

# San Juan Master Leasing Plan Recommendation

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## I. SUMMARY

The proposed San Juan Master Leasing Plan (“MLP”) area is located in southwestern Colorado and contains approximately 1,147,421 acres, managed primarily by the Bureau of Land Management (“BLM”) and the U.S. Forest Service (collectively, “the Agencies”). Roughly 10 percent of the San Juan MLP area has wilderness characteristics, including McKenna Peak, which the Secretary of the Interior recently identified as deserving permanent protection by Congress. Critical habitat for Gunnison sage-grouse, elk, mule deer and several other wildlife species cover much of the proposal area. Rare plants and cultural resources are also found throughout the San Juan MLP area. In short, the San Juan MLP area contains a diverse and widespread assemblage of important and sensitive resources.

The San Juan MLP area also boasts significant reserves of natural gas, and the boundaries of the proposal area loosely follow those of the Gothic Shale Play (“GSP”). According to the Supplement to the Draft Environmental Impact Statement (“SEIS”) for the San Juan Public Lands Center (“SJPLC”), the oil and gas industry intends to drill in upwards of 1,800 new wells in the GSP over the next fifteen years. This intensive level of drilling will require over 1,100 new well pads and 300 plus miles of new roads, all within the GSP. Yet, the SEIS proposes no measures beyond those proposed in the Draft Environmental Impact Statement and Draft Land Management Plan (“Draft EIS/LMP”) to resolve the impacts of developing the GSP on wilderness quality lands, wildlife and several other important resources.<sup>1</sup>

This proposal is being submitted as part of broader comments on the SEIS, and explains why the development scenario forecasted in the SEIS would best be addressed by inclusion of the San Juan MLP in the Final EIS/LMP. Furthermore, this proposal recommends a series of management measures for the San Juan MLP—drawn largely from the existing range of alternatives—in order to address the potential impacts of developing the GSP on wilderness quality lands, wildlife and other important resources. Those measures should receive full consideration in the Final LMP/EIS, even if the Agencies ultimately decide not to prepare a formal MLP.

- **BLM Field Office and Counties:** Dolores Field Office; Dolores, Montezuma and San Miguel Counties).
- **Relevant RMP:** San Juan/San Miguel RMP (1985); SJPLC LMP (draft released in 2007; supplement released in Aug. 2011).
- **Map:** see attached.
- **Total acres:** 1,147,421
- **% Federal Land:** 66% (758,885 acres)
- **% Federal Minerals:** 78% (892,283 acres)
- **% Not Leased:** 69% (789,342 acres)

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<sup>1</sup> The SEIS does, however, propose a series of measures to address the impacts of the revised RFD on air and water quality.

## II. RELATIONSHIP OF THE SAN JUAN MLP TO THE SJPLC PLANNING PROCESS

### A. Overview of the SJPLC Planning Process and the Interior Department's Onshore Oil and Gas Reforms

In 2007, the Agencies issued the Draft LMP/EIS for the SJPLC. The Draft LMP/EIS contained four alternatives, and also included a "No Lease Alternative," under which "no lands would be available for lease" in the SJPLC.<sup>2</sup> In comments on the Draft LMP/EIS, the oil and gas industry stated that the Agencies had significantly underestimated the Reasonable Foreseeable Development ("RFD") scenario for the SJPLC by not accounting for the potential development of the Gothic Shale Play. Accordingly, the Agencies agreed to revise the RFD and prepare the SEIS, which the Agencies released for public comment in August 2011.

In May 2010, seventeen months prior to publication of the SEIS, the Interior Department announced several major reforms to the onshore oil and gas program. Master Leasing Plans are one component of those reforms, and are designed to address the impacts of oil and gas leasing and development "in a defined area containing a high level of potential resource conflicts."<sup>3</sup> MLPs are required when specific criteria are met, and are also permitted "under other circumstances" at the discretion of the BLM. "The MLP process will be conducted through the NEPA process" and "will ordinarily be initiated as a land use plan amendment" or "combined with a plan revision process. . . ."<sup>4</sup> Furthermore, MLPs should contain a combination of "special resources protection measures" and "best management practices" to address potential resource conflicts, including phased leasing and development, drilling multiple wells on a single pad and centralizing liquids gathering systems.<sup>5</sup> Those practices and measures should be enforced through lease stipulations and conditions of approval on existing leases.<sup>6</sup> Thus far, the BLM has agreed to prepare MLPs for seventeen areas across the West, including five in Colorado.<sup>7</sup>

On November 4, 2011, the BLM issued the Colorado Oil and Gas Leasing Reform Strategy ("Colorado Leasing Strategy"), which contains detailed implementation guidance for MLPs. The Colorado Leasing Strategy requires the BLM to evaluate oil and gas activity "at a more focused level [within the MLP area] than the planning area as a whole" and to address the following in MLPs: "(1) the development of resource condition objectives for the MLP area (goals for maintaining or improving the condition of natural resource values in the area); and (2) the identification of resource protection measures and best management practices, typically adopted as lease stipulations in the RMP."<sup>8</sup> Such measures and practices include phased leasing and development, caps on new surface disturbance and drilling multiple wells on a single pad.<sup>9</sup> Finally, the Colorado Leasing Strategy grants the public the right to

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<sup>2</sup> Draft EIS at 2.64.

<sup>3</sup> BLM Colorado Oil and Gas Leasing Reform Implementation Strategy at 3, *available at* [http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/oil\\_and\\_gas/leasing.Par.79557.File.dat/Draft%20CO%20LR%20Implementation%20strategy\\_Final.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/oil_and_gas/leasing.Par.79557.File.dat/Draft%20CO%20LR%20Implementation%20strategy_Final.pdf).

<sup>4</sup> IM 2010-117 at II.

<sup>5</sup> *Id.* at II.B.

<sup>6</sup> *Id.*

<sup>7</sup> Those five areas are: Greater Adobe Town (Little Snake FO); Dinosaur Lowlands (Little Snake and White River FOs); Eastern Book Cliffs/Piceance Basin (Grand Junction and White River FOs); and Shale Ridges and Canyons (Grand Junction FO). Colorado Leasing Strategy at 3.

<sup>8</sup> *Id.*

<sup>9</sup> *Id.* at 8; *see also* IM 2010-117 at II.B.

propose MLPs at any time, and instructs field offices to continually “evaluate and identify areas within their planning boundary, which meet the MLP criteria.”<sup>10</sup>

**B. The Agencies May Include the San Juan MLP in the Final LMP/EIS Without Preparing Another Supplemental Environmental Analysis.**

As explained above, the IM and Colorado Leasing Strategy provide the Agencies with authority to include the San Juan MLP in the Final LMP/EIS. Doing so will not require another SEIS, however, since the San Juan MLP would actually reduce the environmental impacts of developing the GSP. Moreover, the San Juan MLP is “qualitatively” within the range of alternatives evaluated in the Draft EIS/LMP. Under NEPA, a duty to supplement arises when: (1) “substantial changes” are made to the proposed action between a draft and final EIS; or (2) “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”<sup>11</sup> Because neither situation exists here,<sup>12</sup> the Agencies need not prepare another SEIS in order to incorporate the San Juan MLP into the Final EIS/LMP.

First, the San Juan MLP would not require “substantial changes” to the Draft LMP/EIS or SEIS. According to the Tenth Circuit, “a reduction in environmental impact is less likely to be considered a substantial change relevant to environmental concerns than would be an increase in the environmental impact.”<sup>13</sup> That clearly is the case here, since the San Juan MLP would close additional areas to leasing and restrict leasing and development in other areas. These decisions, the purpose of which is to provide greater protection for wilderness, wildlife and other important resources, would reduce rather than increase the environmental impact of oil and gas activity in the GSP.

Second, the San Juan MLP is “qualitatively” within the existing range of alternatives. As the Tenth Circuit recently explained, a new or revised alternative that is “qualitatively within the spectrum of alternatives that were discussed in the DEIS” does not require a supplemental analysis.<sup>14</sup> In *Wyoming v. U.S. Dept. of Agriculture*, the Forest Service decided to apply the roadless rule to approximately 4.2 million additional acres between its draft and final EIS. According to the court, such a change was “qualitatively” within the original range of alternatives, because the additional acres “embody the same characteristics as those areas identified [for protection] in the DEIS. . . .”<sup>15</sup> Here, as in *Wyoming*, the San Juan MLP would protect (on a broader scale) resources already identified for protection in the Draft LMP/EIS—e.g., wilderness quality lands and critical wildlife habitat. Furthermore, the San Juan MLP would do so in large part by relying on measures already evaluated in the Draft EIS/LMP,<sup>16</sup> such as limiting oil and gas activity within “special areas” and “unique landscapes.”<sup>17</sup> Thus, the Agencies may prepare the San Juan MLP without also preparing another SEIS.

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<sup>10</sup> Colorado Leasing Strategy at 9.

<sup>11</sup> 40 C.F.R. § 1502.9(c)(i), (ii).

<sup>12</sup> See *Marsh v. Ore. Natural Res. Council*, 490 U.S. 360, 373 (1989) (rejecting the duty to “supplement an EIS every time new information comes to light”).

<sup>13</sup> *Friends of the Bow v. Thompson*, 124 F.3d 1210, 1219 (10th Cir. 1997).

<sup>14</sup> *Wyoming v. U.S. Dep’t of Agric.*, Nos. 08-8061, 09-8075, 2011 WL 5022755 at \*37 (10th Cir. Oct. 21, 2011); see also *N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 707 (10th Cir. 2009) (concluding that supplementation is not required “where components of fully-analyzed alternatives were recombined or modified to create a ‘new’ alternative”).

<sup>15</sup> *Wyoming v. U.S. Dep’t of Agric.*, Nos. 08-8061, 09-8075, 2011 WL 5022755 at \*38.

<sup>16</sup> See *BLM*, 565 F.3d at 707 (ruling that a SEIS is not required “where components of fully-analyzed alternatives [are] recombined or modified to create a ‘new’ alternative”).

<sup>17</sup> See Draft EIS at 2.47 (limiting or precluding oil and gas development within “special areas” and “unique landscapes”); *id.* at 2.64 (closing “special areas” and “unique landscapes” to leasing).

**C. The San Juan MLP Would Broaden the SEIS’s Range of Alternatives, Which Is Inadequate.**

The SEIS lacks a reasonable range of alternatives, because it proposes no new measures to address the impacts of the revised RFD scenario on resources other than air and water. Under NEPA, the range of alternatives is the “heart of the environmental impact statement” and must include “all reasonable alternatives” to the proposed action.<sup>18</sup> An alternative is “reasonable” when it is consistent with a project’s purpose and need and “significantly distinguishable” from other alternatives.<sup>19</sup> Because the Agencies did not consider any new alternatives in the SEIS outside of a series of measures for air and water quality, the range of alternatives is unreasonable.

In the SEIS, the Agencies indicated that since “the Supplement is only adding information, it does not change the original Purpose and Need for the Draft LMP/EIS,”<sup>20</sup> which is multi-faceted and notably includes the following elements:

- “reflect the balance between continued traditional uses of the planning area, such as with timber harvest, grazing, and the diverse mix of recreation activities (many of which require, or are enhanced by, the maintenance of large, contiguous areas of relatively undeveloped land);”
- “reflect the increased focus that the SJPLC has had on ecological restoration since the existing plans were developed;”
- “reflect the balance between energy production needs and the protection of other resources;” and
- “reflect the emphasis on key areas of the planning area that have unique and outstanding features and legal definition. . . .”<sup>21</sup>

Those elements require consideration of alternatives in the SEIS that address the elevated impacts of the revised RFD scenario. Yet, the SEIS contains no such alternatives, beyond the measures proposed for air and water quality.

The failure to consider additional alternatives in the SEIS is troubling, because under the revised RFD scenario, the oil and gas industry may drill approximately 1,800 new wells in the GSP, in addition to the 1,200 new wells already forecasted for the broader planning area in the original RFD.<sup>22</sup> Furthermore, under every alternative but the “No Lease Alternative,” at least 93 percent of the GSP is available for leasing,<sup>23</sup> and “there is only a maximum variation of 76 acres of disturbance between Alternatives A, B, C and D. . . .”<sup>24</sup> As a consequence, “the expected impacts from [leasing under] these alternatives would not be measurably different.”<sup>25</sup> Finally, as described in the SEIS, developing the GSP will require construction of over 300 miles of new roads and as many as 1,100 new well pads. Thus, in addition to

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<sup>18</sup> 40 C.F.R. § 1502.14(a); see also *Theodore Roosevelt Conservation P’ship v. Salazar*, No. 10-5386, slip op. at 11-12 (D.C. Cir. Nov. 18, 2011) (requiring the BLM to consider a reasonable range of alternatives in a SEIS).

<sup>19</sup> *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 709 (10th Cir. 2009).

<sup>20</sup> SEIS at 1.2.

<sup>21</sup> *Id.* at 1.14-1.15.

<sup>22</sup> *Id.* at 2.4.

<sup>23</sup> *Id.* at 2.6.

<sup>24</sup> *Id.* at 3.97.

<sup>25</sup> *Id.*

encouraging widespread drilling and road construction, the revised RFD scenario will also promote leasing in an area that, at present, is only 34 percent leased.<sup>26</sup>

Moreover, in similar situations elsewhere, the BLM has considered a broad range of alternatives to protect sensitive areas from the impacts of oil and gas development. Such alternatives include closing wilderness quality lands and critical wildlife habitat to leasing (even when covered by existing leases),<sup>27</sup> leasing with no-surface occupancy stipulations, phased leasing,<sup>28</sup> phased development and requiring directional drilling.<sup>29</sup> For example, in *Theodore Roosevelt Conservation Partnership v. Salazar*,<sup>30</sup> the oil and gas industry sought approval to drill hundreds of new wells over the level previously evaluated by the BLM. In response, the BLM prepared an SEIS in which it evaluated five alternatives, including phased development and prohibiting development in critical wildlife habitat for at least five years.<sup>31</sup> On November 18, 2011, the Tenth Circuit upheld the SEIS, ruling that the range of alternatives was reasonable, because the BLM had “examine[d] different ways in which that proposal could be implemented compared against a baseline of no action.”<sup>32</sup> Because the Agencies have not done so here—the SEIS does not “examine different ways in which” the industry could lease and develop the GSP—they must do so in the Final EIS/LMP.

