl. ¶ 5, at 2. He also regularly visits "the greater Chaco region, including areas in and around Counselor, Lybrook, and Nageezi." Eisenfeld Decl. ¶ 5, at 2. He last visited the "Nageezi area" on April 20, 2017, and intends to return in May and June of 2017. Eisenfeld Decl. ¶ 5, at 2.

Nichols visited Chaco Park in March, 2008, March, 2012, April, 2013, and May, 2015. See Nichols Decl. ¶ 5, at 4-5. Nichols intends to continue visiting "the Greater Chaco region, including [Chaco Park] and its outliers . . . at least once a year for the foreseeable future." Nichols Decl. ¶ 6, at 6. He intends to visit "this area" again in June, 2017, when he has a trip planned. Nichols Decl. ¶ 6, at 6.

Green visits Chaco Park "at least once a year." Green Decl. ¶ 4, at 2. Green intends to return to Chaco Park "this fall" -- referring to the fall of 2017 -- and "in the future." Green Decl. ¶ 6, at 2. Miura has visited Chaco Park, and plans to return there "next year, and in the future." Miura Decl. ¶ 5, at 2. Pinto regularly visits Chaco Park and enjoys observing the dark sky from there. See Pinto Decl. ¶ 11, at 3.

Given that the affiants visit Chaco Park and the Nageezi area, and at least several of them have plans to return, the question is whether Chaco Park and the Nageezi area have a geographical nexus to the agency action's site, i.e. the challenged APDs' well sites. See Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. It is approximately ten miles from Chaco Park's edge to the nearest challenged APD's well site. See Declaration of Matthew A. Dorsey at 6 (executed June 2, 2017), filed June 9, 2017 (Doc. 113-1)("Map"). It is approximately fifteen miles from the same edge of Chaco Park, in roughly the same direction, to

Nageezi. See Google Maps, https://www.google.com/maps/@36.1761681,-107.8701589,11z. The Court therefore estimates that it is approximately five miles from Nageezi to the above-mentioned well site.

The Tenth Circuit has held that, when affiants lived twelve to fifteen miles downstream of the affected area, they had a geographical nexus to that area, because "the affiants live immediately downstream from and share the same watershed with the [affected area, and] they may be expected to suffer the effects of decreased water quality." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 450 (alterations added). Similarly, the effects of new wells resulting from the challenged APDs could travel ten miles, causing potential air, noise, and light pollution, and "the possibility of soil and groundwater contamination due to drilling practices," in Chaco Park or in the Nageezi area. Green Decl. ¶ 7, at 2-3. The Plaintiffs have therefore established an injury in fact for Article III purposes. See Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 450-51.

B. THE PLAINTIFFS HAVE SHOWN CAUSATION.

The injury must be "fairly . . . trace[able] to the challenged action of the defendant, and not . . . the[e] result [of] the independent action of some third party not before the court." Lujan, 504 U.S. at 560 (alterations in original). In the NEPA context, "once the plaintiff has established the likelihood of the increased risk for purposes of injury in fact, to establish causation . . . the plaintiff need only trace the risk of harm to the agency's alleged failure to follow the National Environmental Policy Act's procedures." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452. Here, the injury is the increased risk of environmental harm from additional oil-and-gas wells drilled near Chaco Park and near Nageezi. See, e.g., Green Decl. ¶ 7, at 2-3 (asserting that

oil-and-gas development "in the Chaco Canyon area/region and [Chaco Park]" would harm Green's visitor experience, because of potential air, noise, and light pollution, large truck traffic, and the possibility of "soil and groundwater contamination due to drilling practices"). The Plaintiffs have asserted that the "BLM's ongoing approval of Mancos Shale drilling permits . . . violates NEPA's requirement that the agency take a hard look at the cumulative impacts of an action prior to making an irretrievable commitment of resources." Diné Brief at 25-26 (citing 42 U.S.C. § 4332(2)(C)(v); 40 C.F.R. § 1508.7). In other words, the Plaintiffs contend that the BLM's granting of APDs allegedly violates NEPA. Because these drilling permits allow operators to drill wells near Chaco Park and near Nageezi, see Map at 6, the Plaintiffs have traced the risk of environmental harm to the BLM's alleged failure to follow NEPA's procedures. See Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452.

C. THE PLAINTIFFS HAVE SHOWN REDRESSABILITY.

To establish redressability, "it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." Lujan, 504 U.S. at 561 (internal quotations omitted). Under NEPA, "a plaintiff need not establish that the ultimate agency decision would change upon National Environmental Policy Act compliance. Rather, the [plaintiff] must establish . . . that its injury would be redressed by a favorable decision requiring the [agency] to comply with National Environmental Policy Act[] procedures." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452 (alterations added). That an agency may not change its decision to allow operations "after preparing an environmental impact statement is immaterial." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452.

Here, the injury of an increased risk of environmental harm to Chaco Park and to the Nageezi area would likely be redressed if the Court rules that the BLM has not followed NEPA's procedures, because ordering "[c]ompliance with the National Environmental Policy Act would avert the possibility that the [BLM] may have overlooked significant environmental consequences of its action," that is, granting the APDs. Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 452. The Court therefore concludes that the Plaintiffs have standing to pursue their NEPA claim.

The Supreme "Court's standing cases confirm that a plaintiff must demonstrate standing for each claim he seeks to press." DaimlerChrysler Corp. v. Cuno, 547 U.S. 332, 335 (2006). For substantially the same reasons that the Plaintiffs have standing under NEPA, they also have standing under the NHPA. The Plaintiffs allege that the "BLM's APD approvals violate the NHPA . . . by failing to identify adverse effects to historic properties." Diné Brief at 47. A historic property includes those in the "National Register of Historic Places maintained by the Secretary of the Interior." 36 C.F.R. § 800.16(l)(1). Chaco Park is a place that fits this definition. See World Heritage List Nomination Submitted by the United States of America Chaco Culture National Historical Park at 26 (dated November, 1984)(A.R.0217996)(noting that Chaco Park "is on the National Register of Historic Places"). For Article III purposes, the injury remains an increased risk of environmental damage to Chaco Park, which is fairly traceable to the BLM's approval of APDs near the park. See Map at 6. The injury would likely be redressed if the Court ruled that the BLM had not followed the NHPA's procedures, because ordering compliance with the NHPA would likely avert the possibility that the BLM overlooked the environmental consequences of granting the APDs. See Dine, 2015 WL 4997207 ("In general,

the NHPA requires that a federal agency take into account any adverse effects on historical or culturally significant sites before taking action that might harm such sites.").

II. THE PLAINTIFFS MAY CHALLENGE MOST, BUT NOT ALL, OF THE APDS UNDER THE APA.

"In addition to Article III standing requirements, a plaintiff seeking judicial review pursuant to the APA must (i) identify some final agency action and (ii) demonstrate that its claims fall within the zone of interests protected by the statute forming the basis of its claims." Catron Cty. Bd. of Com'rs, New Mexico v. U.S. Fish & Wildlife Serv., 75 F.3d 1429, 1434 (10th Cir. 1996)(internal quotation marks omitted).

> In order to determine if an agency action is final, we look to whether its impact is direct and immediate, whether the action mark[s] the consummation of the agency's decisionmaking process, and whether the action is one by which rights or obligations have been determined, or from which legal consequences will flow.

Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d 1171, 1173-74 (10th Cir. 2000)(internal quotations and citations omitted). "An agency's intent to take action if requested does not constitute final agency action." Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d at 1174.

First, the Plaintiffs' claims against all of the APDs fall within the zones of interest that NEPA and the NHPA protect. NEPA's purpose is to "declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere. . . ." 42 U.S.C. § 4321. According to the NHPA, "it is the policy of the Federal Government . . . to . . . provide leadership in the preservation of the historic property of the United States . . . [and to] administer federally owned, administered, or controlled historic property in a spirit of

stewardship for the inspiration and benefit of present and future generations." 54 U.S.C. § 300101(2)-(3)(alteration added). The BLM does not contest that the Plaintiffs' claims fall within the NEPA and NHPA zones of interest for APA purposes. Given the Plaintiffs' allegations of environmental harm to historic sites including Chaco Park, see, e.g., Green Decl. ¶ 7, at 2-3 (alleging that oil-and-gas development "in the Chaco Canyon area/region and [Chaco Park]" would harm Green's visitor experience, because of potential air, noise, and light pollution, large truck traffic, and the possibility of "soil and groundwater contamination due to drilling practices"), the Court concludes that the Plaintiffs' claims fall within the zones of interest that NEPA and the NHPA protect. Catron Cty. Bd. of Com'rs, New Mexico v. U.S. Fish & Wildlife Serv., 75 F.3d at 1433 (concluding that an environmental injury falls "well within the zone of interests protected by NEPA").

The Plaintiffs have not, however, challenged final agency action with respect to every APD. The BLM has categorized the APDs in this case as follows: "Producing," meaning the well is currently producing; "Approved-Pending Drilling," meaning the BLM has approved the APD but the well has not yet been drilled, "Drilled but not Completed," meaning the well has been drilled but is not yet completed; "Drilled but Temp. Abandon," meaning the well has been drilled but has been temporarily abandoned; "Cancelled," meaning that the EA has been cancelled; "Abandoned," meaning the well has been permanently abandoned; "Shut-in," meaning the well has been shut-in; "Rescinded," meaning the BLM's decision approving the APD has been rescinded; "Withdrawn," meaning the operator has withdrawn the APD; "No APD package," meaning the operator has not submitted the APD package to the BLM; and "Unapproved APD," meaning "the APD package has been submitted to BLM but it has not been

approved or denied." Declaration of Sarah Scott ¶ 8, at 4-5 (executed June 2, 2017), filed June 9, 2017 (Doc. 113-3)("Scott Decl."). The Court concludes that challenging an unapproved APD, a withdrawn APD, or an APD in which the operator has not submitted an APD package to the BLM is not challenging final agency action, because, in such instances, "the consummation of the agency's decisionmaking process" has not yet occurred, and no "rights or obligations have been determined." Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d at 1173-74. Further, "[a]n agency's intent to take action if requested does not constitute final agency action." Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d at 1174.

Additionally, the "Plaintiffs have the burden of identifying specific federal conduct and explaining how it is final agency action within the meaning of [the APA]." Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d at 1173 (alterations added)(internal quotations omitted). Here, the Plaintiffs nakedly assert that the BLM is "mistaken" that a number of the APDs lack final agency action and provide no explanation. Reply at 30. Not only is there no explanation why APDs categorized as "Withdrawn," "No APD package," and "Unapproved APD" are final agency action, but there is no explanation regarding an APD categorized as "cancelled" or "rescinded." Although the BLM defines cancelled only as "the EA has been cancelled," Scott Decl. ¶ 8, at 4, without explaining who or how the EA was cancelled, and defines rescinded only as "the decision approving the APD has been rescinded," Scott Decl. ¶ 8, at 4, it is not the BLM's burden to explain how these decision categories are challengeable as final agency action. Rather, the "Plaintiffs have the burden of identifying specific federal conduct and explaining how it is final agency action within the meaning of [the APA]." Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d at 1173. Because the

Plaintiffs have provided no explanation how APDs categorized as cancelled or rescinded are final agency action, they have not met their burden.

For these reasons, the Plaintiffs "lack the statutory standing required to bring this claim under the APA," Colorado Farm Bureau Federation v. U.S. Forest Service, 220 F.3d at 1174, in regards to any APD listed as "Withdrawn," "No APD package," "Unapproved APD," "Cancelled," or "Rescinded." Scott Decl. ¶ 8, at 4-5. The Court therefore lacks jurisdiction to adjudicate them.[17] See Chemical Weapons Group, Inc. (CWWG) v. U.S. Dept. of the Army, 111 F.3d 1485, 1494 (10th Cir. 1997)("[T]hey must challenge final agency action to confer upon the district court jurisdiction under the Administrative Procedures Act.")(internal quotations omitted).

