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Forest
Service

Draft

Record of Decision

Village at Wolf Creek Access Project
Final Environmental Impact Statement

USDA Forest Service
Rocky Mountain Region
Rio Grande National Forest
Divide Ranger District
Mineral County, Colorado

United States Department of Agriculture
United States Forest Service
Rio Grande National Forest
1803 West Highway 160
Monte Vista, Colorado 81144

July 19, 2018

Table of Contents

Number / Section **Page**

1.0 Introduction

This draft Record of Decision (ROD) documents my second decision and rationale for the Village at Wolf Creek Access Project. A Final Environmental Impact Statement (EIS) for this project was completed in 2014. The EIS documents the direct, indirect, and cumulative environmental effects of two "action alternatives" as well as the no-action alternative and documents the ability of the alternatives to meet the purpose and need for the project. A lawsuit challenged my first ROD (dated May 21, 2015) and the federal district court set that decision aside on May 19, 2017. The owner of the Village at Wolf Creek private inholding appealed to the Tenth Circuit Court and that appeal is pending.

A January 12, 2018, letter from the landowner insisted upon year-round access to the property. I had my staff prepare *a* supplemental information report (SIR) to determine if the 2014 EIS would need to be supplemented. The interdisciplinary team recommended that the changed conditions and new information would not present a significantly different picture of the environmental effects and a supplement to the EIS was not warranted. I agree with this recommendation and have made this draft decision based on the 2014 FEIS, the SIR and a new Biological Assessment. Consultation with the U.S. Fish and Wildlife Service (USFWS) under the Endangered Species Act is ongoing and I will not make my final decision until the consultation is concluded with a Biological Opinion.

2.0 Background and Location

Acquisition of, and proposed access to, private lands in the project area has been accompanied by a complicated procedural and legal history spanning over 30 years.

In 1986, a Decision Notice was signed for the Proposed Wolf Creek Land Exchange. The 1986 Decision Notice approved the conveyance of approximately 300 acres of National Forest System (NFS) lands managed by the Rio Grande National Forest (Rio Grande NF) adjacent to the Wolf Creek Ski Area (WCSA) in exchange for non-Federal lands located in Saguache County, Colorado. The 1986 Decision Notice created a private inholding surrounded by the Rio Grande NF. The inholding, which is entirely within the WCSA Special Use Permit boundary, is owned by the Leavell-McCombs Joint Venture (LMJV). The NFS lands surrounding the inholding are managed by the Rio Grande NF under Management Area Prescription 8.22 – Ski Based Resorts (FEIS Figure 1.9-1).

The 1986 Environmental Assessment considered four alternatives: two land exchange alternatives, one alternative of developing a resort on NFS lands under a special use permit and the alterative of taking no action. An initial Decision Notice selected the no-action alternative based on potential impacts including impacts to the adjacent ski area. That decision was reversed two weeks later and the land exchange was approved with the understanding that Mineral County would regulate the development on private land and a condition that LMJV would grant an easement providing "a specific level of control of the type of developments" for the purpose of assuring that the development would be compatible with the adjacent ski area. (March 6, 1986 Decision Notice, p. 3).

A "scenic easement" was granted in May 1987 and filed in the Mineral County property records in June 1987 and amended in 1998. This easement limited the development to "a mix of residential, commercial, and recreational uses typical to an all-season resort village" and specifically noted that its purpose was to assure compatibility with the adjacent ski area including the scenic and recreational values of the adjoining NFS lands. (DEIS, August 6, 2012 Appendix D). To ensure the development will be compatible with the ski area the easement allows the Forest Service to prohibit 19 specific uses of the former federal property including mobile homes, mining and feed lots. *Id*. The easement also ensures: 1) conditions for advertising signs; 2) that the architectural style of all structures would be compatible with the location; 3) that buildings would be harmoniously colored; and 4) that building height would be no greater than 48 feet. *Id.* Finally, the easement also makes clear that it was "not

intended to conflict with or intrude upon the land use controls of the State of Colorado, Mineral County, or other unit of local government except as specified herein." *Id.* Thus, the 1986 Decision Notice and the subsequent scenic easement contrasted the general land use authority which remained with Mineral County from the "specific level of control of the type of development" which was granted to the Forest Service. The size, density and specific building restrictions for the Village development were left to Mineral County, while the scenic easement granted the Forest Service narrow authority to ensure that the planned resort was compatible with the ski area.

National Forest System Road (NFSR) 391, which connects with U.S. Highway 160 (Hwy 160) and passes through a WCSA parking lot, crosses the private inholding and provides vehicular access to Alberta Park Reservoir. NFSR 391 provides vehicular access to the private inholding during the summer months. During the winter months this road is under a public motorized closure order and serves as a ski trail for the WCSA.

In June 2001, LMJV applied to the Rio Grande NF for rights-of-way across NFS lands between Hwy 160 and the private inholding. LMJV requested that the Forest Service provide permanent, year-round vehicular access to the property through extension of the Tranquility parking lot at WCSA. The proposal was to create the "Tranquility Road" by extending a road through, and beyond, the Tranquility parking lot by approximately 250 feet across NFS lands, thereby connecting to the private land inholding.

The Rio Grande NF completed an EIS to analyze the request for access to the private inholding under Section 1323(a) of the Alaska National Interest Lands Conservation Act (ANILCA). The EIS analyzed four alternatives in detail:

- Alternative 1: No Action
- Alternative 2: The Proposed Action (request for a single additional access to the property via an extension of Tranquility Road);
- Alternative 3: Snow Shed – East Village Access Alternative (a single access alternative using a new road, referred to as the "Snow Shed Road"); and
- Alternative 4: Dual Access Road (a dual access alternative requiring construction and use of both the Snow Shed Road and the extended Tranquility Road).

In March 2006, a ROD was signed by Rio Grande NF Supervisor Peter Clark. The decision was Alternative 4 which authorized the construction of the "Snow Shed Road" and the "Tranquility Road" extension. Four separate appeals of the ROD were received. In July 2006, Deputy Regional Forester Greg Griffith denied the appeals (thereby upholding the decision in the ROD).

In October 2006, a suit was filed against the Forest Service in federal district court, alleging that, among other things, the Final EIS and ROD were arbitrary and capricious under the Administrative Procedure Act (APA) and in violation of NEPA. In November 2006, a temporary restraining order was granted. In October 2007, a preliminary injunction was granted. In February 2008, the lawsuit was settled in order to bring prompt closure to the litigation and allow for the initiation of a new analysis. The settlement recognized that the Forest Service did not concede the decision making process violated any laws.

In July 2010, LMJV submitted a land exchange proposal to the Rio Grande NF as an alternative means of accessing its private inholding. The proposal would exchange approximately 177 acres of LMJV's existing parcel for approximately 205 acres of federal land. The exchange would obviate the need for access via a right-of-way across Forest Service land by creating a direct connection between LMJV's land and Highway 160. As an alternative to a land exchange, LMJV also requested that an access road across NFS lands be analyzed (citing the Forest Service's obligation to provide adequate access

to the private inholding under ANILCA). An Agreement to Initiate[1] a land exchange was signed between the Rio Grande NF and LMJV and a Notice of Intent to Prepare an EIS was published in the Federal Register on April 19, 2011.

In 2012, the Forest Service issued a Draft EIS that evaluated, in detail, the no-action alternative (Alternative 1) and two action alternatives. Alternative 2 was a land exchange and Alternative 3 was authorization of access over National Forest System lands to the private inholding. Both action alternatives also evaluated three conceptual levels of development on the private land.

Congress has not granted the Forest Service regulatory authority over private land. Accordingly, the Draft Environmental Impact Statement (DEIS) addressed the only authority the Forest Service has over the private land development -- the scenic easement. The DEIS meant to summarize the limited authority granted to the Forest Service by the scenic easement when it disclaimed authority to regulate the "degree or density" of development on the private parcel and deferred to Mineral County's general regulation of private development. The "degree or density" reference was a way to avoid restating the detailed terms of the scenic easement which prohibited 19 uses that did not bear repeating because those uses were not being proposed. *See*, definition of "scenic easement" in the 2012 DEIS. The 48 foot building height limitation and other specific limitations on the potential development stated in the scenic easement were discussed throughout the DEIS and the 2014 FEIS where applicable. The full scenic easement was provided to the public as an appendix to the Draft EIS.

The Forest Service did not disclaim its ability to enforce the terms of the scenic easement under the ANILCA right-of-way alternative or to seek easement restrictions for the 2010 land exchange alternative under 36 C.F.R. 254.3(h) ("needed to protect the public interest" or "appropriate"). LMJV indicated that it was agreeable to negotiate deed restrictions as a part of the land exchange and agreed that the Forest Service would consider applying a scenic easement to the proposed federal exchange parcel. However, the Forest Service ultimately decided that it would not analyze applying the 1986 scenic easement or other easement restrictions in the land exchange and advised the public of this determination in the DEIS. This led to a distinction in the analysis between the land exchange alternative (which would retain easement restrictions only on 120 acres of private land not being exchanged) and the ANILCA right-of-way alternative (where the entire private parcel would remain subject to the scenic easement). For the ANILCA right-of-way alternative, the Forest Service *would not* have the authority to impose additional deed restrictions but the USFWS had regulatory authority under the ESA and could negotiate conservation measures that would apply to development of private property under either alternative. Such conservation measures had not been negotiated when the DEIS was released to the public in 2012.

Due to the anticipated indirect effects resulting from development on the private land, the Forest Service, USFWS and LMJV developed conservation measures to minimize adverse effects to lynx. These conservation measures were developed during the section 7 consultation process on effects of the subject project to species and habitats listed under the ESA as specified in the November 15, 2013 Biological Opinion. The conservation measures were committed to by LMJV in writing, and would have been binding on the future developers/owners of the Village should LMJV sell, in whole or in part, the development. On April 12, 2018, LMJV sent the Forest Service a slightly revised proposed Memorandum of Understanding (MOU) which will provide a legal mechanism for enforcing these conservation measures. The original conservation measures can be found in the Biological Opinion and in an appendix to the FEIS. The proposed MOU forms the basis for a Forest Service Biological Assessment and consultation with the USFWS. A brief synopsis of the conservation measures follows:

[1] This Agreement to Initiate authorized each party to enter on lands of the other for such purposes as preparing land value appraisals, land line surveys, wildlife and wetland inventories and other evaluations deemed necessary by the Forest Service to fully evaluate the effects and merits of the exchange proposal.

LMJV will provide funding to implement conservation measures to reduce impacts of any proposed development to the Canada lynx. Funds provided by LMJV will be administered by a Technical Panel consisting of representatives with expertise in lynx biology, traffic, and other relevant disciplines from the Colorado Department of Transportation (CDOT), the USFWS (as a technical advisor), Colorado Parks & Wildlife, the Forest Service, and one representative of LMJV's choosing representing relevant traffic and biology expertise.

Initial funds will be used to pay for a corridor assessment and a trapping/collaring program to determine lynx movement across Hwy 160 between South Fork and Pagosa Springs, Colorado. These studies will result in a prioritization of crossing points by lynx on Hwy 160. Next, the Technical Panel members will identify options for a program to further protect lynx from traffic and to facilitate lynx movement across Hwy 160. The proposed 2018 MOU clarifies that the Technical Panel has authority to spend the funds at its discretion and does not need LMJV's agreement. The 2018 MOU also clarifies that the MOU remains in effect even if the lynx is removed from listing under the ESA and commits additional funds to import individual lynx to replace lynx killed on the Hwy 160 corridor.

LMJV must undertake, independent of the above conservation measures, additional actions intended to reduce potential impacts to Canada lynx. They include:

- Worker Orientation. LMJV will conduct worker orientation concerning Canada lynx conservation.

- Worker Shuttle. LMJV will bus workers to and from the project site to minimize potential construction-traffic-related impacts to lynx during the infrastructure development period.

- On-Site Employee Housing. In Phase 1 and subsequent phases of any future Village development, LMJV will provide some employee housing at the Village to minimize those employees' traffic impacts and will offer bus service to its other employees to reduce the amount of traffic they would otherwise add to Hwy 160.

- On-Site Convenience to Reduce Highway Traffic. As to its future owners and guests, LMJV anticipates that they will have fewer trips along Hwy 160 during their stay than other similar developments in that LMJV plans to provide the necessary essentials (i.e., grocery store, restaurants, etc.) at the Village to minimize their need to travel outside the Village for such items.

- Property Owners and Guests Lynx Awareness Program. LMJV will provide an orientation program to its owners and guests that will advise them of lynx movements in the area and the importance of motorists being aware of potential lynx crossings on Hwy 160 within the Landscape Linkage.

The implementation of these conservation measures will minimize adverse effects associated with the selected alternative to Canada lynx.

On May 21, 2015, I issued a ROD selecting the land exchange alternative because it presented an opportunity to recognize LMJV's right to its congressionally mandated access right to its inholding pursuant to ANILCA (Figure 2-1). The land exchange would minimize impacts of LMJV's development of the Village by changing the footprint of the development to a less sensitive location further from the ski area base and connecting to Hwy 160.

In June 2015, a lawsuit was filed challenging my 2015 ROD but the land exchange was completed subject to a stipulation that would allow "unwinding" the exchange in the event of an adverse ruling. On May 19, 2017, the district court held that the Forest Service abdicated its duty to consider imposing deed restrictions on the federal land to be exchanged, that the power to impose deed restrictions demonstrated "actual power to control" the private development and this failure led the Forest Service

to unlawfully limit its NEPA analysis. Therefore, the district court set aside the 2015 ROD. The Court emphasized the fact that the private land came into being through a land exchange in 1986 and the 1986 land exchange was constrained by the scenic easement. The Court held that the Forest Service was required by 36 C.F.R. 254.3(h) to consider imposing deed restrictions in the 2015 evaluation of the proposed land exchange. The Court failed to recognize that the Forest Service had considered, and rejected, imposing deed restrictions in the second land exchange.

