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## RESPONSES TO PUBLIC COMMENTS ON THE BIG PINEY - LABARGE COORDINATED ACTIVITY PLAN ENVIRONMENTAL ASSESSMENT

Following is a summary of the public comments received on the environmental assessment (EA) for the Big Piney - LaBarge Coordinated Activity Plan and the Bureau of Land Management (BLM) responses to those comments. The responses represent the explanation, answer, or interpretation of BLM's position in regard to the subject matter of the comments. The responses are based on BLM policy, Federal regulations and relevant court decisions.

### 1. Lease Rights

**(a) Comment** - Several reviewers stated that adding Conditions of Approval (COAs) to an Application for Permit to Drill (APD) was, in effect, adding stipulations to an existing lease and therefore constituted a violation of lease rights (breach of contract). Reviewers contend that BLM has no legal basis for the imposition of new restrictions on oil and gas leases which were initially issued without stipulations (because they are old leases, of which most are in this area) and that are currently held by production.

**Response** - BLM contends that imposing properly identified mitigation requirements (COAs) upon a lessee who pursues surface disturbing exploration and/or drilling activities is fully within the authority and responsibility of the BLM and does not constitute modifying or adding requirements to the lease. It is recognized that industry does not agree with this position.

The BLM processes for identifying appropriate and necessary mitigation are the BLM planning process and, in compliance with the National Environmental Policy Act (NEPA), the environmental analysis process. The NEPA analysis process is applied at the land use planning and the detailed activity planning stages of the BLM planning process and at the time of site specific implementation (or authorization) of projects or other actions provided in those plans. The Courts and the Interior Board of Land Appeals have addressed this issue on several occasions and we believe there is sufficient case law to support our position.

Therefore, our position and policy is to take a "hard look" at the environmental consequences of a proposed action at the field development and APD stage, and, if necessary, require mitigation measures (COAs) as means of reducing adverse impacts based on identification of relevant areas of environmental concern.

Most of the leases as originally issued in the Big Piney-LaBarge oil and gas field, do not contain stipulations authorizing the Secretary to deny, totally, any drilling activities upon the lease property. These leases were issued before the adoption of NEPA (1969). However, as supported in case law, the Secretary can impose "mitigation" measures upon a lessee who pursues surface disturbing exploration and/or drilling activities, to take environmental values into account in carrying out his regulatory functions.

However, within the Big Piney-LaBarge CAP area, the BLM concludes that, because the oil and gas operators involved want to be a cooperating party to the management and protection of relevant environmental concerns; and because of the high level of operator involvement throughout this coordinated activity planning effort; and because of operator commitment to work toward the maintenance of environmental integrity in this area, the hard-line, impersonal, regimented approach of conditioning APDs with standard mitigating requirements will not be followed.

Rather, as explained in the CAP decision record, the establishment of a *Working Group* will be used to provide advice and recommendations to the Pinedale Area Manager on plans for field development within the oil and gas area. The Working Group will be comprised of representatives from the oil and gas industry, ranching community, Wyoming Game and Fish, environmental interests, and BLM. This approach will foster confidence and trust among the users and general public. It will ensure a management of development activities that is considerate of the protective needs of the natural resources, while also providing for the enhanced economic interests of the local communities.

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**(b) Comment** - Reviewers state that BLM does not have the authority to impose new restrictions on a lease that "exceeds the terms and conditions of existing leases". Reviewers reference BLM's own planning guidance pointing out that its Supplemental Program Guidance (SPG) for Energy and Mineral Resources states: "Although lease terms cannot be modified by the RMP, the plan should establish the basis for working with existing leaseholders in the event that voluntary conformance can be obtained." Reviewers also point out BLM's Planning for Fluid Mineral Resources Handbook states relative to existing leases: "The constraints and requirements identified in a plan or plan amendment must be applied to all new leases and all lease renewals. Such constraints or requirements may also be applied to new use authorizations on existing leases provided that they are within the authority reserved by the terms and conditions of the lease."

**Response** - BLM does not disagree with the fact that it does not have the authority, once a lease is issued, "to impose new stipulations or new restrictions on a lease that exceed the terms and conditions of existing leases". This is the point of the BLM Supplemental Program Guidance and Fluid Mineral Resources Handbook. It is apparent that, in this case, the point of contention is what constitutes exceeding the terms and conditions of the lease.

Sufficient case law exists to clearly demonstrate that BLM does have the authority and responsibility to impose new restrictions (i.e., COAs, mitigation measures) once a lease has been issued (even though the lease does not include special stipulations), as long as BLM does not deny development of the lease or totally preclude surface disturbing activities.

