



# The Core Problem

Wyoming sage-grouse strategy inadequate to protect the species



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**T**HE STATE OF WYOMING was the first to develop a sage-grouse conservation strategy based on the designation and management of large areas of core habitat to sustain the species. Completed in 2008, Wyoming's strategy aims to limit development and other disturbance within these "core areas," where most sage-grouse occur. Wyoming has been recognized for its innovative and collaborative approach to sage-grouse conservation.

In 2010, the U.S. Fish and Wildlife Service (FWS) determined that greater sage-grouse warranted consideration for listing under the Endangered Species Act (ESA). The FWS subsequently committed to either propose to list the grouse or determine the species is no longer warranted for listing by September 2015. The new deadline has prompted federal agencies and states to develop their own sage-grouse conservation strategies in an attempt to forestall listing. Wyoming considers its plan a model that federal agencies and other states can

use to alleviate the need federally protect the species.

Unfortunately, key components of Wyoming's strategy do not accord with the best available science on sage-grouse, which will be the basis for any listing decision. For example, the Wyoming strategy allows new fluid minerals (oil and gas) leasing and other development within core sage-grouse habitat, contrary to scientific recommendations, while prescribing inadequate protections for important seasonal habitats and allowing excessively high levels of disturbance in core areas that are critical for conservation and recovery of the species.

The Bureau of Land Management (BLM) and other states should avoid adopting Wyoming's strategy for conserving sage-grouse and instead adopt science-based measures that are more likely to protect and recover the species. Implementing strong conservation measures now will not only benefit sage-grouse, but also hundreds of other species in the West.

## The Wyoming Core Area Strategy

Wyoming is key to sage-grouse conservation. Approximately 37 percent of remaining sage-grouse occur in the state,<sup>1</sup> which anchors the eastern half of the species' range.<sup>2</sup> Wyoming's core area strategy is intended to maintain sage-grouse populations by limiting habitat disturbance and other threats in designated core areas where most sage-grouse occur. Core areas cover 24 percent of the state and purportedly include habitat used by 82 percent of sage-grouse in Wyoming.<sup>3</sup> Most core habitat is on federal public lands managed by the BLM.<sup>4</sup>

The state's core area strategy is an important step forward in sage-grouse conservation. It recognizes the need to preserve large areas of sagebrush habitat that are essential to the species' persistence, including on private lands. It has also helped protect some core habitat from fluid minerals development, at least temporarily—the BLM has deferred some leasing in core areas over the last several years in support of the strategy.<sup>5</sup>

Unfortunately, the relative merits of the Wyoming strategy are negated by its minimal restrictions on fluid minerals development wherever it is permitted in core habitat. Energy development and related infrastructure are a primary threat to sage-grouse in Wyoming.<sup>6</sup> Most remaining habitat (69 percent) in the state overlays federal mineral estate administered by the BLM, of which more than half (52 percent) has been authorized for exploration and development.<sup>7</sup> Given the species' sensitivity to disturbance, the best available science recommends limiting development in core areas to avoid disrupting sage-grouse and degrading important seasonal habitats.

The Wyoming strategy allows continued minerals leasing in core habitat, contrary to scientific recommendations. The strategy also fails to adequately protect sage-grouse breeding sites, or "leks," and associated nesting and brood-rearing habitats from development impacts, allows too much disturbance within core areas, and prescribes insufficient protections for sage-grouse winter habitat.

These deficiencies, combined with other impacts on sage-grouse diminish the potential of the Wyoming strategy to conserve sage-grouse populations in the state. In fact, modelling has found that Wyoming's core area strategy may only slow, not necessarily stop,

long-term declines, even when bolstered by \$250 million in targeted easements to conserve sage-grouse on private lands.<sup>8</sup>



### Box 1. Best Available Science

Sage-grouse are well studied and decades of research is available on the grouse and its habitat.<sup>9</sup> In this report we rely on three major sources of best available science: peer-reviewed published research, federal and state data and analyses, and the Sage-Grouse National Technical Team report. The National Technical Team, comprised of 23 federal and state agency biologists and land managers (including 14 BLM officials), drew from the extensive scientific record on sage-grouse to produce “A Report on National Greater Sage-grouse Conservation Measures” (NTT report) with specific conservation recommendations for the species. The report authors were unequivocal that the conservation measures presented in the report were derived from “interpretation of the best available scientific studies” using their “best professional judgment.”<sup>10</sup> This was confirmed by more than 100 scientists who described the report in a letter to then-Secretary of the Interior Ken Salazar as a “comprehensive compilation of the scientific knowledge needed for conserving Sage-Grouse” that “offers the best scientifically supportable approach to reduce the need to list Sage-Grouse as a Threatened or Endangered species.”<sup>11</sup>

