

BIODIVERSITY CONSERVATION ALLIANCE

IBLA 2004-42

Decided August 2, 2006

Appeal from a decision of the Deputy State Director, Wyoming State Office, Bureau of Land Management, affirming the decision of the Rock Springs Field Office, Bureau of Land Management, approving the Lower Bush Creek Coal Bed Methane Exploratory Pilot Project. SDR No. WY-03-15.

Affirmed.

1. Environmental Policy Act--Environmental Quality:
Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Finding of No Significant Impact

When an agency prepares an EA to determine whether an EIS is necessary, it must consider all relevant matters of environmental concern and take a hard look at potential environmental impacts so that it can make an informed decision about whether the environmental impacts are significant or that significant impacts can be reduced to insignificance by mitigation measures.

2. Environmental Policy Act--Environmental Quality:
Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Finding of No Significant Impact

A party challenging BLM's decision has the burden of demonstrating with objective proof that the decision is based on a clear error of law or demonstrable error of fact, or that the analysis failed to consider a substantial environmental question of material significance to the proposed action.

3. Environmental Policy Act--Environmental Quality: Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Finding of No Significant Impact

When making a determination as to whether a proposed action will have a significant effect on the human environment, the cumulative effects of the proposed action and other actions not connected with the proposed activity must be taken into consideration. A cumulative impact is one which results from the incremental impact of the action when added to other past, present, and reasonably future actions and can result from individually minor but collectively significant actions taking place over time.

4. Environmental Policy Act--Environmental Quality: Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Finding of No Significant Impact

When a cumulative impacts analysis in an EA is tiered to the cumulative impact analysis contained in a project EIS that also includes the EA project wells, the EA properly summarizes the issues discussed in the EIS. A party challenging the adequacy of the EA must show that the impacts analysis as tiered does not constitute a reasonably thorough discussion of significant impacts of the probable environmental consequences of the proposed action.

5. Environmental Policy Act--Environmental Quality: Environmental Statements--National Environmental Policy Act of 1969: Environmental Statements--National Environmental Policy Act of 1969: Finding of No Significant Impact

Section 102(2)(E) of NEPA, 42 U.S.C. § 4332(2)(E) (2000), requires consideration of a reasonable range of alternatives to a proposed action, including a no-action alternative. An EA which considers a range of alternatives and gives reasons for BLM's rejection of the alternatives not selected will be upheld when it appears that BLM assessed alternatives in a manner that will avoid or minimize the adverse impacts of the proposed action.

APPEARANCES: Erik Molvar, Laramie, Wyoming, for Biodiversity Conservation Alliance; Andrea Gelfuso, Esq., Office of the Solicitor, U.S. Department of the Interior, Lakewood, Colorado, for the Bureau of Land Management; Morris R. Massey, Esq., Casper, Wyoming, for Kennedy Oil.

OPINION BY ADMINISTRATIVE JUDGE ROBERTS

Biodiversity Conservation Alliance (BCA) has appealed the September 29, 2003, decision of the Deputy State Director, Minerals and Lands, Wyoming State Office, Bureau of Land Management (BLM), on State Director Review (SDR), that affirmed the August 22, 2003, Decision Record and Finding of No Significant Impact (DR/FONSI) issued by the Acting Field Manager, Rock Springs Field Office (RSFO), BLM, approving the Lower Bush Creek Coal Bed Methane Exploratory Pilot Project (LBC Project). This DR/FONSI addressed a proposal by Kennedy Oil (Kennedy) of Gillette, Wyoming, to undertake an exploratory pilot project to explore, test, and potentially develop coal bed methane (CBM) wells.^{1/} The proposal would allow Kennedy to determine whether there is potential for commercial production of CBM on its oil and gas leases by testing two 10-well groupings (pods) located in the Red Desert Watershed Management Area of the Great Divide Basin in Sweetwater County, Wyoming, in secs. 21-23, T. 24 N., R. 98 W., and secs. 25, 26, and 35, T. 25 N., R. 98 W., Sixth Principal Meridian.

Originally, in June 2003, the RSFO issued EA WY-04-EA03-001 for the LBC Project. (Original EA; BLM Response, Ex. C.) On June 24, 2003, the Acting Field Manager, RSFO, issued a DR/FONSI approving the project based upon the Original EA. (BLM Response, Ex. G.) On August 1, 2003, BCA and the Wyoming Outdoor Council (WOC) requested SDR of the Original DR/FONSI in accordance with 43 CFR 3165.3(b), and requested a stay of implementation of the Original DR/FONSI. (BLM Response, Ex. B.) In addition to arguing that it failed to address a range of reasonable alternatives, BCA argued that the Original EA failed to adequately assess the cumulative impacts of the LBC Project. On August 21, 2003, the Deputy State Director issued his decision in response to BCA's request for SDR of the Original DR/FONSI. (Aug. 21, 2003, Decision in SDR No. WY-2003-14 (First SDR Decision); BLM Response, Ex. D.) Acknowledging that the RSFO had properly tiered to analyses in other documents, the Deputy State Director vacated the Original EA and remanded it to the RSFO for further action, primarily on the basis that the RSFO had failed to adequately summarize the cumulative impacts analysis to which it was tiered. On remand from the Deputy State Director, the RSFO issued EA WY-040-EA03-211

^{1/} Kennedy was named as an adverse party in the DR, and it filed its response to BCA's statement of reasons (SOR) and petition for stay.

(Revised EA) and DR/FONSI (Revised DR/FONSI) which are the subject of this appeal.

The Revised EA

The RSFO issued the Revised DR/FONSI and Revised EA on August 22, 2003. (BLM Response, Ex. F.)^{2/} As noted, it superseded and replaced the June 24, 2003, Original DR/FONSI and EA. This EA provided the following description of the Proposed Action:

The Proposed Action involves drilling and testing commercial CBM production potential of the Big Red Coal seam in the Fort Union Formation with two pods of 10 exploratory CBM wells on 160-acre spacing. This well number and spacing is believed to be the minimum necessary to sufficiently de-water the coal, allow the gas to desorb through reduced pressure in the coal seam, and determine whether natural gas production is economically viable in the coal at this location. All produced water will be reinjected into a sandstone formation containing water of lesser or equal quality as compared with the injected water. This Proposed Action would require the construction of access roads, completion of two injection wells and related facilities for each

^{2/} BCA received the Deputy State Director's Sept. 29, 2003, decision on Oct. 2, 2003. On Oct. 31, 2003, BCA filed a notice of appeal and statement of reasons (SOR) alleging several violations of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4332(2)(C) (2000). With its notice of appeal and SOR, BCA included a petition for stay of the Deputy State Director's decision.

On Nov. 17, 2003, BCA filed an emergency request for expedited review, alleging that Kennedy had "already drilled 7 of the 22 planned wells and is progressing toward full completion of the project." (Under 43 CFR 3165.4(c), a State Director's decision concerning onshore oil and gas operations remains effective pending appeal unless we order otherwise). In response, BLM and Kennedy acknowledged that the 10 exploratory wells in the southern pod would be finished by Thanksgiving, and they stated that Kennedy agreed not to drill the wells in the northern pod until after we had acted on BCA's petition for stay. In addition, Kennedy moved to summarily dismiss BCA's appeal because BCA did not serve its petition and SOR on Kennedy.

On Dec. 3, 2003, BLM filed a Response to BCA's request for stay and SOR (BLM Response). On Dec. 12, 2003, we denied BCA's petition for stay and Kennedy's motion to dismiss the appeal.

of the pods, known as the North Sweetwater Pilot and the Central Sweetwater Pilot.

(Revised EA at 1.) The Revised DR/FONSI again authorized the pilot project proposed by Kennedy to explore for commercial CBM resources in the Big Red Coal seam in the Fort Union Formation, and allowed for two pods, each consisting of ten exploratory CBM wells on 160-acre spacing, and one re-injection well. The pods are located approximately three miles apart within the Red Desert Watershed Management Area of the Great Divide Basin.

The project area, defined as “the sections directly affected by the Proposed Action,” encompasses approximately 3,500 acres. (Revised DR/FONSI at 1, 5-7; Revised EA, Ch. 2.1, The Proposed Action.) Initial surface disturbance would total 101.94 acres, and “production disturbance should exploratory drilling prove successful” would be 63.38 acres. (Revised DR/FONSI at 7, Table 2.) The life of the project (LOP) is described as “unknown since this project is designed to test the commercial potential for CBM production but could last anywhere from 60 days to 20 years or more should testing prove successful.” (Revised EA, Ch. 2.1, at 1.) Produced water would be re-injected into one or more Fort Union sandstone formations containing water of lesser or equal quality compared to the produced water. Id.