**(c) Comment** - Reviewers referenced specific lease language that, in their opinion, made it apparent that the "dominant use" on the leased lands was mineral development. That lease language is as follows:

*"Reserved or segregated lands. — If any of the land included in this lease is embraced in a reservation or segregated for any particular purpose, the lessee shall conduct operations thereunder in conformity with such requirements as may be made by the Secretary of the Interior for the protection and use of the land for the purpose for which it was reserved or segregated, so far as may be consistent with the use of the land for the purposes of this lease, which latter shall be regarded as the dominant use unless otherwise provided*

*herein or separately stipulated."* (emphasis added)

**Response** - The reviewers interpretation of the dominant use language is in error. To interpret this to mean mineral development is the dominant use on the leased lands is taking its intent out of context. The words "dominant use" contained in these older lease terms was intended to apply specifically to the intended purpose and use of "reserved or segregated lands". The Big Piney - LaBarge area does not involve reserved or segregated lands.

**(d) Comment** - Reviewers stated that lease development cannot be restricted beyond the special stipulations attached to a lease or be more restrictive than the provisions of 43 CFR 3101.1-2 allows. Reviewers also contend that compliance with post lease RMPs cannot be mandated. That the intent of 3101.1-2 is apparent, to temper impact to leases affected by future RMP objectives.

**Response** - There has been considerable confusion and disagreement over the meaning of the current 3101.1-2 regulation, which reads in part:

*"...At a minimum, measures shall be deemed consistent with lease rights granted provided that they do not: require relocation of proposed operations by more than 200 meters; require that operations be sited off the leasehold; or prohibit new surface disturbing operations for a period in excess of 60 days in any lease year..."*

Industry believes the requirements of 3101.1-2 are maximums that can be imposed on the operator by the BLM, unless the requirement is an existing lease stipulation or a lessee agrees to add such a stipulation after the lease has been issued. No justification for moving a drilling location or delaying operations is needed if these distances and time limitations are not exceeded.

The intent of the regulation (3101.1-2), and BLMs policy and interpretation, is to specify the maximum restriction that can be imposed as a COA to a permit or authorization **without needing support of further planning or environmental analysis**. It is not intended to establish a limit which cannot not be exceeded, even if environmental conditions/impacts dictate that they should be exceeded. This would be completely contrary to the mandates of FLPMA and NEPA. Rather, these limits can be exceeded with proper support of further planning or environmental

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analysis, which demonstrates consistency with lease rights and that the action is reasonable.

"Proper support" means that the supporting analysis and rationale are documented in a current planning and/or NEPA document.

"Consistent with lease rights" means that BLM is not denying the lessee the opportunity to develop the lease. For example, requiring a different location for a drill site and delaying operations during certain critical seasons for important resource values are consistent with lease rights.

"Reasonable" means that an action can be relocated or delayed if unacceptable impacts would occur as proposed. For example, impacts to wintering mule deer on crucial winter range and under severe winter conditions (from proposed construction, drilling or well completion operations) could be determined by management to be unacceptable under the concept of multiple use. In this case it would be reasonable for BLM to protect the area from unacceptable impacts to deer on crucial winter range.

### 2. Seasonal Wildlife Restrictions

**(a) Comment** - Several comments from the oil and gas industry questioned the need for seasonal restrictions on oil and gas development to protect big game, specifically mule deer. People feel that because the big game have coexisted with oil and gas operations in the past, they will prosper in the absence of restrictions to oil and gas operations during crucial periods, such as severe winter conditions.

Some reviewers believe that the need for seasonal restrictions is based on false assumptions. The reviewers point out that they feel BLM is operating under the false assumption that wildlife, specifically mule deer, are harmed by oil and gas activities in "crucial winter habitats". The comments refer to the assumption that "...human activity is likely to cause higher deer mortality and temporary or permanent displacement...", as unsupported.

The report prepared by Hayden-Wing and Associates for the Rocky Mountain Oil and Gas Association (RMOGA) is often referred to as justification for not seasonally restricting certain oil and gas operations. This argument has been expanded to include pronghorn antelope, sage grouse and raptors. Some

reviewers insist that the real issue is one of poor habitat, and they feel the answer to the resource challenges lie in reducing big game populations and improving habitat, and that no restrictions of oil and gas operations is necessary.

**Response** - The Hayden-Wing Associates' report (Final Review & Evaluation of the Regulations and Effect of Oil and Gas Development on Mule Deer, Sage Grouse, and Raptors, September 1990) states in part:

"...Except when harassed by humans, mule deer appear to habituate to human-related activities. Harassment, though, has been shown to reduce fawn production by female mule deer." The report submits that "Minimum fawn mortality on the Big Piney-LaBarge winter range exceeds that on most other winter ranges and is greater than expected on the basis of winter severity conditions." (p.16) and further states "Chronic stress has been hypothesized to promote pathological conditions in free ranging animals, increasing their mortality and decreasing reproduction, but has not been demonstrated for mule deer. Harassing deer on winter range, though, will cause them to expend more energy to escape and avoid the source of disturbance and possibly other, benign human activities. Increased winter mortality is a likely consequence for wintering deer, particularly females, if they are subjected to over crowding, poor forage conditions and availability because of snow cover, and the metabolic demands of thermal stress and fetal development." (p.28).

