April 30, 2007

***Comments sent via:* email to comments-intermtn-bridger-teton-big-piney@fs.fed.us & Certified Mail with Return Receipt**

Greg Clark, District Ranger
US Forest Service
Big Piney Ranger District
P.O. Box 218
315 South Front Street
Big Piney, WY 83113

RE: Comments on the Plains Exploration & Production Co. Eagle Prospect Exploratory Wells DEIS.

Dear Mr. Clark,

Please accept the following comments from Trout Unlimited on the proposed Plains Exploration & Production Co. Eagle Prospect Exploratory Wells DEIS. As a national non-profit conservation organization with more than 150,000 members, Trout Unlimited (TU) has a mission to protect, restore and enhance coldwater fisheries. Since 1959, TU has dedicated staff and volunteers working toward the protection of sensitive ecological systems necessary to support robust native and wild trout and salmon populations in their respective range.

I. General Interest from Commenting Party

In Wyoming, TU has more than 1,300 members and 13 state chapters whose members actively participate in on-the-ground fisheries habitat improvement projects, many of which are located in the Wyoming Range. These chapters are supported by hundreds of dedicated volunteers who value the backcountry qualities that the Wyoming Range has to offer. TU members are active participants in a variety of outdoor recreational pursuits within and near the Wyoming Range, including this proposed project area. Adverse effects will be felt by the approval of this project and TU feels the negative impacts from the exploration and development activities of this project will affect our membership, members themselves, and other non-members, who hunt, fish, recreate and do business in and around the proposed well sites.

TU recognizes the value of public lands and its unparallel importance in providing habitat to coldwater fisheries, drinking water and wildlife habitat. TU's expanding conservation program includes a public lands initiative that recognizes the importance of protecting public lands for the survival and restoration of wildlife and fisheries. The immediate and cumulative effects that the proposed three wells would have on fisheries, wildlife, economic and recreational values in this undeveloped backcountry are unacceptable to a significant portion of Wyoming's public. Wyoming's elected officials (national, state and local), conservation and sportsmen's organizations, landowners, business owners,

and recreationalists are all extremely concerned with the long-term impacts such a project will have.

There is an overriding concern about this document being addressed as an "exploratory" project rather than an appraisal for new wells project. The successful Shell well drilled in the 1970's immediately northwest of this project location is evidence enough that this project is anything but exploration effort. The results from the Shell well shows (Wyoming Oil and Gas Conservation Commission website) that well tested 1.2mmcfd gas at 1200 psi flowing wellhead pressure in the Mesaverde formation, indicating that there is a significant likelihood that there is a large gas play in this area. The Bridger-Teton NF needs to disclose this important fact because it changes the way the Plains project needs to be addressed in terms of a NEPA evaluation. The cumulative management scenario for future leasing and development is much larger in scope and acreage than that presented in this document. The potential for this project to create an open door for further full-field development cannot be underestimated or dismissed by the Forest Service.

II. Wyoming Range Overall Resource Importance

Located in western Wyoming and considered an important habitat component of the Greater Yellowstone Ecosystem, the Wyoming Range provides a variety of significant ecological, wildlife, fisheries, recreational and economical values. The Wyoming Range is known amongst residents and nonresidents for its diversity in wildlife due in large part to being one of the largest areas of roadless land in the Bridger-Teton National Forest (BTNF) and the state. The BTNF itself is considered the largest remaining area of undeveloped lands in the 48 conterminous United States ("America's Great Outdoors", Camping and Picnicking on the National Forests of Southern Idaho and Western Wyoming, USDA, USFS Intermountain Region publication).

The Wyoming Range is home for many wildlife species. Important big game species such as mule deer, elk, moose, bighorn sheep and pronghorn antelope depend on habitat components in this project area for survival. Crucial wintering, birthing, transition corridors and migration habitat exist for mule deer, moose and elk within the project location.

Two of Wyoming's four subspecies of native cutthroat trout (Colorado River cutthroat and the Fine-spotted Snake River cutthroat) inhabit the streams and tributaries in this proposed project area. The Colorado River cutthroat trout is a Wyoming native and is the only native trout to the upper Green River basin, including the watersheds in which these proposed exploration wells are planned. Recognized by both federal and state agencies as a sensitive species ("Conservation Agreement and Strategy for Colorado River Cutthroat trout [*Oncorhynchus clarki pleuriticus*] in the States of Colorado, Utah and Wyoming", Colorado Division of Wildlife, Ft. Collins, CO, April 2001), the Colorado River Cutthroat trout depends on the clear and non-silted waters of high elevation streams located in the Wyoming Range. Streams such as Middle Beaver Creek, South Beaver Creek, tributaries to the Upper Hoback River, Muddy Creek, and numerous unnamed tributaries contain core conservation populations of cutthroat trout and would be significantly affected by this development project (Wyoming Game and Fish Department (WGFD), 2006; Bridger-Teton National Forest, 2005).

The Wyoming Game and Fish Department's (WGFD) Daniel Fish Hatchery, located southeast of the project site, maintains the Department's Bear River or Bonneville cutthroat trout and Colorado River cutthroat trout brood stocks. Springs from aquifers supply the water in this hatchery and lack of basic aquifer and groundwater information creates high concern among state and federal agencies (WY Game and Fish personnel communication, June 2006; USFS personnel, 2006). Offspring from these broods are used for restoration efforts as well as for stocking in waters throughout the state.

The project area contains important habitat for sensitive and threatened and endangered wildlife species (Canada lynx, whooping crane, Grizzly bear, gray wolf) as well as rare stands of old growth forest habitat (USFS/BTNF 2006; WGFD 2006). Protection of habitats for wildlife and fish, including sensitive and endangered species, has been a top management priority for the BTNF, according the USFS documents. Wyoming Game and Fish Department personnel (Oakleaf, 2006) and federal agencies (US Fish and Wildlife Service) have acknowledged the Wyoming Range supports suitable habitat for the Canada lynx, and recent studies have confirmed lynx presence within the project's parameters (Greater Yellowstone Lynx Study, 2004-2005 Annual Report, Endeavor Wildlife Research Foundation). Grizzly bear habitat exists in isolated areas within the Wyoming Range and are considered part of the management profile in the Wyoming Game and Fish Department's Comprehensive Management Plan (2004) and exist with the federally designated "Conservation Strategy Area" (70 Fed. Reg. 69863, Nov. 17, 2005, Figure 1).

The Wyoming Range's popularity for multi-seasonal recreation use is unparallel. More than 40 hunting and fishing outfitting businesses use the Wyoming Range to guide clients for fishing, hunting or snowmobiling. Outfitting businesses represent a rapidly growing sector of Wyoming's economy (recreation and tourism) and the future of this activity relies on healthy public lands managed for long term natural attractions, including healthy populations of wildlife, fish and habitat. Roads and oil and gas rigs detract from the backcountry hunting and recreation experience.