The Revised EA included a new section entitled Cumulative Impacts and the acknowledgment that cumulative impact assessment areas (CIAAs) vary among resources. The new section stated that cumulative impacts “are those that would result from the incremental impacts of the proposed project added to past, present, and reasonably foreseeable development (RFD).” (Revised EA, Ch. 4.17, at 91-98.) The Revised EA states that its analysis is tiered to the cumulative impact analysis for the Environmental Impact Statement (EIS) for the Pinedale Anticline Project and the EIS for the Continental Divide/Wamsutter II (CD/WII) Natural Gas Project (NGP or Project). ^{3/} It further states that the cumulative impact analysis for the CD/WII NGP

^{3/} Of the two EISs, it is clear that the CD/WII EIS is most relevant to BCA’s arguments. The CD/WII Project initially proposed drilling up to 3,000 natural gas wells and the construction of ancillary facilities, pipelines, and roads over a 10- to 20-year period in eastern Sweetwater and southwestern Carbon counties, with an initial disturbance of approximately 22,400 acres. The estimated life of the project (LOP) is 30-50 years. (CD/WII Draft EIS (DEIS), Executive Summary, at v-vi.) Environmental consequences were analyzed in Chapter 4 of the DEIS. Map 4.1 of the DEIS shows a General Cumulative Impacts Assessment Area (GCIAA) covering approximately 4,490,000 acres. The GCIAA includes the CD/WII project area (1,061,200 acres). The Minerals Cumulative Impacts Assessment Area (MCIAA) consists of

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included an RFD scenario of 850 exploratory wells and associated facilities within a GCIAA, *i.e.*, the area outside the MCIAA. The GCIAA embraces an area that is considerably larger than the CD/WII Project, and includes the LBC Project. The MCIAA in general is larger than the CD/WII Project area, but does not include the LBC Project. The LBC Project area is approximately 3,500 acres, or .0033 percent of the GCIAA. *Id.* at 44; *see* Map 4.1. The proposed project lies within the GCIAA. ^{4/}

Chapter 2 of the Revised EA contains Table 2.6, which summarizes environmental impacts on various resources, and applicable mitigation measures. (Revised EA at 20-22.) The Cumulative Impacts section of the Revised EA included a list that summarized the kind of resource or groups of resources, the CIAA, the number of already-disturbed acres or the existing level of activity, and the “potential cumulative impacts” from the LBC Project. *Id.* at 91-95. The summary is followed by a discussion of the impacts on each listed resource. *Id.* at 95-98. ^{5/} The Revised EA

^{3/} (...continued)

approximately 2,077,000 acres, and includes existing, approved, and/or proposed oil and gas developments and surface mining operations that are outside and surround the CD/WII Project area, and additional areas. The boundary of the GCIAA is based on hydrologic divides. *See* CD/WII DEIS, pp. 4-5 and 4-6. Table 4.1 lists the CIAAs for different resources, keyed to Map 4.1. *See* CD/WII DEIS, p. 4-4.

The ROD approved the CD/WII project for up to 2,130 wells at 2,130 locations and the remaining 870 wells and well locations are to be considered in connection with planning review of the Great Divide Resource Area RMP for the Rawlins Field Office area.

^{4/} Page 4-6 of the CD/WII DEIS states: “Reasonably foreseeable disturbance within the GCIAA includes all foreseeable disturbance within the MCIAA, as well as anticipated oil and gas exploration developments outside of the MCIAA. Areas within the GCIAA that are outside of the MCIAA are projected to be developed at a level and rate similar to what has occurred on the area in the past; therefore, reasonably foreseeable disturbance would be approximately 3,100 acres for the LOP (850 wells at 3.6 acres of associated long-term disturbance per well).”

^{5/} The topics covered by these paragraphs are air quality; topography, soils, surface water, and vegetation; geologic hazards, ground water, noise and odors, land use, range, health/safety, transportation, and hazardous materials; minerals and socioeconomics; cultural resources; paleontology; wildlife; wild horses; and visual resources and recreation.

For example, the discussion headed “geologic hazards, ground water, noise and odors, land use, range, health/safety, transportation, and hazardous materials” states that the cumulative impacts are “within the thresholds identified in the discussion of impacts for this project and the general cumulative impact assessment

(continued...)

defined RFD as “that development likely to occur within the CIAA for this action,” and includes “the Proposed Action and development of other exploratory and production wells in the vicinity (Figure 3.3).”^{6/} *Id.* at 95. The CIAA for the RFD lies within the northwest portion of the GCIAA for the CD/WII Project. The summary is based on the assumptions (1) that activity occurring in the Rawlins Field Office (RFO), *i.e.*, authorized in the BLM jurisdiction immediately to the east, is within the CIAA prepared for the CD/WII Project and has been fully implemented; (2) that disturbance per well was 3.6 acres, and that all disturbances within the MCIAA for the CD/WII Project have been implemented; and (3) that all activity approved in the CD/WII Project area and GCIAA has been fully implemented. *Id.* at 91-92, nn. 2 and 3.

BCA requested SDR and a stay of the Revised DR/FONSI (Second SDR Request), arguing that the “insufficient analysis of impacts and alternatives inherent

^{5/} (...continued)

area for the CD/WII project (see cumulative impact discussion for each resource). Should testing prove a producible quantity of natural gas, further environmental analysis would be conducted to asses[s] the impacts of a full field development scenario.” *Id.* at 96.

^{6/} Figure 3.3 appears in Chapter 3 of the Revised EA at 17. Chapter 3 describes the existing conditions of the affected environment. Figure 3.3 is entitled “Oil and Gas Activity and Well Status in the Red Desert Watershed Management Area Outside Jack Morrow Hills Planning Area and Vicinity.” Referring to Figure 3.3, the Revised EA, Subch. 3.1.3, Mineral and Energy Resources, states:

“On-going mineral development in the general area has been oil and gas exploration and production. As of August 11, 2003, BLM records showed a total of 23 wells drilled or shut-in in that portion of the Red Desert Watershed Area located outside of the Jack Morrow Hills planning effort area (see Figure 3.3). Since the original analysis was written [*i.e.*, the Original EA, in June 2003], 7 APDs [applications for permit to drill] have been submitted and are under review. Two APDs have been approved but have yet to be drilled: the Vermillion Basin 27-6 located in Section 27 of T. 24 N., R. 98 W., and the Jade Road 17-11 located in Section 17, T. 25 N., R. 98 W. Other activity is occurring or pending in the Rawlins Field Office including an 11 well CBM exploratory proposal located in T23N, R97W.” (Revised EA, Ch. 3, at 13, 16.)

The last sentence presumably is a reference to Kennedy’s proposed Hay Reservoir Coalbed NGP for which the RFO issued a scoping notice on Sept. 5, 2003. *See* SOR, Ex. 1. T. 23 N., R. 97 W., where that project would take place, is the township immediately southeast of the south pod of the LBC Project. In the township immediately to the east of the south pod, T. 24 N., R. 97 W., Figure 3.3 shows a dense cluster of other oil and gas activity, also in the RFO District.

to the [Original] EA and DR/FONSI * * * that were brought to light in our original [request] remain uncorrected.” (Second SDR Request at 1.) As to cumulative impacts, BCA maintained that the Revised EA did not “fix the deficiencies of the original EA,” arguing that “the Lower Bush Creek CBM Project EA should have considered nearby gas development, and *all* of the other numerous and ongoing oil and gas projects occurring in the Red Desert. And yet the Reasonably Foreseeable Development section of the EA is very vague, and references only a few projects in the immediate vicinity.” Id. at 2-3.

BCA argued that the RSFO “universally skips past the methods and results part of the exercise and leaps straight to its conclusions.” Id. at 3. BCA asserted that the lists in the Revised EA contained “a number of failures to even enumerate cumulative effects of the projects, much less provide the analysis required by NEPA.” Id. at 4. As to geology/mineral/paleontological resources, BCA argued that the list “merely restates the acreage of surface disturbance in the project and notes that 11 additional wells are proposed nearby; no attempt is made to analyze or estimate the magnitude of cumulative effects to these resources across the Red Desert as a whole.” Id.

The SDR Decision on Appeal

In his September 29, 2003, decision, the Deputy State Director rejected each of BCA’s contentions. He began by stating that the Revised EA reflects the work of an interdisciplinary team of resource specialists in identifying “important issues related to each known resource,” whose “conclusions are based on the best available scientific information.” (Sept. 29, 2003, Decision in SDR No. WY-03-15 (Second SDR Decision), BLM Response, Ex. L, at 2-5.) He addressed BCA’s argument that the Revised EA fails to adequately assess and disclose cumulative impacts of all actions occurring near the Lower Bush Creek area, including the Jack Morrow Hills and other nearby gas development projects in the Red Desert area. The Deputy State Director observed that neither NEPA nor the CEQ regulations “require a certain methodology on how cumulative impact analyses are to be conducted.” Id. at 3. He stated further:

When determining the extent of cumulative effects boundaries, “principle 4” [set forth in the CEQ Handbook] states, “It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.” An effective method of conducting a cumulative effects analysis is to consider the past, present, and future effects that overlap in time and location with the effects of the Proposed Action.

(Second SDR Decision at 3.)

The Deputy State Director stated that the cumulative impact analysis for the CD/WII DEIS assumed that 850 wells would be developed outside the CD/WII project area, but within the GCIAA. He noted that the LBC Project “as well as several other pending oil and gas projects, including the Desolation Flats and Atlantic Rim Exploration Projects,” lie within this GCIAA, and that “the cumulative impact analysis assumes the maximum level of development analyzed in the CD/WII project area as well as all the approved and pending activity anticipated in the CD/WII cumulative impact analysis area.” *Id.*, citing Revised EA at 92. The description of that pending activity was to be found on pages 16 and 17 of the Revised EA as the RFD in the cumulative impact analysis. (Second SDR Decision at 3-4.)

