The following section supplements the analysis found in the Draft EIS Chapter Three, Section 3.10 - Terrestrial Wildlife, beginning on page 3.166.

DIRECT AND INDIRECT IMPACTS

Potential wildlife impacts associated with GSGP leasing and subsequent development are the same as those disclosed in the Draft EIS; however, the potential impacts could increase the magnitude and potentially approach threshold levels of concern for wildlife and their habitats if unregulated during development and production. Appendix H leasing stipulations and Design Criteria of the Draft LMP, Part Three (including standards and guidelines and other referenced guidance) are designed to minimize and mitigate these impacts to wildlife and their habitat. As described in the Draft EIS, unmitigated impacts to terrestrial wildlife from potential oil and gas leasing and subsequent development could include the following:

- Road, well pad, and other facility construction could result in direct loss of wildlife habitat, i.e., reducing available forage and habitat components in the affected area. Projected oil and gas development of future leases could result in a direct loss of approximately 2,100 acres of habitat on federal mineral estate, within the GSGP. Again, application of conservation measures found in the Draft LMP standards and guidelines, referenced guidance, and Appendix H leasing stipulations are designed to minimize and mitigate impacts to species.

- Construction and operation of oil and gas facilities could result in the fragmentation of wildlife habitats in the projected development areas. Unregulated Oil and Gas development and production could reach significant levels with negative effects on some species. Fragmentation could occur as a result of road, well pad, and oil and gas facility construction. The effects of habitat fragmentation would vary by wildlife species. For some species, such as those that are small and less mobile (e.g., rodents, reptiles, and amphibians) fragmentation may disrupt movement and reduce connectivity between individuals or populations. For other species, such as those that readily cross oil and gas access roads (e.g., deer and mountain lion), the type and extent of fragmentation anticipated with projected oil and gas development levels within the GSGP could negatively affect population trends if unregulated or be minor with the implementation of leasing stipulations and other guiding direction.

- Increased human activity, equipment operation, vehicular traffic, and noise resulting from all phases of oil and gas development could cause wildlife to stop using the area and prefer other locations. Habitat avoidance could result in the under-utilization of otherwise suitable habitats; therefore, the effectiveness of these habitats in supporting wildlife would be diminished.

- Increased access to public land from oil and gas access roads could potentially lead to increased legal-hunting pressure and poaching.

- Displacement during the project construction phase could alter patterns of habitat use and movements for individual animals. Similarly, the displacement of wildlife from disturbed areas could lead to the overuse of suitable habitats in undisturbed areas, increasing competition for limited resources. Wildlife distribution patterns could be altered. The Draft LMP components along with Appendix H stipulations would require complete avoidance of crucial habitats (with NSO), and/or

TL stipulations, or CSU stipulations to reduce development conflicts with important life history requirements.

- Increased vehicle traffic would be expected during all phases of oil and gas development under each alternative. The potential for vehicle collisions with wildlife species is directly correlated to the volume of traffic. Project-related traffic volume could be greatest during the construction phase and diminish during the production and abandonment phases.

- The adverse impacts associated with oil and gas development could be long-term. Predicted timeframes for oil and gas development are to complete drilling activities within 15-years. From the time of completion, wells may continue to produce for 30-years after that. However, on average within 30 to 35 years, half of all oil and gas wells and the majority of access roads would be removed and the areas reclaimed.

Wildlife leasing stipulations found within Appendix H of the Draft LMP were designed to reflect and be consistent with Draft LMP standards and guidelines and other referenced direction. These stipulations apply to currently unleased lands as they are considered for leasing. Both leased and unleased lands must be consistent with all direction found within the land use management plan for subsequent site specific NEPA analysis and documentation (Instruction Memorandum No. CO-2010-027).