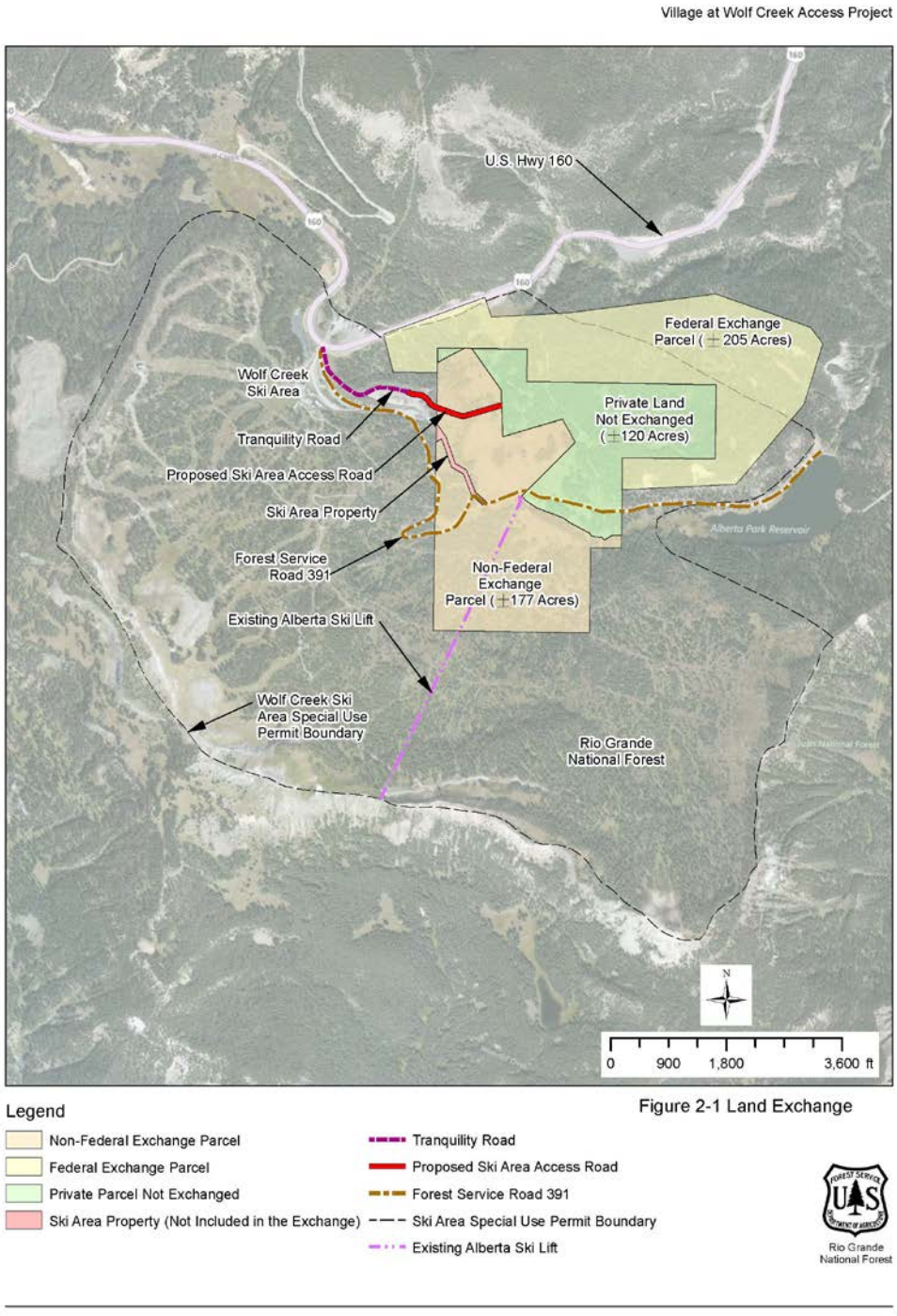
The Court also found the ESA analysis insufficient. The Court was skeptical of the decision to allow LMJV to be covered by an incidental take statement granted through the Section 7 consultation on the federal decision to grant a land exchange rather than requiring LMJV to go through the Section 10 process to get incidental take coverage for impacts caused by private development. However, the Court did not find that the Section 7 process violated the law. Instead, the Court found that the conservation measures were inadequate to meet ESA requirements. The Court assumed that the conservation measures were necessary to avoid jeopardy to the Canada lynx and held that the conservation measures were insufficient for that purpose.

The Court found three specific deficiencies in the conservation measures. First, the measures were found not to be reasonably specific, certain to occur and subject to deadlines or otherwise enforceable obligations because the funding commitment was not sufficient and there was no provision for resolution of any disagreement between LMJV and USFWS regarding specific measures. Slip Op. p. 34. Second, the conservation measures impose no binding obligation on the Forest Service to insure its action is not likely to jeopardize the lynx. Third, to the extent that the USFWS has an enforcement role regarding the conservation measures it is limited to the point of essentially leaving LMJV to self-report. On September 14, 2017 the district court denied a motion to reconsider. Subsequently, LMJV, Rocky Mountain Wild[2] and the United States all appealed the district court's ruling and participated in the court's mediation program. However, the case was not settled and the United States decided to pursue a new decision and dismissed its appeal. LMJV has declined to withdraw its appeal. Rocky Mountain Wild has filed a motion to dismiss the LMJV appeal and notified the court it would withdraw its own appeal if the LMJV appeal is dismissed.

On January 12, 2018, LMJV requested immediate access to the "core" 120 acres of its inholding describing those "core" acres as the portion of the original inholding that would have remained in LMJV ownership under the 2015 land exchange. LMJV expressed the view that it is entitled to an access road under ANILCA *pending* the circuit court's ruling on its appeal.

[2] Rocky Mountain Wild and others are plaintiffs in the pending lawsuit. I will refer to this plaintiff group in my decision as Rocky Mountain Wild.

Figure 2-1 Land Exchange



3.0 Purpose and Need

The Purpose and Need for Action is to allow LMJV to access its property to secure reasonable use and enjoyment thereof as provided in ANILCA and Forest Service regulations, while minimizing environmental effects to natural resources within the project area. The legal entitlement is defined by

ANILCA and Forest Service regulations as a right of access to non-Federal land within the boundaries of the NFS. LMJV has proposed a land exchange to satisfy its access needs in addition to its application for road access. The Forest Service has evaluated both the land exchange and the application for road access as alternative means of providing legal access.

4.0 Decision

4.1 The Decision

Under ANILCA, LMJV is entitled to adequate access for the reasonable use and enjoyment of its private inholding. I have determined pursuant to ANILCA and the Forest Service's regulations that the reasonable use and enjoyment of LMJV's private inholding is as an all-season resort with residential and commercial development to support the adjacent ski area. I must therefore grant LMJV adequate access to fulfil that use. LMJV's willingness to consider accessing its inholding through a land exchange gave me a chance to determine whether the significant environmental effects of the private development could be lessened by allowing it to be built on a different footprint. The FEIS clearly shows that the land exchange would result in protecting more sensitive environments such as fen wetlands and riparian areas from the proposed development. Therefore, in my draft 2015 decision, I found the land exchange to be in the public interest based on the footprint alone and without deed restrictions. Rocky Mountain Wild and others filed objections in which they argued additional deed restrictions were required.

Rocky Mountain Wild also challenged the FEIS as inadequate because it failed to evaluate alternatives which would impose development restrictions on the private land. The district court agreed that the FEIS was insufficient to select the unconstrained land exchange alternative because: 1) the 1986 land exchange decision required a scenic easement; and 2) the Forest Service regulations clearly give me the authority to decline a land exchange without deed restrictions on the federal exchange parcel if those restrictions are needed to protect the public interest.

Rocky Mountain Wild, and others that advocate a land exchange with deed restrictions, fail to appreciate that a land exchange is a bilateral transaction. 36 C.F.R. 254.3(a). The Forest Service could offer LMJV a land exchange with significant development restrictions but LMJV can reject that offer and insist on the access which Congress, through ANILCA, has guaranteed LMJV over NFS lands. Accordingly, in my final decision I found the land exchange to be in the public interest based on the footprint alone and without deed restrictions.

On January 12, 2018 LMJV did essentially that by writing the Forest Service to demand immediate access to the 120 acre "core" of its property. This is the portion of the original inholding that remained after the 2015 land exchange and the portion where LMJV intends to develop the Village Center. LMJV's proposal was to keep the current litigation alive with the possibility that the 2015 land exchange, without deed restrictions, could be saved but allow LMJV immediate access so it could build roads and begin to develop the "core" of its planned Village. I am open to a future land exchange, but I am not open to granting immediate access over lands that have been exchanged to LMJV. The 2015 land exchange will have to be "unwound" as contemplated by the parties in a 2015 stipulation filed with the district court before I can grant an ANILCA right-of-way.

LMJV has a present right of access under ANILCA and I sought to recognize that right by selecting the land exchange alternative in 2015, which would have eliminated the federal right-of-way access need due to direct access from LMJV's private land to Hwy 160. The district court has set aside my land exchange decision. However, the existing FEIS also took a hard look at the significant environmental effects of selecting the ANILCA right-of-way alternative which would allow LMJV to develop the existing parcel constrained, to the extent it is constrained, by the scenic easement.

Therefore, I am selecting Alternative 3 to allow ANILCA access to the LMJV inholding without eliminating the possibility of a future land exchange. My decision is contingent on the 2015 exchange of deeds (which transferred the federal exchange parcel to LMJV) being "unwound" either by agreement with LMJV or by court order.

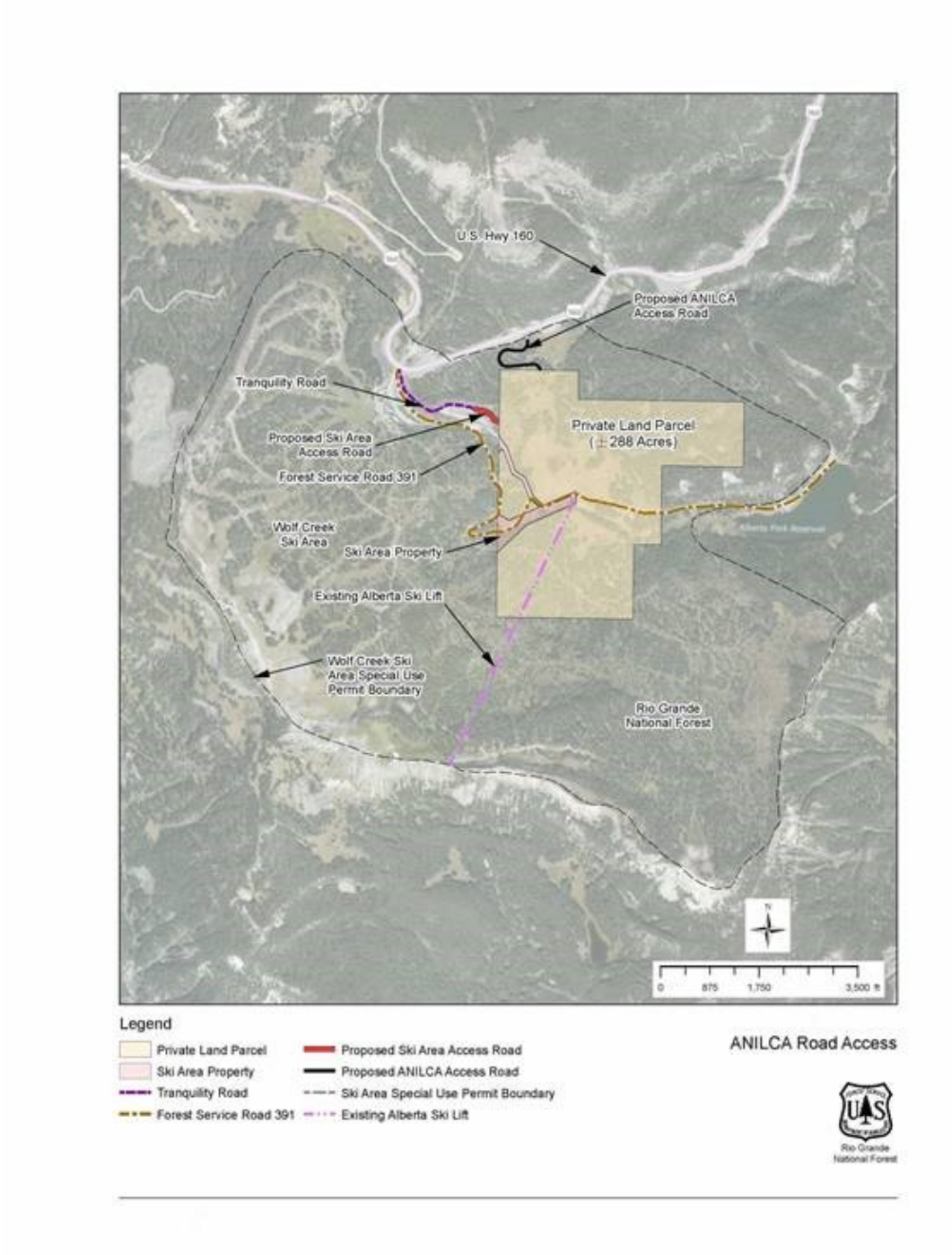
The Deputy Regional Forester did address regulatory authority under 36 C.F.R. 254.3(h) in response to the 2016 objections and found that deed restrictions were not needed or appropriate. In 2015, I concurred with the determination that the land exchange, without deed restrictions, would be in the public interest but I did not expressly state that view in the ROD. In my decision today, however, I am turning down the land exchange proposal *without deed restrictions* and choosing, instead, the ANILCA right-of-way alternative under which the scenic easement applies to the entire private parcel. This decision addresses the district court's concern that the land exchange alternative gives up existing regulatory authority while recognizing that I cannot compel LMJV to accept *any* deed restrictions. A land exchange is a consensual real estate transaction for the proponent as well as for the Forest Service. The Forest Service participated in the appellate court's mediation process but that process was unsuccessful. Therefore, it is time to grant LMJV the access Congress has mandated through ANILCA.

4.2 Selected Alternative

I am selecting Alternative 3 which was designed to fulfill the Forest Service's obligation under ANILCA -- to provide adequate access to non-Federally owned land to secure to the owner the reasonable use and enjoyment thereof. Under Alternative 3, in contrast to the land exchange alternative, the configuration of NFS and private lands in the project area would remain unchanged. The area of the private land inholding included in this alternative is +/- 288 acres. This alternative includes an access road across NFS lands between Hwy 160 on the north and the private land inholding on the south (ROD Figure 2.2-4). The road would be about 1,610 feet in length and be within a 100-foot corridor with a total area of only about 3.7 acres.

The existing Tranquility Road would be extended approximately 530 feet east across NFS lands to provide access between the inholding and WCSA, and would provide limited, restricted and seasonal access between Hwy 160 and the private land inholding. Tranquility Road would also provide a route for emergency access/egress. With regard to the choice of where to locate the access road, the topography, the location of the existing ski area development, the location of the highway, and the location of the inholding greatly constrain my options. The 2006 EIS and the current FEIS considered and eliminated granting access via NFSR 391 or through a single access point via the proposed Tranquility Road. Moreover, internal scoping and public comment did not identify any significant difference in environmental impacts based on the access route which would drive analysis of alternate routes.

Figure 2-2 ANILCA Road Access



4.2.1 Best Management Practices

Best management practices (BMPs) have been developed to apply to the access and utility right-of-ways. The purpose of the BMPs is to minimize potential impacts to Forest Service resources during construction, operation and maintenance of the right-of-ways.

Storm water runoff controls from construction sites are mandated by the Federal Water Pollution Control Act (Clean Water Act). In Colorado, the U.S. Environmental Protection Agency (EPA) has delegated authority to the Colorado Department of Public Health and Environment (CDPHE). Construction sites which disturb greater than one acre are required

to acquire a storm water discharge permit. This decision requires the LMJV to obtain all required permits.

A critical requirement of the Construction Storm Water Discharge permit is the Storm Water Management Plan (SWMP). At a minimum, a SWMP should communicate and satisfy the following:

- Identify all potential sources of pollution which may affect the quality of storm water discharges associated with construction activity;
- Describe BMPs to be used to reduce the pollutants in storm water discharges associated with construction activity including the installation, implementation and maintenance requirements; and
- Utilize good engineering practices and be updated as needed throughout construction and stabilization of the site.

The implementation of these best management practices will reduce the potential impacts associated with the selected alternative.

4.2.2 Monitoring

The Forest Service will be responsible for monitoring the construction and maintenance of both roads; and monitoring for compliance with the scenic easement.

4.2.3 Permits, Licenses, Entitlements and/or Consultation

This decision applies only to NFS lands analyzed within the FEIS. However, because of the unique public/private land interface involved in this project, other Federal, State, and local entities have jurisdiction on private land. The Forest Service assumes no responsibility for enforcing laws, regulations or policies under the jurisdiction of other governmental agencies. The following permits, licenses, entitlements and/or consultations may be necessary:

- CDOT Highway Access Permit
- U.S. Army Corps of Engineers – permit for impacts to Waters of the U.S., including wetlands
- Colorado Department of Public Health and Environment (CDPHE) Grading Permit and Stormwater Discharge Permit
- Mineral County Planned Unit Development (PUD)
- Mineral County Building Construction Permits

5.0 Decision Rationale

The rationale for my decision is based on a thorough review of six factors that I identified as being key to my decision after considering the district court's two written opinions in the pending litigation. Each of the following six factors, including why they are key to my decision, are explored in detail, below.

1) Reasonable Use and Enjoyment, Adequate Access & Similarly Situated Properties;
2) Range of Alternatives;
3) Forest Service Regulatory Authority;
4) NEPA Hard Look Review;
5) Endangered Species Act and Canada Lynx Conservation Measures; and

6) Forest Plan Direction.