Furthermore, because MLPs are designed to address resource conflicts in “defined areas,” such as the GSP, and because MLPs are supposed to contain many of the measures not examined in the SEIS, the Agencies should incorporate the San Juan MLP into the Final LMP/EIS as a means of satisfying their NEPA obligation to consider a reasonable range of alternatives.

#### **D. The SEIS’s Description of the Affected Environment is Misleading and Inaccurate.**

The SEIS contains misleading and inaccurate statements about non-oil and gas resources within the GSP. Under NEPA, the Agencies must “describe the environment of the areas to be affected or created by the alternatives under consideration.”<sup>33</sup> This requirement is synonymous with establishing “baseline conditions,” without which “there is simply no way to determine what effect [an action] will have on the

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<sup>26</sup> *Id.* at 2.3. This percentage refers to the percentage of federal mineral estate in the GSP that is currently not leased.

<sup>27</sup> *See, e.g.*, Jack Morrow Hills Coordinated Activity Plan/Green River RMP Amendment at 52 (declining to reoffer expiring leases in area with “sensitive resource values”), available at [http://www.blm.gov/pgdata/etc/medialib/blm/wy/field-offices/rock\\_springs/jmhcap/rod.Par.9393.File.dat/00rod\\_cap.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wy/field-offices/rock_springs/jmhcap/rod.Par.9393.File.dat/00rod_cap.pdf).

<sup>28</sup> *See, e.g.*, Northeast National Petroleum Reserve-Alaska Final Supplemental Integrated Activity Plan/EIS at 2-8 (“BLM may choose a phased approach whereby only some of the lands designated as available are offered for lease in a given lease sale. . . . This could result in enhanced protection of surface resources by giving BLM the opportunity to learn from the previous exploratory drilling and development activities, to modify the standards and requirements of the stipulations and ROPs, and to adopt additional permit requirements.”), available at [http://www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/planning/ne\\_npra\\_final\\_supplement.Par.70661.File.dat/npra\\_final\\_chapter2.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/planning/ne_npra_final_supplement.Par.70661.File.dat/npra_final_chapter2.pdf); Lander Draft RMP and EIS at 81 (making parcels available for lease “starting in the CSU areas outside of crucial winter range”), available at <http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/planning/rmps/lander/drmp-eis/vol1.Par.63459.File.dat/Vol1-005ch2.pdf>.

<sup>29</sup> *See, e.g.*, Jack Morrow Hills Coordinated Activity Plan/Green River RMP Amendment at App. 2-6 (indicating that “intensive mitigation” may be required for development in sensitive areas, including “[m]ultiple-well pads to limit surface disturbances” and “[u]se of direction drilling to minimize disturbance of sensitive areas”); IM 2010-117 at II.B (directing the BLM to consider requiring “[m]ultiple wells on a single pad” as means of resolving resource conflicts in MLP areas).

<sup>30</sup> No. 10-5386, slip op. (D.C. Cir. Nov. 18, 2011).

<sup>31</sup> *Id.* at 7-9.

<sup>32</sup> *Id.* at 15 (internal quotations omitted).

<sup>33</sup> 40 C.F.R. § 1502.15.

environment, and consequently, no way to comply with NEPA.”<sup>34</sup> Furthermore, as federal courts have recognized, this requirement is “critical to” developing a reasonable range of alternatives.<sup>35</sup>

In the SEIS, the Agencies state that as far as “leasing activity” goes within the GSP, there is “little in the way of competing uses” and that the GSP is “a place where past uses and management action have influenced the overall landscape pattern.”<sup>36</sup> These statements may be true for portions of the GSP; however, for other areas, they are misleading or simply inaccurate, as shown by the Agencies’ own findings in the Draft LMP/EIS. For example, in the preferred alternative, the Agencies determined that four areas in the GSP are suitable for management as Management Area (“MA”) 2 and several other areas for MA 3.<sup>37</sup> MA 2 consists of “special areas and unique landscapes,” such as the Dolores River Canyon and Mesa Verde Escarpment, which “would be managed in order to protect and/or enhance their unique characteristics. . . .”<sup>38</sup> While MA 3 “would include relatively unaltered lands where natural ecological processes operate mostly free from human influences.”<sup>39</sup> Further, MA 3 “would continue to contribute to ecosystem and species diversity and sustainability, and to serve as habitat for fauna and flora, wildlife corridors, reference areas, primitive and semi-primitive recreation sites, and places for people seeking natural scenery and solitude. Roads and human structures would be present, although uncommon.”<sup>40</sup> As illustrated in the attached maps, the GSP clearly contains a broad array of important non-extractive resources.<sup>41</sup>

The San Juan MLP would allow the Agencies to more fully and accurately recognize the non-oil and gas resources of the GSP. Furthermore, since establishing baseline conditions is “critical to” developing a reasonable range of alternatives, the San Juan MLP would also allow the Agencies to develop a broader range of measures to protect wilderness quality lands, wildlife and other important resources in the GSP.

### III. THE SAN JUAN MLP SATISFIES THE MLP CRITERIA.

Under IM 2010-117, a MLP is required when five criteria are met: (1) a substantial portion of an area is not currently leased; (2) it has a majority federal mineral interest; (3) the oil and gas industry has expressed a specific interest in leasing; (4) a moderate to high potential exists for oil and gas development; and (5) that development may harm important resource values, such as wildlife and wilderness.<sup>42</sup> As explained below, this proposal satisfies each of those criteria. Therefore, BLM must incorporate a San Juan MLP into the Final LMP/EIS.<sup>43</sup>

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<sup>34</sup> *Half Moon Bay Fisherman’s Marketing Ass’n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988).

<sup>35</sup> *American Rivers v. F.E.R.C.*, 201 F.3d 1186, 1195 n.15 (9th Cir. 1999) (internal quotations & citation omitted).

<sup>36</sup> SEIS at 2.1, 2.3.

<sup>37</sup> Draft EIS at 2.16.

<sup>38</sup> *Id.* at 2.12.

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> See, e.g., Maps 4 (Special Management Areas), 8 (Gunnison Sage Grouse Habitat), 9 (Elk Habitat).

<sup>42</sup> IM 2010-117 at II.

<sup>43</sup> At least one other BLM field office that, like the San Juan Public Lands Office, has already issued its draft RMP stated that it intends to “more fully incorporate[] and disclose[]” in its final RMP. Bighorn Basin Draft RMP and Draft EIS at App. Y-2, available at

<http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/planning/rmps/bighorn/docs/drmp.Par.90328.File.dat/03vol3.pdf>.

**A. A Substantial Portion of the Proposal Area is Not Currently Leased.**

As shown on Map 2, a substantial portion of the proposal area—nearly 70 percent—is not currently leased. This is confirmed by the SEIS, which states that “[a]pproximately 34% of the federal mineral estate within the GSGP area is currently held under lease. . . .”<sup>44</sup> Furthermore, the proposal area contains numerous leases that expired in 2011 or are set to expire within the next three years.<sup>45</sup> These expired leases (and set-to-expire leases) further reduce the percentage of leased land reported in the SEIS. Thus, this proposal satisfies the IM’s first criterion.

**B. The Proposal Area Has A Majority Federal Mineral Interest.**

Approximately 78 percent of the proposal area is federal mineral estate. This is depicted on Map 12, which shows that the proposal area consists largely of federal mineral estate, with a few, widely scattered pockets of non-federal mineral estate. Consequently, this proposal also meets the IM’s second criterion.

**C. The Oil and Gas Industry Has Expressed A Specific Interest in Leasing Within the Proposal Area.**

The oil and gas industry has a specific and ongoing interest in leasing within the proposal area. According to the SEIS, “there has been significant leasing interest from industry on federal mineral estate within the GSGP area since the release of the Draft EIS and increased permitting activity on non-federal mineral estate lands within the GSGP area.”<sup>46</sup> In fact, the BLM prepared the SEIS because in comments on the Draft LMP/EIS, the oil and gas industry stated that it intends to lease and develop the proposal area at a much higher level than originally forecasted.<sup>47</sup>

The oil and gas industry’s interest in leasing within the proposal area is also shown by its significant holdings in and around the proposal area. For instance, the industry has already obtained leases on approximately 34 percent of the GSP, a percentage that would undoubtedly be higher if BLM had not placed a “hold” on leasing pending finalization of the LMP/EIS. Additionally, according to one industry source, private lands along the Highway 491 corridor immediately west of the SEIS analysis area are heavily leased—60 to 70 percent in some areas—and, according to the RFD Addendum, have experienced “considerable permitting activity” in recent years.<sup>48</sup> Finally, in January 2010, the Bill Barrett Corporation proposed the Doe Canyon 3D Seismic Survey Project for 33,600 acres of public lands administered by the Forest Service within the proposal area. Thus, the industry’s existing holdings and development proposals, coupled with its recent “significant leasing interest,” easily satisfy the IM’s third criterion.

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<sup>44</sup> SEIS at 2.3.

<sup>45</sup> See Map 2.

<sup>46</sup> SEIS at 1.1.

<sup>47</sup> *Id.*

<sup>48</sup> RFD Addendum at 27.

**D. A Moderate to High Potential for Oil and Gas Development Exists within the Proposal Area.**

According to the SEIS, the development potential of the proposal area is “moderate.”<sup>49</sup> Based on that potential, the SEIS forecasts that the industry will drill approximately 1,800 wells within the GSP over the next fifteen years—a 150 percent increase in drilling over the level forecasted for the entire planning area in the Draft LMP/EIS.<sup>50</sup> Thus, the “moderate” development potential of the proposal area satisfies the IM’s fourth criterion.

**E. Additional Analysis or Information is Needed to Address Likely Resource or Cumulative Impacts If Oil and Gas Development Were to Occur Within the Proposal Area.**

Additional analysis and information is needed to address the probable consequences of oil and gas development on wilderness quality lands, wildlife and the other following important resources.

**1. Wilderness Quality Lands**

**a. McKenna Peak**

The McKenna Peak Citizens’ Wilderness Proposal (“CWP”) area is located entirely on BLM land in the northeastern portion of the proposed MLP area. It includes the 19,398-acre McKenna Peak Wilderness Study Area (WSA), along with over 13,000 acres of wilderness quality lands outside of the WSA. On November 20, 2011, the Secretary of the Interior identified McKenna Peak as one of eighteen areas across the West that deserve immediate “protection by Congress as national conservation areas or wilderness areas.”<sup>51</sup> As reported by the Secretary, McKenna Peak and the other areas “are spectacular landscapes” and “some of the most compelling candidates” for a wilderness or other conservation designation.<sup>52</sup> A bill recently introduced by Sen. Udall, the San Juan Mountains Wilderness Act of 2011, would do just that—designate McKenna Peak as a wilderness area.<sup>53</sup>

McKenna Peak itself is a highly symmetrical, gray-colored cone with radiating ridge-spines and gullies. Vegetation on the peak is sparse, composed of scattered grasses and colorful wildflowers with widely separated pinyons and junipers lining the ridges. North and east, an impressive ridge of sandstone cliffs forms a towering backdrop rising 2,000 feet above shale badlands. Atop these cliffs is a lush forest of ponderosa pine and Douglas fir, providing a cool refuge in summer from the shimmering heat of the badlands. Other natural features of interest include rich fossil beds containing Cretaceous era (100 million years ago) clams and brachiopods.

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<sup>49</sup> *Id.* at 32.

<sup>50</sup> *Id.* at 38.

<sup>51</sup> Press Release, BLM, Salazar Highlights 18 Backcountry Areas Deserving Congressional Protection as Conservation Lands or Wilderness (Nov. 10, 2011), *available at* [http://www.blm.gov/wo/st/en/info/newsroom/2011/november/NR\\_11\\_10\\_2011.html](http://www.blm.gov/wo/st/en/info/newsroom/2011/november/NR_11_10_2011.html); *see also*, BLM, Preliminary Report on BLM Lands Deserving Protection as National Conservation Areas, Wilderness or Other Conservation Designations at 8 (Nov. 2011), *available at* <http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=267130> (discussing values of McKenna Peak that justify a congressional designation).

<sup>52</sup> Report on BLM Lands Deserving Protection as National Conservation Areas, Wilderness or Other Conservation Designations at 2 (Nov. 2011).

<sup>53</sup> S. 1635, 112th Cong. § 3 (2011).

McKenna Peak also provides important winter wildlife habitat for large numbers of deer and elk. It borders North Mountain, which has one of the largest deer and elk herds in all of Colorado. The Colorado Division of Wildlife places winter numbers of deer at 500 to 600, with up to 150 wintering elk. Bald eagles winter in the lower reaches of the area, and peregrine falcons have been sighted as well. Mountain lions, bobcats, and black bear are also known to inhabit McKenna Peak.

Scientific and recreational opportunities abound in McKenna Peak. The diverse topography of the area creates interesting hiking up any of the numerous draws and arroyos, with the rim-rocked ridges and buttes posing challenging obstacles for those pursuing the summits. These huge sandstone cliffs induce a tremendous sense of isolation. Additionally, the favorable habitat for wildlife is a strong attraction for hunters; in fact, over 30,000 recreation user days are recorded annually during hunting season in the game management unit of which McKenna Peak is a part. Finally, richly fossiliferous formations offer outstanding possibilities to paleontologists, both amateur and professional. McKenna Peak's adobe badlands offer scientific interest to the geologist interested in weathering and erosion processes.