The longest and nationally recognized recreation trail in Wyoming, the Wyoming Range National Recreation Trail, runs along the crest of the Range at more than 9,000 feet in elevation. Viewsheds from this trail of the drilling activity from Plains Energy would be adverse to a backcountry experience for the public that uses this trail. Additionally, the 353-mile Wyoming Range Snowmobile Trail offers some of the world's most scenic snowmobiling and remains one of the most popular destination areas (USFS/BTNF Finding of No Significant Impact [FONSI], Management Area 24 – Horse Creek, Big Piney Ranger District, 1993). Other nationally recognized trails that are important in terms of cultural and economic status to Wyoming include the Lander Trail, which is part of the Oregon Trail system and is listed on the National Register of Historic Places and the National Historic Trails Association.

Roadless areas are an integral part of the Wyoming Range, and according to the DEIS, exploration activity will occur within and adjacent to the Grayback Ridge Roadless Area, containing more than 315,600 acres of inventoried roadless backcountry and enviably the largest unroaded block of land in the Bridger-Teton National Forest. Monument Ridge Roadless Area, with more than 17,380 acres, lies immediately northwest of the

project area and should this proposed project expand, has the potential to be impacted as well. The Wyoming Range contains some of the largest roadless areas in Wyoming and offers backcountry opportunities not found elsewhere.

Data from state game and fish agencies has shown that over 50 million Americans hunt and fish. In Wyoming, a total of 3,358,523 hunting and fishing recreation days were provided to the public. Based on the number of recreation days and average expenditure per day, hunters, anglers and trappers expended approximately $350 million in pursuit of their sport (WGFD, 2005). The USFS recognizes that fishing and big game hunting opportunities in the Bridger-Teton NF are among the finest found in any National Forest ("America's Great Outdoors").

The areas within the project area are important to anglers. In the Wyoming Range eighty-six populations of Colorado River cutthroat trout inhabit these short headwater streams, with 73 percent of them occupying less than five miles of stream (Wyoming Game and Fish Department, 2005). Trout fishing continues to be a major recreational sport and in 2004, $9.1 million in angling expenditures occurred in Bridger-Teton National Forest (WGFD).

In 2005, over $9.2 million was spent in hunter expenditures on hunting mule deer, elk, moose and antelope in the Wyoming Range, up considerably from the $4.4 million in economic return 12,000 licensed hunters spent in 2004 (WGFD, 2005). Up to 90% of the Wyoming Game and Fish Department's revenue depends on hunting and fishing license sales (WGFD, 2005).

Counties that surround the Wyoming Range have a vested interest in the economic returns provided by the popularity of the Wyoming Range and its numerous outdoor recreational opportunities. Many retail businesses would not be able to survive without the income from hunters, anglers, snowmobilers, hikers, outfitters, etc. In Sublette County alone, over $35 million was spent in travel related recreation in 2004, up from $19 million in 1997 (WGFD, 2005).

Oil and gas development in the Upper Green River Valley (immediately east of the Wyoming Range forest area) is forecasted to continue for another 50-75 years, at the unprecedented levels it currently is experiencing (BLM, 2006). Wyoming will experience over 25% of its surface land under development during this trend (John Emmerich, WGFD, 2007). In the DEIS discussion of the proposed alternative, data from outdated environmental analysis in the early 1990's was used. This evaluation of data was then tiered to an even more outdated Forest Plan (1990) and therefore lacks sufficient information to provide information for NEPA documentation and analysis. Because the Bridger-Teton National Forest is currently in the process of revising its forest plan, it is appropriate for the agencies to postpone any development until the Forest Service completes the update of the plan, including the suitability and availability determinations for oil and gas, the socio-economic parameters, and the air and water quality issues at stake.

Cumulative impact effects were marginally, at best, discussed in the DEIS. Considerably more evaluation needs to be applied to determine the long-range cumulative effects that could occur from this project, the impacts from expansion of this project should a successful strike occur, and the impacts associated from neighboring oil

and gas development in the area and state. Further, and of particular concern, is the necessity for a comprehensive cumulative analysis composed of all types of impacts to these important renewable resources. This includes timber harvesting, grazing, mineral development, subdivisions adjacent to forests and their impacts to groundwater and surface waters, drought, etc. The foreclosing of renewable resources, their development and use values from a long-term view, over the opportunity to develop short-term non-renewable mineral resources in this area should be thoroughly evaluated, as the loss of such economic returns (from renewable resource use) to the state could be devastating.

III. Suspension of Current DEIS Process

Beginning in 2006 and currently ongoing, the BTNF is in the process of updating its forest plan. To date, more than 700 comments have been received (BTNF personnel communication) and public workshops hosted by the BTNF have seen hundreds of people attend and participate in the planning revisions. According to numerous discussions with the BTNF personnel, this type of turnout from the public was a surprise and the BTNF is beginning to acknowledge the greater importance this particular forest serves to the public as a natural resource area highly valued for its renewable recreational characteristics and high scenic and wildlife values. Letters and comments from local chambers of commerce, businesses, state legislators, sportsmen's coalitions, and general individual users of this resource continue to express their desire to protect and preserve this valuable asset of Wyoming and the nation.

Trout Unlimited requests that the Forest Service suspend the Eagle Prospect DEIS process until the forest planning process for this forest is complete and a more thorough and updated landscape view of this forest is available. The Forest Service is well within its rights to conduct such a suspension, as the implications to the local economy, air quality issues (especially as they relate to the health of humans and wildlife), regional wildlife populations, and recreational opportunities from this project are significant and should not be dismissed.

Such a suspension action would allow for a more thorough, comprehensive and scientific review of all the impacts that are associated with this development project. It will also allow for alternatives to development to be considered and pursued, including opportunities to voluntarily retire, purchase, or trade the leases. Similar actions are being conducted on other forests in other states (Montana with the Rocky Mtn. Front and New Mexico with the Ville Vidal) with great success. Political leaders in this state, including Wyoming's Governor Freudenthal, Wyoming's U.S. Senator Craig Thomas, republican and democratic members of Wyoming's legislature, as well as organizations such as the Sportsmen for the Wyoming Range, the Wyoming AFL-CIO, businesses, and many, many others have advocated for such a strategy.

IV. NEPA Violations in DEIS

Assessments, Purpose and Need

The Environmental Assessments completed for the five management areas in the Bridger-Teton National Forest and where this project will be located were primarily conducted over 15 years ago (1990 and 1991). During a 2003 Forest Service internal

review of these management areas where leasing is proposed to occur, the FS concluded that "*the NEPA completed for the oil and gas leasing [1990-1992] is still current and no further effects would come from the processing of oil and gas lease requests."* (Supplemental Information Report, 2004, BTNF). The next sentence in the SIR then discusses the major changes that have occurred in the Wyoming Range (and within the project area) that have not been considered and need further examination and review (SIR, February 2004). Three major changes (referred to as Issues) not previously recognized or evaluated include 1) the presence of the Canada lynx and its listing in 2000 under the Endangered Species Act; 2) air quality impacts and concerns; and 3) the lack of an assessment on current development and project development exceeding the Reasonably Foreseeable Development (RFD) assessment completed in 1987.

