



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Eastern States

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Washington, DC 20003

<http://www.es.blm.gov>

In Reply Refer To:

3120 (930 JRK)

December 2016 Lease Sale

DEC 12 2016

CERTIFIED MAIL—RETURN RECEIPT REQUESTED

Center for Biological Diversity
121 Broadway #800
Oakland, CA 94612

Ohio Environmental Council
1145 Chesapeake, Ave., Suite I
Columbus, OH 43212

Friends of the Earth
1101 15th Street NW
Washington, D.C. 20005

Sierra Club
21010 Webster Street, Suite 1300
Oakland, CA 94612

Heartwood
PO Box 1926
Bloomington, IN 47402

DECISION

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December 13, 2016
Competitive Oil and Gas
Lease Sale

PROTEST DENIED

On November 14, 2016, the Bureau of Land Management (BLM) Eastern States Office (Eastern States) timely received a protest filed on behalf of the above cited parties (Protesters) disputing the inclusion of thirty-three Ohio parcels (Ohio Parcels)¹ in the BLM Eastern States December 13, 2016 Competitive Oil and Gas Lease Sale (December Lease Sale). For the reasons stated below, the protest is hereby denied. However, the BLM Eastern States is withdrawing 16 Ohio Parcels² from the December 13th Lease Sale to resolve questions of ownership and existing rights for minerals acquired by the United States government during the formation of the Wayne National Forest. Once these questions are resolved, the Ohio Parcels may be offered at the next available competitive lease sale.

¹ OHES 058185, OHES 058186, OHES 058187, OHES 058188, OHES 058189, OHES 058190, OHES 058191, OHES 058192, OHES 058193, OHES 058194, OHES 058195, OHES 058196, OHES 058197, OHES 058198, OHES 058199, OHES 058200, OHES 058201, OHES 058202, OHES 058203, OHES 058204, OHES 058205, OHES 058206, OHES 058207, OHES 058208, OHES 058209, OHES 058210, OHES 058211, OHES 058212, OHES 058213, OHES 058214, OHES 058215, OHES 058216, OHES 058217.

² OHES 058185; OHES 058189; OHES 058192; OHES 058193; OHES 058194; OHES 058195; OHES 058196; OHES 058197; OHES 58206; OHES 58207; OHES 058208; OHES 058209; OHES 058210; OHES 058211; OHES 058212; OHES 058214

BACKGROUND

The December Lease Sale includes federal fluid mineral interests located in the Eastern States, Southeastern States District (SSD) and Northeastern States District (NSD). Eastern States received nominations for the December Lease Sale between September 2, 2011 and July 14, 2015 via expressions of interests (EOIs), which is the informal process the public utilizes to nominate public minerals for proposed competitive leasing.

Mississippi Parcel

After Eastern States' initial adjudication of the Mississippi Parcels, which includes minerals underlying Bienville National Forest, Mississippi, the nomination was forwarded to the SSD for review of environmental concerns, including interdisciplinary analyses and field visits to the nominated parcel, in compliance with the *National Environmental Policy Act of 1969* (NEPA) and BLM national policy codified in BLM manuals, handbooks, and Instruction Memoranda (IM). The SSD independently screened the parcel and consulted with the United States Forest Service (Forest Service), the Fish and Wildlife Service (FWS), the Army Corps of Engineers, and the applicable state agencies.

On July 22, 2016 the Determination of NEPA Adequacy (DNA) for the Mississippi parcel was released for a 30-day public review period and posted on the internet, as required by BLM Manual and Handbook 3120 Competitive Leasing and Washington Office IM No. 2010-117. The DNA is tiered to the 2014 Mississippi Forest Plan and Final EIS (MS FP/FEIS), for which the BLM participated as a cooperator and incorporates the August 2010 Lands Available for Oil and Gas Leasing Environmental Assessment, National Forests in Mississippi (2010 Leasing EA). The DNA was accomplished in accordance with BLM NEPA Handbook H-1790-1, as further discussed below.

The 2010 Leasing EA, which is incorporated into the MS FP/FEIS and is the basis of the DNA, describes its purpose and need as follows:

To implement the Congressionally-mandated Federal oil and gas leasing program to help supply the nation with critical energy minerals and provide a source of revenue to local, state and federal governments.

To implement Congressional direction for Federal oil and gas leasing on [national forest] lands, as reflected in laws such as Mineral Leasing Act of 1920, Mineral Leasing Act for Acquired Lands of 1947 (MLA), Mining and Minerals Policy Act of 1970 (MLAL), Energy Security Act of June 30, 1980, Federal Onshore Oil and Gas [Reform] Act of 1987 (FOOGRA), Energy Policy Act of 2005. For example, the purpose of the MLA is "to promote the mining of coal, phosphate, sodium, potassium, oil, oil shale, gas, and Sulphur on lands acquired by the United States." [FOOGRA] and associated regulations 36 CFR 228 E, provides direction on leasing analysis and decisions on [national forest] lands. MMPA states: "The Congress declares that it is the continuing policy of the Federal Government in the national interest to foster and encourage private enterprise in 1) the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries, 2) the orderly and economic development of domestic mineral resources, reserves, and reclamation of metals and minerals to help assure satisfaction of industrial, security and environmental needs..., For the purpose of the

section “minerals” shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium. It shall be the responsibility of the Secretary of the Interior to carry out this policy when exercising his authority under such programs as may be authorized by law other than this section.”

To implement [National Forests in Mississippi] Forest Plan management goal to emphasize mineral resources along with all other forest resources. The Forest Plan recognizes that demand is high for oil and gas, and provides for Federal oil and gas leasing on the [National Forests in Mississippi].

To implement Forest Plan direction to manage minerals development on the [National Forests in Mississippi] so as to optimize the use of these resources in a manner that contains suitable environmental safeguards.

To respond to continuing interest by energy industry in obtaining Federal oil and gas lease and exploring and developing oil and gas on the [National Forests in Mississippi]. Previous leasing has led to successful oil and gas exploration and development in the [National Forests in Mississippi]. The BLM has received [EOIs] requesting more leasing on the [National Forests in Mississippi], and there is a need for Forest Service and the BLM to respond to these as well as future requests for leasing...on the [National Forests in Mississippi].

To recognize the strategic role of the [National Forests in Mississippi] in managing the Federal oil and gas resources in Mississippi. The [National Forests in Mississippi] occupy approximately 67 percent of Federal mineral estate in Mississippi. As the largest Federal agency land management base in Mississippi, as a demonstrated producer of Federal oil and gas, and as a Federal agency with a Congressional-designated multiple use mission, the [National Forests in Mississippi] are key to the Federal oil and gas leasing program in Mississippi.

To respond to the need for timely action by Forest Service and BLM on the Federal oil and gas leasing program as mandated by Congress and Executive Branch, including:

The Energy Security Act of June 30, 1980 directs the Secretary of Agriculture to process applications for leases and permits to explore, drill and develop resources on NFS lands, notwithstanding the current status of the Forest Plan.

Executive Order 13212 (Actions to Expedite Energy-Related Projects) of May 18, 2001 require Federal agencies to “take appropriate actions, to the extent consistent with applicable laws, to expedite projects that would increase the production, transmission, or conservation of energy.”

The Energy Policy Act of 2005 required the Secretary of Interior and the Secretary of Agriculture to enter into a memorandum of understanding (MOU) to ensure timely processing of oil and gas lease applications and surface use plans of operation, and eliminate duplication of efforts by providing for coordination of planning and environmental compliance efforts. In 2006, the Forest Service and the BLM signed the MOU (*Memorandum of Understanding between United States Department of the Interior Bureau of Land Management and United States*

Department of Agriculture Forest Service Concerning Oil and Gas Leasing and Operations- BLM MOU WO300-2006-07; Forest Service Agreement No. 06-SU11132428-052). The MOU establishes joint BLM and Forest Service Policies and procedures for timely environmental analysis of oil and gas leasing and operation on NFS lands.

The 2010 Leasing EA considered two alternatives in detail (page 15):

Alternative 1- No Action Alternative

Under this alternative, new leases of Federal oil and gas would be prohibited on the [National Forests in Mississippi]. The Forest Service would make all lands on the [National Forests in Mississippi] administratively unavailable for Federal oil and gas leasing and would not authorize any specific lands for oil and gas leasing. The Forest Plan would be amended to reflect these decisions. As a result, the BLM would not offer Federal oil and gas leases on [National Forests in Mississippi].

Alternative 2- Lands Available for Leasing Alternative

Under this alternative, new leases of Federal oil and gas would be allowed on the [National Forests in Mississippi]. The Forest Service would make all lands on the [National Forests in Mississippi] administratively available for Federal oil and gas leasing except lands withdrawn from oil and gas leasing by law or regulation such as Congressionally-designated Wilderness Areas.

All leases for the lands made administratively available for Federal oil and gas leasing would be subject to the...stipulations [found in the 2010 Leasing EA] (see Appendix B for stipulations and related maps).

The 2010 Leasing EA considered but eliminated from detailed analysis an additional alternative (page 18):

An alternative considered but eliminated from detailed study would be the halting of oil and gas exploration and development on existing leases. Under this alternative, the Forest Service would not approve any surface use plan of operations for APDs on existing leases on [National Forests in Mississippi], and the BLM would not approve any APDs on existing leases on [National Forests in Mississippi]. For existing leases with no operations, this alternative would prevent lease operations; the Federal Government would be abrogating the lease. For existing leases with some oil and gas operations, this alternative would prevent new lease operations in all areas of the lease; the Federal Government would be abrogating key provisions of the lease. A subset of this alternative could as be to shut down existing operations.

Based on past experience, the environmental effects associated with existing leases are manageable. Existing oil and gas operations are part of the Congressionally-mandated multiple-use mission of the Forest Service. Maintaining the flow of domestic energy supplies of oil and gas is of National interest. For the reasons above, halting existing lease operations is not considered a reasonable alternative.

Through the analysis in the DNA, the SSD determined whether the proposed parcels were appropriate for leasing. In doing so for the DNA, SSD determined whether the MS FP/FEIS and 2010 Leasing EA's evaluation of various resource values, potential impacts to those resources, and appropriate mitigation measures to prevent potential impacts met the standards to be relied upon as a basis for the proposed decision.

Ohio Parcels

After Eastern States conducted preliminary adjudication of the Ohio Parcels, the parcels were forwarded to the NSD for review of environmental concerns, including interdisciplinary analyses and field visits, in compliance with NEPA and BLM national policy codified in BLM manuals, handbooks, and Instruction Memorandums. The NSD conducted site visits on October 26 and 27, 2015 within portions of the Marietta Unit, the area analyzed within the Environmental Assessment DOI-BLM-Eastern States-0030-2016-0002-EA, Oil and Gas Leasing, Wayne National Forest, Marietta Unit of the Athens Ranger District (Marietta EA). The NSD consulted with the Forest Service and all applicable federal and state agencies during the completion of the NEPA documentation.