We know from the literature, Wyoming Game and Fish reports, and the Hayden-Wing Associates report, that winter disruption and disturbance of deer can reduce mule deer fawn production and that fawn mortality is higher than normal on the Big Piney-LaBarge winter range. It is important to note that these fawn mortality calculations are based on mild winters. Under severe winter conditions, a high level of fawn and adult deer mortality would be expected. Add to this situation a high level of oil and gas activity and declining habitat conditions, along with deer congregating on plowed roads, and there is likely to be a higher deer mortality.

Under ideal conditions, big game would be expected to disperse into the best available habitat for foraging. During winter, a fraction of the total habitat is available

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and stress to individuals is high due to snow and temperature conditions. This creates a bottleneck for herd survival and, in fact, under severe conditions, a large percentage of the herd will succumb to these adverse conditions. Usually, fawns and older animals are the first to die and a certain loss of these age groups will occur even during a mild winter.

Winter animal distribution occurs on a relatively small portion of the total habitat and in higher density per square mile than at any other time. This can result in heavy use of winter forage, which is often the most limiting factor to population size. Other factors which can compound an already stressful situation (to both the animals and the habitat) include stimuli that may cause the animals to congregate into even higher densities or expend more energy than is required to survive the cold and snow. Some of these stimuli can be managed, such as limiting or restricting wintertime construction and human occupancy.

The reason for the wintertime restriction (COA) on drilling and other surface disturbing activity is to inform the land user that, if he/she wishes to conduct activities during the crucial winter period, it will be necessary to assess the impacts of the proposal on the area identified as crucial winter habitat. Depending on the nature of the proposal, the severity of the weather conditions, the density and condition of the animals, and the availability and condition of forage, a determination would be made whether to allow the project to proceed during the winter or to delay it until the weather is less severe and/or animals have dispersed into other habitat.

Two questions remain; (1) What is considered enough or excessive disruption and disturbance?; and (2) Could increased disturbance occur in the absence of the winter range restriction on drilling activities?

Wyoming Game and Fish Department (WGFD) biologists and BLM biologists have spent several years observing deer in the CAP area. There are some areas where deer seem fairly accustomed to human activities. However, there are large areas, even within the developed oil and gas units, that have very little human activity, where deer do spook at the sight of a single vehicle and often run to cover out of sight of the vehicle. This would be considered enough or excessive disturbance when the animals are under stress of severe winter conditions.

Displacement of deer occurs whenever the deer move away from a vehicle and this can be observed daily along roads in the CAP area. Usually this is

short term and of negligible impact. However, drilling and completion operations have been shown to take from three weeks to seven months. In an area where deer are not used to intense activity, displacement is expected. No doubt habituation of some deer will occur over time, but each situation needs to be evaluated independently. The BLM will accomplish this through establishment of the Big Piney - LaBarge Working Group (BPLWG), as explained in the Big Piney - LaBarge CAP.

The Hayden-Wing Associates Report states "...With access throughout the winter range, there is potential for people to harass mule deer, whether from existing roads or from off-road vehicles. Hayden-Wing Associates concurs with the recommendation by BLM that the petroleum industry close roads that are unnecessary for maintaining oil and gas operations..."

The Hayden-Wing Associates report bases the conclusion that "...oil and gas developmental activities have neither displaced nor depressed this mule deer population..." on "...what is known about mule deer behavior and information reported in the literature..." (p. 31). However, the report also includes that "...no literature specifically addressing the response of mule deer to oil and gas development was listed in any of the data bases searched..." (p. 20). Two unpublished studies were inconclusive. The report states "...The long-term extensive growth of this herd in the face of substantial, simultaneous, oil and gas activities is solid evidence that oil and gas activities has not had an significant negative effect on mule deer numbers on this winter range..." (p. 31). However, the report fails to give recognition to the fact that *winter drilling* has been minimal during the recent population increase (2 wells in 1985-86, 0 wells in 1986-87, 1 well in 1987-88, 2 wells in 1988-89).

The only site specific studies mentioned in the Hayden-Wing report showed that "...mule deer do not respond vigorously to traffic or existing oil and gas activities...". However, it was not recognized that the traffic and oil and gas activities in the observation area were routine maintenance activities during a mild winter (the type of activity that is not excluded by conditions of approval) and did not include construction of roads or well pads, or drilling and completion of new wells.

Several literature references on the effects of disruption and disturbance (or harassment) on deer, and on raptors and sage grouse are available from "The Hayden-Wing Report." There is literature summarizing what happens to nutritionally deficient deer during winter, and also literature that shows additional stress

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on deer under less than maintenance rations as impacting them significantly. Field observations have shown that certain stimuli will cause deer to displace into adjacent habitat, depending on the type of activity, density of deer, and propensity for the deer to habituate to the activity.