The results of air quality modeling show there could be the potential impact to habitat types for some wildlife species, if uncontrolled and unmitigated. Potential effects of uncontrolled increases in certain atmospheric gasses, such as nitrogen, could result in changes in plant composition to the ecosystem and also favor conditions allowing increases in invasive plant species over the long-term. The magnitude of change and length of time in which significant change could occur to plant composition and invasive species is not well understood at this time. However, emissions from development in the GSGP must meet the requirements of the Draft LMP including standards and guidelines and other referenced direction which include air quality standards of the Clean Air Act. As such, over the life of the development, air quality is expected to have minor effect on long-term plant composition and habitat effectiveness for wildlife species. Air quality effects are discussed further in the Air Quality section.

Impacts to Species Groups

The requirements included in the Draft LMP, including applicable lease stipulations, standards and guidelines, and applicable BMPs, conservation strategies, and other direction listed above apply to all species groups. These requirements would minimize impacts, to various degrees, for each species group, and would be expected to protect and maintain the ecological components necessary to support sustainable populations of all terrestrial wildlife species that occur within the GSGP.

Amphibians and Reptiles

Impacts Related to Oil and Gas Development: Oil and gas program activities that may impact amphibian and reptile populations would continue to be addressed in project planning and management. Impacts would vary depending on location and proximity to species breeding and foraging habitat. These impacts from unmanaged oil and gas development could result from spills of chemicals, saline water, or petroleum at the well site, through fragmentation caused by infrastructure in suitable habitat, or direct mortality by vehicles and equipment. No reptile species of conservation concern or associated habitat occur within the GSGP. Analysis for reptiles does not differ from that in the Draft LMP. For amphibians and reptiles, requirements of the leasing stipulations (Appendix H) and other Draft LMP direction, including the Watershed Conservation Practices Handbook; the Boreal Toad Conservation Plan and Agreement (2001); the Conservation Agreement signed by the R2 Regional Forester (3/29/2001) and the BLM State Director

(3/26/2001); rangeland standards and guidelines; soil standards and guidelines; Draft LMP components that apply to upland habitats such as avoidance of steep slopes and other hazard areas, and travel management standards and guidelines would be applied at the project and activity levels to address these and other species concerns. Operational requirements such as road closures also serve to reduce impacts to these species and their habitats. In general, Draft LMP components were designed to assure the basic ecological conditions are met to support species needs.

Draft LMP/EIS Alternatives: The alternatives that result in more ground-disturbing activity in or near primary habitat areas for amphibians (including riparian areas and wetlands ecosystems) and upland reptile habitat would carry greater potential impact to these species groups. There is less than 5% difference between alternatives in projected well pads, acres of disturbance and other associated infrastructure. Draft LMP components including the leasing stipulations, would be utilized to reduce potential amphibian and reptile impacts to acceptable levels. Leasing stipulations and Draft LMP components would apply to riparian areas, ponds and other water bodies as well as upland habitats and would protect amphibian and reptile habitat. Alternative A would potentially have the greatest impact on amphibians, followed by D, B, and C. The No Lease Alternative would have the least impact to amphibians and reptiles because oil and gas development would be restricted to existing leases only.

Birds

Impacts Related to Oil and Gas Development: Potential impacts to bird species that occur within the planning area are addressed through leasing stipulations (Draft LMP Appendix H), management standards and guidelines (Draft LMP, Part Three beginning on page 263), and species guidance (Draft LMP, page 267) to address these concerns. Potential impacts associated with different species groups and alternatives that are addressed in project and activity analysis and design are described below.

Cavity Nesters: In general, potential impacts to snag-dependent birds would result primarily from clearing of forested areas for well pads and access roads which could facilitate the loss of standing snags (especially those snags greater than about 16-inch dbh). Large snags are preferably utilized by cavity nesters with the most effective use occurring in those snags over 16-inch dbh. Most oil and gas development would be likely to occur in the ponderosa pine, pinyon-juniper, and warm-dry mixed-conifer habitat types which provide habitat for many species of cavity nesters.

