Resource Analysis

Three commercial outfitters use the area for big game hunting. 558 AUMs of grazing occurs in the area south of the canyon. Livestock use north of the canyon has been eliminated by agreement with the permittee and the Wyoming Game and Fish Department because of competition for forage on elk winter range.

The study area contains less than 500 acres of commercial forest land and 170 acres of woodland—a very small percentage of the timber in the region. Most of this is not suitable for logging due to steep slopes and natural barriers [this may change with additions].

There are no oil and gas leases in the area and no active mineral claims within the Citizens' Proposal boundary (BLM, 1992). This area has no potential for oil, gas, tar sands, or limestone. It has low potential for silver, base metal sulfides, rare earth elements or occurrence of uranium. The BLM has limited motor vehicle use to designated roads and trails in the region around Medicine Lodge Canyon, thus minimizing conflicts with off-road vehicle use. The citizens' proposed additions, including the Dry Medicine Lodge Canyon, would further protect and enhance the complete ecosystem and alter a two-track to a trail.

If not designated as wilderness, mineral exploration and leasing activities could destroy naturalness, special values, and vast arrays of transition zone plant life. Wildlife would lose the long-term benefit of improved habitat security.

Boundary Rationale and Management Recommendations

BLM management decisions: The WSA contains 7,740 acres of which 3,600 acres were recommended for wilderness.

The northern and western citizens' additions are designed to include the Dry Medicine Lodge Canyon allowing the track to become an eventual trail.

6. The Paint Rock Creek Canyons (010-236a, 239a)

Summary

Citizens' Proposal:	11,558 acres
Intensive Inventory:	2,322 acres
Wilderness Study Area:	2,322 acres
BLM Recommendation:	0 acres

Highlights

The Paint Rock and South Paint Rock Creek areas offer beautiful open, slanting meadows, leading to steep canyon walls of the Paint Rock Creek Canyons. The area is excellent habitat for mule deer, elk, songbirds, raptors includes great wild fisheries. The Citizens' Proposal combines the two areas by adding State land to the Proposal and offering a complete ecosystem for protection. The areas are adjacent to the Bighorn National Forest and within 8 miles of the Cloud Peak Wilderness Area. Joining the Paint Rock Creek Canyon areas to the Cloud Peak Wilderness would diversity, expand and add to the wilderness recreation experience of the Bighorn National Forest.

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Location

Bordering the Bighorn National Forest on the west side, Paint Rock and South Paint Rock Creek Canyon areas are located in Washakie County 5.5 miles northeast of Hyattville. Public access to the Paint Rock Canyon area has become a concern of recreationists since 1970. Although the area is not landlocked by private lands, public entry would have to be made through steep terrain (BLM, 1978). Access is from Hyattville to the Cold Springs Road to the Lone Tree Trail through the Hyatt Ranch and access from US Forest Service is abundant with at least 6 trails leading to the area.

Highlights

Paint Rock Canyon is a large narrow canyon that cuts through the lower west slopes of the Bighorn Mountains. The canyon begins where Paint Rock Basin narrows 1.5 miles below the Bighorn National Forest boundary. The canyon extends westerly for nearly five miles. It enters Paint Rock Valley just above the Hyatt Ranch. South Paint Rock Creek, a tributary, completes the canyonland ecosystem. The rims of the canyons tower 400 to 1000 feet above Paint Rock and South Paint Rock Creeks. Numerous canyons of varying size intersect the main canyons. Most of the canyon is cut into limestone rock of the Madison and Big Horn Formations, resulting in cliffs and extremely steep, near vertical slopes.

The physical nature of the canyon and its elevation present an vegetative ecosystem from the stream banks dominated with grasses, woody plants, and shrubs to the rim of the canyons exhibiting mountain mahogany and sagebrush. Conifers, mahogany, and sage are found on the canyon's south rim. This magnificent example of canyons on the west face of the Big Horn Mountain holds unique habitat for flora species. With its varied soils from redbeds to limestone cliffs, many rare and sensitive plants are found in the area including: Williams waferparsnip, soft aster, Nuttall Townsend-daisy, Brandegee's Jacob's-ladder, Branched fleabane and Hyattville milkvetch (WNDD, 1993).

The area includes an outstanding trout fishery particularly Yellowstone cutthroat trout, which provides the opportunity for the most important recreational activity undertaken in the canyon. The area is managed as a wild trout fishery by the Wyoming Game and Fish and is used to collect stock of the Yellowstone cutthroat.

Habitat is also provided for Bighorn sheep, coyote, eagles, numerous species of small mammals, reptiles, and songbirds. The canyon is an important wintering area for elk and deer. The Bald eagle, listed as an endangered species, and the Northern goshawk, a candidate for federal protection, are found in the Paint Rock and South Paint Rock Creek areas. Also sighted in the area is the sensitive species, the common loon and the long-legged myotis (WNDD, 1993).

Many archeological sites eligible for inclusion in the National Register of Historic Places have been discovered in the Paint Rock Canyon area with occupation by groups at least 9,000 to 11,000 years ago. Thirty nine archeological sites in the Paint Rock Canyon have been catalogued. The sites recorded represent several types: rock shelters, stratified open sites, and quarry sites, thus provide excellent opportunities for scientifically investigating these hunting and gathering societies (BLM, 1978).

Resource Analysis

The area is recommended as being withdrawn from all forms of appropriation under the public land laws, from location and entry under the mining laws, and from mineral leasing (BLM, 1978). The area has no oil and gas leases, no mining claims, and no commercially valuable timber (BLM, 1978).

Grazing is limited to the Hyatt Ranch. The current facilities in the upper canyon, including the wire fence, bridge and coral, are the only visual intrusions in the natural setting of the canyon (BLM, 1978).

The BLM is allowing some mountain bike use in the South Paint Rock Canyon. Hunting is limited due to the steep terrain.

Should the area not be protected as wilderness, the water quality in the canyons would continue to decline from ORV use and possible gravel quarry activity. A very valuable wild trout fishery would be lost. Road maintenance will disturb the cultural resources and alter the canyon's pristine appearance.

Boundary Rationale and Management Recommendations

BLM management decisions: the areas were dropped from WSA status, but the BLM will not allow motor vehicle use and currently maintains high visual standards until Congress acts (BLM, Baker, 1994).

The Paint Rock Creek Canyons proposed area is bordering on US National Forest lands on the eastern boundary and surrounded by public lands on the western boundary following the Wapiti Trail. The Citizens' Proposal boundaries have increased protection for the Paint Rock Canyon ecosystem and included 1320 acres of State land to combine South Paint Rock with Paint Rock. Our inclusion of the extended lands allow for consistent ecosystem management of a wilderness area and future inclusion with the Cloud Peak Wilderness Area. The areas were dropped in 85 because of their small size and the politics of the time. Although not protected by WSA status, the BLM has not allowed motor use since 1978 and the areas are in good primitive condition.

7. Trapper Canyon (010-242)

Summary

Citizens' Proposal:	7,200 acres
Intensive Inventory:	7,600 acres
Wilderness Study Area:	7,200 acres
BLM Recommendation:	7,200 acres

Highlights

Trapper Canyon encompasses beautiful limestone cliffs that plunge over 1200 feet to a crystal clear stream, and several hanging canyons that drop off sharply with waterfalls into Trapper Creek.

This transition zone between mountains and basin exhibit sheer canyon walls towering above steep talus slopes and stands of Douglas.fir, juniper and mountain mahogany. Cottonwood, chokecherry and wild currant throng the stream sides, while sagebrush and grass dominate on the canyon rim. The riparian vegetation is some of the most pristine and lush found anywhere in Wyoming.

Location and Access

Trapper Canyon lies on the west slope of the Bighorn Mountains, about five miles southeast of Shell, Wyoming. Although surrounded by private land on three sides, the BLM has an easement across private property. An access is from Shell southeast on Trapper Creek Road, staying straight - making no turns, to the southeast boundary. Four-wheel drive is recommended.

Wilderness Qualities

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The ruggedness of this canyon is penetrated only by game trails. Those who venture into the canyon find wild, secluded travels and ideal conditions for geologic and ecologic studies. This area has been proposed for National Natural Landmark status because of its pristine riparian and forest habitat. Another special feature is the lower entrance to Great Expectations Cave—the third deepest cave in the nation. More caves probably lie undiscovered along Trapper Creek. This WSA is located within BLM's West Slope Special Recreation Management Area, and about 1200 acres of the area fall within the Spanish Point Karst ACEC. Trapper Canyon is also a featured site nestled between two National Scenic Byways - the Red Gulch National Scenic Byway and the Big Horn Scenic Byway.

The Wyoming Game and Fish Department considers the area suitable for wilderness designation. The area supports a hardy population of native cutthroat trout, wintering bald eagles, crucial winter range and calving grounds for 400-500 elk, crucial winter range for 200-300 mule deer, mountain lion, black bear, and nesting areas for golden eagle, prairie falcon, and several upland game species. Endangered peregrine falcons forage here in spring and summer (BLM 1990), but nesting habitat is presently unoccupied. A nesting occurrence of harlequin duck has been reported from this area. This area is historical range for the North American lynx. Both the lynx and duck are candidates for federal threatened/endangered listing. The wood frog also appears in this area and it is suspected that populations of wood frogs are declining statewide, though the survey is incomplete (WNDD, 1993).

The canyon has habitat in the extensive cliffs for spotted bats—federal threatened and endangered candidate species—, and five state Priority Species of bats —Townsend's big-eared bats, Yuma myotis, California myotis, Keen's myotis and fringed myotis (Luce 1991).

Trapper Creek Canyon is a magnificent example of the transition zone plant life - blanched fleabane, Hapeman's sullivantia and Cary beardtongue have been listed in many areas of Trapper Canyon.

The many and varied plant communities exhibit the urgency of protecting this area as wilderness. Starting on the gentle slopes at the head of the canyon one finds the mountain big sagebrush/Idaho fescue community; in the canyon is the red-osier dogwood/bedstraw community and the prickly currant/bluebells potential community; up on the canyon rim is the Douglas fir/heartleaf arnica community; higher up is the Douglas fir/common juniper community; still higher on steeper slopes one finds the Englemann spruce/heartleaf arnica community, along with chokecherry/bedstraw potential community, limber pine/spikefescue community, mountain big sagebrush/Idaho fescue community; then from the canyon rim to the creek is the Douglas fir/mountain ninebark community; along the canyon walls is the blue-bunch wheatgrass-Hood's phlox potential community and the curlleaf mountain mahogany/bluebunch wheatgrass community; and into the riparian areas of the canyon one finds the narrow-leaf cottonwood/chokecherry community.

Trapper Canyon is also eligible for registration in the National Register of Archeological Sites.

Resource Analysis

Seven outfitters have permits for hunting trips in the area.
Some of the private land surrounding the canyon is used as hunting camps for commercial outfitting operations.

The proposed wilderness has no potential for oil, gas, coal, uranium or salable minerals, and no valid mineral claims nor oil and gas leases (BLM 1990). It has low potential for occurrence of tar sand, silica sand, and a few other locatable minerals, but none in commercial quantities. High purity limestone occurs in the area, but remoteness and rugged terrain make development unlikely.

This area contains a very small amount of commercial forest land but most of the commercial timber cannot be logged due to steep slopes and natural barriers.

The BLM has limited motorized vehicles to designated road and trails in region around Trapper Canyon minimizing the conflicts with off-road vehicle use.

Should the area be not designated as wilderness, the greatest threat to this pristine area would be from mineral development. There are two active mineral leases just outside the Wilderness Proposal boundary (BLM, 1992). Mineral exploration and leasing could occur on up to 6000 acres, although surface occupancy restrictions, if enforced, would protect some specific resources. While no development is expected, wildlife and special values would not have long-term protection. The impacts from logging in the Trapper Canyon area would be road building, clearcuts, wildlife habitat reduction, and the resulting stream sedimentation.