1) Reasonable Use and Enjoyment, Adequate Access & Similarly Situated Properties

The regulations interpreting and implementing Section 3210 of ANILCA are set out in the Code of Federal Regulations at 36 CFR §251.110 – 114, Subpart D – Access to Non-Federal Lands. The concepts of "Reasonable use and enjoyment," "adequate access," and "similarly situated properties" are central to ANILCA and, therefore, to this decision.

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) reads as follows:

> *Notwithstanding any other provision of law, and subject to such terms and conditions as the Secretary of Agriculture may prescribe, the Secretary shall provide such access to nonfederally owned land within the boundaries of the National Forest System as the Secretary deems adequate to secure to the owner the reasonable use and enjoyment thereof; provided, that such owner comply with rules and regulations applicable to ingress and egress to or from the National Forest System.*[3]

In reviewing the public comments regarding ANILCA, I've noticed a fundamental misperception regarding this statute. Congress enacted ANILCA for a variety of reasons including to ensure access to private land within the boundaries of the National Forest System. Congress did not suggest that it was providing for federal regulation of private property within the boundaries of the National Forest System. Private land use regulation remains the province of local government and here it is Mineral County, not the Forest Service that will determine what LMJV will be allowed to construct on its property. However, Mineral County cannot approve a subdivision plat under state law for a parcel that lacks legal access to a public road. In 2005, Mineral County approved LMJV's Planned Unit Development for the private property. In state court litigation the court found that existing, seasonal access on NFSR 391 was inadequate for a year around development of even the first phase of LMJV's then-proposed development (which was limited to development on 70 acres). Thus, the judge vacated the County approval. The Forest Service must, therefore, consider the reasonable use of the inholding and grant appropriate access without benefit of a final determination by the County as to what development it will allow.

ANILCA does not require the Forest Service to decide which use, within a range of reasonable uses, will be "allowed." The Forest Service's task is more limited. The Forest Service must simply ensure that it provides access over National Forest System lands that will allow use of the private property within the reasonable range. If I determine that the reasonable use of the property is commercial and residential use to serve a ski area, my analysis is not done. I must then determine the minimum access necessary to that use. If year around automobile access is needed for commercial and residential use of a +/- 288 acre property at a ski area, it is not relevant under ANILCA whether that access will be used for a small development or a very large development. If year around automobile access is needed for operation of even a small development, I must grant that level of access. It is then Mineral County's responsibility to determine the size and configuration of the development that will be allowed using that access.

Three terms were fundamental to my evaluation of the access ANILCA requires me to grant to the LMJV inholding: 1) "adequate access"; 2) "reasonable use and enjoyment"; and 3) "similarly situated" lands. Forest Service regulation defines "adequate access" as:

> *[A] route and method of access to non-Federal land that provides for reasonable use and enjoyment of the non-Federal land consistent with similarly situated non-Federal land and that minimizes damage or disturbance to National Forest System lands and resources.*[4]

[3] 16 U.S.C. § 1323(a)

[4] 36 C.F.R. § 251.111

The regulation goes on to provide that:

> *In issuing a special use authorization for access to non-Federal lands, the authorized officer shall authorize only those access facilities or modes of access that are needed for the reasonable use and enjoyment of the land and that minimize the impacts on the Federal resources. The authorizing officer shall determine what constitutes reasonable use and enjoyment of the lands based on contemporaneous uses made of similarly situated lands in the area and any other relevant criteria.*[5]

After an extensive analysis documented in the FEIS and the administrative record, I did not find a property "similarly situated" to the LMJV inholding in size and location other than those already on a public road. Thus, I considered "other relevant criteria" as required by the regulation. The history of the LMJV parcel shows how unique the property is. The original purpose of the Forest Service in authorizing the land exchange that created this inholding was to facilitate commercial and residential development associated with the WCSA. Indeed, the 1986 Environmental Assessment assumed development of a winter resort with 208 residential units, two restaurants, two day lodges and six retail shops. While access was not expressly addressed at the time of the exchange, ANILCA was in effect and it would be disingenuous to suggest that anyone assumed that the intended commercial and residential development was to be operated without automobile access on a snowplowed road.

I find that the reasonable use and enjoyment of the 288 acre LMJV parcel (located near the ski area base which is on a snowplowed highway) is the use intended by the Forest Service when the parcel was created – use as a winter resort including commercial and residential properties. Nevertheless, ANILCA does not guarantee unlimited access. The analysis shows that such a winter resort can be operated using an at-grade access and I find that LMJV is not entitled to a grade-separated intersection with Hwy 160 under ANILCA. At this time LMJV is not seeking a grade-separated intersection. If a grade-separated intersection becomes necessary in the future, that would be a discretionary decision not mandated by ANILCA.

I find that year around snowplowed access is the access adequate to the reasonable use and enjoyment of the LMJV property. I further find that the existing seasonal access on NFSR 391 is not adequate access because it would not allow operation of a winter resort similar to that assumed in the 1986 Environmental Analysis. I further find that snowplowed access on NFSR 391 is not adequate because it would not minimize disturbance to the skiing resource. I further find that over-the-snow access is not adequate because I found no property similar in size and location currently operating a resort associated with a ski area by over-the-snow means.

I conclude that selection of either action alternative would meet the obligation under ANILCA to provide access adequate to secure the reasonable use and enjoyment of the LMJV inholding.

2) Range of Alternatives

Under the Council on Environmental Quality (CEQ) regulations, the Forest Service is required to study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act.[6] Furthermore, the Forest Service Handbook (FSH) provides direction on developing alternatives:[7]

- No specific number of alternatives is required or prescribed.
- Develop other reasonable alternatives fully and impartially.

[5] 36 C.F.R. § 251.114(a)
[6] 40 C.F.R. § 1501.2(c)
[7] FSH 1909.15, Chapter 10 – Environmental Analysis

- Ensure that the range of alternatives does not prematurely foreclose options that might protect, restore, and enhance the environment.
- Reasonable alternatives to the proposed action should fulfill the purpose and need and address unresolved conflicts related to the proposed action.

As established in case law interpreting the NEPA, the phrase "all reasonable alternatives" has not been interpreted to require that an infinite or unreasonable number of alternatives be analyzed, but does require a range of reasonable alternatives be analyzed whether or not they are within Agency jurisdiction to implement.[8]

Comments received during the public scoping process provided the basis for determining the range of alternatives. Seven total alternatives were considered, however four alternatives were eliminated from detailed study. As identified in Chapter 2 of the FEIS, alternatives considered but eliminated from detailed analysis include:

- Exchange Non-Federal Inholding for a Federal Parcel Elsewhere
- Forest Service Purchase of the Private Land Inholding
- Access Non-Federal Parcel from Tranquility Road
- Access the Non-Federal Parcel Via an Upgraded NFSR 391

The FEIS page 2-5 explains why none of these potential alternatives were carried forward for detailed analysis.

In addition, Rocky Mountain Wild alleged in the pending lawsuit that the Forest Service failed to analyze three other reasonable alternatives: 1) granting only over-the-snow access which would severely limit the potential to develop the private inholding; 2) requiring a grade-separated exchange with Hwy 160; and 3) development on the private land consistent with "Option 2" of LMJV's original proposal. The over-the-snow access alternative did not need to be considered because it would not meet the purpose and need of providing access sufficient to the reasonable use and enjoyment of the LMJV parcel. How the access road connects to Hwy 160 is not an alternative. The FEIS expressly found that an at-grade intersection is sufficient for the reasonable use and enjoyment of the property. ANILCA does not require a grade-separated interchange, it only requires access commensurate with reasonable use and enjoyment. The FEIS analyzed an at-grade intersection as satisfying access for the reasonable use and enjoyment of the private property. The at-grade intersection approved with Alternative 3 may be a limiting factor for development beyond the moderate density concept. If a grade-separated interchange becomes necessary it will be in the distant future and will require a new analysis at that time. Finally, Rocky Mountain Wild misunderstood LMJV's reference to "Option 2" which was never a stand-alone alternative. It was merely one of the scenarios under which the existing parcel might be developed if there were no land exchange. Absent a land exchange, the Forest Service has no authority to impose development restrictions on the private inholding. Thus the Forest Service could not "choose" Option 2 under Alternative 3 and reasonably decided to deal with the uncertainty regarding the ultimate development of the private land by analyzing three different development scenarios for each action alternative.

Three alternatives were analyzed in detail in the FEIS. These alternatives included:

1. No Action (representing a continuation of existing Federal and non-Federal land ownership patterns and management practices)
2. Land Exchange of Federal and Non-Federal Lands Within the Same Area
3. Access Road

[8] 40 C.F.R. § 1502.14(c)

To further define the range of alternatives that were analyzed and to adequately disclose the range of indirect effects associated with private land development that could occur as a result of Forest Service approval for either a land exchange or a road access corridor, the FEIS analyzed a range of development concepts – including Low, Moderate and Maximum Density – for each action alternative. I acknowledge that whatever development plan is ultimately approved by Mineral County in the future would likely vary from what is analyzed in the FEIS. However, each of these development concepts provides a reasonable basis from which to analyze and disclose the indirect effects of development that could potentially occur as a result of Forest Service approval to access the private inholding. In essence, the FEIS evaluated, in detail, seven alternative development scenarios (3 development scenarios for each action alternative and the no action development scenario).

Based on FSH and CEQ direction on development of alternatives, I have determined that the range of alternatives, including alternatives considered but eliminated from detailed analysis, is sufficient for making an informed decision and satisfies the requirements of NEPA.

3) Forest Service Regulatory Authority

It is important to note that future development on the private inholding is not a component of the federal action. During the public comment process and the litigation it became clear to me that there is considerable confusion over the extent and source of Forest Service regulatory authority over LMJV's use of its private inholding. Because it is critical to a proper understanding of my decision, my authority over the private LMJV inholding is addressed in detail below.

Congress has decided through ANILCA that the Forest Service must grant access sufficient to the reasonable use and enjoyment of the private inholding. The Forest Service articulated its interpretation of ANILCA's access provision in 1991 regulations as follows: "these rules do not purport to give the Forest Service the right to tell a landowner what use may be made of non-Federal land." 56 Fed. Reg. 27410 (June 14, 1991). Thus, I cannot mandate development restrictions under my ANILCA authority as a condition of the land exchange or as a condition of granting access over NFS lands. I could make a counter offer to LMJV's land exchange proposal asking LMJV to accept private land development restrictions even though I have determined that such restrictions are neither needed in the public interest nor appropriate. However, Congress has already granted a right of access and LMJV can insist on that access rather than accept a land exchange burdened by deed restrictions. Therefore, the Forest Service does not have "actual control" of the private development under ANILCA necessary to "federalize" the private development for NEPA purposes.

The second potential regulatory authority at play in this decision is the existing scenic easement on LMJV's private inholding. As noted above, the scenic easement limits the development to "a mix of residential, commercial, and recreational uses typical to an all-season resort village" and provides the Forest Service the ability to "veto" certain non-conforming uses of the property. But the scenic easement does not purport to give general regulatory authority to the Forest Service that would allow the Forest Service to control the degree or density of the private development. As long as the development is typical of an all-season resort village the scenic easement does not constrain the size of the development in any manner. In fact, the FEIS recognizes that Alternative 3, where the entire private inholding is constrained by the scenic easement, could still result in a residential and commercial development with 403 hotel units; 998 condominium units; 504 townhomes; 76 single family residences and 221,000 square feet of commercial space. The scenic easement also specifically recognizes that Mineral County retains general regulatory authority and expresses the intent not to "conflict with or intrude upon" that development authority. Thus nothing in the scenic easement gives the Forest Service "actual control" of the development on the private land.

The final source of regulatory authority at issue is the Forest Service's authority to seek deed restrictions which would constrain development on the federal exchange parcel after it passes into private ownership. This authority was the subject of particular confusion during the litigation, and I note the district court's concern that my 2015 ROD did not specifically address the ability of the

Forest Service, in a land exchange scenario, to seek additional deed restrictions pursuant to 36 C.F.R. 254.3(h) if "appropriate" or if needed in the public interest.

The land exchange regulations do allow the Forest Service to turn down a land exchange proposal where the proponent is unwilling to accept deed restrictions. Similarly, the proponent cannot be compelled to accept any deed restrictions and the regulations provide no independent authority to regulate the land after it passes into private ownership. Any deed restrictions proposed by the Forest Service must be accepted by the land exchange proponent. Thus, none of the three potential sources of regulatory authority over the LMJV inholding provides "actual control" of the private development.

4) NEPA "Hard Look" Review

The environmental effects associated with any of the alternatives are a key component of my decision. The FEIS includes analysis of the potential impacts to the physical, biological and human environment. This includes direct, indirect and cumulative effects analyses associated with Alternatives 1, 2 and 3, based on multiple development concepts for the Village at Wolf Creek. My staff and I have conducted a thorough review of the environmental analyses associated with each of the alternatives analyzed in the FEIS and engaged the public in the review. There has been vocal opposition to the development based on the likely effects disclosed in the FEIS. I carefully considered these environmental effects and the public comment (both pro and con) when making my decision. I carefully weighed all environmental effects with the Forest Service's legal obligations under ANILCA.

Chapter 4 of the FEIS includes detailed analysis of potential direct, indirect and cumulative effects associated with each alternative. A summary of these effects is provided in Chapter 2 of the FEIS (Tables 2.6-1 and 2.6-2, and Tables 2.6-3.1 through 2.6-3.14 of Section 2.6.2). The FEIS displays the impacts of the various development levels under each alternative across a wide variety of resources, including: surface water; groundwater; geology and soils; water rights and use; climate and air quality; vegetation; wetlands; macroinvertebrates and fish; wildlife; special status plant and animal species (ESA listed and Regional Forester sensitive); scenic resources; recreation resources; transportation; social and economic; and cultural resources.

One issue of confusion and dispute regarding the FEIS was whether the effects of LMJV's proposed private development should be considered part of the federal action and thus a "direct" effect of the federal access decision or whether those impacts should be considered an indirect effect of the federal access decision. As defined by 40 CFR §1508.25, "connected actions" are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

- Automatically trigger other actions which may require environmental impact statements.
- Cannot or will not proceed unless other actions are taken previously or simultaneously.
- Are interdependent parts of a larger action and depend on the larger action for their justification.

Future development of a winter resort on private land that is accessible year round would not be possible without Forest Service approval for either a land exchange (Alternative 2), or a road access corridor across NFS lands (Alternative 3). Therefore, future development on the private lands owned by LMJV was considered a "connected action" in the FEIS and was analyzed as an indirect effect of approval of either Alternative 2 or 3. As noted above, because the ultimate size of LMJV's development will not be known until Mineral County issues its approvals, the Forest Service used a range of development scenarios (low, medium, and high) to capture the impacts of granting LMJV's access to its inholding whether through a right-of-way or a land exchange.

While I believe we correctly categorized the impacts of LMJV's village as indirect effects of the federal access decision, I also firmly believe that our analysis would not have been different if the EIS treated the Village as part of the federal action and therefore classified its impacts as direct effects

rather than indirect effects. We would still have used the same reasonable range of development scenarios to capture the impacts of the Village.

Although the FEIS took a broad approach and analyzed future development on the private lands, it should be noted that the Rio Grande NF has no jurisdiction[9] on private lands and that the NFMA and the Forest Plan do not apply to private lands. Additionally, it is important to reinforce that future development on the private inholding is not a component of either of the action alternatives analyzed in the FEIS.

The FEIS acknowledges that the WCSA 2013 Master Development Plan (MDP) identified reasonably-foreseeable future actions such as the Meadow Lift which were analyzed for cumulative effects but not as connected actions. WCSA's 2013 MDP is not itself an action at all nor does the MDP account for a future Village (of any size/configuration) on private lands near the base area. Both the Rio Grande and San Juan National Forests accepted the MDP in November of 2015.

Based on the review of surrounding lands and activities associated with those lands, it was determined that there are no additional connected actions.