Draft LMP/EIS Alternatives: In general, Alternative A may result in the greatest impacts on habitat components for snag-dependent birds, followed by Alternatives D, B, C, and the No Lease Alternative, respectively. This ranking is based on the relative oil and gas projected development levels for the alternatives. Impacts of habitat loss to cavity dwellers could affect local population levels of cavity dwellers if unregulated oil and gas development occurred at projected levels of the RFD. Implementation of conservation measures found within the Draft LMP standards and guidelines designed to protect and maintain important habitat characteristics would be expected to maintain sustainable populations across the planning area under all of the alternatives.

Migratory Birds: Approximately 350 bird species are known to occur, are thought likely to occur, or have habitat within the planning area, and may use the SJPL at some time during the year. Not all species occupy the planning area every year, or during every season (nesting, migration, and wintering seasons). Impacts are likely to occur to breeding, foraging, or wintering habitats (or some combination of all habitats) depending upon bird species and season. The total amount of habitat likely to be altered under the oil and gas leasing alternatives for the GSGP would be approximately 2,100 acres on new leases relative to the amount of habitat currently available within the planning area. Consequently, for most species, the impacts

of direct habitat loss on migratory birds would be generally small, and not sufficient to result in population-level impacts, or in changes in species distribution.

Draft LMP/EIS Alternatives: In general, the potential impacts of oil and gas development could be greatest for Alternative A followed by Alternatives D, B, C, and the No Lease Alternative. The standards, guidelines and other referenced guidance (Draft LMP, page 267) are expected to sustain populations across the planning area under each of the alternatives.

Raptors: The primary concern of oil and gas development on raptors is disturbance and/or habitat alteration at, or near, nest sites or roosts, and winter concentration areas. Under all of the alternatives, standards, guidelines and other referenced guidance (Id, page 267) would continue to protect and maintain large-diameter snags, and increase recruitment of replacement snags, and provide necessary buffer distances from development and production activity to maintain effective breeding and roosting habitat. With the application of this direction, the impacts resulting from GSGP gas leasing and development would be limited and, consequently, not result in widespread raptor population impacts.

Draft LMP/EIS Alternatives: Impacts to raptor species habitats are expected to be similar across all of the oil and gas leasing alternatives because they have similar projected development. In general, Alternative A would have slightly higher potential for raptor conflict due to its slightly higher projected development level, followed by Alternatives D, B, C, and the No Leasing Alternative. The lease stipulations, standards and guidelines and other referenced direction would maintain raptor habitat effectiveness and sustainable populations under each of the alternatives. Note that due to the narrow geographic scope of this Supplement (GSGP area only), this analysis is based on a subset of the complete, reasonable range of management alternatives developed for the entire planning area as presented jointly in this Supplement and the Draft LMP/EIS; therefore, the range of proposed management presented in this Supplement does not represent the full range of alternatives or impacts.

Gunnison Sage-grouse: The Gunnison sage-grouse remains a species of conservation interest in the planning process because two small subpopulations occur on lands administered by the SJPL and because of continued habitat and viability concerns. The GSGP area includes Gunnison sage-grouse habitat categorized according to the Gunnison Sage-grouse Rangewide Conservation Plan (2005) as occupied. vacant or unknown, and potentially suitable, Table S-3.10.1. The primary factors of concern for oil and gas development related to Gunnison Sage-grouse include disturbance and/or habitat alteration (including fragmentation and/or loss) at, or, near lek sites, nesting habitat, and winter concentration areas. Draft LMP Design Criteria references Plan direction which includes the Gunnison Sage-grouse Rangewide Conservation Plan of 2006 which provides recommendations for minimizing adverse impacts caused by human and/or activity disturbances, as well as impacts to breeding and foraging habitat. Oil and gas leasing stipulations (Draft LMP - Appendix H) includes stipulations designed to protect the sage-grouse based on guidance found within the Rangewide Conservation Plan.