Eastern States, NSD, and Forest Service conducted a series of public meetings. Beginning on November 1, 2015, public notices regarding these meetings appeared in local newspapers, including the Marietta Times, Athens Messenger, and the Ironton Tribune, for two consecutive weeks. The BLM also issued a press release to other news outlets on November 2, 2015, notifying the public of dates, times, and locations of the public meetings. Public meetings were held on November 17, 2015 in Marietta, November 18, 2015 in Athens, and November 19, 2015 in Ironton. The primary purpose for these public meetings was to provide information and gather public input regarding issues that the BLM should consider in this Marietta EA. At each meeting, the BLM and the Forest Service provided information regarding proposed oil and gas leasing activities throughout the Wayne NF, displayed maps showing locations of nominated parcels for proposed leasing and posters detailing the administrative processes associated with EOIs, leasing, and the NEPA, and answered inquiries regarding the project.

In November 2015, the BLM also created a project website for the Marietta EA to provide the public links to documents, additional project information and comment opportunities, including methods for comment submission, maps and EOI information. The website is accessible through the BLM National NEPA Register at:

https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do.

The Marietta EA is in conformance with the 2006 *Final Revised Land and Resource Management Plan, Wayne National Forest* and the 2012 Supplemental Information Report (2012 SIR) on oil and gas prepared by the Forest Service in coordination with the BLM. The BLM was a cooperating agency in development of the 2006 Forest Plan and its related Final Environmental Impact Statement. The Marietta EA incorporates by reference the relevant information from the 2006 Forest Plan, Final Environmental Impact Statement and the 2012 SIR, in accordance with 40 CFR 1502.21.

On April 28, 2016, the draft Marietta EA was posted on the project website in accordance with applicable BLM Manual and Handbook 3120 Competitive Leasing and Washington Office IM No. 2010-117. As a result of the public review period, the BLM received approximately 13,700

comments by email and 480 comments by U.S. postal service or FedEx. Approximately 300 comments were identified as substantive in accordance with NEPA. Public comments were addressed by either expanding existing sections of the EA, providing clarification, or adding additional information. The changes made to the draft Marietta EA are summarized in a comment matrix attached as Appendix A in the Final Marietta EA.

The final Marietta EA for the Ohio parcels describes its purpose and need as follows (Page 17):

The purpose of the Proposed Action is to support the development of oil and natural gas resources that are essential to meeting the nation's future needs for energy while minimizing adverse effects to natural and cultural resources. The BLM minimizes adverse effects to resources by identifying appropriate lease stipulations and notices, best management practices, and mitigations. It is the policy of the BLM as mandated by various laws, including the Mineral Leasing Act of 1920, as amended (30 United States Code [USC] 181 et seq.), the Federal Land Policy and Management Act of 1976 (FLPMA), and the Energy Policy Act of 2005 to make mineral resources available for development to meet national, regional, and local needs. The oil and gas leasing program managed by the BLM encourages the sustainable development of domestic oil and gas reserves which reduces the dependence of the United States on foreign sources of energy as part of its multiple-use and sustainable yield mandate.

The leasing of federal minerals is vital to the United States as it seeks to maintain adequate domestic production of this strategic resource. Industry uses the BLM EOI process to nominate federal minerals for leasing. The Proposed Action is consistent with the BLM's mission and requirement to evaluate nominated parcels and hold quarterly competitive lease sales for available oil and gas lease parcels.

The Marietta EA considered two alternatives in detail (Page 22):

Alternative 1- No Action Alternative

Under the No Action Alternative, the BLM would not offer federal minerals in the Marietta Unit for oil and gas leasing, including both the parcels requested in currently pending EOIs and all other federal minerals in the Marietta Unit. Without a lease (No Action Alternative), operators would not be authorized to access federal minerals at the time of development but could develop adjacent privately owned minerals, potentially resulting in drainage of federal minerals without benefit to the government.

Alternative 2- Lands Available for Leasing Alternative

Under this alternative, the Bureau of Land Management (BLM) proposes to make available for lease up to approximately 40,000 acres of federally-owned mineral estate located in the Marietta Unit of the Athens Ranger District, Wayne National Forest, in Monroe, Noble, and Washington Counties in Ohio. This approximate acreage represents the total amount of federally-owned minerals that could be nominated and potentially be made available for leasing on the Marietta Unit. Although this EA analysis assumes that both oil and gas may be produced in the future within the Marietta Unit, natural gas is more likely to be produced.

The Marietta EA considered but eliminated from detailed analysis an additional alternative (page 30):

Offer all leases with a no-surface-occupancy stipulation

Offering all leases with a no-surface-occupancy (NSO) stipulation was suggested through public comment. However, this alternative would not fulfill the purpose and need described in Chapter 1. This alternative would unnecessarily constrain oil and gas occupancy, especially in this highly fragmented landscape, where the ability to cross federal land may be critical to enabling an operator to develop. A No Surface occupancy stipulation has been incorporated for all slopes in excess of 55 percent and a Controlled Surface Use stipulation applies to slopes between 35 and 55 percent.

Lease minerals for vertical drilling only

Offering all leases with a vertical drilling only stipulation was suggested through public comment. However, this alternative would not fulfill the purpose and need described in Chapter 1. A vertical drilling only stipulation would likely result in far greater surface disturbance as more wells would likely be drilled, and result in the least efficient extraction of Federal minerals. The rule of capture is an oil and gas doctrine that allows one to produce oil and gas from their lands even though said oil and gas flows from the lands of their neighbors. In Ohio, the rule of capture entitles landowners to “offset” wells, or wells that do not need to conform with state conservation standards, when one's neighbor is draining their mineral interest. Second, a vertical drilling only alternative is equivalent to a ban on directional drilling, which in turn would be tantamount to a ban on development of the Utica, Marcellus, and other tight formations underlying the forest. Such tight formations require horizontal drilling to extract trapped oil and gas.

Through the analysis in the Marietta EA, the NSD determined whether the proposed parcels were appropriate for leasing and what mitigation measures (stipulations) should be applied to the leases for the protection of natural and cultural resources. In so doing, the NSD determined whether the 2006 FP/FEIS and 2012 SIR evaluation of various resource values, potential impacts to those resources, and appropriate mitigation measures to prevent potential impacts met the standards to be relied upon as a basis for the proposed decision. The BLM Eastern States Notice of Competitive Oil and Gas Internet-Based Lease Sale, December 13, 2016 was posted on October 14, 2016.

DISCUSSION

The Protesters make 12 primary arguments as to why the Mississippi and Ohio Parcels should not be offered at the December Lease Sale. The following is a discussion of the specifics as to the Protesters' arguments, as well as BLM Eastern States' responses. Part One of the discussion addresses Protesters' arguments pertaining to the actual NEPA documents that served as guidance in the decision to offer the Mississippi Lease Sale Parcels. Part Two addresses Protesters' arguments pertaining to the actual NEPA documents that served as guidance in the decision to offer the Ohio Lease Sale Parcels and, Part Three addresses Protestors' arguments that the BLM leasing program should be halted nationally and a programmatic analysis of BLM leasing program needs to be conducted.

PART ONE

1. The BLM failed to respond to the Center's Comments on the DNA and provide an Adequate Protest period for the Mississippi DNA

Eastern States' provided opportunity for public comment for the Mississippi DNA in compliance with NEPA and BLM Handbook 3120. The handbook states the following as to public comment during the parcel review process (page .4):

State and field offices will provide for public participation as part of the review of parcels identified for potential leasing through the NEPA compliance documentation process. State and field offices will identify groups and individuals having an interest in local BLM oil and gas leasing, including surface owners of split estate lands where Federal minerals are being considered for leasing. Interested groups, individuals, and potentially affected split estate surface owners will be kept informed of field office leasing and NEPA activities through updated Websites and email lists, and will be invited to comment during the NEPA compliance process.

As stated above, the DNA was posted for 30 day comment on July 22, 2016, in accordance 2010 Leasing Reform IM. The BLM Eastern States maintains an email of interested members of the public and sends notice when the NEPA documents are posted on the internet.

On August 22, 2016, a comment on the DNA was received from the Center for Biological Diversity via the eplanning website. Receipt of the comment is noted in the final DNA and the BLM fully considered the comment in the associated decision.

In addition, Eastern States posting of the December Lease Sale Notice was in compliance with applicable agency policy. Handbook 3120 establishes the guidelines for the posting of the Notice of Competitive Lease Sale (page .43):

Each sale notice will include a link to the NEPA compliance documentation. The sale notice will also be made available for the public on the external Web site and will provide applicable lease sale information. The sale notice will also be made available for posting at all surface management agencies having jurisdiction over any of the lands included in the auction, including each BLM district office and field office. The sale notice is not to be published in the Federal Register, and publication in oil and gas journals or other similar publications is not required (see Handbook 3120-1, Section II). Paper copies of the sale notice must be made available to the public for the specified cost recovery rate.

The December 2016 Lease Sale Notice was posted on October 14, 2016. For these reasons, the BLM Eastern States provide adequate public participation in compliance with NEPA, Handbook H-1790, and BLM Manual and Handbook 3120.

2. BLM and the Forest Service failed to provide the public adequate notice of the proposed auction and the solicit for public comment

As stated above, Eastern States has provided adequate public notice and opportunity for public comment in accordance with BLM Handbook 3120.

3. The Forest Service Violated NEPA by failing to conduct any independent environmental review for the Mississippi parcel and by consenting prior to any adequate NEPA review

In accordance with BLM regulations at 43 CFR 3120, the Forest Service is not obliged to provide proof to the BLM of its independent analysis, only whether or not it grants consent to leasing. How the Forest Service arrived at its independent conclusion to consent or not is beyond the purview of BLM's authority; nor does the Forest Service's consent action result in an irretrievable commitment of resources. The BLM is the authorized agency to approve or not approve a particular parcel for leasing.

Eastern States and SSD fulfilled their requirements in coordinating with the surface management agency (SMA) for the Mississippi parcel, located within the Bienville National Forest. As the NEPA Handbook H-1790-1 states (page 112):

You must invite eligible governmental entities (Federal, State, local, and tribal) to participate as cooperating agencies when preparing an EIS (516 DM 2.5(e)). You must also consider any requests by eligible governmental entities to participate as a cooperating agency with respect to a particular EIS, and will either accept or deny such requests. If such a request is denied, the BLM will inform the other agency and state in writing, within the EIS, the reasons for such denial. Throughout the preparation of an EIS, you must collaborate, to the fullest extent practicable, with all cooperating agencies, concerning those issues relating to their jurisdiction or special expertise (516 DM 2.5(f)). Prepare a Memorandum of Understanding (MOU) with any cooperating agency, clearly defining the roles and responsibilities of each agency.

These requirements explicitly apply to an EIS, but coordination between BLM and the SMA is encouraged regardless the level of NEPA reviews.

