



February 13, 2017

VIA FEDERAL EXPRESS

Karen Mouritsen
State Director
Bureau of Land Management
Eastern States Office
20 M Street, Suite 950,
Washington, D.C. 20003

RE: Protest of the December 2016 Competitive Oil and Gas Lease Sale, Wayne National Forest
- DOI-BLM-Eastern States-0030-2016-0002-EA

Dear Ms. Mouritsen:

The Center for Biological Diversity (the “Center”), Heartwood, Ohio Environmental Council (“OEC”), Sierra Club, Buckeye Environmental Network formerly known as Buckeye Forest Council (“BEN”), and Athens County Fracking Action Network (“ACFAN”) hereby file this Protest of the Bureau of Land Management’s (“BLM”) planned March 23, 2017 Competitive Oil and Gas Lease Sale and the programmatic Final Environmental Assessment for oil and gas leasing in the Wayne National Forest, Marietta Unit of the Athens Ranger District, Monroe, Noble, and Washington Counties, Ohio (DOI-BLM-Eastern States-0030-2016-0002-EA) (“EA”), pursuant to 43 C.F.R. § 3120.1-3. We formally protest the inclusion of each of the 21 parcels, covering 1,186.06 acres in Ohio:

ES-001-03/2017 OHES 058226 ACQ
ES-002-03/2017 OHES 058227 ACQ
ES-003-03/2017 OHES 058228 ACQ
ES-004-03/2017 OHES 058229 ACQ
ES-005-03/2017 OHES 058230 ACQ
ES-006-03/2017 OHES 058231 ACQ
ES-007-03/2017 OHES 058232 ACQ
ES-008-03/2017 OHES 058233 ACQ
ES-009-03/2017 OHES 058234 ACQ
ES-010-03/2017 OHES 058235 ACQ
ES-011-03/2017 OHES 058236 ACQ

ES-012-03/2017 OHES 058237 ACQ
ES-015-03/2017 OHES 058240 ACQ
ES-018-03/2017 OHES 058243 ACQ
ES-020-03/2017 OHES 058249 ACQ
ES-022-03/2017 OHES 058251 ACQ
ES-023-03/2017 OHES 058252 ACQ
ES-025-03/2017 OHES 058254 ACQ
ES-026-03/2017 OHES 058255 ACQ
ES-027-03/2017 OHES 058256 ACQ
ES-028-03/2017 OHES 058257 ACQ

PROTEST

I. Protesting Party: Contact Information and Interests:

This Protest is filed on behalf of the Center, Heartwood, OEC, Sierra Club, BEN, and ACFAN:

My-Linh Le, Legal Fellow
Wendy Park, Senior Attorney
Center for Biological Diversity
1212 Broadway #800
Oakland, CA 94612
510-844-7156
mle@biologicaldiversity.org

Elly Benson, Staff Attorney
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
415-977-5723
elly.benson@sierraclub.org

Nathan Johnson, Natural Resources Attorney
Ohio Environmental Council
1145 Chesapeake, Ave., Suite I
Columbus, OH 43212
614-487-7506
NJohnson@theOEC.org

Myke Luurtsema, Council Chair
Heartwood
PO Box 1926
Bloomington, IN 47402
812-307-4326
info@heartwood.org

Andrea Reik
Athens County Fracking Action Network Steering Committee member
8474 Terrell Rd
Athens Ohio 45701
740-591-1736
areik@frontier.com

Caitlyn McDaniel
Buckeye Environmental Network Board Member
15 Granville Ave.

Athens, Ohio 45701
614-558-3360
caitlynemcdaniel@gmail.com

The Center is a non-profit environmental organization dedicated to the protection and recovery of native species on the brink of extinction and their habitats through science, policy, and environmental law. The Center has and continues to actively advocate for increased protections for species and their habitats in Ohio and the Wayne National Forest. The lands that will be affected by the proposed lease sale include habitat for listed, rare, and imperiled species that the Center has worked to protect, including the Indiana bat, Northern long-eared bat, fanshell, pink mucket pearly mussel, sheepsnose mussel, and snuffbox mussel. The Center also works to reduce greenhouse gas emissions to protect biological diversity, our environment, and public health. The Center has over 52,000 members, including those living in Ohio who have visited these public lands in the Wayne National Forest for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future, and are particularly interested in protecting the many native, imperiled, and sensitive species and their habitats that may be affected by the proposed oil and gas leasing.

The Sierra Club is a national nonprofit organization of approximately 695,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Ohio Chapter of the Sierra Club has more than 19,000 members in the state of Ohio. For more than four decades, the Sierra Club has worked to protect the Wayne National Forest and Ohio's other public lands from harmful activities such as clear-cutting, mineral extraction, commercial development, pipelines, and oil and gas drilling. Sierra Club members use the public lands in Ohio, including the lands and waters that would be affected by actions under the lease sale, for quiet recreation, scientific research, aesthetic pursuits, and spiritual renewal. These areas would be threatened by increased oil and gas development that could result from the proposed lease sale.

The Ohio Environmental Council is a non-profit environmental organization whose mission is to secure healthy air, land, and water for all who call Ohio home. OEC has over 100 environmental and conservation member organizations and thousands of individual members throughout the state of Ohio. The OEC has a long history of working to protect the ecological integrity, and recreational and aesthetic qualities of the Wayne National Forest. Many of our members have visited these public lands in the Wayne National Forest for recreational, scientific, educational, and other pursuits and intend to continue to do so in the future.

Heartwood is a non-profit regional environmental organization dedicated to protecting the public forests of the Central Hardwood Region. Heartwood represents over seventeen hundred individual members and numerous member organizations who depend on these public lands, including the Wayne National Forest, for recreational, spiritual and ecological purposes. Heartwood members have, do and will continue to use these public lands, including the Wayne

National Forest, for nonconsumptive purposes and they derive important tangible and intangible ecological benefits from the presence and ecological integrity of these public lands, including the lands that will be affected by the oil and gas leasing proposed by this action.

