OHIO ENVIRONMENTAL COUNCIL – CENTER FOR BIOLOGICAL DIVERSITY HEARTWOOD – SIERRA CLUB – OHIO VALLEY ALLIES – BUCKEYE ENVIRONMENTAL NETWORK

Protest submitted via USPS Priority Certified and FEDEX Priority Overnight Mail

August 13, 2026

Bureau of Land Management
Eastern States State Office
5275 Leesburg Pike
Falls Church, VA 22041

RE: September 2026 Lease Sale Protest (DOI-BLM-Eastern States-M000-2026-0003-DNA)

In accordance with 43 C.F.R. § 3120.13, the Ohio Environmental Council, Center for Biological Diversity, Sierra Club, Heartwood, Ohio Valley Allies, and Buckeye Environmental Network (collectively, "OEC") hereby timely protest the offering of all forty-one oil and gas lease parcels proposed for sale at the Bureau of Land Management's ("BLM") September 2026 competitive oil and gas lease sale: OH-2026-09-1732, OH-2026-09-1731, OH-2026-09-0015, OH-2026-09-1579, OH-2026-09-1581, OH-2026-09-1601, OH-2026-09-1602, OH-2026-09-1604, OH-2026-09-1612, OH-2026-09-1614, OH-2026-09-1615, OH-2026-09-1629, OH-2026-09-1628, OH-2026-09-1627, OH-2026-09-1617, OH-2026-09-1626, OH-2026-09-1624, OH-2026-09-6267, OH-2026-09-6266, OH-2026-09-0101, OH-2026-09-0102, OH-2026-09-0100, OH-2026-09-0074, OH-2026-09-0066, OH-2026-09-0056, OH-2026-09-0058, OH-2026-09-0059, OH-2026-09-0060, OH-2026-09-0061, OH-2026-09-0062, OH-2026-09-0065, OH-2026-09-0067, OH-2026-09-0054, OH-2026-09-0055, OH-2026-09-0068, OH-2026-09-0073, OH-2026-09-0072, OH-2026-09-0069, OH-2026-09-0070, OH-2026-09-4405, OH-2026-09-0071.

OEC submitted scoping comments and commented on the draft Leasing DNA. *See generally* OEC et al., Scoping Comments on Parcels for the Eastern States Bureau of Land Management September 2026 Competitive Oil & Gas Lease Sale in Ohio, DOI BLM-Eastern States-M000-2026-0003-DNA, (January 15, 2026) ("OEC Scoping Comments"); OEC et al., Draft DNA Comments on Parcels for the Eastern States Bureau of Land Management September 2026 Competitive Oil & Gas Lease Sale in Ohio, DOI BLM-Eastern States-M000-2026-0003-DNA, (June 17, 2026) (OEC DNA Comments). BLM did not adequately respond to our comments. *See* Final DNA - Att. 6_2026.07.17_BLM Responses to Public Comments_Sept. 2026 ES Lease Sale. OEC incorporates by reference all of its prior comments.

For this sale, BLM is proposing to lease forty-one parcels covering 2,840 acres of federal mineral estate. Issuing a Determination of NEPA Adequacy (DNA) for these proposed parcels is in violation of multiple environmental laws. Neither the 2016 Final Environmental Assessment (EA) nor the 2025 Final Supplemental Environmental Assessment (SEA), which BLM purports are "adequate" for the purposes of assessing the Ohio Lease Sale, satisfy its obligations under the

National Environmental Policy Act and numerous other environmental laws and ongoing litigation. As explained below, BLM's decision to offer the forty-one parcels for leasing and development violates the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 et seq.; the National Forest Management Act ("NFMA"), 16 U.S.C. §§ 1600 et seq.; the Federal Land Policy and Management Act ("FLPMA"), 43 U.S.C. §§ 1701 et seq.; the Mineral Leasing Act ("MLA"), 30 U.S.C. §§ 181 et seq.; the Clean Air Act ("CAA"), 42 U.S.C. §§ 7401 et seq.; the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 et seq.; the Administrative Procedure Act ("APA"), 5 U.S.C. §§ 551-559, 701-706; and the regulations and policies that implement these laws.

BLM cannot lawfully hold this sale until it remedies the legal deficiencies outlined below.

I. BLM cannot hold this lease sale because the underlying RMP never went into effect.

Under FLPMA, the BLM may issue decisions such as leases, permits, rights of way, and other authorizations only "in accordance with" a valid land use plan. 43 U.S.C. § 1732(a). FLPMA's implementing regulations likewise provide that all "resource management authorizations and actions . . . shall conform to the approved [RMP]." 43 C.F.R. § 1610.5-3(a). BLM cannot proceed with approving new leases or authorizations or take other action predicated on a plan that is not in effect.[1] Doing so would violate FLPMA along with the recently enacted 2025 Reconciliation Act (and the MLA, which it amended), NEPA, NFMA, and the APA.

The Congressional Review Act ("CRA") enacted in 1996 to strengthen congressional oversight of agency rulemaking requires federal agencies to submit a report on each new rule to both houses of Congress and to the Comptroller General for review before a rule can take effect. 5 U.S.C. § 801(a)(1)(A). The report must contain a copy of the rule, "a concise general statement relating to the rule," and the rule's proposed effective date. *Id*.

The Forest Service approved the Land and Resource Management Plan for the Wayne National Forest in 2006 ("Wayne Forest Plan"). Since then, the agency has not transmitted it to Congress under the CRA. Because the Forest Service never submitted the Wayne Forest Plan to both houses of Congress and the Comptroller General, it never became effective. 5 U.S.C. § 801(a)(1)(A) (the agency must submit the rule "[b]efore [it] can take effect"). Because no RMP is in effect for the Wayne, BLM cannot rely on the Wayne Forest Plan to offer and sell oil and gas parcels for development including, but not limited to, relying on the plan's leasing categories, stipulations and notices. 43 U.S.C. § 1732(a) (BLM is required to manage public lands "in accordance with land use plans" that are in effect).

[1] Pub. L. No. 119-21, § 50101(c)(2)(A), 129 Stat. 72, 138 (2025) ("[The BLM] shall offer . . . parcels . . . *under the applicable resource management plan in effect*" (emphasis added)); id. at 138–39 (directing that certain lands meeting certain conditions be made available for leasing "if the Secretary determines that the parcel of land is open to oil or gas leasing *under the approved resource management plan applicable to the planning area in which the parcel of land is located that is in effect*" (emphasis added)); *id*. at 139 (explaining that issued leases "shall be subject to the terms and conditions of the *approved resource management plan*" (emphasis added)).

Importantly, the United States Government Accountability Office ("GAO") has concluded that land use plans can be "rules" and therefore subject to the CRA. *See generally* U.S Gov. Accountability Off., Decision, Matter of: U.S. Department of the Interior, Bureau of Land Management—Applicability of the Congressional Review Act to Central Yukon Record of Decision and Approved Resource Management Plan, B-337200 (June 25, 2025) ("Central Yukon RMP CRA Report"); U.S Gov. Accountability Off., Decision, Matter of: U.S. Department of the Interior, Bureau of Land Management—Applicability of the Congressional Review Act to Miles City Field Office Record of Decision and Approved Resource Management Plan Amendment, B 337163 (June 25, 2025); U.S Gov. Accountability Off., Decision, Matter of: U.S. Department of the Interior, Bureau of Land Management—Applicability of the Congressional Review Act to North Dakota Field Office Record of Decision and Approved Resource Management Plan, B 337175 (June 25, 2025); U.S. Gov. Accountability Off., Decision, Matter of: U.S. Department of the Interior, Bureau of Land Management—Applicability of the Congressional Review Act to the Grand Staircase-Escalante National Monument Record of Decision and Approved Resource Management Plan (Jan. 15, 2026) ("Grand Staircase RMP CRA Report").

The GAO primarily considers whether an agency's action constitutes a "rule" under the APA to determine whether it is subject to review under the CRA. For example, regarding the Central Yukon RMP, the GAO found: 1) it is an agency statement issued by a federal agency; 2) is of future effect; and 3) it "implements, interprets, or prescribes law or policy because it prescribes and implements a consolidated direction under one plan." *See generally* Central Yukon RMP CRA Report. Congress subsequently endorsed GAO's finding that land use plans are "rules" subject to the CRA when it voted to disapprove three of the above-referenced land use plans. *See generally* H.J. Res. 104 – Providing for congressional disapproval under chapter 8 of title 5, United States Code, of the rule submitted by the Bureau of Land Management relating to "Miles City Field Office Record of Decision and Approved Resource Management Plan Amendment," https://www.congress.gov/bill/119th-congress/house-joint-resolution/104; H.J. Res. 105 – Providing for congressional disapproval under chapter 8 of title 5, United States Code, of the rule submitted by the Bureau of Land Management relating to "North Dakota Field Office Record of Decision and Approved Resource Management Plan," https://www.congress.gov/bill/119th congress/house-joint-resolution/105; H.J. Res. 106 – Providing for congressional disapproval under chapter 8 of title 5, United States Code, of the rule submitted by the Bureau of Land Management relating to "Central Yukon Record of Decision and Approved Resource Management Plan," https://www.congress.gov/bill/119th-congress/house-joint-resolution/106.