Further, the Deputy State Director rejected BCA’s contention that the CD/WII and Pinedale Anticline EISs cannot be used to accurately assess cumulative impacts of the LBC Project, observing that “[t]his particular argument contradicts BCA/WOC’s first argument that the RSFO failed to analyze cumulative impacts of oil and gas development in an area of sufficient size surrounding the Lower Bush Creek project.” *Id.* As to BCA’s argument that the RSFO offered no analysis, field research, or literature in support of its conclusion that no cumulative effects will occur, the Deputy State Director cited to Section 4.17 of the Revised EA for its summary of the “predicted cumulative impacts to each identified resource.” *Id.* at 4-5, citing Revised EA at 92.

The Deputy State Director rejected BCA’s argument that the Revised EA failed to consider a range of reasonable alternatives in violation of NEPA. In its view, BCA failed to acknowledge the entire range of alternatives that the RSFA considered in the Revised EA, which included three alternatives that were considered but not analyzed in detail. These other alternatives include (1) the use of directional drilling; (2) drilling of 93 wells in two pods; and (3) utilization of flat bladed or two-track roads only. (Second SDR Decision at 5.)

As to BCA’s contention that BLM’s analysis of the No Action Alternative amounted to a “straw-man” alternative that BLM effectively could not select without violating Kennedy’s lease rights to explore on its mineral leases, the Deputy State Director responded that “[s]hould parts of the Proposed Action be contrary to law, not conform with land use planning or management objectives,” the RSFO could have chosen the No Action Alternative, so that “the project would not go forward as described.” *Id.* He rejected as unreasonable BCA’s position that Kennedy should have developed a single pod alternative, observing that Kennedy “has determined that two 10-well pods is the minimum number of wells necessary to evaluate the productive capability of the Big Red Coal reservoir,” and that this minimum represents Kennedy’s having to “scale-down the project for financial reasons.” *Id.* at 6. He likewise rejected BCA’s argument that BLM failed to analyze an alternative incorporating scientifically adequate sage grouse lek buffers, reasoning that the

Proposed Action reflects that “efforts to mitigate potential adverse impacts to sage grouse and their habitat will be based on the best available scientific information as described in the Green River RMP.” Id.

The Deputy State Director explained why the Revised EA addressed directional drilling as an alternative but did not analyze it in detail. He stated that “[t]he purpose of the Lower Bush Creek Project is to gather data and determine the feasibility of future natural gas development,” that “directional drilling technology requires precise control of target locations in three dimensions,” and that “[w]ithout the knowledge of where coal seams pinch out, split or end, directional drilling may not produce desired results.” Id. at 7. He allowed that “[o]nce coal properties are better defined, and if natural gas development potential exists in the Lower Bush Creek project area, directional drilling may be an appropriate method to consider should full field development occur.” Id.

With respect to BCA’s contention that the Revised EA has failed to adequately evaluate the effectiveness of mitigation measures for sage grouse, the Deputy State Director noted that “[m]itigation and monitoring of sage grouse on Federal lands does occur,” that “the nearby CD/WII area has a Wildlife Mitigation and Monitoring Plan in place and has gathered data for the past two years,” and that “[i]t may take several years of inventory and research to determine the reasons for the decline of the sage grouse throughout the West.” Id. He stated that the RSFO has described how proposed mitigation measures will avoid, minimize, or eliminate impacts on affected resources, including the sage grouse.²⁷

BCA’s SOR

In its SOR, BCA advances four primary challenges to the Revised EA for the LBC Project, disagreeing with all major rulings rendered by the Deputy State Director in his SDR decision. First, BCA contends that BLM has failed to give cumulative impacts of the LBC Project the “hard look” required by NEPA. According to BCA, “[t]he cumulative effects of habitat fragmentation and its effects on wildlife at a landscape scale are an important factor not even given passing consideration in the Lower Bush Creek EA” (SOR at 17), and that “[w]hile the BLM has provided site-specific analyses for a number of factors affected by the proposed project, it has utterly failed to supply cumulative impact analyses” (SOR at 18). Second, BCA argues that the Revised EA fails to meet NEPA’s “requirement of scientific rigor,” referring to 40 CFR 1500.1(b) and 1502.24, and faults BLM for ignoring several

²⁷ The Deputy State Director went on to reject BCA’s other arguments (which BCA does not renew on appeal to this Board), affirmed the decision to implement the revised DR/FONSI, and denied the request for stay. Id. at 9.

scientific studies “which represent the most relevant and current scientific literature on the subject.” (SOR at 24-25.) Third, in BCA’s view, BLM failed to take a hard look at whether mitigation measures adopted for the protection of sage grouse in the LBC Project area are effective, relying instead on the Green River RMP/EIS, which might have been up-to-date when it was issued in 1996, but which fails to account for relevant subsequent scientific studies and documents. (SOR at 26-32.) And fourth, BCA maintains that BLM failed to consider a range of reasonable alternatives, e.g., a single-pod alternative, larger no-surface-occupancy buffer areas for sage grouse leks, and directional drilling. Id. at 33-53.

Analysis

[1, 2] This Board has well-defined standards against which we must evaluate the Revised EA for the LBC Project. In preparing an EA to assess whether an EIS is required under NEPA, 42 U.S.C. § 4332(2)(C) (2000), an agency must take a “hard look” at the proposal and identify relevant areas of environmental concern so that it can make an informed decision about whether the environmental impacts are significant or that significant impacts can be reduced to insignificance by mitigation measures. National Wildlife Federation, 169 IBLA 146, 154-55 (2006). In Southern Utah Wilderness Alliance, 164 IBLA 33 (2004), the Board stated:

In considering whether BLM has taken the requisite hard look at the environmental consequences of a proposed action, this Board has indicated that it is guided by a rule of reason:

An EA need not discuss the merits and drawbacks of the proposal in exhaustive detail. By nature, it is intended to be an overview of environmental concerns, not an exhaustive study of all environmental issues which the project raises. If it were, there would be no distinction between it and an EIS. Because it is a preliminary study done to determine whether more in-depth study analysis is required, an EA is necessarily based on “incomplete and uncertain information.” Blue Ocean Preservation Society v. Watkins, 767 F. Supp. 1518, 1526 (D. Hawaii 1991) * * *. So long as an EA contains a “reasonably thorough discussion of . . . significant aspects of the probable environmental consequences,” NEPA requirements have been satisfied. Sierra Club v. United States Department of Transportation, 664 F. Supp. 1324, 1338 (N.D. Ca. 1987), * * * quoting Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974). [Footnote deleted.]

Bales Ranch, Inc., 151 IBLA 353, 358 (2000), quoting Don't Ruin Our Park v. Stone, 802 F. Supp. 1239, 1247-48 (M.D. Pa. 1992), and authorities cited. A party challenging BLM's decision has the burden of demonstrating with objective proof that the decision is based on a clear error of law or demonstrable error of fact, or that the analysis failed to consider a substantial environmental question of material significance to the proposed action. Great Basin Mine Watch, 159 IBLA 325, 353 (2003); Southern Utah Wilderness Alliance, 158 IBLA 212, 219-20 (2003); The Ecology Center, 140 IBLA 269, 271 (1997). Mere differences of opinion provide no basis for reversal. Rocky Mountain Trials Association, 156 IBLA 64, 71 (2001).

164 IBLA at 36; see also National Wildlife Federation, 169 IBLA at 155.

We will now review each of BCA's challenges to the Revised EA for the LBC Project in the context of these principles, and in the process consider the responses submitted by BLM and Kennedy.

Cumulative Effects of the LBC Project

[3, 4] "Our decisions confirm the importance of a careful analysis of direct, indirect, and cumulative impacts." Friends of the Nestucca, 144 IBLA 341, 358 (1998), and cases cited. NEPA and CEQ regulations require agencies to consider the cumulative impacts of proposed actions. CEQ regulations define the term "cumulative impact" as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency * * * undertakes such other actions." 30 CFR 1508.7; see also Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 46 FR 18,033 (1981).

Our review of the record demonstrates that BLM properly considered the cumulative impacts of the LBC Project. As noted, that analysis is tiered to the cumulative impacts analysis contained in the CD/WII Project EIS, which projected an RFD scenario of 850 wells and related facilities in the GCIAA. That analysis is summarized in the Revised EA in Chapters 2 and 4. BLM thus maintains that the Revised EA considered anticipated disturbance from these 850 wells, "as well as the cumulative impacts from the [LBC] Project, for each of the affected resources and a reasonably foreseeable development of seven wells in the vicinity of the project area." (BLM Response at 4.) In addition, the Pinedale Anticline DEIS was also incorporated by reference into the Revised EA.

BCA's arguments fail even to acknowledge the analyses contained in the CD/WII and Pinedale Anticline environmental documents. BCA's complaint that

“nowhere in the [EA] are explanations of analyses or results of analyses presented” (SOR at 19) is not well-founded because the point of tiering is to avoid duplicating discussions of the same issues. Defenders of Wildlife, 169 IBLA 117, 130-31 (2006); National Wildlife Federation, 169 IBLA at 156 n. 9, and cases cited. Once impacts have been analyzed in a broader NEPA document, a “subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement by reference and shall concentrate on the issues specific to the subsequent action.” 40 CFR 1502.20. Thus, BCA has the burden of demonstrating that the Revised EA’s analysis, which tiers to the two DEIS analyses, does not constitute “a reasonably thorough discussion of * * * significant aspects of the probable environmental consequences” of the proposed action, here the LBC Exploration Project. Trout Unlimited v. Morton, 509 F.2d at 1283. When the tiered analyses are properly viewed as a whole, it is clear that BCA has not discharged its burden.