The Buckeye Environmental Network fka Buckeye Forest Council (BEN) is a membership-based, grassroots organization dedicated to protecting Ohio's native forests and their inhabitants through education, advocacy and organizing. BEN has advocated for ecological management of the Wayne National Forest as well as Ohio's state forests to protect biodiversity, ecosystem services, including air and water purification, and climate stability since 1992. Many hundreds of BEN members from around Ohio and beyond our region have relied on Wayne National Forest as a place of solace, protected wild land, native forest biodiversity, and low-impact recreation.

Athens County Fracking Action Network (ACFAN) was formed in 2011 to protect the Wayne National Forest and our region from the risks to air, water, climate, and community economic and public health from the industrial practice of deep shale drilling and high-pressure, high-volume horizontal fracturing (commonly known as fracking). ACFAN's 900+ network members have consistently urged Wayne and BLM personnel to fully evaluate the potential highly significant impacts of fracking before leasing, an irrevocable commitment of resources, with full public input, as required by NEPA. This has not been done in spite of thousands of appeals and documentation of potential impacts with extensive peer-reviewed science through petitions, meetings, letters, and formal protests since October 2011. ACFAN has mobilized government officials from the local to federal levels as well as drinking water suppliers, environmental and tourism organizations, the President of Ohio University, hundreds of residents of Washington, Monroe, and Morgan County, and thousands of other residents of Ohio, the region, and the nation to urge the USFS to authorize an Environmental Impact Statement before further consideration of this dangerous industrial process, as required by NEPA given the scale of likely harm to the human community as well as to the Forest. Especially because the Wayne is Ohio's only National Forest and one of the nation's smallest and most fragmented, members of ACFAN are highly committed to its protection and to the USFS and BLM taking seriously the extreme and well documented public concerns that have been shared extensively with USFS and BLM officials since 2011.

II. Statement of Reasons as to Why the Proposed Lease Sale Is Unlawful:

Nearly all of the omissions and failures of BLM's NEPA analysis for the December 2016 Competitive Oil and Gas Lease Sale, Wayne National Forest ("2016 Lease Sale") remain and provide the same bases for our protest against the March 2017 sale; therefore we incorporate here by reference and attach as exhibits our previous comment letters and written protest on the 2016 Lease Sale including all documents referenced therein.¹ In addition, BLM's proposed

¹ The Center et al.'s November 11, 2016 Protest of the December 2016 Competitive Oil and Gas Lease Sale, Wayne National Forest, attached hereto as Exhibit A; the Center et al.'s May 31, 2016 comment letter on the draft programmatic Environmental Assessment, attached hereto as Exhibit B; the Center et al.'s August 11, 2016 letter to the USDA Forest Service Eastern Regional Office and Forest Supervisor, attached hereto as Exhibit C; Heartwood

decision to lease the parcels listed above is substantively and procedurally flawed for the reasons discussed below, as well as those discussed in (1) the Center et al.'s Notice of Appeal and Petition for Stay of BLM's December 2016 Lease Sale to the Interior Board of Land Appeals ("Appeal"),² and (2) the Center et al.'s 60-Day Notice of Intent to Sue Under the Endangered Species Act ("NOI"), which are also incorporated here by reference and attached as exhibits.³ More detailed explanations of our objections are provided in these exhibits.

A. The EA and Finding of No Significant Impact ("FONSI") Violate the National Environmental Policy Act's ("NEPA") "Hard Look" Requirement

As discussed in our previous protest of the 2016 Lease Sale, BLM is required to prepare an EIS, or, at minimum, an EA for this sale to determine whether or not an EIS is needed.⁴ Instead, BLM relied on the same programmatic EA that BLM relied on for the 2016 sale, which discusses in very broad terms the general leasing of all federal mineral estate underlying National Forest System lands "within the proclamation boundary of the Wayne National Forest (WNF), Athens Ranger District, Marietta Unit," approximately 40,000 acres federal mineral estate. For the same reasons discussed in our protest against the 2016 Lease Sale,⁵ BLM's FONSI remains deficient.

Even at the programmatic level, the meager analysis BLM has provided thus far is unlawfully deficient. Relying on the programmatic EA as the basis for BLM's FONSI was improper: the broad-brush analysis contained in the programmatic EA omits numerous significant environmental consequences specific to the proposed lease sale, which we discuss in detail below. The EA and FONSI also violate NEPA for the following reasons:

i. BLM Failed to Take a Hard Look at the Environmental Impacts of Opening Up Private Minerals

As discussed in our protest,⁶ letter to the Forest Service,⁷ and Appeal⁸ regarding the 2016 Lease Sale, leasing federal minerals would open up substantial private minerals and private surface for development, and is geared towards that end, but BLM failed to clearly disclose these effects. By opening up federal *and* private minerals to drilling, and consequently overlying private surface, the proposed leasing could dramatically increase the total number of new well pads and wells, total surface disturbance, watershed impacts, cumulative air pollution emissions, public health risks, habitat loss, and disturbance to wildlife. Yet BLM did not conduct any quantitative or qualitative analysis of air, water, soil, or any other impacts from oil and gas

et al.'s May 31, 2016 comment letter on the draft EA, attached hereto as Exhibit D; and BEN fka BFC's January 22, 2016 scoping comments, attached hereto as Exhibit E.

² Attached hereto as Exhibit F.

³ Attached hereto as Exhibit G.

⁴ See, e.g., Ex. A, pp. 4-5.

⁵ Id.

⁶ Ex. A at 4-5.