#### **b. Dolores River Canyon**

The Dolores River Canyon CWP is a pristine desert area containing some of the most outstanding canyon scenery in all of Colorado. It includes the 28,668-acre Dolores River Canyon WSA and approximately 12,000 acres of additional wilderness quality lands, as well as a segment of the Dolores River recommended as "wild" under the National Wild and Scenic Rivers Act of 1968. Twelve formations spanning 160 million years of geologic history are exposed by the river in the canyon; the predominant formation is the red Wingate sandstone. Cliffs rise to benches of bedrock 500 to 700 feet above the river in the CWP, with the canyon rim 1,100 feet above the river. Tributary canyons include La Sal Creek, Coyote Wash, Spring Canyon, Bull Canyon and Wild Steer Canyon, all of which are delightful canyons of sculpted slickrock and plunge pools.

Wildlife in the CWP includes the once endangered peregrine falcon, which nests in nearby Paradox Valley and may hunt in the Dolores River Canyon. Golden eagles nest here and bald eagles can also be seen. Mule deer, mountain lions and bobcats are common, and the canyon is considered prime habitat for desert bighorn sheep and river otters.

The Dolores River Canyon is extremely popular with boaters, and during late May and early June, thousands of rafters typically enjoy the many rapids in the canyon. Hiking is popular in the tributary canyons—prehistoric petroglyphs are found in many of them—and Coyote Wash is a favorite stopping place for rafters. Additionally, the mesa tops offer spectacular views of the La Sal Mountains. Vegetation varies from pinyon-juniper woodlands, oakbrush and sagebrush on the mesa uplands to tamarisk, willows, boxelder, rushes, sedge and occasional cottonwoods along the river. A number of rare plants grow within the Dolores River Canyon WSA, including the Eastwood monkeyflower, Kachina daisy and *Mertensia arizonica*.

#### **c. Snaggletooth**

The Snaggletooth CWP is named for a rapid in the Dolores River, and consists of 31,684 acres of land managed by the BLM and U.S. Forest Service. Snaggletooth contains the renowned Ponderosa Gorge of the Dolores River—home to one of the West's most exquisite wilderness adventures, a quick-paced float past stands of ancient, yellow-barked ponderosa pine. Spectacular campsites among the towering pines

are available throughout the gorge, while soaring cliffs of brilliant red Wingate sandstone provide a fitting background to this incredible wilderness setting.

Snaggletooth covers approximately 30 river miles from the popular Bradfield Bridge launch site downstream past the Snaggletooth rapid. This segment is among the most cherished and rarest wilderness river floats in the Southwest—cherished because of the serene beauty of the Ponderosa Gorge and rare because of the short boating season. The river’s great recreational appeal has led the BLM to designate and manage Snaggletooth as part of the Dolores River Special Recreation Management Area. BLM estimates that the area has more than 12,500 visitor days annually during the brief boating season, typically just a few weeks in May and June.

While the Ponderosa Gorge is breathtaking, the river below Mountain Sheep Point offers charms of a different sort. The river corridor here begins its transformation—from mountain stream to a desert river. The corridor vegetation grows progressively sparser and drier, with box elders and tamarisk taking hold. Pinyon-juniper woodlands dominate the higher canyon slopes, and the ponderosa forest, dense at the Bradfield Bridge launch site, thins dramatically below the Dove Creek Pump Station launch site and is replaced by overhanging clumps of box elder, which offer refreshingly cool and secluded campsites for river runners. The Forest Service component of the CWP consists largely of the rugged eastern tributary canyons and the sloping tablelands above these canyons, dominated by ponderosa pine forest.

River otters were reintroduced to the Dolores River by the Colorado Division of Wildlife in the 1970s and now thrive. Other wildlife species found in the river corridor include mule deer, black bear, mountain lion and numerous raptors. Boaters also enjoy the area’s significant cultural resources, including an intact cliff dwelling located just upstream from the Dove Creek Pump Station. This dwelling, and numerous other archaeological sites, makes the area important for future research focused upon understanding prehistoric cultures.

#### **d. Weber-Menefee CWP**

The Weber-Menefee CWP (14,652 acres) consists almost entirely of the Menefee Mountain WSA (7,089 acres) and Weber Mountain WSA (6,303 acres), and provides important, undisturbed wildlife habitat set among the ranches and farms of the Mancos Valley. The two mountains are prominent buttes, rising from 6,500 to over 8,200 feet, capped with erosion resistant sandstone that forms sheer cliffs. These cliffs, combined with dense vegetation, allow visitors to experience a sense of solitude in the area. Around the mountains, farming and ranching have cleared the land, leaving only the mountains with good vegetative cover. This cover consists of pinyon-juniper woodlands, oakbrush and mountain mahogany with scattered stands of Douglas fir and ponderosa pine above 7,000 feet.

Mule deer herds migrate along the bottom slopes of the mountains for winter range. Weber Mountain, along with adjacent Menefee Mountain, offers a valuable refuge with ridgetops that blow free of snow and protective valleys between. Deer can migrate to the lower, warmer lands of the Ute Indian Reservation to the south. High concentrations of black bears and mountain lions, perhaps moving out from the un hunted populations in neighboring Mesa Verde National Park, also inhabit the area. Rare Mexican spotted owls that nest in adjacent Mesa Verde National Park have been observed on the adjacent Ute Reservation. At least six pairs of golden eagles reside in the WSAs, and bald eagles hunt there as well.

Weber Mountain and Menefee Mountain offer wonderful opportunities for solitude, fine scenery and backcountry recreation in close proximity to Mesa Verde National Park. The ruggedness of the area creates prime opportunities for hiking, backpacking and climbing, and the cliff tops offer dramatic vantage points for sight-seeing and photography. The existing Mesa Verde Wilderness is closed to recreational use, as is all of the backcountry in Mesa Verde, in order to protect the archaeological sites in the National Park. Weber Mountain is the most prominent feature visible from the main entrance road into the park as it climbs up the cliffside to the mesa top.

**e. Inventoried Roadless Areas**

The southeastern section of the proposal area is bordered by Inventoried Roadless Areas, including areas that are recommended for wilderness designation in the Draft LMP/EIS. Significantly, the Hermosa proposed wilderness area, which is recommended wilderness in the preferred alternative, is directly adjacent to the proposal area. Leasing and development decisions should take into consideration potential impacts to air and water quality of these adjacent roadless areas.

**2. Important Wildlife and Plant Species**

**a. Gunnison sage-grouse**

The Gunnison sage-grouse (*Centrocercus minimus*) is a unique species of grouse found only in sagebrush uplands in a small area (roughly 1,115 square miles) of southwestern Colorado and southeastern Utah.<sup>54</sup> Historically, there has been an over 90% loss in Gunnison sage-grouse habitat, and the species currently occupies only 10 percent of its historic range. Today, there are only seven widely scattered and isolated populations of Gunnison sage-grouse in Colorado and Utah<sup>55</sup>, and the total population has declined to an estimated 4,386 individuals.<sup>56</sup> Population trends over the last 9 years indicate that six of the seven populations are in decline. In addition, six of the populations are very small and fragmented.<sup>57</sup> At least five, and most likely six, of the populations are at high risk of extirpation due to declining population trends and small population size.<sup>58</sup> The loss of any one population would have a negative effect on the species as a whole.<sup>59</sup> The Gunnison Basin population is the largest remaining population, and the only population that has been stable in recent years. All seven populations face significant threats, and there are inadequate regulatory mechanisms in place to protect extant populations from threats. As a consequence, the Gunnison sage-grouse became a candidate for protection under the Endangered Species Act (“ESA”) in September of 2010.<sup>60</sup> The U.S. Fish and Wildlife Service (“FWS”) will make a determination regarding whether to list the species as endangered or threatened, and whether to designate critical habitat, in 2011.<sup>61</sup>

It is imperative that BLM take decisive action to put adequate regulatory mechanisms in place to protect remaining populations on BLM lands. The six populations outside of the Gunnison Basin cannot sustain

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<sup>54</sup> Endangered and Threatened Wildlife and Plants; Determination for the Gunnison Sage-grouse as a Threatened or Endangered Species, 75 Fed. Reg. 59,804 (Sept. 28, 2010).

<sup>55</sup> See *id.* at 59,808-809 (the seven populations are Gunnison Basin, San Miguel Basin, Monticello-Dove Creek, Pinon Mesa, Crawford, Cerro Summit-Cimarron-Sims Mesa, and Poncha Pass).

<sup>56</sup> See *id.* at 59,810 (estimate based on 2009 lek count data).

<sup>57</sup> *Id.* at 59,808-809.

<sup>58</sup> *Id.* at 59,845.

<sup>59</sup> *Id.* at 59,844.

<sup>60</sup> *Id.* at 59,804.

<sup>61</sup> Personal Communication, Dan Reinkensmeyer, U.S. Fish and Wildlife Service, November 2011.

any further negative impacts, given that they are already at high risk of extirpation solely from declining population trends and small population trends. These populations must be increased in size in order to prevent extirpation.

The San Juan MLP area covers an area that includes substantial portions of the San Miguel Basin population, and the Dove Creek subpopulation of the Dove Creek-Monticello population.<sup>62</sup> The northeastern section of the San Juan MLP includes a portion of the San Miguel Basin population. The western portion of the San Juan MLP contains part of the Dove Creek subpopulation.<sup>63</sup> These areas constitute important occupied Gunnison sage-grouse habitat, including active lek sites, breeding habitat, production areas, severe winter range and winter range.

The 2010 population estimate for the entire San Miguel Basin population was only 123 birds, on nine leks.<sup>64</sup> The population has declined by 40 percent since 2004, despite the fact that Colorado Parks and Wildlife has been translocating Gunnison sage-grouse from the Gunnison Basin into San Miguel Basin on a yearly basis since the spring of 2006 (with the exception of 2007).<sup>65</sup> According to FWS, cumulative factors may be combining to cause the future extirpation of this population.<sup>66</sup>

The 2010 population estimate for the Dove Creek subpopulation was only 44 individuals on 2 leks.<sup>67</sup> According to FWS, based on the most recent population estimates and overall declining population trend, the Dove creek population may soon be extirpated.

The BLM must take decisive action to put adequate regulatory mechanisms in place to protect the San Miguel Basin and Dove Creek populations from threats posed by activities authorized by BLM. Unfortunately, neither the Draft LMP/EIS nor the SEIS contain adequate regulatory mechanisms to protect these important populations, and implementation of the preferred alternative in the Draft LMP/EIS, as it currently stands, will increase the already high likelihood of extirpation of these populations in the near future.

#### **b. Gunnison's prairie dog**

The proposal contains overall Gunnison's prairie dog range, which includes active colonies. The portions of the Gunnison's prairie dog population within the proposal area are candidate species for ESA protection. Within this portion of the range, plague has significantly reduced the number and size of populations, resulting in considerable negative effects to the species. Populations within montane habitat have distinct disadvantages in resisting the effects of plague due to a high abundance of fleas that spread plague, small populations that cannot recover in numbers from plague epizootics, and isolated populations that limit the ability to recolonize. Poisoning and shooting continue to be threats to the Gunnison's prairie dog within the montane portion of its range and contribute to the decline of the species when combined with the effects of disease. Agriculture, urbanization, roads and oil and gas development each currently affect a small percentage of Gunnison's prairie dog habitat. All of these factors cumulatively contribute to ongoing declines of Gunnison's prairie dog.

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<sup>62</sup> Map 9.

<sup>63</sup> The Dove Creek subpopulation is part of the Monticello-Dove Creek population.

<sup>64</sup> 75 Fed. Reg. at 59,811 and citations therein.

<sup>65</sup> *Id.* at 59,845, 5,9811.

<sup>66</sup> *Id.* at 59,845.

<sup>67</sup> *Id.* at 59,811.

The unimpeded functions of such ecological systems are extremely important to sustain, as these complexes with burrows typically support a highly interrelated community of mammals, avian species, raptors, reptiles and vegetation. Given the number of interrelated species and natural communities in these complexes, it is especially important to eliminate or minimize the many potential disturbances associated with oil and gas development. Such disturbances can include human or vehicular activity near or during breeding or nesting, vibrations and alternation of hydrology, erosional patterns and burrows, habitat fragmentation caused by roads and the spread of nonnative vegetation.

### **c. Raptors**

The proposal area provides important nesting and hunting habitat for several birds of prey, including bald eagle and peregrine falcon.<sup>68</sup> Several of these species are currently experiencing population declines, and oil and gas development and associated infrastructure and disturbance of nest sites and hunting grounds is suspected to be a contributing factor. Based on ongoing concerns about these impacts to raptors of all kinds, the FWS has recently issued draft guidelines for managing activities such as oil and gas drilling in raptor habitat. These guidelines are being adhered to already by the BLM in other resource management decisions in several field offices in Utah, and should be considered in the development of management prescriptions for this proposal area.

### **d. Big Game and Wide-Ranging Mammals**

Given the elevational gradients encompassed by the proposal area, it is perhaps not surprising that the area includes important habitat for economically important big game and for other wide-ranging mammals. In particular, the north portion of the proposal area includes elk and mule deer winter range. A small extent of mapped elk production area is found near the center of the area. Mapped mule deer winter concentration area is found across the area, particularly in the north and south sections. In addition, significant mapped black bear fall concentration area is found in the central and southern portions of the area. Finally, big horn sheep production area and winter range and concentration area is mapped in the northwest portion of the MLP. Energy development in these habitats should be managed to minimize loss, fragmentation and degradation of these habitat types, and to avoid disturbance in seasonal habitats during the season of use (e.g., avoid disturbance during elk calving in elk production areas).