Relevant here, the Wayne Forest Plan, is substantively similar to the land use plans referenced above and contains the same elements that the GAO found material in concluding other plans were subject to the CRA. Specifically, the Wayne Forest Plan is 1) a statement issued by a federal agency; 2) of future effect; and 3) implements, interprets, or prescribes law or policy because it prescribes and implements consolidated direction under a single plan. Therefore, the Wayne Forest Plan is a "rule" pursuant to the CRA. Because USFS never submitted it to both houses of Congress and the Comptroller General, it never became effective. 5 U.S.C. § 801(a)(1)(A) (the agency must submit the rule "[b]efore [it] can take effect"). Because it is not in effect, BLM cannot rely on it to offer and sell oil and gas parcels for development including, but not limited to, relying on the plan's leasing categories, stipulations and notices. 43 U.S.C. §

1732(a) (BLM is required to manage public lands "in accordance with land use plans" that are in effect).

The BLM should not proceed with issuing leases in the absence of a valid RMP. Doing so will violate FLPMA, NFMA, the 2025 Reconciliation Act, the MLA and the APA. BLM must postpone the proposed sale until and the Wayne National Forest has a management plan that has gone into effect.

II. Even assuming the RMP is valid and in effect, it is inadequate to support leasing.

Even assuming the RMP is valid and in effect, it is inadequate to support leasing. Before issuing leases pursuant to an RMP, the agency must confirm that the applicable RMP is up to date and that the underlying environmental analysis will support a contemporary leasing decision. If an RMP is more than five years old, the BLM must reevaluate and confirm that the analysis and any underlying assumptions remain valid. *See* 42 U.S.C. § 4336b. An RMP no longer supports a new leasing decision if there is important new data, policies, or changed circumstances that were not considered when it was approved. *See* H-1601-1 — LAND USE PLANNING HANDBOOK, SECTION VII.C, DETERMINING WHEN IT IS NECESSARY TO REVISE AN RMP at 34–35 (Mar. 11, 2005); 43 C.F.R. § 1610.5-6; 36 C.F.R. § 219.13(a). If an RMP is too old or stale to support a new leasing decision, the responsible agency must revise the RMP or undertake a new, thorough environmental analysis, such as an Environmental Impact Statement (EIS), to support new leasing. BLM purports that the 2006 Wayne Forest Plan governs lands subject to this lease sale, is old and stale, *see* DNA Worksheet at 2, considering that it was published twenty years ago.

Consequently, the BLM should defer leasing in these areas until the agency can consider new inventories and analyze how best to protect the resources. At the very least, the agency must undertake a thorough analysis that considers the potential impacts (direct, indirect, and cumulative) that new leasing and development would have on sensitive resources.

Even where implicated RMPs were finalized within the last five years, the BLM must take a hard look at new resource inventories and stipulations at the lease sale stage to ensure that new leases comply with existing plans, reflect updated inventory data, and adequately protect sensitive resources. Failure to consider, analyze, and disclose these issues would violate NEPA and FLPMA.

III. The BLM may not rely on the 2025 SEA or 2016 EA NEPA documents to determine NEPA adequacy for the September Lease Sale.

The BLM must evaluate the environmental impacts of this proposed lease sale under NEPA. *See* 42 U.S.C. §§ 4331–4347. NEPA fosters informed decision making by federal agencies and promotes informed public participation in government decisions. *See Balt. Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 97 (1983). To meet those goals, NEPA requires that the BLM "consider every significant aspect of the environmental impact of a proposed action" and inform the public of those impacts. *Id*. (internal citation omitted); *accord Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 553 (1978).12 The BLM must take a "hard look" at the

environmental effects before making any leasing decisions, ensuring "that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349–50 (1989). Environmental "[e]ffects are reasonably foreseeable if they are sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision." *Sierra Club v. Fed. Energy Regul. Comm'n*, 867 F.3d 1357, 1371 (D.C. Cir. 2017) (internal quotation omitted).

The BLM must analyze these environmental impacts at the lease sale stage. It is well established that leasing constitutes an "irreversible and irretrievable commitment of resources," and that the BLM is therefore obliged to analyze such impacts at this stage. *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983). Federal courts have repeatedly rejected agency attempts to avoid analyzing reasonably foreseeable future impacts by claiming that considering them at the lease sale stage would be speculative. *See, e.g., N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1078–79 (9th Cir. 2011). BLM's obligation to analyze impacts at the leasing stage triggers requirements under substantive environmental protection statutes in addition to NEPA's procedural requirements. *See e.g., Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988) (holding that the Fish & Wildlife Service violated the Endangered Species Act by failing to adequately analyze threats to species at the leasing stage).

BLM purports to rely on two NEPA documents to justify NEPA adequacy for the September Lease Sale. It states:

> This DNA worksheet confirms the adequacy of the analysis in the Supplemental Environmental Assessment (SEA) for Oil and Gas Leasing, Wayne National Forest, Marietta Unit of the Athens Ranger District, Monroe, Noble, and Washington Counties, Ohio (DOI-BLM-Eastern States-M000-2023-0005-EA, decision signed April 17, 2025) and other prior analyses, such as the Environmental Assessment (EA) for Oil and Gas Leasing, Wayne National Forest, Marietta Unit of the Athens Ranger District, Monroe, Noble, and Washington Counties, Ohio (DOI-BLM Eastern States-M000-2016-0002-EA, decision signed December 12, 2016).

DNA at 2. BLM's reliance on the SEA and EA for this project is arbitrary and capricious. The extensive inadequacies prevalent in the SEA and EA were discussed in the OEC Scoping Comments, including but not limited to the documents' failure to take a hard look at impacts to water resources, listed species, air resources, and environmental justice. BLM may not justify NEPA adequacy on documents that fail to satisfy NEPA.

Moreover, in *Center for Biological Diversity v. U.S. Forest Service*, 444 F. Supp. 3d 832, 872 (S.D. Ohio 2020) ("2020 Order"), the Southern District Court of Ohio found that BLM and the Forest Service violated NEPA for failing to take a "hard look" at the impacts of fracking, including "surface area disturbance," the cumulative impacts on . . . the Little Muskingum River" and "impacts on air quality." On March 8, 2021, the court remanded the 2016 EA, ordering BLM to revise its NEPA analysis, and enjoining development of the 65 leases until BLM finalized its NEPA analysis in accordance with the 2020 Order. *Ctr. for Biological Diversity v. U.S. Forest*

Serv., No. 2:17-cv-372, 2021 U.S. Dist. LEXIS 43020 (S.D. Ohio Mar. 8, 2021) ("2021 Order"). On remand in 2025, BLM issued the SEA and issued a Decision Record approving the leasing plan.

The government subsequently filed a Notice of Satisfaction on Remand with the court, purporting to unilaterally determine that the injunction imposed by the 2021 Order was lifted. On December 3, 2025, Plaintiffs filed a motion to enforce the court's earlier injunction, highlighting numerous deficiencies in BLM's 2025 SEA, and showing that the agency's actions were not in compliance with the court's 2020 and 2021 Orders. That litigation is still ongoing and thus the court's 2021 Order remains in effect. As a result, BLM may not issue any new APDs until BLM completes its NEPA analysis in accordance with the Court's orders, may not permit water withdrawals from the Little Muskingum River for any drilling that is occurring pursuant to the already approved APDs on leased parcels; and may not permit any further surface disturbing activities on the leased parcels. Moreover, BLM may not rely on the SEA or EA for NEPA adequacy where the EA was held to violate NEPA in the court's 2020 Order and the SEA fails to correct those violations.

a. The FSEA failed to assess impacts resulting from drilling in Washington County.

For reasons it did not explain, BLM entirely excluded Washington County from its projected well development scenarios—despite Washington County harboring roughly half of the project area, and despite roughly half of existing industry EOIs being for parcels located in Washington County. FSEA Figure 4 at 3-34 (analysis area map displaying EOIs). Instead, and without any meaningful explanation, the FSEA assumes 80 of the Project's maximum projected 81 wells would be in Monroe County and 1 well would be in Noble County. FSEA Appendix D at 34. Without an adequate explanation, which BLM did not provide, BLM's decision to exclude roughly half of the project area from its development estimates was arbitrary and capricious.

Because BLM did not assess any impacts that would result in the development of any oil and gas wells in Washington County, it cannot issue a DNA for the proposed leases, several of which are located within Washington County.

b. The FSEA failed to take a hard look at impacts to surface water and aquatic species from dewatering.