In the discussion of the assessment of the issues 1-3, a Biological Assessment for Oil and Gas Leasing (January 6, 2004) conducted in each of the management areas for Issue 1 in the Wyoming Range declares that the "first phase of oil and gas leasing, exploration, survey, inventory, mapping and purchase would have **"No Effect"** on Canada lynx or its habitat." Further, though the FS acknowledged there is a lack of any standards for oil and gas development and leasing in these areas, the FS nevertheless feels these oil and gas activities do not jeopardize lynx habitat.

The Forest Service dismissed evaluation and discussion on the purpose and need for other uses and concentrated only on the statement to meet the needs of the applicant. On page 1-8 of the DEIS, the statement reads: "The purpose of [Plains'] proposal is to search for and test certain geologic formations for the presence of commercial quantities of natural gas.", rather than including other options. While the DEIS's purpose is to conduct such an evaluation for the project proponent, the Forest Service also has an obligation to consider all other aspects of natural resource use including protection. There is significant lack of comparison discussion that addresses the Forest Service's Forest Plan goals and objectives (USFS 1990) and the Resource Management Plan's (RMP) guidance document (BLM 1988).

By omitting the majority of the goals and objectives within the 1990 Forest Plan for discussion of the project's viability and impact to the resource, the Forest Service offers the distinct biased impression that the natural wildlife and fisheries resources are less important than supporting the minerals management considerations for development. Furthermore, the lack of updated environmental information, as previously discussed, should prompt the FS to include a detailed new discussion of such relevant information (i.e., Canada Lynx, Wolf, and Grizzly Bear). Mineral management objectives in the RMP do include the objectives that consider protection of other natural resources ("All mineral actions will comply with goals, objectives, and resources restrictions (mitigations) required to protect other resource values in the planning area." RMP ROD at 15.)

<u>Lack of Alternatives</u>

By defining this project from the proponent's perspective only, the Forest Service foreclosed a range of diverse alternatives including those that would have been more restrictive of the project as proposed and more protective of the sensitive and irreplaceable National Forest lands at stake. This slanted evaluation was obviously affected by the use of the old and out-dated Forest Service and BLM documents.

The DEIS considers only three alternatives (A-C), with the first alternative (A) being the No Action. The remaining two alternatives (the proposed action of developing three exploratory gas wells in a roadless area [B]; and one additional action alternative [C] in the same area which is nearly identical to the proposed action except for the placement of a temporary gas pipeline) reflect the FS's desire to pursue mineral development rather than their stated goal of resource protection. By choosing to analyze what essentially amounts to one action alternative, given only the slight modification between alternatives B and C, the Forest Service failed to consider a reasonable range of alternatives and thus violates NEPA's requirement of eliminating narrow and similar alternative selections.

The lack of substantial alternative discussions suggests that there is only one foreseeable outcome selection with the project (given that a No Action would not meet the purpose and need for the project). Trout Unlimited would like to see a full and thorough consideration of alternatives that comprehensively discuss options other than the one selected.

During a field trip conducted by the FS in September 2006 in which Trout Unlimited participated, a suggested alternative made by the Wyoming Game and Fish Biologist to move the well pad location from the open, non-timbered area currently proposed to a timbered area immediately south of the proposed site. The advantages of such a move were explained by the biologist and included the added buffering ability to wildlife who use the crucial habitats in the area and the topographic relief offered by the new location that would potentially suppress noise emanating from the well site and access road during the drilling and completion activities. The discussion the FS offered in the DEIS as to why they did not consider this a viable alternative reflect the impression that the project proponents dismissed the idea for unsubstantiated reasoning. The FS is endowed with statutes and regulations which give it full authority to consider and therefore condition oil and gas development based on numerous factors, including site location, especially in the interest of conservation of surface resources. In this case, important migratory corridors and wetland type habitats will be impacted from the current project's location and WGFD's mitigation suggestion helped to offset those impacts. This alternative should have been considered more thoroughly and with focus on the duties of the U.S. Forest Service as described in its own documents (Mineral Leasing Act).

TU finds it difficult to understand why the Forest Service failed to consider an alternative that would avoid impacts to the Grayback Ridge Roadless Area. The use of directional drilling, even up to two miles, is now considered an acceptable and feasible technological process. The economic factors associated with directional drilling notwithstanding, the proponent and the FS should realize that the entire project's action of development in remote and high elevation rugged areas include costs not often associated with mineral development projects on less challenging topography. Again, the FS is within its surface management jurisdictional rights and the BLM within its subsurface rights to condition well locations on any lessor of subsurface minerals.

The helicopter alternative discussion appeared to be entirely one-sided from the proponent's perspective of economics and noise. The FS did not offer an extensive economic analysis or evaluation that seriously considers the short-term costs associated with exploration and drilling using helicopters versus the long-terms costs and associated permanent impacts from additional roads, erosion, wildlife impacts, stream and wetland impacts, reclamation, etc. The efficiency of helicopter use has long been

accepted and documented for use in the forest, including seismic operations, firefighting, and medical emergencies. Indeed, if there is concern from the FS's perspective about a well blowout and the response time to such an event, it would seem reasonable to assume that a helicopter would be an obvious quick response vehicle, especially in times of heavy snows in winter or muddy spring roads, where vehicular road traffic would be limited.

Cumulative Impact Discussion

Of particular concern to Trout Unlimited is the general lack of a detailed cumulative analysis. As part of the NEPA process, the FS is required to include a discussion of all impacts associated with reasonably foreseeable actions. Cumulative actions are defined in NEPA as those that when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement. As earlier stated, the FS has done a great disservice to the public by not mentioning the impacts that full-field development on a much larger scale will have than that indicated in this document.

- A detailed cumulative effects analysis from the increased drilling and development activity in western Wyoming has not been considered. The current Bridger-Teton National Forest Land and Resource Management Plan (Forest Plan) was adopted in 1990 and is in the process of being revised. However, since 1990, a significant drilling boom east of the Wyoming Range, on BLM lands in the Pinedale area, has significantly altered and changed the wildlife and recreation dynamics connected between the two federal agencies and the lands they manage. Big game wildlife populations that summer and calve or fawn in the Wyoming Range depend on important linking migration routes to their crucial wintering grounds directly accessible from the Wyoming Range to the eastern high elevation sagebrush grasslands in the Pinedale area. The Forest Service's FONSI (1993) did not acknowledge the presence of any migration corridors and the SIR of 2004 did not recognize the cumulative impacts from the significant increase of oil and gas development on big game summer and parturition ranges and the winter range connectivity issues associated with the rapid gas development.

- Long-term cumulative impacts to wildlife have been omitted from this document. One can only speculate on what might happen to a mule deer population that is simultaneously experiencing impacts to its summer, transition, parturition and winter ranges but the evidence is available in other areas immediately adjacent to this project that shows the results of impacts to big game winter range and migration routes as a result of the Jonah Field, the Pinedale Anticline, subdivisions and increased road traffic.