The proposal area also includes important connectivity opportunities for a variety of wildlife species. The Draft LMP/EIS discusses challenges posed by habitat fragmentation and the importance of protecting wildlife corridors to promote connectivity.<sup>69</sup> The proposed MLP area, which encompasses or is near to multiple Inventoried Roadless Areas, Wilderness Areas, Wilderness Study Areas, and the Dolores River Corridor, is in the midst of a landscape which is significant for many species not only in terms of habitat but in the context of providing linkages among the intact ecosystems surrounding it. Therefore, as part of leasing and development decisions for the GSP, the agencies should identify and protect wildlife corridors to ensure that usable habitat and migration pathways will remain.<sup>70</sup>

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<sup>68</sup> Maps 5, 11.

<sup>69</sup> Draft EIS at 3.145, 3.154, 3.174.

<sup>70</sup> In other RMPs, the BLM has established or proposed specific protections for wildlife migration corridors. See Approved Pinedale RMP at 2-57 (closing areas to leasing in part to “maintain and improve” “big game migration corridors and bottlenecks”), available at [http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/planning/rmps/pinedale/rod.Par.45058.File.dat/05\\_Record\\_of\\_Decision\\_and\\_Approved\\_Pinedale\\_RMP.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wy/programs/planning/rmps/pinedale/rod.Par.45058.File.dat/05_Record_of_Decision_and_Approved_Pinedale_RMP.pdf); Lower Sonoran/Sonoran Desert National Monument Draft RMP/EIS at 79-80

Reduction in habitat connectivity through increased fragmentation—due to roads, residential and commercial development, energy development, and off-road vehicles—substantially decreases the amount of ecologically intact core habitat available for many wildlife species. Ecologists have long recognized that the loss of core habitat and habitat connectivity pose the greatest threats to species persistence and overall biodiversity.<sup>71</sup>

Through land use plans, federal agencies plan for land management at the landscape level, which gives the agencies the ability to designate and protect naturally-occurring wildlife corridors. The BLM has the legal authority to implement protective management of wildlife corridors, and also the legal obligation to address threats to wildlife and wildlife habitat as stewards of the western public lands. Protecting wildlife corridors through administrative designations, like ACECs, is consistent with the BLM’s obligations under the Federal Land Policy and Management Act (“FLPMA”) and NEPA.

We have attached to this proposal a policy brief that details the legal and policy framework for designating wildlife corridors on BLM lands, and we hope the agencies will utilize this brief in preparing an MLP for the Gothic Shale Play.

**e. Rare Plants**

Many species of rare and imperiled plants are found within the boundary of the San Juan MLP area. These plant species are sensitive to oil and gas development, and will be negatively affected by the construction of new roads, well pads and other infrastructure needs. Introduction of invasive plant species and improved access to remote areas will also negatively impact these native plant species. The Colorado Natural Heritage Program has identified many Potential Conservation Areas (PCAs) within the San Juan MLP area which serve as important habitat for rare plants. Those PCAs and their relative values are detailed below in the “Special Designations” section.

**3. Special Designations (Existing and Proposed)**

**a. Big Gypsum Area of Critical Environmental Concern**

The nominated Big Gypsum Valley Area of Critical Environmental Concern (“ACEC”) is contiguous with the Big Gypsum Valley Colorado Natural Heritage Program (“CNHP”) Potential Conservation Area. The CNHP has given this PCA a biodiversity significance rank of B1 - outstanding biodiversity significance, which suggests that it is one of the most important places within the SJPLC for maintaining species diversity. The Big Gypsum Valley ACEC harbors multiple species values, including the Gypsum Valley cateye, a rare plant species which is globally critically imperiled and merits BLM sensitive status; a diversity of lichen species that are associated with the Gypsum Valley cateye, including three globally and state rare lichen species; the Nealley’s dropseed, a state rare plant; and the weak-stemmed mariposa lily, a state rare plant listed as sensitive by the Forest Service.

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(proposing to designate “Wildlife Movement Corridors” (WMCs) for the purpose of “assist[ing] wildlife in safe passage from one area to another; closing WMCs to leasing, limited road densities and concentrating surface disturbance in “less sensitive resource areas or in areas already disturbed”), available at [http://www.blm.gov/pgdata/etc/medialib/blm/az/pdfs/planning/son\\_des/drmp.Par.36024.File.dat/Chapt-2.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/az/pdfs/planning/son_des/drmp.Par.36024.File.dat/Chapt-2.pdf).

<sup>71</sup> Wilcove et al. (1998).

The MLP should give special consideration to the larger Gypsum Management Area which is contemplated in Alternative C of the Draft LMP/EIS, rather than the much smaller area which is designated in the preferred alternative. The larger area contains the species values listed above, which could be adversely affected by gas development.

**b.        Narraguinnep Research Natural Area**

The Narraguinnep Research Natural Area (“RNA”) is an existing RNA that is proposed for retention in the Draft LMP/EIS. Its canyon topography provides for a range of species, including old-growth ponderosa pine forests, pinyon-juniper woodlands and mountain shrublands. Because the Narraguinnep RNA contains many species that are endemic to southwestern Colorado, and the area remains in a predominately natural state, it allows for exceptional research opportunities. Natural, unaltered ecosystems such as the Narraguinnep RNA are especially valuable to land managers in the context of climate change study and adaptation.

**c.        National Monuments and Parks**

The southern border of the proposal area is directly adjacent to Mesa Verde National Park, and Canyons of the Ancients National Monument is nearby to the west. These areas were designated primarily to protect significant cultural resources, and are important tourist destinations. Special consideration should be given to management decisions within the planning area that have the potential to negatively impact the National Park or the Monument, such as by degrading scenic viewsheds, natural soundscapes or air quality.

**d.        Potential Conservation Areas**

The proposal area contains sixteen Potential Conservation Areas (“PCAs”).<sup>72</sup> PCAs “focus on capturing the ecological processes that are necessary to support the continued existence of a particular element of natural heritage significance. [PCAs] may include a single occurrence of a rare element or a suite of rare elements or significant features.”<sup>73</sup> Each PCA is given a Biodiversity Significance Rank by the Colorado Natural Heritage Program on a system that goes from B5 (general interest/open space) to B1 (outstanding biodiversity significance).<sup>74</sup>

Potential Conservation Area	Element(s)	Biodiversity Significance Rank
Big Gypsum Valley (21,358 acres)	<ul style="list-style-type: none"> <li>• Gypsum Valley cateye</li> <li>• Weak-stemmed mariposa lily</li> <li>• Nealley’s dropseed</li> </ul>	2
Coyote Wash (5,584 acres)	<ul style="list-style-type: none"> <li>• Western slope grasslands</li> <li>• Kachina daisy</li> <li>• Helleborine</li> </ul>	2

<sup>72</sup> Map 4.

<sup>73</sup> CNHP, Data Dictionary for Potential Conservation Area Transcription Reports from the Colorado Natural Heritage Program at 1, available at <http://www.cnhp.colostate.edu/download/dictionary/Data%20Dictionary%20for%20PCA%20Reports.pdf>

<sup>74</sup> CNHP, Data Dictionary for Potential Conservation Area Transcription Reports from the Colorado Natural Heritage Program at 4, available at <http://www.cnhp.colostate.edu/download/dictionary/Data%20Dictionary%20for%20PCA%20Reports.pdf>.

	<ul style="list-style-type: none"> <li>• Spotted bat</li> <li>• Eastwood monkey-flower</li> </ul>	
Disappointment Valley Northwest (4,204 acres)	<ul style="list-style-type: none"> <li>• Gypsum Valley cateye</li> <li>• Naturita milkvetch</li> </ul>	2
Dolores Canyon—Slick Rock to Bedrock (18,038 acres)	<ul style="list-style-type: none"> <li>• Foothills riparian shrubland</li> <li>• Coyote willow/mesic graminoid</li> <li>• Paradox breadroot</li> <li>• Eastwood monkey-flower</li> <li>• Hanging gardens</li> <li>• Roundtail chub</li> <li>• Smooth cliff-brake</li> <li>• Helleborine</li> <li>• Yuma skipper</li> </ul>	2
Dolores—Norwood Road (9,867 acres)	<ul style="list-style-type: none"> <li>• Cushion bladderpod</li> </ul>	2
Dolores River at Ferris Canyon (31 acres)	<ul style="list-style-type: none"> <li>• Narrowleaf cottonwood riparian forests</li> </ul>	2
Dry Creek Basin (14,207 acres)	<ul style="list-style-type: none"> <li>• Little penstemon</li> <li>• Pygmy sagebrush</li> <li>• Gypsum Valley cateye</li> <li>• Naturita milkvetch</li> </ul>	2
Little Gypsum Valley (2,511 acres)	<ul style="list-style-type: none"> <li>• Naturita milkvetch</li> <li>• Little penstemon</li> <li>• Gypsum Valley cateye</li> </ul>	2
McIntyre Canyon (3,109 acres)	<ul style="list-style-type: none"> <li>• Naturita milkvetch</li> <li>• Mesic western slope pinyon-juniper woodlands</li> <li>• Eastwood monkey-flower</li> <li>• Xeric western slope pinyon-juniper woodlands</li> <li>• Hanging gardens</li> </ul>	2
Mesa Verde Aqueduct (160 acres)	<ul style="list-style-type: none"> <li>• Mesa Verde stickseed</li> </ul>	2
Mesa Verde Entrance (3,457 acres)	<ul style="list-style-type: none"> <li>• San Juan gilia</li> <li>• Little penstemon</li> <li>• Gray's townsend-daisy</li> </ul>	2
Miramonte Reservoir West (4,831 acres)	<ul style="list-style-type: none"> <li>• Parish's alkali grass</li> <li>• Cushion bladderpod</li> </ul>	1
Plateau Creek (11,984 acres)	<ul style="list-style-type: none"> <li>• Cushion bladderpod</li> <li>• Lone Mesa snakeweed</li> <li>• King's clover</li> </ul>	1
San Miguel Basin (101,125 acres)	<ul style="list-style-type: none"> <li>• Gunnison sage-grouse</li> <li>• Sage sparrow</li> </ul>	2
Slick Rock (3,555 acres)	<ul style="list-style-type: none"> <li>• Naturita milkvetch</li> <li>• Little penstemon</li> </ul>	2
Spring Creek Basin	<ul style="list-style-type: none"> <li>• Pygmy sagebrush</li> </ul>	2

(33,969 acres)	<ul style="list-style-type: none"> <li>• Weak-stemmed mariposa lily</li> <li>• Gypsum Valley cateye</li> <li>• Saline bottomland shrublands</li> <li>• Cold desert shrublands</li> <li>• Little penstemon</li> </ul>	
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All of the PCAs within the proposal area are ranked either B1 or B2. Many of the rare plants and important conservation values within this region are located in one of these important PCAs. Protecting PCAs will help to conserve the many different species that are within the proposal area. We recommend that energy development avoid these PCAs. Where that is not possible, energy development should be managed carefully such that the values that the PCAs were designated around are protected.

**e. Unique Landscapes<sup>75</sup>**

**i. Dolores River Corridor**

The Dolores River Unique Landscape carves one of America's premier wild river canyons. Renowned features of the Dolores River include magnificent stands of old-growth ponderosa pine, thrilling whitewater rapids such as Snaggletooth, sheerwalled sandstone canyons, and hidden archeological treasures. The Dolores River's scenic grandeur and ecological richness have been found suitable for Wild and Scenic designation since 1975. Whitewater enthusiasts, naturalists, and other backcountry users of all stripes value the rugged beauty, wildlife, quiet solitude and connection to history these canyons offer. The river's scenery, geology, fish, wildlife, plant communities and human history are woven into a continuum of ever changing wonders.

The Dolores River Corridor, including the Dolores River Canyon WSA, surrounding wilderness-quality lands and tributaries, with towering colorful sandstone cliffs, river otter, peregrine falcon and outstanding opportunities for remote wilderness experiences, merits the highest possible level of protection. Few streams boast the unique natural values—and extent of threats to those values—as are found along the Dolores River. The Dolores River and its tributaries are the evocative, awe-inspiring lifeblood for many human and wildlife communities in far western Colorado. In the face of accelerating change in the west, we must preserve the Dolores River Basin's unique geology, profoundly moving scenery, diverse recreational opportunities, and precious water resources for people, wildlife and healthy natural systems.

The managing federal agencies have consistently recognized the many wilderness, recreation, wildlife and scenic values of the Dolores, and the river corridor's "unique landscape" management status is proposed to be carried through to the revised LMP under the preferred alternative.

**ii. McPhee**

The McPhee Unique Landscape includes the McPhee Reservoir, which is a recreation destination for local communities and tourists, providing opportunities for boating, canoeing, fishing and camping. The area also contains winter range for big game. The McPhee Unique Landscape also includes the Anasazi

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<sup>75</sup> In the Draft LMP/EIS, "unique landscapes" are defined as areas that "posses[] one or more special feature, or characteristic, that would make them and their management unique from other areas within the planning." Draft EIS at 2.12.

Archeological District, which harbors nearly 1,000 archeological sites and is listed on the National Register of Historic Places.<sup>76</sup> The prehistoric sites found here include hunting and gathering camps, pit structures, rock shelters and other ancient remnants of Anasazi settlement dating back as far as 4,000 years.

### **iii. Mesa Verde Escarpment**

According to the Draft LMP/EIS, the Mesa Verde Escarpment contains the highest density of Ancestral Puebloan architectural sites on public lands in the planning area.<sup>77</sup> The area, therefore, provides significant education and research opportunities. The Mesa Verde Escarpment is directly adjacent to Mesa Verde National Park, is a popular tourist and recreation destination and includes portions of two PCAs.

### **iv. Old Growth Restoration Sites**

Potential old growth restoration areas within the proposed MLP area include possibly the best remaining old-growth ponderosa site in the Dolores District. The Smoothing Iron and Boggy Old Growth Areas are designated as special management sites in Alternative C of the Draft LMP/EIS. These important old growth restoration sites warrant careful consideration in oil and gas leasing and development decisions.