On September 12, 2011, Eastern States provided the Forest Service notice that 2012 FP/EIS/2010 Leasing EA would serve as the basis of the DNA for the Mississippi parcels. On November, 29, 2011, the Forest Service consented to the leasing of the Mississippi Parcels. Furthermore, a second request was asked from the Forest Service on October 18, 2013 and granted again as of February 25, 2014. Therefore, Eastern States has provided Forest Service adequate notice and information regarding the proposed action.

4. BLM Cannot Rely on a Determination of NEPA Adequacy for the Mississippi Parcel

The DNAs tier to the 2010 Leasing Analysis EA and the 2014 Forest Plan EIS (which incorporates the 2010 Leasing Analysis and which BLM adopted in a recent record of decision), but BLM's reliance on these programmatic documents is woefully misplaced.

The SSD may properly rely on the 2010 Leasing EA and MS FP/FEIS in making a determination of NEPA adequacy (DNA) as to the proposed action of leasing the Mississippi parcels for potential oil and gas development. According to the BLM NEPA Handbook, "a Determination of NEPA Adequacy is defined as an interim step in the BLM's internal analysis process that concludes that a proposed action is adequately analyzed in an existing NEPA document (an EIS or EA)" (page 131)

Not all new proposed actions will require new environmental analysis. In some instances an existing environmental analysis document may be relied upon in its entirety, and new NEPA analysis will not be necessary (516 DM 11.6).

....You may also use the DNA to evaluate new circumstances or information prior to issuance of a decision to determine whether you need to prepare a new or supplemental analysis (see section 5.3, Supplementing an EIS).

5. Site Specific Analysis Is Required But Lacking for the Mississippi Parcel

BLM has not taken any look, let alone the requisite ‘hard look,’ at the potential impacts of oil and gas development on the parcels.

The agencies decision to proceed with the September 2016 lease sale is based solely on the analysis contained in the Leasing EA, which is incorporated in the Plan EIS. The Leasing EA performs only broad and generalized analysis of the RMP’s effects on resources throughout the planning area.

The “hard look” of potential oil and gas development was addressed in the 2010 EA as part of the Reasonably Foreseeable Development Scenario and cumulative impact section of the 2010 Leasing EA. As “oil and gas exploration and development have been part of the multiple-use management of the [National Forests in Mississippi] for decades” (page 33), the BLM and USFS were able to complete a well-defined cumulative impact analyses for potential oil and gas operations. At the leasing stage, the BLM conducted site visits to determine the suite of mitigation measures (stipulations) necessary to protect natural and cultural resources, if the parcel were to be developed in the future. The site specific NEPA analysis for potential direct and indirect surface, subsurface, and natural resource impacts would be conducted if an application for permit to drill was filed with the BLM.

i. Local Water Resources

EA’s discussion of water resources provides no sense of how specific streams and watersheds would be impacted by increased oil and gas development, including whether leasing could impact already impaired streams and watersheds.

The 2010 Leasing EA adequately analyzes the current state, and potential impacts, on water resources related to the proposed action. The 2010 Leasing EA states (page 39):

The quality of groundwater resources in Mississippi is quite good....Most of the drinking water supply in the state is obtained from deep aquifers which are naturally protected to some extent by overlying clay (confining) layers. Incidents of groundwater contamination impacting large segments of the population have been rare....Oil and gas development activities have rarely affected water quality in the past. Accidental discharges of brine and crude oil have occasionally occurred; and should the discharges reach streams, ponds, or lakes, can deleteriously affect water quality.

In regard to oil and gas effects on water quality, brine and oil leaks or spills have occasionally occurred; however, their effects are limited by a number of preventative and protective measures. Facilities are inspected and deficiencies corrected. Oil and gas operators must provide and implement a Spill Prevention and Counter-Measure Plan that

identifies preventative measures and remediation procedures for implementation if a spill occurs. Size of spills vary and are effectively monitored by probes or sensors at different points in the facilities. Sensors are designed to stop pipeline flow when declining pressure is detected. As a result, oil and gas adverse effects seldom reach streams; thus indicating no observable water quality impacts.

The 2010 Leasing EA states that there would be no “direct effects from leasing” (page 40). However, as described in the 2010 Leasing EA:

The potential indirect effects to surface water include sediment loading of stream channels due to the earthwork associated with site construction. Also potential indirect effects to surface water include water consumption during the early development of a field could have a short-term adverse effect on local stream flow and secondary effects on downstream water use due to changes in water quantity or quality.

ii. Effects on Local Air Quality

The Leasing EA makes no attempt to even quantify oil and gas pollution emissions from existing oil and gas wells or foreseeable oil and gas development.

The 2010 Leasing EA adequately analyzes the current state, and potential impacts, on air resources related to the proposed action. The 2010 Leasing EA states (page 41),

Mississippi has some of the cleanest air in the Nation, which contributes to our high quality of life and helps protect our environment. The air quality in each of Mississippi’s 82 counties meets new, stricter guidelines for fine particulate matter set by the [USEPA].

As to impacts of the proposed action, ultimately, the 2010 Leasing EA finds: “The incremental difference between proposed activities that may affect air quality...are considered to be immeasurable” (page 42). The 2010 Leasing EA further analyzes the specific impacts of Greenhouse Gas (GHG) emissions on climate change, as discussed below.

iii. Industrialization and Habitat Fragmentation Impacts

There is no analysis of the specific characteristics of the areas to be leased, their habitat values, and the extent to which wildlife would be impacted by new oil and gas leasing.

The 2010 Leasing EA adequately analyzes the current state, and potential impacts, on wildlife resources related to the proposed action. The 2010 Leasing EA details the current condition of the wildlife in the project area (page 47):

There are an estimated 2,500 plant species and 306 animal species that occupy an extremely wide array of habitats across the diverse landscapes of the [National Forests in Mississippi]. Habitat management is designed to provide for a diversity of cover types and successional stages to sustain native and desired non-native wildlife species. Forest lands serve as refuges for unique or rare species, offer large contiguous forested areas where animal species can successfully reproduce and rear their young, afford key rest and feeding areas for waterfowl and other migratory bird species, and provide important

linkages (travel corridors) between state and Federal wildlife refuges and other blocks of forest land.

As it relates specifically to special status species, the 2010 Leasing EA states (page 47):

Native ecosystems that exist provide various habit needs for threatened and endangered species that are being monitored and managed on the [National Forests in Mississippi]. The Regional Forester's list of "sensitive species for the [National Forests in Mississippi].... and the [National Forests in Mississippi] threatened and Endangered species list were reviewed o devise a target list of species to be considered for this project. A review of existing information was conducted to further refine the list of potential TES species occurring in the project area. TES species which occur or whose habitat occurs in the project area were identified and the potential effects to these species or their "affected areas" are also included in Appendix D.

The results of this effects analysis are summarized in Appendix D, where a detailed description of the species selection process and effects analysis was concurred on by the USFWS.

As to the effects on special status species, the 2010 Leasing EA states (page 49):

Effects associated with oil and gas leasing would have no direct effects on TES species. Exploration and development (construction of roads, well pads, and pipeline corridors) in connection with leasing, however, could have both direct and indirect effects on TES species (Table 15). Animals may be displaced from the immediate area of development. Animals which are displaced may initially be absorbed by surrounding habitats, causing short-term changes in population densities in surrounding areas. Habitat quality could be reduced for some species in the vicinity of development activity due to loss of important structural components (canopy levels within the Forest and down woody material), fragmentation of habitats, development of barriers to travel for some species, and microclimate changes resulting from openings. Species sensitive to human intrusions may be affected by added oil and gas operations, especially where new activities occur in relatively undisturbed areas. Timing of activities could amplify these effects; for instance, disturbance during nesting or rearing periods of species with small home ranges such as birds, could result in reduced or failed reproduction.

The 2010 Leasing EA analyzes cumulative impacts on wildlife from potential oil and gas development (page 50):

Analysis of the cumulative effects considered the potential impacts of the proposed alternative, when combined with potential impacts of other activities. The activities considered include past, present, and reasonably foreseeable future actions. These activities are within the appropriate area of possible impact for each resource considered, along with the proposed activities (project record). Clearing of the land for agriculture, mining, oil and gas development, draining of wetlands and loss of riparian areas has affected the water quality of streams and impoundments on public and private land. Riparian areas and wetlands are being restored on the Forest, but other activities, especially on lands in other ownerships, are still impacting aquatic communities. The greatest amount of oil and gas development on and near the [National Forests in

Mississippi] has been associated with private land and/or reserved mineral estates, adjacent to or intermixed with [National Forests in Mississippi]. Future development will mostly be associated on private or reserved rights. Therefore, the cumulative effects on TES will be dependent more upon the development of those estates.

The development of oil and gas resource propped in this environmental assessment will have minimal cumulative effects on TES because of the relatively small amount of disturbance foreseen, and because of the protective measures and stipulations which would be implemented and monitored. Management of animal communities on a landscape level focuses on maintaining the integrity of forest ecosystems by minimizing long-term human alterations (roads and permanent openings), particularly in relatively undisturbed habitats. Cumulative effects may occur to aquatic ecosystems and their respective species as a result of increases in sediment run-off from well pads and roads; increases in contaminants from point and non-point sources; and potential changes in amounts of surface water if oil and gas drilling intercepts natural underground flow regimes. Considering the total amount of disturbance that has, is, and will be occurring within the forests, and which ultimately affects the status and distribution of animal species, the cumulative impact of the proposed action will be minor.

The 2010 Leasing EA also introduces management indicator species, as a method of evaluation and monitoring of wildlife. As to MIS, the 2010 Leasing EA states (page 51):

Under the [National Forest Management Act (NFMA)] (1976), the Forest Service is charged with managing National Forests to provide for a diversity of plant and animal communities consistent with multiple-use objectives. Management indicator species (MIS) are one tool used to accomplish this requirement as they and their habitat needs are used to set objectives and minimum management requirements, to focus effects analysis, and to monitor effects of plan implementation. MIS were selected in the 1985 Forest Plan to serve three major functions: 1) represent issues of hunting demand, 2) consider species for which population visibility is a concern, and 3) serve as ecological indicators of certain communities or habitats.

The 2010 Leasing EA goes on to explain the NFMA, and specifically, its mandate as it relates to MIS (page 51):

The NFMA (1976) intends use of management indicator species, in part, to ensure that NFS lands are managed to “maintain viable populations of existing native and desirable non-native vertebrate species.” Because indicator species cannot adequately represent all species (*op. cit.*), new strategies are emerging for accomplishing this goal. This analysis uses habitat availability for MIS to ensure that a mix of habitat types is provided across the landscape. The BE serves to ensure that those species most at risk of losing viability (threatened, endangered, and sensitive species) are not negatively affected.