III. THE PLAINTIFFS' APD CHALLENGES ARE NOT MOOT, EXCEPT AS TO PERMANENTLY ABANDONED WELLS.

The Court concludes that the Plaintiffs' APD challenges are not moot, except as to permanently abandoned wells. Article III, Section 2 of the Constitution limits the federal courts'

[17]These wells are Lybrook O30-2307 02H (Withdrawn); Nageezi Unit L10-2309 2H (Withdrawn); Lybrook E29-2306 02H (No APD Package); Lybrook E29-2306 04H (No APD Package); Lybrook E27-2306 04H; (No APD Package); Lybrook M27-2306 03H (No APD Package); Lybrook E27-2306 02H (No APD Package); Lybrook M28-2306 04H (No APD Package); Lybrook 23-8-16 #201H (No APD Package); Lybrook P12-2206 03H (No APD Package); Lybrook N02-2206 02H (Unapproved APD); Lybrook N02-2206 01H (Unapproved APD); Kaleigh 1H and 2H (ATS Number ATS-F010-14-353)(No APD Package); Kaleigh 1H and 2H (ATS Number ATS-F010-14-354)(No APD Package); W Lybrook UT 764H (No APD Package); W Lybrook UT 766H (No APD Package); Lybrook D34-2307 02H (No APD Package); Lybrook D34-2307 03H (No APD Package); Lybrook D34-2307 04H (No APD Package); Lybrook L34-2307 02H (No APD Package); Lybrook L34-2307 03H (No APD Package); Lybrook L34-2307 04H (No APD Package); Nageezi Unit L10-2309 4H (Cancelled); Chaco 2307-06G 274H (Rescinded); Lybrook B14-2206 02H (Cancelled); Lybrook B14-2206 01H (Cancelled); Lybrook M12-2206 01H (Cancelled); and Lybrook N12-2206 01H (Cancelled). See Scott Decl. at 9, 12-15.

jurisdiction to "cases" and "controversies." U.S. Const. art. III, § 2. "Federal courts are without authority to decide questions that cannot affect the rights of litigants in the case before them." Ford v. Sully, 773 F. Supp. 1457, 1464 (D. Kan. 1991)(O'Connor, C.J.)(citing North Carolina v. Rice, 404 U.S. 244, 246 (1971)). See Johansen v. City of Bartlesville, Okla., 862 F.2d 1423, 1426 (10th Cir. 1988); Johnson v. Riveland, 855 F.2d 1477, 1480 (10th Cir. 1988). "To qualify as a case fit for federal-court adjudication, an actual controversy must be extant at all stages of review, not merely at the time the complaint is filed." Arizonians for Official English v. Ariz., 520 U.S. 43, 67 (1997). See Rio Grande Silvery Minnow v. Bureau of Reclamation, 601 F.3d 1096, 1121 (10th Cir. 2010). Accordingly, if a case becomes moot at any stage, the court does not have jurisdiction to hear the case. See Brown v. Buhman, 822 F.3d 1151, 1165 (10th Cir. 2016)("Mootness deprives federal courts of jurisdiction."). A case becomes moot "when the issues presented are no longer 'live' or the parties lack a legally cognizable interest in the outcome." County of Los Angeles v. Davis, 440 U.S. 625, 631 (1979)(citing Powell v. McCormack, 395 U.S. 486, 496 (1969)).

An exception to the mootness doctrine is voluntary cessation. A "defendant's voluntary cessation of a challenged practice does not deprive a federal court of its power to determine the legality of the practice." Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189 (quotation marks omitted).

> In accordance with this principle, the standard we have announced for determining whether a case has been mooted by the defendant's voluntary conduct is stringent: A case might become moot if subsequent events made it absolutely clear that the allegedly wrongful behavior could not reasonably be expected to recur.

Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189. (internal quotation marks omitted). "The heavy burden of persuad[ing] the court that the challenged conduct cannot reasonably be expected to start up again lies with the parties asserting mootness." Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189 (alteration in original)(internal quotation marks omitted).

The Court concludes that the Plaintiffs' challenges to APDs of permanently abandoned wells are moot. Challenges to wells currently producing, APDs that have been approved but drilling is pending, wells that have been drilled but not yet completed, wells that have been temporarily abandoned, and shut-in wells, however, are not moot. As explained above, the Plaintiffs' injury is "an injury of alleged increased environmental risks." Committee to Save the Rio Hondo v. Lucero, 102 F.3d at 449. This injury persists with respect to producing wells, wells in which the BLM has approved the APD but drilling is pending, and wells that are drilled but not yet complete, because, in all such situations, the increased risk of environmental harm remains.

Under the voluntary cessation doctrine, a challenge to a drilled but temporarily abandoned well is not moot, because temporary abandonment does not make it "absolutely clear that the allegedly wrongful behavior could not reasonably be expected to recur." Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189 (internal quotation marks omitted). On the contrary, categorizing a well as "temporarily abandoned," Scott Decl. ¶ 8, at 4, implies that drilling may re-commence, so the allegedly wrongful conduct may recur. In contrast, a "permanently abandoned" well, Scott Decl. ¶ 8, at 4, renders a challenge moot, because permanent abandonment, as distinguished from "temporarily abandoned," Scott Decl.

¶ 8, at 4, shows that "the allegedly wrongful behavior could not reasonably be expected to recur." Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189 (internal quotation marks omitted). Finally, the wells classified as "shut-in" are not moot, but, rather, are another example of voluntary cessation. The word "shut-in" may describe a spectrum of wells, some only temporarily shut-in for mechanical or engineering reasons, or some shut-in for longer periods, such as no production. Shut-in wells can, however, theoretically, be re-opened, and the "heavy burden of persuad[ing] the court that the challenged conduct cannot reasonably be expected to start up again lies with the parties asserting mootness." Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189 (alteration in original)(internal quotation marks omitted). The BLM has not explained if the wells classified as shut-in might be re-opened, or if they are permanently shut-in, so the Court cannot properly conclude that "the allegedly wrongful behavior could not reasonably be expected to recur."[18] Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. at 189 (internal quotation marks omitted). For these reasons, only the challenges to permanently abandoned wells are moot.[19] The Court therefore has no jurisdiction to adjudicate them. See Brown v. Buhman, 822 F.3d at 1165 ("Mootness deprives federal courts of jurisdiction.").

[18]If a shut-in well required a new APD to re-open the well, then the challenge to an APD of a shut-in well might be moot. The Court could not locate anything in the record, however, suggesting that a new APD is required to re-open a shut-in well.

[19]These wells are Escrito D34-2409 03H (Abandoned); Chaco 2408-33M 120H (Abandoned); Rosa Unit 648H (Abandoned); and Chaco 2407-35I-901 (Abandoned). See Scott Decl. at 7, 11-13.

IV. THE BLM TOOK A HARD LOOK AT THE WELLS' EFFECTS, SO COMPLIED WITH NEPA.[20]

As the Court previously observed,

> This case ultimately boils down to whether the BLM's FONSIs -- which allowed it to rely on the site-specific EAs rather than commissioning an entirely new EIS -- were arbitrary and capricious, or were the result of the BLM's failure to take a hard look at the environmental consequences of approving the challenged APDs.

Dine, 2015 WL 4997207, at *40. The relevant regulation states:

> An environmental assessment prepared in support of an individual proposed action can be tiered to a programmatic or other broader-scope environmental impact statement. **An environmental assessment may be prepared, and a finding of no significant impact reached, for a proposed action with significant effects, whether direct, indirect, or cumulative, if the environmental assessment is tiered to a broader environmental impact statement which fully analyzed those significant effects.** Tiering to the programmatic or broader-scope environmental impact statement **would allow the preparation of an environmental assessment and a finding of no significant**

[20]The API argues that "the law of the case doctrine resolves the majority of Plaintiffs' claims." API Response at 2. The Court would be remiss, however, to rely only on the law-of-the-case doctrine in adjudicating the Motion, as the Tenth Circuit noted in Diné II that a different outcome could result if the Plaintiffs developed their arguments. See Dine II, 839 F.3d at 1285. As the Court has previously observed, "[u]nlike vertical *stare decisis*" law of the case "is a flexible [rule] that allows courts to depart from erroneous prior rulings, as the underlying policy of the rule is one of efficiency, not restraint of judicial power." Mocek v. City of Albuquerque, 3 F. Supp. 3d 1046 (D.N.M. 2014)(Browning, J.)(italics in original)(quoting Prairie Band Potawatomi Nation v. Wagnon, 476 F.3d 818, 823 (10th Cir. 2007)). While the Court should depart from an appellate court's ruling on the same issue in the same case in only few circumstances, one of those circumstances is if the evidence adduced or presented substantially diverges from the evidence presented before the appellate court. The Court must, thus, engage in the analysis it does to ensure that there are no new arguments or evidence presented.

The Court also concludes that law of the case does not apply here, because the Court is not resolving the "same issues" in "subsequent phases of the same case." Been v. O.K. Industries, Inc., 495 F.3d 1217, 1224 (10th Cir. 2007). At the preliminary injunction stage, the Court was deciding whether the Plaintiffs were substantially likely to succeed on the merits. Here, in contrast, the Court is deciding whether the Plaintiffs in fact succeed on the merits. There is a difference between the two issues, otherwise preliminary injunction losers would never be able to continue their claim to the merits phase, as law of the case would always preclude continued litigation. Accordingly, the Court conducts the following analysis.

> **impact for the individual proposed action, so long as any previously unanalyzed effects are not significant.** A finding of no significant impact other than those already disclosed and analyzed in the environmental impact statement to which the environmental assessment is tiered may also be called a "finding of no new significant impact."

43 C.F.R. § 46.140(c)(emphasis added). Essentially, the BLM must conduct an EA-level analysis to determine whether any new technology, not analyzed in the EIS, has significant effects. If the new technology has significant effects, the BLM must create a new EIS to analyze those effects. If the new technology does not have significant effects, the BLM may issue a FONSI. See 40 C.F.R. § 1508.9(a)(1)(explaining that an EA serves to "[b]riefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact"); 42 U.S.C. § 4332(c)(explaining that agencies shall create an EIS for "actions significantly affecting the quality of the human environment"); 40 C.F.R. § 1508.13 (stating that a FONSI explains why, based on an EA, an action is not one significantly affecting the quality of the human environment such that an EIS is unnecessary).

For this case's purposes, the Court must decide whether the EAs determined that new developments in horizontal drilling and fracking technology as used after the 2003 RMP/EIS was issued have no significant environmental effects, compared to the 2003 technology, which would enable the BLM to properly issue FONSIs, see 40 C.F.R. § 1508.13, and would allow the BLM to properly tier the EAs to the 2003 RMP/EIS, see 43 C.F.R. § 46.140(c). The Court has previously noted that the "BLM has both (i) analyzed the impacts of directionally drilled and fracked wells, at the EA level; and (ii) found, again at the EA level, that any difference in environmental impacts between the new technology and the technology that the 2003 RMP/EIS analyzed are insignificant." Dine, 2015 WL 4997207, at *45. The Court stands by this

determination. For example, the EAs explain that "fracking is a common process in the San Juan Basin and applied to nearly all wells drilled. The producing zone targeted by the proposed project is well below any underground sources of drinking water. The Mancos Shale formation is also overlain by a continuous confining layer." 2014 EA at 26 (A.R.0140173). The EAs further explain that there exists "an impermeable layer that isolates the Mancos Shale . . . formations from both identified sources of drinking water and surface water." 2014 EA at 26-27 (A.R.0140173-74). For these reasons, "no impacts to surface water or freshwater-bearing groundwater aquifers are expected to occur from fracking of the proposed wells." 2014 EA at 27 (A.R.0140174). See Environmental Assessment DOI-BLM-NM-F010-2015-0060, at 25 (dated January, 2015)(A.R.0141950)(same); Environmental Assessment DOI-BLM-NM-F010-2015-0045, at 7 (dated January, 2015)(A.R.0141288)(same).

Other EAs explain that "horizontal drilling applications throughout the San Juan Basin have become relatively common. Generally, the use of this technology is applied when it is necessary to avoid or minimize impacts to surface resources." 2014 EA at 17 (A.R.0140164). See Environmental Assessment DOI-BLM-NM-F010-2015-0060, at 17 (dated January, 2015)(A.R.0141942)(same); Environmental Assessment DOI-BLM-NM-F010-2015-0066, at 20 (dated February, 2015)(A.R.0143938)(same). This result is because "horizontal drilling often allows for 'twinning,' or drilling two or more wells from one shared well pad." 2014 EA at 17 (A.R.0140164). Indeed, San Juan Alliance once stated that "[a]lternative drilling methods such as horizontal drilling would, if used in the San Juan basin, reduce adverse impacts such as noise, air pollution, and scarred landscapes from wells and roads. Why can't several wells be drilled from one location? The BLM must consider/require feasible technical alternatives such as

horizontal drilling." San Juan Comment at P-123 (A.R.0001847). Another EA says that estimated C02 emissions from a horizontal well would represent only a "0.0008 percent increase in New Mexico C02 emissions." Environmental Assessment DOI-BLM-NM-F010-2015-0045, at 22 (dated January, 2015)(A.R.0141356). On this record, the Court concludes that the BLM's EAs "[b]riefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact," 40 C.F.R. § 1508.9(a)(1), and that the BLM properly tiered the EAs to the 2003 RMP/EIS, because "any previously unanalyzed effects are not significant." 43 C.F.R. § 46.140(c).