Formations included in the study area supply groundwater to wells in the Bighorn Basin, and must be protected from contamination by outside toxins, including drilling products, salinity, pesticides, and fire retardants.

Boundary Rationale and Management Recommendations

BLM management decisions: All 7,200 acres of the WSA are recommended for wilderness.

According to BLM (1990), the area's high quality plant communities are being degraded by heavy livestock use. Notwithstanding wilderness designation, the BLM recommended that in order to prevent further invasion of undesirable species, erosion of streambanks, and forage taken at the expense of wildlife, livestock use be eliminated from the canyon, and drift fence be built at the east end of the WSA to stop unauthorized grazing. We concur with this recommendation.

Boundaries of the WSA are set primarily by adjacent private lands, and by vehicle ways and roads.

8. Bobcat Draw Badlands (010-126)

Summary

Citizens' Proposal:	29,706 acres
Intensive Inventory:	30,700 acres
Wilderness Study Area:	17,150 acres
BLM Recommendation:	18,540 acres

Highlights

The Bobcat Draw Badlands is embraced by a rugged western landscape with uniquely eroded rock mushrooms, spires, arches, goblins, castles and mud caves. Rich colors of orange, purple and red are layered throughout the broken, eroded topography of this Willwood geologic formation. Along streams in the east and north parts of the area, badlands breaks give way to broad, grassy bottoms, while high plateaus dominate the southwest corner.

Location and Access

This area is located in Big Horn and Washakie Counties, 24 miles west-northwest of Worland in the Fifteenmile Creek drainage, and in the vicinity of Red Butte and Sheep Mountain WSAs. Access to the Bobcat Draw Badlands is either from the south on State Hwy 431 and a couple of unimproved roads, or from the north on a two track along Fifteen Mile Creek.

Wilderness Qualities

These colorful badlands are among the most spectacular in Wyoming. Weathering by wind and water has carved layers of clay, sandstone and ancient volcanic ash into mazes and hoodoos striped with red, orange, bright purple, blue, green and grey. The National Park Service has identified some of these formations as potential National Natural Landmarks. Additionally, it includes several vegetation classes

of the Wyoming Basin Province Ecoregion, which is not currently represented in the National Wilderness Preservation System.

The brightly colored Willwood formation within the area contains the most comprehensive vertebrate fossil zonation of any rock in the world (Bown and Kraus 1983). Fish, crocodiles, turtles, early Eocene mammals, and many other types of fossils are found in the area (Rohrer and Gazin 1965).

The site is home to pronghorn antelope, wild horses, mule deer, bobcats, fox, coyotes, and chukars. It provides crucial habitat for wintering mule deer (WGFD, 1991), golden eagles, and nesting sage grouse. Burrowing owls (a state Priority Species in Need of Special Management) have been documented in the area (Ritter 1991). Survey work for rare plants and animals has not been undertaken.

Resource Analysis

Potential for oil and gas occurrence is low to moderate, but development is improbable due to the great depth of reserves and to No Surface Occupancy stipulations on steep slopes over nearly all of the area. There are only two oil and gas leases within the proposed Wilderness boundary area. Likewise, the depths of possible coal deposits preclude any economic interest. No other minerals are known to occur in commercial concentrations (BLM 1990a). No mining claims are in the area (BLM, 1992).

At present, less than 20 percent of the area is being grazed by sheep, although more of the area was used historically. Most of the area is not suitable for cattle grazing, and no range improvements are planned (BLM 1990a).

Due to disturbance from gas exploration, wilderness and special values would be eliminated or impaired on parts of the area, sediment loading into the Bighorn River would increase slightly, and the mule deer population would be reduced by 10 to 15 percent (BLM 1990a) should the area not be protected as wilderness. Elsewhere, these values would not be assured long-term protection from ORV use or unforeseen development. An ecoregion that is not represented in the National Wilderness Preservation System would be lost.

Boundary Rationale and Management Recommendations

BLM management decisions: The WSA for Bobcat Draw Badlands is 17,150 acres, the BLM recommends 18,540 acres for wilderness. The decision to recommend 1,390 acres of state land within the WSA for wilderness would enhance the manageability of the area.

Paradise Alley, south of the WSA boundary, and Squaw Teats, to the southwest, hold exceptionally scenic badlands, and few intrusions, and should also be included as Wilderness.

The study area is bounded almost completely by roads or two-tracks, with the exception of short segments of private land on the northern and southern borders, and a portion of the southeastern border which follows geographic features.

9. Sheep Mountain (010-130)

Summary

Citizens' Proposal:	24,615 acres
Intensive Inventory:	28,300 acres
Wilderness Study Area:	23,250 acres
BLM Recommendation:	0 acres

Highlights

Sheep and Tatman Mountains dominate the landscape, while deeply cut badlands and highly eroded red-hued soils flank the mountain peaks, creating a maze of irregular landform patterns. Outcrops of the Willwood and Tatman formations provide colorful, rugged vistas throughout the area. The sharply

incised drainages fan out from the mountains to become broad, soft, grassy bottoms along the perimeter of the area.

Location and Access

This area lies 18 miles west of the town of Basin, and 5 miles northeast of Bobcat Draw Badlands WSA. It adjoins the Red Butte Citizens Wilderness Proposal, to the southeast. Access is from an improved road from the north.**[need specifics here]**

Wilderness Qualities

Some of the most striking and unspoiled badlands in Wyoming are found here. Additionally, several vegetative classes of the Wyoming Basin Province Ecoregion, which is not included in the NWPS, are in the area (BLM 1990a).

The area contains early Eocene fossils of world renown. At least 77 genera and 140 species of mammals, including the ancestors of tapirs and pigs, can be found in the area (Bown and Kraus 1983).

Present day mammals include mule deer and pronghorn antelope which depend upon the crucial winter range the area provides (WGFD, 1991). Wild horses, transient bighorn sheep, bobcats, and coyotes are also in the proposed Wilderness area. Hawks, falcons, and strutting sharp-tailed grouse and sage grouse can also be found here (BLM 1990a). At least 15 bald eagles (federally listed endangered/threatened) are observed roosting in the area during the winter (WNDD, 1993).

Resource Analysis

The study area has a moderate potential for occurrence of deep gas, and low potential for the occurrence of oil in the area. Due to the depths of possible reserves, development is not economically feasible (BLM 1990a). In addition, slopes in excess of 25 percent cover most of the area, so surface disturbance would be prohibited. There are oil and gas leases in the northern section of the Wilderness Proposal due to expire within three years. There are no producing wells or mineral leases within the boundary area (BLM, 1992). Coal and other minerals are not present in commercial deposits.

Grazing use in the area is less than half of the apportioned AUMs. Boundary roads provide access for livestock management, and range improvements are neither feasible nor planned (BLM 1990a).

Should the Sheep Mountain proposed wilderness area not be protected, special values would be eliminated or impaired on parts of the area, sediment loading into the Bighorn River would increase slightly, and the mule deer population would be reduced by 13 to 20 percent because of disturbance from gas exploration. An ecoregion that is not represented in the National Wilderness Preservation System would not be added, therefore diversity of the NWPS would not be increased.

Boundary Rationale and Management Recommendations

BLM management decisions: Of the 23,250 acres in the Wilderness Study Area for Sheep Mountain, none were recommended for protection.

Citizens' additions of acreage on the north and south borders of the WSA encompass equally wild terrain, form more manageable boundaries, and result in the Sheep Mountain area being adjacent to the Red Butte area.

Most of the study area boundaries are formed by roads or two-tracks, with the exception of segments of private land on the north and west.

10. Red Butte (010-131)

Summary

Citizens' Proposal:	23,685 acres
Intensive Inventory:	1 1,500 acres
Wilderness Study Area:	11,350 acres
BLM Recommendation:	0 acres

Highlights

Red Butte is characterized by bare, red badlands and sharply cut drainages. The Butte towers over the surrounding terrain, while several ephemeral creeks head up at its base. The northeastern part of the area has badlands intermixed with terraces overlooking the flat bottom of Fivemile Creek. In the western portion, steep ridges flatten out to broad drainages and rolling plains. Plant cover varies across the area from sagebrush grasslands to saltbush to bare, eroded rock and mudstone.

Location and Access

This study area is located 12 miles northwest of Worland and directly southeast of Sheep Mountain WSA, in the Fifteenmile Creek drainage. Access is from either from the east using US Hwy 16-20 and turning west via the Dobie Creek drainage road, or from the north, from Basin using State Hwy. 20 and cutting south along the Sandstone ditch and onto a two-track to Sheep Mountain. Four- wheel drive vehicles are recommended.

Wilderness Qualities

The Red Butte area is typified by unusually beautiful and solitary badlands scenery—red ridges, purple and tan hills, as well as spires and hoodoos of brown sandstone. Outcrops of the Willwood formation within the area contain internationally significant paleontological resources, including specimens of an extremely rare arctocyonid, an ancestor of hoofed mammals (Rohrer and Gazin 1965). Vegetation here is classified in the Wyoming Basin Province Ecoregion, which is not represented in the NWPS.

Red Butte provides undisturbed habitat for wild horses, trophy-sized mule deer, pronghorn antelope, mountain lions, bobcats, and nesting golden eagles, sage and sharp-tailed grouse. Ferruginous

hawks, a candidate for federal protection under the Endangered Species Act, and burrowing owls (a state Priority Species in Need of Special Management) have been documented in the area (Ritter 1991). Merriam's shrew, another Priority Species, may occur here, as well (Luce 1991).

Survey work for rare plant species has not been completed in this area.

Resource Analysis

There is a moderate potential for the occurrence of deep gas, and low potential for the occurrence of oil in the area; however the great depth of these possible reserves makes exploration uneconomical (BLM 1990a). The Citizens' Proposal additions to the north and west are lightly leased for oil and gas. There are no active mineral claims in the area (BLM 1991). Additionally, surface disturbance would be prohibited on over half of the area, where slopes exceed 25 percent. For the past several years, grazing use has been less than 40 percent of the AUMs allotted.

Should the Red Butte area not be designated as wilderness, several vegetative classes of the Wyoming Basin Province Ecoregion would not be added to the National Wilderness Preservation System, so NWPS diversity would not be increased. Deep gas exploration could occur on nearly half of the area, although development would likely produce only a small amount of gas or oil. These activities would result in loss of wilderness values on the disturbed portion of the area, slightly increased sediment loading into the Bighorn River, and reduction of the area's deer population by 15 to 20 percent (BLM 1990a). On the other half of the area, wilderness and special values would not be assured long-term protection from ORV use or other activities.

Boundary Rationale and Management Recommendations

BLM management decisions: The BLM did not recommend the 11,350 Wilderness Study Area for wilderness designation.

All boundaries of the area are set by roads or ways. An unreclaimed well site is cherry-stemmed out on the area's eastern border.

The Citizens' Proposal includes additions of federal land north and west of the BLM WSA to protect equally wild and scenic landform. This provision allows the Red Butte area to adjoin the Sheep Mountain area. BLM should acquire the split-estate land in Section 16 and small state acreage on the northern border for uniform management of the area.

11. McCullough Peaks (010-335)

Summary

Citizens' Proposal:	74,000 acres
Intensive Inventory:	74,000 acres
Wilderness Study Area:	25,210 acres
BLM Recommendation:	8,020 acres

Highlights

This WSA embodies pink badlands on the slopes of the solitary McCullough Peaks. The vein-like drainage patterns of the deeply eroded gullies and extreme terrain variation within the area provide the visitor with a natural maze to explore. There are five separate drainages that branch into small, winding badland canyons of exceptional beauty with outstanding views. The citizens' western addition consists of spectacular breaks which drop sharply to the Shoshone River. Elevations vary from 6400 feet atop McCullough Peaks to 4000 feet along Roan Wash. Biodiversity Conservation has prepared a new on-the-ground inventory of the McCullough Peaks which replaces this older evaluation, and this Citizens' *Wilderness Inventory of the McCullough Peaks* is incorporated by reference into these comments. We ask the BLM to respond to this wilderness inventory through the RMP revision process.