## Wyoming's protective lek buffer is over six times smaller than recommended by the best available science

The Wyoming core area strategy prohibits development within **0.6 miles** of sage-grouse leks to protect breeding, nesting and brood-rearing habitat. The best available science and the NTT report (see Box 1) recommend **excluding development** in core habitat<sup>12</sup>

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“Walker et al. (2009) recommends a buffer distance of at least 4.0 miles containing extensive stands of sagebrush habitat for breeding populations to persist.”

—BLM WYOMING STATE OFFICE

Box 2). **There is no legitimate scientific support for 0.6-mile lek buffers.**

Sage-grouse leks and associated nesting and brood-rearing habitat are especially important to the species' life cycle. Sage-grouse have high fidelity to leks and most hens will nest within four miles of the lek where they mated.<sup>14</sup> Nesting success, which is key to population growth, is higher in relatively unaltered habitat compared to altered habitat.<sup>15</sup>

Research indicates a 0.6-mile lek buffer is inadequate to protect sage-grouse from the effects of energy development and other disturbance, and much larger buffers are advised. As reported by the BLM,

“[d]eclines of Greater Sage-Grouse populations following energy development have been shown through numerous scientific studies. Buffer distances from 0.5 to two miles from oil and gas infrastructure have been shown to be inadequate to prevent declines of birds from leks. Studies have shown that greater distances, anywhere from two to four miles, are required for viable Greater Sage-Grouse populations to persist.”<sup>16</sup>

or, to accommodate valid existing rights, applying **4-mile no surface occupancy buffers** wherever possible to protect sage-grouse leks and associated habitat.<sup>13</sup> The BLM has acknowledged the importance of adopting larger lek buffers to conserve sage-grouse, as well as FWS, despite its apparent endorsement of the Wyoming strategy (see

Adopting smaller lek buffers will likely contribute to continued population declines.<sup>17</sup> An analysis of sage-grouse habitat use and abundance in the Wyoming Basin noted that “[a]ny drilling <6.5 km [approximately 4 miles] from a sage-grouse lek could have indirect (noise disturbance) or direct (mortality) negative effects on sage-grouse populations.”<sup>18</sup>

## Wyoming's disturbance cap is almost twice as high as recommended by the best available science

The Wyoming core area strategy allows up to **five percent surface disturbance** per an average of 640 acres in core habitat; the best available science recommends limiting development to **less than three percent surface disturbance** per section in priority habitat. The BLM, FWS and other authorities have acknowledged the importance restricting surface disturbance to three percent or less in key habitat areas. **There is no scientific support for the five percent disturbance cap.**

Sage-grouse are very sensitive to habitat disturbance.<sup>19</sup> The NTT report recommends managing sage-grouse priority habitats “so that discrete anthropogenic disturbances cover less than three percent of the total sage-grouse habitat regardless of ownership”<sup>20</sup>—and even this prescription may be inadequate to conserve the species. A recent analysis found that sage-grouse largely abandon leks as development approaches 3 percent of disturbance within 5 km of leks.<sup>21</sup> In fact, the data indicate that the majority of leks were in landscapes with less than or equal to just a half percent of anthropogenic disturbance.<sup>22</sup>

Some have commented that the five percent cap prescribed in the Wyoming core area strategy would

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“For all relevant [conservation] objectives, especially including Energy & Fluid Mineral Development, Mining, and [Infrastructure Development], we recommend the BLM/USFS prohibit or severely limit surface disturbance activities in the most important [sage-grouse] habitats and strong-holds.”

—U.S. FISH AND WILDLIFE SERVICE, NEVADA STATE OFFICE

typically allow no more disturbance from development than the three percent cap recommended in the NTT report because the Wyoming strategy also counts other types of disturbance against its cap, including temporary habitat loss from fire and vegetation removal,<sup>23</sup> that are not counted in the NTT cap. But this rationale is flawed. Where fire and vegetation removal have not affected a given core area, energy development and other land use could account for all allowable disturbance under the Wyoming cap, which, at five percent, is nearly twice the limit recommended by science. Moreover, recent data indicate that disturbance in some Wyoming core areas already exceeds five percent, with surface disturbance (including development that occurred prior to and after adoption of the Wyoming core area strategies) averaging 6.35 percent per core area.<sup>24</sup>