Further, as the Court has previously observed, fracking "has been around for a very long time." Dine, 2015 WL 4997207, at *44. Indeed, since fracking was introduced in 1949, "nearly every well in the San Juan Basin has been fracture stimulated." FONSI at 2 (A.R.0232032). "Effective and economical directional drilling is relatively new, but that technology is a net positive for the environment." Dine, 2015 WL 4997207, at *44. See San Juan Comment at P-123 (A.R.0001847)("Alternative drilling methods such as horizontal drilling would, if used in the San Juan basin, reduce adverse impacts such as noise, air pollution, and scarred landscapes from wells and roads."); 2014 EA at 17 (A.R.0140164)(explaining that "horizontal drilling often allows for 'twinning,' or drilling two or more wells from one shared well pad"). Indeed, the record contains many examples explaining how the use of horizontal drilling and fracking since the 2003 RMP/EIS was issued do not significantly harm the environment. See, e.g., White Paper at 16 (A.R.0149876)("The development of a hydrocarbon resource utilizing horizontal wells, drilled from multi-well pads, and stimulating by fracking minimizes the number of wells and surface disturbance needed to fully develop that resource, therefore minimizing biological

impacts."); White Paper at 22 (A.R.0149882)(explaining that "[t]hrough the practices of reuse and recycling, water resources [used for fracking] can be preserved," and that the "use of other substances acting as the fracking fluid . . . can also reduce the demand on water supplies.")(alterations added).

Additionally, "as the district court pointed out, only 3,860 of the anticipated 9,942 new wells in the planning area were drilled in the twelve years between the issuance of the 2003 RMP and the court's consideration of this issue in 2015." Diné II, 839 F.3d at 1283. "Thus, even with increased drilling in the Mancos Shale formation and the switch to horizontal drilling and multi-stage fracturing, the overall amount of the drilling and related surface impacts are still well within the anticipated level." Diné II, 839 F.3d at 1283.

> As for the possibly increased air quality impacts, the agency considered these impacts in its environmental assessments and concluded that the approved drilling activities would not cause a significant increase in emissions over the amount anticipated in the RMP or a violation of national air quality standards for any criteria pollutant.

Diné II, 839 F.3d at 1283. These facts further show that "any previously unanalyzed effects are not significant." 43 C.F.R. § 46.140(c). In sum, the BLM's EAs complied with NEPA's requirements.

The Plaintiffs contend that the 2003 RMP/EIS "analyzed the environmental consequences of drilling a projected 9,942 wells." Diné Brief at 24. This analysis, however, "did not include the Mancos Shale," because "development of the Mancos Shale formation was not reasonably foreseeable at the time the 2003 RMP/EIS was prepared." Diné Brief at 24. With recent advances in horizontal drilling and fracking, however, developing the Mancos Shale became foreseeable. See Diné Brief at 24. According to the Plaintiffs, in light of these technological

developments, the BLM "prepared the 2014 RFDS, which estimated the drilling of 3,960 Mancos Shale wells," which are "in addition to -- not instead of -- the 9,942 vertical wells previously projected by BLM in the 2003 RMP/EIS" Diné Brief at 24-25. The Plaintiffs therefore conclude that the "BLM has never analyzed the environmental and human health impacts from the combined total of 13,902 reasonably foreseeable oil and gas wells across the San Juan Basin." Diné Brief at 28.

First, as explained above, the Court continues to hold that any difference in environmental impacts between the new technology and the technology that the 2003 RMP/EIS analyzed are insignificant for NEPA's purposes. See San Juan Comment at P-123 (A.R.0001847)("Alternative drilling methods such as horizontal drilling would, if used in the San Juan basin, reduce adverse impacts such as noise, air pollution, and scarred landscapes from wells and roads."); White Paper at 16 (A.R.0149876)("The development of a hydrocarbon resource utilizing horizontal wells, drilled from multi-well pads, and stimulating by fracking minimizes the number of wells and surface disturbance needed to fully develop that resource, therefore minimizing biological impacts.").

Second, even though more drilling is occurring in the Mancos Shale than the 2003 RMP/EIS anticipated, the fact remains that "only 3,860 of the anticipated 9,942 new wells in the planning area were drilled in the twelve years between the issuance of the 2003 RMP and the court's consideration of this issue in 2015." Diné II, 839 F.3d at 1283. "Thus, even with increased drilling in the Mancos Shale formation and the switch to horizontal drilling and multi-stage fracturing, the overall amount of the drilling and related surface impacts are still well within the anticipated level." Diné II, 839 F.3d at 1283. Since the Court and the Tenth Circuit

last considered this issue, the numbers have slightly changed, and now 3,945 wells have been drilled in the San Juan Basin since the 2003 RMP/EIS. See BLM Response at 10-11 (citing Mankiewicz Decl. ¶ 3, at 3). Accordingly, the San Juan Basin now contains 5,997 fewer wells than the 2003 RMP/EIS anticipated. Thus, even if another 3,960 Mancos Shale wells are drilled, the total number of wells and "the overall amount of the drilling and related surface impacts are still well within the anticipated level." Diné II, 839 F.3d at 1283.

The Plaintiffs raise, however, an argument that they did not raise previously before the Tenth Circuit. See Diné II, 839 F.3d at 1289 ("Importantly, plaintiffs do not argue that the total impacts of drilling in the basin have exceeded the total impacts predicted in the 2003 EIS."). Here, they cure that deficiency and argue that the total impacts of horizontal drilling coupled with the already drilled vertical wells will exceed the total impacts considered in the 2003 EIS. See Diné Reply at 11-12. Specifically, they argue that the 2003 EIS considered only the surface impacts to 18,577 acres, whereas, with the addition 3,960 Mancos Shale wells, the combined surface impact of the already-drilled vertical wells and the Mancos Shale wells will be 28,482 acres -- therefore exceeding the surface impact considered in the 2003 EIS. See Diné Reply at 11. Their analysis is flawed, however, because they assume that for every one horizontal well, there will be a surface impact of 5.2 acres. See Diné Reply at 11. That ignores record evidence demonstrating that several horizontal wells may fit per well pad. See Environmental Assessment DOI-BLM-NM-F010-2016-0036 at 16, (February, 2016)(A.R.0234975)(noting that four wells could be drilled from one well pad that encompassed a 4.57 acre area)("2016 EA"); 2014 EA at 17 (A.R.0140164)(explaining that "horizontal drilling often allows for 'twinning,' or drilling two

or more wells from one shared well pad"). The Court declines to adopt that bloated acreage number, as the record refutes it.

The Plaintiffs' argument is even more fundamentally flawed, however, because in aggregating the surface impacts, they count impacts of all of the potential 3,960 horizontal wells. But the Plaintiffs do not and cannot challenge all of the 3,960 horizontal wells, because only 382 are at issue, and, as the Court has concluded, only 350 are live in this dispute. See Complaint ¶ 105, at 30; supra at 83 n.17, 86 n.19. The narrow question before the Court, therefore, is whether the 350 APDs violate NEPA, because their impacts exceed the 2003 EIS' projection. Using all 3,960 wells -- 3,578 of which are purely hypothetical -- to determine the total impact erroneously swells the Plaintiffs' calculation. Using 350 as a multiplier, the surface impacts fall comfortably within the 2003 EIS projection: (7,890 + (5.2 x 350)) = 9,710 acres[21], which is less than the 2003 EIS projection of 18,577 acres.[22] The same analysis applies to the water consumption and air pollution numbers. Projected water consumption is: 1,475,407,500 gallons[23], which is less than the 2,818,557,000 gallon 2003 EIS projection. See Diné Reply at 11. The air pollution numbers are as follows:

[21]The formula used for this calculation is ((acres impacted per vertical well x vertical wells already drilled) + (acres impacted per horizontal well x the 350 horizontal wells at issue)). See Diné Reply at 11.

[22]In calculating these projections, the Court assumes that the Plaintiffs numbers from their reply brief are correct. See Diné Reply at 11-12. For reasons already explained, the Court concludes that the record supports a lower number for acres impacted per horizontal well. Accordingly, the total acres impacted is actually less than the 9,715.2 acres that the Court lists above.

[23]The formula for this calculation is ((gallons consumed per vertical well x vertical wells already drilled) + (gallons consumed per horizontal well x 350 horizontal wells at issue)). Thus, broken down, the calculation is (283,500 x 3,945) + (1,020,000 x 350) = 1,475,407,500 gallons.

Air Pollution[24]					
Well Type	Well Construction	NOx (tpy)	CO(tpy)	VOC(tpy)	PM_{10} (tpy)
Vertical	9	2.30	0.63	0.20	0.92
Horizontal	25	6.13	1.64	0.55	2.54
Est. Total Impacts (3,945 vert.)		9,073.5[25]	2,485	789	3,629
Est. Total Impacts (350 horiz.)		2,145.5	574	192.5	889
Total Combined		**11,219**	**2,706.13**	**982.05**	**4,518**
Considered (2003 RMP/EIS)		**22,866**	**6,263**	**1,988**	**9,146**

Each combined number is far less than the numbers considered in the 2003 RMP/EIS. Accordingly, the total impacts of drilling in the basin still have not exceeded the total impacts predicted in the 2003 EIS, so there is no NEPA violation on these grounds. Because the differences in technology since the 2003 RMP/EIS are not significant for NEPA's purposes, and

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Again, the Court assumes that the Plaintiffs numbers are correct for this argument. Having reviewed the underlying record, the Court concludes that the gallons consumed per horizontal well is lower, as the Plaintiffs do not account for the estimated 25% reuse of flow back water, see 2014 RFDS at 23 (A.R.0173848), nor does it account for foam fracking, which would also reduce the amount of gallons per horizontal wells consumed, see 2014 RFDS at 24 (A.R.0173849). Accordingly, the 1,476,427,500 gallons figure is greater than the number of gallons consumed per well.

[24]The Court assumes, again, that the numbers in this table -- taken from their reply brief -- are correct. Having reviewed the underlying record that they cite, however, the Court cannot discern how the Plaintiffs determined these numbers. For example, they state that NO_x emissions are equal to 2.3 tons per well per year. See Diné Reply Brief at 11. The 2003 EIS notes, in contrast, that the BLM estimates NOx emissions to be 3,333.4 tons per year for 663 wells, which would yield 5.02 tons per well per year. See 2003 RMP/EIS at 4-58, 4-59 (A.R.0001068-69). It is possible that the Court is misinterpreting the 2003 EIS' figures. Nevertheless, the Court suspects that the emissions projected in the 2003 EIS are higher than the Plaintiffs estimate. Thus, the Total Combined numbers above are an inflated figure, but, even as inflated, the BLM has not violated NEPA.

[25]The reply brief lists this number as 20,869, but the Court concludes that it must be an arithmetic error, because 2.3 x 3,945 = 9,073.5, and not 20,869. See Diné Reply at 12.

the total number of wells remain within the 2003 RMP/EIS estimate, the Court concludes that the Plaintiffs' argument is without merit.

V. THE BLM ADEQUATELY INVOLVED THE PUBLIC IN ITS NEPA PROCESS.

The BLM did not violate NEPA when it prepared and published EAs for the Mancos Shale wells. The Plaintiffs assert two arguments: (i) the BLM did not adequately involve the public during its EA process; and (ii) the BLM did not timely post its EAs in a public forum. The Court disagrees with both contentions.

"When preparing an EA, an 'agency shall involve . . . the public . . . to the extent practicable." WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d 677, 698 (10th Cir. 2015)(quoting 40 C.F.R. § 1501.4(b))(alterations in WildEarth Guardians v. U.S. Fish and Wildlife Serv.). "Plainly, this language affords an agency 'considerable discretion to decide the extent to which such public involvement is practicable.'" WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d at 698 (quoting Brodsky v. U.S. Nuclear Regulatory Comm'n, 704 F.3d 113, 121 (2d Cir. 2013)). The BLM is not required to make every draft EA available for public comment to satisfy the public involvement requirement. See Greater Yellowstone Coalition v. Flowers, 359 F.3d 1257, 1279 (10th Cir. 2004)("Flowers"). Rather, as long as the documents circulated give some notice to the public of the project's nature and effects, the agency meets the public notice requirement. See WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d at 698-99; Flowers, 359 F.3d at 1279. For example, in Flowers, the agency did not make publically available the EA or other relevant documents, but it "include[d] maps detailing the layout of the 359-acre proposal" and "also stated that the project is likely to adversely affect bald eagles." Flowers, 359 F.3d at 1279. With those publically available documents, the Tenth Circuit

concluded that the agency adequately included the public. See Flowers, 359 F.3d at 1279. Similarly, in WildEarth Guardians v. U.S. Fish and Wildlife Serv., the Tenth Circuit, citing Flowers with approval, concluded that a "circulated notice" mentioning a projects' impact on Preble's Meadow Jumping Mouse[26] sufficiently gave notice to the public under NEPA. WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d at 698-99. In so concluding, the Tenth Circuit focused on the notice's effect to determine whether the notice given was sufficient. See WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d at 699 ("[T]he notice was presumably sufficient since the comments themselves then brought the issue [of the mouse] up.").