Old-growth ponderosa pine is the least protected forest type in the San Juans, with an estimated 5 percent of original old-growth remaining. The Draft LMP/EIS acknowledges this: “Due to their rarity, old-growth ponderosa pine forests have particular biological diversity significance within the planning area (these forests have been extensively harvested in the past).”<sup>78</sup> In order to preserve this important resource, road-building and other surface occupancy should be prohibited to maintain, and recreate where possible, roadless pockets to ensure long-term protection for a restored ecosystem.

## **4. Water Resources**

According to the Draft LMP/EIS, the water required to facilitate development of the GSP is enormous, especially in the context of much of the area being semi-arid climatically. In the Dolores River watershed much of the water resource is already allocated, and the long term forecast predicts diminished water supplies. According to the SEIS, unconventional gas wells in the Paradox Basin will use approximately 7.9 to 13.1 acre-feet (2,574,222 to 4,268,648 gallons) per well of water in the well drilling and completion process.<sup>79</sup>

Due to the restriction noted in the SEIS on acquiring water from public surface water, the GSP water needs will need to be satisfied from private sources. These private water sources are currently undefined; however, one potential water source is the Dolores Water Conservancy District’s Municipal and Industrial (M & I) water. This M & I water is available for purchase at a fixed price over a long time frame; however, it has been emphasized by some that this water is “expensive” in the overall spectrum of water pricing.

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<sup>76</sup> Draft LMP at 226.

<sup>77</sup> Draft LMP at 209.

<sup>78</sup> Draft EIS at 3.110.

<sup>79</sup> SEIS at 3.60.

The development timeline envisioned in the RFD notes that through 2023 there would be an annual drilling rate of 118 wells per year.<sup>80</sup> This estimate, along with the RFD's per-well estimate, computes to an annual water consumption rate for the GSP of 932 to 1,617 acre-feet. Contextually, this is enough water to supply 185 to 325 households annually (Denver Water Board). It should be noted this projection of water consumption is linked to the RFD's scenario, and certainly the annual rate of drilling and correlated water consumption could be much greater if there are no limiting regulatory factors utilized, such as phased leasing and/or development.

## 5. Scenic Resources

The public lands in southwestern Colorado offer stunning scenery that inspires locals and attracts visitors from around the state and the west. From the majestic peaks rising out of vast high-altitude wilderness areas, to the colorful canyons sloping down to wild rivers, to adobe badlands surrounded by sandstone cliffs, the visual resources stewarded by the SJPLC are expansive and worthy of protection.

The proposal area includes significant amounts of land that are categorized as high scenic integrity and/or VRM I and II in the Draft LMP/EIS's preferred alternative. Protecting visual resources is important to providing enjoyable experiences to public lands visitors, and is required by FLPMA, NEPA and the BLM Manual.<sup>81</sup> Once established, VRM objectives are as binding as any other resource objectives, and no action may be taken unless the VRM objectives can be met.<sup>82</sup> Therefore, leasing and development decisions in the MLP area must account for and comply with visual resource management decisions in the land use plan.

## IV. ADDITIONAL CONSIDERATIONS CONCERNING THE SAN JUAN MLP

### A. BLM Has Discretionary Authority to Prepare the San Juan MLP.

As explained above, IM 2010-117 requires preparation of an MLP when five criteria are met. Because this proposal satisfies each of those criteria, the BLM must include a San Juan MLP in the Final LMP/EIS. However, the BLM also has discretionary authority to prepare the San Juan MLP, since the IM authorizes MLPs when "other circumstances" are present.<sup>83</sup> Although the IM does not define or enumerate those circumstances, the BLM has repeatedly exercised its discretionary authority to prepare MLPs when proposals do not satisfy one or more of the IM's criteria.<sup>84</sup> Moreover, under the Colorado Leasing Strategy, the BLM is supposed to continually evaluate and identify new areas for preparation of MLPs.<sup>85</sup> Thus, the BLM also has discretionary authority to include the San Juan MLP in the Final LMP/Final EIS.

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<sup>80</sup> RFD Addendum at 35.

<sup>81</sup> Under the authority of FLPMA, the BLM must prepare and maintain on a continuing basis an inventory of visual values for each RMP effort. 43 U.S.C. § 1701; BLM Manual MS-8400.06. NEPA requires that measures be taken to "assure for all Americans . . . aesthetically pleasing surroundings." The objective of the BLM's VRM policy is to "manage public lands in a manner which will protect the quality of the scenic (visual) values of these lands." BLM Manual MS-8400.02.

<sup>82</sup> *S. Utah Wilderness Alliance*, 144 IBLA 70, 86 (1998).

<sup>83</sup> IM 2010-117 at II.

<sup>84</sup> For example, the BLM determined that MLP proposals for five areas in Colorado did not meet the IM's criteria; however, the BLM still exercised its discretionary authority provided by the IM to prepare a MLP analysis for each of those five areas. BLM CO Oil and Gas Leasing Reform Implementation Strategy at 8, *available at* [http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/oil\\_and\\_gas/leasing.Par.79557.File.dat/Draft%20CO%20LR%20Implementation%20strategy\\_Final.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/co/programs/oil_and_gas/leasing.Par.79557.File.dat/Draft%20CO%20LR%20Implementation%20strategy_Final.pdf).

<sup>85</sup> Colorado Leasing Strategy at 9.

**B. The Agencies Have the Authority to Evaluate and Address the Impacts of Oil and Gas Leasing on the San Juan National Forest in the San Juan MLP.**

Because IM 2010-117 provides BLM with the authority to evaluate and address the impacts of oil and gas leasing and development on national forests, the Agencies should do so in the San Juan MLP. First, the IM authorizes and directs the BLM to evaluate the impacts of oil and gas activity on “nearby” lands managed by other federal agencies.<sup>86</sup> Here, the proposal area includes 325,981 acres of the San Juan National Forest,<sup>87</sup> portions of which are directly adjacent to public lands managed by the BLM.

Second, the IM requires the BLM to evaluate the impacts of oil and gas development on resources co-managed by the Agencies.<sup>88</sup> As shown on the attached maps, the proposal area includes several important resources co-managed by the two agencies, including critical wildlife habitat,<sup>89</sup> wildlife migration corridors<sup>90</sup> and wilderness quality lands.<sup>91</sup> All of those resources would benefit from a coordinated and consistent management approach for oil and gas leasing and development (i.e., an MLP).

Third, the Agencies are already cooperating on preparation of the EIS/LMP. As explained in the Draft EIS/LMP:

[i]n April 2004, the SJPLC began a joint long-term planning effort to revise the USFS’s San Juan National Forest Land Management Plan (LMP) (1983) and the BLM’s San Juan/San Miguel Resource Management Plan (RMP) (1985) covering the San Juan public lands. This joint revision provides the opportunity for creating consistent land management direction between the two land management agencies, as well as for seamless public participation in the planning process.<sup>92</sup>

Thus, the Agencies are well-positioned to prepare and include a MLP in the Final EIS/LMP.

Fourth, the Agencies have previously developed joint management plans to address the shared impacts of oil and gas activity. For example, several years ago, the Agencies jointly prepared a draft EIS for a full field development project in northwest Montana.<sup>93</sup> The project area, like the proposal area, contained public lands administered by both agencies, along with wildlife habitat, migration corridors and other co-managed resources.<sup>94</sup> Moreover, in the Montana example, the Forest Service managed a significantly higher percentage of the public lands (75 percent) than it does in the San Juan MLP area (28 percent).<sup>95</sup> Thus, the Agencies should follow the precedent set in Montana (and elsewhere) and jointly prepare the San Juan MLP.

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<sup>86</sup> IM 2010-117 at II.A. Additionally, if the Forest Service consents, the BLM has the authority to lease the national forests for oil and gas development. 30 U.S.C. § 226(h); 43 C.F.R. § 3101.7–1(c).

<sup>87</sup> Map 1.

<sup>88</sup> IM 2010-117 at II.A.

<sup>89</sup> See, e.g., Maps 8 (Elk Habitat), 9 (Gunnison Sage Grouse Habitat) and 10 (Mule Deer Habitat).

<sup>90</sup> Maps 8, 9.

<sup>91</sup> Map 1.

<sup>92</sup> Draft EIS at 1.5.

<sup>93</sup> BLM, Draft Blackleaf EIS at i (attached).

<sup>94</sup> *Id.* at 46-49.

<sup>95</sup> Compare *id.* at 1 with Map 1.

Finally, the San Juan MLP is consistent with the purposes of the Memorandum of Understanding (“MOU”) Concerning Oil and Gas Leasing and Operations, signed by the Agencies in 2006. That MOU recognizes that “[a]nalysis and decision-making on all lands under Federal authority (both the BLM and Forest Service) within a defined leasing area will ensure consistency in oil and gas resource management.”<sup>96</sup> Accordingly, the MOU commits the agencies to “jointly developing and applying consistent administrative practices that sustain energy supply, ecological systems, and local communities.”<sup>97</sup> The San Juan MLP, which would regulate oil and gas activity “within a defined leasing area”, furthers the MOU’s goals and objectives.

## **V. POTENTIAL IMPACTS TO IMPORTANT RESOURCE VALUES IN THE SAN JUAN MLP AREA FROM OIL AND GAS LEASING AND DEVELOPMENT**

As the Agencies acknowledge in the SEIS (as well as in the Draft LMP/EIS), the revised RFD scenario may impact important resources throughout the San Juan MLP area, including the following:<sup>98</sup>

### **A. Potential Impacts on Wilderness Quality Lands**

As the Agencies acknowledged in the Draft LMP/EIS, “oil and gas development has been the primary reason for the loss of roadless characteristics [in the planning area]. The impact of development extends from the past into the future, and would apply to the general planning area (outside of Wilderness Areas).”<sup>99</sup> The SEIS would perpetuate those impacts, since the Draft LMP/EIS opens wilderness quality lands in the San Juan MLP area to leasing and development under every alternative but the “No Lease Alternative,” does so without prohibiting surface disturbance and the SEIS proposes no new measures to protect wilderness quality lands from leasing and development, such as closing those areas to leasing or prohibiting surface disturbance.<sup>100</sup>

### **B. Potential Impacts on Wildlife and Plant Species**

#### **1. Big Game and Wide-Ranging Mammals**

Oil and gas development creates a complex network of roads, well pads, pipelines, pumping stations, and other infrastructure across a landscape. Roads are widely recognized by the scientific community as having a range of direct, indirect, and cumulative effects on wildlife and their habitats (Trombulak and Frissell 2000, Gucinski et al. 2001, Gaines et al. 2003, Wisdom et al. 2004a, Wisdom et al. 2004b, New Mexico Department of Game and Fish 2005). Increasingly, studies are demonstrating many of the negative effects specific to oil and gas development on wildlife (Colorado Department of Wildlife et al. 2008, Wyoming Game and Fish Department 2004, Confluence Consulting 2005, Holloran 2005, Sawyer

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<sup>96</sup> Memorandum of Understanding Between United States Department of the Interior Bureau of Land Management and United State Department of Agriculture Forest Service Concerning Oil and Gas Leasing and Operations at 8, *available at* [http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS\\_REALTY\\_AND\\_RESOURCE\\_PROTECTION\\_/energy/epca\\_chart.Par.42324.File.dat/BLM\\_MOU\\_WO\\_300-2006-07.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/energy/epca_chart.Par.42324.File.dat/BLM_MOU_WO_300-2006-07.pdf).

<sup>97</sup> *Id.* at 8 (emphasis in original).

<sup>98</sup> *See, e.g.*, Draft EIS at 3.568 (“... oil and gas development has been the primary reason for the loss of roadless characteristics. The impact of development extends from the past into the future, and would apply to the general planning area (outside of Wilderness Areas).”); SEIS at 3.72 (“Projected oil and gas development of future leases could result in a direct loss of approximately 2,100 acres of [terrestrial wildlife] habitat on federal mineral estate, within the GSGP” and could “approach threshold levels of concern for wildlife and their habitats” if not adequately regulated.).

<sup>99</sup> Draft EIS at 3.568.

<sup>100</sup> *Compare* Draft EIS at 3.290-3.293 *with* Map 1.

et al. 2006, Berger et al. 2006). These negative effects range from direct removal of habitat to long-term displacement of species from preferred habitat. The extent of direct effects can be measured by calculating the physical dimensions of the development features (e.g., roads or well pads). Indirect and cumulative effects on wildlife are often assessed through the spatial analysis of habitat fragmentation (Wilbert et al. 2008).

Habitat fragmentation has been defined as the “creation of a complex mosaic of spatial and successional habitats from formerly contiguous habitat” (Lehmkuhl and Ruggiero 1991). Habitat fragmentation alters the distribution of wildlife species across the landscape and affects many of their life functions such as feeding, courtship, breeding, and migration. Transportation networks and similar infrastructure are one of the most significant causes of habitat fragmentation, and negatively impact wildlife well beyond the surface area disturbed by an actual road or oil/gas well pad (Wyoming Game and Fish Department 2004).

The hundreds of scientific papers covered in the literature reviews cited in the paragraph above illustrate the preponderance of evidence that routes ranging from narrow dirt tracks to paved roads can and do have adverse effects on wildlife. In fact, habitat fragmentation from roads and other human infrastructure has long been identified as one of the greatest threats to biological diversity worldwide (Wilcove 1987). Wilbert et al. (2008) point out that along with this literature spatial analysis is required to fully assess the indirect and cumulative and plan for mitigation of these impacts. This volume of science simply cannot be ignored in a major land management planning effort.

Big game species are important to the ecology and recreation in San Juan planning area. It is important to anticipate and manage for the impacts of oil and gas and other human disturbance on these species.

**Mule Deer Impacts** -- Freddy et al. (1986) found that mule deer are shown to alert exhibiting a stress response to human activity at a distance of 0.29 miles (470 meters) and are less likely to use the habitat for normal life functions. Wyoming Game and Fish Department (2004) used this figure to calculate a 117 acre area of reduced habitat effectiveness around each well pad. Work by Sawyer et al. (2005) of GPS-collared mule deer in Wyoming found that deer utilized habitat progressively farther from roads and well pads over years of increasing gas development and showed no evidence of acclimating to energy-related infrastructure and activities. Lutz et al. (2003) states that mule deer can be pressured into using less-preferred or lower-quality habitat, and that this could negatively affect an individual’s energy balance “and ultimately decrease population productivity especially on winter range.”