Location and Access

The McCullough Peaks are located 10 miles northeast of Cody, with the northern boundary about 2 miles from Ralston in Park County. The area is accessed from US Hwy 14a turning west onto State Hwy 295 to the northern boundary.

Wilderness Qualities

The National Park Service has identified this area as a potential National Natural Landmark, where visitors find exceptional scenery, such as winding badlands canyons, vividly colored ridges, and panoramas of dendritic drainages and distant mountain ranges. This area offers outstanding opportunity for solitude.

The area contains many important archaeologic sites (Berry and Goldbach 1990). Outcrops of Willwood formation, along with those in a handful of other WSAs in the Bighorn Basin, provide the most comprehensive vertebrate fossils of any rock in the world (Bown and Kraus 1983). These sites are outside of BLM's recommended Wilderness area.

Three to four hundred deer—both trophy mule deer and white-tailed deer—winter in the area; while sage grouse, golden eagles, merlin, prairie falcons, and many other raptors nest and forage here (BLM 1990a). Pronghorn antelope, wild horses, mountain lion, coyotes, foxes and jackrabbits can also be seen in the area. Merriam's shrews (a state Priority Species in Need of Special Management) may inhabit the area's grasslands and barren areas (Luce 1991). Just south of McCullough Peaks, a very rare, verified occurrence of the endangered whooping crane was noted. (WNDD, 1993). The common loon has been observed many times on the Shoshone River as well as nesting colonies of Franklin's gull, both State Priority species due to their rarity in the State. The Yellowstone cutthroat trout has been verified in the Shoshone River, a rare species (State Priority status) (WNDD, 1993).

Resource Analysis

ORV use accounts for about 300 visitor days per year. In the event of wilderness designation, ORV users could easily use other public lands in the region, while hunters and rockhounders would access the area on foot or horseback. Additionally, extrapolations of BLM predictions indicate an increase of 500 visitor days per year in wilderness use. With designation the area would be enjoyed by a greater number of people with far less impact on the site.

Localized coal zones in the area have little or no development potential. No other locatable or salable minerals exist.

There is a decent potential for the occurrence of deep gas at 4,500 to 20,000 feet. Considering the depth and surface restrictions due to steep slopes, development potential is low.

The western boundary of the Citizen's Addition is leased for oil and gas. The very southeastern corner has one oil and gas lease along the northern boundary line are four oil and gas leases out in three to six years.

Should this area not be protected, special pristine recreation values would be impaired on over 5000 acres in the probable event of oil and gas exploration. Sediment discharged into the Shoshone River would increase slightly and 25 mule deer would be displaced from the area.

Wilderness values on the remainder of the area would not be assured, and could be impacted or destroyed by ORV use or unanticipated activity. New vegetative classes of the Wyoming Basin Province Ecoregion would not be added to the NWPS, and the system's diversity would not be increased.

Boundary Rationale and Management Recommendations

BLM management decisions: Only 8,020 acres out of 25,210 acres of the McCullough Peaks Wilderness Study Area is recommended for wilderness designation by the agency.

Citizens' additions to BLM's recommendation include a major fossil site and breaks along the Shoshone River and the badlands of Whistle Creek to the east of the WSA. Boundaries of the area are set by the Shoshone River on the west, a powerline on the north, and roadss, private land, and topographic features on the south and east.

12. Owl Creek/Castle Rocks

(010-104 a,b,c & 010-unnumbered)

Summary

Citizens' Proposal: 8,985 acres

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Intensive Inventory:	750 acres
Wilderness Study Area:	710 acres
BLM Recommendation:	710 acres

Highlights

Geologically, this site is known as the Castle Rocks Chaos. It is a jumble of volcanic debris representing a unique geologic event which occurred during the Eocene period (Sundell 1982). Both the Owl Creek section and the Castle Rocks are distinguished by high (elevation of 9,000 to 10,900 feet) alpine tundra with windswept slopes and mountainous cliffs scattered with erratic dense patches of conifer, and aspen. The bare rocky soil along lower draws and ridges and sagebrush grasslands along wide creek bottoms enhance this mountain transition area. All tracts border the Washakie Wilderness Area of the Shoshone National Forest. These wild areas are logical extensions of the Washakie Wilderness.

Location and Access

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This area is comprised of three separate tracts in Owl Creek and two larger areas in the Castle Rocks area located at the southeast end of the Absaroka Mountains. The area is landlocked by private ranches and access is difficult. Access to Owl Creek/Castle Rocks can be from the National Forest trail system to the northern boundary or from the south of Owl Creek by paying access fees to the Wind River Indian Reservation to use their trails.

Wilderness Qualities

The Owl Creek/Castle Rocks proposed Wilderness area features similar primitive recreation opportunities, such as hiking, backpacking, and study of alpine ecology. The local geology offers excellent opportunities for studies of tertiary volcanics, and two archaeologic sites in the area are important for the study of native peoples who once lived at high altitudes.

Two of the area's streams are important fisheries for rainbow, brook, and Yellowstone cutthroat trout. The area also provides crucial habitat for bighorn sheep, moose and mule deer, crucial winter range and calving grounds for elk, and migration routes for elk and bighorn sheep (WG&F, 1992). Raptors, pronghorn antelope, mountain lions, and black bears use the area, and grizzly bears have been observed nearby. A high priority in this area is the occurrence of the harlequin duck a category two candidate for federal listing (WNDD, 1993). Dwarf shrews and montane vole—two state Priority Species in Need of Special Management-may inhabit Owl Creek's grasslands and conifer forests (Luce 1991; WNDD, 1993).

Several rare plant species have been found in the area - Evert's waferparsnip, shoshoea, Rocky Mountain twinpod, yellow spring-beauty, sweet-flowered rock jasmine, and the nuttall townsend-daisy (WNDD, 1993).

Resource Analysis

Although the potential for oil and gas occurrence is relatively high, development potential is very low due to protective stipulations for surface water, wildlife, and surface use restrictions on at least 92 percent of the area where slopes exceed 25 percent. One oil and gas lease exists within the Citizens' proposed additions to the area as of 1993. There is no known potential for coal, or locatable or salable minerals in the area, and no mining claims (BLM 1990a).

Approximately half of the area has timber cover, but harvesting is highly unlikely (Berry and Goldbach 1990) due to inaccessibility and steep slopes. Livestock grazing will continue at current levels of 90 AUMs. A few outfitters are permitted for day use of the area (Berry and Goldbach, 1991).

Should the area not be designated wilderness, long-term protection would not be assured for elk and bighorn sheep migration routes, elk calving areas, bighorn sheep winter and spring range, and other wildlife uses, as well as wilderness qualities.

Boundary Rationale and Management Recommendations

BLM management decisions: The entire 710 acres of the Owl Creek WSA is recommended for wilderness designation.

The Wyoming Game and Fish Department has identified the Castle Rocks section as a potential bighorn sheep reintroduction site. Therefore, BLM should maintain the required habitat.

Livestock exclusion fences along portions of Rock Creek and the South Fork of Owl Creek should be maintained to protect the excellent water quality, and new fences should be constructed around four springs in the South Fork of Owl Creek, as recommended by BLM. This would result in a three-fold increase in fish populations over the next fifty years (BLM 1990). A vehicle barrier may be necessary at the area boundary where a jeep trail winds along the South Fork of Owl Creek.

The boundaries of these areas are dictated by neighboring USFS, private, state, and tribal lands. The eastern border of the eastern-most area of Owl Creek adjoins the Castle Rocks addition divided only by a two-track way. One vehicle trail dictates the far eastern boundary of Castle Rocks.

13. Pryor Mountains

Summary

Citizens' Proposal:	40,032 acres	(4,432 in Wyoming)
Initial Inventory:		
Wilderness Study Area:	38,327 acres	(4,432 in Wyoming)
Agency Recommendation	33,824 acres	(4,432 in Wyoming)

Highlights

Erosive forces have incised deep canyons through the limestone uplift of the Pryors, reminiscent of the Southwest canyon country. The Pryor Mountains proposed wilderness is a multi-agency proposal that includes adjacent wildlands. Three areas comprise the Pryor Mountains study area: Bighorn Canyon - managed by the National Park Service and BLM, Burnt Timber Canyon - managed by the BLM, and Lost Water Canyon - managed by the Forest Service. Most of the proposed wilderness is in Montana, due south of the Crow Reservation. Appropriate protection for the Pryor Mountains can only be achieved through an ecosystem approach of which this northern Wyoming BLM section would complete.

The Pryor Mountains contain tremendously varied terrain. A hiker may traverse desert plateau, red and gray canyons, white limestone cliffs and pinnacles, explore mulitudes of caves, and mountain forests in a single day. Within a space of a few miles, you can travel through a great diversity of habitats, from arid desert to scattered spruce and lodgepole stands and finally into a dense forest of Douglas fir admidst mulit-colored limestone cliffs.

Location and Access

Only the southern tips of Burnt Timber Canyon and Bighorn Canyon areas lie in Wyoming, about 15 miles north of Lovell. Access is from State Highway Alt. 14 north to County Road 37, crossing Crooked Creek and taking jeep trails to the southern boundary.

Wilderness Qualities

Extensive recreation opportunities in the Pryor Mountains include exploring ice caves, rock climbing, studying nature and geology, Spectacular vistas from cliffs and ridges within the area overlook Bighorn Canyon—etched over a thousand feet deep in the desert plateau. Well-preserved vertebrate and invertebrate fossils have been found in the study area. The Crooked Creek National Natural Landmark, of which 160 acres are within the area, is a site for vertebrate fossils.

Numerous prehistoric sites, including tepee rings, a rock shelter, lithic scatters, and petroglyph panels, are within the Pryor Mountains. A portion of the study area is within the boundaries of the Demi-John Archeological District, which is listed on the National Register of Historic Places. This district contains over 230 stone circles and stone alignments, and is significant for its large size and abundance of features.

Wildlife within the area includes bighorn sheep, mule deer, black bear, scorpions, and rattlesnakes. The wild mustangs of the pryors survived in this rugged, broken canyon country until the pryor mountain wild horse range was established, the first of its kind in the nation. The herds are now managed by the Bureau of Land Management. The extensive caves and canyon walls within the Pryor Range provide excellent sites for bats to raise young and hibernate. At least ten species, including spotted and Townsend's big-eared bats (federal threatened and endangered candidates), and pallid bats (listed as a species of special concern by the Montana Natural Heritage Program and a Priority Species by the

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Wyoming Game and Fish Department), have been documented (Worthington 1991; WNDD, 1993). Other state Priority Species in Need of Special Management, such as Yuma myotis, California myotis, Keen's myotis, and fringed myotis, may also inhabit the area (Luce 1991). Extensive nesting habitat for endangered peregrine falcons exists in the area, but is unoccupied at the present recovery level (Oakleaf 1991).

Three rare plant species are observed in the area: persistent sepal yellowcress, hairy prince-plum, and a wild buckwheat (all State Priority species) that have less than 20 populations known in Wyoming (WNDD, 1993).

Resource Analysis

No oil or gas leases nor mining claims currently exist in the area. Potential is considered to be extremely low. There are no suitable timber lands within the proposal area. Uranium prospecting in the 1950s left wheel tracks along most major ridges of the Pryors. BLM officials can continue to manage the Pryor Wild Horse Range under wilderness management. The Pryors are also used by members of the Crow Nation for religious purposes (MWA, 1993).

Boundary Rationale and Management Recommendations

BLM management decisions: the BLM did not study this area for wilderness.