The effects on MIS from potential oil and gas development are analyzed in the 2010 Leasing EA (page 53):

Effects associated with oil and gas leasing would have no effects on MIS. Exploration and development (construction of roads, well pads, and pipeline corridors) in connection with leasing could have indirect effects on MIS (Table 17). Animals may be displaced

from the immediate area of development. Animals which are displaced may initially be absorbed by surrounding habitats, causing short-term changes in population densities in surrounding areas. Habitat quality could be reduced from some species in the vicinity of development activity due to loss of important structural components (canopy levels within the Forest and down woody material), fragmentation of habitats, development of barriers to travel for some species, and microclimate changes resulting from openings. Species sensitive to human intrusions may be affected by added oil and gas operations, especially where new activities occur in relatively undisturbed areas. Timing of activities could amplify these effects; for instance, disturbance during nesting or rearing periods of species with small home ranges such as birds, could result in reduced or failed reproduction.

Terrestrial species may be affected by certain activities under Alternative 2, namely tree or brush removal, or soil disturbance. Aquatic species may be affected by sediment movement off-site from the developments, or from accidental spills of oil and gas materials. Riparian area, waterhole, wetland and pond/lake conditions of approval in APDs would protect aquatic habitats and aquatic species. Specific guidance for protection of MIS resources from effects due to oil and gas activities or other activities is displayed in the Forest Plan and in the Protective Measures identified in Chapter 2, Section 2.4. Because of these protection measures and the fact that little disturbance is expected to occur as a result of implementing Alternative 2 (0.3 percent of forest land would likely be impacted); the overall impacts to MIS would be insignificant.

The 2010 Leasing EA makes the following determination as to MIS (page 54):

The development of oil and gas resources proposed in this environmental assessment will have minimal cumulative effects on MIS because of the relatively small amount of disturbance foreseen, and because of the protective measures and stipulations which would be implemented and monitored. Management of animal communities on a landscape level focuses on maintaining the integrity of forest ecosystems by minimizing long-term human alterations (roads and permanent openings), particularly in relatively undisturbed habitats. Cumulative effects may occur to aquatic ecosystems and their respective species as a result of increases in sediment run-off from well pads and roads; increases in contaminants from point and non-point sources; and potential changes in amounts of surface water if oil and gas drilling intercepts natural underground flow regimes. Considering the total amount of disturbance that has, is, and will be occurring within the forests, and which ultimately affects the status and distribution of animal species, the cumulative impact of the proposed action will be minor.

The 2010 Leasing EA also goes in depth regarding migratory land bird conservation, and the effects on this initiative from potential oil and gas development. As to migratory landbird conservation, the 2010 Leasing EA states (page 55):

Under the NFMA (1976) the Forest Service is directed to “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” (P.L. 94-588, Sec 6 (g) (3) (B)). The January 200 Forest Service Landbird Conservation Strategic Plan, followed by Executive Order 13186 in 2001, in addition to the Partners in Flight (PIF) specific habitat Conservation Plans for Birds and the January 2004 PIF North American Landbird

Conservation Plan, all reference goals and objectives for integrating bird conservation into forest management and planning.

A Region-wide program for monitoring land bird populations has been developed. It involves establishing several thousand permanent monitoring stations on national forests across the South, covering all major physiographic regions and habitat types. Each point is visited yearly using standard procedures to record all birds present. The resulting data resides in a Regional database (R8Bird). Results of a regional analysis of this data have been published.

In late 2008, a Memorandum of Understanding (MOU) between the Forest Service and the USFWS to promote the conservation of migratory birds was signed. The intent of the MOU.... Within the NFs, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities.

Opportunities to promote conservation of migratory birds and their habitats as identified in Tables 24 and 25 of the Birds of Conservation Concern (USFWS, 2008) in the project area were considered.

The 2010 Leasing EA “determined that the project would not adversely impact migratory land bird species or their associated habitats” (page 55).

iv. Industrialization and Habitat Fragmentation for Red-cockaded Woodpecker

The ‘Protective Measures’ referenced in the EA’s analysis of impacts on Red-cockaded Woodpecker are extremely general—they only reiterate BLM and the Forest Service’s ability to impose stipulations on leases to protect listed species, without any detail as to what specific measures would be required.

The Forest Plan EIS and Leasing EA fail to address how total disturbance from oil and gas activities would impact red-cockaded woodpecker habitat, including impacts from hydraulic fracturing and horizontal drilling, which are likely to have a larger footprint than conventional drilling.

Forest Plan EIS fails to analyze the impacts of climate change on the RCW and take into account climate change impacts on the RCW’s recover, let alone in connection with the impacts of new leasing and oil and gas development in habitat.

The 2010 Leasing EA thoroughly discusses the current status of the Red-cockaded woodpecker in the project area, and potential impacts of possible oil and gas development on the species. Appendix D of the 2010 Leasing EA contains the biological evaluation, which states (Appendix D page 8):

The Red-cockaded woodpecker (RCW) is a medium-sized woodpecker adapted to the fire maintained mature pine forest ecosystems of the southeastern United States. The range of the red-cockaded woodpecker has been reduced to approximately 1 percent of its historic range. It is currently listed as endangered by the USFWS throughout its range....

Species recovery is dependent on land management practices that mimic historical regimes that resulted in open stands of mature pine with understories dominated by forbs and grasses. Presently, 56% of all active Red-cockaded woodpecker groups (known as clusters) reside on U.S. Forest Service land (U.S. Fish and Wildlife Service 2003b). Thus, the Forest Service plays a crucial role in the conservation and recovery of the Red-cockaded woodpecker.

The U.S. Fish and Wildlife Service has determined that recovery populations of the endangered Red-cockaded woodpecker (RCW) will be accomplished only within large expanses of mature and overmature pine forests managed for the special nesting and foraging habits of this species. Four districts within [National Forests in Mississippi] have been identified by the U.S. Fish and Wildlife Service and the U.S. Forest Service as support units for this species. Two are primary core populations, acknowledged to harbor at least 350 potential breeding groups (PBGs) at the time of and after delisting – the Bienville National Forest and the Chickasawhay Ranger District of the De Soto National Forest. Two others are secondary core populations which will hold at least 250 PBGs at the time of and after delisting – the Homochitto National Forest and the De Soto Ranger District of the De Soto National Forest (U.S. Fish and Wildlife Service 2003b).

Oil and gas leasing will have no direct effects on Red-cockaded Woodpecker. Indirect effects as a result of implementation such as exploration and development (construction of roads, well pads, and pipeline corridors) in connection with leasing could have impacts. Habitat quality could be reduced in the vicinity of development activity due to loss of important structural components (canopy levels within the Forest) and fragmentation of habitat which could cause indirect effects. Specific guidance for protection of TES resources from effects due to oil and gas activities or other activities is displayed in the Forest Plan, in the Protective Measures section of Chapter 2 of the EA and the Protective Measures Section of this document. Because of these protection measures and the fact that little disturbance is expected to occur as a result of implementing the proposed action, the overall impact to the Red-cockaded Woodpecker would be insignificant and no direct effects would occur. The development of oil and gas resources proposed will have minimal indirect and cumulative effects on the Red-cockaded Woodpecker because of the relatively small amount of disturbance foreseen, and because of the protective measures and stipulations which would be implemented and monitored. Because oil and gas drilling will be prohibited within RCW clusters and the proposed action will have no direct effects and insignificant indirect and cumulative effects on the Red-cockaded Woodpecker, it is my determination that the proposed action will “not likely adversely affect” the Red-cockaded Woodpecker. The no action alternative will have “no effect” on this species.

As established by Appendix B of the 2010 Leasing EA, the mitigating measures in the form of Notices and Stipulations have been attached to the Lease Sale Parcels. The September Lease Sale Notice provides for attachment of Notice to Lessee 3 for Bienville and Homichito National Forest lands in Mississippi (page 25, 27 respectively):

All or part of the leased lands may contain animal or plant species classified under the Endangered Species Act of 1973, as amended. Other species may have been identified as sensitive in accordance with Forest Service Manual 2670 and be listed on the current

Regional Forester's List of Sensitive Plant and Animal Species. Further information concerning the classification of these species may be obtained from the authorized Forest Officer. Exploration and development proposals may be limited or modifications required if activity is planned within the boundaries of a threatened, endangered or sensitive plant or animal species location as it then exists. All activities within these areas must be conducted in accordance with existing laws, regulations and the Forest Land and Resource Management Plan guidelines.

As previously stated, considerations for all special status species would be facilitated through additional section 7 consultations with USFWS during site-specific analysis at the APD stage.

6. Analysis of Site-Specific Impacts Is Feasible for the Mississippi parcel

The analysis of site-specific impacts must occur at the leasing stage, because leasing is highly likely to result in development of the parcels at issue and production of fluid mineral resources. A multitude of effects are readily foreseeable as discussed above.

BLM has made specific projections as to the number of wells that could be expected to be developed in each national forest and the proportion that would be productive. BLM can also project the type of development that would likely occur in the leased areas based on existing well types already within the area and the plays that are likely to be developed.

The 2010 Leasing EA analyzes impacts on resources from potential oil and gas development, developing general stipulations and other mitigating measures. However, as stated in the discussion related to the Mississippi parcel, located within the Bienville National Forest, not all factors that are needed to determine site-specific effects are known. However, as the 2010 Lease EA states there will be an opportunity to implement these site specific mitigating measures prior to actual development of oil and gas (page 18-19):

After a Federal oil and gas lease is issued, the Federal leaseholder cannot construct a road, drill a well or conduct ground-disturbing operations until the Federal Government reviews and approves plans for each proposed well and associated roads. Before ground-disturbing operations can occur, the leaseholder must submit an APD, including a Surface Use Plan of Operation (SUPO), for review and approval by the Federal Government (BLM and Forest Service). The Forest Service, in cooperation with the BLM, conducts a site-specific NEPA analysis of the proposed operation as required by the NEPA (1969). Alternatives, such as different access roads locations, are assessed to address issues. An [Interdisciplinary] team reviews the proposed operations and develops site-specific environmental protections that are applied to the APD. The environmental protections are derived from environmental protection laws and regulations applicable to NFS lands. Proposed lease operations are subject to environmental protection requirements in a wide range of laws, and regulations applicable to NFS lands. Proposed lease operations are subject to environmental protection requirements in a wide range of laws and regulations, including Endangered Species Act, Archaeological Resource Protection Act, Federal Water Pollution Control Act, Clean Water Act, and all other environmental protection laws and regulations applicable to NFS lands.

....In addition, proposed lease operations are subject to environmental protection requirements in the BLM regulations, oil and gas lease terms and conditions, Onshore Oil and Gas Order No. 1, and other onshore oil and gas orders, and Notice to Lessee issued pursuant to Federal regulations. For example, environmental protections in the standard oil and gas lease include requirements such as: "Conduct of Operations- Lessee shall conduct operations in a manner that minimize adverse effects to the land, air, and water, to cultural, biological, visual, and other resources, and to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future use upon or in the leased lands, including the approval of easements or rights-of-ways. Such uses shall be conditioned so as to prevent unnecessary or unreasonable interference with rights of Lessee."