BCA first contends that BLM failed to consider impacts and habitat fragmentation of the “landscape scale.” (SOR at 17.) Further, BCA criticizes BLM for failing to analyze full field development in Lower Bush Creek in the Revised EA. (SOR at 18). We do not agree. The CD/WII DEIS analyzed full field development with a maximum of 2,130 wells at 2,130 locations within the GCIAA that includes the LBC Project wells. (CD/WII ROD at 4.)

Before discussing particular resources, the CD/WII DEIS stated that “[a]ssessment of cumulative impacts includes a quantification of existing surface disturbance” in the CD/WII project area and in the various CIAAs. (CD/WII DEIS at 4-6.)^{8/} Existing surface disturbance was determined primarily from aerial photographs taken in 1994; some kinds of disturbance were verified in the field. Table 4.2 of the DEIS, entitled “Cumulative Disturbance,” lists total long-term acreage disturbed in the GCIAA, the MCIAA, and the CD/WII project area from oil and gas, oil and gas roads, and other uses, including “surface mines, non-oil-and-gas roads, railroads, residential areas, impoundments, cultivated lands, utility lines, and other facilities.” Id. at 4-7, n. 4. Total disturbed acreage in the GCIAA was estimated at 86,100 acres; in the MCIAA, at 53,700 acres; and in the CD/WII Project area at 14,800 acres. As set forth in Table 4.1, the CIAA for geology and paleontological resources was the CD/WII Project area; for minerals, it was the MCIAA. Big game was the entire winter and crucial ranges for project-affected herds; for sage grouse, it was project-affected Upland Game Bird Management Areas (UGBMAs) within the GCIAA; for raptors, it was the MCIAA and 1-mile buffer; for threatened, endangered, candidate and sensitive species it was the GCIAA; and for wild horses, it was project-affected Wild

^{8/} At the time the DEIS was prepared, the current BLM guidance on cumulative effects analysis was contained in Instruction Memorandum No. 97-310, “Guidelines for Assessing and Documenting Cumulative Impacts” (1994). (CD/WII DEIS at 4-3 and 6-3.)

Horse Herd Management Areas within the GCIAA. (CD/WII DEIS at 4-4.) BCA is clearly not correct in asserting that BLM failed to consider impacts on a landscape basis; an impacts analysis embracing more than a million acres is plainly on a landscape scale. It is equally clear that the tiered impact analysis considered habitat fragmentation.

In the general introduction to the wildlife section of the chapter, the CD/WII DEIS stated:

[S]ignificant impacts could occur from indirect disturbance to big game on their winter ranges and/or raptor nest abandonment and/or reproductive failure under the Proposed Action. Impacts to wildlife resources from construction, drilling, and completion activities would generally be through loss of habitat and disruption of activities due to human presence. * * * Given adherence to wildlife protection measures identified in Appendix D [of the DEIS], impacts to most wildlife resources are anticipated to be insignificant * * *. [Emphasis added.]

(CD/WII DEIS at 4-47.)^{2/} The Final EIS for the CD/WII Project added another potentially significant impact: “and/or loss of sage grouse productivity” was added after “raptor nest abandonment and/or reproductive failure.” (Final CD/WII EIS at 15.) In its corresponding general introduction to the discussion of wildlife, Chapter 4 of the Revised EA similarly recognizes that impacts “would include displacement of wildlife, loss or temporary disturbance of wildlife habitats, an increase in the potential for collisions between wildlife and motor vehicles, and an increase in the potential for illegal kill, harassment, and disturbance of wildlife due to increased human presence and improved vehicle access.” (Revised EA, Ch. 4, at 77.)

As we stated above, BCA’s assertions on appeal are mistakenly limited to the EA’s summary of the cumulative impacts analysis that appears in the CD/WII EIS. With respect to sage grouse, for example, BCA argues that BLM failed to identify

^{2/} Appendix D of the CD/WII DEIS is a wildlife monitoring/protection plan, the goal of which is to “avoid and/or minimize adverse impacts to wildlife present on project-affected areas by monitoring wildlife population trends during the course of project development and operations and by developing appropriate mitigative actions.” (CD/WII DEIS at D-1.) Its implementation calls for annual reports and meetings (D-2.1.1 at D-3); annual inventory and monitoring (D-2.2 at D-7) for raptors, species of concern (including mountain plover), sage grouse, and big game crucial winter range use; and protection measures (D-2.3 at D-19) for the same species. BLM is to convene an annual meeting to discuss “proposed wildlife inventory, monitoring, and protection protocol for the subsequent year,” and to issue an annual report beginning in February 2001. (D-2.1.1 at D-3.)

either direct or cumulative impacts on sage grouse populations in the Red Desert UGBMA. (SOR at 22.) The record is to the contrary. The Revised EA acknowledges potential impacts, depending on the level of activity relative to suitable habitat. However, the Revised EA also states:

Effects to greater sage-grouse could include direct loss of habitat and forage, and increased disturbance from project related activities. Disturbance of sage-grouse during the nesting and brood-rearing period and on winter concentration areas can increase stress and may influence species distribution. There may also be a potential for increased poaching and harassment or increased predation from raptors using facilities for perching. Greater sage grouse would be expected to demonstrate avoidance of the area for the life of the project depending upon the level of human activity and where it occurs in relation to suitable habitat. Noise and human disturbance in the project may lead to lek abandonment and reduced nesting.

Although no active leks are located in the project area, five leks are found within two miles. Although these leks have had little activity the last couple of years there is an abundant quantity of suitable greater sage grouse nesting habitat available. The amount of habitat disturbance should be minimal in proportion to that which is suitable. Sage grouse can be impacted by other activities associated with CBM development, including increased human and pet activity, increased traffic, and predation by birds of prey. [Emphasis added.]

Id. at 79.

The Revised EA relies on the mitigation measures and practices set forth in the Green River RMP to reduce potential impacts to the sage grouse population, and “protect the breeding, nesting and brood-rearing activities of the greater sage-grouse from February 1 through July 31.” Id. Such mitigation measures include no-surface occupancy (NSO) “stipulations applicable to a 1/4 mile buffer around active leks,” and “road use would be limited within 1/4 mile of an active lek between 6:00 pm and 9:00 am February 1, through May 15.” Id. In addition, “[c]onstruction of structures that could be used for raptor perches would be avoided or mitigated to prevent raptor perching.” Id.; see also Kennedy’s Response to SOR at 4-5.

The CD/WII DEIS noted that 963 of the 3,000 wells originally proposed for the project would be located in probable sage grouse nesting habitat, i.e., 340,200 acres within two miles of sage grouse leks, traditional strutting and breeding grounds for the sage grouse, located in and adjacent to the project area. Nonetheless, the DEIS concluded that BLM believed existing oil and gas lease stipulations adequately protect

strutting and nesting sage grouse. ^{10/} (CD WII DEIS at 4-59.) The majority of the disturbance would occur in the Red Desert UGBMA that contains the LBC Project, estimated to be 2,600 acres. *Id.* According to Table 4.12, the Red Desert UGBMA contains a total of 571,000 acres of probable nesting habitat and 31,000 acres of potential breeding habitat. The LBC Project, in contrast, envisions a total initial disturbance of 101.94 acres for all wells and associated facilities, and a total of 63.38 acres of production disturbance if drilling is successful. Consistent with the Green River RMP, no disturbance would be allowed within .25 miles of an existing lek. *Id.* at 4-59. In addition, the DEIS stated that “[w]ith the implementation of the Wildlife Protection Plan for this project and associated monitoring and potential implementation of augmented protection measures (see Appendix D) impacts to sage grouse associated with the Proposed Action are expected to not be significant.” *Id.*

While the CD/WII DEIS acknowledged “some uncertainty regarding potential significant cumulative impacts on sage grouse as a result of the proposed action,” *id.* at 4-62, the Final EIS for the CD/WII project also stated that “with the implementation of the Wildlife Protection Plan * * * and associated monitoring and potential implementation of augmented protection measures * * *, most impacts to sage grouse associated with the Proposed Action are expected to not be significant.” (Final CD/WII EIS at 16.) The Final EIS further noted that “regional sage grouse populations have apparently been decreasing over the last several years, and these decreases have been attributed to a number of factors[,] including climate, predation, livestock grazing, and mineral development.” *Id.* The Final EIS added the underlined language to the following statements in the DEIS, (1) that “[c]umulative impacts to potential raptor and sage grouse habitat resulting from regional developments are unknown,” and (2) that “if developments result in raptor or sage grouse nest abandonment or reproductive failure, significant impacts could result.” (Final CD/WII EIS at 17.)