Each area is administered by a different federal agency, but should be managed as one wilderness area, because they are geographically as well as ecologically one. This Citizens Proposal boundary would be an important addition to preserving an unusual and complete ecosystem of the Pryor Mountains. Within Wyoming, the boundaries of Lost Water Canyon and Bighorn Canyon areas are formed by roads, ways and private land.

Proposed ACECs and SMAs

All currently existing ACECs and SMAs should be retained, and additional ACECs should be added to include important prairie dog complexes and mountain plover nesting concentration areas. These areas should be withdrawn from surface disturbing activities, and leased only under No Surface Occupancy (NSO) restrictions. In addition to the special areas enumerated in the sections that follow, all crucial winter, crucial winter relief, and elk calving areas identified by WGFD should be granted ACEC status and withdrawn from new mineral leasing and entry.

Additional Recommendations

We recommend a balanced approach to management of the public lands and resources in the Rawlins Resource Area of Wyoming. The final RMPs for these lands should promote the best use of the lands and resources in the Area, with the overarching goal that all permitted activities will be compatible with maintaining healthy ecosystems. It must also prevent any undue or unnecessary degradation of public land values. In keeping with these goals, the recommendations below provide that some areas with high wildlife, scenic, or recreational values are preserved and managed to support these fragile resources. Even so, the vast majority of these federal lands should remain available for energy development, logging, livestock grazing, and other uses.

Wildlife Habitat and Fisheries Management

1. Broad stretches of undeveloped landscape should be maintained in a well-distributed pattern throughout the planning area.

2. All management activities shall be done in a manner compatible with maintaining thriving populations of BLM Sensitive Species and other plants or wildlife classified as rare or declining.

3. Wild horse numbers should be managed at sustainable levels, taking into consideration impacts to wildlife, habitats, and rangelands.

4. The BLM shall protect habitat so as to maintain the viability of all native species widely distributed throughout the planning area.

5. All management activities should prevent soil erosion and compaction, and maintain or restore biological soil crusts over the long term.

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Fire/Fuels Management

1. Natural fires shall be allowed to burn unless and until they directly threaten human lives and property.

2. Fuels reduction projects designed to reduce fire hazard shall be limited to areas within % mile of existing buildings.

3. Prescribed fire will be the principal tool of fuels reduction, not mechanical treatments.

Areas of Critical Environmental Concern

1. Existing Areas of Critical Environmental Concern will be retained in the new Plan.

2. Areas where there is overlap between three or more types of big game crucial habitats as delineated by WGFD will be designated ACECs and leased only under No Surface Occupancy stipulations.

3. All ACECs will be withdrawn from locatable mineral entry and be classified as "unsuitable" for coal leasing.

4. Fluid minerals in all ACECs may be leased only under No Surface Occupancy stipulations.

Wilderness

1. All lands encompassed by citizens' wilderness inventories are granted Wilderness Study Area status and managed to protect their wilderness qualities.

2. Citizens' proposed wilderness areas will be withdrawn from mineral leasing, coal leasing, and locatable mineral entry.

Land Ownership Adjustments

1. BLM should identify and acquire non-BLM lands and consolidate ownership to enhance its ability to manage important recreation opportunities and wildlife habitats such as migration corridors, crucial big game habitats as defined by WGFD, riparian areas, and wetlands.

2. All land swaps will be conducted with adequate public notice and involvement.

3. The RMPs should determine which lands are currently legally accessible by motor vehicle, horse, or foot for public recreation, and which lands are rendered unavailable for public recreation due to private lands which hold no access easements. The RMPs should address the problem of inaccessibility of public lands for public recreation, including acquisition of easements and appropriate land exchanges.

Oil and Gas Leasing and Development

Goal: Sensitive landscapes and habitats (defined below) must be spared from the impacts of oil and gas development. In lands that are not especially sensitive, major reforms are needed to prevent widespread degradation of the land, to minimize the overall impacts of the oil and gas industry, and to

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make oil and gas development as compatible as possible with other multiple-use resources, including fish and wildlife habitat, watershed values, recreation, and wilderness.

1. Pursuant to supplemental program guidance, the BLM shall determine which lands should be off-limits to future oil and gas leasing, including at minimum:

   Existing and citizens' proposed Wilderness Study Areas;

   Existing and Proposed ACECs; and

   Lands in Visual Resource Management Classes I and II.

2. BLM shall institute a program to suspend and/or trade to nullify currently existing leases in the above three categories of land.

3. No new leasing shall occur on crucial winter ranges, crucial winter relief ranges, crucial winter yearlong habitats, of elk calving ranges as defined by WGFD until BLM thoroughly evaluates the effectiveness of seasonal timing and No Surface Occupancy stipulations and mitigation measures.

4. In the case of split-estate lands, the surface owner shall be given written notification prior to the offering of underlying subsurface mineral rights at a lease sale.

5. BLM shall prepare site-specific environmental analysis consistent with the requirements of NEPA § 102(2)(C) (i.e., an EIS) for leasing decisions on split-estate lands (e.g., federal minerals underlying private surface). Accordingly, under this approach, the RMP decision would defer leasing decisions on split-estate lands subject to subsequent site-specific analysis (which would be triggered by industry nomination to lease).

6. BLM shall provide the record surface owner 45 day advance written notice of proposed leasing decision and opportunity to comment, including recommending specific lease stipulations.

7. Staged development shall be instituted to achieve no net loss of crucial winter ranges, crucial winter yearlong ranges, severe winter relief ranges, and elk calving ranges as delineated by WGFD.

8. In cases where drilling is approved (subject to the limitations outlined below), directional drilling shall be the required to minimize environmental impacts, unless a less environmentally harmful alternative is available.

9. Areas may be leased only under a No Surface Occupancy Stipulation with appropriate buffers to guarantee protection of the special resources in question, and will be excluded from surface development. Waivers may be granted for surface disturbances and developments *if* they will be completely invisible by line-of-sight from the site in question. These include:

   a. Lands within 5 miles of historic trails, Native American Trails, or a site eligible for the National Register of Historic Places.

   b. Lands within Native American religious or cultural sites as identified by the tribes.

10. Sensitive areas that will be leased under No Surface Occupancy stipulations and shall be withdrawn from surface disturbing activities on a year-round basis, with ***no waiver available:***

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Lands where there is overlap between three or more types of wildlife crucial winter ranges, crucial winter relief areas, and elk calving areas as defined by WGFD,

Other Areas of Critical Environmental Concern as outlined in the Western Heritage Alternative,

areas within 1 mile of active raptor nests,

areas within 3 miles of active sage grouse or 1 mile of sharp-tailed grouse leks,

large prairie dog colonies and complexes, or those associated with BLM Sensitive Species such as the black-footed ferret, burrowing owl, mountain plover, or swift fox, plus a /4-mile buffer zone around these colonies,

critical habitats of Endangered and Threatened species, and

areas within the 100-year floodplain of permanent or intermittent streams or within 500 feet of natural water sources or riparian vegetation.

11. Wilderness Study Areas, including new citizens' proposed wilderness additions, will be withdrawn from mineral leasing and other surface disturbing activities.

12. Oilfield exploration standards.

    a. Seismograph testing will take place without the construction of additional roads. Construction for the purposes of this policy shall include blading, grading, or the use of mechanical means such as hand tools.

    b. Shot-hole seismic exploration will be the preferred method for seismic exploration where sensitive archaeological resources are not threatened, but shall be limited to hand-laying of geophone lines and helicopter transport of drilling rigs in sensitive landscapes outlined in Section 2.

13. Exploration wells will be constructed within 100 feet of existing improved gravel roads, limited by the stipulations outlined above. If improved gravel roads are unavailable, previously constructed but unmaintained roadways may be upgraded, with the stipulation that the minimum length of roadway will be reconstructed and that these route shall be returned to their original condition upon termination of production.

    a. Off-road travel on steep or unstable soils or during wet weather is prohibited.

14. Oil and gas infill development.

    a. Wherever possible, infill production wells shall be sidetracked from existing wells or drilled from existing wellpads or from cluster pads immediately adjacent to improved gravel roads and subject to the limitations of Section 1

    b. Cluster pads shall be constructed at intervals that create the minimum practicable footprint.

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c. The construction of new roads will not be permitted for oilfield infill development unless exceptional difficulties are presented.

15. Full-field development of new fields.

    a. Production wells shall be drilled from cluster pads immediately adjacent to existing improved gravel roads and subject to the limitations above; these cluster pads will be spaced at the widest possible spacing to minimize surface disturbance.

    b. The construction of new roads shall not be permitted unless the maximum interspersion cannot be met under the provisions of Section 4(b), subject to the limitations of Section 1. If new roads are constructed, the siting of cluster pads away from existing improved gravel roads will be achieved by minimizing the length of new road construction, using existing unimproved roadways wherever they are available.

16. New oil and gas drilling activities shall be regulated under a Staged Development scenario:

    a. There shall be no net loss of unroaded or undeveloped lands. Drilling will not be introduced into new unroaded or undeveloped areas until an equivalent acreage of formerly developed lands achieves undeveloped status.

17. State-of-the-art drilling technologies, including but not limited to pitless drilling techniques (using closed-loop circulation of drilling muds), shall be employed for all exploration and production wells unless there is a less environmentally harmful alternative.

18. Coalbed methane produced water may either be reinjected into aquifers of similar water quality or treated to remove pollutants prior to discharge. Produced water from coalbed methane wells shall not be discharged onto soil surfaces or into water bodies if it might affect sensitive wildlife species, water quality, or soil productivity.

19. The plan of operations shall include a reclamation plan which describes in detail the methods and practices that will be used to ensure complete and timely restoration of all lands affected by oil and gas activities to the condition that existed prior to surface disturbing activities. Unless otherwise provided in an approved surface use plan of operations, reclamation shall be conducted concurrently with other operations.

20. Disturbed lands should be returned to their natural condition immediately after the termination of development activities for oil and gas; bonds shall not be refunded until this requirement is met.

21. Revegetation activities should re-create the original distribution and species composition on plant on the site prior to disturbance.

22. The reseeding of disturbed sites shall use only native species of plants.

23. Topsoil shall be retained for all surface-disturbing activities, and shall be replaced during reclamation activities.

24. The obligation to complete reclamation will persist until the site is substantially returned to its natural condition.

Noxious Weeds

1. The BLM will work with other agencies to prevent the introduction of noxious weeds.

2. In order to retard the spread of noxious weeds, the following steps will be taken:

- Reduce the road construction associated with oil and gas development and other surface disturbance to the minimum practicable footprint.
- Reduce grazing pressures where overuse is promoting the spread of invasive species.
- Require that any fill material used on the Resource Area be free of non-native seeds or other noxious weed material.

Coal and Locatable Minerals

1. Sensitive areas that will be classified "unsuitable" for coal leasing under SMCRA on a year-round basis, with ***no waiver available:***

- Areas where there is overlap between three or more wildlife crucial winter ranges, crucial winter relief areas, and birthing areas,
- Other Areas of Critical Environmental Concern as outlined in the Western Heritage Alternative,
- areas within 1 mile of active raptor nests,
- areas within 3 miles of active sage grouse or 1 mile of sharp-tailed grouse leks,
- large prairie dog colonies and complexes, or those inhabited by BLM Sensitive Species such as black-footed ferret, burrowing owl, mountain plover, or swift fox,
- critical habitats of Endangered and Threatened species, and
- areas within the 100-year floodplain of permanent or intermittent streams or within 500 feet of natural water sources or riparian vegetation.