**Elk Impacts** -- A major volume reviewing elk ecology and management by Lyon and Christensen (2002) states, “Access — mainly that facilitated by roads — is perhaps the single most significant modifier of elk habitat and a factor that will remain central to elk management on public and private lands.” Several authors have noted that elk habitat security is a particular concern in open landscapes (Morgantini and Hudson 1979, Rost and Bailey 1979, Lyon 1979) such as the open sagebrush habitat of the San Juan Resource Area. Lyon (1979) suggests that in non-forested landscapes route densities less than 1 mi/mi<sup>2</sup> may eliminate effective habitat for elk. A study in open habitat at Jack Morrow Hills in Wyoming observed that elk avoid areas within 1.2 miles of roads and active oil and gas wells in the summer and within 0.6 miles of these features in the winter (Powell 2003).

**Bighorn Sheep Impacts** -- Transportation roads adversely affect desert bighorn sheep by inducing road avoidance behavior, creating barriers to dispersal, and limiting movement across open landscapes to locate food, habitat, and mates. Research by Dr. J. E. Canfield determined that bighorn sheep are the

most sensitive big game species to human disturbance (1999). In a southern Utah study, bighorn sheep were found to spend time significantly further away from roads in high human use areas (Papouchis et al. 2001). The same field study noted that bighorn exhibited the greatest avoidance of humans traveling by foot, followed by humans in vehicles and on bicycles. Bighorn activity decreased by 50 percent when vehicles were present on unpaved roads (Jorgensen 1974). The literature record is clear that bighorn sheep are sensitive to roads, although there are few studies that attempt to quantify the distance where this impact could occur. However, Papouchis et al. (2001) observed that the bighorn sheep defense radius was 0.23 miles and their flight response radius averaged 0.08 miles.

Fortunately, the BLM has begun to recognize the significance of habitat fragmentation and the need to use spatial analysis to evaluate impacts on wildlife and to limit the extent of development in a resource area. For instance, the Record of Decision (ROD) for the Resource Management Plan Amendment for Federal Fluids Mineral Leasing and Development in Sierra and Otero Counties (New Mexico) sets out two limitations to protect Chihuahuan Desert Grasslands: restricting surface disturbance to 5 percent of a leasehold at one time and limiting total surface disturbance to 1,589 acres over the life of the RMP Amendment. The ROD states that both limitations will be monitored and enforced using GIS technology. (See ROD, p. 12, available at [http://www.blm.gov/pgdata/etc/medialib/blm/nm/field\\_offices/las\\_cruces/las\\_cruces\\_planning/white\\_sands\\_otero0/docs\\_white\\_sands\\_Par.82039.File.dat/PRINTBLEROD-LCFO-FINAL\\_text.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/nm/field_offices/las_cruces/las_cruces_planning/white_sands_otero0/docs_white_sands_Par.82039.File.dat/PRINTBLEROD-LCFO-FINAL_text.pdf).)<sup>101</sup>

In another example, the preferred alternative in the current Lander Draft RMP and EIS in Wyoming recommends a portion of the resource area for a Master Leasing Plan with a maximum 5 percent disturbance and a 1.2 mile separation between existing and new development. The area contains pronghorn, mule deer and special status plant species. (See Draft RMP and EIS at: <http://www.blm.gov/wy/st/en/programs/Planning/rmps/lander/docs/dmp-eis.html>.) Similarly, the preferred alternative in the Kremmling Draft RMP now out for review sets a 3 percent limit on surface disturbance at a given point in time and encourages clustered development in Greater Sage-grouse habitat. (See Draft RMP and EIS at: [http://www.blm.gov/co/st/en/BLM\\_Programs/land\\_use\\_planning/rmp/kfo-gsfo/kremmling.html](http://www.blm.gov/co/st/en/BLM_Programs/land_use_planning/rmp/kfo-gsfo/kremmling.html).)

## **2. Gunnison Sage-Grouse**

Oil and gas development (and associated road construction) can have a variety of negative direct, indirect and cumulative impacts on Gunnison sage-grouse populations, including by: 1) causing direct loss of habitat, 2) causing habitat fragmentation, 3) causing functional loss of important habitat due to behavioral avoidance of infrastructure in one or more seasons, 4) resulting in increased disturbance during critical seasons, 5) resulting in collisions with structures and vehicles, 6) reducing quality of habitat due to invasions of weeds following ground disturbance and other factors, 7) causing increased predation due to facilitation of predators, and 8) causing impacts due to noise (e.g. negative impacts of noise at leks). The following research on the impacts of oil and gas development on sage-grouse is particularly relevant, and should be used in developing effective measures to avoid, minimize and mitigate the impacts of oil and gas development on Gunnison sage-grouse.

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<sup>101</sup> The ROD was overturned by the US Court of Appeals for the 10<sup>th</sup> Circuit in litigation brought by the State of New Mexico and conservation organizations on the basis of inadequate analysis and protection for the grassland ecosystem and subsurface aquifer. In its ruling, the court specifically found that the plan amendment did not adequately consider potential impacts of oil and gas development in causing habitat fragmentation in the grasslands or in contaminating the aquifer.

First, surface disturbance associated with oil and gas development results in direct loss of occupied habitat. Gunnison sage-grouse depend on large, intact, interconnected expanses of sage-brush habitat for every part of their life-cycle.<sup>102</sup> Gunnison sage-grouse use a variety of habitats within the sagebrush uplands to meet their seasonal requirements for food, nesting and cover. In addition, seasonal habitat requirements differ between sexes and age classes. In order to support Gunnison sage-grouse, sagebrush uplands must include large expanses of sagebrush with a diversity of grasses and forbs, healthy riparian ecosystems and seasonal habitat areas in the later seral stages of ecological succession. It is now widely agreed that it will be necessary to maintain large expanses of suitable sagebrush habitat across the landscape to conserve sage-grouse populations.<sup>103</sup> Several studies emphasize the importance of retaining sagebrush cover in order to maintain sage-grouse populations.<sup>104</sup>

Second, oil and gas development within or adjacent to occupied habitat can result in functional loss of occupied habitat.<sup>105</sup> At a landscape scale, sage-grouse may avoid habitats where the density of development, and/or the density of roads exceed certain thresholds, and development that exceeds these thresholds in occupied habitat can result in population declines. For example:

- In Wyoming, the rate of inactivity of greater sage-grouse leks doubled when there were greater than 12 well pads within 2 miles of a lek (or more than 1 well per 640 acres). Further, even when such wells were clustered in a pattern that maintained open areas of sagebrush, leks experienced a 55% decline in abundance.<sup>106</sup>
- In the Gunnison Basin, females avoided nesting in areas where residential development exceeded approximately 2% of an area within a 1.5 km moving window, regardless of the amount of sagebrush habitat available it contains.<sup>107</sup>
- In the Gunnison Basin, females avoided nesting in areas where road densities (roads classed 1-4) are above 0.50 km/km<sup>2</sup> across a 6.4 km window.<sup>108</sup>
- Oil and gas development has also been shown to have negative impacts on sage-grouse in winter habitat. Research indicates that greater sage-grouse avoid coal bed natural gas development in otherwise suitable winter habitat. Sage-grouse were 1.3 times more likely to occupy sagebrush habitats that lacked coal bed natural gas wells within a 4 square kilometer area, compared to those that had of 12.4 wells/in a 4 square kilometer area.<sup>109</sup>

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<sup>102</sup> GSGRCP 2005 at: <http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/Birds/Pages/GunnisonConsPlan.aspx>

<sup>103</sup> Id. at 1 and 14

<sup>104</sup> For example see Walker et al. 2007 pg. 2652 cited in Id. at 1: "Greater sage-grouse leks had the lowest probability of persisting (40-50 percent) in a landscape with less than 30% sagebrush within 6.4 kme (4 mi) of the lek. These probabilities were even less in landscapes where energy development was factor.", and <http://rockymountainwild.org/site/wp-content/uploads/Aldridge-2011.pdf>: In the Gunnison Basin, landscape models indicated that Gunnison sage-grouse selected nesting areas containing >93% of a 1.5 km area with >5% sagebrush cover. Probability of nesting approaches zero for all landscapes when the proportion of sagebrush cover is less than roughly 90%.

<sup>105</sup> Id. at 1 page 59812: "Functional habitat losses include disturbances that change a habitat's successional state or remove one or more habitat functions; physical barriers that preclude use of otherwise suitable areas; or activities that prevent animals from using suitable habitat patches due to behavioral avoidance."

<sup>106</sup> [http://rockymountainwild.org/site/wp-content/uploads/Doherty\\_2008.pdf](http://rockymountainwild.org/site/wp-content/uploads/Doherty_2008.pdf) (pages 72-81)

<sup>107</sup> <http://rockymountainwild.org/site/wp-content/uploads/Aldridge-2011.pdf>; Note that this density threshold was identified for housing development, not oil and gas development. We assert that Oil and gas development can be expected to have more significant impacts due to the greater level of activity associated with oil and gas development, and the greater height of oil and gas wells, and thus should be limited to an even lower density.

<sup>108</sup> <http://rockymountainwild.org/site/wp-content/uploads/Aldridge-2011.pdf>

<sup>109</sup> Id. at 18 page 29

In addition, individual developments and roads may result in functional loss of habitat and cause significant negative impacts on sage-grouse populations. For example:

- A review of a number of studies on the impacts of energy development on greater sage-grouse found that siting energy development facilities within 3.9 miles of a lek results in measureable impacts on sage-grouse leks and breeding populations.<sup>110</sup>
- Declines in male greater sage-grouse lek attendance were reported within 1.9 miles of a well or haul road with a traffic volume exceeding one vehicle per day.<sup>111</sup>
- In the Gunnison Basin, nesting females avoided placing nests within 1.5 miles of any single development.<sup>112</sup>
- In the Gunnison Basin, females also avoided nesting in close proximity to major roads. Road avoidance extended out to approximately 8 km (5 miles) from high volume roads (classed 1-2).

It is important to note that FWS believes that the effects of oil and gas development on Gunnison sage-grouse are likely to be similar to those observed in studies of greater sage-grouse.

Given that: 1) the San Miguel Basin and Dove Creek populations are already small, fragmented, declining, and at high risk of extirpation; and 2) habitat in these areas is already degraded and fragmented, the BLM must not allow any additional direct or functional loss of occupied habitat. Further, the BLM must prevent any additional significant impacts of oil and gas development on these populations.

Oil and gas development may pose a threat to the San Miguel Basin and Dove Creek populations. The entire San Miguel Basin population has high potential for oil and gas development. The Dove Creek population also has potential for oil and gas development. There are existing leases across a substantial proportion of occupied Gunnison sage-grouse habitat in both populations.<sup>113</sup> In addition, there are existing leases immediately adjacent to occupied habitat in both populations.<sup>114</sup> There are substantial numbers of active wells within the area occupied by the San Miguel Basin population, as well as adjacent to this area (particularly in and adjacent to the Dry Creek subpopulation).<sup>115</sup> There are a small number of active wells within and adjacent to the area occupied by the Dove Creek population. Only a small proportion of existing leases in these areas are in production, and thus many leases may be developed in the future. The exact locations of future drill sites are not known, but many future drill sites will likely lie within 2 miles of leks, given the location of existing leases relative to lek locations. Current impacts from gas development may be exacerbating the Gunnison sage-grouse imperilment in the Dry Creek subpopulation of the San Miguel Basin population. Given the already small and fragmented nature of the populations where oil and gas leases are likely to occur, additional development within occupied habitat would negatively impact the San Miguel Basin and Dove Creek populations by causing additional actual and functional habitat loss and fragmentation, as well as a variety of other impacts. Existing roads are widespread throughout both the Dove Creek and San Miguel Basin populations, and increased

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<sup>110</sup> [http://rockymountainwild.org/site/wp-content/uploads/Naugle\\_etal\\_2009.pdf](http://rockymountainwild.org/site/wp-content/uploads/Naugle_etal_2009.pdf)

<sup>111</sup> Holloran 2005 pg. 40 cited in *Id.* at 1 page 59817.

<sup>112</sup> This density threshold was identified for housing development, not oil and gas development. We assert that oil and gas development can be expected to have more significant impacts due to the greater level of activity associated with oil and gas development, and the greater height of oil and gas wells, and thus should be limited to an even lower density.

<sup>113</sup> See Map 9.

<sup>114</sup> *Id.*

<sup>115</sup> See Map 3.

use of roads that run through or are adjacent to occupied habitat due to oil and gas development may also negatively impact these populations.

The preferred alternative for the Draft LMP/EIS includes the following stipulations to protect Gunnison sage-grouse from oil and gas development:

- No Surface Occupancy (NSO) (1) within 0.6-mile radius of a known lek site; and (2) nesting habitat that is within 4.0 miles of a lek site (no exceptions).
- Controlled Surface Use (CSU) - requires surveys in potential habitat; if a lek is located, apply above NSO stipulation (no exceptions).
- Timing Limitation (TL) prohibits surface use from Mar. 1—June 30 within 4.0 miles of lek site; does not apply to routine operation and maintenance of production facilities (exceptions if use will not cause “unacceptable disturbance” on lek sites or nesting habitat).
- Portions of the lands occupied by the San Miguel Basin and Dove Creek populations are not available for lease, for the purpose of protecting nesting habitat and leks.