⁷ Ex. C at 3-7

⁸ Ex. F at 8-22

development on the adjacent private lands. Below are examples of impacts that are likely to result from opening up private mineral development, which BLM failed to consider:

a. The EA Fails to Analyze Disturbance from Private Surface Development

BLM failed to analyze or quantify how much new private surface disturbance could result from new leasing.⁹ This is especially troubling given that development on private surface is more likely than development on federal surface, and that BLM and Forest Service regulations would not necessarily mitigate the effects of such development as the EA misleadingly suggests.¹⁰

b. The EA Fails to Consider Impacts to Vegetation and Sensitive or Endangered Species Habitat from Development of Private Minerals and Private Lands

As discussed in our prior submissions, BLM failed to meaningfully analyze vegetation impacts on private lands, including the potential loss of oak hickory on the Indiana bat.¹¹ Although the EA discusses lease stipulations that target particular species, and mentions other measures that may be taken at the APD stage, BLM fails to acknowledge that these protections do not apply to or are not enforceable on private lands.¹² Even if they were, simply identifying potential protective measures, without any analysis or discussion as to the adequacy or efficacy of these measures in protecting resources in the area, does not meet the requirements of NEPA.

This missing analysis is important for determining potential habitat impacts on the Indiana bat, for example, which would be adversely affected by the removal of oak hickory and other suitable habitat. Given the lack of existing information about baseline vegetation conditions on private land, as noted in the EA, the severity of harm that oil and gas development could have on vegetation on private surface and suitable habitat for the Indiana bat is “highly uncertain,” which requires preparation of an EIS. 40 C.F.R. § 1508.27(b)(5) (EIS must be prepared when an action’s effects are “highly uncertain or involve unique or unknown risks”);

⁹ See, e.g., Ex. A at 4-5; Ex. C at 3-7; and Ex. F at 8-22.

¹⁰ Compare EA at 23 (“There would be very little federal oversight in the development of private minerals under federal surface....”) and EA at 120 (noting “federal oversight of mineral development on federal land/federal minerals is more stringent than on private land/private minerals”) with EA at 23 (suggesting that BLM and Forest Service have control over activities “no matter the ownership status of the minerals”), *id.* at 105 (noting “BLM and Forest Service would not approve water withdrawals that would draw down a surface waterbody to the extent that aquatic life would be measurably adversely impacted,” without addressing whether this applies to well development on private surface), and *id.* at 57 (stating “when federal minerals are leased by BLM, all *surface* and downhole activities must comply with federal regulations,” without noting BLM’s limited authority over private surface development [emphasis added]).

¹¹ See, e.g., Ex. A at 10-11; and Ex. F at 17-20.

¹² Ex. F at 19 (where we delineated several examples, such as the Forest Plan’s requirement of “closed systems” for storing wastewater instead of wastewater ponds and prohibits netting, to protect the ESA-listed Indiana bat, whereas Ohio law allows wastewater pits to remain in operation throughout the producing life of a well, so long as standing wastewater is drained and removed at least every 180 days. Ohio law does not prohibit the screening or netting of these pits.)

see also Nat'l Parks & Conservation Ass'n v. Babbitt, 241 F.3d 722, 732 (9th Cir. 2001) (preparation of EIS “mandated where uncertainty may be resolved by further collection of data” or where the collection of such data may prevent speculation on potential effects).

c. The EA Fails to Consider Private Land-Use Changes

BLM failed to analyze baseline private land use conditions surrounding the areas for lease or look at the potential for private land-use changes that could result from new oil and gas leasing, as explained further in the attached exhibits.¹³ As we have argued previously, it is apparent that private oil and gas developers are eager to acquire federal minerals so that they can develop their private minerals, and are more likely to do so on private land.

d. The EA Lacks Adequate Analysis of Surface Water and Groundwater Impacts

BLM violated NEPA by failing to prepare an EIS without adequate assurances that the effects of increased private disturbance on water resources will be avoided or mitigated to less-than-significant levels.¹⁴ It remains unclear what authority BLM has to mitigate surface water impacts of private surface development that would reach federal minerals.

e. The EA Lacks Adequate Analysis of What Federal Regulations or Mitigation Measures Would Apply to Private Surface Development that Access Federal Minerals

As we have previously noted,¹⁵ the EA fails to identify what authority BLM has over pipelines that reach federal minerals or well pads on private surface, or pipelines crossing private surface; or to identify which federal and state regulations would apply to mitigate spills.

Development on the proposed parcels and on adjacent private surfaces are connected and inextricably linked, such that private surface development is reasonably foreseeable. See Sierra Club v. United States DOE, 255 F. Supp. 2d 1177, 1185 (D. Colo. 2002) (“NEPA regulations define a connected action as one that ‘cannot or will not proceed unless other actions are taken previously or simultaneously.’”) (citing 40 C.F.R. § 1508.8(a)(1)(ii)). Further, the EA’s assumption that all impacts of oil and gas development on private surface within the Marietta Unit would be “minimized” by State of Ohio regulations is baseless. BLM must take a hard look at the impacts of private mineral and surface development in an EIS.

ii. BLM Failed to Adequately Address Potential Impacts to Threatened and Endangered Species, as Required by NEPA

¹³ See Ex. A at 11; and Ex. F at 20.

¹⁴ See Ex. F at 20-22.

¹⁵ See, e.g. Ex. A at 10-11; and Ex. F at 17-20.