Specific studies on the effect of oil and gas activity on deer are lacking in the literature, although several studies are currently underway. Caution is the guide, until site specific studies can support otherwise. Where deer density is high, forage conditions poor, the population hunted heavily, winter stress severe, and disturbances likely to add stress or cause displacement, the land management agency is mandated to address and resolve potential conflicts. This is the purpose and intent of the CAP and the Big Piney-LaBarge Working Group. It is planned that a study will be designed in the CAP area under the purview of the working group that will document the effects of oil and gas activity on mule deer.

**(b) Comment** - Several reviewers questioned the need for restrictions on activity to protect sage grouse and raptors.

**Response** - Sage grouse breeding consists of a complex early morning (and sometimes into the evening and late night) mating ceremony that involves a lek or strutting ground. Male birds display and defend territories within the lek while females enter this breeding ground, are fertilized, and nest in suitable areas (usually within 2 miles of the lek). The purpose of the restriction on construction activities and human occupancy on or near the leks is to keep from disturbing the breeding ritual and to protect nests during the nesting period, if they are in the path of new roads, well pads, pipelines, etc.

The Hayden-Wing Associates report recommended sage grouse habitat be addressed through a site specific evaluation of nesting suitability, with the degree of oil and gas activity allowed being based on the survey. The BLM standard practice has gone one step further by conducting an actual nest search of areas in the path of proposed surface disturbance or human activity, within the two mile area of nesting habitat, and relieving the restriction if: 1) the area of construction is unsuitable for sage grouse nesting; or 2) no nests are found during the nesting period. However, this nesting restriction has been eliminated in the CAP Decision Record as a result of industry and Wyoming Game and Fish input. The restriction now placed on leks is a 1/4 mile avoidance area and a restriction on surface disturbing and disruptive activi-

ties from 9:00 AM through 12 midnight, within 1/2 mile of the lek, during active mating.

Raptors are protected under the Migratory Bird Treaty Act. Disturbances during nesting can affect the productivity of raptors. It is documented that adult birds have been observed deserting eggs or young after being disturbed, damaging eggs and young if the adults are frightened, and creating adverse conditions for eggs and chicks from prolonged absence from the nest while avoiding disturbance. The purpose for the raptor nesting restriction is to encourage maximum survival of the young birds during this sensitive nesting period.

The Hayden-Wing Associates Report characterized the raptor section of the CAP as temporal and spatial restrictions that are too general, categorically exclusive, and unnecessarily restrictive. Hayden-Wing proposed several alternatives to be used, on both a site-specific and species-specific basis, to protect raptor nests. These include allowing activities to commence after hatching of young birds, moving the nest, moving hatchlings into foster nests, placing a temporary nesting deterrent over an existing nest prior to arrival by the parent birds, and eliminating the nest. The first alternative would be reasonable, if the proposed activity is far enough from the nest to keep from causing frightened adult birds to accidentally harm nestlings, miss feedings, leave nests unattended for long periods, etc. All the other alternatives would require a permit from the Federal and State authorities under the Migratory Bird Treaty Act and would most likely result in longer delay of the proposed activity beyond the nesting period. Further, as we use the restrictions in question, they allow for relief or adjustment, when appropriate, such as different chronologies for different species, nature of the operation, existence of visual buffers, or excepting the restrictions, if the anticipated problem is not realized etc.

**(c) Comment** - Some reviewers questioned the basis and accuracy of the formula used in the CAP environmental assessment to determine wildlife displacement due to oil and gas activity.

**Response** - A formula to predict the likely consequences of wintertime drilling was developed specifically for the CAP EA in an effort to quantify the potential effects of human activity. The specific components and parameters of this formula are described in the CAP Technical Report. While there is dissatisfaction among some of the reviewers over the parameters used in this formula, the professional

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judgement of the field biologists was the basis for assessing the potential impacts on wildlife. Several assumptions, such as uniform deer distribution, distance of displacement, number of deer that will habituate to the disturbance, and uniformity of reactions among big game species were questioned. These are valid points which can only be addressed in site specific analyses. This will be one of the considerations of the Big Piney-Labarge Working Group. Until site specific analyses for individual projects are undertaken or new data gathered from the planned studies identified in the Decision Record, an approach based on professional judgement, such as was done for the CAP, must suffice.

**(d) Comment** - Several reviewers were concerned about the "decision points for shut-down" between drilling, completing, and putting a well on line. The need to finish a project once it is commenced was expressed.

**Response** - The current Wyoming BLM policy on this matter will remain in effect. This policy allows the Area Manager to shut-down operations, if necessary to protect other resource values, at (1) the point of completing the drilling of a well; and (2) the point of well completion, before the well is put on-line (i.e., before ancillary facilities are constructed at the well site and/or before a pipeline is connected to the well). This also assumes that other resource concerns would be adequately mitigated or addressed to allow these actions to occur (e.g., frozen or saturated soil, cultural resources, steep slopes, etc.). This is a key item that will be included in considerations for winter-time drilling activities by the Big Piney-LaBarge Working Group and the Pinedale Area Manager.