Here, the BLM satisfied that minimal public notice requirement. Although it did not furnish EA drafts for public comment, the BLM provides a NEPA log on its website, which tracks each proposed well, its location coordinates, the county in which the well is located, the date the well was submitted for approval, the date -- if any -- the BLM approved the well, and contact information for the BLM employee responsible for that well. See, e.g., NEPA Log at 1-35 (A.R.0151320-54). See also BLM Response at 31 (citing NEPA Logs in the record at A.R.0150140-15180). Updates to the NEPA log are made weekly. See Letter from Victoria Barr, Bureau of Land Management District Manager, to Mike Eisenfeld at 2 (dated January 26, 2015)(A.R.0178210)("BLM Letter to Eisenfeld"). The BLM also hosts public meetings at each proposed well's site and sends notices of those meetings to parties via email. See Draft Letter

[26]Preble's Meadow Jumping Mouse is a subspecies of meadow jumping mice that Edward A. Preble discovered in 1899. See Preble's Meadow Jumping Mouse, U.S. Fish & Wildlife Service: Endangered Species Mammals, at 1 (October 13, 2017) available at https://www.fws.gov/mountain-prairie/es/preblesMeadowJumpingMouse.php. It is a threatened sub-species found primarily in southeastern Wyoming and Colorado's Front Ranges. See supra Preble's Meadow Jumping Mouse at 1.

from the Bureau of Land Management (unsigned) to Jeremy Nichols, WildEarth Guardians Climate and Energy Program Direct, Erik Schlenker-Goodrich, Western Environmental Law Center Environmental Director, Mike Eisenfeld, San Juan Citizens Alliance New Mexico Energy Coordinator, Anson Wright, Chaco Alliance Coordinator at 2 (undated)(A.R.0178704). See also BLM Response at 31.

The Court concludes that the BLM's NEPA logs and the public meetings about proposed wells gave sufficient notice, because both actions alert the public to the projects and the effects the projects might have on the environment. Although the NEPA logs do not explicitly state that oil-and-gas wells affect the air quality or the environment, see Diné Reply at 16, the BLM does not have to call a horse a horse to give the public adequate notice. In 2018, it is self-evident -- especially to environmental non-profits, such as the Plaintiffs -- that new oil-and-gas wells affect air quality and the environment. See Colorado Environmental Coalition v. Salazar, 875 F. Supp. 2d 1233, 1253 (D. Colo. 2012)(Krieger, J.)(analyzing an environmental groups' contention whether "oil and gas development" in Colorado "would affect air quality"). Cf. Sierra Club v. U.S. Army Corps of Engineers, 803 F.3d 31, 33 (D.C. Cir. 2015)("The construction and operation of [oil] pipelines necessarily affect land, water, air, plants, animals, and human life, and carry the potential for unintended damage."). The Court's conclusion that the BLM gave the requisite notice also follows from WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d at 699. In that case, the Tenth Circuit determined that actual notice of the project's potential impacts also serves as sufficient notice for NEPA purposes. See WildEarth Guardians v. U.S. Fish and Wildlife Serv., 784 F.3d at 699 ("[T]he notice was

presumably sufficient since the comments themselves then brought the issue [of the mouse] up."); Flowers, 359 F.3d at 1279.

Here, in addition to the self-evident proposition that oil-and-gas wells affect the environment, there is record evidence that the Plaintiffs had actual notice of the oil-and-gas wells' environmental effects without the benefit of EAs on every well and without an explicit statement from the BLM that oil-and-gas wells may cause environmental effects. See Letter from Jeremy Nichols, WildEarth Guardians Climate and Energy Program Director, Mike Eisenfeld, San Juan Citizens Alliance New Mexico Energy Coordinator, Erik Schlenker-Goodrich, Western Environmental Law Center Executive Director, Anson Wright, Chaco Alliance Coordinator to Jesse Juen, Bureau of Land Management State Director, Gary Torres, Bureau of Land Management Farmington Field Office Field Manager at 1 (dated October 27, 2014)(A.R.0178400)("WildEarth et al. letter")("The BLM's rampant approval of Mancos shale drilling and fracking is not only threatening the region's air, water, fish and wildlife, but undermining our nation's progress in reducing greenhouse gases and combating climate change."). Accordingly, the Court concludes that the BLM did not violate NEPA by failing to give the public notice of its proposed wells' effects. See also Amigos Bravos v. U.S. Bureau of Land Management, 2011 WL 7701433, at *27 (D.N.M. Aug. 3, 2011)(Brack, J.)("[A]lthough the EAs in this case were not open for public comment, the fact that BLM published Notices of the Lease Sales, made copies of the EAs available to the public at its Farmington field office, listed the EAs on BLM's website, and permitted protests constituted more than adequate public involvement for the issuance of an EA/FONSI.").

The Plaintiffs contend, however, that the BLM did not adequately involve the public when it prepared EAs for the Mancos Shale wells, because the BLM made a case-by-case determination whether to post draft EAs for public comment depending on whether the well was "routine or unique," and "who might be interested or affected by the project." Diné Brief at 29. According to the Plaintiffs, the BLM arbitrarily labeled some wells "routine" to exclude the public. Diné Brief at 29. The Plaintiffs also assert that their repeated requests for information about wells should have signaled to the BLM that the wells were not "routine." Diné Brief at 29-30.

The Court concludes that the BLM's policy of making a case-by-case determination whether to post draft EAs for comment falls within the BLM's considerable discretion to dictate its EA process. The Tenth Circuit has determined that the agency does not need to disclose every draft EA. See Flowers, 359 F.3d at 1279. Moreover, the plain language of the regulation's notice requirement entails notifying the public where "practicable." 40 C.F.R. § 1501.4(b). Such language recognizes that it may be difficult to involve the public in every EA, so commonsense policies cutting down the number of unimportant, ordinary, or redundant draft EAs made publicly available for comment, so that more time can be devoted to unique or significant EAs, is consistent with that regulation. The BLM's process of withholding draft EAs "whose analysis is similar to comparable past actions" is such a commonsense rule. BLM Response at 31.

Although the Plaintiffs contend that the BLM arbitrarily labeled some wells routine to avoid disclosing public draft EAs, there is no record evidence that the BLM acted arbitrarily. The Plaintiffs' citations to support that argument are: (i) an email from environmental groups

arguing that the BLM should put a hold on leasing land and approving APDs in areas where fracking and horizontal drilling is reasonably foreseeable, see Diné Brief at 29 (citing Email from Wilma Tope, Powder River Basin Resource Council Chair, Nathan Johnson, Buckeye Forest Council Staff Attorney, Brendan Cummings, Center for Biological Diversity Public Lands Director, Bruce Valzel, Earthworks Oil & Gas Accountability Project Senior Staff Attorney, Amy Mall, Natural Resources Defense Council Senior Policy Analyst, Barry Weaver, Newton County Wildlife Association Chair, Mike Eisenfeld, San Juan Citizens Alliance New Mexico Energy Coordinator, Walter Loraine McCosker, Ohio Sierra Club Forest and Public Lands Committee Co-Chair, Donny Nelson, Western Organization of Resource Councils Oil and Gas Campaign Team Chair, and Bruce Pendery, Wyoming Outdoor Council Staff Attorney to Michael J Pool, Bureau of Land Management at 1 (dated August 7, 2012)(A.R.0178179-81)); (ii) an email from Eisenfeld stating that he objects to the BLM's practice of self-determining what wells are routine or unique, see Diné Brief at 30 n.10 (citing Email from Mike Eisenfeld, San Juan Citizens Alliance New Mexico Energy Coordinator to Gary Torres, Bureau of Land Management Deputy Division Chief (Acting) at 2 (dated December 3, 2014)(A.R.0178208)); (iii) the WildEarth et al. Letter requesting that the BLM stop issuing new APDs and detailing their arguments why such an action is appropriate, see Diné Brief at 30 (citing WildEarth et al. Letter at 1 (A.R.0178401); and (iv) various requests for final EAs not posted to the BLM's website and the BLM's responses, see Diné Brief at 30 (citing Email from Mike Eisenfeld to Gary Torres at 1 (dated August 5, 2013)(A.R.0178183); Email from Maureen Joe to Mike Eisenfeld at 1 (dated August 28, 2013)(A.R.0178185); Email from Mike Eisenfeld to Amanda Nisula at 1 (dated March 6, 2014)(A.R.0178186); Email from Mike Eisenfeld to Amanda Nisula

at 1 (dated October 2, 2014)(AR178204); Email from Amanda Nisula to Mike Eisenfeld at 1 (dated October 3, 2014)(AR178204)). The record cited demonstrates that environmental groups have objected, for many years, to the way that the BLM has conducted its processes, but it does not demonstrate that the BLM arbitrarily labeled some of the wells routine to avoid public involvement. The Court finds no record evidence, for example, that these wells are so different from each other such that the BLM's determination that their EAs would be alike is clearly without basis. Moreover, after studying several EAs in the record, the Court concludes that the EAs' analyses for many, if not all of these wells, are likely to be substantially similar. In two of the EAs that the Court considered the environmental analysis is highly alike. Compare Environmental Assessment DOI-BLM-NM-F010-2014-0254 at 18-20 (A.R.0120125-27), with Environmental Assessment DOI-BLM-NM-F010-2014-0250 at 18-21 (A.R.0119200-03). For example, in both EA's air quality analysis, the BLM lists harmful pollutants, considers how much the well will increase the amount of those pollutants, and determines the cumulative impact the well will have on the air with the other wells in the San Juan Basin. Compare Environmental Assessment DOI-BLM-NM-F010-2014-0254 at 18-20 (A.R.0120125-27), with Environmental Assessment DOI-BLM-NM-F010-2014-0250 at 18-21 (A.R.0119200-03). The Court concludes, accordingly, that the BLM did not act arbitrarily in labeling these projects routine.

Finally, the Plaintiffs argue that the BLM violated NEPA regulations when it delayed posting the final EAs. See Diné Brief at 30-31. Under 43 C.F.R. § 46.305, the BLM must "notify the public of the availability of an environmental assessment and any associated finding of no significant impact once they have been completed." 43 C.F.R. § 46.305(c). The Court

concludes that the BLM complied with that requirement. 43 C.F.R. § 46.305(c) is, at bottom, a notice regulation. The BLM provided that notice by updating its website whenever an EA was completed. See, e.g., NEPA Log at 1-35 (A.R.0151320-54). It is true that, because of a backlog, the BLM did not immediately post every completed EA to its website. See Email from Amanda Nisula to Mike Eisenfeld at 1 (dated October, 3, 2014)(A.R.0178204). The regulation does not, however, require that the EA be posted to the internet once complete. See 43 C.F.R. § 46.305(c). Instead, it requires that the public be notified when an EA is available. See 43 C.F.R. § 46.305(c). By all accounts, these EAs were available, even though they were not posted on the internet, because the BLM granted access to physical copies of EAs within days of a request. See United States Department of the Interior Bureau of Land Management Visitor Log at 1 (dated October 7, 2014)(A.R.0178205)(listing Mike Eisenfeld as a visitor); Letter from Mike Eisenfeld to Amanda Nisula at 3 (A.R.0178297)("On October 7, 2014 BLM employees ushered me into the worker cubicle area and handed me hard copies of the EAs, Decision Records (DRs) and Finding of No Significant Impacts (FONSIs), and told me to make my own copies."). The delay in receiving the EA also does not run afoul of 43 C.F.R. § 46.305(c), because the regulation imposes no deadline when the public must have access to the EA. See 43 C.F.R. § 46.305(c). Notice of the document's availability must be issued "once" the EA has "been completed," but it says nothing about when the document must be disclosed. 43 C.F.R. § 46.305(c).