The EA fails to adequately address the potential impacts from the proposed oil and gas leasing on species that are federally designated as threatened or endangered with extinction, including the Indiana bat, Northern long-eared bat, fanshell, pink mucket pearly mussel, sheepnose mussel, and snuffbox mussel, as explained in more detail in our prior comments.¹⁶ For example, the EA fails to analyze or document baseline conditions for listed species throughout the entire forest, precluding an understanding of how species would be impacted by new oil and gas development forest-wide; fails to discuss oil and gas impacts on the Indiana bat and Northern long-eared bat in the context of climate change and white-nose syndrome; and fails to adequately analyze impacts from water depletion, surface disturbance, and toxic spills from horizontal drilling on listed mussels and bats.

iii. BLM's Analyses of Air Quality and Greenhouse Gas Emissions are Deficient and Fail to Examine the Relevant Data

a. The EA Failed to Provide Quantitative Analysis for Criteria Air Pollutants

We incorporate by reference our protest comments¹⁷ regarding BLM's failure to provide any quantitative analysis of criteria pollutants. For example, BLM failed to provide data or monitoring reports that reflect pollutant levels and whether they meet the NAAQs. The EA should have included monitoring data for the past 3-5 years for each criteria pollutant. BLM failed to adequately analyze direct, indirect, or cumulative impacts from increased ozone and other pollution in the area based on reasonably foreseeable development.

b. The EA Arbitrarily Underestimates the Impact of Methane and Nitrous Oxide Emissions

The EA uses a long-outdated estimate of the "global warming potential," or "GWP," of greenhouse gases other than carbon dioxide.¹⁸ For example, BLM uses a GWP for methane of 25,¹⁹ which is derived from an outdated report that was superseded in September 2013. But the EA acknowledges elsewhere that methane is estimated to have a GWP of 28-36 times that of CO₂ over 100 years.²⁰ It is unclear what GWP BLM's GHG estimates are based on. These estimates are critical given the importance of near term action to ameliorate climate change – near term action that scientists say should focus, *inter alia*, on preventing the emission of short-lived but potent GHGs like methane while, at the same time, stemming the ongoing increase in the concentration of carbon dioxide.²¹

¹⁷ See, e.g. Ex. A at 15.

¹⁸ See, e.g. Ex. A at 15-16.

¹⁹ EA at 39 ("For example, 1 ton of methane would be equal to 25 tons of CO₂ equivalent, because it has a global warming potential (GWP) 25 times that of CO₂."); and, *id.*, at 40 (See Table 3.3. GHG Regulated by USEPA and Global Warming Potentials).

²⁰ EA at 39.

²¹ Ex. A at 15-16.

c. The EA Failed to Analyze The Significance and Severity of Greenhouse Gas Emissions

The EA fails to analyze the impact or severity of greenhouse gas emissions, such as providing a calculation of the social cost of carbon.²² NEPA requires BLM to inform the public of direct and indirect effects the “significance” of these emissions, 40 C.F.R. § 1502.16(a)-(b); for example, BLM must “evaluate the[ir] severity.” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 352 (1989). To serve NEPA’s “twin aims” of informing agency decisionmakers and the public, this evaluation must be in terms that will meaningfully inform these intended audiences of the magnitude and consequences of these effects. Natural Res. Def. Council v. Nuclear Regulatory Comm’n, 685 F.2d 459, 487 n.149 (D.C. Cir. 1982) *rev’d on other grounds sub nom. Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 106-107 (1983); Columbia Basin Land Prot. Ass’n v. Schlesinger, 643 F.2d 585, 594 (9th Cir. 1981). One widely used approach to evaluating the impact of GHG emissions is to estimate the costs of those emissions to society. BLM arbitrarily declined to use this method and failed to provide any analysis whatsoever regarding the significance, severity, and impact of greenhouse gas emissions.

iv. BLM Arbitrarily Underestimated Surface Disturbance Impacts from Limits Of Disturbance (“LODs”), Gathering Lines, Well Pads, and Compressor Stations

As explained in our previous comments,²³ the EA ignores or underestimates surface disturbance from well pads, compressor stations, wastewater ponds, and gathering lines. The EA’s surface disturbance projections are significantly lower than empirical field data suggests. This error infects the EA’s entire analysis, including its discussion of soil, vegetation, surface runoff, habitat fragmentation, and air quality impacts.

For example, the EA’s failure to quantify surface disturbance resulting from gathering pipeline construction and burial is especially glaring and troublesome. Gathering lines have been recognized as the single largest source of surface impacts associated with oil and gas development. Furthermore, data from gathered from 122 well pads in eastern Ohio’s Utica Shale play found an average of 17 acres per well pad of direct surface disturbance from pipeline burial.²⁴

The 2006 Forest Plan EIS contemplated an upper limit of 50 acres total for any and all utility development (not just oil and gas pipeline) proposed to cross the Wayne (36.73 acres remaining as of 2012 SIR).²⁵ Notably, neither the 2006 Forest Plan and EIS nor the 2012 SIR evaluate the potential surface impacts associated with gathering pipelines. Rather, the 2004 RFDS and 2012 SIR dismiss this class of impact out of hand, stating:

²² Ex. A at 16-18.

²³ Ex. A at 18-19; Ex. B at 16-21; Ex. C at 7-9.

²⁴ McClaugherty, Charles et al., Landscape impacts of infrastructure associated with Utica shale oil and gas extraction in eastern Ohio (abstract), 100th Ecological Society of America Annual Meeting (2015), available at: <https://eco.confex.com/eco/2015/webprogram/Paper52636.html>.

²⁵ U.S. Forest Service, Supplemental Information Report Horizontal Drilling Using High Volume Hydraulic Fracturing, August 2012, (“SIR”), pp. 43 and 75, Table 13.

Given the long history of gas production in the WNF, there is already a well developed pipeline infrastructure in place which should minimize the need for lengthy gathering lines to service new wells.²⁶

It is unlikely that existing gathering line infrastructure on the Wayne could accommodate future horizontal operations. For instance, field studies conducted by The Nature Conservancy show that “the supporting [horizontal] infrastructure is much larger in scale (24” diameter pipelines to gather gas from wells versus 2” or 4” pipelines in shallow fields).”²⁷

Surface disturbance from gathering lines is a major and foreseeable impact of oil and gas development, yet BLM devotes scant attention to this class of impact in its Final EA. The EA offers mere passing statements on the subject of pipeline construction and installation, stating only that: “If the well produces natural gas, and the flowline is in the road, another 0.5 acres may be affected by flowline construction. . . . If the well is productive, additional land may be affected by pipeline construction.”²⁸ We raised pipeline surface disturbance impacts and supporting empirical data in our previous comments on the Draft EA. BLM nonetheless failed to meaningfully evaluate these impacts in its EA.