### 3. Drilling Ceilings or Limits

**(a) Comment** - Several reviewers asked if there will be a limit on the number of oil and gas wells that will be permitted to be drilled in the CAP area.

**Response** - No limit will be placed on the level of additional well drilling and development which can be conducted in the CAP area. However, because there are concerns and differing opinions regarding the degree of impact that may occur from the additional 600 to 900 wells that may be developed in the assumed ten year period, should the development level reach 500 new wells within the next ten years, an environmental evaluation will be conducted to determine the level of impacts which are occurring. At any point that monitoring indicates a substantial change in impacts, or that levels of impact beyond those

analyzed in the EA are starting to occur, environmental evaluations will be initiated.

**(b) Comment** - There is some disagreement among constituent interests about the level at which development impacts become significantly adverse.

**Response** - Based on the data gathered and the environmental analysis results, the interdisciplinary team believes, that, at the 500-600 additional well level, no significant adverse impacts would occur from well drilling activities or from cumulative impacts of all activities in the area. This is particularly true when the habitat and range improvement work that is approved in the CAP are taken into account.

**(c) Comment** - Several reviewers asked why the number of wells is an important factor.

**Response** - The development of drilling pads, roads and ancillary facilities such as pipelines are contributors to the reduction of habitat in the area and the number of wells is an indication of the level of impact occurring. As stated above, since there are differing opinions regarding the level of impact that will occur from an additional 600 to 900 wells, further evaluation of environmental effects will be conducted, should the level of new development reach 500 wells in the next ten years.

### 4. Wildlife Habitat Condition and Mule Deer Population

**(a) Comment** - Several reviewers commented that the true issue of the CAP, as it related to mule deer, was one of habitat condition and an overpopulation of deer. The restrictions on winter activity were viewed as over restrictive and unnecessary when the thrust of management should be toward habitat improvement and deer population control.

**Response** - The overriding issues as they relate to mule deer in the CAP area are poor habitat condition and high deer numbers. The solutions to these problems are the main thrust of wildlife management in the area. The BLM is committed to improving the reclamation techniques used in the area, returning unnecessary roads to deer habitat, treating and rejuvenating the decadent vegetation, avoiding surface disturbance to key forage species, and emphasizing a continued active well plugging and abandonment program. It is true that overpopulation is one factor that has caused habitat problems. This situation is being addressed by the WGFD through an increase in the number of hunting licenses issued in the area.

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The seasonal restrictions to protect wintering mule deer primarily address a humane issue, i.e., disruption and displacement of deer under high stress conditions. A detailed explanation of this is provided in issue number two. The seasonal restrictions also address the habitat condition. If wintering deer, densely congregated on the winter range, are displaced by activities into even higher densities, the habitat into which they are displaced suffers a greater impact due to the increased forage utilization. This situation becomes even more critical when both high deer population and poor habitat condition exist, as is the case in the CAP area.

**(b) Comment** - Some reviewers said they felt that the oil and gas industry was being blamed for the decadent shrub condition. Several reviewers would like to have seen more emphasis placed on habitat improvement by BLM and WGFD and less on activity restrictions.

**Response** - The charge that oil and gas is to blame for the decadent vegetation condition is the result of an inadvertent statement made in the CAP Environmental Impacts section. This is false and should have been deleted from the CAP EA. The oil and gas activities in the area are only responsible for habitat conditions to the extent that facilities have taken acreage out of production or where reclamation has been unsuccessful. Some of the developed oil and gas areas are not producing optimum deer habitat, but an effort at improving reclamation techniques is a vital part of the CAP Decision Record and should help alleviate any further problems with poor reclamation on the small percentage of habitat involved.

**(c) Comment** - Some reviewers felt that the BLM habitat improvement management strategy is not aggressive enough.

**Response** - BLM believes that its habitat improvement strategy is as aggressive as it should be at this time. There is no guarantee that habitat improvement can be accomplished on all portions of the winter range. The plan to treat no more than 10% of the habitat over 10 years using various treatments will give us an indication of whether the management objectives are being met. To go beyond 10 percent in ten years would excessively risk the loss of too much habitat, if the treatment does not prove successful. At first, the treatments will reduce the availability of forage, and full benefits are not expected until after the shrubs have adequate opportunity to respond, possibly 10-20 years. Monitoring of the planned

treatments and improvements will indicate the success of the program and future improvement potential.