  Equally significant would be impacts to moose and elk from a cumulative analysis perspective. Moose nearly always suffer from increased collisions with vehicles when traffic increases on their winter ranges, as it will if the area is developed (Dr. Harry Harju, Wildlife Biologist, consultant, 2007).

- Water quality issues as it implies to groundwater, surface water and fisheries impacts have not been addressed from a cumulative standpoint. The fact that there are 250 private homeowners adjacent to the forest and within this project area that depend on well systems should be cause for a thorough hydrogeologic review.

- Cumulative impacts to core conservation populations of Colorado River Cutthroat trout and Snake River fine-spotted Cutthroat trout were also not considered. The watersheds within the Forest Service's proposed project contain core conservation streams and populations of these two species. Petitioned for listing under the Endangered Species Act was conducted for the Colorado River Cutthroat trout in 1999 but found not warranted in April 2004. The CRCT nevertheless remains a sensitive species not only in Wyoming but in Utah and Colorado as well. The signing of the Conservation Agreement and Strategy (CAS) for CRCT with those three states has helped bolster the conservation efforts. It is important to note the connectivity issue of this watershed to the three states, the importance of the Colorado River Compact and the CRCT. The longevity and stability of this native trout depends on management from a cumulative threshold and was not considered nor evaluated in the environmental analysis.

- The Forest Service is required by the Clean Air Act to prevent any degradation of air quality related values in Class I areas. The Clean Air Act, 42 U.S.C. § 7475(d)(2)(B), requires both the BLM and the Forest Service, to "protect the air quality related values (including visibility)" of lands within "Class I" airsheds. The Forest Service and the BLM have acknowledged that air quality impacts are now a source of significant concern. The BTNF is within the Class I areas defined in Wyoming. The air quality impacts from the increasing development within the Upper Green River area have been documented and summarized by the Bridger-Teton National Forest in a November 2006 paper (BTNF Air Quality Program, November 2006). The BTNF states that the FS is "much concerned" about the protection of Class I areas (where this project is located).

  Recent monitoring study results have indicated that data trends with the National Atmospheric Deposition Program (NADP) show a trend of decreasing sulfates and increasing nitrates. Nitrate deposition is of high concern to TU because of acid deposition of high mountain lakes and streams which in turn affect trout populations and their survival. Bulk deposition sampling (the sampling of rain and snow precipitation) from two sites in the Bridger Wilderness area east of the project location also shows an increase in nitrates and decrease in sulfates. And a long-term lake sampling program in the BTNF and the Shoshone National Forest of high mountain lakes most sensitive to acid deposition show a trend of increasing and decreasing Acid Neutralizing Capacity (ANC). According to the information, a "decrease in ANC means the lakes are not able to buffer additions of acid deposition as they were in the past. An increase in ANC is likely indicated nutrient enrichment of the lakes", which could lead to unfavorable conditions for the macroinvertebrates or zooplankton associated with these lakes and an important component in trout diets. Results in this white paper also indicated that aerosol monitoring (collection of air-born chemicals) being conducted in the Forest also show a trend in the increase in nitrates.

  Had a more thorough air quality impact analysis been conducted, including evaluating the potential for the likely event that this project will expand to full-field development, the FS would have been able to analyze the industrial development footprint most likely to occur.

- The economic impacts from loss of traditional business incomes based on renewable natural resources have not been adequately addressed. Tourism in this area is extremely valuable and contributes significantly to the financial well being of the immediate communities in Sublette, Teton, and Lincoln Counties and in the outlying communities of Wyoming as a whole. Hunting and fishing opportunities will most likely be decreased based on impacts associated to population herds from displacement, death, and disease when loss of significantly crucial habitats occur. The Wyoming Game and Fish Department relies heavily on license fees from hunters in these areas. Their bottom-line would be impacted as would the tourism industry in Wyoming.

- The Forest Service has been remiss in not adequately evaluating the overall cumulative impacts from previous and future drilling associated with this project. Since there was a successful well in the general area drilled over 30 years ago, it is very likely this project will lead to full field development all the way to Cliff Creek and beyond, a disaster for the other natural resources in the Wyoming Range and the Hoback Basin. The impact analysis should reflect all that is likely to be impacted as a result of these appraisal wells, including the entire geologic structure and measures to be used to mitigate impacts to other resources in the area.

The FS manages to list in a table some of the projects that have occurred or are occurring in the area but there is no discussion or thoughtful analysis that approaches the level of detail needed in this DEIS. Should the FS complete such an analysis, it might find that the renewable resources in this forest area might not be able to stand up to the developments that are occurring region wide in this state.

It appears that while the FS recognizes the value of fish, wildlife and roadless areas in this DEIS document, there nevertheless remains a distinct underlying impression with the reader that the FS does not much care to protect them or distinctly lacks the foresight ability to learn from the past development scenario. Plans for the first exploratory wells near LaBarge, Midwest/Edgerton, Wamsutter, Jonah, and the Pinedale Anticline had little concerns as well. Yet the oil and gas development continues incrementally, with statements from federal agencies claiming there is little or no impact from a few wells, followed by the ratcheting up of more and more development. Since there are nearly 200,000 acres of the Wyoming Range and Hoback Basin already leased and since a successful strike from this project would obviously lead to much more massive development, with economic and political pressures to allow lessees to develop the rest of the area, the best alternative Trout Unlimited can see for wildlife and fisheries is the No Action alternative.

<u>Fisheries and Water Related Impacts</u>

Headwaters that reach into the Wyoming Range from three important rivers provide healthy populations of Snake River fine-spotted, Yellowstone, Bonneville River and Colorado River cutthroat trout (CRCT). Of the four subspecies, the Colorado Cutthroat has been impacted the most from logging, mining and habitat loss. Two of Wyoming's four subspecies of native cutthroat trout (Colorado River cutthroat, and Snake River cutthroat) inhabit the streams and tributaries in this project area. The Colorado River cutthroat trout is the only native trout to the upper Green River basin, including the

watersheds in which the lease parcels are located. It is estimated that less than one percent of the Colorado River cutthroat trout's historic range still exists (WGFD, Mike Stone, 2001). Both subspecies occupy tributaries in the project area that flow into the Upper Green River Valley to the east of the range.

The CRCT is also considered a stream species of greatest conservation need in Wyoming by the Wyoming Game and Fish Department (WGFD. 2005. A Comprehensive Wildlife Conservation Strategy for Wyoming. Cheyenne, WY. 125 pp.). The WGFD recognizes cutthroat protection and mitigation measures in the Department's 2004 Recommendations document[1] which is currently being updated to address the ever-increasing issues of impacts to wildlife and fisheries habitats associated from oil and gas development in Wyoming.