This analysis constituted a "hard look" at the potential environmental effects of the alternatives and more than met the twin aims of NEPA: informed decision making and informed public participation. Any defects in the EIS that do not defeat the informational goals of NEPA do not require a new analysis. Whether the Forest Service properly classified the private land development impacts as direct or indirect impacts is not controlling and I am convinced that the FEIS is adequate.

5) Endangered Species Act & Canada Lynx Conservation Measures

In listing the Canada lynx as a threatened species, the USFWS determined that "the single factor" threatening the species was the inadequacy of regulatory mechanisms[10] to conserve the Canada lynx distinct population segment (DPS) in the lower 48 states. From the Lynx Conservation Assessment and Strategy which preceded this listing, through the Southern Rockies Lynx Amendments (SRLA) and down to project-level consultation under the ESA, a fundamental concern was connectivity of habitats. That concern was expressed in creating Lynx Analysis Units (LAUs) and Linkage Areas. However, the Forest Service lacked jurisdiction to directly regulate private land or to regulate the highways themselves. SRLA Standard ALL S1 provided that "permanent developments" and vegetation management projects must maintain habitat connectivity in an LAU and/or Linkage Area. If the Forest Service were proposing to construct a winter resort on NFS lands under a special use authorization, Standard ALL S1 would apply. But, Standard ALL S1 was not developed to prevent the Forest Service from authorizing access to developments on private land even where those developments have adverse impacts on connectivity. Rather, Standard ALL S1 applies only to developments on NFS land – where the Forest Service has jurisdiction. Thus, ALL S1 *was not applicable* to the Wolf Creek Village development on private land.

The April 2013 Biological Assessment, August 2013 Supplemental Biological Assessment, and the 2014 FEIS erroneously assumed that ALL S1 applied to the private land development. But the error is of no significance because the connectivity issue which is addressed in the ALL S1 standard is very much at the center of our analysis of the impact the private development will have on Canada lynx. The 2013 Biological Opinion did not repeat the Forest Service error of tying the connectivity issue to Standard ALL S1. The project-level consultation seeks to deal with the biggest impact of the private development on connectivity through LMJV's conservation measures which address the adverse effects of increased highway use on connectivity (avoidance of the highway or death of

[9] The Forest Service does have authority to enforce the scenic easement but LMJV has not proposed a development that is inconsistent with that easement.

[10] The listing decision specified the lack of guidance in National Forest land and resource management plans and Bureau of Land Management land use plans.

individual lynx). So, the conservation measures take the place of Standard ALL S1 in a private-land scenario where maintaining landscape and habitat connectivity for the lynx in the Wolf Creek linkage area continues to be of interest to the parties and the ALL S1 standard is not applicable.

The Forest Service addressed the "single factor" of forest plans without lynx conservation guidance by amending twenty-five forest plans across the Northern (2007) and Southern (2008) Rocky Mountains. The amendments to 7 forest plans in the southern Rockies were referred to as the Southern Rockies Lynx Amendment (SRLA) and the amendments to eighteen forest plans in the Northern Rockies were known as the Northern Rockies Lynx Management Direction (NRLMD). These amendments established management direction on approximately 25 million acres of Canada lynx habitat on NFS lands. In its biological opinion, the USFWS found "the programmatic and project-level objectives, standards, and guidelines in the [SRLA] provide comprehensive conservation direction adequate to reduce most adverse effects to lynx from Forest management and to preclude jeopardy to the lynx." The SRLA (like its companion NRLMD in the Northern Rockies) followed a programmatic/project consultation format:

> "Further section 7(a)(2) consultation will occur on future site-specific projects and activities if they may affect lynx. Future consultations will reference back to the Biological Opinion issued on this decision to ensure the effects of the specific projects are within the effects anticipated in the Biological Opinion issued on this decision (USDI FWS 2008)."
>
> "The Service concludes that continued implementation of the Plans incorporating the amendments for lynx conservation may result in some level of adverse effects to lynx. However, the level of adverse effects to lynx are not reasonably expected to, directly or indirectly, reduce appreciably the likelihood of both the survival and recovery of the lynx DPS in the wild by reducing the reproduction, numbers, or distribution of lynx."

The consultation is structured by recognizing the programmatic Biological Opinion for the SRLA as the first tier of a consultation framework, with the review of subsequent projects that may affect lynx as being the second tier of consultation. For projects expected to adversely affect the Canada lynx which are consistent with, and fully analyzed under, the first tier Biological Opinion, the USFWS provides a letter that confirms that the project is in compliance with the programmatic Biological Opinion on the SRLA. For projects that will adversely affect the Canada lynx but were not fully analyzed in the first tier Biological Opinion, a second tier Biological Opinion is prepared. For projects that will result in insignificant and discountable effects to the Canada lynx, the USFWS provides a letter of concurrence.

The structure of the Canada lynx listing (and the programmatic and site-specific Tier 2 Biological Opinions under the programmatic consultation for the SRLA) reinforce the unlikelihood of an individual project on private land resulting in jeopardy to the Canada lynx. The Response-to-Comment section of the FEIS rejected any concern that the private development could jeopardize the lynx stating: "there is no project or action that could be implemented, if its effects were confined to the Southern Rockies that would result in a jeopardy determination." Accordingly, project-level Biological Opinions rely on programmatic Biological Opinions to address jeopardy and focus on a smaller scale where the concerns are incidental take, adverse effects and conservation rather than jeopardy. As long as the basic programmatic/site-specific framework remains the same, there is no need to further address jeopardy at the project-level because jeopardy has already been considered and resolved at the programmatic level by the SRLA plan amendments Biological Opinion.

The November 13, 2017 USFWS status review for Canada lynx indicates that the lynx has recovered and that a proposed rule delisting the species will be pursued. It is likely to take several years before a final rule is adopted and, if that rule delists the lynx, litigation is assured. Nevertheless, the USFWS determination that the lynx has recovered in the lower 48 states and

should be proposed for delisting, additionally supports the Forest Service determination in our 2018 Biological Assessment (BA) that the Village at Wolf Creek private land development does not jeopardize the species.

The USFWS did not specifically address the question in its 2013 Biological Opinion whether conservation measures were necessary to insure that the private development is not likely to jeopardize the species. Thus, the Forest Service is reinitiating consultation with a BA on my choice of Alternative 3. The BA takes the position that the private land development would not jeopardize the Canada lynx *even if there were no conservation measures*. The purpose of the conservation measures is not to avoid jeopardy but to fund proactive conservation measures for Canada lynx in the Wolf Creek Pass area which reduce adverse effects to the local population, minimize incidental take, and maintain connectivity values for lynx in a key landscape movement linkage for lynx in southern Colorado.

In response to the district court's finding that the conservation measures were inadequate, LMJV has clarified in its April 12th 2018 letter and proposed MOU that the funding commitment is firm and the Technical Committee has authority to expend funds as it sees fit without LMJV approval.

I find that the modified conservation measures are reasonably specific, certain to occur and impose enforceable obligations. These conservation measures will help us understand how Hwy 160 affects the local lynx population and address the increasing highway traffic which has the most potential to impact connectivity – a key factor for conserving the local population.

I further find that the Forest Service's amendment of 25 forest plans covering over 25 million acres of lynx habitat on NFS lands across the Rocky Mountains (and the continued tiered consultation process with the USFWS) amply meets the Section 7(a)(2) obligation to "insure" that this project is "not likely to jeopardize" the continued existence of the Canada lynx. I also note that the conservation measures for the Village at Wolf Creek private land development are not necessary to my no jeopardy finding.

6) Forest Plan Direction

Congress, through NFMA, directed the Forest Service to ensure that "instruments for the use and occupancy of National Forest System lands" should be consistent with the forest plan. 16 U.S.C. §1604(i). Grant of an access route over NFS lands is subject to NFMA's consistency provision but development of private land is not.

The access routes evaluated in the FEIS are within Management Area Prescription 8.22 - Ski-based Resorts: Existing/Potential (Forest Plan, IV-35 to 36), which emphasizes management for their existing or potential use as ski-based resort sites. This management area encompasses the WCSA SUP boundary (FEIS Figure 1.9-1). Granting access to private property for development which is complimentary to the ski area is consistent with this management area prescription.

The SRLA imposed forest plan direction (including objectives, guidelines and standards) on seven forest plans in the Southern Rockies in 2008. However, the SRLA does not purport to grant authority to control private land within the boundary of a National Forest. In fact, the SRLA assumes that private land will be developed in a manner that is detrimental to lynx.

The Biological Opinion for the SRLA made the following observations:

> "The Forest Service has varying levels of authority and jurisdiction . . . ." For instance, the Forest Service typically has little influence on . . . private land development but has substantial influence on lynx through vegetation management actions on National Forests."

> "Many actions that affect connectivity are . . . under the authority of other agencies . . . or private land owners.
>
> "The Forest Service considers the conditions of lynx habitat on private lands within LAUs to the extent possible, in its assessment of baseline conditions during development of projects for Forest lands, and adjusts its action to reduce negative effects in the LAU."
>
> "Even with implementation of the amendment, the role of the Forest Service in ameliorating the impacts of highway or private land development is limited. The amendment would however . . . require the Forest Service to consider land exchanges or acquisition, and coordinate with other agencies to lessen the impacts of development."

The Biological Opinion for the SRLA goes on to recognize that adverse private land effects will occur but recognizes that the size of private land parcels is small relative to total lynx habitat as well as individual lynx home ranges. The Biological Opinion concludes that the negative effects of private land development interspersed with NFS land would be moderated by management of surrounding NFS lands under the amendment. Finally, the Biological Opinion notes that the objectives are to "actively maintain or restore" lynx habitat connectivity "either through Federal land management or conservation easements, land exchanges, or other cooperative efforts with private land owners." Clearly, the Biological Opinion recognized the Forest Service did not have the authority to impose its plan standards on private lands. Thus, the amendment sought to incentivize private landowners to cooperate in conserving Canada lynx. Here, LMJV is cooperating to conserve lynx through committing to substantial funding and developing conservation measures.

The 2013 Biological Assessment for the proposed land exchange also recognized: "[t]he future development of private lands and the density of development that might occur on the Village parcel would be outside of the [U.S. Forest Service's] jurisdiction and not subject to SRLA direction (i.e., because the parcel would be private land)."

The characterization in the 2014 FEIS that Alternative 3 is not consistent with Standard ALL S1 or Objective ALL O1 and would require a site-specific forest plan amendment was incorrect. However, the objection reviewing officer provided an instruction to address the SRLA in the plan consistency analysis. This ROD demonstrates that SRLA Standard ALL S1 and Objective ALL O1 do not apply to private land development. Therefore, Alternative 3 cannot be inconsistent with ALL S1 or ALL O1.

6.0 Public Involvement

Public involvement with the Village of Wolf Creek Access Project began on April 13, 2011. Details of the public involvement efforts are described in the FEIS, Section 1.5. The following is a summary of those efforts:

- On April 13, 2011 a scoping package soliciting comments was mailed to 84 individuals, agencies, tribes and other organizations. In addition, the scoping package was posted on the Rio Grande NF website. The scoping period ended on June 4, 2011.
- On April 19, 2011 a Notice of Intent to prepare an EIS was published in the Federal Register.
- On April 25, 26 and 27, 2011 public open houses were held in Creede, Pagosa Springs, and Del Norte, Colorado respectively.
- A field trip to the project area was held September 20, 2011.

- On August 17, 2012 a Notice of Availability of the DEIS was published in the Federal Register, which initiated a 45-day comment period. The comment period was subsequently extended by 15 days to October 16, 2012.

These public involvement efforts resulted in the Forest Service receiving 111 comment letters during the scoping period (April 13-June 4, 2011) and 893 comment letters during the DEIS comment period (August 17-October 16, 2012).

7.0 Alternatives Considered

As per CEQ Regulations 40 CFR 1502.14, alternatives to the No Action were developed and analyzed to address environmental issues. They include four Alternatives considered but eliminated from detailed study, Alternative 2 – Land Exchange, and Alternative 3 – Access Road.

7.1 Alternatives Considered but Eliminated from Detailed Study

Exchange Non-Federal Inholding for a Federal Parcel Elsewhere.

This alternative assumes that the Forest Service and LMJV would agree to exchange the private inholding for a Federal parcel of equal value on the Rio Grande NF or elsewhere on federally owned property. This alternative was eliminated from analysis because LMJV expressed no interest in such an exchange.

Forest Service Purchase of the Private Land Inholding.

This alternative assumes the United States (Forest Service) would purchase the non-Federal inholding from LMJV. Historically, the Forest Service has acquired critical non-Federal parcels through a congressional appropriation from the Land and water Conservation Fund (LWCF). While the non-Federal parcel would be a desirable acquisition for the Forest Service, such an acquisition would require LMJV be willing to sell the private land inholding and that funds be available from the LWCF for the purchase. This alternative was rejected because it does not meet the Purpose and Need, LMJV is not willing to sell and there would not likely be funding available for the purchase of the inholding.

Access the Non-Federal Parcel Via an Upgraded NFSR 391.

This alternative provides for upgrades that would allow winter use of NFSR 391. However, this access is encumbered by seasonal use, as well as design and recreational land use issues. This alternative was eliminated from detailed study because it conflicts with established Forest Service winter recreational uses, would materially interfere and be inconsistent with the ongoing operations of WCSA, and would impact traffic at WCSA's intersection with Hwy 160.

Access Non Federal Parcel from Tranquility Road.

This alternative assumes that the private land inholding would be accessed by extending Tranquility Road, the access road to WCSA's parking lots, east to the inholding to provide primary vehicular access. This alternative would create ski area access and parking lot traffic issues, and depending on the level of development that may ultimately be approved by Mineral County, could result in the CDOT requirement for a grade-separated interchange with Hwy 160 due to issues of safety and congestion. Therefore, this alternative was eliminated from detailed study because of the potential impacts to WCSA operations and due to potential traffic impacts at WCSA's access road intersection with Hwy 160. It should be noted that the Tranquility Road extension is included in the Action Alternative as a means of providing ski area access from the LMJV parcel and to serve as an emergency access/ egress road.

7.2 Alternative 1 - No Action

Per the requirement of 40 CFR part 1502.14, a No Action Alternative has been included in the analysis to provide a baseline for comparing the effects of the Action Alternatives. By definition, the No Action Alternative represents a continuation of existing Federal and non-Federal land ownership patterns and existing management practices on these lands. Under the No Action Alternative, as illustrated by Figure 2.2-1, LMJV has vehicular access to the private parcel via NFSR 391 during those periods when this road is snow-free, generally mid-June through September. Under this alternative there would be no additional road access provided to the ±288-acre private land inholding.

7.3 Alternative 2 - Land Exchange

Alternative 2, the Proposed Action, as illustrated by Figure 2.2-2 within the EIS, is a land exchange between the United States and LMJV. This alternative proposes that LMJV would convey approximately 177 acres of non-Federal lands to the Rio Grande NF in exchange for approximately 205 acres of NFS lands managed by the Rio Grande NF. The ±177-acre non-Federal exchange parcel to be conveyed to the United States encompasses the southern and western portions of the private land inholding, and the ±205-acre Federal exchange parcel is located to the north, east and south of the private land inholding. This exchange would create a private land parcel of ±325 acres extending to Hwy 160, and would accommodate year-round vehicular access. Under Alternative 2, the existing Tranquility Road which extends from Hwy 160 to a WCSA parking lot, would be extended east ±1,593 linear feet across NFS lands within the WCSA SUP boundary to provide access between the private land parcel and WCSA. This road would provide limited, restricted and seasonal access between Hwy 160 and the private land parcel, and would also provide a route for emergency access/egress.