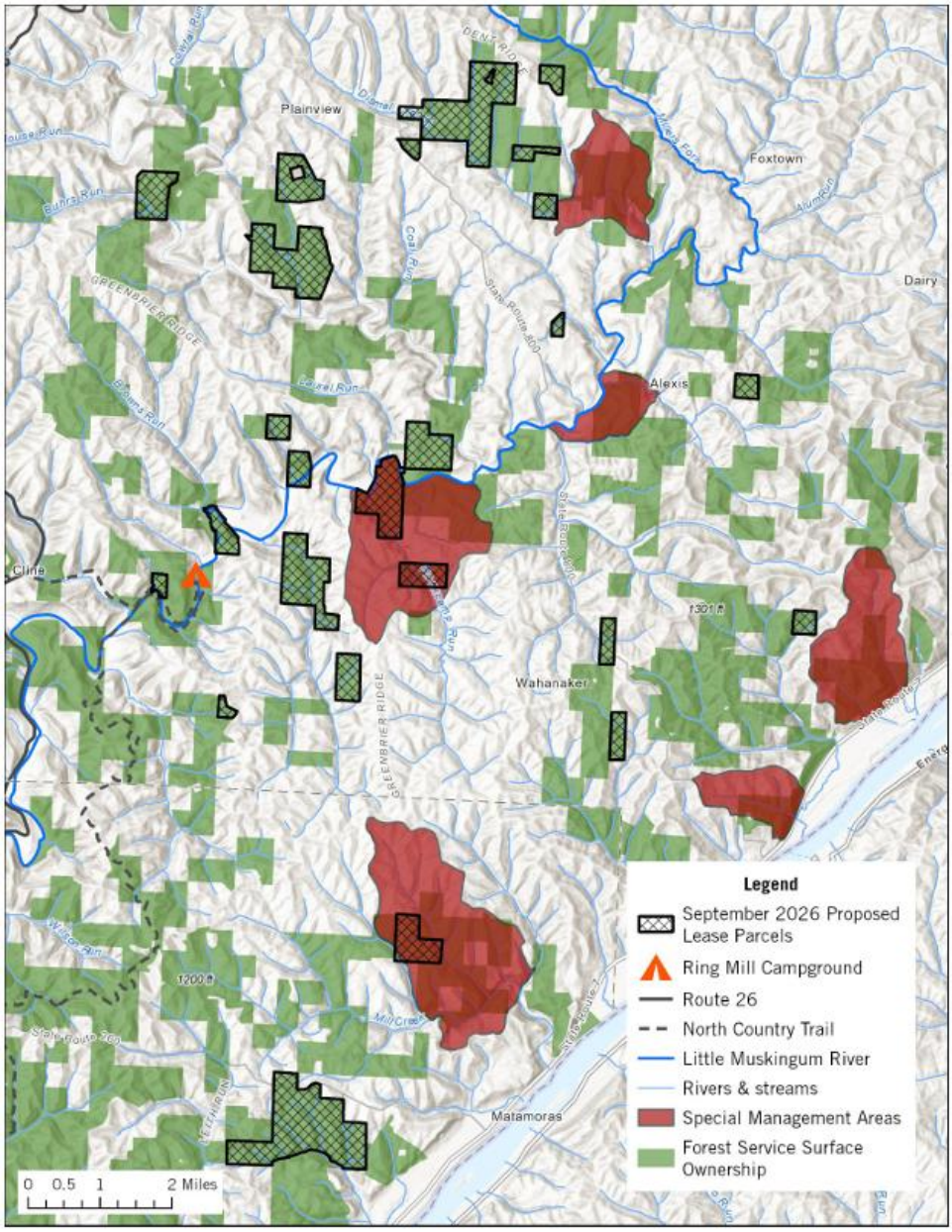
BLM failed to adequately consider the Project's water depletion effects on rivers and streams in the Marietta Unit, the ten listed aquatic species (together, "listed aquatic species"), including Clubshell musssel (endangered), fanshell mussel (endangered), Northern riffleshell mussel (endangered), pink mucket mussel (endangered), longsolid mussel (threatened), purple cat's paw mussel (endangered), round hickorynut mussel (threatened), sheepnose mussel (endangered), snuffbox mussel (endangered), and rabbitsfoot mussel (threatened), and two proposed aquatic species, namely the salamander mussel (proposed endangered) and Eastern hellbender (proposed endangered). In the Biological Assessment (BA) for the FSEA, BLM states that the "Aquatic Analysis Area encompasses watersheds where water withdrawals may occur to support reasonably foreseeable drilling and hydraulic fracturing activity associated with leases

that are issued under the Proposed Action." BA at 20, 22 (map of aquatic analysis area). Within that boundary, BLM accounts for numerous perennial and intermittent streams and rivers which "are considered the highest quality" of the entire Wayne NF. *Id*. at 50-51. BLM assumes that "impacts to water resources and aquatic species outside of the Aquatic Analysis Area are unlikely because operators strongly prefer to obtain water from a source that is close to the well site to be developed." *Id.* at 20.

Oil and gas development from BLM's proposed project is expected to require approximately 114 to 162 million gallons of water each year, amounting to billions of gallons total over the development period. *Id*. at 119. Well operations would require an additional 2 to 6 million gallons of water per well, or an estimated 486 million total gallons over the operation/production phase of the project. *Id.* "Considering that all surface water withdrawals in the Analysis Area between 2017 and 2021 were within the Little-Muskingum-Middle Island HUC-8," BLM assumes that the water withdrawals for the Wayne NF Project will be sourced exclusively from within this watershed. *Id*. at 120. Moreover, the agency expects that the primary surface waters that would supply water for the reasonably foreseeable development of the leases are the Little Muskingum River and the Ohio River. *Id.*

The Little Muskingum River runs through the center of the Marietta Unit and nearby several proposed lease parcels. Although BLM claims that the effects of water depletions on the Little Muskingum River's average annual streamflow would be "minimal," the agency recognizes that during low-flow periods, streamflow could drop well below levels needed to support the Wayne NF Project. *Id*. at 122-23. As a result, BLM acknowledges that harmful reductions in streamflow could occur in the Little Muskingum River and within the Little Muskingum-Middle Island HUC-8 watershed which could negatively impact listed and proposed aquatic species that inhabit the Little Muskingum River. *Id.* at 115, 123. Both mussel species and the eastern hellbender are sensitive to any changes in water quality, temperature, and increased sedimentation. *Id*. at 113. Water withdrawals during low-flow conditions could deplete minimum flows or shorten inundation periods for wetlands; lower lake levels; impact ecosystem function like primary productivity and leaf litter processing; create "simplified streams" that could result in the loss of branches and stream features in riparian areas; and make those watersheds more vulnerable to future floods, fires, or landslides. *Id*. at 124. These impacts could "temporarily strand[] mussels, resulting in mortality" and have the effect of decreasing "oxygen levels, which could also result in mortality of mussels." *Id*. Mussels would also be more susceptible to increased predation during low flow events. *Id*. Surface disturbance and in-water work could further cause erosion and sedimentation in surface waters, suffocating, crushing, or otherwise harming mussels and eastern hellbenders. *Id*. at 115.

Although not easily visible on BLM's map of the proposed leases, a map prepared by the Center for Biological Diversity (see image below) shows that the vast majority of BLM's proposed parcels overlap with or are in the vicinity of the Little Muskingum River and its tributaries.



The only other surface water source considered by BLM is the Ohio River, which runs along the southeastern border of the Marietta Unit. BLM estimates that, due to the Ohio River's more substantial streamflow, there would be no anticipated impacts to the river if all water for the proposed project were sourced there. *Id*. at 124.

Additionally, the Muskingum River runs just to the west of the Marietta Unit. FSEA at 3 76. Although the Biological Assessment does not discuss impacts of water withdrawal on the Muskingum River, the Biological Assessment suggests that the Muskingum River is another potential water source, *see id*. at 3-101 (noting measures to reduce impacts on Muskingum River species), and a portion of the river passes through the Aquatic Analysis Area, *see id*. at 22 (map of the aquatic analysis area, which encompasses the area west of Marietta, where the Muskingum River connects with the Ohio River).

Presumably because of the harms that BLM identified for the Little Muskingum River and listed and proposed aquatic species, it created Aquatic Avoidance and Mitigation Measure 5 ("AMM 5"), which purports to prohibit water withdrawals from streams harboring federally listed mussels, known as "Group 2 or 4 streams," and from undefined "eastern hellbender streams." Specifically, AMM 5 "prohibit[s] water withdrawals from Little Muskingum River [and] Muskingum River"—Group 2 and 4 streams that currently occur within the Action Area—"and any additional Group 2 and 4 streams and eastern hellbender streams that may be identified in the future." *Id.* at 66-67.

First, it is not reasonably certain that the mitigation measures proposed in the FSEA will be applied at the site-specific level. In addition to the concerns discussed above, relating to the Reconciliation Bill, BLM has indicated that whether Avoidance and Mitigation Measures will apply to a particular project will be determined on a case-by-case basis. *See, e.g*., FSEA BA at 118 (explaining that BLM will review the proposed source and amount of water at the site specific permitting stage and apply AMMs that "*could* include" AMM 5 (emphasis added)). BLM has not yet disclosed which AMMs will be applied to the proposed leases.

The tentative nature of BLM's mitigation undermines BLM's determination that "potential effects from the Proposed Action and reasonably foreseeable development of the leases, with incorporation of AMMs, are unlikely to occur (discountable) and the size of any impact, were it to occur, would be too small to be measured or evaluated (insignificant)." *Id*. at 108-109. *See Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723, 747 (9th Cir. 2023) (invalidating BiOp where it was "unclear what will … commit the action agency to carrying out any of the mitigation measures listed" and where mitigation would be applied on a "case-by-case basis" without "bind[ing] [the agency] when the need for those measures apply").

Second, BLM's and FWS's "not likely to adversely affect finding" with respect to the listed aquatic species is further unsupported because the FSEA BA fails to account for the potential for AMM 5's prohibition on water withdrawals from the Little Muskingum River to exacerbate harms to aquatic species by shifting water withdrawals to more sensitive and possibly upstream water sources.

AMM 5, if applied, covers water withdrawals from the Little Muskingum River, Muskingum River, and any Group 2 or 4 streams identified in the future, but does not cover these streams' tributaries or headwaters. Based on the plain language of AMM 5 then, the perennial and intermittent streams and rivers within the Marietta Unit will still be available to operators for water sourcing.