Standard Lease Terms and Federal regulations allow the Forest Service and the VLM to: 1) control surface use of proposed activities in the lease area, and 2) prohibit surface occupancy on some areas within the lease area. For example, a proposed oil and gas facility, such as a road, can be relocated up to 200 meters without any stipulation. In addition, under Federal law such as the Endangered Species Act, the Forest Service at the APD stage can control or prohibit surface occupancy of any size acreage, when justified, without lease stipulations.

....Proposed lease operations are subject to the state laws and regulations governing oil and gas operations, including requirements for environment protection and reclamation. The Mississippi State Board of Oil and Gas has law and regulation for environmental protection of oil and gas operations as part of state permitting of operations.

....Monitoring would be conducted by Federal and state agencies, including the Forest Service, the BLM, and the Mississippi State Board of Oil and Gas. At the APD (including Surface Use Plan of Operations) stage, when the operator is proposing ground-disturbing activities (roads, well pads, etc.) at specific locations, these proposals are monitored to ensure consistency with the lease stipulations. Site-specific analysis would include environmental protection measures, as appropriate.

SSD maintains that with the framework set-up by the mitigating measures established by the 2010 Leasing EA, certain site-specific mitigation measures will be available prior to any actual oil and gas development.

A. Reliance on the Forest Plan EIS and Leasing EA Is Improper, Because They Fail to Properly Analyze the Effects of Fracking and Horizontal Drilling

BLM cannot rely on the Forest Plan EIS and Leasing EA for the NEPA documentation, because that analysis is incomplete or inadequate in other respects. Aside from failing to analyze site-specific impacts, the Forest Plan EIS and Leasing EA fail to thoroughly address the wildlife, greenhouse gas, seismic risks, and public health impacts of increased horizontal drilling and hydraulic fracturing and fail to discuss adequate mitigation.

i. **BLM Must Analyze the Impacts of Hydraulic Fracturing that Could Result from New Leasing**

BLM and the Forest Service entirely ignore the potential for hydraulic fracturing and horizontal drilling to occur within the Bienville and Homochitto National Forests, despite that new leasing could foreseeably result in these drilling techniques, which may have far worse environmental consequences than conventional drilling.

Because the Forest Plan EIS and Leasing EA do not acknowledge the potential for use of these toxic and dangerous techniques and their environmental effects, reliance on the DNAs for the Mississippi leasing proposals is wholly improper.

Hydraulic fracturing is just a single aspect of overall oil and gas development, which has been analyzed throughout the 2010 Leasing EA. However, Appendix F of the 2010 Leasing EA, provides comments response specifically addressing hydraulic fracturing (page 1-2):

Hydraulic fracturing is a technique used to enhance production by fracturing the rock surrounding the borehole with a high-pressure fluid. In Mississippi, hydraulic fracturing has been in use for 30+years. On the [National Forests in Mississippi], wells that have been enhanced by hydraulic fracturing have many thousands of feet of separation between the “frac” zone and fresh water aquifers. (MS Oil & Gas Board records) Also, the production zone or “frac” zone is within confined beds or formations, which also contains the production. Except for Pretty Creek Field, Homochitto NF drilled in the 1960 there are no known cases of groundwater contamination on the National Forest from oil and gas operations in the state of MS. (Dykes, 2010)

Material Safety Data Sheets, required by OSHA under 29 CFR 1910.1200 are developed and made available to first responders and other emergency planning and response officials.

Main compounds used in typical fracture fluid additives are found in common use everyday items. (Arthur, 2008)

Appendix G, added to the EA, is BLM’s response addressing hydraulic fracturing on [National Forests in Mississippi].

Appendix G of the 2010 Leasing EA provides a detailed discussion of hydraulic fracturing, potential impacts and mitigating measures (page 1-2):

Oil and gas wells may have the potential to affect Usable Safe Drinking Water (USDW) quality and quantity through withdrawal, injection, or unintentional leakage and spills. Since Oil and Gas development is faced with many complexities, adherence to 43 Code of Federal Regulations (CFR) 3162 and Onshore Oil and Gas Orders Nos. 1-7, BMP’s, proper well sanitation, and drilling and completion methods would reduce these impacts, but would not entirely eliminate them. Due to the unique nature of lithology, every horizon, play, well, and pay zone may require a unique drilling and completion treatment.

There is a misconception that hydraulic fracturing is a drilling technique when it is actually a Production Enhancement technique. The environmental impacts associated with horizontal drilling are minimal. The reason is that numerous wells can be drilled

from a single pad and sensitive areas can be developed with no surface disturbance. This allows the BLM and the [Forest Service] to ensure the Federal Mineral Estate is not drained and maximum development and recovery of the hydrocarbon resource.

.... Although the injection of hydraulic fracturing fluids has not been determined to threaten underground sources of drinking water (EPA 2004), disposing of produced water withdrawn from oil and gas wells has the potential to affect surface water and groundwater sources. The preferred method of disposal of produced water is underground injection. Injection of produced water would prevent impacts to surface water quality; however, a critical aspect of underground injection is finding a permanent formation with a concentration of total dissolved solids (TDS) that is equal to or greater than the produced water. In order to inject produced water, an oil and gas operator must obtain a permit as required by the 43 CFR 3162 and Onshore Oil and Gas Orders No. 1,2, and 7. The underground injection regulations address the siting, construction, operation, monitoring, abandonment of an injection well, and the protection of USDW. These requirements are designed to prevent contamination of surface and underground drinking water sources. At the present time, there are no known cases of groundwater contamination from Oil and Gas Operations in the state of MS. This includes horizontal, directional, vertical, and hydraulically fractured oil, gas, and water injection wells. The proper well drilling and completion techniques, lithology of MS, and the location of pay zones below the USDW have contributed to the success of the protection of the USDW Resource.

Surface discharge is another common method of disposing produced water from oil and gas production. Oil and gas operators must obtain a National Pollutant Discharge Elimination System (NPDES) permit to discharge produced water on the surface. The type of permit currently offered is a Tier II permit. This permit requires the monitoring of water quality in streams and limits instream TDS concentrations to 230 mg/L (GSA 2005). The surface discharge of produced water into existing stream channels could potentially increase the salinity of surface waters and increase flow rates, resulting in water quality degradation, increased soil erosion, and channel downcutting and widening.

In order to minimize the introduction of drill fluids, hazardous waste spills, or leakage from reserve pits into groundwater sources, adherence to the requirements of 43 CFR 3162 and Onshore Oil and Gas Orders No. 1,2, and 7 is required. Although potential impacts to groundwater would be reduced through the implementation of federal, state, and local regulations that require site characterization and corrective action for hazardous waste and spills, such impacts would not be eliminated.

While Oil and Gas production may contribute to the effects of climate change, proper storage facilities, adherence to flaring and venting regulations would limit the amount of emissions released. In addition, Oil and Gas Production emissions remain below other industries emissions.

- ii. **The Mississippi DNAs are based on an EIS which failed to quantify greenhouse gas emissions that will result from BLM's decision to lease the parcels, and are therefore inadequate.**

BLM need to quantify GHG emissions, and subsequent climate change impacts, resulting from the proposed Action in Mississippi. The Mississippi DNAs are inadequate where they rely on NEPA documents that fail to consider these factors. BLM needs to take these factors into account in an EIS.

BLM must evaluate the impacts on climate change resulting from GHG emissions from the Proposed Action in Mississippi. This includes conducting a SCC analysis based on the reasonably foreseeable development of the Mississippi parcels and subsequent GHG emissions.

The 2010 Leasing EA adequately addresses the current state of GHG and climate change in the project area, and the potential impacts on GHG and climate change from possible oil and gas development. The 2010 Leasing EA states (page 68):

For the [National Forests in Mississippi] and much of the southeastern United States, climate variability and weather events such as hurricanes, heat waves, droughts, tornadoes, floods, freezes, and lightning storms have long been part of the natural environment

....Across the country, warming temperatures, altered precipitation patterns, rising sea levels, and increases in the number and intensity of extreme weather events are already causing observed ecological responses across the United States (U.S. Climate Change Science Program, 2008a). Although there are variations by region, overall temperatures across the nation warmed during the 20th century, with 11 of the 12 years from 1995-2006, among the warmest since instrumental record keeping was started in 1850 (U.S. Climate Change Science Program, 2008b; IPCC, 2007).

....Over the past decade, a number of models have been developed to simulate climatic effects anticipated in the future. These scenarios are based on historical data, trends, and analysis of different plausible assumptions. While climate model simulations are continuing to be developed and refined, climate projections typically do not yet accurately address expected conditions below the regional scale in the United States. In the report by the United States Global Change Research Program on *Climate Change Impacts on the United States* (2001), the two principal models that were found to best simulate future climate change conditions for the various regions across the country were the Hadley Centre model (developed in the United Kingdom) and the Canadian Climate Centre model. Unless otherwise noted, the following discussions of climate change expectations for the southeastern United States are based on findings from the 2001 U.S. Global Change Research Program report and more recent projections in the U.S. Climate Change Science Program Reports (SAP 4.3., May, 2008a; SAP 4.4, June, 2008b).

For some aspects of climate change, virtually all models agree on the types of changes to be expected for the southern region:

The climate is going to get warmer, especially warmer minimum winter temperatures....Overall regional temperature changes are projected to be equivalent to shifting the climate of the southern U.S. to the central U.S. and the central U.S. climate to the northern U.S. The heat index, which is a measure of comfort based on temperature and humidity, is going to rise. The principal

climate model simulations agree that the heat index would increase more in the southeast than in other regions.....Threats to coastal areas would increase, including rising sea levels, beach erosion, subsidence, saltwater intrusion, shoreline loss, and impacts to urban development.

Precipitation is more likely to coming in heavy, extreme events.

Despite these factors, the 2010 Leasing EA goes on to state (page 72):

[N]o direct environmental effects would result from the leasing itself. However, indirect effects related to existing and future leases can be estimated as discussed in the assumed projections from the BLM analysis of RFDS. Indirect effects would generally be analyzed in a site-specific NEPA analysis following the submission of an APD by the leaseholder or agent at the time drilling is proposed. While Alternative 2 would likely include an elevated level of fossil fuels being burned running powered equipment used in drilling; the effect would not be significant or easily measured in the context of the total fossils fuels consumption either statewide, regionally or globally.

.... [T]he contribution to climate change of discovered and recovered fossil fuel raw products is less significant than the demand for fossil fuel consumer products. The amount of fossils fuels burned is dependent upon consumer demand, availability of alternate fuels, alternative energy sources and economic factors such as price.

The 2010 Leasing EA adequately address and analyzes GHG and climate change effects from potential oil and gas development, and develops mitigating measures to negate any potential impacts. Further quantification of these emissions is not required at this time for the same reasons discussed in regards to the Mississippi Parcel.