2. Sensitive areas that will be withdrawn from locatable minerals entry on a year-round basis, with ***no waiver available:***

- wildlife crucial winter ranges, crucial winter relief areas, and birthing areas,
- Other Areas of Critical Environmental Concern as outlined in the Western Heritage Alternative,
- areas within 1 mile of active raptor nests,
- areas within 3 miles of active sage grouse or 1 mile of sharp-tailed grouse leks,
- large prairie dog colonies and complexes, or those inhabited by BLM Sensitive Species such as black-footed ferret, burrowing owl, mountain plover, or swift fox,

- critical habitats of Endangered and Threatened species, and
- areas within the lOO^year floodplain of permanent or intermittent streams or within 500 feet of natural water sources or riparian vegetation.

Off-Road Vehicle Management

1. All motor vehicles should be limited to designated roads and trails throughout the planning area.
2. Designated routes will be limited to those which minimize damage to soil, harassment of wildlife, and conflicts with other recreational users in accordance with Executive Orders # 11644 (1972) and 11989 (1977), and 43 C.F.R. § 8340 et seq.

Sensitive Plants Management

1. All current special management areas should be maintained.
2. The BLM should take measures to ensure preservation of the plant species of concern listed on the Wyoming Natural Diversity Database.

Soil, Water, and Air Management

Soils

1. The RMP should map the occurrence of Biological Soil Crusts throughout the planning area and evaluate current and future impacts to this important soil resource from livestock grazing, seismic exploration, and other types of development.
2. Develop and implement long-term monitoring protocols for the restoration of soil crust communities. Adapt and refine monitoring protocols, in particular the Biological Soil Crust Stability Index, for evaluation of existing BSC condition. When used in conjunction with corresponding measures of landscape stability, biotic integrity, and watershed function, the BSCSI can be used to help determine the relative health of grassland and sagebrush communities.
3. Identify, map and protect from human related disturbances any remaining areas (refugia) where BSC represent 50% or more of the total ground cover (These are unlikely to represent more than 0.1% of the GRDA).

Water Quantity

1. The RMP should provide that BLM will pursue whatever mechanisms are available to it under federal and state law to preserve minimum stream flows necessary for wildlife habitat, fisheries, and recreation. These mechanisms include conditions on the issuance of rights-of-way for water projects on BLM lands, reserved water rights, and state instream flow protections.

Water Quality

1. The RMP must ensure compliance with all federal and state water quality standards.

2. The RMP should detail the steps BLM intends to take to improve water quality in those stream segments that are not currently meeting state standards. Special attention is required for those stream segments on the state's 303(d) list. These steps should include, at a minimum, reducing the impact of livestock grazing on water quality by limiting livestock access to riparian areas; reducing the impact of timber operations on water quality by creating adequate buffer zones; restricting road construction and ORV use in riparian areas, and ensuring that produced water is either treated or re-injected.

In addition, the Resource Area contains several stream segments that have been designated as Class 1 or Outstanding Waters. For these stream segments, the RMP must ensure that there is no deterioration in water quality.

Air Quality

1. BLM must ensure that all activities on BLM lands are in compliance with federal and state air quality standards and take steps to improve air quality where such standards are not being met.

2. Air quality impacts associated with oil and gas development should be strictly limited which might degrade current Class I Areas (and on lands proposed for wilderness designation), and any areas of non-attainment of current air quality standards.

Visual Resource Management

1. Lands within the viewsheds of National Trails and lands proposed for wilderness designation must be managed as VRM Class I.

Wild and Scenic Rivers

1. Segments of the Encampment River located within the current WSA will be nominated for protection under the Wild and Scenic Rivers Act.

Adaptive Management Strategy

1. Recognizing that the costs of monitoring and mitigating for private uses on the public lands often outstrip the agency's resources, the RMP will contain a schedule for re-evaluating the ability of BLM to achieve the non-commodity resource goals contained in the RMP. If those goals are not or cannot be met, the RMP will outline how BLM will adapt its management of the Resource Area in order to ensure preservation of wildlife, scenic, and recreational values.

Monitoring

1. The BLM shall undertake a systematic program of periodic monitoring of resources and attributes, including but not limited to grazing levels, biological soil crusts, sage grouse populations, burrowing owl populations, extent and occupancy of prairie dog colonies, and population trend of Sensitive Species.

Vegetation Treatments

1. Sagebrush reduction treatments shall not occur within 3 miles of a sage grouse lek, within 1 mile of a sharp-tailed grouse lek, or on sage grouse or sharp-tailed grouse winter habitats.

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Forest Management

1. The new RMP should outline standards and guidelines for timber harvest that require harvest to be sustainable over time and compatible with other multiple uses such as wildlife, recreation, and watershed values.

2. Timber harvest rotations should reflect natural stand turnover before the advent of widespread logging.

3. The RMP should ban clearcutting and seed-tree harvest in favor of group selection, individual tree selection, and three-stage shelterwood harvests to minimize additional forest fragmentation.

4. No new timber roads should be constructed in lands proposed for wilderness designation, lands where three or more wildlife migration corridors and crucial habitats coincide, and lands requiring NSO stipulations for leased minerals.

5. For timber sales, a minimum of 5 snags/acre of the largest diameter available will be retained to enhance wildlife habitat.

Historical and Cultural Resources

1. Cultural and paleontological resources should be preserved in place so that their full scientific and cultural values can be evaluated and maintained.

2. BLM should inventory the Resource Area in order to identify sites of cultural and paleontological resources.

3. BLM should engage the Native American community in identifying sites that should be given special protections, including ACEC designation.

4. Sites of known cultural or paleontological resources, such as the Morrison Formation, should be designated and protected as ACECs.

5. All permits, leases, contracts, rights-of-way or other agreements allowing private uses should require consultation and inventories prior to any surface disturbance to determine whether such resources are or may be present.

ROW Corridors

1. Utility corridors should be designated along existing rights-of-way or high-traffic gravel roads or highways.

2. The following areas shall be classified as "exclusion areas" for the purposes of siting ROW corridors:

   wildlife crucial winter ranges, crucial winter relief areas, and birthing areas,

   Other Areas of Critical Environmental Concern as outlined in the Western Heritage Alternative,

   areas within 1 mile of active raptor nests,

areas within 3 miles of active sage grouse or 1 mile of sharp-tailed grouse leks,

large prairie dog colonies and complexes, or those inhabited by BLM Sensitive Species such as black-footed ferret, burrowing owl, mountain plover, or swift fox, and

critical habitats of Endangered and Threatened species.

3. Areas within the 100-year floodplain of permanent or intermittent streams or within 500 feet of natural water sources or riparian vegetation shall be classified as "avoidance areas" for the purposes of sighting ROW corridors.

4. Communications sites and antenna structures will not be built in or adjacent to:

wildlife crucial winter ranges, crucial winter relief areas, and birthing areas,

Other Areas of Critical Environmental Concern as outlined in the Western Heritage Alternative,

areas within 1 mile of active raptor nests,

areas within 3 miles of active sage grouse or 1 mile of sharp-tailed grouse leks,

large prairie dog colonies and complexes, or those inhabited by BLM Sensitive Species such as black-footed ferret, burrowing owl, mountain plover, or swift fox, and

critical habitats of Endangered and Threatened species.

Livestock Grazing Management

Overall, the BLM should manage allotments to avoid overgrazing and render livestock grazing compatible with other multiple-use values.

1. The RMP should include a reasoned determination as to which lands within the Resource Area should be grazed at all. The special values of lands in ACECs or other special management areas, lands that warrant the protection of NSO stipulations, lands with concentrations of biological soil crusts, or lands with plant or animal species of concern may dictate a determination that such lands are unsuitable for livestock grazing.

2. The RMP should include a three-year schedule for reviewing the condition of all allotments and riparian areas and swift rehabilitation of those that are not in compliance with these requirements. The RMP should adopt a similar schedule for ensuring the timely completion of evaluations required under the National Environmental Policy Act and the Endangered Species Act for grazing activities on the Resource Area.

3. The BLM should manage all allotments toward "good" to "excellent" range condition.

4. Sufficient forage should remain following livestock grazing to support native wildlife.

5. The new RMP should impose measures to minimize the transmission of diseases from livestock to native wildlife.

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6. All fences shall meet WGFD standards with regard to construction standards.

7. Illegal fences should be brought into compliance or removed.

8. The construction of new fences that might potentially interfere with the migration or dispersal of wildlife should be avoided.

9. The "Standards and Guidelines for General Application to All Components of the Rangeland Ecosystem," as well as "Standards and Guidelines for Unhealthy Ecosystems," currently in force on BLM lands, shall be formally adopted in full into the new RMP.

10. The BLM must ensure that grazing complies with the Fundamentals of Rangeland Health and other statewide requirements, and all riparian areas must be managed to comply with current "Properly Functioning Condition" requirements.

Conclusions

We applaud BLM for revising its three clearly interconnected Resource Management Plans in the Bighorn Basin in a single NEPA process and hope that this will lead to a more complete analysis of the direct and cumulative impacts to the ecosystems found here. Please consider these comments in crafting your range of alternative land-use plans, and please copy us will all future communications regarding the NEPA process for these plans. We will look forward to seeing your range of alternative plans in the forthcoming Draft EIS.

Sincerely yours,

Erik Molvar

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Attachments:

Attachment 1: Braun, Clait. "A Blueprint for Sage-Grouse Conservation and Recovery." 2006

Attachment 2: Walker, Brett. "Greater sage-grouse population response to energy development and habitat loss." 2007

Attachment 3: U.S. Fish and Wildlife Service. "Atlantic Rim Natural Gas Project Draft Environmental Impact Statement Comments.

Attachment 4: Beck, Jeffrey. "Summary of Oil and Natural Gas Development Impacts on Prairie Grouse." 2006

Attachment 5: Wyoming Game and Fish Department. "Multi-State Sage-Grouse Coordination and Research-based Recommendations." 2008

Attachment 6: Biodiversity Conservation Alliance. "Wind Power in Wyoming: Doing it Smart from the Start." 2008

Attachment 7: Biodiversity Conservation Alliance. "Drilling Smarter: Using Directional Drilling to Reduce Oil and Gas Impacts in the Intermountain West." 2003

Comment Documents 1314 and 1315 have been intentionally removed.

1316

Brad Mohrmann
1873 Paintbrush Drive
Sheridan, WY 82801

November 10, 2008

Eddie Bateson, Manager
Wind/River Bighorn Basin District
P.O. Box 119
Worland, WY 82401

Dear Mr. Bateson,

I am writing to express my concerns over BLM planning for the Bighorn Basin. I am particularly concerned with the sage grouse. This is the only area in the state where sage grouse numbers are expanding. No drilling should be allowed near leks. Sage grouse habitat is in under assault across the state. We need to protect this area.

This is also an important area for winter migration and calving for a variety of wildlife including some from Yellowstone National Park. I urge you to adopt a plan that requires directional drilling for all projects to minimize the footprint on the land. Of equal importance I also urge you to require all CBM water be re-injected. I am increasingly disturbed by the damage done to our water resources due to CBM development. There is no reason that industry should not have to re-inject the water.

Thank you for your attention to these concerns. Wyoming is under assault from development and in my opinion it is being poorly managed. Please take care in protecting our environment and wildlife.

Sincerely,

Brad Mohrmann

NOV 1 3 2008

1317

Eddie Bateson, Manager
Wind/River Bighorn Basin District
P.O. Box 119

Worland, WY 82401 Monday, November 10,2008

Dear Mr. Bateson

The letter is in regard to process that has begun to develop land use plans for the Bighorn Basin. Since these plans will have a lasting impact on how our public lands in the Bighorn Basin will be managed far into the future, several mitigating factors should be considered carefully over a length of time that will allow the BLM and the public to fully understand at all of the consequences; thus allowing sound decisions as to the direction the Bighorn Basin land use plan should move in order to provide opportunities for responsible oil and gas exploration, protection of water sources, domestic animal grazing, consideration of wilderness areas, recreation, wildlife preservation, unusual scenic protection, etc. With the due diligence of considering all of the concerns listed above and only allowing responsible oil and gas exploration, I feel that the BLM can come up with a Bighorn Basin Land Use Plan that will serve the Bighorn Basin well and stand as an example for land use plans throughout the country

For too long the oil, gas and extraction industries have run roughshod over the land use planning undertaken by the BLM. There have been several toxic spills and contamination of waterways throughout the state of Wyoming, yet open pits, (several unlined), full of toxic contaminates are still allowed. Frac'ing fluids that contain any number of several hundred highly toxic materials, (If the average citizen tried to use some of these, we would be subject to severe fines), are allowed by the BLM under the current administration for use by the oil and gas exploration industry. We can't even find out what is actually contained in frac'ing fluids because they are considered proprietary. Even the Minimal regulations now in place on the oil and gas industry are not enforced because of the lack of BLM personnel to enforce the regulations and if violations are found the fines are so minimal that many companies just violate again.