7.4 Alternative 3 – Access Road

Alternative 3 was designed to fulfill the Forest Service's obligations under ANILCA which is to provide adequate access to non-Federally owned land to secure to the owner the reasonable use and enjoyment thereof. Under Alternative 3, the configuration of NFS and private lands in the project area would remain unchanged. The area of the private land inholding included in this alternative is about 288 acres. This alternative includes an access road across NFS lands between Hwy 160 on the north and the private land inholding on the south (FEIS Figure 2.2-4). The road would be about 1,610 feet in length and be within a 100-foot corridor with a total area of about 3.7 acres.

The existing Tranquility Road would be extended east about 530 linear feet across NFS lands to provide access between the inholding and WCSA, and would provide limited, restricted and seasonal access between Hwy 160 and the private land inholding. Tranquility Road would also provide a route for emergency access/ egress.

8.0 Environmentally Preferable Alternative

In accordance with CEQ Regulations, I am required to identify the alternative or alternatives that could be considered environmentally preferable [40 C.F.R. 1505.2(b)]. The Forest Service Handbook 1909.15 Section 05 describes *environmentally preferable* as: "The alternative that will best promote the National Environmental Policy Act as expressed in NEPA's Section 101 (42 USC 4321). Ordinarily, the environmentally preferable alternative is that which causes the least harm to the biological and physical environment; it is the alternative which best protects and preserves historic, cultural and natural resources" (36 CFR 220.3).

Based on the review of the alternatives, Alternative 1, the No Action, is the environmentally preferable alternative.

9.0 Findings Required by Other Laws, Regulations and Agency Policy

I have reviewed the FEIS and concluded that implementation of Alternative 3 is consistent with all relevant laws, regulations and requirements. This includes, but is not limited to, the following:

- Alaska National Interest Land Conservation Act of 1980
- Clean Water Act of 1977, as amended
- Endangered Species Act of 1973, as amended, including consultation resulting in the Biological Opinion as signed on November 15, 2013
- Floodplain Management – Executive Order 11988 of 1973
- National Environmental Policy Act of 1968, as amended
- National Forest Management Act of 1976
- National Historic Preservation Act of 1966, as amended
- Protection of Wetlands – Executive Order 11990 of 1977

10.0 Pre-Decisional Administrative Objection Process

This decision is subject to the pre-decisional review process pursuant to 36 C.F.R. 218. Objections must be filed within 45 days of the publication of a legal notice for the opportunity to object in the Valley Courier newspaper in Alamosa, Colorado (36 C.F.R.218.26(a)). The publication date of the legal notice in the newspaper is the exclusive means for calculating the time to file an objection (36 C.F.R.218.8). Those wishing to object should not rely on dates or timeframe information provided by any other source.

Objections including attachments must be in writing and filed (regular mail, fax, email, hand-delivery, express delivery) with the Reviewing Officer (36 C.F.R.218.3). It is the objector's responsibility to ensure the timely filing of an objection with the reviewing officer (36 C.F.R. 218.9(a)).

Objections must be filed with the Reviewing Officer at: USDA, Forest Service, Rocky Mountain Region, Attention: Reviewing Officer, 1617 Cole Boulevard, Building 17, Lakewood Blvd., Lakewood, Colorado 80401, Fax: 303-275-5134. The office business hours for submitting a hand-delivered objection are: Monday through Friday, 8:00 am to 4:30 pm, excluding holidays. Electronic objections must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf) or Word (.doc or .docx) to: r02admin_review@fs.fed.us The objection must include a physical mailing address and have an identifiable name attached or verification of identity will be required. A scanned signature may serve as verification on electronic appeals.

Either the Reviewing Officer or the objector may request a meeting on the objections and potential resolution to the objections (36 C.F.R. 218.11(a)).

Only individuals or organizations who submitted specific written comments during the two opportunities to comment periods are eligible to file an objection (36 CFR 218.2, 218.5(a)). These two opportunity to comment periods were the scoping period (April 13-June 4, 2011) and the DEIS comment period (August 17-October 16, 2012). Objections must meet the objection content requirements specified in 36 C.F.R. 218.8. If no objections are filed within the 45 day objection

period, implementation of the decision may occur on, but not before, five (5) business days after the close of the objection filing period.

11.0 Contact Person

For additional information concerning the Record of Decision, the FEIS, or the Forest Service objection process, please contact:

Tom Malecek, Deputy Forest Supervisor
Rio Grande National Forest
1803 West Highway 160
Monte Vista, CO 81144
Telephone: (719) 852-6225
Email: tmalecek@fs.fed.us

The Record of Decision, and supporting documents, are available for inspection during regular business hours at the at the above address.

12.0 Signature and Date

I have been delegated the authority and am the Responsible Official for the decision outlined in the Record of Decision. Note that in many cases this Record of Decision summarizes information described more completely in the FEIS. For detailed information, please refer to the FEIS and project file.

_____ _____

Dan Dallas Date
Forest Supervisor
Rio Grande National Forest

WOLF CREEK ANILCA ROAD RIGHT-OF-WAY

Biological Assessment

prepared by

7/18/18

Peter McDonald, Program Leader
Threatened, Endangered and Sensitive Species
Rocky Mountain Region

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Table of Contents

Table of Figures

Table of Tables

Part 1: Introduction

The purpose of this biological assessment is to analyze and determine the likely effects on federally-protected species (endangered, threatened, and proposed), from the granting of road access by the U.S. Forest Service to an inholding in the Rio Grande National Forest. Under the Alaska National Interest Lands Conservation Act (ANILCA), the Forest Service must provide private landowners with access for reasonable use and enjoyment of their inholding property.

This Biological Assessment conforms to legal requirements set forth under section 7 of the Endangered Species Act (ESA) (19 U.S.C. 1536 (c), 50 CFR 402.12 (f) and 402.14). Section 7(a) (1) of the ESA requires federal agencies to use their authorities to further the conservation of listed species. Section 7(a) (2) requires that federal agencies ensure any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of federally-listed species, or destroy or adversely modify designated critical habitat.

Forest Service policy also requires that a review of programs and activities be conducted to determine their potential effect on federally-threatened and endangered species and species proposed for listing as such under the ESA. Under the ESA, a Biological Assessment (BA) must be prepared for federal actions the equivalent of "major construction activities," to evaluate the potential effects of the proposal on these species that overlap the action area. The contents of the BA are at the discretion of the federal agency, and will depend on the nature of the federal action (50 CFR 402.12(f)).

Part 2: Background

This Biological Assessment borrows extensively for foundational reference information (descriptions, analyses) from the project documents for the 2015 Rio Grande National Forest Supervisor's ANILCA land exchange decision (www.fs.usda.gov/project/?project=35945). This particularly includes the Biological Assessment (April 2013), Supplemental Biological Assessment prepared a few months later to update the baseline for the Canada lynx under ongoing bark beetle- and fire-induced landscape changes to lynx habitat on the forest (August 2013), Final Environmental Impact Statement (FEIS; November 18, 2014), and final Record of Decision (ROD; May 21, 2015). Focus in this current BA is on evaluating the ANILCA road right-of-way action (Alternative 3) previously evaluated in the 2014 Wolf Creek EIS, to consider any new, relevant information (lynx habitat mapping, new science, ESA decisions) for implications to listed and proposed species and earlier effect determinations.

In 1986, a Decision Notice was signed for the Proposed Wolf Creek Land Exchange. The 1986 Decision Notice approved the conveyance of approximately 300 acres of National Forest System (NFS) lands managed by the Rio Grande National Forest (Rio Grande NF) adjacent to the Wolf Creek Ski Area (WCSA) in exchange for non-Federal lands located in Saguache County, Colorado. The 1986 Decision Notice created a private inholding surrounded by National Forest System lands on the Rio Grande NF. The inholding, which is entirely within the WCSA Special Use Permit boundary, is owned by the Leavell-McCombs Joint Venture (LMJV).

National Forest System Road 391, which connects with U.S. Highway 160 (Hwy 160) and passes through a WCSA parking lot, crosses the private inholding and provides vehicular access to Alberta Park Reservoir. NFS Road 391 provides vehicular access to the private inholding during the summer months. During the winter months this road is under a public motorized closure order and serves as a ski trail for the WCSA.

In June 2001, LMJV applied to the Rio Grande NF for rights-of-way across National Forest System lands between Hwy 160 and the private inholding. LMJV requested that the Forest Service provide permanent, year-round vehicular access to the property through extension of the Tranquility parking lot at WCSA. The proposal was to create the "Tranquility Road" by extending a road through, and beyond, the Tranquility parking lot by approximately 250 feet across National Forest System lands, thereby connecting to the private land inholding.

In compliance with its statutory obligations under Section 1323(a) of the Alaska National Interest Lands Conservation Act (ANILCA), the Rio Grande NF determined that an Environmental Impact

Statement (EIS) was required to analyze the request for access to the private inholding. The EIS analyzed four alternatives in detail:

- *Alternative 1:* No Action
- *Alternative 2:* The Proposed Action (request for a single additional access to the property via an extension of Tranquility Road);
- *Alternative 3: Snow Shed* - East Village Access Alternative (a single access alternative using a new road, referred to as the "Snow Shed Road"); and
- *Alternative 4:* Dual Access Road (a dual access alternative requiring construction and use of both the Snow Shed Road and the extended Tranquility Road).

In March 2006, a ROD was signed by Rio Grande NF Supervisor Peter Clark. The decision was a combination of Alternatives 3 and 4 and authorized the construction of the "Snow Shed Road" and the "Tranquility Road." Four separate appeals of the ROD were received between April and May 2006. In July 2006, Deputy Regional Forester Greg Griffith denied the appeals, thereby upholding the decision in the ROD.

In October 2006, a suit was filed against the Forest Service, alleging that, among other things, the FEIS and ROD were arbitrary and capricious under the Administrative Procedure Act (APA) and in violation of the National Environmental Policy Act of 1969, as amended (NEPA). In October 2007, a preliminary injunction was granted.

In February 2008, the U.S. Forest Service negotiated a settlement with the plaintiff in order to bring a more prompt closure to the litigation and allow for the initiation of a new analysis. The settlement recognized that the Forest Service did not concede the decision making process violated any laws.

In July 2010, LMJV submitted a land exchange proposal to the Rio Grande NF. In addition to a land exchange, LMJV requested an access road across National Forest System lands be analyzed (citing the Forest Service's obligations to provide adequate access to the private inholding under ANILCA). An Agreement to Initiate was signed between Rio Grande NF and LMJV in January 2011, and a Notice of Intent to Prepare an EIS was published by the Forest Service in the Federal Register on April 19, 2011.

On May 21, 2015, after completion of the EIS in late 2014, Rio Grande NF Supervisor, Dan Dallas, signed a Record of Decision selecting the land exchange alternative and extending LMJV's inholding to Hwy 160. This would give LMJV direct access to their property from the highway. A consortium

of conservation groups subsequently challenged Forest Supervisor Dallas's decision. On May 19, 2017, the federal district court in Colorado set aside the decision.

The Forest Service remains obligated to provide access to the private inholding in the Rio Grande NF. Section 1323 of the Alaska National Interest Lands Conservation Act (ANILCA, Public Law 96-487, 16 U.S.C. 3210), provides statutory authority for access to non-Federal lands located within the boundaries of Federal land administered by the Forest Service.

> *"Notwithstanding any other provision of law, and subject to such terms and conditions as the Secretary of Agriculture may prescribe, the Secretary shall provide such access to nonfederally owned land within the boundaries of the National Forest System as the Secretary deems adequate to secure to the owner the reasonable use and enjoyment thereof; provided, that such owner comply with rules and regulations applicable to ingress and egress to or from the National Forest System."* (§1323)

Consequently, the Forest Service now proposes to select the other action alternative (Alternative 3, ANILCA road right-of-way) evaluated in full in the November 2014 FEIS. What constitutes adequate access for "reasonable use and enjoyment" of the private inholding is discussed in more detail in that FEIS. Because the Forest Service consulted with the U.S. Fish and Wildlife Service (USFWS) under section 7 of the ESA only on the land exchange alternative at the time, this Biological Assessment will serve as the basis for consultation with the Service on the planned ANILCA road right-of-way for LMJV to access their private land.

Similar to the land exchange alternative, the 2014 FEIS determination for Alternative 3 was that it could result in adverse effects to the Canada lynx. The basis for that determination is discussed more later in this Biological Assessment. Prior to submitting this Biological Assessment and our request for initiation of consultation to the USFWS, relevant new information with implications to the earlier effects analyses and determinations for listed and proposed species, and updates to the baseline for such species, were considered.

Part 3: Description of the Forest Service Action and Project Area

The federal action here is the Forest Service's authorization of access by LMJV across the Rio Grande NF and related activities on the federal land. While the federal action does not include any activities on the private parcel, the analyses here will disclose potential indirect effects on listed and proposed species and critical habitats from future activities on the non-federal lands and possibly Hwy 160 that may be facilitated by the access. LMJV is participating as an applicant in the interagency consultation between the Forest Service and USFWS. LMJV and the USFWS will address any adverse effects associated with future activities on the private lands as a result of acquiring access from the Forest Service, including obtaining an incidental take permit as needed, or signing a "no take" agreement with the USFWS. Such permits or agreements between LMJV and USFWS may be completed during or after the Forest Service successfully concludes its federal interagency consultation with the USFWS.

3-1. ANILCA Road Access

The Project Area is entirely within the Wolf Creek Special Use Permit Area, although Wolf Creek Ski Corporation is not an applicant to this action (Fig. 1). The area of the private land inholding is ± 288 acres (117 ha). The Forest Service proposes to issue a special use authorization to the private landowner for road access in two locations to his inholding. The first would be a private road easement across National Forest System lands on the Rio Grande NF between Hwy 160 on the north and the private land inholding on the south (Fig. 2). The road would be ± 1,612 feet (491 m) in length and be within a 60-foot (18 m) corridor with a total area of ± 2.22 acres (0.90 ha) for the Low Density Development Concept, or within a 100-foot (30 m) corridor with a total area of ± 3.70 acres (1.50 ha) for the Moderate and Maximum Density Development concepts.

The second access, through issuance of a private road special use permit, would extend the existing Tranquility Road east across ± 529 feet (161 m) of the Rio Grande National Forest, to provide access between the inholding and Wolf Creek Ski Area, and would provide limited, restricted and seasonal access between Hwy 160 and the private land inholding. Tranquility Road would also provide a route for emergency access/egress.