These stipulations are a substantial improvement over the management prescriptions in the current plan, and we commend BLM for taking a step in the right direction. However, these stipulations are not adequate regulatory mechanisms to protect the San Miguel Basin and Dove Creek populations from extirpation due to the direct, indirect and cumulative impacts of oil and gas development and other activities authorized by BLM, given the current status of these populations. Further, these stipulations are not consistent with the best available science.<sup>116</sup>

Major concerns about the stipulations include the fact that they are focused almost entirely on protecting nesting and lek habitat, despite the fact that research has clearly established that all seasonal habitat types are essential to the persistence of Gunnison sage-grouse populations. There are no management prescriptions in place to protect other important seasonal habitats (e.g., winter habitat). In addition, these stipulations do not account for the potential for functional loss of habitat (e.g., from behavioral avoidance of infrastructure). For example, a well placed within 4 miles of a lek will have measureable impacts on sage-grouse leks and breeding populations, regardless of whether that well is placed in nesting habitat. Third, the stipulations do not adequately protect sage-grouse from the variety of impacts associated with road construction and increased road use due to oil and gas development. Fourth, the stipulations generally assume that these populations can sustain additional loss of habitat and other significant impacts, which is a highly questionable assumption, given the current status of these populations.

## **VI. POTENTIAL MLP DECISIONS—OPPORTUNITIES TO SOLVE OR PREVENT CONFLICTS**

A thoughtful approach to the configuration of oil and gas development across the landscape is critical for resource protection. As explained in IM 2010-117 and the Colorado Leasing Strategy, the location and density of development needs to be planned in advance and at the landscape level to avoid and minimize impacts on both natural and cultural resources. The importance and complexity of using the

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<sup>116</sup> It is important to note that there is significant new peer-reviewed research that is relevant to assessing the impacts of oil and gas development on Gunnison sage-grouse, released after publication of the Gunnison sage-grouse rangewide conservation plan. The Gunnison sage-grouse range wide conservation plan is outdated and no longer constitutes the best available science. The oil and gas lease stipulations in the preferred alternative of the draft San Juan Management Plan are based on outdated information in the Gunnison sage-grouse rangewide conservation plan, recent science suggests more stringent protections are needed.

best available science to plan at the landscape scale has been recognized by many scientists (Szaro et al. 2005, Noss 2007). Many ecological functions such as the seasonal migrations of wildlife, connectivity required to prevent genetic isolation, and natural disturbances affecting wildlife habitat occur across broad landscapes.

Furthermore, a thoughtful approach to leasing and development is justified by the acknowledged uncertainty concerning the development potential of the GSP. According to the RFD Addendum, the development potential of the GSP is “moderate” at best and perhaps “low;”<sup>117</sup> operators in the GSP are having difficulty establishing commercially productive development wells;<sup>118</sup> and “[m]ost of the initial drilling activity is expected to target localized ‘sweet spots’ of production on private fee acreage along the western boundary of the [GSP], especially near existing gas transmission lines and other surrounding infrastructure.”<sup>119</sup> These factors suggest strongly that the Agencies should proceed slowly with the GSP and in accordance with a key recommendation of the “Stiles Report,” which in the interest of “promot[ing] the orderly development of oil and gas” advised the following:

Based on the historical development of this area, including the known geologic structures and targets, and the pattern of existing development and recent leasing, the Team recommends that no leasing occur in the vicinity of this parcel unless/until development progresses to areas much nearer to this parcel. If at some point it is determined to be appropriate to go forward once again with leasing this parcel, stipulations should be reviewed to ensure that potential conflicts with recreation management objectives and wilderness characteristics are fully considered.<sup>120</sup>

We recommend a two-step approach for protecting wilderness quality lands, wildlife habitat and the other important resources values identified in this proposal. First, lands that deserve full protection from oil and gas development should be identified and mapped and closed to leasing and development. Second, lands where development is allowed but impacts must be minimized through clustered and phased development should also be identified and mapped.<sup>121</sup> Please note that the landscape level recommendations in this section are additive and do not replace recommendations for local NSO, buffers or other for individual species recommendations listed at the end of this section.

#### **A. Lands Excluded from Oil and Gas Development**

Within the proposed San Juan MLP area, lands that should be removed from consideration for oil and gas development include lands identified for their wilderness character and occupied Gunnison sage-grouse habitat. Both resources are shown on Map 9. There are four citizen proposed wilderness areas (described above). These lands consist of just 9 percent of the proposed MLP area. Approximately half of this is already designated as a wilderness study areas. It is important to protect these areas from oil and gas development to preserve these few lands that still harbor wilderness character for both the

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<sup>117</sup> RFD Addendum at 32.

<sup>118</sup> *Id.* at 27.

<sup>119</sup> *Id.* at 42.

<sup>120</sup> BLM, Final BLM Review of 77 Oil and Gas Lease Parcels Offered in BLM-Utah’s December 2008 Lease Sale at 11, *available at* [http://www.doi.gov/documents/BLM\\_Utah77LeaseParcelReport.pdf](http://www.doi.gov/documents/BLM_Utah77LeaseParcelReport.pdf).

<sup>121</sup> The BLM recently proposed such an approach for the Beaver Rim MLP area in the Lander Field Office. See Lander Draft RMP and EIS at 81 (proposing to “[m]ake parcels in the Beaver Rim area available for lease starting in the CSU areas outside of crucial winter range. Allow no more than 5 percent surface disturbance in the township in which the parcel is located until interim reclamation goals are achieved. Require co-location of new disturbance if technically feasible. New disturbances must be at least 1.2 miles from existing disturbance.”).

ecological values and the cultural importance of these lands. These are a part of a broader network of wilderness lands. As recognized by the Agencies in the Draft LMP/EIS,<sup>122</sup> it is unlikely that wilderness character could be reclaimed after oil and gas is developed on these lands.

Oil and gas development should not be permitted in any Gunnison sage-grouse habitat. This habitat has been identified over 7 percent of the proposed MLP area by Colorado Division of Wildlife. As described above, Gunnison sage-grouse has already been lost from 90% of its historic range and remains in significant decline. The BLM recognizes the importance of this habitat in the Draft LMP/EIS. Appendix H already includes NSO for all lands within 0.6 miles of a lek, NSO and timing limitation stipulations for all nesting habitat within 4 miles of a lek, and bird surveys to identify lek sites. The BLM has also already withdrawn portions of this area from fluid mineral leasing. However, the BLM should take the next step and preclude oil and gas development in this limited area of the MLP to assist in the recovery of this species.

## **B. Lands Where Oil and Gas Development Impacts are Minimized**

Steps should be taken to configure development to minimize impacts on big game species (bighorn sheep, elk and mule deer) and Gunnison's prairie dog shown on Maps 6, 8 and 10. All land that include habitat for these species should be included in this category because of the sensitivity of these species to disturbance from oil and gas development, the value big game species bring to the region, and the imperiled status of the Gunnison's prairie dog.

Currently the draft stipulations in Appendix H include time limitations stipulations on specific habitats (parturition, critical winter range, and lambing) for different big game species. As recognized by the BLM elsewhere,<sup>123</sup> limiting access during some portions of the year, while somewhat helpful in reducing immediate disruption, does not compensate for the long-term indirect and cumulative impacts of roads and other energy infrastructure on wildlife and their habitat. Management recommendations from the Wyoming Game and Fish Department (2004) state that "Although seasonal restrictions are intended to protect specific habitats (e.g. winter and reproductive habitats) and species (e.g. pronghorn, mule deer, elk, sage grouse) at critical times of the year, they generally have been most effective during the exploration and drilling phases of oil field development. However, oil and gas operations also disturb and displace wildlife through the production phase (up to 40 years and longer.)"

Volume 2 in the Draft LMP/EIS states: "To maintain habitat effectiveness for elk, manage for road densities of 1 mile or less per square mile in areas providing critical wildlife needs such as within winter concentration and critical winter range, calving areas, and transition habitat."<sup>124</sup> This is a good step in the right direction and needs to be expanded upon for all landscapes with big game species habitat identified by CDOW. Unfortunately, the Draft LMP provides little specific guidance on the protection of the Gunnison prairie dog.

These habitats for the big game species and for Gunnison's prairie dog fall largely in the northern half of the proposed MLP and smaller portions of the southern and western part of the MLP.<sup>125</sup> The boundary of the area for clustered and phased development should include all the habitats identified on these

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<sup>122</sup> Draft EIS at 3.568.

<sup>123</sup> See Lander Draft RMP and EIS at 789 ("Prohibiting surface disturbance or occupancy is more restrictive and provides more protection for wildlife than avoiding surface disturbance or occupancy.").

<sup>124</sup> Draft LMP at 270.

<sup>125</sup> See Maps 6, 8, 10.

maps, including the overall range for the Gunnison's prairie dog but only the selected habitats for big game species, including winter habitats, production areas and migratory corridors.

In the area defined by the habitat boundaries of these 4 species, guidelines for development should be followed to insure clustering of infrastructure and phasing of development over time. Guidelines need to be based on the best available science, particularly information derived from field studies measuring impacts on big game and Gunnison's prairie dog from disturbance caused by roads, oil and gas development and other anthropogenic sources. Management guidance must steer development to: 1) maintain the largest possible areas of intact wildlife habitat; 2) minimize the direct impacts through steps such as angular drilling, using multiple wells per pad, and utilizing shared infrastructure; and 3) minimize indirect and cumulative impacts by enforcing clustering and phasing of development over time. The following guidelines should be a part of the guidelines for clustered and phased development for all big game habitats:

**1. Develop oil and gas in clusters of well pads and required infrastructure.** New development should be located near existing infrastructure (well pads, roads, pipelines, and other utilities). Identify areas for focused development. Limit the overall *number* and *size* of these clusters of development in order to maximize intact habitat in between them. Do not develop a cluster of well pads across a migratory corridor.<sup>126</sup>

**2. Limit development density within clusters to 1 pad per square mile.** This well pad density roughly equates to road densities in an oil or gas field of approximately 1 mile per square mile and a 1 percent direct surface disturbance from roads and pads (Wilbert et al, 2008). This is the same road density already identified in the Draft LMP for road densities in watersheds with important wildlife habitats:

“Where motorized route densities in key wildlife habitat exceed 1 mile per square mile, management actions should be considered that maintain habitat effectiveness supporting limiting life functions. Key wildlife habitat may include severe big game winter range and concentration areas, kidding and lambing areas, calving and fawning areas, and migration corridors. Travel management actions considered may include seasonal travel restrictions, partial or complete route closures, and new route alignments (or the realignment of existing routes in order to avoid key wildlife habitat).”<sup>127</sup>

Field biologists measure changes in elk habitat effectiveness caused by the density of roads across a landscape rather than simply the number of miles of road. Road densities of 1 mile per square mile were found to reduce elk habitat effectiveness by 25% in forested landscape and to nearly eliminate habitat effectiveness in open landscapes (Lyon 1979, Lyon 1983). This means even at this density of one pad per square mile we are sacrificing habitat effectiveness and must insure large regions of intact habitat outside of development clusters.

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<sup>126</sup> Researchers recommend that distribution of oil and gas development should not coincide with or sever migratory routes (Sawyer et al. 2005, Berger 2004). Wyoming Game and Fish Department (2004) states “Long-term displacement of wildlife from preferred habitats and disruption of migration routes could, in the extreme case eliminate “migration memory” that required several thousand years to evolve. . . . Extended disruptions of migration or habitat use can result in loss of learned behavior from entire cohorts of young animals, breaking the tradition of migration to the most suitable winter habitats.”

<sup>127</sup> Draft LMP at 275.

Similarly for Gunnison's prairie dog, a maximum density of one well pad per square mile is recommended. (Please see this and other recommendations for Gunnison's prairie dog included in this proposal.)

**3. Do not develop in between identified clusters to insure large regions of intact wildlife habitat.** The many pieces of literature cited at the top of this section document the negative impacts of fragmentation from roads and well pads. Wyoming Game and Fish Department (2004) states that "As densities of wells, roads, and facilities increase, the effectiveness of adjacent habitats can decrease until most animals no longer use the habitat." Clustering development is the most effective way to insure the maintenance of large patches of undeveloped habitat required by big game species.

**4. Phase oil and gas development over time as well pads and roads are reclaimed.** Once the maximum number, size and density of clusters have been reached, reclamation must be conducted before allowing the development of additional well pads within a cluster or additional clusters of development. The Colorado Leasing Strategy identifies "phased development," "caps on new surface disturbance, pending acceptable interim or final reclamation," and "final reclamation restoring the landform and native plant community" as appropriate planning decisions in MLPs to protect resources including wildlife.

We recommend careful consideration of what is considered to be "reclaimed," and consequently the allowance of further development. Quickly reestablishing vegetative cover is not the same as the much longer process of establishing vegetation to support ongoing ecosystem functions and services. In areas of sagebrush habitat we recommend active restoration to reestablish compositional and structural elements important to the survival of sagebrush obligate species. Emphasis should be placed on the restoration of *functional* habitats and *connection* of habitats. Clearly define what constitutes reclamation for each habitat type and ensure that this fits in to broader, scientifically-sound restoration efforts.

**5. Monitor oil and gas development annually** to 1) insure development is constrained to predetermined cluster boundaries and that development densities do not exceed 1 well pad per square mile within clusters, 2) document areas that are reclaimed, and 3) identify negative impacts on big game species. As stated in the Colorado Leasing Strategy: "Every field office will assess environmental impacts from oil and gas development and evaluate whether existing protection measures are effective in achieving their desired intent. BLM Colorado will use Adaptive Management principles, incorporate the best available science, and address changing resource conditions when considering lease stipulation exceptions, waivers, and modifications." The best management plan may be highly ineffective without monitoring. This last step is critical to effective implementation of the management plan.

### **C. Species-Specific Recommendations**

#### **1. Gunnison Sage-Grouse**

We recommend that the BLM apply the following management prescriptions within occupied Gunnison sage-grouse habitat, both within the San Juan MLP, and within the area covered by the San Juan Management Plan:

- Include a standard in the San Juan Management Plan and the San Juan Master Leasing Plan that states that the agency will allow no additional direct or functional loss of occupied Gunnison sage-grouse habitat.
- Designate all occupied habitat as an Area of Critical Environmental Concern, managed to maintain and increase Gunnison sage-grouse populations, where uses inconsistent with this goal are prohibited.