**(d) Comment** - Several people wanted clarification on what the BLM means by avoiding mountain shrubs.

**Response** - As "avoidance areas", mountain shrub habitat types are to be avoided by surface disturbing activities, to the extent possible. In cases where it is not possible to avoid these areas, intensive mitigation of the proposed surface disturbing activities will be emphasized. For example, a surface disturbing activity proposed in the mountain shrub habitat type would be relocated to an area outside this habitat type, if practical or possible. If not possible, and the activity must be conducted in a mountain shrub type, the WGFD will be consulted to help determine the extent of impact and the mitigation needed. A site specific reclamation plan may be required from the project proponent, specifying methods, techniques and time frames for reestablishing the mountain shrub habitat to predisturbance levels. Authorization of surface disturbing activities in the mountain shrub habitat type will depend on the acceptability of the reclamation plan. The BPLWG may also be consulted for recommendations on these situations from a long term planning perspective.

### 5. Forage Utilization/Allocation Problems and Allotment Management Plan Implementation.

**(a) Comment** - Several reviewers questioned how the BLM will allocate (adjust) forage for livestock and wildlife.

**Response** - The forage use by big game (primarily winter deer and antelope use) within the CAP area is not highly competitive with livestock use (primarily spring and summer cattle use). Therefore, the allocation of "available" forage (i.e., available for animal consumption, as opposed to some nonconsumptive use, such as ground cover for watershed protection) basically amounts to allocating the shrubby vegetation to big game use and allocating the grasses and forbs to cattle and small game use. The appropriateness of current stocking levels (livestock and wildlife) will be determined following evaluation at the end of one grazing cycle. Using a combination of actual livestock grazing use data, climatic data, vegetative utilization measurements, and range trend data, a determination can be made as to whether the livestock/wildlife forage allocation is proper. Actual livestock use and vegetation utilization data can be

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prorated against the total allocated livestock grazing privileges to establish proper allocation for livestock. If increases or decreases in livestock forage allocation are necessary they will be shared equally among the individual range users based on a percentage of the total current active allocation. New forage inventories on livestock grazing allotments in the CAP area are not anticipated, unless an unforeseen need arises.

Utilization is defined as the percent of current year's vegetative growth of key species consumed by animals during a given grazing period. For the purpose of measuring livestock grazing use on the Calpet Common and North LaBarge Common grazing allotments, all measurements will be made on the current year's growth of key grass species.

At a given point during the growing season, if livestock utilization is 50 percent of the current available key grass species crop and the livestock are removed from the range before the end of the growing season, utilization will be substantially less than 50 percent of the total growth for the year, since regrowth occurs until the growing season ends. Residual vegetation from previous years' growth will not be considered in utilization measurements. Residual vegetation due to pasture grazing deferment will be beneficial for watershed protection during spring runoff, for small game forage and cover during the winter, and for livestock forage on spring turn out pastures.

Measuring livestock utilization on current year's growth only and removing livestock after 26 days (or when utilization levels reach 50 percent on key grass species), before grasses cure and before livestock would begin to make use of shrubby vegetation, will allow for substantial regrowth of grasses and forbs under most of the grazing treatments to be used in the area. Livestock grazing deferment, the subsequent regrowth on four of the six proposed grazing treatments each year, and the control of livestock use on shrubby vegetation should also provide for ample big game winter forage on these allotments.

**(b) Comment** - A few comments were concerned with why the BLM is limiting utilization of riparian areas to 40 and 50 percent when limits in the Bridger-Teton Forest Plan are 55 percent utilization on riparian areas in unsatisfactory condition and 65 percent utilization on those in satisfactory condition.

**Response** - The Forest Service utilization figures are meant to be maximum limits for the entire national forest. Limits on individual allotments and individual riparian areas within the national forest are to be

established by an interdisciplinary (ID) team, including Forest Service employees, livestock permittees, and other concerned interests, at the time individual AMPs are developed.

Most of the riparian concerns in the CAP area are in annual precipitation zones of 7 to 14 inches, while many of the areas on the Bridger-Teton are in precipitation zones of 19 or more inches per year. Because of this difference, the CAP area riparian zones have much less potential for regrowth than the riparian zones on the national forest. Thus, riparian areas in the CAP area should be grazed at lower levels to account for the lower regrowth potential. Also, in many cases the soils in the CAP riparian areas are more fragile than those in the national forest areas. The shallower, rocky soils in the national forest are generally less susceptible to erosion than some of the deep loamy and silty soils in the CAP area. Therefore, riparian areas in the CAP area require that more vegetation remain on the ground (i.e., lower livestock utilization levels) to provide them adequate protection from erosion.

Finally, some of the riparian areas in the CAP area are badly deteriorated (probably more so than most of the riparian areas on the national forest). Livestock utilization levels in these deteriorated areas will be limited to no more than 40 percent of the annual year's growth. When an upward trend in the ecological condition of these areas becomes apparent (e.g., banks stabilize, additional forage becomes available, etc.), higher livestock utilization limits will be considered.