In order to protect the Bighorn basin from being over run by irresponsible oil and gas exploration the BLM should require the following rules concerning oil and gas exploration in the Bighorn Basin:

1. Require phased in leasing and development so that only a minority of the Bighorn Basin can be committed to oil and gas exploration at one time;
2. Give notice when federal minerals are leased and require land owner approval of drilling;
3. Make public compositions of all drilling and frac'ing fluids used, so in the future we can tell if the toxic pollution of private wells came from these fluids
4. Ensure all impacts are not harmful to human health;
5. Mandate minimum-footprint directional drilling for all projects to reduce impact on other uses of the Bighorn Basin;
6. Require "No Surface occupancy for oil and gas development within three miles of sage grouse leks and in crucial big game winter ranges;
7. Protect potential wilderness areas, such as the McCullough Peaks and Bobcat Draw and other unique scenic areas;
8. Manage domestic animal grazing to ecologically sustainable levels

1317

9. Minimize CBM impacts by considering reinjection when possible, ensure quality of discharge water that won't be detrimental to the surface owner, and require full surface owner consent for discharge of water.
10. Since drilling in the Bighorn Basin is likely to be massive, require an EIS that does a comprehensive study of the over all impact of oil and gas development throughout the Bighorn Basin, rather than allowing an exception for the three wells now proposed in the Roctober Drilling Plan.
11. Require flareless finishing of all gas wells to avoid the high levels of ozone pollution that has occurred in the Pinedale area.
12. Require closed loop operation where open pits—often now unlined—are banned and all fluids are stored in tanks in order to keep soil and water contamination to a minimum
13. Require bonds high enough to actually cover the potential damage that may be caused.
14. Strictly enforce with "boots on the ground" all regulations and make fines high enough for breaking the rules so the fines will actually deter companies rather that the current small slaps on the wrist that deter nearly nothing.

In addition to the above I request, pursuant to 5 U.S.C. section 555(e), that the comment time on the Bighorn Basin Land Use Plan be extended at least 30 days and possibly 60 days in order to give the public time to digest what they learned at the public meetings, rather than the current deadline of only three days after the last public meeting.

Yes we need to drill for gas and oil; however, we need to do all drilling in a responsible manner, so not to put the public in danger from toxic spills or unhealthy ozone levels in the air we breathe. We need to protect potential wilderness areas and unique scenic areas from the drill bit. We should not disturb big game from their winter feeding grounds or disturb sage grouse leks. Since the water supply is one of our most precious resources in the Bighorn Basin, we should go to great lengths to make sure it stays clean and is not wasted. In order to make the Bighorn basin a place that we can all use and enjoy any oil and gas development should be should be regulated so best practices are used and all regulations should be enforced by the BLM.

In conclusion I feel if the BLM does not require the oil and gas to use the best practices available, the Bighorn Basin will end up becoming an industrial waste land like the Jonah Field or the next Pinedale; devastated like the Powder River Basin with the squandering of our vital water supply, or the destruction of prime grazing land from being flooded by water with a high mineral content. Nor do we want our domestic water polluted by toxic waste by a gas well blowout similar to the one that happened in the Line Creek drainage near Clark, Wyoming; or as in the Pavillion, Wyoming area, where massive gas exploration has polluted several domestic wells.

Sincerely

John T. Powell
63 Canyon Road
Clark, Wyoming 82435

1318

Mary Ann Budenske
450 S. Wolcott
Casper, WY 82601

November 10, 2008

Eddie Bateson, Manager
Wind River/Bighorn Basin District
P.O. Box 119
Worland, WY 82401

Re: Bighorn Basin RMP Scoping

Dear BLM Planners

Pursuant to 5 U.S.C. Section 555(e) I petition the BLM to extend the comment period for the Bighorn Basisn RMP scoping process

The short public comment time does not leave enough time for the public to digest the complex issues and produce detailed and thoughtful comments that this important process requires.

I am also writing to urge you to develop a revised RMP that will

1.) Require phased leasing and development so that only a minority ofthe Basin can be committed to drilling in one year.

2.) Give ntoice when federal minerals are leased and require landowner approval of drilling and make public compositions of all drilling and frac'ing fluids used.

3.) Mandate a minimum footprint directional drilling for all projects.

4.) Require a no surface occupancy for development within three miles of sage grouse leks and critical big game winter ranges and calving sites.

5.) Protect potential wilderness such as McCullough Peaks and Bobcat Drqw.

6.) Minimize CBM impacts, require waste-water to be reinjected and

7.)Manage livestock grazing at ecologically sustainable levels.

Sincerely,

Mary Ann Budenske

1319

719 Emerson St.
Sheridan, WY 82801
November 13,2008

Eddie Bateson
BLM
P.O. Box 119
Worland, WY 82401

Dear Mr. Bateson,

Although we live on the other side of the Bighorns, my family often "crosses over" to camp and hike in the Bighorn Basin, and are interested in your planning process for managing public lands and split-estate minerals. People often rush to defend forested mountains, but the basin has its own scenic beauty that may be more fragile than those historically protected.

In order to develop a plan that will prevent the affects of development we've experienced in the Powder River Basin and the Jonah Field, please:

- phase leasing and development to minimize impact
- provide immediate public information about leases
- protect public health and publish information about chemicals being used
- require directional drilling to reduce footprint
- buffer sage grouse leks and elk calving areas with sufficient "No Surface Occupancy"
- manage the WSAs in the basin as Wilderness
- prevent damage by and degradation of discharge water, or require reinjection.

In addition, please extend the comment period to allow the public more time to learn about the plan and the process: pursuant to U.S.C. Section 555(e) I petition the BLM to extend the comment period for the Bighorn Basin RMP scoping process.

Thank you.

E. Heyward

1320

50 Piper Road
Laramie, WY 82070
(307) 742-3533

November 11, 2008

Eddie Bateson, Manager
Wind/River Bighorn Basin District
P.O. Box 119
Worland, WY 82401

Mr. Bateson,

I urge you to develop a revised RMP for the Bighorn Basin that will involve phased leasing and development, mandate directional drilling and minimize CBM impacts, require "No Surface Occupancy" for oil and gas development within three miles of sage grouse leks and in crucial big game winter ranges and calving sites, protect potential wilderness such as McCullough Peaks and Bobcat Draw.

Pursuant to 5 U.S.C. Section 555(e), I petition the BLM to extend the comment period for the Bighorn Basin RMP scoping process. The November 17 deadline is only three days after the last public meeting, too short a period to thoughtfully respond.

Thank you for your attention to my letter.

Sincerely,

Daniel A. Dale

1321

Martin Steitz
21853 Iden Avenue Place North
Forest Lake, MN 55025
msteitz@hupc.org

November 15, 2008

Mr. Eddie Bateson, Manager
Bureau of Land Management
Wind/River Bighorn Basin District
PO Box 119
Worland, WY 82401

The Bighhorn Basin is rich in cultural, historical and environmental resources, and offers outstanding desert recreation opportunities. I urge you to develop a revised RMP that will:

*Require phased leasing and development so that only a minority of the Basin can be committed to oil and gas drilling at any one time;

*Give notice when federal minerals are leased, require landowner approval of drilling, and require that companies provide the public a complete chemical inventory of drilling products;

*Mandate minimum-footprint directional drilling for all projects to reduce impacts;

*Require "No Surface Occupancy" for oil and gas development within 3 miles of sage grouse leks and in crucial big game winter ranges and calving sites;

*Protect potential wilderness such as McCullough Peaks and Bobcat Draw; and

*Minimize CBM impacts by considering reinjection when possible, ensure quality of discharge waters, and require full surface owner consent.

In addition, I urge you to extend the comment period for this process. I understand that the BLM is hosting public scoping meetings to provide information and answer questions from the public on this process. The deadline for public comment is only three days following the last public meeting. This does not give the public adequate time to digest the multiple and complex issues related to the Big Horn Basin. Under 5 U.S.C Section 555(e), I petition the BLM to extend the comment period such that the public has an opportunity to digest this information and provide the BLM adequate input.

Sincerely yours,

Martin Steitz

November 14, 2008 **1322**

Mr. Eddie Bateson, Manager
Bureau of Land Management
Wind/River Bighorn Basin District
PO Box 119
Worland, WY 82401

Dear Mr. Bateson:

RE: Please Don't Rush Drilling in Bighorn Basin

I am writing to ask your help on behalf of the Bighhorn Basin, which is rich in cultural, historical and environmental resources, and offers outstanding desert recreation opportunities.

I urgently ask you to develop a revised RMP that will:

- Require phased leasing and development so that only a minority of the Basin can be committed to oil and gas drilling at any one time.
- Give notice when federal minerals are leased, require landowner approval of drilling, and require that companies provide the public a complete chemical inventory of drilling products.
- Mandate minimum-footprint directional drilling for all projects to reduce impacts.
- Require "No Surface Occupancy" for oil and gas development within three miles of sage grouse leks and in crucial big game winter ranges and calving sites.
- Protect potential wilderness such as McCullough Peaks and Bobcat Draw.
- Minimize CBM impacts by considering reinjection when possible, ensure quality of discharge waters, and require full surface owner consent.

I also urge you to extend the comment period for this process.

I understand that the BLM is hosting public scoping meetings to provide information and answer questions from the public on this process. The deadline for public comment is only three days following the last public meeting. This does not give the public adequate time to digest the multiple and complex issues related to the Big Horn Basin. Under 5 U.S.C Section 555(e), I petition the BLM to extend the comment period such that the public has an opportunity to digest this information and provide the BLM adequate input.

Thank you for the opportunity to comment and your help on behalf of America's treasured and irreplaceable lands and wildlife.

Respectfully,

J. Capozzelli
New York

1323

From: Susan Silberberg-Peirce <speirce@greenspeedisp.net>
Subject: **Protect the Big Horn Basin**
- November 18, 2008 8:16:04 AM PST

Eddie Bateson, Manager
Wind/River Bighorn Basin District
P.O. Box 119
Worland, WY 82401

Dear BLM Planners,

The Bighhorn Basin is rich in cultural and historical resources, and outstanding desert recreation opportunities. It is also home to the only sage grouse population in the state that is currently expanding, and crucial big game winter ranges for elk, bighorn sheep, mule deer and pronghorn, including some used by the Yellowstone herds. I urge you to develop a revised RMP that will:

* Require phased leasing and development so that only a minority of the Basin can be committed to oil and gas drilling at any one time;
* Give notice when federal minerals are leased and require landowner approval of drilling and make public compositions of all drilling and frac'ing fluids used;
* Mandate minimum-footprint directional drilling for all projects to reduce impacts;
* Require "No Surface Occupancy" for oil and gas development within 3 miles of sage grouse leks and in crucial big game winter ranges and calving sites;
* Protect potential wilderness such as McCullough Peaks and Bobcat Draw;
* Minimize CBM impacts, require waste-water to be re-injected to protect aquifers; and
* Manage livestock grazing to ecologically sustainable levels.