As another example, for big game species habitats, the Revised EA states that effects on big game would include direct loss of habitat and forage, increased disturbance from project activities, and a potential for increased poaching and harassment. (Revised EA, Ch. 4, at 78.) Continuing drought conditions, as well as direct loss of habitat and forage, increased disturbance from project activities, a potential for increased poaching and harassment, and “activities and development occurring on private land where protective stipulations are not imposed were identified as impacts.” (Revised EA, Ch. 4, at 97.) The Revised EA states further that

^{10/} Applicable project stipulations similarly proscribed surface-disturbing activities within .25 miles of active sage grouse leks, and a limitation of construction activities within a 2-mile radius of active sage grouse leks on suitable sage grouse nesting habitat between March 1 and June 30. (CD/WII DEIS 2-34, items 12 and 13 under 2.6.13.9.)

big game “would be expected to demonstrate some avoidance of the [LBC Project] area for the life of the project due to an increase in human presence.” *Id.* Effects on big game species were described as “minimal” because the project area affected less than one per cent of their winter or year-long range,^{11/} and no fencing was proposed that would impede migration. No long-term habitat loss was expected after reclamation because big game were expected to return. *Id.* The LBC Project area is within the Red Desert Pronghorn Antelope Herd Unit. (Revised EA, Ch. 3, at 28.) The Revised EA analyzed the portion of the herd unit that overlaps the GCIAA, encompassing 1,849,024 acres (Figure 3.8). Although “the pods lie within a migration area, no crucial winter range for antelope occurs in the project area or vicinity.” *Id.*, Ch. 3, at 29.

Correspondingly, with respect to big game, the CD/WII DEIS stated that “[d]irect impacts * * * were only assessed for affected crucial winter ranges and winter ranges since these range types tend to be limiting for most herds.” (CD/WII DEIS at 4-47.) This assessment is important because the LBC Project is located in the winter/yearlong range of the Red Desert pronghorn antelope herd. *Id.* at 4-49, Map 4.3. The CD/WII DEIS stated that total initial surface disturbance within the winter range for the Red Desert herd would be approximately 16,306 acres, with a total of 8,437 acres within the year-long range, some tiny fraction of which would be attributable to the LBC Project, and that “LOP surface disturbance in winter/yearlong range for the Red Desert herd within the CD/WIIPA [project area] would be less than 1.7% of the entire winter/yearlong range for the herd.” *Id.* at 4-48. Existing disturbance of the winter/yearlong range in the GCIAA was estimated at 12,400 acres, with potential future disturbance of 2,800 acres. Total CD/WII project-related, existing, and potential future acreage disturbance affecting the Red Desert herd was estimated to be 23,637 acres or 1.3 percent of the entire range type. *Id.* at 4-50, Table 4.10.

The CD/WII DEIS also discussed indirect impacts on big game from human disturbance, both intentional and unintentional, stating that animals displaced by disturbance incur costs due to lower food intake and potential lower quality habitat; “[i]f the disturbance becomes chronic or continuous, these costs can result in reduced

^{11/} The Revised EA provides the following summary of winter/year-long ranges:

“Winter ranges are used by substantial numbers of animals only during the winter months (December through April). Winter/year-long ranges are occupied throughout the year, but during winter these ranges are used by additional animals that migrate from other seasonal ranges. Crucial big game range (e.g., crucial winter/year-long range) describes any seasonal range or habitat component that has been documented as a determining factor in a population’s ability to maintain itself at a specified level over the long-term.” (Revised EA, Ch. 3, at 28.)

animal fitness and reproductive potential * * * .” Id. at 4-53. The DEIS makes clear that “[i]ndirect impacts to all three big game species affected by the Proposed Action [i.e., pronghorn antelope, mule deer, and elk] may be significant during project construction and for the LOP; however, LOP impacts to big game from displacement and indirect habitat loss are anticipated to be less than those occurring during construction.” Id. ^{12/}

Although the CD/WII DEIS acknowledges that “[c]umulative impacts resulting from direct habitat loss for all big game herds are unknown,” it is anticipated that monitoring in accordance with the Wildlife Protection Plan would allow the BLM to determine whether “further studies are required * * * and whether additional mitigations are necessary.” See Appendix D, D-2.2.4 and D-2.3.4. Important to our consideration of the impacts of the LBC Project on big game is the following conclusion: “Since no long-term large-scale fencing would be utilized by this project, impacts to big game migrations are not anticipated to be significant. However, increased use of the CD/WII [project area] and adjacent areas would likely impede big game migrations to some degree due to displacement.” Id. at 4-57 and 4-58.

The CD/WII DEIS discussed the impacts on raptors from the proposed action:

The principal threat to raptors from project activities and associated increased human access is disturbance during nesting[,] resulting in nest abandonment and associated reductions in reproduction success. * * * If this disturbance resulted in nest abandonment and/or reproductive failure, significant impacts to raptors would result. * * * The potential for these impacts would be greatest during project development (10-15 years), when human activity levels are greatest * * * .”

^{12/} Table 4.11 provides estimated potential displacement distances, i.e., “average distance at which all or a majority of the animals of a particular species would remain undisturbed during well construction and road use,” for all three species based on a review of several studies. (CD/WII DEIS at 4-54.) Pronghorn antelope in the CD/WII project area could be expected to remain approximately .5 mile away from well construction and .25 mile from roads; mule deer would remain 1.0 mile from well construction and .75 mile from roads; and elk could be anticipated to be displaced 1.5 miles from well construction and 1.0 mile from roads. Id. at 4-54 and 4-55; Table 4.11.

(CD/WII DEIS at 4-58.) A total of 549 wells could be developed within known suitable raptor nesting buffer areas, *i.e.*, within one mile of active nests and within sensitive resource areas, disturbing 6,300 acres initially and 3,300 acres over the life of the project. *Id.* at 4-58 -- 4-59; *see* Table 4.12, at 4-60. ^{13/}

The CD/WII DEIS explained that potential cumulative impacts to raptor habitats from development are unknown, and that further studies may be required:

The area of cumulative impact assessment for raptors is the MCIAA and a 1-mi[le] buffer * * *. Cumulative impacts to potential raptor habitat resulting from regional developments are unknown; however, as with the Proposed Action, if developments result in raptor nest abandonment or reproductive failure, significant impacts could result. * * * The potential for significant cumulative impacts to raptors * * * is unknown under implementation of the Proposed Action * * *. With the application of wildlife protection measures identified in the Wildlife Protection Plan (see Appendix D), the BLM would be able to determine if further studies are necessary (*i.e.*, cause-and-effect studies) and whether additional mitigations are required.

Id. at 4-62.

^{13/} The CD/WII DEIS is quite specific as to the need for adequate spatial and temporal buffer zones in protecting raptors:

“While the spatial and temporal buffer zones proposed by Operators (see Section 2.6.13.9) would provide seasonal protection of raptor nests from human activities, nothing would prevent development within the buffer zone outside of the nesting season, and activities associated with this development (*e.g.*, well maintenance actions, traffic) could disturb nesting raptors during subsequent nesting seasons. For this reason, buffer zones around active raptor nests during nesting periods may provide inadequate nest protection and result in reproductive failure in some raptor nesting territories. Unoccupied suitable raptor nesting habitat also would be unprotected, and as the area becomes fragmented by project facilities, the availability of alternate nest sites may become limited.”

Id. at 4-58.

The Revised EA states, under other applicant-committed practices: “Surface-disturbing activities will be seasonally restricted from February 1 through July 31 within a 0.5-mile radius of all active raptor nests, except for Ferruginous Hawk nests, which will have a 1.0-mile seasonal buffer. Active nests are described as any active within the past 3 years. Such restriction will not apply to routine maintenance activities.” (Revised EA, Ch. 2.1.9.8, at 16, item 5.)

Consistent with Table 4.1 in the CD/WII DEIS, the table in the Revised EA for the LBC Project stated the CIAA for raptors was the project area (3,500 acres) plus a 1-mile buffer, a total of 16,000 acres. Within that area, an existing road disturbs 9.6 acres. Although the LBC Project itself would not add any disturbance, there is RFD of two wells within one mile of a Ferruginous Hawk nest. (Revised EA, Ch. 4, at 94.) The nest is found over one mile to the north of the project area, at the John Hay Reservoir. *Id.* at 79. The two wells are presumably included in Kennedy's Hay Reservoir Coalbed NGP in the Rawlins District. The Revised EA repeats the statement in the CD/WII DEIS that the principal potential effects of implementing the proposed project would be nest abandonment and/or reproductive failure caused by the project-related activities and increased public access. *Id.*

Our final example is BCA's argument that BLM failed to adequately assess cumulative impacts on mountain plovers.^{14/} The CD/WII DEIS identified mountain plover as one of five Federal threatened or endangered or state sensitive species "that could be adversely affected * * * due to loss of habitat." (DEIS at 4-69 -- 4-70.)^{15/} However, pre-construction surveys must be conducted as part of the review process

^{14/} The Revised EA stated that no mountain plover were observed in suitable habitat during general surveys of resources in 2002, but that "the species is expected to use the area for nesting and brood rearing." (Revised EA, Ch. 3, at 36-37.) No surveys had been conducted in accordance with U.S. Fish and Wildlife Service (USFWS) guidelines, but the entire project area was being considered as suitable habitat, and mapping for prairie dogs in 2003 confirmed that plover were inhabiting the area. *Id.* at 37. Among other things, Kennedy committed to protecting the mountain plover "by restricting or avoiding construction activities in * * * nesting and brood-rearing habitat during breeding periods (April 10 through July 10)." *Id.*, Ch. 2.1.9.8, item 7, at 17. However, the Revised EA was clear that "[t]he potential exists for adverse impacts if protective measures are not adhered to." *Id.*, Ch. 4, at 80.