The two cases that the Plaintiffs cite to the contrary are inapposite. See Diné Brief at 31 (citing WildEarth Guardians v. OSMRE, 104 F. Supp. 3d 1208, 1224 (D. Colo. 2015)(Jackson, J.), order vacated by 652 F. App'x 717, 719 (10th Cir. 2016); Guardians v. U.S. of Surface

Mining Reclamation and Enforcement, 2016 WL 6442724, at *7 (D. Mont. Jan. 21, 2016)(Otsby, M.J.) order adopted in part and rejected in part, 2016 WL 259285, at *2 (Watters, J.)). In both cases, the agency did not tell anyone that they had placed paper copies of "EAs and FONSIs on a shelf in its high-rise office," and in the public reading room. WildEarth Guardians v. OSMRE, 104 F. Supp. 3d at 1224. See Guardians v. U.S. of Surface Mining Reclamation and Enforcement, 2016 WL 6442724, at *7. Thus, the EAs were available, but they gave the public no notice. Here, in contrast, the BLM gave the public notice of completed EAs with its NEPA log. See, e.g., NEPA Log at 1-35 (A.R.0151320-54). Their availability was not immediate, but the regulation does not require immediate availability. See 43 C.F.R. § 46.305(c). Accordingly, neither of these cases dictate a different outcome.

VI. THE BLM DID NOT VIOLATE THE NHPA, BECAUSE CHACO PARK AND ITS SATELITTES ARE OUTSIDE OF THE APE, AND THE RECORDS' CULTURAL RESOURCE ANALYSES SATISFY THE PROTOCOLS' DOCUMENTATION STANDARDS.

The Court concludes that the Plaintiffs' main contention with respect to the NHPA -- that the BLM violated the NHPA by not analyzing the indirect effects the wells would have on Chaco Park and its satellites -- lacks merit. That contention fails, because the Protocols governing the BLM require it to consider effects on historical sites within the APE, and Chaco Park and its satellites are outside of the wells' APEs. Thus, that the BLM did not consider the wells' effects on Chaco Park and its satellites did not violate the Protocols, so did not violate the NHPA. The records' cultural resources analysis otherwise comport with the Protocol's documentation standards, so there is no other NHPA violation.

"NHPA, like NEPA, is a procedural statute requiring government agencies to stop, look, and listen before proceeding when their action will affect national historical assets." Coal. of

Concerned Citizens To Make Art Smart v. Fed. Transit Admin. of U.S. Dep't of Transportation, 843 F.3d 886, 905 (10th Cir. 2016)("Concerned Citizens"). Section 106 of NHPA "requires an agency undertaking a project expected to adversely affect a public or private site listed on the National Register of Historic Places to 'take into account the effect of the undertaking on any historic property.'" Concerned Citizens, 843 F.3d at 905 (quoting 54 U.S.C. § 306108).

Because the NHPA is a procedural statute, a reviewing court is not tasked with determining if the BLM correctly decided whether an oil well or another project altered a historic site. See Concerned Citizens, 843 F.3d at 906-08. Instead, a reviewing court must ensure only that the BLM followed the proper procedures and considered the factors it was supposed to consider when the BLM made its determination. See Concerned Citizens, 843 F.3d at 906-08. The NHPA's regulations outline both the requisite procedure and the proper factors. See 36 C.F.R. §§ 800.3-.13. First, they require that the BLM designate an area -- termed the "APE." 36 C.F.R. § 800.4(1)(a). See 36 C.F.R. § 800.16(d) ("Area of Potential effects means the geographic area or areas which an undertaking may directly or indirectly cause alterations in the character or use of historic properties."); Concerned Citizens, 843 F.3d at 906. Within that APE, the BLM must identify historic properties. See 36 C.F.R. § 800.4(b). Next, the BLM must consider whether the undertaking will affect the historic properties identified within the APE. See 36 C.F.R. § 800.4(d)(1)-(2). Finally, if the historical site will be affected, the BLM must assess whether those potential effects are adverse to the historical site. See 36 C.F.R. § 800.5(a). An adverse effect exists when "an undertaking may alter, directly or indirectly any of the characteristics of a historic property that qualify that property for inclusion in the National register." 36 C.F.R. § 800.5(a)(1). Relevant here, one example of an adverse effect is

"[i]ntroduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features." 36 C.F.R. § 800.5(a)(2)(v).[27] In short, the NHPA regulations require the BLM to: (i) designate an area to consider -- the APE; (ii) identify historical sites within that area to consider; (iii) consider whether the undertaking could affect historical sites within that area to consider; and (iv) determine whether those effects are adverse to the historical site. See 36 C.F.R. §§ 800.4-.5; Concerned Citizens, 843 F.3d at 906.

The NHPA's regulations also outline the documentation standards for NHPA determinations. See 36 C.F.R. § 800.11. Broadly speaking, "[t]he Agency official shall ensure that a determination, finding, or agreement under the procedures in this subpart is supported by sufficient documentation to enable any reviewing parties to understand its basis." 36 C.F.R. § 800.11(a). For a finding that "no historic properties are affected," the BLM must provide "[t]he basis for determining that no historic properties are present or affected." 36 C.F.R. § 800.11(d)(3). For a determination of "adverse effect" or "no adverse effect," the BLM must detail "a description of the undertaking's effects on historic properties" and an "explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions of future actions to avoid, minimize or mitigate adverse effect." 36 C.F.R. § 800.11(e)(4)-(5).

Few cases have interpreted 36 C.F.R. § 800.11's documentation standards, but the small number that have done so require that there be at least some detail to understand the basis for the agency's finding. See, e.g., Neighborhood Ass'n of the Back Bay Inc. v. Federal Transit Admin., 463 F.3d 50, 60-61 (1st Cir. 2006); Comanche Nation v. United States, 2008 WL

[27]Some other examples of an adverse effect that the regulation provides are: (i) physical destruction or damage to all or part of the property; (ii) removal of the property from its historic location; and (iii) change of the character of the property's use. See 36 C.F.R. § 800.5(a)(2)(i)-(vii).

4426621, at *19 (W.D. Okla. Sept. 23, 2008)(DeGuisti, J.). 36 C.F.R. § 800.11's plain language, nevertheless, suggests that it is not a demanding standard. See 36 C.F.R. § 800.11(a) ("The agency official shall ensure that a determination . . . is supported by sufficient documentation to enable any reviewing party to understand its basis."). Because the Court is not passing judgment on the agency's ultimate determination, i.e., adverse or no adverse effect on a historical site, a piercing level of detail is unnecessary; all the agency needs to provide is "sufficient documentation" such that the Court or any other reviewing party can understand the findings' "basis." 36 C.F.R. § 800.11(a). This basis includes an "explanation of why the criteria of adverse effect were found applicable or inapplicable." 36 C.F.R. § 800.11(e). Accordingly, the agency's findings need not be a topic treatise or even an essay, but there needs to be some explanation for why the agency made the determination it did, and, if the agency determined that there was an adverse effect, an explanation of "any conditions or future actions to avoid" to "minimize or mitigate adverse effects." 36 C.F.R. § 800.11(e)(5).

An agency, however, may substitute the NHPA's regulations, in whole or in part, if an "agency program alternative" governs the project. 36 C.F.R. § 800.3(a)(2). A program alternative is essentially a contract that establishes alternative procedures that an agency must follow vis-à-vis certain undertakings. See 36 C.F.R. § 800.14(a). In creating a program alternative, the agency must consult with the Advisory Council on Historic Preservation, the National Conference of State Historic Preservation Officers, individual SHPOs, or -- as appropriate -- Indian tribes. See 36 C.F.R. § 800.14(a)(1).

Here, the BLM entered two program alternatives: one in 2004 and another in 2014. See 2004 Protocol at 1-22 (A.R.0169038-59); 2014 Protocol at 1-51 (A.R.0169213-299). Under the

2004 Protocol, a New Mexico Cultural Heritage Specialist ("CHS")[28] determines the APE on a case-by-case basis. See 2004 Protocol § VI(D)(1)-(2), at 11-12 (A.R.0169048-49). If the CHS subsequently determines that an APE contains no historic or only "isolated manifestations" of historic sites, the undertaking will be approved. 2004 Protocol § VI(F)(1), at 14 (A.R.0169051). If the CHS determines that there is a potential that an undertaking will damage or destroy a "cultural resource," but that site is unlikely to be eligible for NHPA protection, the undertaking will be approved. See 2004 Protocol § VI(F)(2), at 14 (A.R.0169051). If the CHS determines that there is a NHPA protected site within the APE, the CHS can make one of three findings: (i) no effect; (ii) no adverse effect; or (iii) adverse effect. See 2004 Protocol § VI(G)(1)-(4), at 15-16 (A.R.01969052-53). A no-effect finding means that the undertaking will not alter the characteristics that make a site eligible for the National Register of Historic places. See 2004 Protocol § VI(G)(2), at 15 (A.R.0169052). A no–adverse-effect finding means either that the undertaking will have a positive effect on the site or that a site, specifically an archaeological site, can be treated to mitigate the adverse effect, such as through "data collection," i.e., all of or the majority of the valuable historic data from an archaeological dig is retrieved. 2004 Protocol § VI(G)(3)(a)-(b), at 15-16 (A.R.0169052-53). An adverse effect occurs when an undertaking changes a site's characteristics that qualify it for inclusion in the National Register of Historic Places. See 2004 Protocol § VI(G)(4), at 16 (A.R.0169053).

[28]The 2004 Protocol does not define CHS, but, based on context clues throughout the 2004 Protocol, a CHS appears to be a BLM employee tasked with surveying different plots of land to determine whether: (i) there are any historic sites eligible for inclusion in the National Historic Register within in a region; and (ii) whether undertakings in that region will affect those sites. See 2004 Protocol §§ VI(E)(1), VI(F), VI(G)(1) at 13-16 (AR169050-53).

The 2004 Protocol also establishes its own documentation standards in lieu of 36 C.F.R. § 800.11. See 2004 Protocol § V(A)(5)(c), at 5-6 (A.R.0169042-43)(dictating that H-8100-1 Procedures for Performing Cultural Resource Fieldwork on Public Lands in the Area of New Mexico BLM Responsibilities (A.R.0168854-9017)("BLM Procedures") governs documentation standards for large- and small-scale inventory reports). Relevant here, for a small-scale inventory report,[29] if there is a historical site within the APE, the CHS must document a "Determination of Effect" which means that the CHS must

> [e]valuate and describe the potential of the undertaking, proposed project, or action to affect each of the cultural resources identified within the project area or immediately adjacent to the project area. This discussion should address each cultural property individually, and should consider the nature of the cultural property and those attributes that determine its potential for nomination to the National Register, its location with respect to ground disturbing activities and other project actions, its location relative to current public access, and its location relative to changes in access resulting from the completion of the proposed undertaking.

New Mexico Bureau of Land Management Reporting Standards for Small-Scale Cultural Resource Inventory Project Reports, at Appendix 3-7 (A.R.0169166)("BLM Procedures Appendix"). The Determination of Effect requirement, like 36 C.F.R. § 800.11, does not appear to require a rigorous analysis, but nonetheless requires a description of the "affect" that each undertaking will have on historic sites, and a "discussion" of each "cultural property individually," which "should consider the nature of the cultural property and those attributes that determine its potential for nomination to the National Register." BLM Procedures Appendix at 3-7 (A.R.0169166). The BLM Procedures, however, also have a "Recommendation" requirement for its reports, which states:

[29]Small-scale inventory report are reports "that cover fewer than 160 acres, or less than 10 linear miles, in total." BLM Procedures at 1-11 (A.R.0168869).

> The field investigator's recommendations concerning measures which can be taken to avoid or mitigate the effects of the undertaking upon properties within the area of potential environmental effect are invaluable. It may prove impossible to revisit each documented property, so suggestions on how to protect them must be as specific as possible.
>
> This section requires the preparer to evaluate whether or not the undertaking could affect the properties recorded. If the answer is no, then explain why. Be explicit as to where each site is located in relation to the project's ground disturbance, increased public access, etc.
>
> If it is felt that the undertaking could affect any of the sites, then state explicitly how each property could be impacted. Be specific and relate any suggestions for avoidance or mitigation of effects to individual site - sketch maps. Discuss how the specific qualities making individual properties significant could be affected by the undertaking.

BLM Procedures Appendix at 3-7 (A.R.0169166). Thus, if the undertaking does not affect the historical site, the CHS "explain[s] why." BLM Procedures Appendix at 3-7 (A.R.0169166). If the undertaking could affect any of the historical sites within the APE, the CHS must "state explicitly how each property could be impacted" and must also "[d]iscuss how the specific qualities making individual properties significant could be affected by the undertaking." BLM Procedures Appendix at 3-7 (A.R.0169166).