In addition, we'd like the BLM to extend the comment period to allow the public sufficient time to have meaningful input into the process. Public participation and comments are an integral and critical part of the RMP process. Although the BLM is hosting 6 public scoping meetings (see below), the deadline for the public to submit comments is November 17, 2008, only 3 days after the last public meeting. Three days does not give the public time to digest the many and complex issues of the Bighorn Basin and produce the detailed and thoughtful comments this important process requires. When you send your comments, please add a section using the language "Pursuant to 5 U.S.C. Section 555(e), I petition the BLM to extend the comment period for the Bighorn Basin RMP scoping process" and list your reasons.

Susan and Roger Peirce
143 Eagle Feather Way
Lyons, CO 80540-8450 USA

303.823.5913 tel./fax

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1324

Big Horn County Mapping and Planning

P.O. Box 29
Basin, Wyoming 82410
Phone: 307-568-2424
e-mail: planner@bighorncountywy.

November 21,2008

Bureau of Land Management
Wind River/Bighorn Basin District Office
P.O. Box 119
Worland, WY 82401

Dear District Manager:

Big Horn County is currently working on a new Land Use Plan for the rural portions of the county. A planning consultant was hired and a steering committee was created to spearhead the planning effort. The first phase of the land use plan included gathering facts and data about Big Horn County. The committee and consultant have also developed preliminary goals for future land use in the county.

The steering committee has scheduled three Open Houses December 2-4, 2008. The open houses will allow the public the opportunity to see what information has been gathered, review the draft goals, and provide comments. Since Big Horn County and all the public land administrators share a common interest in the rural areas, we encourage you, your staff, or other BLM personnel to attend an open house in your area.

Attached is the notice as advertised in all Big Horn County newspapers. It would be a great help to the effort if you and other BLM personnel could attend. In the meantime, please feel free to contact me if you have any questions. Thanks in advance for your interest in planning for the future of Big Horn County.

Sincerely,

Jim Waller

Jim Waller
Big Horn County
GIS Coordinator/County Planner

1324

OPEN HOUSE MEETINGS

Big Horn County Land Use Plan

Earlier this year, Big Horn County began an effort to update and revise the County's Land Use Plan. The County hired a consulting planner and appointed a 14-member committee to produce the plan. When completed next spring, this plan will provide recommendations for the future direction of growth and development in the county.

The Big Horn County Land Use Plan Committee is hosting several "open house" meetings in December. The purpose of the meetings is to display the work that the committee and consultants have completed so far. Furthermore, the meetings are an opportunity for members of the public to give input and feedback about the plan. Exhibits, maps, background information, and the results of the countywide survey will all be on display and available for review and comment. In addition, the committee and consultants are asking for public input on a series of goals for future land use in the county.

Please join us anytime **between 5:00 pm to 8:00 pm** at any one of the open house locations listed below:

- **Tuesday, December 2,2008** (Greybull Elementary School Cafeteria, 125 6th Ave. S Greybull, WY)
- **Wednesday, December 3,2008** (Cloud Peak Middle School Cafeteria, 170 School Ave Manderson, WY)
- **Thursday, December 4,2008** (Lovell Community Center, 1925 Highway 310, Lovell, WY)

For more information see: www.bighornplan.info or call the County Planning Department at 307-568-2424.

Publish November 13, 20,27

1325

Nov - 6 - 08

Eddie Bateson, Manager
Wind/River Bighorn Basin Dist.
P.O. Box 119
Worland, WY 82401

Dear BLM Planners:

The Bighorn Basin is rich in cultural and historical resources, and outstanding recreational opportunities. It is also home to the sage grouse population in the state that is currently expanding, and crucial big game winter ranges for elk, bighorn sheep, mule deer and pronghorn. I urge you to develop a revised RMP that will:

1. Require only a small part of the Basin committed to oil and gas drilling at any one time.
2. Give notice when federal minerals are leased and require landowner approval of drilling and make public compositions of all drilling + fracing fluids used
3. Mandate minimum-footprint directional drilling for all projects.
4. Require "No Surface Occupancy" for oil + gas development within 3 miles of sage grouse leks and in crucial big game winter ranges + calving sites.
5. Protect all potential wilderness areas.
6. Require waste-water to be re-injected to protect aquifers
7. Remove livestock grazing.

Sincerely,

Ron Marquart

Ron Marquart
3300 E. Red stone Dr.
Boise, ID 83712

11/18/08 **1326**

EDDIE BATESON, MANAGER
WIND/RIVER BIGHORN BASIN DISTRICT
P.O. BOX 119
WORLAND, WY, 82401

DEAR SIR,

WE SUPPORT THE BIODIVERSITY CONSERVATION ALLIANCE'S POSITION ON THE BIGHORN BASIN REGIONAL MANAGEMENT PLAN! THE BIODIVERSITY CONSERVATION ALLIANCE'S POSITION IS STATED THE OPPOSITE SIDE OF THIS LETTER.

SINCEREMELY,

John P. Stoltenberg
Martha J Stoltenberg

John P. Stoltenberg P.E.
N. 8362 State Highway 67
P.O. Box 596
Elkhart Lake, WI 53020-0596
(920) 876-2184
State of Wisconsin
Registered Prof. Engineer, Cert. - 19207
jpstolten@verizon.net

Mr. Martha Stoltenberg
N8362 State Road 67
Elkhart Lake, WI 53020

Comment Documents 1327 and 1328 have been intentionally removed.

1329

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

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Ref: EPR-N

NOV 1 4 2008

Mr. Caleb Hiner, RMP Project Manager
Bureau of Land Management
Worland Field Office
101 South 23rd
P.O. Box 119
Worland, WY 82401

Re: Scoping Comments on the Bighorn Basin Resource Management Plan Revision Project, Wyoming

Dear Mr. Hiner:

The Region 8 Office of the U.S. Environmental Protection Agency (EPA) has reviewed the Bureau of Land Management's (BLM) Notice of Intent (NOI) to prepare Resource Management Plans (RMPs) with an associated Environmental Impact Statement (EIS) for the Cody and Worland Field Office planning areas (collectively known as the Bighorn Basin Resource Management Plan Revision Project). In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, we offer the enclosed comments for your consideration as you proceed with the Draft RMPs/EIS.

The Cody and Worland planning areas encompass approximately 5.6 million acres, including all lands regardless of jurisdiction. The planning area also includes 12 Wilderness Study Areas (WSAs) and nine Areas of Critical Environmental Concern (ACECs). The decision area consists of 3.2 million acres of BLM-administered surface land and approximately 4.2 million acres of subsurface federal minerals. Given the significant amount of oil, gas, and coal leasing, exploration and development throughout Wyoming, the NOI identifies energy development as one of the major issues that will be addressed in the RMPs/EIS.

Based on the general information included in the NOI, EPA's principle areas of focus for these upcoming land use plans include: impacts to air quality from oil and gas development; impacts to wetlands; and protection of water sources. In addition to these issues, EPA has attached additional recommendations for addressing cumulative impacts, water quality and other resources.

Air Quality

Planning-level NEPA analyses, such as RMPs, provide direction for broad resource management and may be the basis for future leasing decisions. These plans provide the how, when and where for oil and gas operations. At the resource management planning level, a quantitative approach which includes air dispersion modeling may be necessary to provide the decision-maker with the level of information necessary to support the decision-making process. The air quality analysis should provide the decision-maker with the information to guide planning decisions such as: the rate of oil and gas leasing or development; appropriate leasing stipulations; and/or necessary mitigation measures to include in drilling permits. The appropriate level of air quality analysis at the management planning stage will help to ensure that proper, proactive steps are taken to minimize adverse impacts to air quality.

In RMPs that plan for significant oil and gas development, EPA maintains that air quality dispersion modeling should be conducted to assess the cumulative impacts of projected oil and gas wells on air quality values within and outside of the planning area. The qualitative emission comparison approach, which is commonly used in Environmental Assessments and in some land use planning documents, is not specific enough to adequately address and predict air quality impacts from oil and gas development. While the qualitative emission comparison approach provides a means to compare the total predicted emissions of each alternative to a baseline year, it does not provide any indication of the potential for exceedances of ambient air quality standards or the potential for adverse impacts on air quality related values (i.e. visibility) in nearby Class I areas. In reviewing planning-level NEPA documents, EPA Region 8 typically considers the following seven factors in determining the appropriate level of air quality analysis. These factors, while not exclusive, and which may vary from project to project, provide some indication of the potential for air quality impacts to occur from management plans that provide for oil and gas leasing and/or development.

1. Number of projected oil and gas wells.
2. Distance of the planning area or projected well development areas from Class I airsheds.
3. Distance from other sensitive receptors (i.e., National Parks, Class II areas and population centers).
4. Distance from areas approaching a National Ambient Air Quality Standard (NAAQS). This is particularly important for ozone and fine particulate matter (PM2.5) in the West.
5. Availability of recent, relevant, and comprehensive air quality modeling data prior to management planning Draft EIS.
6. Whether relevant, comprehensive, and cumulative air quality analysis is *concurrently* completed with a project-specific EIS in the management planning area.
7. Potential for cumulative adverse impacts to air quality from projects in adjacent planning areas.

2

The potential for categorical exclusions under Section 390 of the Energy Policy Act further emphasizes the need for BLM to analyze the air quality impacts and to identify appropriate mitigation measures at the RMP/EIS stage. Section 390 of the Energy Policy Act of 2005 established five statutory categorical exclusions under NEPA including an exclusion for "drilling an oil and gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed drilling as reasonably foreseeable activity, so long as such plan or document was approved within five years prior to the date of spudding the well." A qualitative emissions comparison approach would not provide BLM with the information necessary to predict potential air quality impacts and identify appropriate mitigation measures.

Wetlands

EPA believes wetlands should be afforded the highest level of protection, either through closing certain lands to leasing or through the use of No Surface Occupancy (NSO) stipulations. This is especially true for wetland and riparian areas of WSAs/ACECs. We suggest that lease stipulations to protect wetlands be strongly considered. We note that the Record of Decision for Western Uinta Basin Oil and Gas Leasing issued by the Uinta and Ashley National Forests in 1997 required "No Surface Occupancy" (NSO) as the lease stipulation for riparian lands and wetland areas over 40 acres. For travel management in the planning area, EPA recommends BLM give preference to routes that do not have sensitive soils, wetlands, stream crossings, critical habitat, meadows, etc.

EPA recognizes the challenges facing BLM in analyzing, understanding and ultimately managing wetland resources in planning areas that cover vast areas of Wyoming. Nonetheless, the RMPs/EIS should address generally the expected impacts to wetlands. More importantly, the RMPs/EIS should describe specifically how wetlands will be identified, avoided, or ultimately mitigated at the project-specific level. The discussion should address situations with private land/federal minerals and federal land/federal minerals. Additional comments regarding wetlands and riparian areas are enclosed in the attached "Detailed Comments."

Water Source Protection

For areas with significant oil and gas development, water source protection may be a key issue. EPA recommends the RMPs/EIS analyze the potential impacts to groundwater, drinking water, and irrigation waters. Water source protection is particularly important for oil and gas development on split estates (federal minerals/private surface) that are used for farming and ranching and where property owners may be reliant on groundwater and/or surface water for drinking and irrigation. The RMPs/EIS should identify all relevant, reasonable mitigation measures to protect these water sources even if they are outside the jurisdiction of BLM.

1329

EPA would like to discuss with BLM the air quality impact analysis planned for these RMPs/EIS. By proactively working together early in the RMP/EIS process, we hope to be able to assist BLM with the development of an air quality analysis which will adequately address potential air quality impacts and identify appropriate mitigation measures. EPA would also welcome the opportunity to discuss Water Source Protection. If you have any questions about our comments, please contact Rachel Eichelberger at 303-312-6008, or me at 303-312-6004.