## Wyoming's strategy fails to protect sage-grouse winter habitat

The Wyoming core area strategy **only seasonally restricts development** in sage-grouse winter habitat when the birds are present; the best available science recommends prohibiting surface disturbance in or adjacent to winter habitat **any time of the year** to avoid degrading wintering areas that are critical to sage-grouse survival.<sup>25</sup>

As with leks, sage-grouse typically show high fidelity to winter habitat, and a single area may support several different breeding populations.<sup>26</sup> Consequently, the

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“Doherty et al. (2008) demonstrated that Greater Sage-Grouse in the Powder River Basin avoided otherwise suitable wintering habitats once they have been developed for energy production. . . .”

—BLM BUFFALO FIELD OFFICE

loss or fragmentation of wintering areas can have a disproportionate impact on sage-grouse population size.<sup>27</sup> Scientists have also observed that the quality of winter habitat appears to influence the abundance and condition of female sage-grouse and their nesting effort and clutch sizes in spring.<sup>28</sup> It makes little sense to restrict development in wintering areas during



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**Rampant energy development has severely degraded sage-grouse habitat in some parts of Wyoming.**

the season of use, only to allow the same development at other times of the year, since sage-grouse will eventually return to find the habitat degraded and potentially unavailable the following winter.

## Additional concerns with Wyoming's strategy

Problems with the Wyoming core area strategy extend beyond those related to energy development. Successive iterations of the strategy modified core area boundaries to accommodate incompatible development in sage-grouse habitat. The strategy also fails to address some threats to sage-grouse, including livestock grazing, prescribed fire and invasive species, and management prescriptions for non-core habitat are entirely inadequate to conserve the species. Finally, new research has found that designated core areas, which are based primarily on sage-grouse breeding habitat, may not adequately protect other needed seasonal habitats for sage-grouse. This could limit the effectiveness of the strategy overall.<sup>29</sup>

## Federal agencies and states should avoid adopting Wyoming's strategy

The BLM (and the U.S. Forest Service, as a cooperating agency) initiated the National Greater Sage-Grouse Planning Strategy (Planning Strategy) in 2011 to “incorporate consistent objectives and conservation

measures for the protection of greater sage-grouse and its habitat” into relevant federal land management plans across the species’ range.<sup>30</sup> The Planning Strategy will amend nearly 100 resource management and land use plans in ten western states with new conservation measures for sage-grouse with the goal of avoiding the need to list the species under the ESA.<sup>31</sup>

The BLM (unadvisedly) partitioned the Planning Strategy into 15 separate subparts, including three plan amendments and one sub-regional environmental impact statement in Wyoming. The agency has now finalized the first plan amendment in Wyoming for the Lander Field Office. The record of decision does not restrict oil and gas leasing in core areas,<sup>32</sup> and although

## **Box 2. U.S. Fish and Wildlife Service’s Endorsement of the Wyoming Core Area Strategy**

The BLM cites the FWS’s Conservation Objectives report<sup>35</sup> and a series of communications from the agency endorsing the State of Wyoming’s core area strategy<sup>36</sup> as evidence that the strategy, fully implemented, will be sufficient to conserve sage-grouse populations in the state.<sup>37</sup> However, FWS is no more immune to the best available science on sage-grouse than are the state or BLM. The burden of proof is ultimately on FWS to show how the state’s core area strategy will conserve sage-grouse when the agency considers the species for listing by September 2015.

It should also be noted that the FWS has advised BLM to adopt more protective standards than the Wyoming core area strategy wherever possible, reminding planners that “it is...critical that...protections for seasonal habitats address the real conservation concerns for these potentially limiting habitat areas.”<sup>38</sup> Implementation of the core area strategy must also “keep current with the best available science in order to meet the information requirements in the [ESA].”<sup>39</sup> As mentioned in this report, the BLM’s Lander plan, which generally adopts the state’s strategy, declined to implement stronger protections for sage-grouse seasonal habitats in some core areas, failed to address the best available science on the species, and offered no other scientific support for the inadequate conservation measures in its selected management alternative.

the selected alternative prohibits surface occupancy associated with development in some core habitat, it otherwise adopts the state’s core area strategy for managing sage-grouse throughout the Lander planning area.<sup>33</sup> Despite its claims to the contrary, the Lander plan is unlikely to achieve its conservation goals for the species.