The 2014 Protocol is similar to the 2004 Protocol, but also diverges in some important ways. In general terms, the 2014 Protocol requires that

> the BLM will consider potential direct, indirect, and cumulative effects to historic properties and their associated settings when setting is an important aspect of integrity, as applicable. The introduction of physical, visual, audible, or atmospheric elements has the potential to affect the historic setting or use of historic properties including but not limited to properties of religious and cultural significance to Indian tribes, and the BLM will take this into account in defining the limits of an APE for indirect effects.

2014 Protocol at 21 (A.R.0169233). Unlike the 2004 Protocol, which lets the CHS have considerable discretion to determine the APE, the 2014 Protocol discusses an APE definition for

both direct and indirect effects. The APE for direct effects has a fixed boundary depending on the type of undertaking, and, for oil well pads, it is the well pad's construction zone plus one hundred feet on each side of the construction zone's edges. See 2014 Protocol at 21 (A.R.0169233); New Mexico State Protocol Appendix B Standard APEs for Direct Effects at 1, 3 (A.R.0169265, A.R.0169267)("2014 Protocol App. B"). The APE for indirect effects, on the other hand, "shall include known or suspected historic properties and their associated settings where setting is an important aspect of integrity," but identification efforts outside of the Direct Effect APE for historic sites are subject to the BLM Field Manager's approval after considering recommendations from the SHPO. 2014 Protocol at 21 (A.R.0169233). In other words, an indirect APE exists only if the BLM field manager approves of one after he or she considers SHPO recommendations. See 2014 Protocol at 21 (A.R.0169233). The 2014 Protocol then establishes the criteria by which the BLM may classify a historic property as adversely or not adversely affected:

> The BLM will consider the following guidance when determining whether a finding of No Historic Properties Affected is appropriate. If the inventory does not find cultural resources of any kind, and/or only identifies isolated manifestations (isolated occurrences), or only finds ineligible sites, buildings, structures or objects, then a determination of No Historic Properties is appropriate. If historic properties are present in the APE but will not be affected by the undertaking, then a determination of No Historic Properties Affected is appropriate. If a setting analysis is completed, and a proposed project will not be visible from the historic property, then a determination of No Historic Property Affected is appropriate. A determination of No Historic Properties Affected is generally not appropriate when the undertaking involves ground disturbance within the boundaries of a historic property.
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> . . . .
>
> The BLM will consider the following guidance when determining whether a finding of No Adverse Effect is appropriate.

a. If a historic property is being affected by a proposed undertaking, but the effect will not diminish the aspects of integrity nor alter, directly or indirectly, any of the characteristics that make the property eligible for listing in the NRHP, then a finding of No adverse Effect is appropriate as defined in 36 CFR 800.5(b). This applies to all historic properties located within the APE.

b. If it can be demonstrated that the portion of the property that will be affected directly or indirectly, lacks integrity, then a finding of No Adverse Effect is appropriate. For archaeological sites this will usually involve documentation on how the archaeological site has been disturbed and a discussion of how the integrity deposits has been compromised.

c. If setting, feeling and/or association are contributing aspects of integrity for any historic property, and a proposed undertaking will be visible from the historic property, but the project elements will not dominate the setting or attract the attention of the casual observer, the BLM will document the decision and a finding of No Adverse Effect is appropriate as provided in 36 CFR 800.5(b).

d. If the BLM proposes preservation, stabilization, rehabilitation, or reconstruction of NRHP eligible sites, buildings, structures, or objects, and the work is consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties (SOI Standards), or the BLM modifies the undertaking or imposes conditions on the undertaking to ensure consistency with the SOI Standards, a finding of No Adverse Effect is appropriate as provided in 36 CFR 800.5(b)

. . . .

[T]he BLM will consider the following guidance when determining whether a finding of Adverse Effect is appropriate.

a. If setting, feeling and/or association are contributing aspects of integrity for any historic property, and a proposed undertaking will be visible from the historic property, and the project elements dominate the setting, a

finding of Adverse Effect is appropriate as provided in 36 CFR 800.5(a)(1).

b. If the proposed undertaking, including research excavation projects, will result in the physical destruction of or damage to all or part of the historic property, a finding of Adverse Effect is appropriate as provided in 36 CFR 800.5(a)(1).

2014 Protocol at 26-30 (A.R.0169238-42). The 2014 Protocol's documentation standard, however, is identical to the 2004 Protocol's documentation standard. See 2014 Protocol at 31 (A.R.0169243). See also BLM Procedures Appendix at 3-7 (A.R.0168975).

The Plaintiffs main contention is that air, light, and noise pollution, and vehicle traffic, adversely affect Chaco Park and its satellites, and that the BLM failed to take those effects into account in its analysis. See Diné Brief at 35; Diné Reply at 18. The BLM counters that it has satisfied its NHPA obligations, because it commissioned a cultural investigation, defined an APE, "considered foreseeable direct and indirect adverse effects to cultural resources," and determined whether the wells would have an adverse effect on the sites. BLM Response at 37-38. The Operators also contend that the BLM properly followed the 2004 and 2014 Protocols. See Operators' Response at 24-25. The Court concludes that the BLM complied with the NHPA, because the BLM followed the Protocols it adopted. For each well, it: (i) defined the APE; (ii) determined if there were any historical sites within that APE; and, (iii) if there were historical sites, it signaled the historical site's nature, and documented how effects to that site could or could not be avoided.

The Court conducts an arbitrary-and-capricious review of the BLM's process and the factors it considered when determining if a historical site has been affected. See Concerned Citizens, 843 F.3d at 909 ("[The Plaintiffs] also fail to establish that the FTA acted arbitrarily or

capriciously in failing to consider these factors."). A historical site's nature affects what factors that the BLM should consider, and the BLM concluded similarly when it drafted its protocols. For example, in the 2014 Protocol, the BLM decided that, if a historical site's setting was what made it historical, then whether the historical site could be seen from the undertaking would be a factor -- perhaps, a dispositive factor -- that the BLM should consider when determining whether a project affects the historical site. See 2014 Protocol at 30 (A.R.0169242). See also 2014 Protocol at 21 (A.R.0169233)("The introduction of physical, visual, audible, or atmospheric elements has the potential to affect the historic setting or use of historic properties."). If the historical site is archaeological, however, visibility of the oil well has little effect on what makes the archaeological site have historical value, so the visible effect the oil well has on the archaeological site need not be considered. See 2014 Protocol at 30 (A.R.0169242). Thus, the historical site's nature dictates the factors that the BLM needs to consider, and the APE, in turn, dictates which historical sites that the BLM must consider. See 2004 Protocol at 11-12 (A.R.0169048-49); 2014 Protocol at 21 (A.R.0169233).

With those concepts in mind, the Court turns to the Plaintiffs' contentions. First, they contend that there is no "record evidence to indicate that BLM ever defined an area for indirect effects,"[30] so the BLM acted arbitrarily and capriciously. Diné Brief at 38. In making this

[30]The parties refer to direct and indirect effects, see, e.g., BLM Response at 39, but the regulations do not define those terms. See 36 C.F.R. § 800.16(i) (defining effect as an "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register," but not defining direct or indirect effects). Based on the parties briefing, it appears that, by indirect effects, they mean effects such as air, noise, and light pollution, and visual disturbances -- i.e., whether the project creates an eyesore affecting the historical site's setting, environment, or feeling. See, e.g., BLM Response at 39; Diné Reply at 20. Direct effects, in contrast, refer to physical damage to historical properties. See, e.g., Diné Reply at 20.

argument, the Plaintiffs attack the first step an agency must take under the NHPA: defining the APE. Nothing in the protocols, however, requires that the BLM define each well's indirect APE separate from the direct APE. Instead, the 2014 Protocol creates a standard direct APE for oil well pads, which is equal to the area of the well pad and construction zone plus a one-hundred foot buffer zone on each side of the construction zone's edges. See 2014 Protocol at 21 (A.R.0169233); 2014 Protocol Appendix B at 1 (A.R.0169265). The 2014 Protocol then states that an indirect APE "shall include known or suspected historic properties and their associated settings where setting is an important aspect of integrity," but the indirect APE definition subsequently notes that "identification efforts" outside of the direct APE for other historical sites shall occur only with the BLM field manager's approval after the BLM manager has considered recommendations from the BLM cultural resource specialist and the SHPO. 2014 Protocol at 21 (A.R.0169233). In other words, the BLM need only consider historic properties within the direct APE, unless the BLM field manager, after taking into account certain recommendations, decides that the BLM needs to broaden its scope to include other "known or suspected properties." 2014 Protocol at 21 (A.R.0169233). Thus, under the 2014 Protocol, the default APE definition is the direct APE's definition -- one-hundred feet within the well pad's construction zone. To be sure, the 2014 Protocol still requires the BLM to consider indirect and cumulative effects that the wells have on those historic sites within the APE, see 2014 Protocol at 21 (A.R.0169233), but there does not need to be a separate indirect APE defined to satisfy the Protocols. Indeed, the 2014 Protocols expect that the direct and indirect APEs, in most cases, will be the same, and will diverge only when the BLM field manager approves of a divergence. See 2014 Protocol at 21 (A.R.0169233).

The 2004 Protocol similarly requires no separate indirect APE definition. It provides: "NM BLM cultural heritage specialists will determine the area of potential effects that will be subject to inventory. This determination will define the geographic area within which the undertaking might directly or indirectly cause changes to the character or use of any historic properties should they exist." 2004 Protocol at 11-12 (A.R.0169048). The 2004 Protocol, unlike the 2014 Protocol, does not create a standard direct APE nor does it create a standard indirect APE. The definition turns on what appears to be the CHS' case-by-case determination. See 2004 Protocol at 11 (A.R.0169048). The 2004 Protocol makes no distinction between direct or indirect APE, so, based on its plain language, the indirect APE does not need to be separately defined. Accordingly, it is not arbitrary and capricious that the BLM did not separately define the indirect APE from the direct APE.[31]

Second, the Plaintiffs cite the 2014 Protocol's language, which states that, "[i]n defining the APE, the BLM will consider potential direct, indirect, and cumulative effects to historic properties and their associated setting when setting is an important aspect of integrity, as applicable" to argue that the BLM needed to consider the wells' effects on Chaco Park and its satellites. Diné Brief at 37 (quoting 2014 Protocol at 21 (A.R.0169233)). See Diné Brief at 38-39. Their argument pivots on whether that language means that the BLM, in defining the APE, had to consider and document their consideration of the historic sites many miles away from the wells. The Court concludes that the 2014 Protocol has no such requirement. Rather, as already explained, efforts to identify historic sites that could be indirectly affected, and thus need to be

[31]The Court also notes that the regulations do not require the indirect APE to be defined separately from the direct APE. See 36 C.F.R. §§ 800.4(a)(1); 800.16(d).

considered, are executed at the BLM field manager's discretion with the BLM cultural resource specialist's and the SHPO's recommendations. See 2014 Protocol at 21 (A.R.0169233). The 2014 Protocol grants the BLM some flexibility in defining the APE, which makes sense, because the indirect APE is bound to be different for different sites. If, for example, a mountain stands between a well and a historic site, considering the well's indirect visual effects on that historic site does not make sense. The NHPA regulations recognize -- perhaps for that reason -- that the APE needs to be flexible. See 36 C.F.R. § 800.16 ("The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."). The 2014 Protocol echoes that sentiment by granting the BLM some discretion to determine, on a case-by-case basis, how far out it must look for historic sites when defining the APE. See 2014 Protocol at 21 (A.R.0169233). See also Valley Community Preservation Com'n v. Mineta, 373 F.3d 1078, 1091 (10th Cir. 2004)("Establishing an area of potential effects requires a high level of agency expertise and as such, the agency's determination is due a substantial amount of discretion.").

That the BLM may not have ever considered Chaco Park and its satellites is not arbitrary and capricious, because (i) the 2014 Protocol does not require the BLM to consider those sites; and (ii) the Court cannot say that the BLM should have considered those sites given that Chaco Park and its satellites are more than ten miles away for most of the wells. See Location of APDs Challenged in DinéCARE v. Zinke 15-cv-209 (D.N.M.) Administrative Record Data at 1, filed June 6, 2017 (Doc. 113-1)("APD Map Aff.").[32] Although some oil wells might be visible from

[32]Although the map constructed in the APD Map Aff. is not in the record, the map was constructed entirely from data in the record. See APD Map Aff. ¶¶ 5-6, at 2. The Court accordingly may consider the APDs locations with relation to Chaco Park and its satellites.

the historic sites, the Court could locate no evidence in the record demonstrating that the wells actually are visible from those sites.[33] The wells' distance from Chaco Park and its satellites also suggests that noise and light pollution would have minimal effect on those historic sites. To be sure, noise can travel a distance, but any noise that would carry miles to the historical site would not be so much that it was arbitrary and capricious for the BLM to exclude Chaco Park and its satellites from the APE. There is already ambient noise from traffic into the park and traffic on Highway 550 -- the area where most of the well pads are located. The same analysis applies for light pollution. Finally, the Court cannot say that the 2014 Protocol is arbitrary and capricious for granting the BLM discretion in determining what sites it needs to consider for indirect effects, because the regulations also suggest that the APE should be defined flexibly. See 36 C.F.R. § 800.16.