Sincerely,

Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

Attachment

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1329

Additional Region 8 EPA Scoping Comments for the Bighorn Basin Resource Management Plan Revision Project/Draft EIS

Cumulative Impacts

In addition to the evaluation and discussion of direct and indirect impacts, the EIS should provide cumulative impacts analyses for resources of concern. The EIS should analyze impacts according to airsheds and watersheds, rather than political boundaries. The purpose of a cumulative impacts analysis is to assess the incremental impacts on each resource of concern due to connected and unconnected actions that take place in a geographic area over time (i.e., past, present and future) no matter which entity (public or private) undertakes the actions. A cumulative impacts analysis aids in identifying the level of significance of those impacts on a particular resource and the appropriate type and level of mitigation required to offset the current proposal's contribution to these impacts. In the analysis of present and reasonably foreseeable future actions, it is appropriate to examine anticipated activity trends in the study area, not just already approved "on-the-ground" projects. Examining activity trends in other areas with similar uses and contributory metrics can also be useful in this analysis. Also, the appropriate area of consideration and the time frame to use when assessing cumulative impacts will vary for each resource under consideration.

Protection and Mitigation of Wetlands and Riparian Areas

EPA considers the protection, improvement, and restoration of wetlands and riparian areas to be a high priority. Wetlands increase landscape and species diversity, and are critical to the protection of designated water uses. Possible impacts on wetlands include damage or improvement to: water quality, habitat for aquatic and terrestrial life, channel and bank stability, flood storage, groundwater recharge and discharge, sources of primary production, and recreation and aesthetics. Road and pipeline construction, grazing, land clearing and earthwork generally include sedimentation and hydrologic impacts which at some level may cause changes to surface and subsurface drainage patterns and, ultimately, wetland integrity and function. Riparian habitats, similar to wetlands, are important ecological areas supporting many species of western wildlife. Riparian areas generally lack the amount or duration of water usually present in wetlands, yet are "wetter" than adjacent uplands. Riparian areas increase landscape and species diversity, and are often critical to the protection of water quality and beneficial uses.

- Due to the time it can take to adequately reclaim some disturbed wetlands, it is suggested that BLM require mitigation of wetland disturbance during the project operating time, and that mitigation for any particular wetland or riparian area begin concurrent with the disturbance, or even prior to project construction, if possible. As studies indicate that traditional mitigation is generally not successful in fully restoring wetland function, it is suggested that the BLM require a minimum of two-to-one mitigation of wetland disturbance. The EIS should specify general mitigation requirements, and require any

5

specific projects to generate a wetland mitigation plan.

We encourage the BLM to require delineation and marking of perennial seeps and springs and wetlands on maps and on the ground before activity development so industry employees will be able to avoid them. We recommend establishment of wetland and riparian habitat 100-foot buffer zones to avoid adverse impacts to streams, wetlands, and riparian areas.

Water Quality Impacts

The EPA recommends the RMPs/EIS include an accurate description of surface and ground water resources, as both are essential to understanding the potential effects of any management alternative. The RMPs/EIS should clearly describe water bodies within the analysis area which may be impacted by resource management activities. Identifying affected watersheds on maps of the various alternatives helps convey their relationship with project activities.

The EIS should analyze potential impacts to surface water, groundwater, and existing and potential drinking water. Impacts to consider include: water quality, quantity, and any adverse change to current water quality of the any rivers, streams and their tributaries. No Surface Occupancy (NSO) lease stipulations may be appropriate to protect current or potential drinking water sources. In unleased areas, terms and conditions should be considered to protect non-mineral resources, including NSO lease stipulations as appropriate. For leased areas. Best Management Practices (BMPs) and mitigation measures should be used to protect these resources and designed into the alternatives under consideration.

The RMPs/EIS should also disclose the extent to which aquatic habitat could be impaired by potential activities, including effects on surface and subsurface water quality and quantity, aquatic biota, stream structure and channel stability, streambed substrate including seasonal and spawning habitats, stream bank vegetation, and riparian habitats. Particular attention should be directed at evaluating and disclosing the cumulative effects of increased levels of erosion and sedimentation. Water quality parameters such as conductivity, dissolved and suspended solids, metals, pH, temperature, dissolved oxygen and physical aquatic habitat parameters may also be important monitoring indicators for determining stream or lake impairment or stress, as well as its sensitivity to further impacts. Existing water quality standards applicable to the affected water bodies should be presented to provide a basis for determining whether existing uses will be protected and water quality standards met.

Air Quality Impacts

The potential oil and gas leasing and other activity could eventually result in emissions of atmospheric pollutants. The RMPs/EIS should incorporate an assessment of current air quality conditions. It should use suitable data sets from ambient air monitoring programs with a description of the quality and completeness of the data in terms of location and the period when it was collected. While EPA understands broad assumptions are made at the RMP stage, the assessment should include reasonable estimations of full development, including wells, compressors, and other surface facilities, as well as associated transportation activities. It should

address all categories of emissions that will occur during the construction and operating phases. It should include the cumulative impact of energy-related activities and other reasonably foreseeable energy development and other activities that may affect air quality in the area, including examining anticipated activity trends in the study area, not just already approved "on-the-ground" projects.

In RMPs/EISs that plan for significant oil and gas development, EPA maintains that air quality dispersion modeling should be conducted to assess the cumulative impacts of projected oil and gas wells on air quality values within and outside of the planning area The analysis should disclose impacts to applicable National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD) increments, as well as on air quality-related values in Class I areas. Specific pollutants of concern include NO_x, Sulfur Dioxide **(SO2,)** and fine particulate contributions to regional haze. Impacts to visibility and the potential for regional haze from the range of alternatives need to be estimated. The potential for near-field exceedance of the **PM10** NAAQS also is a concern because of road dust emissions. The RMPs/EIS should identify all relevant, reasonable mitigation for air quality impacts, even if they are outside the jurisdiction of BLM. The probability of the mitigation measures being implemented should also be discussed.

Effects on Vegetation, Wildlife Habitats and Area Hunting/Fishing

The effects of resource management activities on area ecology, including vegetation, wildlife and their habitats, as well as recreational hunting and fishing activities, should be disclosed and evaluated in the RMPs/EIS. This is particularly important for the 12 WSAs and nine ACECs contained in the planning area. Important vegetative issues include: reclamation activities supportive of pre-existing land uses, including wildlife habitat; noxious weed management; any adverse impacts to BLM State sensitive plants; and/or violation of executive orders concerning invasive species, flood plains, or wetlands and riparian zones. Important wildlife issues include: compliance with BLM, USFWS, or State wildlife management objectives for natural gas mineral developments; wildlife mortality; crucial wildlife habitat; adverse impacts to breeding or nesting activities; and/or any adverse effects to Endangered Species Act listed threatened or endangered species, USFWS listed or proposed species, or BLM State sensitive wildlife or fish species. The RMPs/EIS should include mitigation measures that may be undertaken to minimize or eliminate adverse impacts from the alternatives considered.

Noxious Weeds and Invasive Plants

EPA supports the goal of preventing the introduction and spread of invasive plants and noxious weeds. Among the greatest threats to biodiversity is the spread of noxious weeds and exotic (non-indigenous) plants. Many noxious weeds can out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. Noxious weeds tend to gain a foothold where there is disturbance in the ecosystem. Oil and gas development activities, grazing, and off highway vehicle (OHV) use can cause such disturbances.

EPA supports integrated weed management including the effective mix of cultural

education and prevention, biological, mechanical, chemical management. However, we encourage prioritization of management techniques that focus on non-chemical treatments first, with reliance on herbicides being the last resort. Early recognition and control of new infestations is essential to stopping the spread of infestation and avoiding future widespread use of herbicides, which could correspondingly have more adverse impacts on biodiversity and nearby water quality. There are a number of prevention measures available such as reseeding disturbed areas as soon as possible and cleaning equipment and tires prior to transportation to an un-infested area.

The RMPs/EIS should list the noxious weeds and exotic plants that occur in the resource area. In cases where noxious weeds are a threat, EPA recommends the document detail a strategy for prevention, early detection of invasion, and control procedures for each species.

Affect on Visual Character and Scenic Resources.

Visual impacts associated with the project's facilities and activities may affect the visual character and scenic resources of an area, including the aesthetic and/or functional quality of recreational experiences. This may include the introduction of impacts out of character with the setting and the visual impact of equipment and crews during construction and operational activities. The severity of these effects depends on a number of factors, including: can the surrounding landscape integrate visual changes without attracting attention; how far from, or visible to, sensitive viewing areas and/or roadways are the activities; how much disturbance will occur; what mitigation efforts are put forth to integrate activities and structures with the area; and/or the potential to reclaim disturbed landscapes. The RMP/EIS should evaluate these aspects, and detail mitigation steps that will be taken to minimize associated impacts. Interim and final reclamation work should allow disturbed sites to blend into the natural surroundings, to the extent possible.

Potential Effects on Local Communities from Oil and Gas Development, and Reasonably Foreseeable Development Considerations

The RMPs/EIS should consider environmental related socio-economic impacts to the local communities such as housing for project workers, schools, burdening existing waste and wastewater handling facilities, and increased road traffic with associated dust and hazardous materials spill potential. Methods to avoid or minimize such impacts, or if these issues are not a concern for this project, should be discussed. The reasonably foreseeable development evaluation should address the additional loading that could be placed on local communities' abilities to provide necessary public services and amenities, and methods that could potentially avoid or minimize such impacts.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," signed in 1994, applies to federal agencies that conduct activities that substantially affect human health or the environment. In accordance with this order, the RMPs/EIS should disclose and evaluate any environmental justice aspects associated with impacts on rural low-income communities by either the proposed project, or the

potential build-out for reasonably foreseeable development analysis. If there are no applicable environmental justice considerations, then that should be disclosed. Close coordination with any potentially future impacted Native American tribes, is important.

Management, Mitigation and Monitoring

Oil and gas development, recreational use, grazing, and related activities are among the planning activities requiring management, mitigation, and monitoring. Various impacts can be minimized or potentially eliminated if BMPs and other mitigation measures are properly implemented. Details should be provided for accomplishing these activities in the RMPs/EIS. Also, it is important to specifically designate what entity (e.g., BLM, the proponents, resource organizations, or some combination) will be in charge of which activities, and which will have specific enforceable accountability. In addition, the BMPs, mitigation measures and other related activities require inspection, documentation and record keeping. A "paper" documentation trail must exist to determine what was monitored, inspected, maintained, and completed. All management, mitigation, and monitoring should be verifiable, and an agency/entity needs to be held accountable for performance oversight, throughout the entire project construction and operating life. It may be appropriate for the proponents to fund an account from which 3rd party contractors can be contracted to perform inspections and monitoring, and/or the implementation of some of the mitigation measures. Please provide details on the issues discussed above in the EIS, preferably in a separate monitoring plan. It may be appropriate to have commitment for these activities placed in the ROD.

Off-Highway Vehicles

The popularity of Off-Highway Vehicles (OHV) has increased dramatically and is expected to continue, due to population growth, advances in recreation technology, increased availability of information and improved access to remote areas. EPA supports efforts to address motorized use resource damage, monitoring issues, known user conflicts, and enforcement issues. EPA also supports the transition from unmanaged motorized recreation to restricted travel. Restricted or limited travel is necessary to ensure that resources are protected and that other non-motorized recreation is accommodated. Unmanaged OHV use on federal lands has resulted in unplanned roads and trails, erosion, damage to wet meadows, soils and stream channels, and increasing degradation of recreational experiences such as horseback riding and hunting. The RMPs/EIS should provide a thorough analysis of impacts from OHV use. The analysis should include prevention or mitigation of adverse impacts from OHVs to soils, watersheds, vegetation, wildlife habitat, water quality, cultural resources and other assets of the planning and decision areas.

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Comment Documents 1330 through 1431 have been intentionally removed.