The Revised EA stated that cumulative impacts on the local mountain plover population due to habitat loss and displacement from past, proposed, and future projects were unknown: "Disturbance due to livestock or wildlife use, oil and gas, recreation, vehicle traffic, and other uses has either removed, modified, or created potential mountain plover breeding and nesting habitat. Application of mitigation measures in accordance with FWS' guidelines should minimize impacts so that plover reproduction is not jeopardized." (Revised EA, Ch. 4, at 97.) The cumulative effects table states: "No jeopardy determination for mountain plover, mitigation applies." *Id.* at 94.

Shortly after the Revised EA was issued, the USFWS withdrew a proposed rule to list the mountain plover as threatened. 68 FR 53083 (Sept. 9, 2003).

^{15/} Other species were the Ferruginous Hawk, loggerhead shrike, western burrowing owl, and eastern short-horned lizard.

for applications for permits to drill and applications for rights-of-way and if any of these species were found, the locations will be avoided until the species are not affected or protective measures can be specified. *Id.* at 4-70. Several applicant-committed monitoring and mitigation measures were specified, e.g., surveys in suitable mountain plover habitats in accordance with USFWS guidelines in advance of ground-disturbing activities.

The impacts analysis was supported by a Biological Assessment (BA) for the CD/WII Project in which it was concluded that “[l]oss of potential mountain plover breeding and foraging habitat due to proposed project activities may adversely affect the species.” *Id.*, E-5.2.6.2, at E-25. The BA discussed the nature of potential impacts of development on the mountain plover population:

Cumulative impacts to the local mountain plover population would probably not jeopardize regional populations. Although disturbance due to oil and gas development, surface mining, urban developments, and roads has removed an unknown portion of potential mountain plover nesting habitat, it is unlikely that the extent of this habitat removal has jeopardized plover reproduction due to the dispersed nature of disturbance associated with oil and gas and other developments throughout the region. * * * Surface disturbance resulting from the proposed project would slightly increase cumulative impacts to mountain plovers, and such impacts are unknown for the foreseeable future.

Id.

An important step in determining environmental consequences of cumulative effects is to “monitor the cumulative effects of the selected alternative and adaptive management.” (CEQ Handbook, Ch. 4, at 37.)^{16/} In accordance with

^{16/} See CEQ, *The National Environmental Policy Act: A Study of Its Effectiveness After Twenty-Five Years*, “Monitoring and Adaptive Management,” at 31-34 (Jan. 1997); CEQ, *The NEPA Task Force Report to the Council on Environmental Quality, Modernizing NEPA Implementation*, Ch. 4, Adaptive Management, at 44-56 (Sept. 2003).

On July 2, 2003, the Department’s Office of Environmental Policy and Compliance issued Environmental Statement Memorandum No. ESM03-06, “Procedures for Implementing Adaptive Management Practices,” to heads of bureaus and offices. That memorandum defined adaptive management as

“a system of management practices based on clearly identified outcomes, monitoring to determine if management actions are meeting outcomes, and, if not,

(continued...)

40 CFR 1505.2(c), the CD/WII DEIS included a wildlife monitoring/protection plan. Implementation was to begin in 1999, and annual reports of wildlife inventory, monitoring, and protection data are to be prepared by BLM. (CD/WII DEIS, App. D, at D-1, D-3.) The plan calls, for example, for annual sage grouse lek attendance monitoring from March to mid-May within the project area and a 2-mile buffer around it and for big game crucial winter range use monitoring data, as available from Wyoming Game and Fish Department. ^{17/} Id. at D-5, Table D-2.2.

The May 2000 ROD for the CD/WII Project included a section on compliance and monitoring, stating that “[b]ecause of the importance of mitigation for avoiding or minimizing adverse impacts, an intensive monitoring program will be implemented by the Operators and BLM with input from state and other federal agencies.” (CD/WII ROD at 15.) The ROD further explained: “The procedures identified for monitoring, evaluation, review, and potential modification (e.g., changed mitigative actions) identified in the EIS * * * Wildlife Protection Plan * * * provide for an ‘adaptive environmental management plan’ for most, if not all, resources with the potential for significant impacts.” Id. The adoption of such monitoring procedures for the CD/WII Project demonstrates that BLM was aware that changing circumstances could result in increased impacts requiring implementation of additional mitigation measures, and undercuts BCA’s argument that BLM failed to consider the cumulative impacts to wildlife in the LBC Project area.

We could lengthen this opinion by discussing every other resource about which BCA complains, but we decline to do so. Even a cursory review of the tiered

^{16/} (...continued)

facilitating management changes that will best ensure that outcomes are met or to re-evaluate the outcomes. Adaptive management recognizes that knowledge about natural resource systems is sometimes uncertain and is the preferred method of management in these cases.”

On Mar. 8, 2004, the Department published a revision of its procedures for implementing NEPA procedures. 69 FR 10866 (Mar. 8, 2004). 516 DM 1.3 D.(7) provides that heads of bureaus and offices “shall use adaptive management (see 516 DM 4.16) to fully comply with 40 CFR 1505.2 which requires a monitoring and enforcement program to be adopted, where applicable, for any mitigation activity.” 69 FR 10873-74 (Mar. 8, 2004). 516 DM 4.16 quotes the definition in ESM03-06, adding: “Bureaus are encouraged to build adaptive management practice into their proposed actions and NEPA compliance activities and train personnel in this important environmental concept.” 69 FR 10880 (Mar. 8, 2004).

^{17/} Id., Table D-2.1, at D-4. Aerial sage grouse lek and raptor nest inventories and raptor productivity monitoring at active nests would be provided every 5 years, with operator financial assistance for aircraft rental.

analysis demonstrates that it constitutes a reasonably thorough discussion of probable environmental consequences. We conclude that the Revised EA, as tiered to the environmental analyses for the CD/WII DEIS Project, provides a cumulative effects analysis of the LBC Project which meets the requirements of NEPA.

NEPA's Requirement of Scientific Rigor

As a related matter, BCA criticizes the Revised EA as lacking the “high level of scientific credibility and integrity” required by NEPA, quoting 40 CFR 1502.24, which provides: “Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.” Further, 40 CFR 1500.1(b) states: “The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” BCA charges that the NEPA documents associated with the Lower Bush Creek project do not meet this standard. (SOR at 24, citing Colorado Environmental Coalition v. Dombeck, 185 F.3d at 1171-72.)

In BCA's view, BLM failed to address “responsible opposing views” in reviewing the BCA Project. Specifically, BCA states that it “provided the BLM with the references of several scientific studies, constituting such ‘opposing views,’” and that BLM “should have addressed [them] its project decision.” (SOR at 25-26.)^{18/} BCA claims that “these studies and opinions * * * represent the most relevant and current scientific literature on the subject,” and that BLM “entirely fail[ed] to give any objective and reasonable consideration to the findings of the aforementioned relevant scientific papers and the opposing views found therein.” (SOR at 25.)

The fact that BCA cites experts who agree with its position is not dispositive. See Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162, 1176 (10th Cir. 1999). However, to the extent that BCA identified such experts or submitted their findings to BLM, the record plainly shows that BLM considered opposing views at the scoping stage when it reviewed public comments on the LBC Project, including the

^{18/} The studies cited by BCA are A.G. Lyon, “The Potential Effects of Natural Gas Development on Sage Grouse (*Centrocercus urophasianus*) near Pinedale, Wyoming,” (2000) (M.S. Thesis, Univ. of Wyoming) (SOR, Ex. 3); J.W. Connelly, M.A. Schroeder, A.R. Sands, and C.E. Braun, “Guidelines to Manage Sage Grouse Populations and their Habitats,” 28(4) Wildlife Society Bulletin 967-85 (2000) (SOR, Ex. 4); C.E. Brawn, C.E., “Comments: Sage Grouse Issues, Supplemental Draft Environmental Impact Statement for the BLM's Jack Morrow Hills Coordinated Activity Plan/Draft Green River Resource Management Plan Amendment,” Tucson, AZ, GROUSE INC. (May 16, 2003) (SOR, Ex. 5).

information submitted by BCA. BLM responded to BCA's comments on the Original DR/FONSI dated June 2003 (BLM Response, Ex. G, at 19-28) and in the Revised DR/FONSI (BLM Response, Ex. A, at 10-19). BLM further explains the steps it took in responding to BCA's views:

In fact, in response to arguments raised in Appellant's initial State Director Review, BLM revised the LBC EA and provided detailed analysis regarding cumulative impacts. BLM considered BCA's comments and addressed them in the NEPA documents, which resulted in a revision of the LBC EA in recognition of BCA's concerns. However, * * * BLM disagreed with Appellants' analysis in other areas, including sage grouse mitigation measures and a reasonable range of alternatives.

(BLM Response at 8.)

BCA has not shown that the Revised EA is based upon information lacking in scientific integrity, and we reject BCA's contention that the Revised EA is deficient on this basis. As we have shown in our cumulative impacts discussion, and as we will show as we evaluate BCA's challenge to measures imposed by BLM for the protection of sage grouse populations, the Revised EA appears to be premised upon scientific analyses which are thorough and take into account the wide variety of viewpoints in a changing forum. BCA's "differences of opinion provide no basis for reversal." Id., quoting Oregon Natural Resources Council, 131 IBLA 180, 186 (1994).