Preventing water withdrawals from the Little Muskingum River will likely have the effect of merely shifting water withdrawals to smaller streams, many of which are tributaries and headwaters of the Little Muskingum River (see map above). Smaller streams are far more sensitive to flow reductions than larger rivers. Withdrawals from smaller streams "can more easily cause excessive flow reduction… [resulting in] higher sediment loads, decreased oxygen levels, lower water velocity, higher water temperature, and algal blooms." Center for Biological Diversity Comment (May 17, 2024) at p. 17 (incorporated by reference in its entirety); Harmon,

Brady et al., *Flow alterations in rivers due to unconventional oil and gas development in the Ohio River basin*, Science of the Total Environment, 856 (2023) 159126, at 7. And BLM acknowledges that if water were sourced from smaller streams, habitat loss could result and "would be especially pronounced in smaller streams, tributaries, and drainages that are more susceptible to impacts." FSEA, p. 3-112. However, outside this short analysis, BLM does not consider smaller streams as potential sources for well development.

The BA fails to acknowledge that a prohibition on sourcing water from the primary river running through the center of the project area would likely shift water withdrawals to nearby small streams, tributaries, and headwaters, further exacerbating impacts to already vulnerable small stream ecosystems. Many of these streams may also contain listed aquatic species, meaning that dewatering them could cause direct mortality of listed species.

In addition, BLM has not considered whether withdrawals from Little Muskingum River tributaries and headwaters would reduce streamflow in the Little Muskingum River itself. If operators simply extract water from a source that feeds into another river, the result is a reduction in streamflow in the mainstem. Harmon (2023) at 8.

As BLM acknowledges, water withdrawals during low-flow conditions could deplete minimum flows, resulting in the loss and degradation of aquatic habitat and the stranding, killing, and increased predation of mussels. BA at 124. Those effects would be felt in both the source stream and in the mainstem Little Muskingum River. And as BLM itself notes the "most effective way for the BLM to ensure that it is not causing a negative effect on mussel populations is to prohibit water withdrawals from the Little Muskingum River and associated waterways that are susceptible to degradation of their mussel habitat by water withdrawals." FSEA, p. 3-104 05.[2] But neither BLM's Biological Assessment nor FWS's concurrence letter addresses these effects of AMM 5 in tributary source streams on the Little Muskingum River or restricts water depletions in those streams.

Furthermore, BLM claims that it will implement mitigation measures to mitigate harms from water withdrawals "at the APD stage, when more information is known about the water location source and amount of water needed." BLM Response to Comments at 1. However, recent APDs issued by BLM in the Wayne National Forest included no determinations or assessments regarding location or timing of water withdrawals. S*ee* DOI-BLM-Eastern States-M000-2026-0005-CE (included as Exhibit 1). Nor do the APDs include any measures to implement AMM 9 ("BLM will require monitoring of stream flow to confirm that it is maintained at a level to maintain aquatic functions as required by USFWS at the tier 2 review Stage."). *Id*.

Further, wherever water is sourced, water intake structures could entrain mussel larvae or host fish critical to mussel larval development. Neither the BA nor FWS concurrence letter consider these impacts or measures to avoid entrainment.

[2] To be clear, the undersigned support imposition of a mitigation measure that prohibits water withdrawals from the Little Muskingum River watershed. However, AMM 5, as it was drafted in the FSEA does not do this and may work to increase harms in the Little Muskingum River or merely shift harms upstream.

In addition, there is no assurance that the Project will avoid harm to listed aquatic species, because BLM does not require that streams be surveyed for listed aquatic species before water withdrawals can begin. Notably, BLM provides no explanation for what streams would qualify as "eastern hellbender streams" (i.e., a confirmed sighting, suitable habitat, or critical habitat designation) or how it will determine whether a stream that an operator identifies for water withdrawal is a "Group 2 or Group 4 stream" harboring listed mussels. Thus, the BA and FWS's letter of concurrence fail to provide adequate assurance that AMM 5 will avoid harm to listed aquatic species.

In sum, BLM's FSEA failed to take a hard look at possible impacts to surface water and aquatic listed and proposed species resulting from fracking in the Wayne National Forest. As a result, BLM cannot rely on a DNA to satisfy its obligations under NEPA, the ESA, or FLPMA.

c. The FSEA failed to take a hard look at listed bats and tri-colored bats.

BLM's determinations that the Project "may affect, is not likely to adversely affect" the Indiana bat (endangered) and Northern long-eared bat (endangered), (together, "listed bats") and no jeopardy for the tri-colored bat (proposed endangered) are unsupported. Those determinations failed to fully consider the Project's effects on the listed bats. As a result, BLM failed to take a hard look at the impacts of fracking on these species and cannot bypass a full NEPA analysis with a DNA for these proposed lease sales.

BLM's Biological Assessment concludes for these species:

> Based on the effects analysis, potential effects from the Proposed Action and reasonably foreseeable development of the leases, with incorporation of AMMs, are unlikely to occur (discountable) and the size of any impact, were it to occur, would be too small to be measured or evaluated (insignificant). Therefore, the BLM seeks concurrence of an effects determination of **may affect, not likely to adversely affect** for listed Indiana and NLE bats and **not likely to jeopardize the continued existence of** the proposed endangered tricolored bat. If the tricolored bat is officially listed, the effects analysis and implementation of AMMs would also result in an effects determination of *may affect, not likely to adversely affect* tricolored bat.

FSEA BA at 108-109.

This conclusion is based on at least four flawed and/or unsupported assumptions. First, the conclusion is based on the FSEA's flawed and unsupported assumption as to the total amount of forest clearing that could occur from oil and gas leasing, on a per-well-pad basis and forest wide. Those projections fail to fully take into account the effects of forest clearing and surface disturbance from fracking activities in the Wayne on the listed bats and tri-colored bat, including disturbance from gathering lines. BLM's Reasonably Foreseeable Development Scenario projecting total surface development impacts in the Wayne relies on the unsupported assumption that

> Hydrocarbons are transported from the wellbore to the production equipment by means of varying lengths of 2-inch diameter pipe. […] 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.

2020 RFDS at 30; *see also* 2020 RFDS at 28. Based on this assumption, BLM projected that each well-pad site could disturb 6 to 35 acres of forest, FSEA at 2-23, or up to 1,015 acres across the Wayne's Marietta Unit.

In *Center for Biological Diversity v. U.S. Forest Service*, 444 F. Supp. 3d 832 (S.D. Ohio 2020), the court examined the exact same assumption in BLM's 2006 Reasonably Foreseeable Development Scenario for the instant oil and gas leasing plan and found it "contrary to record information … demonstrat[ing] that gathering pipelines for fracking and conventional vertical drilling cannot be interchanged. FS-2966-67." *Id*. at 861 n.14. This included evidence that unconventional gas development requires larger diameter pipelines and thus larger rights-of-way of up to 100 feet across. These rights-of-way can require the clearing of land up to 12 acres of per mile, or roughly 19.8 acres of disturbance per well pad.[3] The court also noted that federal defendants "[did] not argue that Plaintiffs' estimates are false, argue that the same pipelines can be used for both conventional and fracking activities, or provide citation to where they otherwise addressed the comment in their Final EA." *Id*. Likewise, here, BLM has once again failed to support its assumption that the same gathering lines used for conventional oil and gas development can still be used for unconventional oil and gas development.

Although BLM claims that its disturbance projections do take into account gathering line disturbance, FSEA at J-31, BLM fails to explain how it factored in this disturbance despite its conflicting assumption that the Wayne's existing "well-developed pipeline infrastructure … should minimize the need for lengthy gathering lines to service new wells." 2020 RFDS at 30. The RFDS does not say what acreage it projected for gathering line disturbance, how it determined this acreage, or otherwise demonstrate that its projections are reliable and based on the "best available data."

Second, BLM's "not likely to adversely affect" and "no jeopardy" conclusions assume that habitat loss will only result from direct habitat loss, while discounting indirect habitat loss from habitat fragmentation. For example, BLM concludes:

> Bats may also be affected through loss of roost habitat that may occur if a substantial portion of a colony's summer area or a primary maternity roost is cut in the winter (during hibernation) when bats are not present. However, these situations are unlikely in the Proposed Action given the estimated small size of

[3] Johnson, Nels, et al., Natural Gas Pipelines, Excerpt from Report 2 of the Pennsylvania Energy Impacts Assessment (2011), at 5, 8, available at https://www.pennfuture.org/Files/Admin/ng-pipelines.pdf (12 acres per mile of gathering line times 1.65 miles of gathering line per well pad equals 19.8 acres). See also FS-4281 (Gathering lines for shale gas development can approach the size of cross-country transmission lines, and result in far more surface disturbance than conventional well); FS-15523 (observing 100-foot rights-of-way for pipelines in West Virginia).

> individual well pads (6 to 35 acres), total estimated initial disturbance in the RFDS of 171 to 1,015 acres (Table 0-2), and total acres of surface area needed to support production of 86 to 285 acres relative to the overall size of the surrounding available forested landscape of the Terrestrial Action Area."

BA at 104.

This conclusion ignores that habitat loss from fragmentation effects could extend many acres beyond the footprint of well pads, roads, and pipelines, as discussed above. [4][5] Development of pipelines roads, and well pads could cut these species off from large swaths of forest. Although Bat AMM 2 purports to limit clearing of "mature trees" to "10 acres or less for each new Federal project," unless more than ten acres is "necessary," BA 66, 104, BLM estimates that each development site could require forest clearing up to 35 acres, and makes clear that this AMM can be waived. *See, e.g.*, BA at 104 ("If greater than 10 acres of clearing/cutting in suitable forest habitat is necessary, then additional coordination with USFWS will apply.).