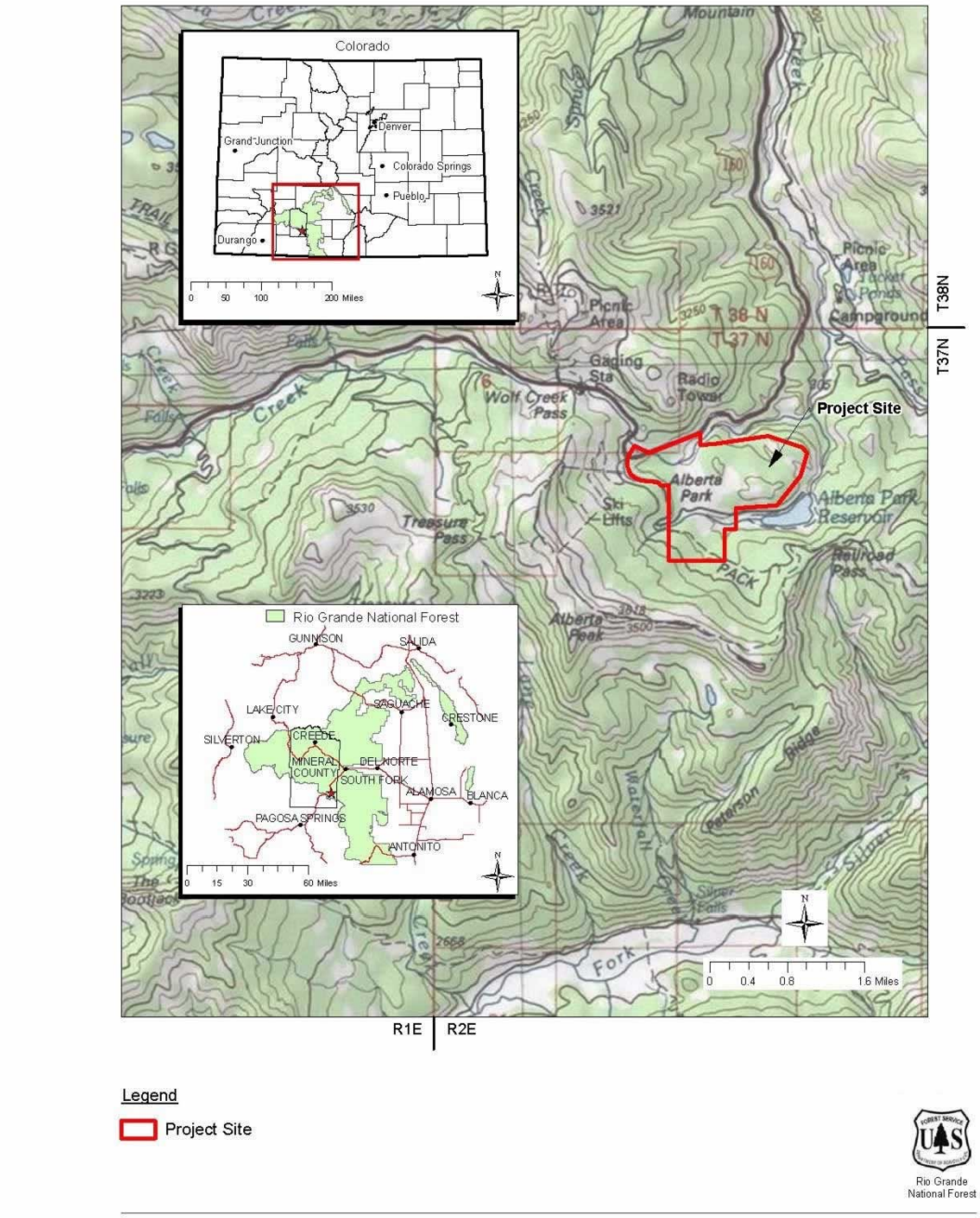

Figure 1. Regional context of the Project Area.

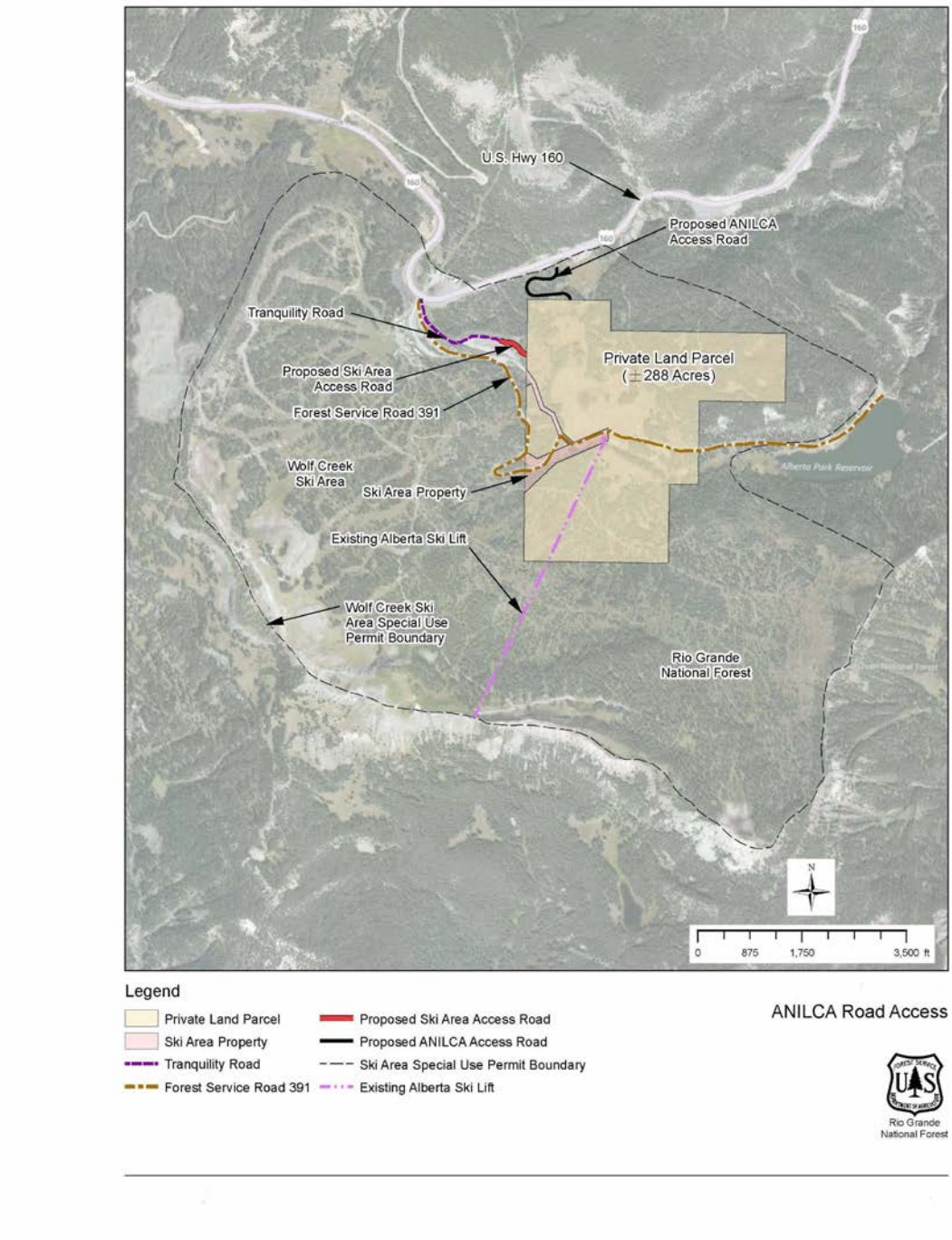

Figure 2. Vicinity map of the Project Area, showing the planned access routes across the Rio Grande National Forest to the private parcel.

The Project Area and full analysis area is within the Wolf Creek Pass lynx linkage (WCPLL). Linkage areas are believed to provide landscape connectivity between blocks of lynx habitat. The Rio Grande NF was also the site for the initial releases of Canada lynx during the state's reintroduction program aimed at restoring the species back to Colorado and the southern Rockies. Lynx have persisted on the Rio Grande NF ever since and have dispersed out to other parts of the state and beyond from this location.

LMJV was previously granted Applicant status by the Forest Service for purposes of section 7 consultation (March 1, 2012, letter from Divide District Ranger Tom Malecek to Clint Jones, LMJV). An inter-agency memo, signed in January of 2003, provides guidance for the "Application of the Endangered Species Act to proposals for access to nonfederal lands across lands administered by the Bureau of Land Management and the Forest Service" (Bosworth et al. 2003). The policy allows applicants to request an incidental take statement with reasonable and prudent measures for take resulting from activities on non-Federal land.

3-2. Development Concepts for the Private Land Inholding

While the federal action is confined to the provision of access across the Rio Grande NF, the private landholder proposes to commercially develop his property into the Village at Wolf Creek. Ultimately, Mineral County has authority to regulate the degree or density of future development on private land in the county, including LMJV's private inholding. The Forest Service's legal obligation is to accommodate the private landowner with access considered to be adequate with respect to reasonable use and enjoyment of their property. Currently, there is not a Planned Unit Development (PUD) approved by Mineral County for any level of development of the private lands, and the level of any future development that may be approved by Mineral County is unclear.

To adequately disclose the range of potential indirect effects associated with private land development that could be facilitated by Forest Service approval of a road access corridor across National Forest System lands, a range of development concepts, including Low, Moderate and Maximum Density, were provided by the landowner and evaluated in the 2014 FEIS. Information on each of these potential development concepts was provided by LMJV, and some assumptions were made for specific elements of each development concept. Whichever development concept plan may ultimately be approved by Mineral County in the future would likely vary from what is analyzed here. Nevertheless, these development concepts provide a reasonable basis from which to analyze and disclose development that could potentially occur if the proposed road access across the Rio Grande NF was provided by the Forest Service. The Forest Service holds a scenic easement which contemplates an all-season resort village but imposes limited restrictions in order to ensure

the private development will be compatible with the ski area and the scenic and recreational values of the adjoining National Forest System lands. In contrast to the specific restrictions in the scenic easement, the easement expressly defers general land use control to the State of Colorado, Mineral County or other unit of local government. The scenic easement does not provide authority for the Forest Service to regulate the degree or density of private development on the LMJV inholding. . The range of development concepts is simply included to assist with the estimation and evaluation of potential indirect effects in this Biological Assessment of the ANILCA road right-of-way action. A comparison of the development concepts is summarized in Table 1 followed by more detailed discussions of each concept excerpted from the 2014 FEIS that remain unchanged today. While the three development concepts range from low density to very high density, the full private parcel is subject to the scenic easement and each concept is consistent with the scenic easement.

Table 1. Development concepts for the Wolf Creek private inholding, Rio Grande National Forest.

Parcel Size (acres)	± 288	± 288	± 288
Number of Units	8	523	1,981
Hotel	--	71	403
Condo	--	244	998
Townhome	--	168	504
Single Family	8	40	76
Commercial Space	--	49,500 ft²	221,000 ft²
Scenic Easement	Applicable to all concepts. Maximum height of buildings and structures limited to 48 feet.		
Access to U.S. Highway 160	± 1,612 linear foot (LF) road in 60' corridor across National Forest System land with at-grade intersection. No accel/decel lanes. 2.22-acre impact.	± 1,612 LF road in 100' corridor across National Forest System land with an at-grade intersection* and accel/decel lanes. 3.70-acre impact.	
Access to Ski Area	± 529 LF road in 60' corridor across National Forest System land within the WCSA SUP to connect with Tranquility Road, and then ± 1,778 LF to Hwy 160. ± 0.73-acre impact.		
Water Storage Volumes in Million Gallons (NG)	None; wells only.	7.4 MG	7.4 MG
Stream/Wetland Crossings & Method	5 culverts	8 bridges 1 culvert	11 bridges 1 culvert
Length of Roads in LF	± 7,976	± 15,332	± 25,369

3-2-1. Low Density Development Concept

This concept assumes that the private land parcel would be partitioned into up to eight lots of 35 acres (14 ha) or greater in size. Figure 3 illustrates the private land that could potentially be developed under this alternative. About 9 acres (4 ha) of the ski area Waterfall parcel within the

boundary of the non-Federal parcel would remain in ski area ownership and would not be available for future development by LMJV under this alternative, and the 2.66-acre (1.1 ha) WCSA A-Way trail parcel is not included in any of the development concepts. The lots could be accessed by a two-lane road within a 60-foot (18 m) corridor extending south to the parcel in an alignment identical to that of the Moderate and Maximum Density Development Concepts for this alternative. Five streams would be crossed using culverts. The 26-foot wide (8 m) access road would have an at-grade intersection with Hwy 160 and there would be no requirement for acceleration/deceleration lanes. A ski area and emergency access road could potentially be constructed from the inholding to the Wolf Creek Ski Area in a road easement across the Rio Grande National Forest.

It is assumed that water for the residences would be provided by wells. Each lot owner would be required to get a domestic well permit from the State, and a court approved augmentation plan would be required if homeowners plan to use well water for outdoor purposes. It should be noted that the existing water rights of the inholding are more than adequate to compensate for the water depletion for outdoor watering. It is also assumed that each home would have a septic system and that electricity would be provided by the SLVREC from adjacent power lines that provide electricity to the ski area. Furthermore, telephone, cable TV and fiber optics would likely be included in the road system.

3-2-2. Moderate Density Development Concept

Figure 4 illustrates the Moderate Density Development Concept which, should the proposed development be approved by Mineral County, could potentially be constructed on the existing ±288-acre (117 ha) private inholding. Note that 9.01 acres (3.6 ha) of the ski area Waterfall parcel within the boundary of the non-Federal parcel will remain in ski area ownership and not be available for development by LMJV under this alternative. This development concept could have approximately 523 units, which may include one hotel with 71 units, four condominiums with 244 units, 13 townhomes with 168 units, 40 single family lots, and 49,500 ft^2 (4,599 m^2) of commercial space. On-site infrastructure would include a water storage and treatment facility, a WWTP, and a natural gas distribution facility.

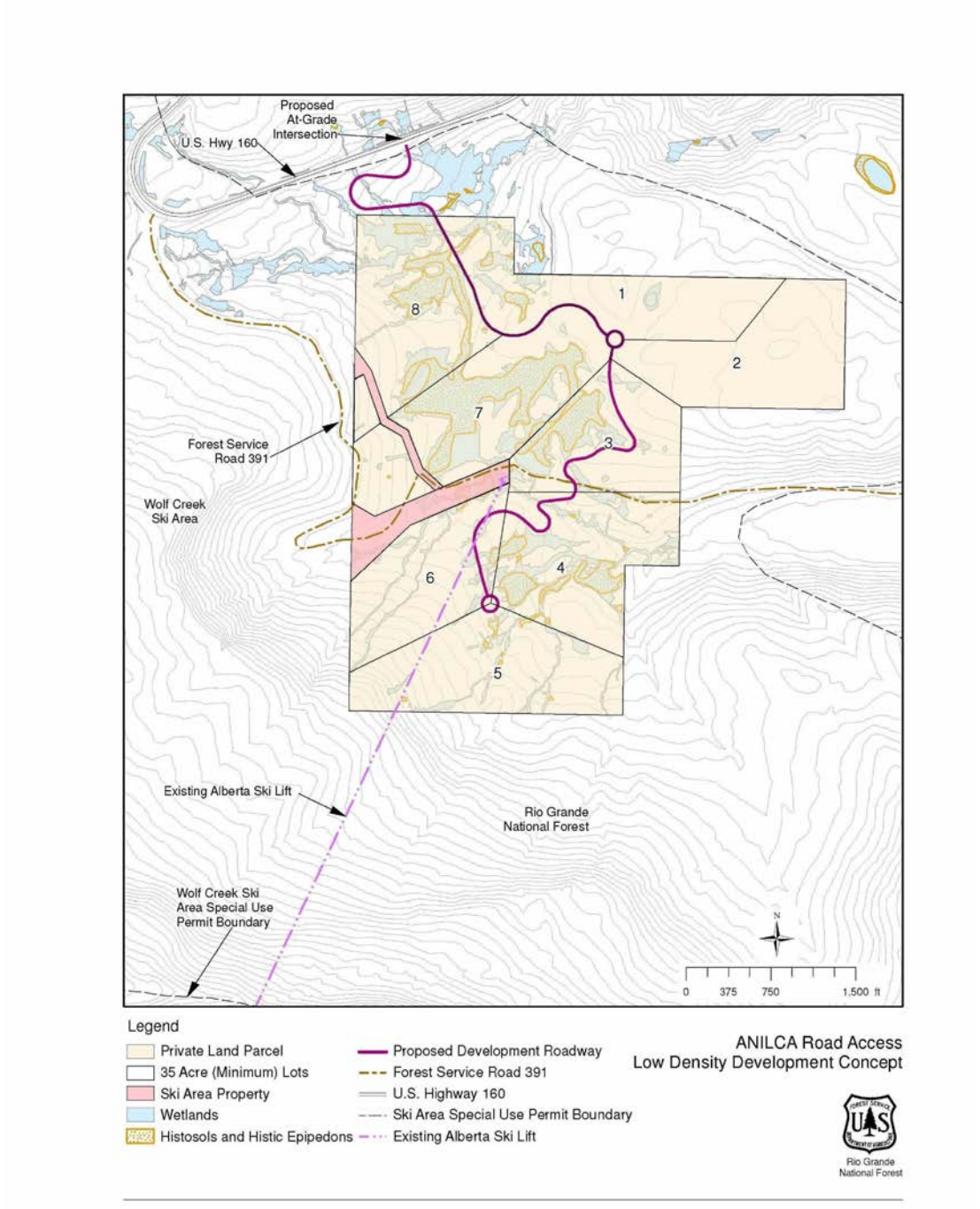

Figure 3. Low density development concept for the private land associated with the ANILCA road right-of-way action, Rio Grande National Forest.