In fact, neither the EA nor the response to comments contained therein even acknowledge, let alone examine, any of the empirical data we submitted to the agency on precisely this matter. Were BLM to acknowledge this data, the (January, 2004) RFDS acreage assumptions it insists upon would likely be overwhelmed. This is highly significant, because the 2004 RFDS acreage assumptions drive much of the species and resource analyses of the underlying 2006 Forest Plan and FEIS. Were BLM to acknowledge and properly wrestle with the data we submitted to it on pipeline construction, it would likely have to admit that its underlying RFDS figures are no longer adequate, and that a full Environmental Impact Statement is required. Evidently, these are steps the agency is loathe to take.

v. BLM Failed to Adequately Address the Potential Impacts of Fracking

The EA fails to analyze numerous impacts related to fracking, including potential threats to human health and safety, such as carcinogenic, developmental, reproductive, and endocrine disruption effects,²⁹ air quality,³⁰ risks to water resources,³¹ and seismic risks.³²

²⁶ SIR, Appendix B: Oil and Gas Management, including the Reasonably Foreseeable Development Scenario (Appendix G of the EIS), p. 7.

²⁷ Johnson, Nels, 2010 Pennsylvania energy impacts assessment, Report I: Marcellus Shale Natural Gas and Wind, The Nature Conservancy, Pennsylvania Chapter, and Pennsylvania Audubon, page 9; available at: http://www.nature.org/media/pa/tnc_energy_analysis.pdf.

²⁸ Final EA, 25-26.

²⁹ Ex. A at 19-20; and Ex. B at 67-72.

³⁰ Ex. B at 36-45.

³¹ Ex. A at 20-21; see also Ex. B at 21-35 (explaining the threats unconventional oil and gas operations pose to water resources); Ex. F at 27-29.

³² Ex. F at 31; Ex. B at 65-68.

For example, the EA fails to discuss human health and safety risks linked to oil and gas operations or fracking, and instead concludes without providing any analysis, that “[t]hrough the NEPA process and adherence to federal, state, and local regulations, laws, permits and policy, as well as numerous safety standards and protocols, the BLM and Forest Service ensures that future oil and gas leasing operations would not compromise public health and safety.”³³ Still, BLM has provided absolutely no analysis, data, or studies concluding that there have been no impacts to human health and safety from oil and gas operations that comply with state and/or federal air quality standards. BLM cannot arbitrarily assume that any action that does not violate state or federal air quality standards will have no impact on public health and safety, or that compliance with these standards will automatically reduce all impacts to human health and safety to an insignificant degree.

In addition, the EA fails to analyze the increased risk of spills associated with fracking. For example, many of the lease parcels are near the Ohio River and its tributaries, which will be at risk of contamination from increased transport of fracking chemicals and wastewater via trucks and pipelines, and runoff pollution from new roads and well pads.³⁴ The threat of harm to water and wildlife is not hypothetical. For example, in June 2014, the Eisenbarth well pad located in Monroe County, close to the proclamation boundary of the Marietta Unit, experienced a fire followed by more than 30 explosions, which sent shrapnel flying around the well pad.³⁵ The well was owned by Norwegian driller Statoil and was being fracked by Halliburton. Given the risk of catastrophic chain reaction explosions if the wells themselves caught fire, local authorities evacuated 25 families living within a mile radius of the well site.³⁶ “As a result of fire-fighting efforts and flow back [sic] from the well head, significant quantities of water and unknown quantities of products on the well pad left the Site and entered an unnamed tributary of Opossum Creek that ultimately discharges to the Ohio River.”³⁷ One report estimated “54,000 gallons of 16 hazardous fracking chemicals were lost from the pad, along with 300,000 gallons of water and foam used to control the blaze.”³⁸ Everything washed down into a tributary of the Ohio River; the runoff killed approximately 70,000 fish in a 5-mile long fish kill.³⁹ Opossum Creek, the location of the Eisenbarth fish kill, is partially located within the proclamation boundary of the Marietta Unit.

Another incident earlier that year, in May 2014, involved a 100-barrel spill of drilling mud into an unnamed creek near Beverly, Ohio “heavily” contaminating the areas with the

³³ EA at 109

³⁴ See Center Map of Tributaries (2017)

³⁵ Rutz, N., et al. Ohio Citizen Action Education Fund: The Eisenbarth well fire: Ohio fails in a fracking emergency (October 2014), available at <http://www.theoec.org/sites/default/files/OhioCitizenAction.Eisenbarth%20Report.pdf>.

³⁶ *Id.*

³⁷ See, e.g., U.S. Environmental Protection Agency Pollution/Situation Report, Statoil Eisenbarth Well Response, POLREP #1, available at <http://www.theoec.org/sites/default/files/Eisenbarth%20well%20pad%20fire.pdf>; Junkins, Casey, EPA: 70K Fish, Aquatic Life Killed, Wheeling Intelligencer, July 22, 2014, available at http://www.theintelligencer.net/page/content_detail/id/607167.html; Ohio Environmental Protection Agency, Directors Final Findings & Orders NPDES In the Matter of Statoil USA Onshore Properties, Inc. (November 6, 2015).

³⁸ Rutz, N., et al. Ohio Citizen Action Education Fund: The Eisenbarth well fire: Ohio fails in a fracking emergency (October 2014), available at <http://www.theoec.org/sites/default/files/OhioCitizenAction.Eisenbarth%20Report.pdf>.