Third, the Plaintiffs argue that the BLM violated the 2014 Protocol, because the BLM did not consult with the SHPO to define the indirect effects to historic properties. See Diné Brief at

[33]The Court notes that there are some well pad photographs in the record, but none of the ones the Court located were taken from where a historical site was situated. See Letter from WildEarth Guardians to Jesse Juen, State Director, Bureau of Land Management and Gary Torres, Field Manager, Farmington Field Office, Bureau of Land Management at 4-6 (dated October 27, 2014)(A.R.01678403-05)("WildEarth Letter"). Some of the photographs were aerial pictures and others were taken close to the well pad. See WildEarth Letter at 4-6 (A.R.01678403-05). The Court also notes that the Plaintiffs attach pictures of the well pads in several of their declarations, but, again, none are taken from a historic site. See Nichols Supp. Decl. ¶¶ 9-10, at 5-11; Eisenfeld Supp. Decl. ¶ 8, at 4-6. Rather the pictures are taken from roads into Chaco Park, see Nichols Suppl. Decl. ¶¶ 9-10, at 5-11, or the supplemental declaration does not say from where the pictures are taken, see Eisenfeld Suppl. Decl. ¶ 8, at 4-6. Moreover, even if the pictures in the supplemental declaration were taken from the historic sites, the Court cannot consider the declarations for substantive evidence, because those pictures are outside the administrative record.

38. In so arguing, the plaintiffs cite language from the 2014 Protocol's Appendix B, which states:

> In certain circumstances, even though an undertaking may have a standard APE listed below, the Field Manager, at the recommendation of the cultural resource specialist, may have justification to require a larger APE. If an APE larger than the minimums below is being recommended, SHPO consultation is not required. For actions where a field office is suggesting a smaller APE for an undertaking listed below, SHPO consultation will be required pursuant to Section IV.B. For any other APEs (i.e. undertakings not listed here, visual effects APE, etc.), the cultural resource specialist will consult with SHPO pursuant to Section IV.B.

2014 Protocol Appendix B at 1 (A.R.0169265)(emphasis in original). The Plaintiffs read the language -- "[f]or any other APEs . . . the cultural resource specialist will consult with the SHPO," 2014 Protocol Appendix B at 1 (A.R.0169265)(emphasis in original) -- to mean that the BLM must consult with the SHPO "to define an APE for indirect effects," and, because there is no evidence that the BLM ever consulted with a SHPO, the BLM violated the Protocol. See Diné Brief at 37-38. The Court agrees with that analysis to a point. It is true that the 2014 Protocol requires the BLM field manager to consider recommendations from the SHPO when that field manager is determining whether identification efforts for historic properties outside of the direct APE are required. See 2014 Protocol at 21 (A.R.0169233). The Plaintiffs' assumption is, however, that the BLM Field Manager must conduct that larger APE analysis for every well, but the 2014 Protocol does not require that analysis; rather, it requires such an analysis only at "the approval of the BLM field manager." 2014 Protocol at 21 (A.R.0169233). That language suggests that a larger APE analysis is an exception to the typical rule. A SHPO consultation is thus not mandatory for every well, but only for wells that the BLM Field Manager is considering expanding the APE. Accordingly, the BLM's failure to consult the SHPO for every well does not, by itself, demonstrate that the BLM acted contrary to law or arbitrarily and capriciously.

Fourth, the Plaintiffs contend that the BLM violated the 2014 Protocol, because a SHPO consultation is required for every "complicated or controversial" undertaking. According to the Plaintiffs, all of the wells at issue are controversial and there is no record of a SHPO consultation, so the BLM violated the 2014 Protocol. See Diné Brief at 37-38. The Plaintiffs do not explain why the wells are controversial, see Diné Brief at 37-38; presumably, they are controversial, because the Plaintiffs have challenged them. The Court concludes that the 2014 Protocol's reference to "complicated or controversial" does not apply, merely because a plaintiff group creates a controversy by challenging the wells. Such a definition would suggest that the BLM should consult a SHPO on every well, because any well could be subject to legal challenge. If the 2014 Protocol's intent was to require the BLM to always consult a SHPO, it would have said as much instead of creating a scheme whereby SHPO consultation is the exception instead of the rule. See 2014 Protocol at 21 (A.R.0169233). Because the Plaintiffs have not demonstrated how any of the wells are otherwise controversial, the Court concludes that the wells are not controversial, so the BLM is not required to consult a SHPO for that reason.

The Plaintiffs' final contention is that the BLM did not consider the indirect or cumulative effects the wells would have on Chaco Park and its satellites. See Diné Brief at 36, 40. The BLM need consider those indirect or cumulative effects only if those historical sites were within the various wells' APE. See 2014 Protocol at 27-28 (A.R.0169239-40); 2004 Protocol at 15 (A.R.0169052). After reviewing the records' cultural resource reports, the Court concludes that Chaco Park and its satellites are not within any of the wells' APEs, see, e.g., A Cultural Resources Survey of WPX Energy Production LLC's Chaco 2306-18M Number 240H/256H Dual Well Pad, Pipeline, and Access Road at 4 (dated March 21,

2014)(A.R.0168011)("Chaco 2306-18M Report"), so the BLM did not act arbitrarily and capriciously when it did not explicitly consider indirect effects to those properties within its cultural resource reports. The Court also concludes that the records' cultural resources reports meet the 2004 Protocol's and the 2014 Protocol's documentation standards. Each cultural resource report and its accompanying cultural resource record of review describes each historical site within the APE with enough detail that the Court can discern the historical site's nature, as required. See 2014 Procedures at Appendix 3-7 (A.R.0168975). The sites identified are archaeological in nature. See, e.g., Chaco 2306-18M Report at 4(A.R.0168011)(identifying the historical site as qualifying for the national registry of historic places under criteria D, which means it is a site that has yielded or is likely to yield information important in history). See also New Mexico Cultural Resource Information System at 24 (A.R.0169118)(defining criteria D under the national registry of historic places as a site that "has yielded, or is likely to yield, information important in prehistory or history," and noting that "[o]bviously most archaeological sites will fall under criteria 'd.'"). Those reports then describe why the BLM has determined that the well pad will not affect those sites. See, e.g., Chaco 2306-18M Report at 4; Cultural Resource Record of Review for Chaco 2306-18M at 1-2 (A.R.0168012-13)("Chaco 2306-18M CRROR"). Most often, the reason is that the site can be avoided during construction, thus eliminating or severely mitigating the risk of physical damage. See, e.g., Chaco 2306-18M Report at 4; Chaco 2306-18M CRROR at 1-2. As explained in the 2014 Protocol, a project's adverse effect on an archaeological site is limited to whether the project could physically destroy or damage the archaeological site. See 2014 Protocol at 30 (A.R.0169242). Such a limitation makes sense, as the archaeological site's historical value stems from the historical data

recoverable from the location and not the historical property's setting or feeling associated with it. As the Court mentioned previously, the documentation standard is not a high standard, and the Court concludes that the record documentation for these archaeological sites meets the low bar that the documentation standard erects.[34] Accordingly, the BLM did not violate the NHPA.

VII. IF THE COURT WERE TO CONCLUDE THAT THERE WERE A NEPA VIOLATION, VACATUR AND REMAND, BUT NOT A PERMANENT INJUNCTION, WOULD BE THE PROPER REMEDY, AND IF THE COURT WERE TO CONCLUDE THAT THERE WERE A NHPA VIOLATION, REMAND WITHOUT VACTUR, IN LIEU OF A PERMANENT INJUNCTION, WOULD BE THE APPROPRIATE REMEDY.

If the Court concluded that there were a NEPA violation, it would conclude that vacatur would be the proper remedy, but a permanent injunction would not be. Vacatur with remand, as opposed to remand without vacatur, of the 350 wells' APDs is proper, because the seriousness of the BLM's violation outweighs the potential harm the operators would suffer. An injunction precluding the BLM from approving more wells would be inappropriate, however, as the

[34]The Court previously determined that some of the cultural resource reports did not meet the requisite documentation standards. See Order at 4, filed March 31, 2018 (Doc. 128)("Order"). After having an opportunity to review fully the case's voluminous record, the Court concludes that the BLM meets the required documentation standards. The Court's previous determination was based on some cultural resource reports, which state that historical sites were within an APE, but then give no explanation why the BLM concluded that the well would not affect that historical site. See Cultural Resources Survey of Encana Oil and Gas (USA) Inc.'s Escrito D34-2409 Number 01H/02H/03H/04H Multiple Well Pad, Access Road, and Pipeline at 4 (dated November 19, 2012)(A.R.0167456)("Escrito D34-2409 Report"). For example, in the Escrito D34-2409 Report, it notes that there are four historical sites within the APE, two of which are eligible for inclusion in the national register of historic places, yet does not explain why it determined that the well pads would not adversely affect those historic sites. See Escrito D34-2409 Report at 4. With an opportunity to review fully the record, the Court uncovered accompanying Cultural Resource Record of Review Documents, which detail the reasoning for the BLM's no-adverse determination. See Cultural Resource Record of Review for Escrito D34-2409 at 1-2 (A.R.0167457-58)(noting that erected physical barriers would protect the historic sites, so the project could proceed). The combined reports satisfy the documentation standards.

presumption is in favor of remand with vacatur. Moreover, on balance, given the harms alleged, vacatur would better serve the public. On the other hand, if there were just a NHPA violation, remand without vacatur would be appropriate, because the harms alleged are purely aesthetic.

A. VACATUR OF THE WELLS' APDS IS PROPER.[35]

Vacatur is the usual remedy for an agency action that is arbitrary, capricious, or contrary to law. See 5 U.S.C. § 706(2)(A); DinéCitizens Against Ruining Our Environment v. United States Office of Surface Mining Reclamation and Enforcement, 2015 WL 1593995, at *1 (D. Colo. April 6, 2015)(Kane, J.)("When a federal agency fails to comply with its obligation to consider the environmental impacts of its action before undertaking a 'major federal action,' the normal remedy is vacatur.")("Diné III"). "[I]n some cases," however, "equitable principles counsel in favor of remand without vacatur." Diné III, 2015 WL 1593995, at *2 (citing Pacific Rivers Council v. United States Forest Service, 942 F. Supp. 2d 1014, 1021 (E.D. Cal. 2013)(England, Jr., C.J.)). See Allied-Signal, Inc. v. U.S. Nuclear Regulatory Com'n, 988 F.2d 146, 150 (D.C. Cir. 1993)("An inadequately supported rule, however, need not necessarily be vacated."). Vacatur is proper as opposed to remand when the seriousness of the rule-making's deficiency outweighs the harm that might arise from vacating the agency's action. See Allied-Signal, Inc. v. U.S. Nuclear Regulatory Com'n, 988 F.2d at 150-51; California Communities Against Toxics v. E.P.A., 688 F.3d 989, 992 (9th Cir. 2012). Reviewing the cases, the presumption is in favor of vacatur instead of remand without vacatur. See e.g., Humane Soc. of U.S. v. Locke, 626 F.3d 1040, 1053 n.7 (9th Cir. 2010)("In rare circumstances, when we deem it

[35]This analysis, which is already contingent on the Court coming to a different conclusion, does not apply to the APD challenges that the Court concluded were moot or were not challenging final agency action. The Plaintiffs' challenges to those wells' APDs would fail even if the Court determined that the BLM violated NEPA or the NHPA.

advisable that the agency action remain in force until the action can be reconsidered or replaced, we will remand without vacating the agency's action."); Heartland Regional Medical Center v. Sebelius, 566 F.3d 193, 198 (D.C. Cir. 2009). The statute's mandatory language supports that proposition. See 5 U.S.C. § 706(2)(A)("The reviewing court shall . . . hold unlawful and set aside agency action.")(emphasis added).