A ±1,612-foot (491 m) long access road would extend south from Hwy 160 across the Rio Grande NF in a 100-foot (30 m) corridor. This road would have an at-grade intersection with Hwy 160 and

there would be acceleration/deceleration lanes. Six streams would be bridged and a tributary to North Pass Creek located in the ROW of Hwy 160 would be culverted. The development would be connected to the ski area by a ±529 foot (161 m) long road within the Wolf Creek Ski Area Special Use Permit boundary across the Rio Grande NF, extending west to Tranquility Road. The first ±250 linear feet (76 m) would be across an undeveloped landscape and the final ±279 linear feet (85 m) would be across terrain disturbed by the ski area parking lot.

The power and communications infrastructure would extend from existing utilities in the Hwy 160 ROW south to the development via the 1,612 foot (491 m) long entry road across National Forest System land. The entry road would be 100 feet (30 m) wide with a road width of 22-24 feet (6-7 m), and thus there would be ample space for the utilities.

The water and sewer utilities network would be confined to the private project site. Water would be withdrawn from three infiltration galleries; one along North Pass Creek and two along South Pass Creek. All of the infiltration galleries would be located on the private land parcel. Raw water pipelines would extend from the infiltration galleries to the water tank farm where the water would be stored for future use. The raw water pipelines would generally be located within the road system, however short segments of the pipelines would extend across the undeveloped landscape from the infiltration galleries to the road system. Raw water would be pumped from the tank farm to the water treatment facility located adjacent to the farm, processed, and then distributed to homes, businesses and other water users via a processed water pipeline located entirely within the road system, which is sufficiently wide to accommodate it.

The sewer system would be located within the road system and generally flow downhill to the WWTP, located along North Pass Creek. Once the sewage is treated, the effluent would be piped a short distance across the landscape to North Pass Creek and discharged.

3-2-3. Maximum Density Development Concept

Figure 5 illustrates the Maximum Density Development Concept which, should the development be approved by Mineral County, could potentially be constructed on the existing ±288-acre private inholding. This development concept could have 1,981 units, which is 281 units more at full build-out than under the maximum density development concept for the land exchange alternative selected in 2015. These may include three hotels with 403 units, 15 condominiums with 998 units, 42 townhomes with 504 units, 76 single family lots, and 221,000 ft^2 (20,532 m^2) of commercial space. On-site infrastructure would include water . storage and treatment facilities, a WWTP, and a natural gas distribution facility. Plans for the access road to Hwy 160 and the ski area access road are identical to those described for the Moderate Density Development Concept.

The Maximum Density Development Concept would likely be built in phases, according to market, economic and logistical considerations. The initial phase of development would have an "at-grade" access. At some time in the future under a maximum build-out scenario, and based on traffic counts, Colorado Department of Transportation may require a grade-separated intersection with Hwy 160. At this time, LMJV is not seeking a grade-separated intersection. If a grade-separated intersection becomes necessary in the future, that would be a discretionary decision not mandated by ANILCA and would be subject to further evaluation under the National Environmental Policy Act, and, as needed, consultation with the U.S. Fish and Wildlife Service under the Endangered Species Act.

3-3. Canada Lynx Conservation Measures

Southwestern Colorado including the Rio Grande NF have a disproportionately high value to recovery of the Canada lynx in Colorado and the southern Rockies region. About 85% of the Canada lynx reintroduced to Colorado by the state were released on the Rio Grande NF. While lynx have settled in other parts of the state, most have remained and reproduce in the high-elevation spruce-fir zone of southwestern Colorado, including the Rio Grande National Forest. The current proposed project also lies within the designated Wolf Creek Pass landscape linkage corridor (WCPLL) for lynx. Continuing to maintain viability of this linkage for landscape and genetic connectivity for the Canada lynx has consistently been the paramount issue when considering access proposals for LMJV.

During the formal consultation on the Wolf Creek land exchange proposal in 2013, LMJV agreed to implement several Conservation Measures to minimize traffic-related effects including incidental take of Canada lynx from development of the private parcel. Details of these measures are described in the Forest Service's April 2013 Biological Assessment submitted to the USFWS for the formal consultation and the Service's November 15, 2013 Biological Opinion.

In summary, the conservation measures consisted of the following: The Applicant would provide funding to implement conservation measures to reduce impacts of any proposed development to the Canada lynx. Funds provided by the Applicant would be administered by a Technical Panel consisting of representatives with expertise in lynx biology, traffic, and other relevant disciplines from CDOT, the USFWS (as a technical advisor), Colorado Parks & Wildlife, the Forest Service, and one representative of the Applicant's choosing[1] representing relevant traffic and biology expertise. Initial funds would be used to pay for a corridor assessment and a trapping/collaring program to

[1] This is a change from the 2014 Conservation Measures, that originally allowed the LMJV Applicant two representatives of their choosing on the Technical Panel.

determine lynx movement across Hwy 160 between South Fork and Pagosa Springs, Colorado. These studies will result in a prioritization of crossing points by lynx on Hwy 160. Next, the Technical Panel members, along with the Applicant and the USFWS, would identify options for a program to further protect lynx from traffic and to facilitate lynx movement across Hwy 160. The Applicant further agrees to undertake, independent of the above conservation measures, additional actions intended to reduce potential impacts to Canada lynx. They include:

- Worker Orientation. Applicant will conduct worker orientation concerning Canada lynx conservation.

- Worker Shuttle. Applicant will bus workers to and from the project site to minimize potential construction-traffic-related impacts to lynx during the infrastructure development period.

- On-Site Employee Housing. In Phase 1 and subsequent phases of any future Village development, the Applicant will provide some employee housing at the Village to minimize those employees' traffic impacts and will offer bus service to its other employees to reduce the amount of traffic they would otherwise add to Hwy 160.

- On-Site Convenience to Reduce Highway Traffic. As to its future owners and guests, the Applicant anticipates that they will have fewer trips along Hwy 160 during their stay than other similar developments in that the Applicant plans to provide the necessary essentials (i.e., grocery store, restaurants, etc.) at the Village to minimize their need to travel outside the Village for such items.

- Property Owners and Guests Lynx Awareness Program. The Applicant also proposes to provide an orientation program to its owners and guests that will advise them of the lynx movements in the area and the importance of motorists being aware of potential lynx crossings on Hwy 160 within the Landscape Linkage.

More recently, in response to the May 19, 2017, Colorado district court decision against the proposed land exchange between the Forest Service and LMJV proponent at Wolf Creek, LMJV proposed to Rio Grande NF Supervisor Dan Dallas new Conservation Measures that largely adopt the earlier ones with important updates to address the court's concerns regarding their enforceability and implementation by LMJV. Specifically, the Conservation Measures now 1) give the Technical Panel that oversees the conservation strategy and its funding, the power to expend

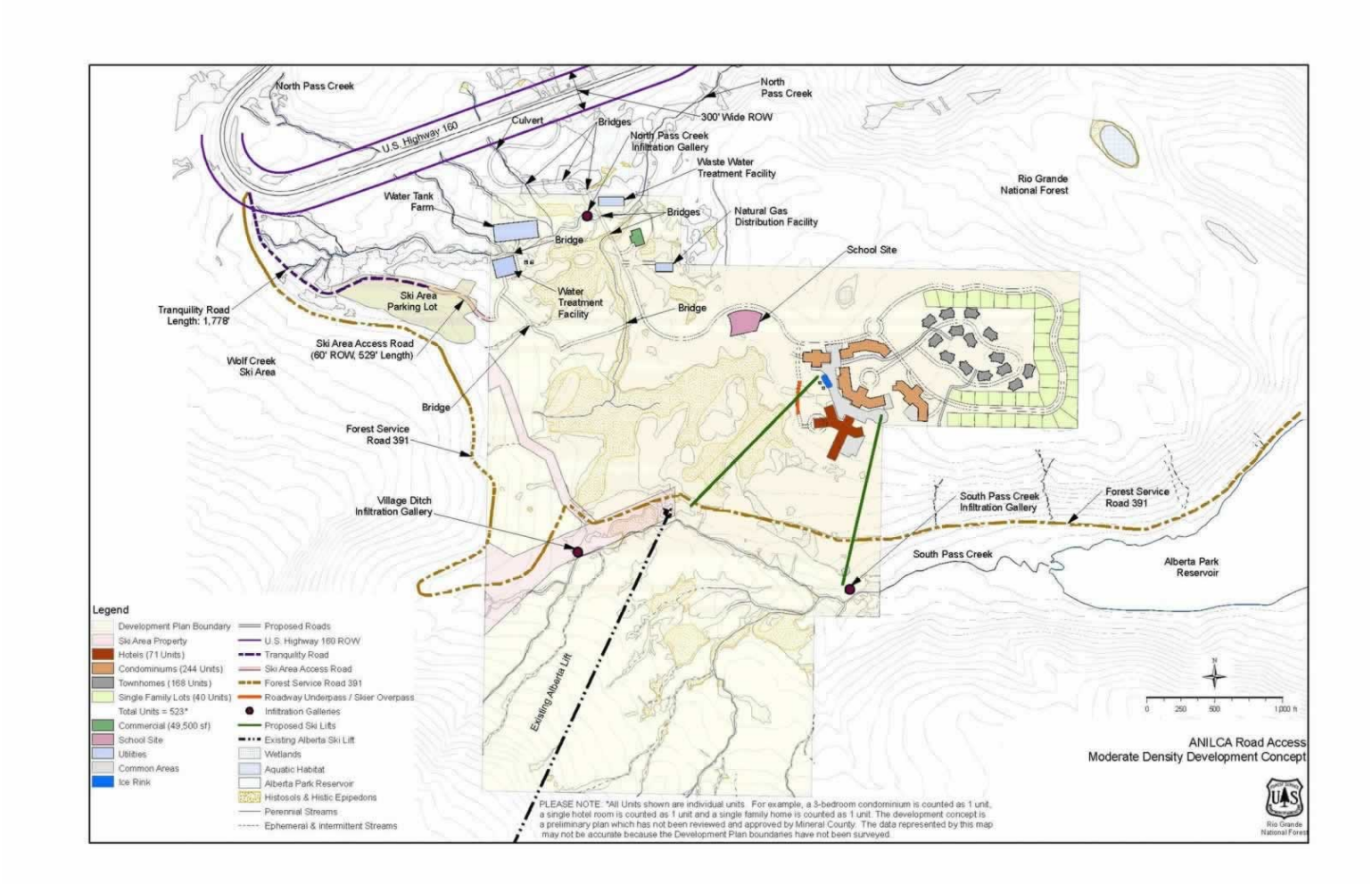

Figure 4. Moderate density development concept for the private land associated with the ANILCA road right-of-way action, Rio Grande National Forest.

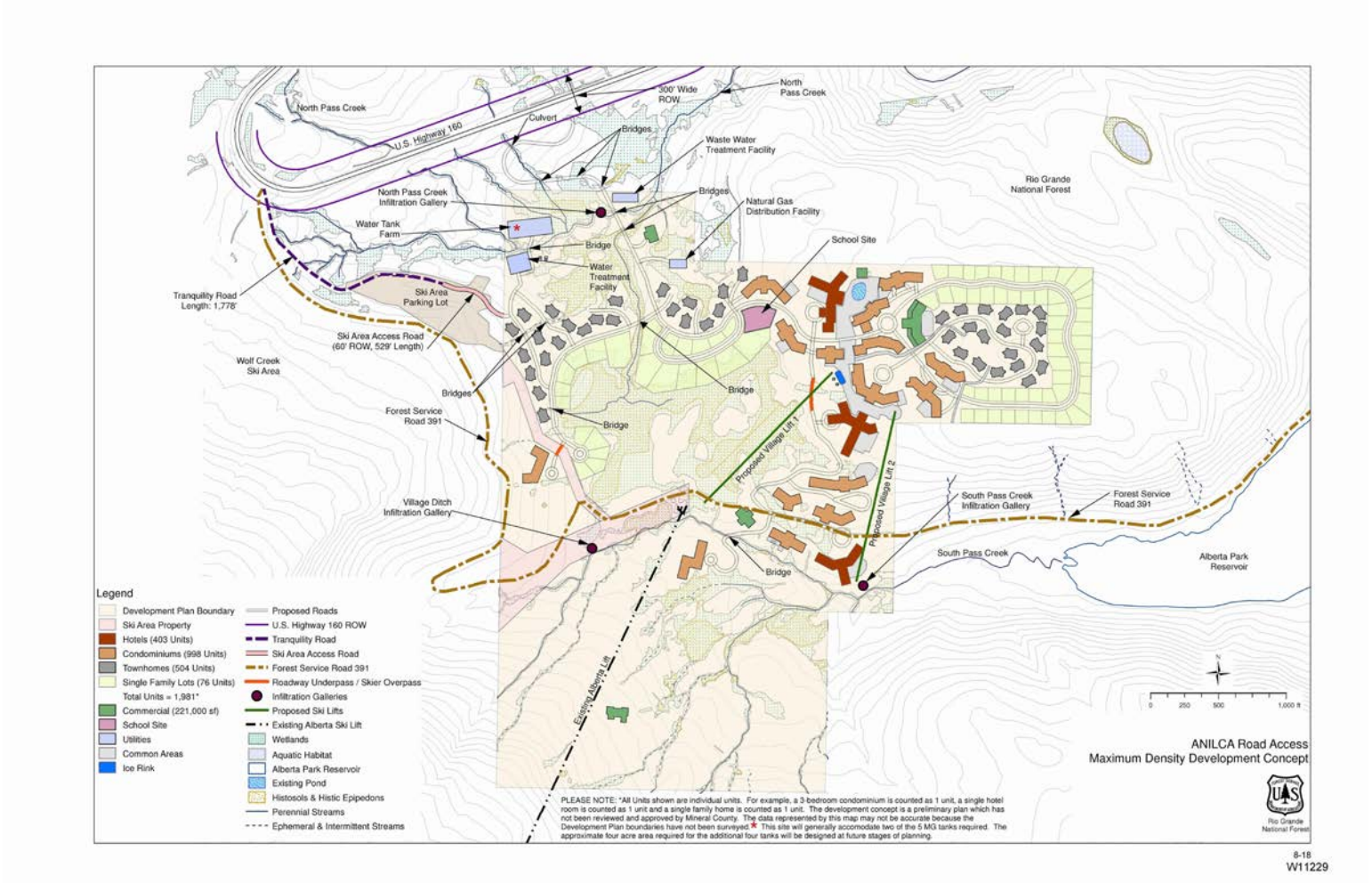

Figure 5. Maximum density development concept for the private land associated with the ANILCA road right-of-way action, Rio Grande National Forest.

the funds as it sees fit, rather than merely making recommendations to LMJV and the USFWS, and 2) affirm LMJV's commitment to the Conservation Measures even if the U.S. Fish and Wildlife Service proceeds to remove the Canada lynx from the federal list of threatened and endangered species. The latest proposal for Conservation Measures from LMJV is found in Appendix B.

The earlier ANILCA access land exchange alternative selected by the Forest Supervisor in 2015, was based on a maximum build-out of 1,700 units on the Wolf Creek private inholding. The current draft Conservation Measures in Appendix B still reflect that maximum build-out scenario. The Forest Service has since confirmed with an LMJV representative that they are willing to modify the Conservation Measures to reflect their continued support for funding the measures up to a maximum of $1,000 per unit and 1,981 units (T. Malecek, Rio Grande NF, personal communication). On another minor note, the CMs incorrectly identify the Canada lynx as an endangered species, when its current federal status is threatened.

Part 4: Consultation History

4-1. Timeline

An extensive consultation history for the project/analysis area is available in the 2013 Biological Assessment (Appendix A) and is not repeated here.