**(c) Comment** - Some questions were raised on how the CAP will relate to Allotment Management Plans (AMPs).

**Response** - AMPs will be prepared or revised for all "I" allotments within the CAP area. The final stages of AMP development for Calpet Common and North LaBarge Common grazing allotments will begin immediately after the Big Piney - LaBarge CAP is approved. Information needed to complete these AMPs on those portions of the grazing allotments that are outside of the CAP area is readily available and the remainder of the AMP development should be relatively straight forward. Elk crucial winter ranges and calving areas and Colorado Cutthroat trout habitat are the major concerns to be further considered in developing these AMPs. AMP development or revision for the other I allotments in the CAP area will be scheduled for preparation in the next one to five years or as funding permits.

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### 6. Reclamation of Abandoned Oil and Gas Well Locations

**(a) Comment** - Some comments received indicated that the assumed 200 wells to be plugged within the 10 year analysis period is the estimate of only one of the oil and gas companies operating in the CAP area and that the BLM should increase the well site reclamation estimates.

**Response** - All of the companies operating in the area were queried as to the number of wells they thought would be plugged. The resulting total was still 200 wells for the 10 year period, even though there were 36 wells plugged and abandoned on BLM administered public lands within the CAP area during 1990 alone. The assumption of 200 reclaimed well sites for the ten year period still represents a reasonable estimate of well site reclamation, while the actual result may be more or less.

**(b) Comment** - Some commentators questioned whether the 784 inactive wells (i.e., of 1864 wells drilled in the area, 1080 are active) represent further reclamation that was overlooked.

**Response** - The 784 inactive wells have already been plugged and abandoned and reclaimed. Thus, further reclamation opportunity has not been overlooked. However, the reclamation success on some of these sites may be less than adequate. This will be determined in conjunction with field monitoring.

**(c) Comment** - Some commentators questioned why the BLM couldn't specifically identify the roads in need of maintenance in the CAP.

**Response** - BLM personnel limitations and other priority work have prevented conducting an inventory of needed road maintenance and upgrading in the CAP area. Access roads that require upgrading will continue to be identified in consultation with the responsible operator(s). Refinement of the transportation network plan for the CAP area will also be considered by the Big Piney - LaBarge Working Group.

**(d) Comment** - Some commentators questioned why the BLM requires upgrading of existing access roads prior to allowing drilling equipment onto the location.

**Response** - Many of the existing, old roads in the CAP area are flat bladed or, if crowned, are improperly drained and surfaced. These are a principle source of increased sedimentation from runoff and

often are a safety hazard. Because of the desire to reduce sedimentation and liability to public land users, if safety standards are not met, BLM policy requires that existing roads be maintained to BLM engineering standards. This means that roads not up to standards in the CAP area will be upgraded (i.e. crowned and ditched, resurfaced, etc.) to maintain road integrity.

**(e) Comment** - Some commentators expressed the concern that seasonal and permanent road closures could impact oil and gas production operations.

**Response** - There is **NO plan** to seasonally close roads in the CAP area, without first consulting and working with the operators in the area. Access to producing wells **will not be denied** for any reason. It is possible, through consultation with the Big Piney - LaBarge Working Group, that access to certain roads in the area may be administratively limited to only the oil and gas operator, WGF personnel, law enforcement personnel, other affected parties, and the BLM, during seasonal periods of concern. The reasons for and alternative methods of closure will be considered by the Big Piney - LaBarge Working Group and other interests involved, and their recommendations provided to the Pinedale Area Manager for decision.

Operators in the area will not be denied access to roads which are essential to their operations. Well pads or other facilities that have more than one access route will be evaluated to determine the need for the additional access routes. The BLM will work with any affected operators/permittees before access roads are closed to ensure that the roads are not essential to their operations.

### 7. Surface Disturbance Restrictions

**(a) Comment**- Many comments were received identifying the 500 foot surface disturbance setback from surface water and riparian areas as arbitrary and too restrictive because there are alternative mitigation methods that can eliminate potential impacts. Some similar comments were received in reference to surface disturbance restrictions in general.

**Response** - The BLM has standard requirements that are appropriately included in use authorizations to ensure protection from or mitigation of adverse or undue and unnecessary environmental impacts. Wyoming BLM has also developed standard mitigation guidelines for surface disturbing activities that are used in the environmental analysis and planning processes to determine needed mitigation and stipu-

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latory requirements. While these standards are based on years of experience, experience has also shown that it is necessary to have flexibility in their application on a site specific basis, because they may need to be modified to fit specific situations. Also, the BLM recognizes that, in most cases, surface disturbing activities in environmentally sensitive areas can be accomplished economically and without unacceptable adverse environmental impact, with some advance planning and proper design. Therefore, application of the surface disturbance restriction has been refined to provide the intended and needed flexibility within the CAP area.