³⁹ *Id.*

drilling mud, crude oil, and condensate.⁴⁰ The unnamed creek flows into Cow Run Creek, which leads to Olive Creek, which then meets with the Muskingum River a tributary of the Ohio River.⁴¹ In addition to the drilling mud, an unknown amount of wet gas was also released, causing an explosive atmosphere leading to dangerous working conditions and the evacuation of seven residents from three homes adjacent to the site.⁴² The spill was a result of a mechanical failure of a well head during a horizontal drilling operation intended for hydraulic fracturing in the Utica Shale formation to extract wet gas.⁴³ As a result of the well head failure, drilling fluid discharged out of the well boring and onto the well pad, into storm-water control drainage ditches, and eventually into the unnamed creek.

More recently, in March 2016, a truck hauling drilling wastewater overturned in eastern Ohio, sending thousands of gallons of toxic water into a nearby creek and contaminating a drinking water reservoir in Barnesville in Belmont County.⁴⁴ The wastewater came from a well in Monroe County, where all the auctioned lease parcels are located, and the spill occurred close to the Wayne's Marietta Unit.⁴⁵

The EPA recently completed its study on the impacts of fracking on drinking water resources, which found scientific evidence that hydraulic fracturing has impacted drinking water resources.⁴⁶ The report identifies a number of risk factors that may increase the risks of drinking water contamination, all of which are present in the Wayne National Forest, as further detailed in Exhibit F at 27-29.

vi. BLM Failed to Account for New Fracking Project on the Ohio River and Other Projects

BLM must analyze the effects of Eclipse Resources' contemplated project on WNF, Ohio River, and West Virginia resources, as a reasonably foreseeable consequence of new leasing.⁴⁷ Alternatively, BLM must consider the cumulative effects of this project in connection with new leasing for purposes of both NEPA and ESA Section 7.

In addition, several other major projects have been proposed in the vicinity of the Marietta Unit, but the EA fails to address their cumulative effects in connection with new leasing. First, petrochemical giant PTT Global Chemical is considering the construction of a massive multibillion-dollar ethane cracker in Dilles Bottom, Ohio, in Belmont County, north of

⁴⁰ USEPA, POLREP #1, PDC Energy Oil Spill (May 4, 2014).

⁴¹ Id.

⁴² Id.

⁴³ Id.

⁴⁴ Arenschiold, Laura, "Truck overturns, spills drilling wastewater that taints reservoir" Columbia Dispatch (March 9, 2016) ("About 5,000 gallons of drilling wastewater spilled into a field, then a creek and finally into one of Barnesville's three reservoirs[;] [...] the truck was hauling waste from a well in Monroe County[.]") ("Arenschiold 2016").

⁴⁵ See Arenschiold 2016.

⁴⁶ USEPA, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States, ES-3 (2016).

⁴⁷ Ex. A at 21-22; see also Ex. F at 52-53.

the Marietta Unit.⁴⁸ Ethane would be sourced from the Marcellus and Utica shales and processed at the cracker plant for conversion to ethylene, and other compounds for the production of antifreeze and plastic products. Land clearing and cleanup of the project site is ongoing, and a final decision on whether the project will be built is expected early this year. JobsOhio, a private nonprofit corporation, has already invested \$14 million in the project, while PTT is investing \$100 million in a feasibility study for the project.⁴⁹ The Ohio EPA recently approved water pollution permits for the project's discharges into the Ohio River and is currently considering the project's air permits.⁵⁰

Second, Energy Storage Ventures (ESV) has proposed a massive project to store 168 million gallons of natural gas liquids in eight underground salt caverns along the Ohio River in Monroe County, 12 miles south of the proposed Belmont cracker plant.⁵¹ The project is proposed on a former coal mine and expected to be operating in 2018. ESV has begun testing for the project and has applied for a 401 water quality certification with Ohio EPA and other permits with Ohio Department of Natural Resources. Located in the heart of the Utica and Marcellus shale plays, the project could potentially serve the Belmont cracker, Royal Dutch Shell's proposed cracker plant in Beaver County, Pennsylvania, a plant across the Ohio River in West Virginia, and production operations in surrounding areas, including the Wayne National Forest. The potential for accidental leaks from gas storage facilities is illustrated by the recent catastrophe at the Aliso Canyon facility in Porter Ranch, California in 2015-2016. The leak spewed 109,000 metric tons of methane into the air, took four months to cap, forced the evacuation of 7,000 residents, and resulted in complaints of headaches, fatigue, nausea, and rashes.⁵² Some residents also experienced these symptoms before the leak.

Third, Royal Dutch Shell has committed to the construction of a multibillion dollar cracker plant in Beaver County, Pennsylvania—one of the largest of its kind in North America.⁵³ Like the cracker and storage projects above, Shell's plant will be built on the banks of the Ohio River. The project will process 105,000 barrels of ethane per day from Marcellus and Utica shale producers and produce 1.6 million tons of polyethylene per year. Shell's decision makes it far more likely that PTT Global Chemical will build its proposed cracker plant in Belmont County. Increased operational efficiencies are possible with another cracker in the region, in the event pipelines or plant operations go down.

⁴⁸Junkins, Casey, Work on Dilles Bottom Cracker Plant Goes On, *The Intelligencer* (July 14, 2016), available at <http://www.theintelligencer.net/news/top-headlines/2016/07/work-on-dilles-bottom-cracker-plant-goes-on/>.

⁴⁹Gearino, Dan, JobsOhio invests in prep work for planned Belmont County Plant, *The Columbus Dispatch* (Dec. 5, 2016), available at <http://www.dispatch.com/content/stories/business/2016/12/06/jobsohio-invests-in-prep-work-for-planned-belmont-county-plant.html>.

⁵⁰O'Brien Dan, OEPA Issues Permits for Belmont County Cracker Plant, *Business Journal Daily* (Jan. 18, 2017), available at <http://businessjournaldaily.com/oeпа-issues-permit-for-belmont-county-cracker-plant/>.

⁵¹Junkins, Casey, Ethane to Be Stored Underground in Monroe County, *The Intelligencer* (Feb. 5, 2017), available at <http://www.theintelligencer.net/news/top-headlines/2017/02/ethane-to-be-stored-underground-in-monroe-county/>.