Cutthroat trout (specifically CRCT) have been identified in many Forest Service Resource Management Plans as Management Indicator Species because they represent the effects of land uses on aquatic and riparian environments. With short home ranges, the species is confined to headwater areas. The proposed project will have impacts along riparian areas and in certain stream and tributary reaches. A full analysis and inventory of current riparian and habitat conditions should be implemented in order to offer protection measures against unfavorable conditions.

This project will bisect and work within core conservation populations of Colorado River Cutthroat trout as well as their historic ranges. Both the BTNF and the WGFD have goals to improve and expand these historic ranges for CRCT. There are ten streams and tributaries (excluding road access to the delineated project site) that contain habitat for and populations of Snake River fine-spotted and Colorado River cutthroat trout. From road construction alone on this project, there are potentially eleven stream and tributary crossings that contain habitat for these trout subspecies. The tie-in to the Williams pipeline has more than 11 crossings including a significant Right-of-Way crossing along Horse Creek and its tributaries. There exists a significant lack of any analysis, including cumulative, on the impact to these import water bodies to these fish.

The Colorado River Cutthroat trout is considered a sensitive species by both federal and state wildlife management agencies. Core conservation populations of this native trout exist in tributaries within the project area that flow into the Upper Green River Valley to the east of the range. Trout Unlimited and the WGFD has concerns that the CRCT populations will be impacted with the development of this project and should be protected under the Conservation Agreement and Strategy (CAS) (WGFD Letter to Greg Clark, District Ranger, Big Piney Ranger District, May 26, 2005). TU has a high level of concern that these core populations could be jeopardized and believes that a comprehensive evaluation and analysis of impacts from energy development needs to be completed. Most populations of Colorado River cutthroat, which have the potential

[1] Wyoming Game and Fish Department. 2004. Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats: A Strategy for Managing Energy Development Consistently with the FLPMA Principles of Multiple Use and Sustained Yield". December, 2004. Wyoming Game and Fish Department, Cheyenne, WY.

for receiving the greatest impact from the development of oil and gas, have short home ranges because they are confined to these headwater areas[2] (CRCT Task Force, 2001. Conservation agreement and strategy for Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*) in the States of Colorado, Utah, and Wyoming. Colorado Division of Wildlife, Ft. Collins, 87 pp.; Heggenes et al. 1991; Quinlan 1980, Miller 1957).

With the proposed level of oil and gas development in this region, it can be expected that significant threats to current populations of this subspecies and their long-term recovery are inevitable if an updated NEPA analysis and consequential protection measures are not undertaken. In the 1970's oil spills along a tributary of LaBarge Creek (located south of the project location) destroyed a population of pure strain Colorado River cutthroat trout[3] (Binns, WGFD,1977). This population has never recovered. The WGFD has requested an NSO stipulation in the LaBarge watershed which is part of South Piney creek watershed) due to the habitat improvement and reintroduction project of the CRCT (WGFD Letter to Greg Clark, District Ranger, Big Piney Ranger District, June 2, 2005). This project began in the late summer of 2005 and will continue through 2007, in efforts to reestablish native populations of CRCT. Fifty-eight stream miles of habitat are being affected and oil and gas development was not evaluated in the EA's for these lease parcel sales.

As previously mentioned, the WGFD's Daniel Fish Hatchery is located nearby the project location Two springs supply approximately two million gallons of water per day to the hatchery. According to personnel in the WGFD (2006), little is known about the hydrology or geology of these two important springs. Nowhere in any of the FS analysis was there information relating to the potential deleterious effects of oil and gas wells to artesian springs, although it is a high level of concern within the WGFD and Trout Unlimited. Further, according to the WGFD (Steve Sharon, Wyoming Wildlife Magazine interview, May 2001), due to the sensitivity levels of cutthroat trout, they are extremely difficult to rear in hatcheries, requiring more specialized care when the WGFD does try and rear them. Through the hatchery program in WGFD, the USFS-BTNF, the WGFD and TU are attempting to restore native historic habitat in Wyoming, with emphasis in the particularly appealing forested areas of the Wyoming Range. This program is an effort to help this sensitive species avoid potential federal protection listing in the future.

Impacts to the freshwater aquifer and hydrology should be analyzed prior to any approval of this project. Groundwater plays a crucial role in maintaining wildlife habitat by contributing water for river base flows, playas, and wetlands. There is a direct relationship between ground water and surface water and the importance of this relationship to the hydrologic cycle and stream flows is often overlooked or ignored[4]. Groundwater provides much of the water that flows in streams. Additionally, along any

[2] Heggenes, J., T.G. Northcote, and A. Peter. 1991. Seasonal habitat selection and preferences by cutthroat trout (*Oncorhynchus clarki*) in a small, coastal stream. *Canadian Journal of Fisheries and Aquatic Sciences* 48:1364-1370.; Quinlan, R.E. 1980. A study of the biology of the Colorado River cutthroat trout (*Salmo clarki pleuriticus)* population in the North Fork of the Little Snake River drainage in Wyoming. Master's thesis, University of Wyoming, Laramie.; Miller, R.B. 1957. Permanence and size of home territory in stream-dwelling cutthroat trout. *Journal of the Fisheries Research Board of Canada* 14:687-691.

[3] Binns, N.A. 1977. " Present status of indigenous populations of cutthroat trout, *Salmo clarki*, in southwest Wyoming". Wyoming Game and Fish Department, Cheyenne. Fisheries Technical Bulletin 2.

[4] Trout Unlimited. 2007. "Gone to the Well Once Too Often: the Importance of Ground Water to Rivers in the West". A Report by Trout Unlimited's Western Water Project. February 2007.

river or stream, ground water flows into surface water in some areas, while in others, surface water flows into ground water.[5] There are currently no assurances that the transport of contaminants through a base flow from the aquifer to the surface water (should a well blow out or become over pressured) will not occur. This can only be done through sufficient and adequate hydraulic and hydrological analysis. This information has not been evaluated or analyzed in these areas. In the 1960's there was a significant well blow out, now since capped, that produced 13 million cubic feet per day of gas, and is located within the general area of this project (Dave Geer, USFS, 2005). Measurement of any impacts to groundwater or geology has not been completed.

Impacts from subsurface and surface ground water contamination, spills, etc. can deleteriously harm the future survival of this species. Locations in high elevation forested areas with groundwater influences (such as those conditions in this project) associated with winter habitat use by cutthroat trout are important to their survival. Off-channel pools, often associated with groundwater, contain the pool depth, cover, temperature gradients and habitat stability that help these fish overwinter in the extreme cold climate experienced in the Wyoming Range (Harper, D.D., et al[6]).

The DEIS has underestimated the amount of total water needs for this project and the implications from this underestimate could have significant consequences for fish, wildlife and associated habitats. Inadequate discussion of the project area's geology, hydrogeology and impacts to nearby groundwater is significant (Gerstle, Hydrosphere, Inc., 2007. Comments to the DEIS).