**(b) Comment** - Several commentors asked why directional drilling of oil and gas wells was a required consideration.

**Response** - When surface features (e.g. topography, floodplain, etc.) or environmental conflicts limit or impede the feasibility of drilling a well from the proposed location, an operator has two options available to choose from. One of the options is to prepare appropriately detailed engineering designs and/or mitigation planning that would demonstrate how the environmental concern will be adequately protected or how the effects will be adequately mitigated. While this can be accomplished, in many cases it will often increase the cost of the project considerably. If it is not practical or possible to adequately mitigate the environmental impact, the location of the proposed well must be moved. Depending on the new drilling location, the operator may have to drill directionally to reach the desired downhole location. The BLM is requiring protection of certain resource values and one of the valid options that may be considered is directional drilling (see Michael Gold decision, IBLA 86-1575). The operator, not BLM, may propose to directionally drill, if it is the only environmentally or economically feasible solution. Thus, where necessary, "consideration" of directional drilling is required.

### 8. Socio-Economic Tradeoffs

**Comment** - Some reviewers felt that the socio-economic benefits of oil and gas activities far out-weigh the insignificant effects on other local resource values. Others pointed out that because no significant impacts were identified with any alternatives, the responsible approach for BLM to take is to adopt a management option which would benefit both habitat conditions and the local economy.

**Response** - While the socio-economic benefits are an important component in the decision-making process, sole consideration of social and economic benefit from a proposal to the detriment of the natural environment would violate both the basic premise of the National Environmental Policy Act and BLM's management mandate contained in the Federal Land Policy and Management Act. BLM concurs in the premise that adoption of a management option which would benefit both habitat condition and the local economy is best in this case. The BLM believes that the management option selected, the approved Big Piney - LaBarge CAP, best meets this objective.

### 9. Air Quality

**Comment** - The Wyoming Department of Environmental Quality (DEQ) was concerned that air pollution emissions from the proposed action and existing oil and gas wells were grossly over estimated. Conversely, the Forest Service was concerned about the possibility of emissions from the existing and proposed activities in the CAP area causing adverse air quality and visibility impacts in the designated Class I airsheds for the wilderness areas they manage.

**Response** - After investigating the Wyoming DEQ's concern, the BLM agrees that the number of emission sources considered in the CAP EA was estimated incorrectly. This resulted from two factors, (1) the number of emission sources was much too high for well field operations; and (2) the emissions factors used to calculate emissions were overly conservative (i.e., tending to over estimate). Because the Wyoming DEQ information is more current and accurate than that used for the CAP EA, the BLM has adopted the DEQ estimates for the number of emission sources and their suggested emission factors for well field operations. As shown below, none of the new emission estimates for the proposed action alternative will cause violations of state or federal air quality standards. The addition of the air pollutants, SO<sub>x</sub>, NO<sub>x</sub> and particulates, will add to visibility reduction during localized atmospheric stagnation episodes. However, this reduction should never become great enough to cause a public safety hazard. In addition, long range transport of pollutants will result in extremely low concentrations of air pollution arriving in Class I areas, such as the Bridger Wilderness, and will not result in any direct violation of air standards. This should significantly lower the Forest Service's concern for their Class I areas.

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### Revised Air Emissions for The Proposed Action Alternative

Emission Source	Units	Unit of Measure	Pollutant	Amount (Tons/yr)
Well Drilling	32-100	Well	TSP or SO <sub>2</sub>	106 - 333
Well Drilling	32-100	Well	NO <sub>x</sub>	1597 - 4990
Oil & Gas Cumulative (yr)			TSP or SO <sub>2</sub>	196 - 423
Oil & Gas Cumulative (yr)			NO <sub>x</sub>	2067 - 5460
Oil & Gas Access Road Use	350	Mile	TSP	8.0
Surface Disturbance	609	Acres	TSP	27.7
Prescribed Burning	10650	Acres	TSP	20.0 to 35.0
Prescribed Burning	10650	Acres	PM10	15.7 to 27.8

**Notes:**

1. TSP means total suspended particulates.
2. PM10 means particulate matter ten microns or less in diameter.
3. NO<sub>x</sub> means oxides of nitrogen.
4. Emissions factors are those which have been suggested by the Wyoming Department of Environmental Quality - Air Quality Division.
5. Prescribed fire emissions were calculated using the BLM Simple Approach Smoke Estimation Model (SASEM).
6. All emissions estimations are presented as ranges because implementation of development and activities will vary by year.
7. Cumulative oil and gas emissions were calculated assuming that there are 815 wells existing, but only 481 are producing. In addition, there are 9 compressors operating (six 250 hp units and three 125 hp units), four 100 hp water pumps, one 20 hp water pump, and ninety-five 10 hp pump engines existing in the field. Under the preferred alternative, 32 wells would be drilled per year (50 days of drilling for each well).
8. Access road use was estimated to be 700 miles of existing road plus 0.5 mile for each new well. TSP emissions were calculated using an emission factor of 48 lbs per year per mile of road. This factor was taken from the Riley Ridge EIS Air Quality Technical Report.
9. Emissions for disturbed areas were calculated using the USEPA AP-42 emissions factor for agricultural tilling. Using a silt content of 25% and a Thornthwaite PE index of 31, emissions are 91 pounds per acre of TSP.