Third, the "not likely to adversely affect" conclusion is based on the flawed assumption that there is "abundant" suitable habitat in the Wayne and that suitable habitat is not a "limiting factor" for the bat. *See* BA at 107 ("[D]ue to the low rate of conversion from undeveloped to developed land, the abundant suitable forested habitat in the analysis area, and that suitable forest habitat is generally not a limiting factor for Federally protected bats, the Proposed Action … would minimally contribute to cumulative effects on Federally protected bats."); BA at 103 ("[B]ecause most bats know of and use a variety of roosting sites throughout the summer and because habitat is not considered a limiting factor in the Terrestrial Action Area, the loss of one or a few unknown roost trees is unlikely to result in detrimental effects on the species."); BA at 104 ("If a primary roost tree is cut during winter, an individual is likely to be able to locate a new roost the following spring within or near its traditional roosting area because (1) many roosts are ephemeral resources, so bats switch roost trees frequently, and (2) the small scope of individual project sites and the heavily forested context of the Terrestrial Action Area ensure an abundance of other potentially suitable trees nearby.").

But according to BLM's EA, "Suitable habitat for the bat species has not been delineated in the Action Area…." SEA at 3-128. Although the BA observes that "[m]uch of the WNF system lands are *potentially* suitable habitat," it also acknowledges that "[v]arious forest stand conditions, such as age, vertical and horizontal structure, composition, and basal area, may contribute to or detract from the suitability of any one place for bats and their assorted activities." BA at 96. Given that neither USFS nor BLM have assessed how much suitable

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[4] Henderson, L. and Broders, H. 2008. Movements and resource selection of the northern long-eared Myotis (Myotis septentrionalis) in a forest-agriculture landscape. Journal of Mammology 89(4): 952-963. Available at: https://academic.oup.com/jmammal/article/89/4/952/871896; Cornman, A.M. 2014. A white paper on the northern long-eared bat, forest management, and threat interactions. Little River Band of Ottowa Indians Natural Resources Report No. 2014-2, available at: https://www.researchgate.net/publication/317094298_A_white_paper_on_the_northern_long-eared_bat_forest_management_and_threat_interactions.

[5] U.S. Forest Service, Nantahala and Pisgah National Forests, Final EIS for the Land Management Plan (Jan. 2023), p. 3-270, available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd1090064.pdf.

habitat occurs in the Wayne or where it occurs, BLM has no basis for suggesting that only a small fraction of suitable habitat would be affected by the proposal.

Fourth, BLM's effects analysis separates out effects of development of private surface that is interconnected to a federal drilling project. *See, e.g.*, BA at 107 (excluding from the "Proposed Action" "development of well sites that will occur on private land outside of Federal jurisdiction but in conjunction with Federal leasing"). This approach rests on the incorrect assumption that private surface effects are not effects of the proposed leasing plan, but rather are only cumulative effects, i.e., "effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation. 50 C.F.R. § 402.02. However, these private surface activities are effects of the leasing plan. Effects of the action is defined as:

> all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action but that are not part of the action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

Id.

BLM acknowledges, however, that private surface activities may be "directly interconnected" with a federal drilling approval and that BLM has authority to mitigate that development even if it occurs "prior to submittal of APDs":

> If it is apparent that private surface disturbance and development prior to submittal of APDs has resulted in removal of suitable bat habitat which has: 1) likely resulted in adverse effects to ESA-protected bat species, 2) is directly interconnected to development of Federal mineral leases under this Proposed Action , and 3) would otherwise not have occurred, the BLM may choose to not approve an APD or will apply AMMs and other measures to APDs as conditions of approval to avoid and minimize new impact to Federally listed species on a site-specific basis.

BA at 107. BLM, however, only considers these activities in its cumulative effects analysis even though these effects "are caused by the proposed action" and eventually "involve" federal activities. 50 C.F.R. § 402.02.

The exclusion of these interconnected activities results in BLM underestimating the effects of the action. For example, the BA's cumulative impacts analysis acknowledges that "if operators develop private surface prior to submittal of APDs, there is potential to remove suitable habitat and to directly harm or kill ESA-protected bat species before they apply for an APD from BLM," as those operators would skirt BLM avoidance and minimization measures and/or Section 7 consultation. BA at 107. The BA's conclusion that "the Proposed Action" would

"minimally contribute to cumulative effects on Federally protected bats" is incorrect, because it fails to include these significant take impacts as effects of the proposed action. *See id*.

BLM's determination that the proposed action is not "not likely to adversely affect" the Indiana bat and Northern long-eared bat, and is "not likely to jeopardize" the tri-colored bat is unsupported, much less supported by the best available information.

d. The FSEA failed to take a hard look at air resources.

BLM's DNA for this proposed lease sale is arbitrary and capricious and contrary to law because the Final Supplemental Environmental Assessment (FSEA) upon which the lease sale project and DNA rely violate NEPA and the APA. Remarkably, the FSEA expressly refused to assess the Project's air quality impacts. E.g., FSEA, Appendix J at J-88 ("Impacts to air quality can only be assessed through air quality modeling, which is not performed at the leasing stage since the decision does not authorize development to occur"). "NEPA does not give BLM the discretion to ignore the impacts to the environment when there are methods for analyzing those impacts." *Diné Citizens Against Ruining Our Env't v. Haaland*, 59 F.4th 1016, 1043 (10th Cir. 2023). To analyze environmental impacts "under NEPA, agencies must do more than quantify pollution— they must also 'discuss the actual environmental effects resulting from those emissions.'" *WildEarth Guardians v. Zinke*, 2019 WL 2404860, No. CV 17-80-BLG-SPW-TJC, at *8 (D. Mont. Feb. 11, 2019) (citation omitted) (emphasis in original); *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995 (9th Cir. 2004) ("A calculation of the total number of acres to be harvested in the watershed … is not a sufficient description of the actual environmental effects that can be expected from logging those acres.").

Rather than analyze the significance of the emissions it quantified, BLM's FSEA states generally that the Project "is expected to lead to air quality impacts," and lists health impacts associated with the Clean Air Act's National Ambient Air Quality Standards (NAAQS) criteria pollutants. FSEA at 3-49 to 3-50. However, the FSEA does not say anything meaningful about the degree to which criteria pollutant increases would affect air quality in the local area, including the Project's potential to cause or contribute to violations of the NAAQS. *See* 40 C.F.R. § 1501.3(b) (2021)1 ("In considering whether the effects of the proposed action are significant, agencies shall analyze the potentially affected environment and degree of the effects of the action."); *id*. at (b)(2)(iii)-(iv) ("In considering the degree of the effects, agencies should consider […] [e]ffects on public health and safety [and] [e]ffects that would violate Federal, State, Tribal, or local law protecting the environment.").

Merely listing the expected quantity of emissions for each criteria pollutant but not assessing that data against the NAAQS or any other threshold for determining the Project's impacts on air quality does not constitute a hard look. *See 350 Montana v. Haaland*, 50 F.4th 1254, 1266 (9th Cir. 2022) (finding agency's generic discussion of climate change consequences was "untethered" to its FONSI such that "the reader is left to guess how or why" project's air emissions were insignificant); *Ky. Riverkeeper*, 714 F.3d at 408 (holding duty to assess effects not satisfied where agency provided survey data but did not discuss impacts).

The FSEA displays quantified Project emissions data in two tables. Table 3-3 lists quantified emissions estimates, but lacks any evaluation of these emissions' significance. FSEA at 3-51. Table 3-4 lists quantified Project emissions beside all oil and gas sector emissions in the state, including refining emissions, and estimates for all other federal (conventional) oil and gas wells in the state. FSEA at 3-54. But, again, BLM fails to discuss what any of these numbers might mean, leaving the listed data to speak for itself. BLM does not even supply comparative percentages for the data, forcing the reader to do their own calculations.

Calculating these comparative percentages sheds some light on the magnitude of the anticipated emissions BLM left unanalyzed. For example, percentage calculations completed by OEC, not BLM, show the Project could emit 82% of the coarse particulate matter (PM10) emitted by Ohio's entire oil and gas industry (including refining) annually. *See* FSEA, Table 3-4 at 3-54 (407 tons per year ("tpy") from the Project's "High Scenario" compared to 497 tpy from "Ohio Oil and Gas"). Percentages for other pollutants are similarly concerning (e.g., 14% for fine particulate matter (PM2.5) and 10% for hazardous air pollutants). *Id*. Further, the estimated annual air pollution amounts from BLM's projected 81 Project wells would greatly exceed the annual emissions generated by the 581 existing federal (conventional) wells in the state. *See* FSEA at 3 54. Yet BLM fails to acknowledge the enormity of these emissions, let alone analyze their potential impact on air quality—an egregious hard look failure.

In its response to public comments on the Draft SEA, BLM admitted the FSEA does not actually assess air quality impacts, stating: "Impacts to air quality can only be assessed through air quality modeling," and "[t]he BLM does not do air quality modeling for EA-level lease sales as it would be costly, time-consuming and not represent actual development if it does occur." FSEA, Appendix J at J-88; *Id*. at. J-93. However, BLM does not substantiate its assertions about cost and time. Furthermore, these statements cannot provide a rational basis for BLM's refusal to analyze air quality impacts because they: (1) presuppose this is an "EA-level" lease sale project, (2) incorrectly claim that meaningful modeling or prediction cannot be done at the leasing decision stage, and (3) ignore other available methodologies for assessing impacts.