⁵²KPBS, Utilities Commission Approves Aliso Canyon Investigation (Feb. 8, 2017), available at <http://www.kpbs.org/news/2017/feb/09/utilities-commission-approves-aliso-canyon-investi/>; Cardwell, Diane, The Long Reach of the Aliso Canyon Gas Leak, *New York Times* (Jan. 14, 2017), available at https://www.nytimes.com/2017/01/14/business/energy-environment/aliso-canyon-gas-leak.html?_r=0.

⁵³Marcellus Drilling News, Shell PA Cracker Plant Project A Lot Bigger Than First Thought (June 2016), available at <http://marcellusdrilling.com/2016/06/shell-pa-cracker-plant-project-a-lot-bigger-than-first-thought/>.

The above projects are reasonably foreseeable and could have far-reaching, significant effects on the Wayne National Forest, Ohio River, and neighboring communities. These projects will certainly require a network of pipelines for transport of ethane, including pipelines through the Wayne National Forest and along the Ohio River, and/or an enormous amount of truck traffic. Accordingly, BLM must consider the cumulative effects of new oil and gas leasing in connection with these projects' water quality, air quality, climate change, wildlife, and public health impacts, under both NEPA and ESA Section 7.

B. BLM Violated its Statutory Duty to Prepare an EIS under NEPA

NEPA requires that BLM prepare an EIS for the action.⁵⁴ An EIS is required because: (1) the effects on the human environment will be highly controversial, as demonstrated by evidence showing that oil and gas operations can cause significant impacts to human health, water resources, air quality, and imperiled species, raising substantial disputes about the “size, nature, or effect of the action as discussed in Exs. A at 23 and B at 74-75; (2) the lease sale presents highly uncertain or unknown risks, such as those from fracking or in the contributions of this action to the resulting effects of potentially catastrophic climate change as discussed in Exs. A at 23 and B at 75; (3) the lease sale poses threats to public health and safety as discussed in Exs. A at 19-20, and B at 67-72; and (4) the action may adversely affect endangered, threatened, candidate, and agency sensitive species and their habitat, some of which we highlighted in Exs. A at 12-14 and B at 59-64.⁵⁵

C. BLM Violated Section 7 of the ESA by Failing to Consult with FWS on the Impacts of the Proposed Oil and Gas Leasing on Threatened and Endangered Species

BLM violated the ESA by failing to consult with FWS concerning the impacts of its oil and gas leasing proposal on listed species.⁵⁶ In failing to comply with the Section 7 consultation procedures, BLM cannot ensure that the proposed oil and gas leasing will not jeopardize any listed species, or destroy or adversely modify any critical habitat, in further violation of Section 7 of the ESA. 16 U.S.C. § 1536(a).

D. BLM's Reliance on the 2005 Forest Plan Biological Opinion and Failure to Reinitiate Consultation Violates the ESA Section 7

BLM's reliance on the 2005 Biological Opinion is misplaced because it is out of date, as further detailed in our previous comments, NOI, and Appeal.⁵⁷ Agencies are required to reinitiate ESA consultation when: (1) new information⁵⁸ reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; and (2) a new

⁵⁴ Ex. A at 22-24

⁵⁵ See also Exs. F and G.

⁵⁶ Ex. A at 24-30; Ex. B at 62-64; Ex. F at 39-49; and Ex. G at 11-21.

⁵⁷ Ex. A at 26-30; Ex. F at 42-49; and Ex. G at 13-21.

⁵⁸ Ex. A at 27-29, Ex. F at 45-48, and Ex. G at 13-20.

species is listed or critical habitat designated that may be affected by the identified action.⁵⁹ 50 C.F.R. § 402.16. Reinitiation is required in light of new information concerning new drilling techniques, white-nose syndrome, and climate change, as well as new listings of snuffbox, sheepnose mussel, and Northern long-eared bat.⁶⁰ However, BLM, Forest Service, and FWS, have failed to reinitiate consultation on the 2005 Biological Opinion

E. BLM Failed to Respond to Comments

We pointed out various significant foreseeable impacts in our previous comments and protest on the 2016 Lease Sale. BLM's responses in its updated Final EA have dismissed nearly all of these issues without providing any evidentiary support or scientific analysis to conclude that the impacts are insignificant. Instead, BLM insists that it will look at these impacts after the leases have been issued and have entered the development stage. BLM's failure to consider and adequately respond to public comments violates NEPA's requirement that agencies take a "hard look" at environmental consequences. See W. Watersheds Project v. Kraayenbrink, 620 F.3d 1187, 1206 (9th Cir. 2010).

F. BLM Failed to Request the Forest Service's Participation as a Cooperating Agency

BLM failed to request the Forest Service's participation as a cooperating agency in the preparation of the EA, in violation of the CEQ regulations. See 40 C.F.R. § 1501.6. A lead agency "shall...request the participation of each cooperating agency in the NEPA process at the earliest possible time." Id. The purpose of this requirement is "to emphasize agency cooperation early in the NEPA process." Id. A lead agency must therefore "[u]se the environmental analysis and proposals of cooperating agencies...to the maximum extent possible consistent with its responsibility as lead agency." Id. at 1501.6(a). Cooperating agencies, in turn, must participate in the NEPA process "at the earliest possible time" and participate in the scoping process," and "[m]ake available staff support at the lead agency's request to enhance the latter's interdisciplinary capability." Id. at 1501.6(b)(1), (2), (4).