PART TWO

1. The EA and Finding of No Significant Impact (FONSI) [for the Ohio Parcels] Violate the National Environmental Policy Act (NEPA) “Hard Look” Requirement

A. BLM failed to take a Hard Look at the Environmental Impacts of Opening Up Private Minerals

The potential opening up private minerals for oil and gas development was addressed adequately throughout the Marietta EA. The Marietta EA clearly states (Page 120):

Leasing federal minerals within the Marietta Unit may lead to additional future mineral development on private land and private minerals within the area. Although federal oversight of mineral development on federal land/federal minerals is more stringent than on private land/private minerals, there are numerous state laws and regulations in place. Appendix C of this EA summarizes the laws and regulations that govern mineral development activities on private land in Ohio.

The Marietta EA describes the inclusion of private mineral development analysis in the Reasonable Foreseeable Development Scenario RFDS (Page 25) :

While the RFDS does not project any disturbance on private lands, this EA analysis covers the potential impacts of future oil and gas development on both the Forest Service lands and on adjacent private lands within the Marietta Unit to allow for maximum NEPA flexibility and coverage in case conditions should change in the future.

However, the Marietta EA does include private development in the cumulative analysis (Page 120):

...the cumulative effects analysis also considers recent past, ongoing, and reasonably foreseeable mineral development (private and federal) within the Marietta Unit. As of 2015, there were 285 federal wells in Washington County, 117 federal wells in Monroe County, and none in Noble County. There were a total of 790 active wells on private lands in the Wayne National Forest.

Addressing concerns about potential environmental impact of private development, the Final EA states:

...if some development were to occur on privately owned surface federal and state regulation do exist in order to address any potential concerns regarding contamination or spills. However, if the development occurs on private lands and pipelines or well development reaches federal minerals, the BLM would ensure that the construction of such well is in compliance with all applicable safety standards

Furthermore, the Marietta EA responds to comments regarding private development by adding them to the Public Comment Matrix (Appendix A, Page 158) as well as Appendix C (Page 192) .

B. BLM Failed to Provide Baseline Conditions to Adequately Address Potential Impacts to Threatened and Endangered Species, As Required by NEPA, including: Indiana bat, Northern Long Eared Bat and Aquatic Species.

The Marietta EA adequately addresses wildlife and special status species. As to the Indiana bat, the Marietta EA states that there are no documented hibernacula within the Marietta Unit in Ohio (Page 48):

The WNF contains one documented hibernaculum, and it is not on the Marietta Unit...the Athens and Ironton Units most likely contain the most heavily concentrated populations of Indiana bat, based on thorough surveys conducted previously throughout the WNF by the USFWS.

For the Northern Long Eared Bat the Marietta EA clearly uses the 4(d) rule of the USFWS which states that in areas of the bat's range that may be affected by white-nose syndrome, incidental take caused by some tree removal and tree-clearing activities, does not need to be prohibited to conserve the northern long-eared bat when conservation measures that protect the bat's most vulnerable life stages are taken (Page 48):

The Forest Service activities fall under the 4(d) rule that exempts incidental take of northern long-eared bat, provided those activities adhere to certain, basic conservation measures to protect hibernacula and roost trees.

For Aquatic Species such as mussels the Marietta EA states (Page 49):

Fanshell and pink mucket pearlymussel are not documented anywhere on the WNF... Sheepnose and snuffbox may be present on waterways within the WNF and were not included in the 2005 BO, but the USFWS concurred with the Forest Service that the 2012 SIR did not need any update regarding these species because neither of these species would be affected by oil and gas activities on the national forest.

The Marietta EA adequately addresses Section 7 of the ESA and the rationale is (Pages 19-20):

The Forest Service completed a Biological Evaluation (BE) and the USFWS issued its Biological Opinion (BO) on November 22, 2005. The BO established a tiered approach to the Section 7 consultation. The programmatic (Tier I) BO (November 22, 2005) covers all the activities described in the 2006 Forest Plan/EIS at a programmatic, non-site-specific level. Because the BLM was a cooperating agency in the 2006 Forest Plan and EIS, the consultation conducted with respect to the 2006 Forest Plan and EIS applies to the Proposed Action analyzed in this EA... As part of the 2012 SIR, the Forest Service reviewed new information related to hydraulic fracturing and whether there could be additional effects to threatened and endangered species that had not been previously analyzed in the 2006 Plan/ EIS. The Forest Service and the USFWS concluded that no further analysis or consultation was needed and that the consultation conducted under the 2006 Plan/EIS was still valid. As the BLM analyzes individual projects pursuant to the Forest Plan, the BLM is responsible for reinitiating consultation and providing the USFWS with additional information; this process is called Tier II consultation. ...Since the BLM was a cooperating agency it can adopt the consultations included within the Plan as their 2012 revision done for their 2012 SIR.

...the BLM would submit a Tier II Biological Assessment to the USFWS when it receives an APD, if it determines that potential effects to critical habitat, fish or wildlife could occur.

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

The Marietta EA adequately address potential environmental impacts to air quality. As to the ability to identify site-specific air quality concerns, the Marietta EA states (Page 94):

Further NEPA analysis would be conducted at the [Application for Permit to Drill (APD)] stage, when specific development details with which to analyze potential GHG emissions are likely to be known.

The Marietta EA establishes the following mitigating measures for potential impacts to air quality identified during the APD stage (Page 95):

The BLM encourages industry to incorporate and implement BMPs to reduce impacts to air quality through reduction of emissions, surface disturbances, and dust from field production and operations...Additionally, the BLM encourages oil and natural gas companies to adopt proven, cost-effective technologies and practices that improve

operational efficiency and reduce natural gas emissions. In October 2012, USEPA promulgated air quality regulations for completion of hydraulically fractured gas wells (USEPA, 2015b). These rules required air pollution mitigation measures that reduced the emissions of volatile organic compounds during gas well completions. Mitigation included utilizing a process known as a “green” completion in which natural gas brought up during flowback is captured in tanks rather than in open fluid pits. Among other measures to reduce emissions include the USEPA’s Natural Gas STAR program. The USEPA U.S. inventory data shows that industry’s implementation of BMPs proposed by the program has reduced emissions from oil and gas exploration and development (USEPA, 2016i).

The Marietta EA adequately addresses climate change and emissions. Impacts resulting from direct and indirect effects of oil and gas development are discussed as follows (Page 84):

...the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems.

The Marietta EA included quantitative analyses of greenhouse gases (GHG) impacts. Best available science was used to approach the greenhouse gas emissions calculation for the Marietta EA: “Life cycle greenhouse gas emissions of Marcellus shale gas (and associated supplementary data) (Jiang et al., 2011) was used as the basis for estimating GHG emissions from the preproduction phase of potential oil and gas development in the Marietta Unit” (Page 85). As it relates to Ohio, the Marietta EA states that: “Ohio’s Natural Gas and Crude Oil Exploration and Production Industry and Emerging Utica Gas Formation Economic Impact Study estimated that the average amount of natural gas per the life of a natural gas well is 5 billion cubic feet (bcf) (Kleinhenz & Associates 2011)” (Page 90). “Using...U.S. EPA combustion emission factors for natural gas (see Appendix E) allowed BLM to compare combustion emissions to those calculated for this EA” (Page 93).

The Marietta EA also discloses calculation assumptions (Page 87):

Disturbance for wellpad approximately 5 acres, approximately 6 wells per wellpad (per the 2006 RFDS), approximately 25 years for the lifetime of a well, use of horizontal drilling and hydraulic fracturing.

Based on the location of the proposed lease, geological formations, and similar construction techniques that would be used if future production was to occur in the Marietta Unit, the preproduction data gleaned from Jiang et al., 2011, is applicable to possible foreseeable mineral development within the Wayne National Forest.

As to post-production impacts, the Marietta EA states (Page 89):

...emissions associated with the post-production phase of development were calculated based on reasonable assumptions and standard emissions factors. Mean emission factors

used in this EA for production of natural gas, processing, transmission and storage, distribution, and combustion were provided by Venkatesh et.al. (2011).

The uncertainties regarding development are also discussed in the Marietta EA (Page 93):

There are many factors that affect the potential for GHG emissions estimates at the leasing stage: a lease may not be purchased, so no GHG emissions would be expected; a lease may be purchased but never explored, so again there would be no GHG emissions; a lease may be purchased and an exploratory well drilled that showed no development potential, so minimal GHG emissions would occur; or a lease may be purchased, explored, and developed. If developed there are notable differences in the potential for emissions related to a wide variety of variables, including the production potential of the well, economic considerations, regulatory considerations, and operator dynamics, to name a few.

The methodology was included step by step within the Marietta EA in pages 90-92.

Regarding the use of the Global Warming Potential (GWPs) values the EA discloses in one of the incorporated tables (Page 205):

While EPA recognizes that Fifth Assessment Report (AR5) GWPs have been published, in an effort to ensure consistency and comparability of GHG data between EPA's voluntary and non-voluntary GHG reporting programs (e.g. GHG Reporting Program and National Inventory), EPA recommends the use of AR4 GWPs. The United States and other developed countries to the UNFCCC have agreed to submit annual inventories in 2015 and future years to the UNFCCC using GWP values from AR4, which will replace the current use of SAR GWP values. Utilizing AR4 GWPs improves EPA's ability to analyze corporate, national, and sub-national GHG data consistently, enhances communication of GHG information between programs, and gives outside stakeholders a consistent, predictable set of GWPs to avoid confusion and additional burden.

D. BLM Arbitrarily Underestimated Surface Disturbance Impacts from the Limits of Disturbance ("LODs"), Gathering Lines, Well Pads, and Compressor Stations

The Marietta EA adequately estimated the surface disturbance from all oil related activities. The Final EA states (Page 24):

Although there would be no surface disturbance from the action of leasing, the EA analyzes a reasonably foreseeable development scenario (RFDS) to address the potential environmental effects from potential future oil and gas development.

In addition, the Marietta EA explains how this projection was developed (Page 25):

The 2006 RFDS projected a total of 135 acres of disturbance (see Table 2-1, below) to federal surface in the Marietta Unit from exploration and production activities, regardless of mineral ownership (scenarios A and B in Figure 2.1.), with 121 acres needed to support long term production. The analysis assumed that after exploration and production ceased, 151 acres would be reclaimed per state and federal requirements. The projected surface disturbance included all acreage potentially affected by future oil and gas

development activities, such as road construction; well pad construction, construction of turnaround/production facility areas, pipelines, and other related activities.

...approximately 10 acres have already been disturbed from oil and gas development in the Marietta Unit; therefore, the remaining acreage of surface disturbance that could occur within the Marietta Unit that is analyzed in this EA, is approximately 70 acres. Of those 70 acres, approximately 40 acres of disturbance would persist for the long term, until final reclamation is completed.