Mitigation Measures for Sage Grouse

BCA and BLM differ sharply as to whether BLM's measures are adequate to protect the sage grouse populations which are or may be affected by the LBC Project. BCA states that it "has repeatedly called into question the effectiveness of protective measures proposed by BLM for sage grouse lek sites * * * and nesting habitats." (SOR at 27.) According to BCA,

BLM has repeatedly failed to provide any analysis, whether field experiments or literature reviews, that examine the effectiveness of the proposed quarter-mile Controlled Surface Use buffers that are required as mitigation measures to protect sage grouse leks and nesting habitat in the Lower Bush Creek project. These buffers would provide year-round protection for only 1.56% of the land area around the lek site (encompassing 5.47 million square feet) that would be protected by the minimum two-mile buffers (encompassing 350.33 million square feet) recommended by experts * * *.

Id. Moreover, BCA faults the Proposed Action for “allowing roads and wells to be built within 2 miles of sage grouse leks (within sensitive nesting habitat) as long as construction occurred outside the breeding/nesting season.” Id.; see Revised EA at 26-27. BCA criticizes the mitigation measures proposed to reduce sage grouse impacts on the basis that BLM failed to “evaluate the effectiveness of these mitigation measures, or provide analysis of the extent to which they might reduce the magnitude of those impacts.” Id.; see Revised EA, Ch. 4, at 78-79.

Contrary to BCA’s contentions, the record shows that BLM carefully evaluated possible measures to be adopted for the mitigation of adverse impacts to sage grouse populations in the LBC Project area. We conclude that BLM has in fact imposed measures for the protection of the sage grouse affected by the LBC Project, and that BCA’s challenge is based upon its view that the measures are not stringent enough to accomplish the desired objective. However, “no leks are located within the project area,” and only “five leks are located within 2 miles of the project area.” See BLM Response, Ex. C, at 3-21; BLM Response, Ex. F, at 32. BLM contends that sage grouse populations in the LBC Project area has declined, but “[s]ince the project area has not been developed for oil and gas, the decline in population is not reasonably attributable to the effects of development.” (BLM Response at 8.)

Given the low numbers of sage grouse in the LBC Project area, as described in the Revised EA, we see it as reasonable that in its EA BLM adopted the mitigation measures developed for the “Green River RMP, which include timing, controlled surface use stipulations and restrictions on structures.” Id.; see Original EA at 4-12 to 4-13; Revised EA at 79. Putting aside questions about the reasons for the decline in sage grouse in the LBC Project area, the Revised EA provides that protection for breeding sage grouse will include NSO stipulations within .25 mile of a lek, that “[c]onstruction of low profile facilities or performance of temporary disruptive activities will be avoided where possible,” that “nesting habitat within appropriate distances will include avoidance of such habitat and/or restriction of seasonal activities within those areas,” and that “from February 1 through July 31 restrictions on activities may apply to nesting habitat up to two miles from the lek.” (Revised EA at 16-17.)

As to BCA’s contention that BLM has ignored information gathered since the Green River RMP was published, BLM responds that it has initiated a national “Sage-Grouse Habitat Conservation Strategy,” the goal of which is to reverse the decline of the sage grouse population, and to obviate the need for listing the sage grouse as endangered under the Endangered Species Act, 16 U.S.C. §§ 1531-1543 (2000). See BLM Response at 9; Ex. H. Further, BLM states that it is in the midst of conducting a study into the issue of concern to BCA, *i.e.*, the effect of oil and gas drilling on sage grouse populations. The study, entitled “Potential Impacts of Natural Gas Field Development on Sage-Grouse Strutting Activity and Seasonal Habitat

Selection” (Sage-Grouse Study), was begun in 1998. Phase II of the study, conducted by BLM and the Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming, was begun in 2002, and was expected to be completed in 2005. See BLM Response at 9; Exs. I and J. Phase II states that “[t]he goal of the initial phase of this study was to determine the effects on sage-grouse of spring drilling activity within specified distances from active leks,” and that “[a]s Phase I data will continue to be collected through Phase II of the study, Phase I results will be presented and discussed at the conclusion of Phase II.” (BLM Response, Ex. I, at 5.)

Rather than ignoring the best available information regarding the impacts on sage-grouse populations caused by oil and gas development, as BCA contends, the Sage-Grouse Study was prompted by a desire to collect more information and data regarding “the effects of alteration of sagebrush communities on wildlife * * * at both the national and state levels.” Id. at 4. Phase II of the Study states:

Although some research suggests that gas and oil development causes sage-grouse populations closely associated with the developed area to decline, the actual reasons for declines are unknown. The objectives of this project are to: (1) determine if certain aspects of developing a natural gas field influence sage-grouse behavior; (2) determine the distance from seasonally selected sage-grouse habitats where the influences of certain aspects of natural gas field development are minimized or eliminated; and (3) determine how sage-grouse react to certain aspects of natural gas field development.

Id.

BLM argues that “throughout the Study Plan are citations to the very sources * * * which Appellants allege are ‘credible scientific sources’ that BLM ignores.” Id. at 10. We agree with BLM that “[i]t is inherently reasonable for BLM to rely on data prepared for an existing RMP, which constitutes the ‘best available scientific information’ while the agency conducts a study designed to update that information.” Id. We assume, moreover, that BLM will make appropriate use of the knowledge gained from the study as it becomes available or widely accepted to modify or add to mitigation measures designed to protect the species.

Finally, we see no merit to BCA’s contention that BLM has ignored petitions filed with the USFWS to list various sage grouse populations under the ESA, and that the fact of such petitions constitutes “significant new information regarding the sage grouse that requires BLM to update the NEPA analyses in the [Green River] RMP.” Id. To the contrary, in its 2002 Annual Report on the Sage-Grouse Study, BLM and the Wyoming Cooperative Research Unit acknowledge the petitions to list sage grouse populations throughout their range (including in Wyoming, Colorado, Utah, and

Washington State) as a threatened or endangered species. See BLM Response, Ex. K., at 1. The Report reiterates that the purpose of the Study is to “determine the effects on sage-grouse of spring drilling activity within specified distances from active leks.” (BLM Response at 11, citing Ex. K.) The information provided in the Report does not represent “a comprehensive, peer-reviewed or published analysis of the research data.” Id. However, that information informed BLM’s efforts to apply reasonable mitigation measures to lessen the impacts on the sage-grouse populations caused by the LBC Project.

Upon review of the Revised EA and other documents, we find no basis for disturbing BLM’s conclusion that the mitigation measures in place are appropriate. We agree with BLM that it has taken a hard look at the potential impacts of the LBC Project on the sage grouse, and has ensured that appropriate mitigation measures are in place to avoid any potentially significant impacts. E.g., City of Auburn v. U.S. Government, 154 F.3d 1025, 1033 (9th Cir. 1998), cert. denied, 572 U.S. 1022 (1999). As BLM states, “[w]here significant mitigation measures have been imposed, a finding of no significant impact will be upheld, even if the measures do not ‘completely’ compensate for all adverse impacts.” (BLM Response at 9, citing Friends of the Payette v. Horseshoe Bend Hydroelectric Co., 988 F.2d 989, 993 (9th Cir. 1993).

Consideration of Range of Alternatives

[5] Under NEPA, BLM is required to consider a reasonable range of alternatives which includes the no-action alternative. Defenders of Wildlife, 152 IBLA 1, 9 (2000). Southern Utah Wilderness Alliance, 122 IBLA 334, 338-40 (1992). In evaluating the adequacy of BLM’s alternatives analysis, we employ a “rule of reason” to ensure that the EA contained sufficient discussion of the relevant issues and opposing viewpoints to enable BLM to take a hard look at the environmental impacts of the proposed action and its alternatives, and to make a reasoned decision. E.g., Colorado Environmental Coalition v. Dombeck, 185 F.3d at 1174. BLM is not required to “analyze the environmental consequences or alternatives it has in good faith rejected as too remote, speculative, or . . . impractical or ineffective.” Id., quoting All Indians Pueblo Council v. United States, 975 F.2d 1437, 1444 (10th Cir. 1990.) Thus, BLM is required by NEPA to consider “appropriate alternatives” to the proposed action, as well as their environmental consequences. See 40 CFR 1501.2(c) and 1508.9(b); Defenders of Wildlife, 152 IBLA at 9; City of Aurora v. Hunt, 749 F.2d 1457, 1466 (10th Cir. 1984); Howard B. Keck, Jr., 124 IBLA 44, 53 (1992), aff’d, Keck v. Hastey, Civ. No. S92-1670-WBS-PAN (E.D. Cal. Oct. 4, 1993). Such alternatives should include reasonable alternatives to a proposed action, which will accomplish the intended purpose, are technically and economically feasible, and yet have a lesser impact. 40 CFR 1500.2(e); Headwaters, Inc. v. BLM, 914 F.2d 1174, 1180-81 (9th Cir. 1990); City of Aurora v. Hunt, 749 F.2d at 1466-67; Defenders of

Wildlife, 152 IBLA at 9; Wyoming Outdoor Council, 147 IBLA 105, 114 (1998); Howard B. Keck, Jr., 124 IBLA at 53.