We recommend that the BLM apply the following management prescriptions within occupied Gunnison sage-grouse habitat (including all types of seasonal habitat<sup>128</sup>):

- New Leases
  - Make both BLM surface and private surface underlain by federal minerals unavailable for fluid mineral leasing.
  - Apply no surface disturbance restrictions, without provision for exception, modification and waiver.<sup>129</sup>
  - Apply no surface occupancy restrictions without provision for exception, modification or waiver.
  - Require avoidance for oil and gas (and other) right-of-ways, with no exceptions.
- Existing Leases
  - Apply the provisions outlined above for new leases, when not prohibited from doing so by law.
  - Do not re-issue existing leases when they expire. Once existing leases in occupied habitat expire, automatically add these areas to the area not available for leasing.
  - Avoid permitting oil and gas development that would result in increased use of roads in occupied habitat. Route oil and gas traffic out of occupied habitat.
  - No surface use stipulations should be applied in all seasonal habitats<sup>130</sup> during the season of use. These stipulations must apply to operation and maintenance as well as construction. There must be no provision for exception, modification or waiver.
  - If the provisions outlined previously for new leases cannot be applied because of legal limitations (e.g. lease rights)<sup>131</sup>, then apply the following provisions:
    - Do not allow road density to exceed existing road density and/or thresholds known to be inconsistent with Gunnison sage-grouse conservation. If existing roads exceed this threshold, then require de-commissioning of roads prior to allowing new road construction, such that total road density remains below both current levels of road density and thresholds known to be inconsistent with Gunnison sage-grouse conservation.<sup>132</sup>

<sup>128</sup> See description of seasonal habitat types in the 2005 Gunnison Sage-grouse Rangewide Conservation Plan at: <http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/Birds/Pages/GunnisonConsPlan.aspx>. This should include all areas within 4 miles of a lek.

<sup>129</sup> This could be written to allow for exceptions for minor activities (e.g. minor surface disturbance associated with grazing activities).

<sup>130</sup> Id at 26

<sup>131</sup> BLM has the authority and responsibility to add conditions of approval to existing leases that are more stringent than the stipulations on the original lease (when supported by scientific analysis). See *Yates Petroleum Corporation*, 174 IBLA 144 (September 30, 2008); and *William P. Maycock, et al.*, 177 IBLA 1 (March 16, 2009).

<sup>132</sup> Id. at 20: In the Gunnison Basin, females avoid nesting in areas with road densities (roads classed 1-4) above 0.50 km/km<sup>2</sup> across a 6.4 km window, regardless of the amount of sagebrush habitat in the area.

- Do not allow a cumulative increase in the overall footprint of infrastructure. Require use of existing infrastructure (roads, pipelines, powerlines etc.) wherever possible. If new infrastructure is absolutely necessary, then require reduction of existing infrastructure before new infrastructure can be added. Require infrastructure to be sited such that the overall footprint is minimized (e.g. site new pipelines along existing pipeline/road corridors etc.
- Require right-of-way avoidance, where this is not possible, implement additional measures to limit impacts of right-of-ways (for example, see recommendation for powerlines below).
- When powerlines cannot be avoided, require that new powerlines be buried.
- Bury existing powerlines. If this is not possible, retrofit powerlines with effective raptor perch deterrents.
- Limit the density of wells below thresholds known to be inconsistent with Gunnison sage-grouse conservation.<sup>133</sup>
- Require clustering of oil and gas wells, and avoid siting wells and other infrastructure within occupied habitat, minimize the amount of direct loss of sagebrush habitat.
- On existing leases, cap cumulative surface disturbance at 1%.

We recommend that the BLM apply the following management prescriptions in areas within 4 miles<sup>134</sup> of occupied habitat, both within the San Juan MLP, and within the area covered by the San Juan Management Plan:

- New Leases
  - Apply no surface occupancy restrictions within 4 miles of Gunnison sage-grouse leks – this restriction should include all land within this buffer distance, as allowing surface occupancy within this buffer can result in lek loss due to behavioral avoidance of the area, regardless of whether the structure is placed within nesting habitat.
  - Do not allow new road construction within 4 miles of Gunnison sage-grouse leks.
  - Avoid permitting oil and gas development that would result in increased use of roads within 4 miles of Gunnison sage-grouse leks. Route oil and gas traffic around lands within 4 miles of Gunnison sage-grouse leks. At a minimum, do not allow traffic to exceed 1 vehicle per day on roads within 1.9 miles of Gunnison sage-grouse leks.
  - Limit cumulative density of oil and gas wells and other structures to levels below thresholds known to be inconsistent with Gunnison sage-grouse conservation. If existing structures reach or exceed these thresholds, then allow no new structures.
  - Do not allow cumulative road densities to exceed thresholds known to be inconsistent with Gunnison sage-grouse conservation.
  - No surface use stipulations should be applied in all seasonal habitats<sup>135</sup> during the season of use. These stipulations must apply to operation and maintenance as well as construction. There must be no provision for exception, modification or waiver.

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<sup>133</sup> Id. at 18: Density of wells above 1 well per 640 acres (12 wells within 2 miles of a lek) have been shown to be inconsistent with greater sage-grouse conservation; and Id. at 20: Density of residential development that exceeds approximately 2% of an area within a 1.5 km moving window has been shown to result in avoidance of nesting habitat. In addition, we assert that oil and gas developments likely have greater impacts than residential development, and should be kept well below this threshold.

<sup>134</sup> See previous citations indicating that effects of energy development can extend out to roughly 4 miles.

<sup>135</sup> Id. at 26

- Existing Leases
  - Do not allow road density to exceed existing road density and/or threshold of tolerance for Gunnison sage-grouse. If existing roads exceed this threshold, then require de-commissioning of roads prior to allowing new road construction, such that total road density remains below both current levels of road density and established thresholds of tolerance for Gunnison sage-grouse.<sup>136</sup>
  - Do not allow a cumulative increase in the overall footprint of infrastructure. Require use of existing infrastructure (roads, pipelines, powerlines etc.) wherever possible. If new infrastructure is absolutely necessary, then require reduction of existing infrastructure before new infrastructure can be added. Require infrastructure to be sited such that the overall footprint is minimized (e.g. site new pipelines along existing pipeline/road corridors etc.
  - Require right-of-way avoidance, where this is not possible, implement additional measures to limit impacts of right-of-ways (for example, see recommendation for powerlines below).
  - When powerlines cannot be avoided, require that new powerlines be buried.
  - Bury existing powerlines. If this is not possible, retrofit powerlines with effective raptor perch deterrents.
  - Limit the density of wells below thresholds known to be inconsistent with Gunnison sage-grouse conservation. Require phased development to limit the density of wells on the landscape at any one time.
  - Require clustering of oil and gas wells, and avoid siting wells and other infrastructure within occupied habitat, minimize the amount of direct loss of sagebrush habitat.
  - On existing leases, cap cumulative surface disturbance at 1%.
  
- All New and Existing Leases in the San Juan MLP and on San Juan Public Lands
  - Include language in the San Juan Management Plan and the San Juan Master Leasing Plan that states that new development or land uses will be authorized only when it can be conclusively demonstrated by the agency that the activity will not cause declines in Gunnison sage-grouse populations, including new oil and gas development on existing leases.<sup>137</sup>
  - Include language in the San Juan Management Plan and the San Juan Master Leasing Plan that states that BLM has the authority and responsibility to add mitigation measures as conditions of approval on existing leases (when supported by scientific analysis), even when such measures are more stringent than the stipulations on the lease.<sup>138</sup>
  - Attach a stipulation to all new leases within the San Juan MLP area that states that additional conditions of approval may be required, and that these conditions may be more stringent than stipulations attached to the lease, if new information on Gunnison sage-grouse suggests that such conditions are necessary.
  - Apply an appropriate speed limit on roads through occupied habitat and within 4 miles of a lek at all times of year.

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<sup>136</sup> Id. at 29

<sup>137</sup> <http://www.blm.gov/pgdata/etc/medialib/blm/wy/resources/efoia/IMs/2010.Par.61358.File.dat/wy2010-012.pdf>

<sup>138</sup> See Yates Petroleum Corporation, 174 IBLA 144 (September 30, 2008); and William P. Maycock, et al., 177 IBLA 1 (March 16, 2009).

- For the purpose of effects analysis for a proposed action, a sage-grouse habitat evaluation should extend at minimum, out to 4 miles from proposed actions. BLM should review relevant research to determine whether the appropriate distance should be greater than 4 miles for Gunnison sage-grouse. The analysis area should be large enough to capture potential impacts to all occupied habitat. For example, Wyoming BLM requires that a sage-grouse habitat evaluation extend at a minimum out to four miles for relatively small individual proposed actions, and should extend, at a minimum, out to 11 miles from the project boundary for large-scale proposed actions.<sup>139</sup>
  - Implement any additional best management practices outlined in the Gunnison sage-grouse rangewide conservation plan, and other relevant scientific literature.
  - Implement a suite of measures to reduce facilitation of Gunnison sage-grouse predators. In addition to measures described above to reduce the footprint of roads and infrastructure; require effective raptor perch deterrents on all structures; require trash to be placed in receptacles that are not accessible to ravens, coyotes, and other grouse predators; require road kill to be reported and moved out of occupied habitat; and require speed limits to reduce road kill.
  - Implement sound weed control and reclamation practices. It is particularly important to reduce the spread of cheatgrass.
- Other Measures
    - In analysis of the indirect and cumulative impacts of oil and gas development outside of occupied Gunnison sage-grouse habitat, analyze impacts to connectivity between Gunnison sage-grouse populations and subpopulations, and develop measures to avoid and minimize reductions in connectivity.

## 2. Gunnison's Prairie Dog

We recommend the following measures to avoid, minimize and mitigate impacts of oil and gas development to Gunnison's prairie dog communities:

- New Leases
  - Apply NSO and NGD restrictions and avoid construction in prairie dog colonies.<sup>140</sup>
  - Do not issue or re-issue leases in prairie dog colonies.
- Existing Leases
  - Apply NSO and NGD restrictions and avoid construction in prairie dog colonies wherever possible.<sup>141</sup>
  - Avoid surface facility density in excess of 10 well pads per 10-square mile area (one well pad per section) in Gunnison's prairie dog management areas. *Id.*
  - Where oil and gas activities must occur on or in Gunnison's prairie dog colonies, conduct these activities outside the period between March 1 and June 15." *Id.*

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<sup>139</sup> <http://www.blm.gov/pgdata/etc/medialib/blm/wy/resources/efoia/IMS/2010.Par.61358.File.dat/wy2010-012.pdf>

<sup>140</sup> [Colorado Division of Wildlife's Actions to Minimize Adverse Impacts to Wildlife Resources \(October 2008\)](#), Appendix A, P. 29. Found at: <http://www.oilandgasbmps.org/viewpub.php?id=27>

<sup>141</sup> [Colorado Division of Wildlife's Actions to Minimize Adverse Impacts to Wildlife Resources \(October 2008\)](#), Appendix A, P. 29. Found at: <http://www.oilandgasbmps.org/viewpub.php?id=27>

- Aggressively control non-native and invasive weeds, particularly cheatgrass, in reclamation areas within prairie dog habitat." *Id.*
- Manage oil and gas activities within prairie dog colonies to minimize impacts to attributes that maintain the functional integrity of the prairie dog colony (e.g., vegetation, soils, burrow systems, etc.)." *Id.*
- Survey for active and inactive prairie dog colonies within development areas prior to development." *Id.*
- Prohibit permanent aboveground facilities are allowed within a 660 feet buffer [of Gunnison prairie dog colonies in prairie dog habitat]." <sup>142</sup>
- Prohibit surface-disturbing activities within 660 feet of active prairie dog colonies identified within [Gunnison] prairie dog habitat." *Id.*

### 3. Rare Plants

We ask that the BLM avoid oil and gas leasing and development in PCAs that have biodiversity significance ranks of 1 or 2. Where this is not possible, and in areas with occurrences of rare plants outside of CNHP PCAS, we ask that BLM follow the Recommended Best Management Practices for Plants of Concern.<sup>143</sup>

## VII. APPENDIX

### A. San Juan MLP Maps

1. Land Ownership
2. Oil and Natural Gas Leases
3. Oil and Natural Gas Wells
4. Special Management Areas
5. Bald Eagle Habitat
6. Bighorn Sheep Habitat
7. Black Bear Habitat
8. Elk Habitat
9. Gunnison Sage Grouse Habitat
10. Mule Deer Habitat
11. Peregrine Falcon Habitat
12. Federal Mineral Ownership

### B. Attachments

1. Wildlife Corridors: Protecting Species and the Western Landscape
2. Blackleaf Draft Environmental Impact Statement, Lewiston District Office, March 1990
3. Analysis of Habitat Fragmentation from Oil and Gas Development and its Impact on Wildlife: A Framework for Public Land Management Planning (Wilbert, M., Thomson, J., Culver, N. 2008)

<sup>142</sup> [Moab Field Office: Record of Decision and Approved Resource Management Plan](http://www.blm.gov/pgdata/etc/medialib/blm/ut/moab_fo/rmp/rod_approved_rmp.Par.20099.File.dat/Moab%20Appendices.pdf), Appendix A, Table A1, P. A-16. Found at: [http://www.blm.gov/pgdata/etc/medialib/blm/ut/moab\\_fo/rmp/rod\\_approved\\_rmp.Par.20099.File.dat/Moab%20Appendices.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/ut/moab_fo/rmp/rod_approved_rmp.Par.20099.File.dat/Moab%20Appendices.pdf)

<sup>143</sup> Found at: <http://conserveonline.org/workspaces/corareplantinitiative/documents/recommended-best-management-practices-for-plants/view.html>

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