Draft LMP/EIS Alternatives: Impacts to the sage-grouse are expected to be similar across all of the oil and gas alternatives because they have similar projected development. In general, Alternative A would have slightly higher potential for conflict with the Gunnison sage-grouse due to its slightly higher projected development level, followed by Alternatives D, B, C, and the No Lease Alternative. Under Alternative A, lands are subject to the leasing stipulations found under the 1992 amended BLM San Juan/San Miguel Planning Area Resource Management Plan as well as the guidance found under the Rangewide Conservation Plan which would be applied in subsequent development stage NEPA analysis. The Draft LMP Appendix H leasing stipulations as well as the Rangewide Conservation Plan apply to the leasing stage and subsequent development level NEPA analysis for the remaining alternatives. This guidance is consistent with direction found within the Rangewide Conservation Plan for all alternatives, providing for

species conservation. Additional information is found in the Supplement to Appendix T - Biological Evaluation, available online or by request.

Table S-3.10.1 – Gunnison Sage-Grouse Habitat with Federal Minerals within the Gothic Shale Play Area

Habitat Class	Acres of Sage-Grouse Habitat with Federal Minerals in GSGP	% of the GSGP Area
Occupied	2,747	1%
Vacant or Unknown	8,697	2%
Potentially Suitable	18,556	5%
Total	30,000	8%

Mammals

Impacts Related to oil and gas development: Impacts from oil and gas development may vary, depending on location of lease areas, project location and proximity to important habitat components. The vast differences in life history and habitat requirements suggest that many mammals may be influenced by human activities, including oil and gas development. A variety of impacts, however, may apply to most mammals in general, as described above, and could include direct habitat loss, habitat fragmentation and loss of habitat effectiveness resulting from various aspects of oil and gas development. The lease stipulations, standards and guidelines and other referenced guidance would be prescribed both at the oil and gas leasing and development stages to manage these potential impacts. For example, lease stipulations would protect winter habitat effectiveness by restricting on oil and gas development activities in winter range during the critical winter months TLs. A number of wildlife lease stipulations also require avoidance of habitat. Other design criteria for Draft LMP components applied to development and made conditions of APD approval include, for example, required road closures and other habitat maintenance measures such as road obliteration and avoidance of selected habitats, all of which reduce human wildlife impacts. Unregulated oil and gas development at levels projected in the RFD for the GSGP could result in population declines to large ungulate species such as deer and elk. The impacts for these two species would be similar. The analysis for elk, later in this section would also apply to deer and discusses conservation measures which apply to these species which regulate oil and gas development to minimize and mitigate impacts to these species.

Draft LMP/EIS Alternatives: The potential impacts to mammals such as direct habitat loss, fragmentation, displacement, could be slightly higher under Alternative A because of the higher level of development as compared to Alternatives B, C, and D. The No Lease Alternative would have the lowest potential impact on mammals because oil and gas development would be restricted to existing leases only. Development of existing leases would be consistent with the requirements of the revised Draft LMP.

Invertebrates

The analysis for invertebrates is unchanged by the GSGP and hence is the same as disclosed in the Draft EIS, Chapter Three within Section 3.10.

CUMULATIVE IMPACTS

Wildlife cumulative effects are considered to be the potential impacts from oil and gas development, and other relevant factors, resulting from the incremental impact of a proposed action when added to other past,

present and reasonably foreseeable future actions occurring within the same natural drainage basin, or watershed.

The wildlife cumulative effects analysis area for this Supplement includes that portion of the Draft LMP planning area in Montezuma, Dolores, and San Miguel Counties where conventional and GSGP development is projected. The Introduction to Chapter Three, Table S-3.0.2 provides a tabulation of potential oil and gas development within the cumulative effects area categorized by (1) current development (2) projected development on existing federal leases, (3) and projected development on future federal leases within the Paradox Basin.