Habitat for cutthroat trout can be intermittent and patchy in these high mountain streams and tributaries. Dr. Wayne Hubert (Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming, Laramie) stated in May 2001 (Wyoming Wildlife Magazine) that spawning habitat is restricted and fish may crowd into choice places. Additionally, cutthroat trout spawn later than other fish, including up to fours years of age for the Bonneville Cutthroat (WGFD, George Gunn, Daniel Fish Hatchery). This means survival to a reproductive age becomes even more challenging and risky coupled with impacts that could occur with this project . Disturbances to streams and tributaries, based on these limiting conditions, can be devastating to the population of trout. Silt (from grazing, road construction, natural erosion, logging, fires, off-road vehicle use, etc.) is a limiting factor in cutthroat trout spawning beds. Cutthroat trout require less than 10 percent fine sediment in spawning beds for successful reproduction (in Petition to List the Colorado River Cutthroat Trout, Chapter VI, pp.3. www.biologicaldiversity.org/swcbd/papers/CRCTfinal2.).

There is obviously a concern from TU with regards to the potential for stream pollution due to well or gas spills, sedimentation from road construction, year-round traffic, fuel spills, etc. Additionally, air quality impacts from acid deposition to these high mountain streams are also of great concern. This project calls for the use of diesel generators

[5] Trout Unlimited. 2007. "Gone to the Well Once Too Often: the Importance of Ground Water to Rivers in the West". A Report by Trout Unlimited's Western Water Project. February 2007.

[6] Harper, D.D., A.M. Farag, 2004. "Winter Habitat Use by Cutthroat Trout in the Snake River near Jackson, Wyoming". U.S. Geological Survey, Jackson Field Research Station. In Transaction of the American Fisheries Society, Vol. 133 (1), January 2004. p. 15.

rather than the less polluting Tier II natural gas generators. Pollution from diesel, flaring, etc. all contributes to acid deposition.

Of all the cutthroat trout species, the Snake River fine-spotted has been found to be the most sensitive to acid deposition, which has the potential to occur in the Rocky Mountain region which includes the Wyoming Range (Farag, A. M., et al.[7]). Recent Class I air quality standards, previously mentioned, are showing signs of increases in nitrates and acid loading in lakes, which eventually impacts streams and tributaries of these species. This is important to note because acid conditions alone and in combination with inorganic contaminants have been shown to impair locomotor activity, growth responses and feeding in salmonids, including cutthroat trout (Woodward, D.F., et al.[8]).

The potential for impacting pure conservation populations of Colorado River cutthroat trout remain high from the associated affects of oil and gas drilling, development and production. The Forest Service has identified several areas within the project area as No Surface Occupancy stipulation due to the nature of the highly erodible and steep slopes. These areas were classified as containing slopes in excess of 40 percent or on technically unsuitable soils. This is an important consideration since road building and mining operations alter the hydrology of watersheds and is well documented to be harmful to fish and other aquatic life[9]. Stream sedimentation caused from erosive soils and slopes are most harmful to native trout. Increased sedimentation reduces dissolved oxygen, raises stream temperature, and often covers or buries trout spawning grounds, removing any reproduction potential. With the proposal of increased oil and gas development in these sensitive areas, it can be expected that an increase in surface runoff and decreased slope stability (based on locations of gas wells, road building and associated development infrastructure) will result.

Roads and road building are recognized as a significant source of damage to surrounding resource values, including river systems. Young et.al.[10] (1996) estimated that roads have impacted seven percent of all pure and hybrid populations and one percent of all unknown populations of Colorado River cutthroat trout. Given that this trout occupies less than one percent of its historic range, this damage estimate should be cause for concern. Currently, the Grayback Ridge Roadless Area, where this project is located, contains the least amount of roadless areas in the BTNF and may be an underlying reason for the success of maintaining and planning for the preservation and protection of the cutthroat trout survival.

[7] Farag, A.M., D.F. Woodward, E.E. Little, B. Steadman, and F.A. Vertucci. 1993. "The Effects of Low pH and Elevated Aluminum on Yellowstone Cutthroat Trout (*Oncorhynchus clarki bouvieri)*". In Environmental Toxicology and Chemistry, Vol. 12, pp. 719-731.

[8] Woodward, D.F., A.M. Farag and M.E. Mueller, E.E. Little, and F.A. Vertucci. 1989. "Sensitivity of Endemic Snake River Cutthroat Trout to Acidity and Elevated Aluminum." In Transactions of the American Fisheries Society 118:630-643, 1989.

[9] Eaglin, Gregory S. and Wayne A. Hubert. 1993. "Effects of Logging and Roads on Substrate and Trout in Streams of the Medicine Bow National Forest, Wyoming." *North American Journal of Fisheries Management*, Laramie, Wyoming: Fish and Wildlife Service; 13(4):844-847.; "Summary of Historical and Legal Context for Water/Road Interaction". Technology and Development Program, US Department of Agriculture. Ronald Copstead, P.E. San Dimas Technology and Development Center, December 1997.

[10] Young, M.K., R.N. Schmal, T.W. Kohley, and V.G. Leonard. 1996. Conservation status of Colorado River cutthroat trout. General Technical Report RM-282. Ft. Collins, CO: U.S. Dept. Agriculture, Forest Service, Rocky Mtn. Forest and Range Experiment Station. 32 pp.

The Yellowstone cutthroat, considered by many to be a sensitive species, occurs in the drainages adjacent to the immediate project location (Hoback River drainages) and the Upper Hoback River is located within the boundaries of the project site. This species was not identified to occur within the immediate geographic confines of the project, but should be considered in the analysis due to its sensitivity and the potential for this project to expand. Though the U.S. Fish and Wildlife Service recently found that the listing of the Yellowstone cutthroat was not warranted, it is important to recognize that there is the potential for decline of this species should its habitat be degraded from impacts to rivers and streams. Most of the habitat for Yellowstone cutthroat lies on lands administered by Federal agencies, especially the Forest Service and National Park Service. And many of the strongholds for this species occur within roadless or wilderness areas which technically should provide considerable protection to the fish (USFWS, news release, February 2006).

Little data exists on long-term impacts to coldwater fisheries from oil and gas production. Federal and Wyoming discharge permits do allow certain levels of direct or point discharge from various types of oil production facilities into streams and rivers. Chronic exposure to this type of discharge has the potential to destroy a river or stream's fisheries and macroinvertebrates. Further studies on wastewater discharges and sediment overloads associated with oil and gas activities are needed prior to the FS approval of this project.[11]

Wildlife and Associated Considerations

The Forest Service and the BLM are required by NEPA to consider the direct, indirect and cumulative impacts that will occur from the proposed oil and gas drilling on the environment including those that may occur to wildlife and its habitat. The DEIS for this project fails to adequately address the impacts of this development on wildlife, particularly big game and sensitive and endangered species. Very little environmental consequences are addressed with either Alternative B or C and the stark omission of updated habitat and population data supplied by the Wyoming Game and Fish is unjustified.