The other three draft BLM plans in Wyoming also propose to adopt the state’s strategy for managing development in core habitat, including its inadequate lek buffers, high disturbance cap and ineffectual protections for winter habitat. Scientists have expressed concern about the “gaps” between management prescriptions for energy development and the best available science in draft BLM plans for conserving sage-grouse.<sup>34</sup>

## **Recommendations**

There are volumes of research on greater sage-grouse and its habitat and the science is clear on what the species needs to survive. States and federal agencies should develop and implement consistent, adequate conservation measures based on the best available science to conserve and restore the grouse. Given its scientific deficiencies, federal agencies and other states should avoid adopting the Wyoming core area strategy in their conservation plans.

The Wyoming state strategy itself should be updated with the best available science on development impacts in core habitat, and existing core areas should be expanded to include seasonal habitats that are incompletely represented in core areas.

The national Planning Strategy is an unprecedented opportunity for the BLM to rebalance species conservation and sustainability with land use and development on tens of millions of acres of federal public land. Although the FWS has offered varying and sometimes conflicting advice on draft federal plans for sage-grouse, the agency has also consistently supported the conservation alternatives in these plans, which typically include NTT report prescriptions for managing energy development in sage-grouse habitat. Adopting these prescriptions will help protect and recover sage-grouse and may avoid the need to list the species under the ESA. Implementing strong conservation measures now will also help ensure long-term land health, benefiting hundreds of other sagebrush-dependent species and helping the agencies avert conservation crises in the future.



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- <sup>1</sup> Copeland et al. 2013: 1.  
<sup>2</sup> See Doherty et al. 2011.  
<sup>3</sup> Gamo et al. 2013.  
<sup>4</sup> BLM, undated.  
<sup>5</sup> Copeland et al. 2013.  
<sup>6</sup> 70 Fed. Reg. 2258, 2264.  
<sup>7</sup> Copeland et al. 2013: 1.  
<sup>8</sup> Copeland et al. 2013.  
<sup>9</sup> See, e.g., Knick and Connelly 2011.  
<sup>10</sup> SGNTT 2011: 58.  
<sup>11</sup> Soulé and Braun, letter (01-15-2013).  
<sup>12</sup> SGNTT 2011: 11-26.  
<sup>13</sup> *Ibid* at 23; see also Moynahan 2004; Holloran and Anderson 2005.  
<sup>14</sup> SGNTT 2011: 21, Table 1.  
<sup>15</sup> Connelly et al. 2011.  
<sup>16</sup> Wyoming DEIS (2013): 4-335, citing Braun 1986, Remington and Braun 1991, Braun et al. 2002, Holloran 2005, Walker et al. 2007, Connelly et al. 2000, and Holloran and Anderson 2005.  
<sup>17</sup> See Naugle et al. 2011; see also HiLine DEIS (2013): 4-135; Wyoming DEIS (2013): 4-291.  
<sup>18</sup> Hanser et al. 2011: 131; see also Apa et al. 2008, unpublished.  
<sup>19</sup> SGNTT 2011: 8, citing Johnson et al. 2011, Naugle et al. 2011a, b.  
<sup>20</sup> SGNTT 2011: 7; see also Oregon DEIS (2013): 2-14.  
<sup>21</sup> Knick et al. (2013); see also Baruch-Mordo et al. 2013: 237, Figure B.  
<sup>22</sup> Knick et al. 2013: 9, Figure C.  
<sup>23</sup> E.g., Wyoming DEIS (2013): 2-118, Table 2-1, Action 115; 2-181, Table 2.5.  
<sup>24</sup> Wyoming data (04/08/2014).  
<sup>25</sup> See SGNTT 2011: 21; see also Doherty et al. 2008.  
<sup>26</sup> Oregon DEIS (2013): 8-39.  
<sup>27</sup> Caudill et al. 2013; Oregon DEIS (2013): 8-39.  
<sup>28</sup> Moynahan et al. 2007.  
<sup>29</sup> Fedy et al. 2014.  
<sup>30</sup> 76 Fed. Reg. 77009.  
<sup>31</sup> *Ibid*.  
<sup>32</sup> Lander ROD/ARMP (2014): 45, Record 2008, MR:1.3.  
<sup>33</sup> *Ibid* at 5.  
<sup>34</sup> Holloran, letter (06/03/2014).  
<sup>35</sup> COT 2013.  
<sup>36</sup> USFWS, letter (06/24/2011); USFWS, letter (10/25/2012).  
<sup>37</sup> Lander FEIS/ROD (2014): 10.  
<sup>38</sup> USFWS, letter (10/25/2012).  
<sup>39</sup> *Ibid*.
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