Gas development of lands made available for lease or already leased is projected to continue over the next 15-years within the SJPL. Projected development of existing and future *federal* leases totals approximately 1,140 well pads in the Paradox Basin. Forty-five percent of future federal development within the Paradox Basin would be on existing leases. Development of *non-federal* leases within the cumulative effects area would total 625 well pads in the Paradox Basin. Existing producing wells in the Paradox Basin cumulative effects area, in addition, total 261 on all jurisdictions. Existing and projected wells on all jurisdictions are factors that contribute to the cumulative wildlife effects. In total, land clearing for oil and gas facilities would directly remove approximately 9,300 acres of wildlife habitat, primarily in pinyon-juniper and ponderosa pine ecosystems. Gas development of existing leases in the Paradox Basin would be intermingled with development of future leases.

The wildlife impacts resulting from development of existing leases to the species groups would be as described in the wildlife analysis above. Impacts of concern would include direct loss of habitat, habitat fragmentation, loss of habitat effectiveness, and potential for increased wildlife harassment over a much larger area of mixed jurisdictions.

Impacts resulting from development of future leases would be minimized by implementing the above wildlife stipulations, implementation of comparable stipulations attached to existing leases, and the revised standards and guidelines and referenced management direction (Draft LMP, pages 263, 264, and 267).

Oil and gas development on private lands would contribute to adverse impacts to wildlife by broadening the area of potential impacts. Design criteria applicable to the specie(s) would not apply to private land/private mineral estate development, but newly promulgated State regulations require lessee consultation with the CDOW prior to an undertaking. Nonetheless, private land development could compound impacts such as habitat fragmentation and loss of habitat effectiveness that may occur to wildlife, particularly for elk and deer.

Another action of concern on the SJPL is winter motorized recreation within winter range, on or off of designated trails. On the public lands, significant areas of winter range would not have over-snow winter recreation. In addition, TLs on oil and gas development, road closures and utilization of remote telemetry to monitor wells would address potential winter range impacts and maintenance of winter habitat effectiveness. The degree of loss of winter habitat effectiveness should not change overall elk population trends across the Paradox Basin.

Population in Dolores, San Miguel, and Montezuma Counties is projected to increase by a moderate to high rate over the plan period. This trend in human growth may result in increased fragmentation and the loss of habitat on private lands that surround the prospective oil and gas development areas. The trend in human population growth may also result in an increased demand for goods and services from the public lands. These increases would place additional pressures on the public lands to supply the various types of habitat, and seclusion, required by the variety of wildlife species that utilize the planning area. Oil and gas

development on private lands would also add to adverse impacts to certain mammal species by broadening the area of potential impacts. Design criteria applicable to the specie(s) would not generally apply to private land development. This may compound impacts such as habitat fragmentation and loss of habitat effectiveness that may occur to wildlife on federal lands.

The high amount of recreational use occurring, and expanding, into previously secluded habitat within the planning area would most likely continue to increase over time as the human population expands. On the public lands, significant areas of winter range would not have over-snow winter recreation. In addition, TLs, road closures and utilization of remote telemetry to monitor wells would address potential winter range impacts and maintenance of winter habitat effectiveness. The degree of loss of winter habitat effectiveness should not change overall population trends across the SJPL for species such as elk and deer. Plan components including those applying to oil and gas development are designed to minimize and reduce impacts to mammal species.

Federally Listed Threatened and Endangered Terrestrial Wildlife Species

The review and conclusions regarding the effects of the Draft LMP alternatives on threatened and endangered wildlife species are presented in Draft EIS, pages 3.177 through 3.185. The information presented here addresses oil and gas leasing and development impacts on threatened and endangered (T&E) species that may result from development of GSGP area.

Federally listed T&E Terrestrial Wildlife Species:

- Canada lynx (Threatened) – *Lynx Canadensis*
- Mexican spotted owl (Threatened) – *Strix occidentalis lucida*
- Southwestern willow flycatcher (Endangered) – *Empidonax traillii extimus*
- Uncompahgre fritillary butterfly (Endangered) – *Boloria acrocnema*

Canada Lynx

The Draft LMP incorporates, by reference, the Lynx Conservation Assessment and Strategy (LCAS 2000), all associated standards and guidelines, and stipulations for the development of fluid minerals. Oil and gas leasing and development would generally occur outside of lynx habitat and have little effect on the species. However, these activities may still result in occasional disturbance to lynx, and may also influence habitat conditions due to the roads associated with these developments. Roads may also lead to more public winter motorized use and increases in snow compaction.