Crucial wildlife habitat exists within the areas of this project. Crucial elk, moose, bighorn sheep and mule deer parturition areas, which supply secure cover and nutritional supplements for calving/fawning/lambing and subsequent summer growth occur within and near the proposed development site. Important big game migration corridors meander through the project proponent's area, providing a direct link between high mountain forests for summer range and lower elevation sagebrush areas for crucial winter range for elk and deer. Mule deer and antelope studies conducted by Hall Sawyer from 2001-2005[12], West, Inc.[13] (2004-2005) and Joel Berger with The Wildlife

[11] Confluence Consultilng, Inc. 2004. "Annotated Bibliography of the Potential Impacts of Gas and Oil Exploration and Development on Coldwater Fisheries", June 17, 2004. Prepared for Trout Unlimited.

[12] Sawyer, H., and F. Lindzey. 2004. "Assessing Impacts of Oil and Gas Development on Mule Deer". In Transactions from the 69th North American Wildlife and Natural Resources Conference, Spokane, WA. Wildlife Management Institute, Washington, D.C.

[13] West, Inc. Sawyer, H., R. Neilson, D. Strickland, and L. McDonald. 2005. 2005 Annual Report: Sublette Mule Deer Study (Phase II): long-term monitoring plan to assess potential impacts of energy development on mule deer in the Pinedale Anticline Project Area. Cheyenne, WY.

Conservation Society[14] (2005, 2006) conducted in the Pinedale Anticline area continue to illustrate the significant impacts oil and gas drilling have on big game populations. A decrease in the Sublette mule deer population by 46 percent has been attributed to the impacts of oil and gas drilling (Sawyer, 2005). Animals within these herd units migrate to the Wyoming Range in the summer to have their young. Portions of their migration corridors and parturition areas are within the project proponent's site (WGFD, Scott Smith, 2007). Development of the leases along the face of the Wyoming Range would likely lead to similar impacts to seasonal ranges vital to deer for fawning, for forage in milder winters and to maintain body condition prior to entering winter. Numbers of deer have already declined from the peaks of the 1960s and 1970s due to declining condition of winter ranges and drought. Unfortunately, we will never know how much development of the LaBarge/Piney oil field, much of it then winter range for deer, also contributed to the decline. The Wyoming Range deer herd has not been able to increase enough to achieve its population objective in the past dozen years. Gas wells will only make the problems worse, and field development in several areas might be disastrous (Dr. Harry Harju, Wildlife Consultant, Comments to the DEIS).

The DEIS points out the Wyoming Range provides "…free-roaming big game, native trout, healthy forests, pure water, alpine scenery, and solitude." It also reminds us the Sublette County Comprehensive Plan stresses "…clean air and water, vast open spaces, rich natural resources, accessible public lands, private property, and natural beauty." The DEIS notes values are changing and those near the project focus on "…the abundance of high quality air, water, and land resources that offer a rich quality of life and reflect a western lifestyle." It shouldn't be surprising then, that people who love the area and its values oppose drilling rigs and gas development. Developers' views to the contrary, drilling and field development are not compatible with the values mentioned above.

Associated impacts to wildlife habitat occurring on adjacent BLM lands in the Upper Green River Valley need to be considered in the FS and BLM analysis of this project. Oil and gas development on these public lands is escalating at a pace and to a degree that has created a high level of concern among biologists about the ability of wildlife to survive these impacts. When migration corridors are blocked by gas wells and development infrastructure and animals are unable to migrate from forest to open spaces and back, the health of wildlife populations is at risk. The lack of acknowledgement from federal agencies in their environmental analysis that there exists this cumulative problem is irresponsible. Recent wildlife studies in the Pinedale Anticline and the Jonah Field are showing major impacts to mule deer (46% decline in population abundance in oil and gas sites), antelope (avoidance of oil and gas sites), and sage grouse (entire populations disappearing from previously occupied range).

Habitat fragmentation is occurring on both forest lands and BLM lands and is contributing to a sizeable impact for the future of wildlife populations. This enormous impact on habitat security for mule deer, elk, pronghorn antelope and moose will dominate an entire landscape perspective, ultimately eliminating the essence of wild

[14] Berger, Joel. The Wildlife Conservation Society. 2005-2006. The Wildlife and Energy Development Report. Washington, D.C. Also, "Yellowstone's long-distance travelers in trouble", in Journal of Conservation Biology, April 2004. Both references pronghorn antelope migration challenges from increasing oil and gas development impacts.

migrating herds of big game (Trout Unlimited[15], 2004). Habitat fragmentation alters the distribution of wildlife species across the landscape and affects many life functions such as feeding, courtship, breeding, and migration (The Wilderness Society Report).[16] Failure to consider the cumulative fragmentation from effects of this project places wildlife populations at risk. The Forest Service had relied on outdated environmental analyses that are tiered to an even more outdated 16-year old Forest Plan and its related NEPA documentation. The Bridger-Teton National Forest is in the middle of updating its Forest Plan. It is entirely appropriate for the agencies to postpone any project approval, including suspending this DEIS process, until the Forest Service updates its analysis and can better forecast the impacts from oil and gas development to wildlife populations and the relationship between the two.

On page 3-87 in the DEIS, it states that some areas of the BTNF are unsuited for roads. With the documented history of landslides in this area, putting in new roads seems to go against the BTNF recognition of unsuitable road sites. The Figure 3.3 on page 3-34 reflects that data, and seems a textbook case of where not to put a road. How will the upgraded road in the same location not create or be subject to similar problems, while maintaining the integrity of the wild values and wildlife security? How can you provide undisturbed areas for outfitters, make communities prosperous, allow mineral development, build 35 miles of new roads each year, upgrade 68 miles of roads each year, improve dispersed recreation, and preserve wildlife habitat and water quality, all at the same time? Several of these goals and objectives are incompatible. We are probably about to learn the national forests can no longer be all things to all people due to resource conflicts like the project discussed in the DEIS. Since areas like the Wyoming Range and Hoback Basin are in short supply elsewhere in the country, we should strive to maintain them where they exist and as they currently exist.

Big game are impacted by roads. On page 4-44 the discussion on elk displacement strengthens the need for the FS to reanalyze their acreage data. Since elk will displace up to 2 miles from roads and human activity, the actual worst-case disturbance to elk habitat is a 2-mile perimeter around all aspects of the project. That should be quite a few more acres than the DEIS table shows. This goes for all other wildlife that are affected and displaced by road development.

On page 4-45, the DEIS is remiss in not addressing the potential impacts that this increase in truck traffic will have on big game. Since moose numbers have declined in the Sublette herd, running 1,000-1,500 truck trips to this site heightens concern about collisions. When big game animals are “just displaced”, one of two things happen. They move to an area of poor quality habitat that is unsuitable or it would already be occupied, or they move to suitable habitat that is already occupied and overcrowd the area (Dr. Harry Harju, comments to DEIS, 2007). This often leads to poor animal conditions, resulting in winter mortalities, disease and lack of reproduction. Neither is good for the animal displaced.