First, BLM cannot rationally determine the significance of the Project's effects—and therefore determine whether the Project is "EA-level" or "EIS-level"—without first assessing, inter alia, the Project's impacts to air quality. *See Sherwood v. Tennessee Valley Authority*, 590 Fed.Appx. 451, 459 (6th Cir. 2014) (finding circular reasoning where agency used unassessed assumptions about the effectiveness of management practices to determine that those same practices would not have environmental consequences).

Second, the FSEA incorrectly states that any meaningful modeling or prediction of air quality effects is impossible at the leasing stage because the "scale, location, and types of equipment" are "unknown." FSEA at 3-52. However, just two paragraphs prior, BLM claims it used "estimates of well numbers and required equipment from similar lease developments within the Marietta Unit" to "estimate reasonably foreseeable on-site emissions[.]" *Id*. at 3-51. The FSEA does not explain why or how that same equipment and well data could not be used to model or predict air quality impacts to a useful degree. Furthermore, BLM has modeled air quality effects for future anticipated drilling prior to having site-specific well information. *Colorado Environmental Coalition v. Salazar (CEC)*, 875 F. Supp. 2d 1233, 1255-56 (D. Colo.

2012) (rejecting BLM's explanation that more precise information was needed to meaningfully model air impacts outside planning area because agency had already conducted predictive air modeling within planning area). This fact belies BLM's contention that it is not possible to predict or model air impacts in any meaningful way as part of a leasing decision.

Third, BLM's assumption that air quality impacts can only be assessed through a modeling analysis is incorrect, and BLM failed to use any other readily available means of assessing impacts. For example, BLM could have compared its quantified data to Clean Air Act (CAA) Conformity Rule de minimis thresholds. *Tinicum Tp., Pa. v. U.S. Dept. of Transp.*, 685 F.3d 288, 296 (3rd Cir. 2012) (holding agency satisfied NEPA where it compared quantified project emissions against CAA conformity de minimis thresholds, and that air dispersion modeling was therefore not required). Under the CAA General Conformity Rule, federal agencies are prohibited from engaging in, supporting, or approving any activity that does not conform to a state implementation plan to ensure attainment or maintenance of the NAAQS. 42 U.S.C. § 7506(c)(1). BLM did not compare its quantified estimates to the CAA de minimis thresholds, however. Furthermore, all of Washington County, including approximately half of the Marietta Unit, is designated as a maintenance area for ozone and PM2.5 NAAQS. FSEA, Appendix I at I-3 to I-4. BLM acknowledges in the FSEA that "[a]ny developments in nonattainment or maintenance areas are subject to the General Conformity process of the CAA." *Id*. at I-2. Given the information before it, BLM's failure to compare its quantified emissions estimates to the CAA de minimis thresholds was arbitrary, capricious, and contrary to NEPA and the APA.

Furthermore, had BLM done such a comparison, it would show that the Project's emissions exceed CAA conformity de minimis thresholds in all development scenarios chosen by BLM, and should have triggered the agency to perform a full conformity determination. Agencies are required to undertake a full "conformity determination [...] for each criteria pollutant or precursor where the total of direct and indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed" listed de minimis thresholds. 40 C.F.R. § 93.153(b). Per BLM's pollutant estimates, the Project exceeds the 100 tpy de minimis maintenance area thresholds for both ozone and PM2.5 under all scenario estimates (through VOCs alone, a precursor pollutant of both ozone and PM2.5). *Id*. at § 93.153(b)(2) (listing maintenance area thresholds); FSEA, Table 3-3 at 3-51 (listing "Average Year Low Scenario" VOCs at 432.9 tpy and "Max Year High Scenario" VOCs at 1,576.2 tpy). Thus, the quantified emissions presented in the FSEA warranted actual analysis, including conformity review under the CAA. BLM's decision to merely list emissions data in Table 3-3 and do nothing more was arbitrary, capricious, and contrary to NEPA and the APA.

Furthermore, the FSEA grossly underestimates the emissions it quantifies by relying on assumptions contrary to the record before it. First, the FSEA's emission estimates for NAAQS criteria pollutants rely on the assumption that federal leasing will result in the construction of between a "low scenario" minimum of 29 wells and a "high scenario" maximum of 81 wells. FSEA at 3-50 to 51. BLM takes these assumptions from a 2020 Reasonably Foreseeable Development Scenario (2020 RFDS) report. FSEA at 2-22; FSEA Appendix D (2020 RFDS). However, state well location data and industry-submitted leasing Expressions of Interest (EOIs) reflected in the FSEA demonstrate that a realistic development scenario would include

significantly more wells—and therefore significantly more air pollution—than BLM estimates for the Project.

The FSEA's development scenarios assume each unconventional well pad will have a maximum of three horizontal wells, which BLM says "is the average number of wells per well pad for recently drilled gas wells in the area based on review of ODNR [state] and AFMSS [federal] data (see section 6.2)." FSEA Appendix D at 36. But BLM's assumption of three wells per pad as the maximum for its air quantification scenarios is not supported by reliable evidence. A closer look at Section 6.2 of the 2020 RFDS reveals that, at least with respect to the federal data that informed its well count analysis, BLM only considered conventional wells in the area. *Id*. at 21 ("The Marietta Unit has 239 producing conventional gas wells and 152 conventional producing oil wells … in AFMSS."). Elsewhere, the RFDS acknowledges that unconventional well pads in the area may contain up to eighteen or more wells. *Id*. at 28; *see also* FSEA at 3-150 (assuming all 81 wells projected under the "high scenario" would be unconventional, horizontal wells). Moreover, the Ohio Department of Natural Resource's (ODNR) own data shows a total of 117 unconventional horizontal well pads in Monroe County, with an average of five wells per pad. OEC Public Comment on the 2024 Draft SEA at 6, n.15; Monroe County Well Pad Data Spreadsheet at WNF 027236. In other words, BLM's air pollution estimates assume that well pads associated with the Project would contain up to a maximum of three wells, but record evidence demonstrated that five wells per pad was the actual average for the area.

BLM decided to stick to the 2020 RFDS' unreliable and outdated estimate of three unconventional wells per pad when estimating emissions for the Project. FSEA at 3-51. The consequences are far-reaching. Given that each well generates air pollution emissions, BLM's faulty well count assumption artificially and significantly lowered the agency's air pollution estimates for NAAQS criteria pollutants. As a result, BLM failed to take a hard look at the Project's reasonably foreseeable air quality impacts.

Second, and for reasons it did not explain, BLM entirely excluded Washington County from its projected development scenarios—despite Washington County harboring roughly half of the project area, and despite roughly half of existing industry EOIs being for parcels located in Washington County. FSEA Figure 4 at 3-34 (analysis area map displaying EOIs). Instead, and without any meaningful explanation, the FSEA assumes 80 of the Project's maximum projected 81 wells would be in Monroe County and 1 well would be in Noble County. FSEA Appendix D at 34. Without an adequate explanation, which BLM did not provide, BLM's decision to exclude roughly half of the project area from its development estimates was arbitrary and capricious.

BLM's decision to project zero wells in Washington County—even though it covers roughly half of the project area and contains roughly half of the industry-submitted expressions of interest—means the FSEA's air pollution estimates are unreliable and substantially under representative. Thus, and for the reasons described above, BLM failed to take a hard look at the Project's air quality impacts.

e. The BLM must take a hard look at impacts to groundwater from well construction practices, hydraulic fracturing, and wastewater injection –

particularly in light of the ongoing wastewater migration emergency in Washington County.

Washington County, where multiple parcels in this sale are located, is currently the site of an active documented wastewater migration problem whereby "toxic wastewater is bubbling up out of the ground" due to the injection disposal of oil and gas wastewater.[6] In October of 2025, the City of Marietta formally declared an emergency moratorium on injection within six miles of its aquifer.[7] By March 2026, eight additional Washington County water authorities joined the City of Marietta in requesting a state moratorium on injection wells.[8] New leasing under this sale would generate additional wastewater in and near Washington County, requiring disposal in an area already the subject of a documented, unresolved contamination emergency. BLM must take a hard look at the potential for the proposed sale and the overall 40,000-acre leasing project to cause or contribute to groundwater and drinking water pollution in and around Washington County – from both fracking and wastewater injection.

NEPA requires the BLM to assess all the potential environmental impacts from oil and gas leases before it offers those leases to operators. That responsibility includes taking a "hard look" at how development on those leases could impact groundwater. *See WildEarth Guardians v. BLM*, 457 F. Supp. 3d 880, 886–89 (D. Mont. 2020). Groundwater is a critical resource that supplies many communities, particularly rural ones, with drinking water. Protecting these resources is imperative to protect human health and the environment, especially because groundwater will become more important as increased aridity and higher temperatures due to climate change alter water use, quality, and availability. The EPA has noted that existing drinking water resources "may not be sufficient in some locations to meet future demand" and that future sources of fresh drinking "will likely be affected by changes in climate and water use." U.S. ENV'T PROT. AGENCY, HYDRAULIC FRACTURING FOR OIL AND GAS: IMPACTS FROM THE HYDRAULIC FRACTURING WATER CYCLE ON DRINKING WATER RESOURCES IN THE UNITED STATES, EPA/600/R-16/236F, 2-1 to 2-18 (Dec. 2016), https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990 [hereinafter HYDRAULIC FRACTURING REPORT]. As a result, the BLM must protect aquifers currently being used for drinking water as well as any aquifers that could serve as drinking water sources in coming decades, including deeper and higher salinity aquifers. Oil and gas drilling typically involves boring wells to depths thousands of feet below the surface, often through or just above groundwater aquifers. Without proper oil or gas well construction and vertical separation between aquifers and producing formations, oil and gas development can contaminate underground sources of water. *See, e.g.*, HYDRAULIC FRACTURING REPORT at 27; Gayathri Vaidyanathan, *Fracking Can Contaminate Drinking Water*, SCI. AM. (Apr. 4, 2016),

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[6] *E.g.*, Quinn Glabicki, "In Ohio, Toxic Wastewater Is Bubbling Up Out of the Ground," The New York Times, July 29, 2026 (included as Exhibit 2), available at: https://www.nytimes.com/2026/07/29/climate/ohio-fracking-water-injection-wells.html?unlocked_article_code=1.41A.R1-X.B2E11mtl4rvd&smid=url-share

[7] City of Marietta, Ohio, Resolution No. 81 (24-25) AS AMENDED (included as Exhibit 3), available at: https://cms3.revize.com/revize/mariettaOH/Documents/Government/City%20Council/injection%20well/Marietta%20City%20moratorium%20resolution.pdf?t=202603051042490.