The Marietta EA states what activities may occur due to development (Page 26):

Reasonably foreseeable activities that could occur as a result of future oil and gas development associated with leasing in the Marietta Unit include surface disturbance associated with preparation for drilling including construction of a road, drilling pad, and reserve pit. Constructed access roads normally have a running surface width of approximately 12 to 16 feet; the length is dependent upon the well site location in relation to existing roads or highways. The average length of road construction is approximately 0.5 miles per well pad. Therefore, approximately two acres would likely be affected by road construction. Typically from 3 to 5.5 acres are cleared and graded level for the construction of the drilling pad. If horizontal drilling occurs, each drilling pad could have up to eight lateral lines. If the well produces natural gas, and the flowline is in the road, another 0.5 acres may be affected by flowline construction. These disturbances are typical for private or federal ownership well pad locations but may be subject to adjustment based on site-specific conditions, which have not yet been determined.

E. BLM Failed to Adequately Address Potential Impacts of Proposed Action on Human Health and Safety

The Marietta EA adequately addresses human health and safety, relating to fracking, since it even compiled two sections to solely discuss this topic (Section 3.8 & 4.8). Eastern States recognizes the public concern of health issues regarding possible future hydraulic fracturing and therefore decided to compile a new section addressing this topic. The Marietta EA states (Pages 108-109):

There would be no direct impacts to public health and safety from leasing, since leasing is an administrative action...BLM acknowledges that if the leasing area was to be developed in the future, environmental hazards of...oil and gas may produce some effects to public health or safety if not properly managed...communities or workforce residing or working near the potential development sites may be at higher risk for accidental spills, fugitive emissions or releases of gas from a future well bore. The level of effect would depend on the product released or spilled, level of activity, density of development, technological and safety controls/regulations in place, and the receptors' susceptibility to risk.

.... As of 2014, most studies addressing the public health implications of oil and gas development have been either predictive and/or descriptive hypothesis generating. The few analytic studies are preliminary and do not provide enough evidence to conclusively determine if oil and gas operations directly result in health effects in nearby populations. Existing studies have provided evidence that hazards are inherently present in and around

oil and gas operations and populations can be exposed to these hazards if safety measures are not implemented. People living near oil and gas operations have reported that oil and gas operations affect their health and quality of life, particularly through traffic accidents, air and water pollution, and social disruption expressed as psychosocial stress (University of Colorado at Boulder, 2015). Some short term health effects reported by people living near oil and gas operations include irritation of the eyes, nose, throat, lungs or skin, or other symptoms like headache, dizziness or nausea and vomiting. Some also report sleep disturbance or anxiety associated with noise or light effects from mineral development activities. There is very little information about long term health effects in people living near oil and gas operations.

.... Numerous scientific studies have linked air pollution to a variety of health problems including: (1) respiratory and cardiovascular disease, (2) decreased lung function, (3) increased frequency and severity of respiratory symptoms such as difficulty breathing and coughing, (4) increased susceptibility to respiratory infections, (5) effects on the nervous system, including the brain, such as IQ loss and impacts on learning, memory, and behavior, (6) cancer, and (7) premature death. Sensitive individuals or those at high risk appear to be at even greater risk for air pollution-related health effects, for example, those with pre-existing heart and lung diseases (e.g., heart failure/ischemic heart disease, asthma, emphysema, and chronic bronchitis), diabetics, older adults, and children. Future mineral development operations within the Marietta Unit that would violate a state and/or federal air quality standard would not be approved.

F. BLM Failed to Adequately Address Potential Impacts of Hydraulic Fracturing, Horizontal Drilling, and Other Unconventional Well Stimulation Techniques on Water Resources

The Marietta EA adequately analyzes the current state, and potential impacts, on water resources related to the proposed action. The Marietta EA states (Page 104):

While the act of leasing federal minerals would produce no impacts to surface water quality, subsequent exploration and development of the lease parcels have the potential to produce impacts. The potential effects to surface water from reasonably foreseeable mineral development include sediment loading of stream channels due to the erosion associated with site development or operational transport and introduction of pollutants, toxic chemicals, sediment or debris, via spills and releases to surface water from oil/produced water treatment, storage tanks, handling and sanitary facilities or oil/produced water transportation mediums (trucks or pipelines).

Specifically, the Marietta EA addresses concerns regarding withdrawals of water for oil and gas operations (Page 105):

The 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, for example, by dewatering a stream enough to entrap fish or expose mussels to dry conditions in a stream that would normally have perennial flow.

As to local aquifers and groundwater, the Marietta EA states (Page 105):

Local aquifers (within the Marietta Unit) do not yield sufficient water to support industrial activities within the Marietta Unit. Therefore, the likelihood that the proposed leasing action and potential future mineral development would affect groundwater quantity is negligible.

However, the Marietta EA does acknowledge potential environmental concerns to water resources, as well as mitigating measures (Page 105):

Future mineral development activities would pose some risk of accidental spills of drilling fluids, produced water, and other chemicals (see also Section 4.7, Wastes, Hazardous or Solid). This risk would be minimized by the requirement, described in the 2012 SIR, for operators to use tanks, instead of open pits, to hold all fluids other than fresh water... The only areas where a spill would pose an unacceptable risk to groundwater quality are designated wellhead protection areas or certain locations within the Ohio River and Little Muskingum River floodplains (Thompson, 2012). Other locations throughout the Marietta Unit tend to have low groundwater pollution potential due to low hydraulic conductivity and depths of groundwater (around 200 feet or less from the surface). Drilling to a production zone that is below a potable water-bearing formation poses the risk of allowing brine and other chemicals to migrate up into a potable water zone. This risk is mitigated in federal wells by casing and cementing requirements in Onshore Oil and Gas Order Number 2.

G. BLM Failed to Account for New Drilling Project on Ohio River as part of its cumulative effects analysis

The Marietta EA adequately included all known projects into its cumulative analysis. For this the Marietta EA used all available knowledge of projects disclosing them as follows (Page 120):

- Approval of an electric line that crosses 600 feet of NFS lands, 2009;
- Habitat improvement for yellow-fringed orchid on 38.5 acres using a variety of mechanical and chemical treatments and minor construction activities, 2010;
- Approval of three oil and gas wells, 2010;
- Renewal of two miles of electric pipeline permits, ranging in width from 15 to 80 feet, 2010
- Renewal of 61 acres of hay and row-crop cultivation and 114 acres of grazing, most of which is in river corridor management area, 2010;
- Renewal of permits for 3,300 feet of road access, 2010;
- Approval of laying approximately 2,500 feet of 1½-inch plastic pipeline on surface;
- Mechanical treatments on managed openings, 2011;
- Habitat management, including 564 acres of early successional habitat creation, 432 acres of alleged stands using single-tree and group selection, and 870 acres of prescribed burning, 2011;
- Approval of an Application for Permit to drill a vertical oil and gas well on a 0.74-acre pad with a 250-foot access road, 2013;
- Plugging and abandonment of six orphaned wells, 2014;
- 4.4-mile expansion of Kinderhook equestrian trail, 2015; and
- Approval of a 150-foot-by-10-foot ATV trail to service an oil and gas well, 2015.

In addition to the discrete projects listed above, the cumulative effects analysis also considers

recent past, ongoing, and reasonably foreseeable mineral development (private and federal) within the Marietta Unit. As of 2015, there were 285 federal wells in Washington County, 117 federal wells in Monroe County, and none in Noble County. There were a total of 790 active wells on private lands in the Wayne National Forest.

However, any new project is not expected to have a significant impact that may shift the Finding of No Significant Impact because of the establishment of mitigation measures and Best Management Practices for the proposed action (Pages 94-95):

The BLM encourages industry to incorporate and implement BMPs to reduce impacts to air quality through reduction of emissions, surface disturbances, and dust from field production and operations... Additionally, the BLM encourages oil and natural gas companies to adopt proven, cost-effective technologies and practices that improve operational efficiency and reduce natural gas emissions. In October 2012, USEPA promulgated air quality regulations for completion of hydraulically fractured gas wells (USEPA, 2015b). These rules required air pollution mitigation measures that reduced the emissions of volatile organic compounds during gas well completions. Mitigation included utilizing a process known as a “green” completion in which natural gas brought up during flowback is captured in tanks rather than in open fluid pits. Among other measures to reduce emissions include the USEPA’s Natural Gas STAR program.

In addition, the Marietta EA states (Page 124):

Despite the potential for cumulative effects...reclamation and other stipulations and best management practices, as described earlier in this EA, would help to minimize the potential for significant adverse cumulative effects...Additional protections may be applied at the APD stage. Appendix C of this EA summarizes the laws and regulations that would apply to mineral development activities on private land with regard to federally listed species.

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

As discussed, Eastern States has satisfied the National Environmental Policy Act (NEPA) requirements analyzing impacts of oil and gas operations necessary prior to offering the Ohio Parcels. In addition, under NEPA an EA may be relied upon without any further environmental analysis when the EA’s analysis show that no significant impacts to environmental resources would occur. A finding of no significant impact does not require that no impacts are identified, rather, no impact may result from adequate regulations and mitigation measures that negate any potential significant impact. The Marietta EA contains adequate mitigating measures to any potential impacts. Therefore BLM can determine based on the analysis included throughout the EA that significant environmental impact would not occur.

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

The Marietta EA adequately addresses wildlife and special status species. As to the Indiana bat, the Marietta EA states that there are no documented hibernacula within the Marietta Unit in Ohio (Page 48):

The WNF contains one documented hibernaculum, and it is not on the Marietta Unit...the Athens and Ironton Units most likely contain the most heavily concentrated populations of Indiana bat, based on thorough surveys conducted previously throughout the WNF by the USFWS.

For the Northern Long Eared Bat the Marietta EA clearly uses the 4(d) rule of the USFWS which states that in areas of the bat's range that may be affected by white-nose syndrome, incidental take caused by some tree removal and tree-clearing activities, does not need to be prohibited to conserve the northern long-eared bat when conservation measures that protect the bat's most vulnerable life stages are taken (Page 48):

The Forest Service activities fall under the 4(d) rule that exempts incidental take of northern long-eared bat, provided those activities adhere to certain, basic conservation measures to protect hibernacula and roost trees.

For Aquatic Species such as mussels the Marietta EA states (Page 49):

Fanshell and pink mucket pearlymussel are not documented anywhere on the WNF... Sheepnose and snuffbox may be present on waterways within the WNF and were not included in the 2005 BO, but the USFWS concurred with the Forest Service that the 2012 SIR did not need any update regarding these species because neither of these species would be affected by oil and gas activities on the national forest.

The Marietta EA adequately addresses Section 7 of the ESA and the rationale is (Pages 19-20):

The Forest Service completed a Biological Evaluation (BE) and the USFWS issued its Biological Opinion (BO) on November 22, 2005. The BO established a tiered approach to the Section 7 consultation. The programmatic (Tier I) BO (November 22, 2005) covers all the activities described in the 2006 Forest Plan/EIS at a programmatic, non-site-specific level. Because the BLM was a cooperating agency in the 2006 Forest Plan and EIS, the consultation conducted with respect to the 2006 Forest Plan and EIS applies to the Proposed Action analyzed in this EA... As part of the 2012 SIR, the Forest Service reviewed new information related to hydraulic fracturing and whether there could be additional effects to threatened and endangered species that had not been previously analyzed in the 2006 Plan/ EIS. The Forest Service and the USFWS concluded that no further analysis or consultation was needed and that the consultation conducted under the 2006 Plan/EIS was still valid. As the BLM analyzes individual projects pursuant to the Forest Plan, the BLM is responsible for reinitiating consultation and providing the USFWS with additional information; this process is called Tier II consultation.