Summary: Oil and gas development on the GSGP is a minor factor contributing to potential impact to Canada lynx and/or its habitat. However, T&E species effect determinations are not based on the effects of oil and gas development only, but are based on the effects of the Draft LMP alternatives in total and are presented below. Draft LMP components (including applicable lease stipulations, design criteria and other references direction including species conservation direction, would be applied to leasing and development and continue to meet, or exceed, the management direction in the LCAS. Therefore, the alternatives for the GSGP "may affect, but will not likely adversely affect" the Canada lynx. This determination is discussed in detail within the biological assessment for this Plan revision. Project-specific protective measures are incorporated in surface use plans of operation when APDs are submitted. This procedure occurs for all threatened and endangered species and is not repeated below.

Southwestern Willow Flycatcher

The application of the lease stipulations (Appendix H), along with all other Draft LMP components that avoid oil and gas development in riparian areas, would reduce direct habitat loss of riparian willow systems. The committed conservation measures would minimize the potential for disturbance in occupied habitat (by minimizing direct habitat losses and minimizing the indirect impacts of associated activities that may occur within, or adjacent to, occupied habitat). Parasitism of Southwestern Willow Flycatcher (SWWF) by brown-headed cowbirds has not been documented in the planning area, and is currently not considered a local management concern.

Summary: Unregulated oil and gas development activities associated with all of the alternatives could potentially adversely impact SWWF and/or its habitat. Other potential impacting programs and activities are listed above. Conservation measures found within the Draft LMP lease stipulations and other Plan components would effectively implement the recovery objectives associated with the SWWF and mitigate development activity affects to the species. It is therefore determined that all of the alternatives within the GSGP "may affect, but will not likely adversely affect" SWWF. This determination is discussed in detail within the biological assessment for this Plan revision.

Mexican Spotted Owl

Mexican spotted owl (MSO) in Colorado, and within the vicinity of the planning area, are closely associated with steep, rocky canyons that contain mature to late successional stands of mixed-conifer forest. Management activities that may influence these types of habitat are primarily associated with vegetation management including clearing of sites for oil and gas facilities and disturbance during nesting season.

Summary: Unregulated and unmitigated management actions associated with the alternatives, including oil and gas development within suitable habitat, could potentially impact MSO and its habitat. Conservation measures found in the Draft LMP lease stipulations along with other Draft LMP components that address leasing in PACs and suitable habitat, and COA would continue to meet recovery objectives for MSO. It is therefore determined that with conservation measures, the Draft LMP alternatives (including their component programs) within the GSGP "may affect, but will not likely adversely affect" MSO. This determination is discussed in detail within the biological assessment for this Plan revision.

Uncompahgre Fritillary Butterfly

The species is restricted to higher-elevation alpine habitats that are often inaccessible and not areas where projected oil and gas development within the GSGP would occur. Hence, the analysis is the same as disclosed in the Draft EIS.

BLM and USFS Terrestrial Wildlife Sensitive Species

BLM and USFS terrestrial wildlife Sensitive Species for the planning area are listed in Draft EIS Table 3.10.2. These include 11 mammals, 23 birds, two amphibians, two reptiles, and one insect species from the BLM State, and USFS Region 2 lists. These wildlife sensitive species have habitat within the planning area on federal lands. (See Draft EIS, Appendix T for a detailed analysis of the species.)

The Draft LMP/EIS, and associated planning documents, do not provide site- and project-specific analysis; they provide the guidance for planning and implementing projects designed to move the land base toward meeting and maintaining desired future conditions. Guidance is included for the BLM and USFS Sensitive Species and their habitat (Draft LMP, pages 258, 259, 263-267). Much of the direction concerning these species is incorporated by reference from existing legislation, policy, agreements, and conservation plans including the Colorado Comprehensive Wildlife Plan. Part Three of the Draft LMP, Design Criteria, lists the standards and guidelines, conservation measures, and other existing direction that apply to terrestrial

wildlife species within the planning area. Draft LMP, Appendix H lists applicable leasing stipulations for wildlife species. These measures would be the same under all of the alternatives. Oil and gas leasing and development would be guided by the direction of the LMP and would be applied during planning for project implementation of oil and gas development.