[8] Cover letter for Nine Moratorium Resolutions from Washington County, March 4, 2026, (Exhibit 4), available at: https://cms3.revize.com/revize/mariettaOH/Documents/Government/City%20Council/injection%20well/Cover%20letter%20for%20nine%20moratorium%20res.pdf?t=202603051034560

https://www.scientificamerican.com/article/fracking-can-contaminate drinking-water/; Dominic C. DiGiulio & Robert A. Jackson, *Impact to Underground Sources of Drinking Water and Domestic Wells from Production Well Stimulation and Completion Practices in the Pavillion, Wyoming Field*, 50 ENV'T SCI. & TECH. 4524, 4524–36 (2016) [hereinafter DiGiulio 2016]; Tetiana Cantlay et al., *Contamination of Private Water Supplies After a Well Communication Event (Frac-Out) in Southwest Pennsylvania*, NATURE (2025), https://www.nature.com/articles/s41598-025-16976-5.epdf. However, federal rules and regulations do not provide specific directions for the BLM and operators on how to protect all usable water. As a result, agency regulations, like the 43 C.F.R. § 3172.7 (formerly Onshore Order No. 2) requirement to "protect and/or isolate all usable water zones," are inconsistently applied and often disregarded in practice. *See* BLM, REGULATORY IMPACT ANALYSIS FOR THE FINAL RULE TO RESCIND THE 2015 HYDRAULIC FRACTURING RULE at 44–45 (Dec. 2017), https://beta.regulations.gov/document/BLM-2017-0001-0464.

Industry has admitted that it often does not protect usable water in practice. The Western Energy Alliance (WEA) and the Independent Petroleum Association of America have told the BLM that the "existing practice for locating and protecting usable water" does not measure the "numerical quality of water" underlying drilling locations and therefore does not consider whether all usable water would be protected during drilling. WEA and the Independent Petroleum Association of America, Sept. 25, 2017, comments Re: RIN 1004-AE52, Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands; Rescission of a 2015 Rule (82 Fed. Reg. 34,464) (2017 WEA comments), at 59, https://www.regulations.gov/document?D=BLM-2017 0001-0412. Multiple reports studying samples of existing federal oil and gas wells in Wyoming and Montana confirm industry admissions that well casing and cementing practices do not always protect underground sources of drinking water. *See, e.g.*, REBECCA TISHERMAN ET AL., EXAMINATION OF GROUNDWATER RESOURCES IN AREAS OF WYOMING PROPOSED FOR THE JUNE 2022 BLM LEASE SALE (May 12, 2022) [hereinafter TISHERMAN REPORT], https://eplanning.blm.gov/public_projects/2015538/200495187/20062621/250068803/Exhibit%20119-%20PSE%20WY%20Report%20May%202022%20Final.pdf; DOMINIC DIGIULIO, DOMINIC DIGIULIO, EXAMINATION OF GROUNDWATER RESOURCES IN AREAS OF MONTANA PROPOSED FOR THE MARCH 2018 BLM LEASE SALE (Dec. 22, 2017) [hereinafter DIGIULIO REPORT], https://eplanning.blm.gov/public_projects/nepa/87551/136880/167234/Earthjustice_Protest_112-2018.pdf (Exhibit D to David Katz and Jack and Bonnie Martinell's protest of the March 13, 2018, BLM Montana-Dakotas oil and gas lease sales). A study of hydraulic fracturing in Pavillion, Wyoming, indicated that oil and gas drilling had contaminated underground sources of drinking water in that area due to lack of vertical separation between the aquifer and target formation. *See* DiGiulio 2016, at 4532. Indeed, multiple courts have invalidated BLM lease sales in recent years due to the agency's failure to grapple with this evidence. *See Wilderness Soc'y*, 2024 WL 1241906, at *8–11; *WildEarth Guardians*, 457 F. Supp. 3d at 886–89.

Given these risks to a critical resource, the BLM must evaluate potential groundwater impairment from any lease parcels it proposes to offer.

First, as a threshold matter, the BLM must provide a detailed accounting of all groundwater resources that could be impacted in the areas considered for leasing, including

usable aquifers that may not currently be used as a drinking water supply. The accounting must include, at minimum, all aquifers with up to 10,000 parts per million total dissolved solids (the standard for usable water and underground sources of drinking water). This data is readily available from the USGS and other resources, *see* TISHERMAN REPORT; DIGIULIO REPORT, and the BLM cannot substitute existing drinking water wells or other inadequate proxies for a full description of all potentially usable groundwater resources in the area. The BLM must provide an explanation of the impacts to usable water zones where fracking is already occurring (even if those zones are not currently being used as a drinking water source), and how that fracking may degrade the quality of groundwater.

Second, the BLM must use that accounting to assess how new oil and gas wells might impact these resources. That evaluation must assess the sufficiency of protective measures that will be employed during all phases of the operation, including the depth of surface casing, the extent to which deeper areas of the wellbore are both cased and cemented (especially across zones containing groundwater with less than 10,000 ppm TDS), and vertical separation between aquifers and the oil and gas formations likely to be hydraulically fractured. In assessing these protections, the BLM cannot presume that state and federal regulations will protect groundwater, because of the shortcomings and industry noncompliance described above.

Third, the BLM may not defer its analysis until the APD stage because information is readily available at the lease sale stage to evaluate groundwater risks. *See WildEarth Guardians*, 457 F. Supp. 3d at 888. As noted above, data is available to identify the presence, depth, quantity, and quality of aquifers in the area of proposed leasing. The BLM can look to nearby existing oil and gas wells for a forecast of the likely depth of new wells and whether those wells present concerns over adequate casing and cementing. A failure to conduct such an analysis would violate NEPA. *See id*.

Finally, New leasing under this sale would generate additional wastewater in and near Washington County, requiring disposal in an area already the subject of a documented, unresolved contamination emergency. BLM must take a hard look at the potential for the proposed sale and the overall 40,000-acre leasing project to cause or contribute to groundwater and drinking water pollution in and around Washington County – from both fracking and wastewater injection.

f. The BLM must analyze the impacts of oil and gas leasing on public health.

Protecting public health is fundamental to the underlying purpose of NEPA, which includes "stimulat[ing] the health and welfare of man" and mandates that agencies consider the degree to which their proposed actions affect public health or safety. 42 U.S.C § 4321. NEPA requires federal agencies "to use all practicable means, consistent with other essential considerations of national policy" to "assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings." *Id*. § 4331(b). To protect public health and promote informed agency decision-making, transparency, and public participation, NEPA imposes "action-forcing procedures … requir[ing] that agencies take a hard look at environmental consequences," *Robertson*, 490 U.S. at 350, which includes public health.

Oil and gas development poses myriad public health concerns. An extensive and ever growing body of peer-reviewed research has shown what people living near oil and gas operations already know firsthand: proximity to drilling operations, including hydraulic fracturing, and other oil and gas facilities is linked to adverse health risks and impacts. These risks and impacts include but are not limited to:

- Reproductive harms, including birth defects, low birth weight, preterm births, miscarriages, and infant mortality;
- Respiratory health effects, including asthma, lung disease, breathing difficulty, and, most recently, increased vulnerability to COVID-19;
- Eye, skin, and throat irritation and rashes;
- Cardiovascular effects, including higher blood pressure and other indicators of, or precursors to, heart disease;
- Possible disruption of the endocrine system (a system of glands producing hormones that regulate a variety of functions in the body, including metabolism, growth and development, reproduction, sleep, and mood);
- Cancer, including lung cancer, childhood cancers such as leukemia, and other types of cancer;
- Motor vehicle injuries and fatalities, and other health and safety risks associated with increased vehicle traffic (and the air pollutants it emits) from oil and gas development;
- Injuries and fatalities from explosions, fires, spills, and leaks; and
- Trauma and psychological stress.