[15] Trout Unlimited. 2004. “Gas and Oil Development on Western Public Lands: Impacts on Fish, Wildlife, Hunting and Angling.” A Report Produced by Trout Unlimited’s Public Lands Initiative.

[16] The Wilderness Society. 2006. “Habitat Fragmentation from Roads: Travel Planning Methods to Safeguard Bureau of Land Management Lands.” Ecology and Economics Research Dept., The Wilderness Society, Washington, D.C., May 2006. Number 2.

While the values of hunting, fishing, and tourism are recognized in the DEIS, the incompatibility of those activities and the decreased quality of those activities in combination with oil and gas development is not recognized. Hunting in the Wyoming Range is big business, both to the Wyoming Game and Fish Department and the local communities surrounding the Range. The folks who go to the Wyoming Range and Hoback Basin do not go there to view or frequent well fields. Those folks spend millions of dollars each year on renewable resources that will still be available for generations to come and supporting the economy when the non-renewable resources and the developers have gone, provided development is not allowed to ruin the renewable resources.

As noted in TU's publication *Where the Wild Lands Are (2006)*[17] Wyoming, and numerous studies done by researchers on a number of national forests, roadless areas are very important to elk. The Wyoming Range has not only a thriving elk herd, but a high hunter success rate and a high proportion of bulls killed. In Wyoming, the higher the proportion of roadless area or the more access is restricted, the higher the number of bulls killed, and the more likely elk are to be of trophy quality. Roads increase vulnerability of elk by increasing hunter access, reducing security cover, and where refuges are available on inaccessible private land, result in elk disappearing from areas where hunters can harvest them, leading to overpopulation of elk as hunters go elsewhere, and demands for limited quota hunting.

The Wyoming Range and Hoback Basin are two areas of Wyoming that produce trophy deer and are in high demand. There are two nonresident applications for every nonresident deer license available in region H (Hoback Basin) and over 3 applications for every nonresident deer license available in Region G (Wyoming Range). Trophy quality deer are present because the areas have few roads. In a typical year over 5,000 hunters pursue the deer in the Wyoming Range (WGFD, 2006; Dr. Harry Harju, 2007), and the herd is still hunted with general licenses, providing a quality hunting experience for all who wish to go there. Increased environmental impacts to deer habitat and increased access making deer more vulnerable invariably lead to reduced opportunity to hunt through more restrictive hunting seasons. Lower numbers of deer, the inability of the deer herd to reach its population objective, complaints of hunter crowding in more accessible areas and decreased hunter success have already combined to reduce numbers of resident hunters in recent years. Development of mineral leases will only exacerbate these problems.

The FS failed to adequately analyze the impacts this project has on the population of moose and moose habitat. The FS did not include updated habitat data provided by the Wyoming Game and Fish Department that states there exists over 20 square miles of crucial winter and yearlong moose range. Seasonal timing stipulations should be applied and rigorously upheld. Numbers of moose have declined since 1998, and mineral development will do little to improve the situation. WGFD states that operation and maintenance activities from this project could have a noticeable effect on wintering moose. Moose nearly always suffer from increased collisions with vehicles when traffic increases on their winter ranges, as it will if the area is developed. Moose numbers are down and calf crops reduced due to poor forage quality and failure to become pregnant

[17] Trout Unlimited. 2006. "Where the Wild Lands Are: Roadless Areas in Wyoming." A Report Produced by Trout Unlimited's Public Lands Initiative. April 2006.

(WGFD, 2006; Dr. Harry Harju, comments to DEIS, 2007). Moose in Wyoming have the lowest reproductive rates on the planet, according to Joel Berger's moose studies[18], therefore, more impacts on either summer or winter ranges will not produce better conditions for moose. The Sublette Moose Herd contains a substantial portion of the moose in Wyoming, and demand for licenses for this trophy animal is high. Under Wyoming's preference point system it takes a dozen years to draw a license to hunt a bull moose in some hunt areas.

Timber discussion as it relates to this project does not seem to be significant. The BTNF has never been a strong timber producing forest and the discussion on page 3-39 seems to stretch the limits in trying to attribute the benefits of timber harvest. Additionally, what is the justification for making the statement that says approving the development of this project will improve the riparian zone? Once the area is scraped free of vegetation, acreage is removed from further production on a permanent status, especially where the welltree and pipe facilities will be located.

Finally, this area of the Wyoming Range is home to several wildlife species that are on the federal T&E species list. This includes areas that have been identified by the Wyoming Game and Fish Department as key habitat for fish and wildlife species of greatest conservation need. Some of these species include bald eagles, peregrine falcons, whopping cranes, grizzly bear and the wolf, and all have peripheral or direct habitat access in this backcountry and project area. As previously mentioned, the Canada lynx has been documented as inhabiting habitat within this area. In order for lynx to be present, an adequate prey base must exist. Habitat manipulation from energy development on these parcels can impact the primary prey of the lynx, the snowshoe hare, and therefore have deleterious effects on the lynx survival. The whooping crane has also been identified in this portion of the BTNF and should be analyzed.

V. Conclusion

A major failure of federal environmental documents continues to be piecemeal evaluation of impacts. This has obscured the real magnitude of impacts until developments have developed economic and political heads of steam, and in the process created a high level of distrust among those who value other resources suffering greater impacts than those granting and developing leases said would occur. It's likely nobody really knows the potential impact to recreational resources from field development on the national forest, but the magnitude of impact to deer and sage grouse in the Jonah Field, which according to developers and federal impact statements was going to be minimal, suggests caution. In this case, caution is Alternative A—the No Action Alternative.

We are assured (page 2-17) that if there is a strike there will be another NEPA analysis of "reasonably foreseeable development". Experience with other oil and gas developments in Wyoming has produced a disconcertingly high number of developments where the "reasonably foreseeable size" just could not be determined and the development turned out to be much larger and produced much more impact than the NEPA document foresaw. We presume any subsequent NEPA analysis would be a

[18] Berger, Joel. Ongoing Moose studies in western Wyoming for The Wildlife Conservation Society.

worst-case analysis in such a sensitive area with so much potential for litigation.

It is a huge leap and irresponsible in terms of analysis for this project to make the statement on page 4-40, *"Given time, all actions included within the action alternatives are reversible."* We presume this means geologic time, because most of us think 30 years for this project (if a strike is made, followed by 50-75 years to develop and reclaim all of the additional secondary effects from such projects that follow) is a long time.

The Forest Service has not undertaken the necessary NEPA steps required to adequately review a thorough cumulative analysis, using supportive state and federal documentation for this proposed project. The Forest Service failed to adequately consider impacts to wildlife and fisheries, hunting and fishing, recreation, water quality issues, air quality issues, and economic impacts to communities and wildlife management agencies.

Trout Unlimited requests that this DEIS be suspended from further action until the BLM and the Forest Service can fully comply with the policies and regulations set forth in the National Environmental Policy Act, the Endangered Species Act, the National Forest Management Plan and the Bridger-Teton National Forest LRMP.

Sincerely,

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