The Forest Service is a cooperating agency. Its participation in the preparation of the EA was required, because it has "jurisdiction by law" over the lease sale and "special expertise" with respect to various impacts resulting from the lease sale. See 40 C.F.R. § 1508.5 ("Cooperating agency means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal...."). A "Federal agency which has jurisdiction by law shall be a cooperating agency." 40 C.F.R. § 1501.6. "Jurisdiction by law" means "agency authority to approve, veto, or finance all or part of the proposal." 40 C.F.R. § 1508.15. Here, the Forest Service has "jurisdiction by law," because it has "authority to approve" and "veto" the lease sale. Under 30 U.S.C. § 352, the Forest Service must consent to the leasing of oil and gas underlying acquired lands within its jurisdiction before BLM can lease those lands.⁶¹ The Forest Service may consent to leasing only after it verifies that

⁵⁹ Ex. A at 29-30, Ex. F at 48-49, and Ex. G at 20-21.

⁶⁰ Ex. A at 27-30; Ex. G at 13-20.

⁶¹ "No mineral deposit covered by this section [including oil and gas] shall be leased except with the consent of the head of the executive department, independent establishment, or instrumentality having jurisdiction over the lands

“leasing of the specific lands [1] has been adequately addressed in a NEPA document, and [2] is consistent with the Forest land and resource management plan.” 36 C.F.R. § 228.102(e)(1). In addition, the Forest Service has “special expertise” over existing conditions within the forest and sensitive resources contained on its lands. Both its jurisdiction by law and special expertise make it a cooperating agency.

There is no indication that BLM ever requested the Forest Service’s participation as a cooperating agency, despite the Forest Service clearly having jurisdiction by law and special expertise.⁶² This failure deprived the public and agency of the Forest Service’s expertise and environmental analysis in evaluating an array of issues concerning lands within the Wayne National Forest’s boundaries, including potential effects of fracking on vegetation, wildlife, surface water, and groundwater.

This procedural requirement of participation of cooperating agencies is not merely a formality, but is there to allow the agencies and the public to understand the consequences of the proposed lease auction. Without the Forest Service’s participation in assessing the potential consequences of leasing for the resources within its jurisdiction, the agencies and the public are deprived of a meaningful opportunity to evaluate the potential consequences of BLM’s proposed action. A prime example of this is the effects of new leasing on private surface and mineral development, and how such development could impact Forest Service resources. The Forest Service has never addressed this issue in any of its previous environmental analyses, and BLM’s weak attempt at addressing it in the EA lacks the benefit of the Forest Service’s review and expert assessment. The public is therefore deprived of meaningful information and adequate assurances that these effects have been adequately reviewed.

BLM’s failure to request the Forest Service’s participation as a cooperating agency is arbitrary and capricious. See Colo. E envtl. Coal. v. Office of Legacy Mgmt., 819 F. Supp. 2d 1193, 1215 (D. Colo. 2011) (finding violation of § 1501.6).

G. The Forest Service’s Consent is Invalid, and Therefore Cannot Properly Authorize the Lease Sale

BLM cannot properly base its approval of the lease sale on the Forest Service’s consent to new leasing. As noted above, the Forest Service may consent to leasing only after it verifies that “leasing of the specific lands [1] has been adequately addressed in a NEPA document, and [2] is consistent with the Forest land and resource management plan.” 36 C.F.R. § 228.102(e)(1). The Forest Service could not properly find that leasing of the specific lands “has been adequately addressed in a NEPA document.” The Forest Service’s 2012 Supplemental Information Report (“2012 SIR”), which is the only document in which the Forest Service has ever attempted to

containing such deposit. . . , and subject to such conditions as that official may prescribe to insure the adequate utilization of the lands for the primary purposes for which they have been acquired or are being administered.” 30 U.S.C. § 352. The parcels leased here are acquired lands, i.e., lands that have been acquired from other entities and were not originally “public domain lands” belonging to the United States at the time they were acquired.

⁶² We understand from our conversations with Forest Service officials that BLM never sought its participation except in an informal manner, and only very late in the process.

address the effects of fracking from new leasing, is not a proper “NEPA document” as it has never been subject to public review and comment. Several cases have found that fracking entails unique risks and impacts that must be addressed in a proper NEPA review. See Hayes v. Chaparral Energy, LLC, 180 F. Supp. 3d 902, *28-*29 (N.D. Okla. 2016) (failure to address impacts of fracking in EA violated NEPA); Ctr. for Biological Diversity v. BLM, 937 F. Supp. 2d 1140, 1157-59 (N.D. Cal. 2013); Los Padres ForestWatch v. United States BLM, 2016 U.S. Dist. LEXIS 138782, *33-*35 (C.D. Cal. Sept. 6, 2016). Moreover, the 2006 FEIS for the Forest Plan and 2012 SIR do not analyze the effects of private surface development that would arise from new leasing, the climate change effects of new leasing, and a host of other fracking impacts.⁶³ The Forest Service therefore could not properly consent to new leasing, and BLM could not approve the lease sale based on this faulty consent.

IV. Conclusion

Unconventional oil and gas development not only fuels the climate crisis but entails significant public health risks and harms to the environment. Accordingly, BLM should cancel the lease auction, or else prepare an EIS that thoroughly analyzes the effects of the proposed lease auction, as compared to the alternative of no new fossil fuel leasing and no fracking or other unconventional well stimulation methods within the WNF planning area. BLM must also consult under Section 7 of the ESA, prior to allowing the proposed action to move forward. Thank you for your consideration of these comments.



My-Linh Le, Legal Fellow,
Wendy Park, Senior Attorney,
Center for Biological Diversity



Nathan Johnson, Natural Resources Attorney
Ohio Environmental Council

Myke Luurtsema, Heartwood Council Chair
Heartwood

⁶³ See, e.g., Ex. G at 13-17 (demonstrating some of the effects of private surface development that would arise from new leasing); see also, e.g., Ex. B at 47-53 (discussing some of the dangers of climate change effects from new leasing).

Elly Benson, Staff Attorney,
Sierra Club

Andrea Reik
Athens County Fracking Action Network Steering Committee member

Caitlyn McDaniel
Buckeye Environmental Network Board Member

Encl:

Compact disc of references cited

Compact disc of Exhibits A, B, C, D, E, F, and G with references cited within exhibits

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