The ROGER database contains the best available scientific information, which shows the voluminous public health risks and impacts associated with oil and gas activities that result from the BLM's leasing decisions. Multiple peer-reviewed papers have identified adverse health effects and risks arising from exposure to unconventional oil and gas drilling operations, even within a large radius of residences, potentially up to 10 miles. *See* Janet Currie et al., *Hydraulic Fracturing and Infant Health: New Evidence from Pennsylvania*, 3 SCI. ADVANCES 1, 5 (Dec. 13, 2017) (finding evidence of negative health effects of in utero exposure to fracking sites within 3 km, or about 1.86 miles, of a mother's residence, with the largest health impacts seen within 1 km, or about 0.62 miles). For example, one study found that babies whose mothers lived in close proximity to multiple oil and gas wells were 30% more likely to be born with heart defects than babies born to mothers who did not live close to oil and gas wells. *See* Lisa M. McKenzie et al., *Birth Outcomes and Maternal Resident Proximity to Natural Gas Development in Rural Colorado*, 122 ENV'T HEALTH PERSPECTIVES 412, 414 (2014). Other adverse health impacts documented among residents living near drilling and fracking operations include increased reproductive harms, asthma attacks, higher rates of hospitalization, ambulance runs, emergency room visits, self-reported respiratory problems and rashes, motor vehicle fatalities, trauma, and drug abuse. *See* SETH B.C. SHONKOFF ET AL., PUBLIC HEALTH DIMENSIONS OF UPSTREAM OIL AND GAS DEVELOPMENT IN CALIFORNIA: SCIENTIFIC ANALYSIS AND SYNTHESIS TO INFORM SCIENCE-POLICY DECISION MAKING at 2-4, 2-9, 3-17 (June 21, 2024). Another recent study found that fracking and drilling near people's homes "drives stress experiences that go beyond the mere presence of industrial land uses in neighborhoods" and identified two key institutional barriers driving negative mental health impacts for people living near unconventional oil and gas (UOG) production—namely: (1)

uncertainty, due to inaccessible, transparent information about environmental and public health risks; and (2) powerlessness to meaningfully impact regulatory or zoning processes. *See* Stephanie A. Malin, *Depressed Democracy, Environmental Injustice: Exploring the Negative Mental Health Implications of Unconventional Oil & Gas Production in the United States*, 70 ENERGY RSCH. & SOCIAL SCI. 1 (Sept. 11, 2020). In turn, "these institutional barriers make UOG production a chronic stressor – which can be more insidious, negative, and, significantly, can generate longer-term mental health impacts such as self-reported depression."

Id. (citation omitted). The BLM must take a hard look at the adverse health risks and effects associated with proximity to oil and gas activity and facilities and disclose them to the public. The agency should disclose, at minimum, how many residences are within approximately 1, 5, and 10 miles of the proposed leases. The BLM must take a hard look not only at direct health impacts and proximity-related health impacts of oil and gas development, but also at cumulative health risks and impacts. Cumulative health risks and impacts can arise not only from multiple pollutant exposures, and cumulative pollution exposures over time, but also from compounding structural, social, and economic factors, many of which are rooted in systemic inequities and injustices. To adequately analyze human health impacts, the BLM should incorporate findings from regionally relevant health impact assessments (HIAs). An HIA is a preventative health tool that anticipates the human health impacts of new or existing development projects, programs, or policies. The overall goal of this type of assessment is to identify and minimize negative health effects of a particular action, such as oil and gas development and production.

g. The BLM must prepare an Environmental Impact Statement.

NEPA requires federal agencies to prepare a detailed statement by the responsible official for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). BLM has not prepared the required statement or taken the requisite hard look at the impacts of fracking in the Wayne National Forest. The SEA and EA fall far short of an EIS and BLM's FONSI is without rational basis; accordingly, BLM must prepare an EIS.

IV. The BLM must make a general conformity determination under the Clean Air Act (CAA).

Under the CAA General Conformity Rule, federal agencies are prohibited from engaging in, supporting, or approving any activity that does not conform to a state implementation plan to ensure attainment or maintenance of the NAAQS. 42 U.S.C. § 7506(c)(1). All of Washington County, including approximately half of the Marietta Unit, is designated as a maintenance area for ozone and PM2.5 NAAQS. FSEA, Appendix I at I-3 to I-4. BLM acknowledged in the FSEA that "[a]ny developments in nonattainment or maintenance areas are subject to the General Conformity process of the CAA." *Id*. at I-2. Given the information before it, BLM's failure to perform a full conformity determination in the FSEA was arbitrary, capricious, and contrary to NEPA and the APA. The agency's continued avoidance of its requirements under the CAA at the leasing stage is equally unlawful. BLM must perform a full conformity determination for the leases that would cause emissions in Washington County.

If BLM does not perform a conformity determination at the leasing stage then it is reasonably foreseeable that no conformity determination will ever occur. BLM has entirely ignored this issue; and, misleadingly implies that it will perform a conformity determination at the APD stage. BLM must address the fact that APDs are reviewed in piecemealed form, typically resulting in de minimis emissions that fully escape CAA conformity review.

V. BLM and Forest Service must initiate consultation with the FWS regarding listed and proposed species.

As discussed above, the circumstances under which BLM would apply or not apply AMMs is unclear and appears to be entirely discretionary. *See* FSEA Decision Record at 5 (noting AMMs "available for *possible* application at the APD stage"); *id*. at 6 (noting "recommended AMMs" that would be "available to apply to future APD approvals *as appropriate*"). Even where BLM deems the application of an AMM appropriate, the AMM could be waived: "If an applicant cannot follow all appropriate AMMs then a separate consultation between FWS and the BLM (outside this programmatic informal consultation) may be required as well as coordination with the FS, if the proposed project will impact the WNF." *Id*. at 59.

BLM cannot premise its "not likely to adversely affect" determination on unenforceable mitigation measures. *Ctr. for Biological Diversity v. United States BLM*, 698 F.3d 1101, 1117 (9th Cir. 2012) (mitigation measures "must be enforceable *under the ESA*" to factor into a determination about whether the action as a whole will jeopardize the continued existence of listed species or cause adverse modification of critical habitat"). BLM and Forest Service must initiate consultation with the FWS regarding proposed and listed aquatic species.

Moreover, and for the reasons discussed above, BLM and Forest Service must initiate consultation with FWS regarding the listed and proposed bat species.

VI. The Forest Service must amend or revise the Wayne Forest Plan and submit it to Congress prior to issuing any leases in the Wayne National Forest.

The Wayne Forest Plan was issued in 2006, but was never submitted to Congress in compliance with the CRA. Twenty years have now gone by, making much of the analysis in the plan outdated. Moreover, the Forest Service did not meaningfully consider the effects of oil and gas drilling in the Wayne National Forest, making the document ineffective for the purposes of guiding this process at the land management level. Finally, because there are new or proposed ESA listings of species that have habitat in the Wayne National Forest (e.g., Eastern Hellbender), the Plan must be updated to provide for mitigation measures sufficient to protect those species under the ESA.

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We appreciate your consideration of and attention to these matters.

The signatories below are authorized to act on behalf of the below-referenced organizations and have long-standing interests in the management of the Wayne National Forest.

OHIO ENVIRONMENTAL COUNCIL (the “OEC”) is a non-profit environmental organization with thousands of members throughout Ohio and beyond. This number includes members who recreate in and nearby the proposed leases and are affected by actions taken within and nearby the proposed leases. The OEC’s mission is to protect the environment and health of all Ohio communities through legal and policy advocacy, decision-maker accountability, and civic engagement. We aim to ensure current and future generations of Ohio residents have equitable access to Ohio’s natural world. We work to expand Ohio’s public lands, protect wildlife and sensitive ecosystems, and defend these natural assets from degradation and destruction.

CENTER FOR BIOLOGICAL DIVERSITY (the “Center”) is a non-profit environmental organization with more than 1.8 million members and online activists dedicated to the protection of endangered species and wild places. This number includes members who recreate in and nearby the proposed leases and are affected by actions taken within and nearby the proposed leases. The Center uses science, policy, and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats and climate they need to survive.

SIERRA CLUB is a national nonprofit organization of more than 600,000 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 16,800 members in the state of Ohio. For many 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 proposed lease sale parcels, for quiet recreation, scientific research, aesthetic pursuits, and spiritual renewal.

HEARTWOOD is a nonprofit environmental organization with a mission of education and advocacy for native forest restoration that includes the eastern portion of the continental US. We are a cooperative network of grassroots organizations, "People helping people protect the places they love." Heartwood has hundreds of members, and more than a dozen member-organizations, that live in or are based in Ohio. These members have a personal interest in the Wayne National Forest, many use it for camping, hiking, recreating, spiritual renewal, connection with Nature and with America's natural history. Some use these public forests for foraging and hunting, providing an important element of food sovereignty for a region of the state where the nearest supermarket or grocery store might be dozens or many tens of miles away. Some have businesses that rely on public lands, and provide important services to the public, such as canoe liveries or outdoor outfitters and markets. The proposed leases of oil and gas rights to drill in the Wayne National Forest will cause direct negative harm to these interests.

OHIO VALLEY ALLIES is a non-profit organization that utilizes a science based educational approach to inform the public about the threats we face due to the polluting and destructive oil and gas industry. The Wayne National Forest is a treasured natural refuge and we strive to protect it. Our members recreate in and nearby the proposed leases and are affected by actions taken within and nearby the proposed leases. We help protect and empower people in the Ohio River

Valley and beyond to stand up for their rights for a healthy environment, and a caring and prosperous community. Our mission is to promote peace, clean energy solutions, and a more harmonious way of life, ensuring a protected and healthy environment for current and future generations to live and thrive.

BUCKEYE ENVIRONMENTAL NETWORK ("BEN"), formerly Buckeye Forest Council (BFC), works to support grassroots environmental and environmental justice organizing and to protect Ohio's native forests. Working with grassroots community groups, we provide activists the tools and support needed to mobilize their communities for effective action against harm to their environment and their health. Through community action and ecological protection, we seek fundamental changes that improve our relationships with each other and the land. Our members recreate in and nearby the proposed leases and are affected by actions taken within and nearby the proposed leases.

Sincerely,

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