Management Indicator Species

For USFS MIS, actions associated with unregulated oil and gas development could adversely impact species individuals. With the adoption of conservation measures within the Draft LMP components (including lease stipulations and standards and guidelines and referenced management direction), oil and gas development within the GSGP, would not likely result in a significant change to habitat or population trends across USFS lands within the planning area.

Abert's Squirrel

A portion of projected oil and gas development would occur within habitat for Abert's squirrel in the well represented and distributed ponderosa pine habitats of the GSGP. Similar, but slightly varied, amounts of Abert's squirrel habitat and food source could be impacted under each of the alternatives. Impacts could result from removal of trees and other vegetation, road construction and use, and other disturbances to habitat resulting from facility operations. Overall, however, these impacts would be minor given the acres of habitat impacted relative to total Abert's squirrel habitat planning area wide. Oil and gas development of existing leases in the GSGP would be intermingled with development of future leases. Impacts resulting from development of existing and future leases would be minimized by implementing as COA, the revised Draft LMP standards and guidelines and referenced management direction (Draft LMP, pages 263, 264, and 267).

American Marten

American marten are considered well-distributed throughout the planning area, within suitable habitat. Habitat trends are considered slightly upward with stable to slightly upward population trends (American Marten Species Assessment, SJPL). Suitable habitat for American marten includes the spruce-fir and cool-moist mixed-conifer cover types. Most oil and gas leasing and development activities would occur on prospective lands in the GSGP at lower elevations not suitable for American marten. Therefore, oil and gas leasing and development activities would have no measurable effect on the species. Overall habitat and population trends are expected to remain stable, or to slightly increase, across the planning area in association with the actions described under all of the alternatives. Site-specific mitigation measures would be made part of the COA for wells and ancillary facilities in order to minimize impacts to the species.

Elk

Within the planning area, and prospective oil and gas development areas, elk have ample summer range that provides forage, thermal and hiding cover, and calving grounds. During the winter months, elk become concentrated on winter ranges that overlap other management activities and are increasingly being influenced by human development pressures and uses adjacent to SJPLC-administered lands. Consequently, the general risk factors identified for elk are primarily tied to activities and influences associated with low-elevation habitats (including pinyon-juniper and ponderosa pine). A TL stipulation prohibits development and limits operations within winter range during winter months considered critical to elk persistence. Additional guidance for elk is found in the standards and guidelines of the Draft LMP which provide for the maintenance of important life history components for the species.

In addition, closure of oil and gas access roads to the public, seasonal restrictions on construction activities as required of the lease stipulations, reduction in the density of roads required of the lease stipulations, and

use of telemetry for well site monitoring, etc., and also Draft LMP components would be utilized to minimize oil and gas development and operation impacts.

No change is expected to the currently stable overall population trend for elk from oil and gas development across the planning area, though local population changes could occur in some areas.

Mountain Bluebird

The identified risk factors for mountain bluebird would involve adverse management activities within aspen habitat. Oil and gas development should not be a significant activity affecting mountain bluebird in the GSGP. Activities that may influence mountain bluebird populations and habitat in aspen include timber management and livestock grazing.

All of the alternatives would provide the same management direction for the mountain bluebird. This direction addresses the maintenance of suitable nesting trees (snags), designed maintain suitable habitat conditions and well-distributed populations of mountain bluebird throughout the planning area. No significant change to the bluebird habitat or population trends would be expected across the SJPL as a result of projected oil and gas development.

CUMULATIVE IMPACTS

Cumulative effects for MIS would be as described for wildlife in general in the above cumulative effects section.