Here, had the Plaintiffs made a showing that the BLM violated NEPA, because the EIS did not consider the significant effects resulting from these wells that use horizontal drilling and fracking techniques, the APD deficiency would be serious. Hundreds of wells would be operating without a robust EIS level analysis of horizontal drillings' effects on the environment. First, there would be unconsidered impacts to water consumption -- perhaps to the tune of hundreds of millions of gallons of freshwater -- which is of particular consequence in a desert. See RMP/EIS at 4-14, 4-15 (A.R.0001024-25); see 2014 RFDS at 23-24 (A.R.0173848-49).[36] There would also be unconsidered impacts to the surface area, equaling about 2,000 acres, and the air quality, equaling around several thousands of tons of emissions per year. See Reply Brief at 10-11, nn.15, 17 (citing e.g. Environmental Assessment DOI-BLM-NM-F010-2014-0004, at 7

[36]The Court calculates the hundreds of millions of gallons figure by assuming that the BLM did not consider the horizontal wells' effects and assuming that some of the Plaintiffs' reply brief figures are correct. See Reply Brief at 10. Thus, for 350 horizontal wells not considered multiplied by 1,020,000 gallons per well yields 357 million gallons. As already noted, see supra 95, n.22, the Court concludes that the gallons per well figure is likely smaller, but even with a smaller number, the record supports a hundreds of millions of gallons figure. see 2014 RFDS at 23-24 (A.R.0173848-49)(noting a potential 25% per gallon per well reduction by reusing water, which would yield 267 million gallons per well). If the Court were to use the well number that the Plaintiffs want it to use -- 3,960 -- the figure balloons to 4 billion gallons. The Court also notes that the water used may not all be pure freshwater. See 2014 RFDS at 23 (A.R.0173844)(noting that advances in technology may allow oil companies to use a low saline water for its fracking purposes).

(A.R.0047459); (A.R.14456); 2003 RMP/EIS at 4-58 - 4-61).[37] The Court notes that the harm from unconsidered environmental impacts is more than just the direct environmental impacts. The loss of water from horizontal drilling is the same regardless whether the BLM considered that loss of freshwater. Another very real harm from unconsidered effects is the increased risk that these unconsidered effects could cause some more dire unforeseen harm. For example, the increased use of hundreds of millions of gallons of water could impact New Mexico's desert or the San Juan Basin in some way that is not reversible. Thus, in weighing the rulemaking's deficiency, the Court must also consider the risk of unforeseen harms. See Diné III, 2015 WL 1593995, at *2 ("[I]t is apparent that these mercury-related indirect effects could have significant impacts on threatened and endangered species in the area.").

These rulemaking's deficiencies must then be balanced against the harms arising from vacating 350 APDs. The harm stemming from vacatur would primarily be economic. The operators would lose profits from the dormant wells. While this harm is not trivial -- as the Court analyzed previously, see Diné, 2015 WL 4997207, at *49 -- the Court concludes that, had the Plaintiffs prevailed on the merits, the rulemaking's deficiencies would be more serious than lost profits, thus warranting vacatur.[38] It is unclear the amount of lost profits which the Operators would sustain, but it is likely that the amount would be "serious" -- perhaps hundreds

[37]These numbers are assuming, again, that the BLM did not consider the horizontal wells' effects and assuming that some of the Plaintiffs' reply brief figures are correct. Even if the numbers are lower, as the Court concludes above, they would likely still be around a thousand acres and several thousand tons of emissions per year.

[38]The Court notes that, in conducting this balancing test, the Court is not -- as the API intervenors suggest is appropriate, see Operator Response at 18-20 -- weighing all of the benefits of the oil-and-gas industry on the one hand and the environmental effects of horizontal drilling on the other. Rather, the Court must determine the harm that vacating 350 APDs would inflict on the operators.

of thousands or millions of dollars. Diné, 2015 WL 4997207, at *49. Although this harm would be serious, it would not stop the Operators from continued operation in the region with their vertical wells, and there is a chance -- perhaps even a good chance -- that, after the BLM cured its NEPA violation, the wells would be approved, and the wells would produce a profit. The delay in profit certainly imposes a cost, in that the price of oil could drop or another unforeseen factor could affect profits, but this cost is likely less than the upper range of the millions of dollars of loss that the Operators project.

Moreover, as at least one other district court has recognized, in the oil-and-gas industry, the risk of "lost profits and industrial inconvenience" is "the nature of doing business," because it is an industry "fraught with bureaucracy and litigation." Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, 282 F. Supp. 3d 91, 104 (D.D.C. 2017)(Boasberg, J.)("Standing Rock"). "By nonetheless, proceeding with its venture, the company assumed some risk of economic disruption." Standing Rock, 282 F. Supp. 3d at 104. Although vacatur would impose a cost on the Operators, it is not necessarily an unexpected cost, which lessens the weight the Court will give it. See Standing Rock, 282 F. Supp. 3d at 106 ("In sum, although the Court concludes that there is likely to be some economic disruption from vacatur, this factor does not weigh heavily in the Defendants' favor.")(emphasis in original). An expected cost, for example, is far less likely to cause a company to default on its obligations. Although it may be serious, the Court concludes that the lost profits concern is not so great to overwhelm the environmental concern, had the Court concluded that the BLM violated NEPA. On balance, and with the presumption in favor of vacatur, the rulemaking's deficiencies outweighs the potential economic harm, so vacatur would be warranted. See Standing Rock, 282 F. Supp. 3d at 104-106; Public

Employees for Environmental Responsibility v. United States Fish and Wildlife Service, 189 F. Supp. 3d 1, 3 (D.D.C. 2016)(Bates, J.)("Absent a strong showing by FWS that vacatur will unduly harm economic interests . . . the Court is reluctant to rely on economic disruption as the basis for denying plaintiffs the injunctive relief they seek."); Diné III, 2015 WL 1593995, at *2-3 (concluding that vacatur was warranted even with $400,000.00 per month economic harm, because the challenged mine could significantly impact endangered species in the region). See also California Communities Against Toxics v. EPA, 688 F.3d at 994 (concluding vacatur was not warranted, because stopping the project would be "economically disastrous" as it was "a billion-dollar venture.").[39]

In contrast to the NEPA violation, the environmental harms associated with the NHPA violation are far less severe. The Plaintiffs allege that air, light, and noise pollution adversely affect historic sites. See Diné Response at 35. Although those are cognizable harms, the BLM's failure to consider how air, light, and noise pollution might affect Chaco Park and its satellites is unlikely to lead to irreparable harm or even serious harm to the historic property in the interim between this order and the agency's updated decision.[40] All of those individuals who visit those historic sites might be inconvenienced, or their experience might be less enjoyable, but that harm

[39]The Operators argue that vacatur is not warranted, even if there is a NEPA violation, because the BLM's "latest EAs hav[e] the most robust cumulative impact analysis . . . and address the potential future Mancos shale drilling from the 2014 RFD." BLM Response at 27. Although it may be true that the latest EAs have robust analyses, that fact does not bear greatly on the vacatur balancing analysis. EAs only comment on the environmental impact of particular wells. There is no indication that the newest EAs are EAs for the wells challenged.

[40]Air pollution can certainly be a serious harm. In addition to causing climate change, it can also cause health issues. See Massachusetts v. EPA, 549 U.S. 497, 523 (2007); Whitman v. American Trucking Assocs., 531 U.S. 457, 465 (2001). In this context, however, the air pollution is alleged to harm the historic site's setting, or the aesthetic, which is a much less severe harm than the general harm that air pollution causes.

does not outweigh the potential hundreds of thousands to millions of dollars of economic harm the operators will endure. Accordingly, remand without vacatur would be appropriate for the NHPA violation.

B. A PERMANENT INJUNCTION IS UNWARRANTED.

As the presumption is in favor of remand with vacatur vis-à-vis remand without vacatur, so is the presumption in favor of vacatur vis-à-vis a permanent injunction. See Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139, 165-66 (2010)("If a less drastic remedy (such as partial or complete vacatur of APHIS's deregulation decision) was sufficient to redress respondents' injury, no recourse to the additional and extraordinary relief of an injunction was warranted."); American Bioscience, Inc. v. Thompson, 269 F.3d 1077, 1084 (D.C. Cir. 2001)("If an appellant . . . prevails on its APA claim, it is entitled to relief under that statute, which normally will be a vacatur of the agency's order."); Sierra Club v. Van Antwerp, 719 F. Supp. 2d 77, 78 (D.D.C. 2010)(Lamberth, J.). The factors to consider for a permanent injunction are similar to a preliminary injunction's factors:

> A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006).

Turning first to irreparable harm, as the Court previously determined in Diné, 2015 WL 4997207, at *46-48, the Plaintiffs' identified NEPA harms are irreparable, id. at *48 ("Environmental injury . . . is often permanent or at least of long duration."). The Court discerns nothing to have happened in the interim to change this determination. Accordingly, this prong

counsels in favor of a permanent injunction. Similarly, the second prong also favors an injunction. See Diné, 2015 WL 4997207, at *48 ("Environmental injury, by its nature, can seldom be adequately remedied by money damages.").

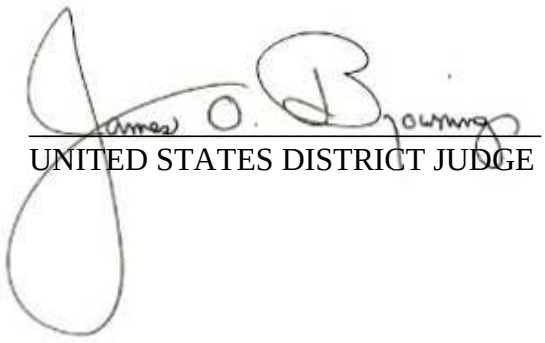
In contrast, the harm alleged under the NHPA -- noise, air, and light pollution causing an aesthetic injury to the historic site -- is not irreparable. To stop the noise all the operators have to do is strop drilling. Similarly, to stop the light pollution, the riggers need only turn off the lights. Although air pollution is typically conceived of as an irreparable environmental harm, the air pollution here, as explained above, is an aesthetic harm affecting the historic site's setting or feeling associated with it. The Court conceives of this harm in the form of smog or a hazy day. Such air pollution would decrease the aesthetic of a site like Chaco Park. This type of air pollution, however, tends to be localized and can be alleviated if the local machinery causing it is stopped. Accordingly, the Court concludes that there is no irreparable harm vis-à-vis the NHPA. Monetary damages have also been found -- at least at common law -- appropriate for aesthetic injuries, depending on their severity. For example, nuisance provides money damages for noxious odors. See Safe Streets Alliance v. Hickenlooper, 859 F.3d 865, 886 (10th Cir. 2017). Monetary damages, accordingly, can address the noise, air, and light pollution aesthetic injuries at issue here.

With NEPA, although the first two factors favor a permanent injunction, the balance of hardships do not favor an equitable solution, given the other available remedy -- vacatur. The balance of hardships have already been addressed supra, and the Court determines that the balance favored the Plaintiffs. Nevertheless, the balance of hardships do not counsel a permanent injunction -- "a drastic and extraordinary remedy," Monsanto Co. v. Geertson Seed

Farms, 561 U.S. at 165, because the Court perceives that vacatur will sufficiently redress the respondent's injury. Vacatur, like a permanent injunction, stops the wells from inflicting any more environmental harm. Vacatur is more appropriate, however, because the source of the statutory injury flows from the BLM's failure to consider horizontal drilling's environmental effects. A permanent injunction would preclude the oil wells from ever producing again unless and until the Plaintiffs secured an order modifying the injunction with the Court. In contrast, vacatur stops the wells until the agency reconsiders its previous determination. Given that the harm flows from the agency's failure to consider, a permanent injunction, which stops the agency from correcting its mistake until it comes back to the court is not tailored to the harm alleged. Accordingly, the Court concludes that this factor does not weigh in favor of a permanent injunction for the NEPA violation. This factor, for this case, is dispositive for the Court given the Supreme Court's admonition that, if vacatur is better tailored to the harm, it is the appropriate remedy in lieu of a permanent injunction. See Monsanto Co. v. Geertson Seed Farms, 561 U.S. at 165. In terms of the NHPA violations, the balance of harms factor does not counsel for vacatur, see supra at 127-28, so the Court would also conclude that a permanent injunction is inappropriate.[41]

IT IS ORDERED that the requests in the Plaintiffs' Opening Merits Brief, filed April 28, 2017 (Doc. 112), are denied. All of the Plaintiffs' claims are dismissed with prejudice.

[41]As the Court noted previously, in this case, the balance of equities and the public interest prongs collapse into the same inquiry. See Diné, 2015 WL 4997207, at *50. Accordingly, it concludes that vacatur would be the proper remedy for the NEPA violation and remand without vacatur would be the proper remedy for the NHPA violations.



UNITED STATES DISTRICT JUDGE

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