...Since the BLM was a cooperating agency it can adopt the consultations included within the Plan as their 2012 revision done for their 2012 SIR.

...the BLM would submit a Tier II Biological Assessment to the USFWS when it receives an APD, if it determines that potential effects to critical habitat, fish or wildlife could occur.

4. BLM's Reliance on the 2006 Forest Plan Biological Opinion Violates the ESA Since It Does Not Include New Information Such As: Horizontal Well Development, White Noise Syndrome and Newly Listed Species.

This comment was received and responded in the comment matrix attached as Appendix A to the Marietta EA. The Marietta EA states (Page 170):

The 2012 SIR was completed to determine if the 2006 Forest Plan/EIS needed to be updated in light of new information regarding hydraulic fracturing. The Forest Service determined that the potential effects associated with hydraulic fracturing and horizontal drilling were not significantly different from those of vertical drilling and that the mitigation measures in place for vertical drilling would suffice for horizontal drilling/hydraulic fracturing.

As to BLM's role in this analysis, the Marietta EA explains (Page 174):

BLM was a cooperating agency on the 2006 Forest Plan/EIS and provided input for the 2012 SIR. Both the Forest Service and the USFWS concurred that no further analysis or Endangered Species Act consultation was needed at this stage.

The BLM also adopts in the Marietta EA the 4(d) rule to address the newly added Northern Long Eared bat (Page 20):

More recently, a BO was issued by the USFWS in 2016 for the 4(d) rule for the federally listed, threatened northern long-eared bat. This rule exempts incidental take of northern long-eared bat for federal actions that adhere to certain, basic conservation measures. The Forest Service operates under this BO and therefore the Proposed Action is also covered under the BO.

5. BLM Failed to Respond to Comments

The BLM adequately responded to comments since it complied with the CEQ regulations at 40 CFR 1503.4 which recognize several options for responding to substantive comments, including: modifying one or more of the alternatives as requested, developing and evaluating suggested alternatives, supplementing, improving, or modifying the analysis, making factual corrections, explaining why the comments do not warrant further agency response, citing cases, authorities, or reasons to support the BLM's position.

The CEQ recommends that responses to substantive comments should normally result in changes in the text of the NEPA document, rather than as lengthy replies to individual comments in a separate section (see Question 29a, CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981). Therefore a short response to each substantive comment and a citation to the section or page where the change was made was the method adopted for this Final EA. Similar comments were summarized and responded to as a whole and if the comment did not entail any change to the Marietta EA it was also disclosed within the response matrix developed. This response matrix was attached as Appendix A (Page 158) to the Marietta EA.

6. The Forest Service Violated NEPA By Failing To Conduct Any Independent Environmental Review and by Consenting Prior to Any Adequate NEPA Review

In accordance with BLM regulations at 43 CFR 3120, the Forest Service is not obliged to provide proof to the BLM of its independent analysis, only whether or not it grants consent to leasing. How the Forest Service arrived at its independent conclusion to consent or not is beyond the purview of BLM's authority. The Forest Service's consent action does not result in

an irretrievable commitment of resources because the BLM is the authorized agency to approve or not approve a particular parcel for leasing.

Eastern States and NSD fulfilled their requirements in coordinating with the surface management agency (SMA) for the Ohio parcels, within Wayne National Forest. As the NEPA Handbook H-1790-1 states (page 112):

You must invite eligible governmental entities (Federal, State, local, and tribal) to participate as cooperating agencies when preparing an EIS (516 DM 2.5(e)). You must also consider any requests by eligible governmental entities to participate as a cooperating agency with respect to a particular EIS, and will either accept or deny such requests. If such a request is denied, the BLM will inform the other agency and state in writing, within the EIS, the reasons for such denial. Throughout the preparation of an EIS, you must collaborate, to the fullest extent practicable, with all cooperating agencies, concerning those issues relating to their jurisdiction or special expertise (516 DM 2.5(f)). Prepare a Memorandum of Understanding (MOU) with any cooperating agency, clearly defining the roles and responsibilities of each agency.

These requirements explicitly apply to EIS, but coordination between BLM and the SMA is encouraged regardless the level of NEPA reviews.

PART THREE

1. BLM Must End All New Fossil Fuel Leasing and Hydraulic Fracturing

A. BLM Must Limit Greenhouse Gas Emissions By Keeping Federal Fossil Fuels In the Ground

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, including GHG emissions and climate change. Potential impacts have been determined to be mitigated by the measures discussed in these documents. When nominated lands are available, and environmental impacts are mitigated to the point where there will be no significant environmental impact, BLM is mandated to offer said minerals for competitive lease sale. Therefore, it is appropriate for Eastern States to offer the Mississippi and Ohio parcels at the December Lease Sale.

B. BLM Must Consider A Ban on New Oil and Gas Leasing and Fracking in a Programmatic Review and Halt All New Leasing and Fracking in the Meantime.

Again, any programmatic decision as to federal oil and gas leasing outside the scope of the NEPA analysis and decision, and BLM is under a statutory duty to offer available lands for leasing. Therefore, it would be inappropriate to consider a national ban on oil and gas leasing in the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA.

2. The Dangers of Hydraulic Fracking and Horizontal Drilling

As discussed above, the Final EA, the 2010 Leasing EA and MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically hydraulic fracturing and horizontal drilling. Potential impacts have been determined to be mitigated by the measures discussed in these documents.

3. Unconventional Oil and Gas Operations Pose Risks to Water Resources

As discussed above, the Final EA, the 2010 Leasing EA and MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically potential impacts to water resources. Potential impacts have been determined to be mitigated by the measures discussed in these documents.

A. More Intensive Oil and Gas Development Will Increase Storm Water Runoff

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically potential impacts to water resources from potential spills and storm water runoff. Potential impacts have been determined to be mitigated by the measures discussed in these documents.

B. Fossil Fuel Development Depletes Enormous Amounts of Water

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically water resource depletion due to oil and gas operations. Potential impacts have been determined to be mitigating measures discussed in these documents.

C. Oil and Gas Developments Harm Aquatic Life and Habitat

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically harm to wildlife and wildlife habitat. This includes potential impacts to aquatic species. Potential impacts have been determined to be mitigating measures discussed in these documents.

D. Harm to Wetlands

As discussed above, the Final EA, the Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically hydraulic fracturing. Potential impacts have been determined to be mitigating measures discussed in these documents. For these reasons, this portion of Protesters' Protest is denied.

4. Oil and Gas Operations Harm Air Quality

A. Types of Air Emissions

As discussed above, the Final EA and the 2010 Leasing EA and MS FP/FEIS underlying the DNA discuss various types of air emissions. These sources are considered when developing the stated mitigating measures.

B. Sources of Air Emissions

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA discuss various sources of air emissions. These sources are considered when developing the stated mitigating measures.

C. Impact of Increased Air Pollution

As discussed above, the relationship between air quality and human health has been analyzed for the proposed actions of the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA, and no significant impact has been determined. Potential impacts have been determined to be mitigating measures discussed in these documents.

D. Air Modeling

As discussed above, the Final EA, the Leasing EA and the MS FP/FEIS underlying the DNA discuss air quality, GHG emissions, and climate change. The analysis, including existing models and qualitative discussion, was determined to be adequate for the purpose of these analyses, and developing the stated mitigating measures.

5. Fossil Fuel Development will Exacerbate Climate Change

A. BLM Must Fully Analyze Greenhouse Gas Emissions of Oil and Gas Operations

As discussed above, the relationship between air quality and human health has been analyzed for the proposed actions of the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA, and no significant impact has been determined. Potential impacts have been determined to be mitigated by the measures discussed in these documents. Again, any programmatic analysis outside the scope of the project area and the immediate surrounding areas would be inappropriate in these analyses. For these reasons, this portion of Protesters' Protest is denied.

6. Oil & Gas Development Harms Sensitive Species and Wildlife

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations and specifically impacts to various sensitive species and wildlife. Potential impacts have been determined to be mitigated by the measures discussed in these documents. For these reasons, this portion of Protesters' Protest is denied.

7. Oil & Gas Development Poses Significant Risk to Human Health/Safety

As discussed above, the relationship between oil and gas development and human health has been analyzed for the proposed actions of the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA, and no significant impact has been determined. Potential impacts have been determined to be mitigated by the measures discussed in these documents.

8. Proposed Leasing will Industrialize Public Lands

As discussed above, the Final EA, the 2010 Leasing EA and the MS FP/FEIS underlying the DNA adequately account for impacts of oil and gas operations, and specifically the effects on the current environmental state of the project area. Potential impacts have been determined to be mitigated by the measures discussed in these documents. For these reasons, this portion of Protesters' Protest is denied.

9. BLM Must Prepare EIS

As discussed above, under NEPA an EA may be relied upon when the analysis shows no significant impacts to environmental resources. The Final EA, the 2010 Leasing and the MS

FP/FEIS underlying the DNA adequately mitigate potential impacts to come to the determination that significant environmental impact would not occur.

10. BLM Must Ensure FLPMA/MLA not Violated

As discussed throughout the Final EA, the 2010 Leasing and the MS FP/FEIS underlying DNA, is the policy of the BLM to make mineral resources available for use and to encourage development of mineral resources to meet national, regional and local needs. This policy is based on law, including the FLPMA. The MLA amended- Subtitle B (FOOGLRA)--"Lease sales shall be held for each State where eligible lands are available at least quarterly..." (MLA sec 226(b)(1)(A)). Therefore, FLPMA and MLA have not been violated by the decision to offer the December Lease Sale parcels.

DECISION

After a careful review, it has been determined that all of the protested Lease Sale Parcels described in the December Sale Notice may be offered at the December Lease Sale. The protests to all Lease Sale Parcels are denied for the reasons described above. As stated above, 16 Ohio Parcels included in the December Sale Notice will not be offered at the December Sale, but for reasons other than this protest.

You may appeal this decision to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the attached Form 1842-1 (Attachment 2). If you file an appeal, your notice of appeal must be filed in the BLM Eastern States Office, 20 M Street SE, Suite 950 Washington, D.C. 20003, within 30 days from receipt of this decision. You have the burden of showing that the decision appealed from is in error.

If you wish to file a petition (pursuant to regulation 43 CFR 4.21) (request) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standard for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

Please contact Justin Katusak at (202) 912-7727 with any further questions or concerns.


Karen E. Mouritsen
State Director