Our review leads to the conclusion that BCA has not established that BLM failed to consider reasonable alternatives to the Proposed Action. BCA complains that BLM analyzed only two alternatives in detail for the LBC Project, *i.e.*, the Proposed Action involving 20 wells in two pods separated by about three miles, and a No Action Alternative which would deny permission for the Project. (SOR at 38.) BCA argues that “BLM’s failure to consider a range of other reasonable alternatives for the Lower Bush Creek project is arbitrary and capricious in the extreme.” *Id.* at 39. However, as we will show, BLM in fact considered other alternatives, but rejected them as not technically or economically feasible for accomplishing the objectives of the project. *See, e.g., Headwaters, Inc. v. BLM*, 914 F.2d at 1180-81; *City of Aurora v. Hunt*, 749 F.2d at 1466-67.

The Single-Pod Alternative

More specifically, BCA contends that BLM should have more fully analyzed the “single-pod alternative.” According to BCA, “[b]y approving only one of the 10-well pods, the BLM could have satisfied Kennedy’s objective to gain exploratory information, at half the cost to the lessee, and at half the impact to the environment.” *Id.* at 40. BCA emphasizes that the Green River RMP assumes that only 10 wells will be drilled in the Red Desert Watershed Area, and that “[h]alving the project to 10 wells,” by conforming the Project to the Green River RMP is “an even more reasonable alternative than the Proposed Action.” *Id.* BCA faults BLM for accepting Kennedy’s assertion that the “two 10-well pods is the minimum number of wells necessary to evaluate the productive capability of the Big Red Coal reservoir.” *Id.* at 41.

In its response, BLM explains that it considered, but eliminated from further study, an initial proposal to drill 93 wells in 2 pods, including 35 wells and 3 injection wells in the south pod, and 58 wells and 4 injection wells in the north pod. Because the cost of completing the necessary study for the 93-well project proved to be “uneconomic” and “prohibitive,” Kennedy “scaled down the project to the minimum number of wells necessary to accomplish the project’s objective, a total of 22 wells in two pods.” (BLM Response at 12; *see* Revised EA, Ch. 2, at 18-19.) In his First SDR Decision, the Deputy State Director responded to BCA’s request that BLM consider the single-pod alternative:

Developing an alternative such as proposed by BCA, that loses sight of the need for the action, would be considered unreasonable. When considering an exploratory project for an area that is relatively unknown geologically, some professional judgment must be relied upon

to determine a sufficient number of wells that must be initially tested to determine the economics of the reservoir. If twenty wells must be drilled to get an idea of the economic potential of the Big Red Coal seam, then the approval of just one pod (10 wells) would not meet the purpose of the proposed action and would be unreasonable.

(First SDR Decision at 3.)

In its Response, BLM further explained that “[s]ince the objective of the project was to test the viability of CBM production from both the north and south portions of the Red Coal Seam of the Fort Union Formation, it was reasonable of BLM to determine that the greatly-reduced size of the project proposed by the operator was indeed the minimum number of wells that would accomplish the project’s ‘intended purpose.’” (BLM Response at 13.) BLM provides the following succinct rationale for rejecting the single-pod alternative for testing the viability of CBM production from the Red Coal Seam:

Further, although drilling half the number of proposed pods may have reduced the environmental impact of the LBC Project, Appellants have not demonstrated that the operator could do so and still accomplish the project’s “intended purpose.” BLM need not consider an alternative which is unlikely to accomplish its intended result. Utah Wilderness Association, 134 IBLA 395, 400 (1996). See also Wyoming Outdoor Council, 147 IBLA 105, 114 (1998) *citing* Friends of the Bow, 139 IBLA 141, 150 (1997). Appellants’ argument regarding the single-pod alternative must fail.

(BLM Response at 13.)

Alternative Incorporating 2-Mile Buffers for Sage Grouse Leks

Our previous discussion of the adequacy of mitigation measures imposed by BLM for the protection of sage grouse populations applies equally to BCA’s related assertion that a “reasonable alternative” that BLM should have considered involves the requirement of NSO stipulations “for all lands within 2 miles of a sage grouse lek.” (SOR at 43.) BCA acknowledges that its view that a 2-mile buffer is necessary for the protection of the sage grouse population is based upon “anecdotal information, from several sources in Wyoming, [which] suggest that sage grouse populations are negatively affected by the activities associated with oil and gas development, even when mitigative measures are implemented.” *Id.*, quoting Original DR/FONSI at 36. Nevertheless, BCA maintains that a “**minimum** 2-mile NSO buffer around sage grouse leks” is a reasonable alternative that should have

been considered. (Emphasis in original.) BLM's experts apparently do not agree, or are unable to agree in the absence of better data.

Thus, we again advert to the Sage-Grouse Study being conducted by BLM and the Wyoming Cooperative Research Unit, the purpose of which is to determine the effects of oil and gas operations on sage grouse populations. See BLM Response, Ex. K. Accordingly, we find no fault with BLM's basic rationale for rejecting the "minimum 2-mile NSO buffer" alternative:

Given that BLM has initiated a study to determine the impact of oil and gas drilling on sage grouse, is planning a 'Habitat Conservation Strategy,' and that existing mitigation measures include measures to protect sage grouse during critical reproduction periods, an alternative that would require the adoption of a sage-grouse buffer zone without extensive scientific analysis was not reasonable.

(BLM Response at 14.)

Directional Drilling Alternative

BCA asserts that "BLM has failed to rigorously explore and objectively evaluate directional drilling as an alternative method of implementing this project." (SOR at 45.) In his decision, the Deputy State Director explained that "[o]nce coal properties are better defined, and if natural gas development potential exists in the Lower Bush Creek project area, directional drilling may be an appropriate method to consider should full field development occur." (Second SDR Decision at 7.) BCA claims that directional drilling "represents a viable, and indeed environmentally preferable, alternative." *Id.* at 49. BCA cites several studies and reports in support of its argument that directional drilling has proven successful in producing oil and gas from low-pressure formations. *Id.* BCA submits a study it prepared entitled "Drilling Smarter: Using Directional Drilling to Reduce Oil and Gas Impacts in the Intermountain West" (Feb. 18, 2003) (SOR at 51, Ex. 7), which states that "[d]irectional drilling has proven technically and economically feasible in a broad range of geologic settings, including tight gas, heavy oil, and coalbed methane." *Id.* at 1.

In his Second SDR Decision, the Deputy State Director quoted CEQ's cites to Question 1a of *Forty Most Asked Questions Regarding CEQ's NEPA Regulations* as setting the range of alternatives as "all reasonable alternatives which must be rigorously explored and objectively evaluated as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them." (Second SDR Decision at 3, quoting 46 FR 18026-38 (Mar. 23, 1981).) BLM states that it considered the comments offered by BCA but "concluded

that the use of directional drilling was not a reasonable alternative for this project because the purpose of a pilot project such as this one ‘is to gather and determine the economic feasibility of more extensive development,’” and that “[a]t this stage, it would be very difficult to evaluate the feasibility of directional drilling, or horizontal completion techniques in the Kennedy project as little data or information is available.” (BLM Response at 12, quoting Revised EA at 19-20.) BCA has not persuaded us that BLM erred in reaching that conclusion.

The Revised EA provides a brief discussion of directional and horizontal drilling, and provides the following explanation for not considering those methods as representing reasonable alternatives for the LBC Project:

Requiring directional drilling or horizontal completions would complicate the Kennedy pilot project in that the purpose of the pilot project is to collect reliable information on reservoir heterogeneity, coal thickness, coal gas content, gas chemistry, recovery efficiency, coal permeability, water quality and quantity, plus drilling, completion and processing costs. This data must be collected before an assessment of the feasibility of drilling directional wells from a central location or using horizontal completions can be properly evaluated. Neither directional nor horizontal drilling methods have been successful in low-pressure coal bed methane wells, as is the character of the Big Red Coal. Due to these factors, a directional or horizontal drilling program was found to be unreasonable.

(Revised EA at 19-20.) BLM acknowledged that directional drilling may be appropriate for full field development, but concluded that it is not appropriate for the LBC Project, which is at the exploratory stage when “delineating the underlying natural gas resource” is the objective. (BLM Response at 12, quoting Wyoming Outdoor Council, 147 IBLA 105, 115 (1998).) BCA has not persuaded us that BLM erred in reaching that conclusion.

Conclusion

As a party challenging the Revised EA, BCA has the burden of demonstrating with objective proof that BLM’s decision is based on a clear error of law or demonstrable error of fact, or that the analysis failed to consider a substantial environmental question of material significance to the proposed action. Based upon the foregoing analysis, we conclude that BCA has not carried this burden. See National Wildlife Federation, 169 IBLA at 165; Southern Utah Wilderness Alliance, 164 IBLA at 36; Wyoming Outdoor Council v. U.S. Army Corps of Engineers, 351 F. Supp. 2d 1232, 1240-43 (D. Wyo. 2005).

Any other arguments raised by BCA not expressly addressed in this opinion have been considered and rejected.

Therefore, pursuant to the authority delegated to the Interior Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, we hereby affirm the Deputy State Director's September 29, 2003, decision.

James F. Roberts
Administrative Judge

I concur:

T. Britt Price
Administrative Judge