Part 5: New Information Since the 2015 Wolf Creek ANILCA Land Exchange Decision

This section describes relevant new science that has emerged since the 2013 interagency consultation, as well as related new ESA listing and critical habitat decisions since then. The new science is utilized further in this Biological Assessment, where believed applicable to the effects analysis.

5-1. New Science

5-1-1. Squires et al. (*in progress*): *Lynx habitat ecology in beetle-impacted forests.*

Scientific study by Dr. John Squires and collaborators with the U.S. Forest Service's Rocky Mountain Research Station, Rio Grande NF, and Colorado Parks and Wildlife investigating the influence of large-scale disturbance to movements and habitat selection by Canada lynx and snowshoe hares in spruce-fir forests in and around the Rio Grande NF. Lynx and hares are continuing to use habitats and successfully reproduce in the disturbed forest. These studies are intended to better understand the nature of the habitat relationships of these species in that disturbed landscape and provide a more scientific basis for informing broad-scale salvage harvest activities and the new land management plan for the Rio Grande NF.

5-1-2. Buderman et al. (2018): *Large-scale movement behavior in a reintroduced predator population.*

The authors analyzed multi-year telemetry data from the Canada lynx reintroduction program in Colorado, to model and discern behavior and broad scale movement patterns of lynx following releases and population re-establishment at the southern periphery of the species' range. The Rio Grande National Forest provided the core release sites for the inaugural reintroduction program. The authors found some seasonal- and sex-related differences in movement patterns, although both males and females demonstrated more movement activity in the breeding season and summer compared to winter. Animals on average spent about 5 months in "movement bouts" after release, before settling in an area an average of 100 km from their release site. Lynx generally used alternative habitats (xeric shrublands, lodgepole pine forest, montane mixed conifer forest) proportionally more during movement bouts, than settled animals that spent more time in spruce/fir forest, aspen, and alpine or subalpine meadows. The authors also observed what they concluded was "… a population-level corridor of high-speed movement that extended from the

southwest part of Colorado, through the central mountain ranges, and dissipated in southern Wyoming."

5-1-3. Kosterman et al. (2018): *Forest structure provides the income for reproductive success in a southern population of Canada lynx.*

The authors studied the intrinsic and extrinsic factors influencing reproductive success in 36 female Canada lynx of reproductive age (≥2 yr old) over a 14-year period. They demonstrated a positive effect of age on female body condition and reproductive success, though did not find a relationship between pre-pregnancy body condition and reproductive success. The reproductive success of female lynx was primarily related to forest structure and configuration. Highest reproductive success was associated with core areas within larger home ranges, that contained (1) abundant and connected mature forest and (2) intermediate amounts (e.g., ~12-20%) of small-diameter, regenerating forest. Collectively, mature forest in a connected configuration juxtaposed with some early seral forest conditions, provided abundant, temporally stable, and accessible prey resources in the form of snowshoe hares and contributed to the highest reproductive success among female Canada lynx. The authors argue their findings have important implications to informing forest management compatible with conservation of the Canada lynx and its habitat through the lens of females and habitat attributes associated with their reproductive success.

5-1-4. Baigas et al. (2017): *Using environmental features to model highway crossing behavior of Canada lynx in the Southern Rocky Mountains.*

The authors investigated permeability of 2-lane highways for Canada lynx in western Colorado, based on 593 GPS-documented crossings. All lynx with highways in their home range crossed them regularly, and most crossings were at night and early morning hours during low traffic volumes. Based on resource selection function modeling, at a fine scale lynx selected crossing sites with lower distances to vegetation cover and higher tree basal area. The authors did not find a relationship between crossings and topography or road infrastructure. At a landscape scale, lynx crossed highways at locations with high forest canopy in drainages on primarily north-facing aspects. The predicted crossing sites through their modeling compared successfully against known crossing sites based on snowtracking surveys and road-mortality data. Anecdotal observations indicated that resident lynx were able to regularly cross the 4-lane, high traffic volume Interstate-70 that bisects Colorado, by locating and using below-grade crossings at large underpasses. The authors suggest appropriate mitigation to enhance highway connectivity for Canada lynx in the

region, may include reduced speed limits at night and vegetation management, rather than extensive investments in physical overpasses at a few putative crossings.

5-1-5. Vanbianchi et al. (2017): *Canada lynx use of burned areas: Conservation implications of changing fire regimes.*

The authors examined response of Canada lynx to two wildfires in Washington state and long-term conservation implications in the face of increasingly larger and more severe disturbances brought on by a warming climate. They found that lynx exhibited resilience to the fire-disturbed forest, using burned areas as soon as 1 year post-fire, provided that some residual stands and vegetation remained available. The authors concluded that forest fire and vegetation management (green tree timber harvest, salvage) should adapt in concert with the climate-induced changes to disturbance regimes, to avoid contributing to additive effects of forest loss and ensure that landscape heterogeneity and mosaics are provided on the landscape to benefit lynx and other species.

5-1-6. Holbrook et al. (2017): *Understanding and predicting habitat for wildlife conservation: the case of Canada lynx at the range periphery.*

The authors developed an integrated, analytical framework including Resource Selection Functions (RSF), to better understand habitat use and selection by Canada lynx at multiple scales in the northern Rocky Mountains and put in an on-the-ground conservation context. First, they characterized use and habitat selection in winter and summer and at two spatial scales: landscape (second order) and home range (third order). They then built resource selection functions at the second and third orders to 1) evaluate multivariate resource selection and 2) provide single-scale and scale-integrated predictions of lynx habitat.

The authors found that modeling at different scales helped refine the patterns of habitat selection and use by Canada lynx. Lynx used more mature spruce-fir forests than any other structural class or species available to them. Sparse forest and stand initiation were generally avoided. Lynx used lodgepole pine and Douglas-fir canopy cover about the same, though showed strong selection for lodgepole at the 2nd order landscape scale. Finally, intermediate snow depths and distribution of snowshoe hares were the strongest predictors of where lynx established home ranges.

The authors also demonstrated that habitat use or selection can change with changing availabilities, rather than remain constant as often assumed previously in lynx habitat modeling. For example, during the winter male and female lynx increasingly selected for advanced regenerating forest as it became more available, and exhibited decreasing use of stand initiation and sparse forest. Female lynx also consistently selected a narrower gradient of forest structures compared to males,

particularly in the winter. Also, as expected both males and females demonstrated selection of areas of predicted snowshoe hare occupancy. That selection intensified as hare occupancy and use became less available to them, which is consistent with the idea that lynx specialize on snowshoe hares as prey. The authors argue their results are consistent with the idea that advanced regeneration likely produces the highest snowshoe hare densities, while the mature structure class is where hares are most accessible to lynx.

The authors discussed potential applied management implications of their findings. For example, managers could implement tools such as harvest or fire that create advanced regeneration in the long term. To offset or minimize the negative effects in the short term in creating stand initiation conditions (while attempting to promote advanced regeneration over the long term), the manager could focus conservation efforts in areas of relatively low availability of existing stand initiation or sparse forest. Managers should also focus on the needs of females when developing management plans, given their pattern of narrower habitat selection. The authors generated scale-integrated "probable use" maps that managers could use to make decisions in a binary fashion about whether habitat likely exists or not and where the managers would prioritize conservation work for the Canada lynx.

5-1-7. Holbrook et al. (2016): *Multiscale habitat relationships of snowshoe hares (Lepus americanus) in the mixed conifer landscape of the Northern Rockies, USA: Cross-scale effects of horizontal cover with implications for forest management.*

The authors modeled habitat relationships for snowshoe hares across the mixed conifer landscape in the northern Rocky Mountains. They found that both occupancy and intensity of use by hares increased with horizontal cover. The influence of horizontal cover became stronger with increasing use and density of snowshoe hares. Subalpine fir and Engelmann spruce were the tree species that provided the high horizontal cover. Additionally, the authors observed a positive effect of lodgepole pine on both occupancy and use by snowshoe hares and concluded the association supports the hypothesis that high-quality nutrition and not just predation risk influences habitat use by snowshoe hares. They observed a negative effect of Douglas fir on intensity of use by snowshoe hares, due to low levels of horizontal cover. The authors also found that the most important factor characterizing occupancy of snowshoe hares was snow depth. Overall, they concluded that their results confirmed 1) the importance of horizontal cover, spruce-fir and lodgepole pine as snowshoe hare habitat indicators, 2) hare habitat is patchily distributed across the northern Rockies landscape, multiple-use lands are essential for the conservation of snowshoe hare habitat, and focusing just on protected areas, such as wilderness areas and national parks will likely represent

ineffective strategies for conserving the snowshoe hare, and 3) the structure of forests with high use by snowshoe hares was characterized as dense (particularly in the understory), relatively closed, and multi-storied. The authors stated that these stand characteristics can occur in nearly all successional stages and presumably realized following disturbance (e.g. wildfire, insect damage, root disease, or cutting) of intermediate severity allowing for patches of light to reach the forest floor. Managers can use this knowledge to directly implement vegetation management strategies to favor snowshoe hares and their predators. While some disturbance could negatively affect snowshoe hares in the short term, they may benefit them over the long term (e.g. 20-50 years).

5-1-8. Ivan and Shenk (2016): *Winter diet and hunting success of Canada lynx in Colorado.*

The authors investigated winter diet and hunting habits of Canada lynx in Colorado to compare with results of studies in other parts of the species' range and put in some management context. They also tested for the existence of high quality habitat patches that snowshoe hares may select as refugia from heavy lynx predation during declining and low phases of the lynx-hare cycle. They found that the majority of the winter diet of the 132 lynx tracked across 11 winters ($\bar{x}$ = 70%, range = 26-90%) was comprised of snowshoe hares, both in occurrence and biomass. Lynx exhibited the ability to shift the proportion of their diet allocated to hares and red squirrels over time, which appears to be consistent with lynx in more northern populations. Perhaps in contrast to northern lynx, red squirrels comprised a substantial portion of the lynx diet in most years. The findings suggest that lynx in Colorado are capable of exploiting red squirrels when they are readily available, or when hares are relatively scarce (Ivan and Shenk 2016). The authors also found evidence for snowshoe hare refugia during the winter, and that above about 3,000 stems/ha densities lynx success hunting hares declined. They suggest that management of lynx habitat in the southern Rockies focus on maintenance of mature, uneven-aged Engelmann spruce-subalpine fir stands that provide patches of dense and open habitats and promote high hare densities.

5-1-9. Ivan et al. (2014): *Density and demography of snowshoe hares in central Colorado.*

The authors investigated snowshoe hare densities from 2006 – 2009 in three types of forest stands: 1) mature Engelmann spruce (*Picea engelmannii*)-subalpine fir (*Abies lasiocarpa*), 2) early seral, even-aged lodgepole pine (*Pinus contorta*), and 3) mid-seral, even-aged lodgepole pine that had been pre-commercially thinned. Across all forest types and seasons, snowshoe hare densities were <1.0 hares/ha. Seasonal differences were observed in hare densities. In summer, hare densities

were highest in early seral lodgepole pine, intermediate in mature spruce-fir, and lowest in mid-seral lodgepole. Winter hare densities were more similar among the stand types. Annual survival of hares was highest in mature spruce-fir and similar between the lodgepole pine types. Based on estimates of density and demography observed by forest type, the authors concluded that mature spruce-fir may be the most valuable forest type for snowshoe hares, and managers should maintain mature spruce-fir and early seral lodgepole stands over thinned, mid-seral lodgepole stands to benefit snowshoe hares in central Colorado.

5-1-10. Ruediger and Haas (2014): *Wildlife habitat connectivity and associated wildlife crossings for US Highway 160.*

This report fulfilled part of one of the conservation measures for the Canada lynx previously developed and recently reaffirmed with LMJV (Attachment B to this Biological Assessment) during the earlier Forest Service planning and section 7 consultation on the Wolf Creek land exchange. The report details the results of a corridor assessment by the authors of known and potential lynx crossing areas along Hwy 160 in the Wolf Creek Pass and ANILCA road access project area. While this assessment was finalized and released late in the planning stages for the 2015 Wolf Creek land exchange decision, Forest Supervisor Dan Dallas did address it in his May 2015 decision as follows:

> *"The report authors elected not to make any recommendations at this time for single-species wildlife crossings specifically to benefit the Canada lynx, citing the lack of verification of use of existing crossings by lynx (based on casual observations of local Colorado Department of Transportation road maintenance employees), high snow depths that may limit use of underpass crossings for several months, lack of data about where lynx may be crossing US 160, and the fact that only one lynx has been confirmed struck by a vehicle in the Wolf Creek Pass vicinity. They pointed out that wildlife crossings for single species are not typically recommended, because most wildlife crossings are built for safety reasons to reduce animal/vehicle collisions and tend to benefit a wide variety of wildlife even though certain species may be targeted. The authors noted that they found several potential crossing options to benefit wildlife during a July 25, 2014, reconnaissance visit to Wolf Creek Pass and surrounding wildlife habitat linkages. They recommended, "…that CDOT, USFS,CPW, and USFWS continue to monitor lynx in the Wolf Creek Pass area to refine information where crossings may be effective and continue to document future lynx mortality causes. If this information provides specific locations or measures that would conserve lynx, they should be considered for implementation."*

Forest Supervisor Dallas went on to conclude that "The report provides important new information for consideration by the pending technical committee in their oversight and guidance of the Village at Wolf Creek [Canada lynx] conservation program. It should particularly help inform further planning for the second part of conservation measure #4 involving the trapping/collaring program."

5-1-11. Squires et al. (2013): *Combining resource selection and movement behavior to predict corridors for Canada lynx at their southern range periphery*.

The authors investigated how Canada lynx move through landscapes at the broad scale based on fine-scale movement behavior, to identify functional corridors for lynx conservation. It also represents the first scientific publication documenting the distribution of lynx in Montana. Lynx movement was monitored using radio telemetry data from 64 animals during 1998-2007 over a broad area (36,096 km2) in western Montana. Factors such as roughness, elevation, avoidance of forest openings, and high forest canopy were used to characterize the landscapes where lynx occur. Findings were that lynx primarily selected home ranges with low topographic roughness at mid-elevations. These home ranges also tended to be in areas with higher canopy cover (>60%) and lower open (e.g., grass) habitat. The study further found that connectivity between lynx habitat in Canada and in the conterminous United States is facilitated by only a few putative corridors, with a primary north-south corridor extending from the Canadian border south along the west side of the Bob Marshall Wilderness, along the western front of the Swan Range, and ending near Seeley Lake. The study concluded that current conditions facilitate broad-scale connectivity and that maintaining the integrity of these connectivity corridors to lynx habitat in Canada is of primary importance to lynx conservation in the Northern Rockies.

The authors also discussed the impacts of fragmentation and show that forest thinning increases the model's estimate of landscape resistance to lynx movement. Though the paper does not specifically address the scale at which thinned areas become significant, the context for the discussion was focused on very large blocks of non-federal land where very wide tree spacing had resulted from thinning treatments. The authors concluded that there are few current habitat impediments to lynx movement and that there is no evidence that genetic isolation is a current threat.

5-1-12. Interagency Lynx Biology Team (2013): *Canada lynx conservation assessment and strategy, 3rd edition.*

Excerpted from the introduction: *"The Lynx Conservation Assessment and Strategy (LCAS) was developed to provide a consistent and effective approach to conserve Canada lynx (Lynx canadensis)… and to assist with Section 7 consultation under the Endangered Species Act (ESA) on federal lands in the contiguous United States. An action plan that identified the need for preparation of a lynx conservation strategy was approved by the affected Regional Foresters of the USDA Forest Service (FS), State Directors of the Bureau of Land Management (BLM), and Regional Directors of the U. S. Fish and Wildlife Service (FWS) on June 5, 1998. The National Park Service (NPS) joined the effort later that month. In accordance with the action plan, an interagency Steering Committee was established to guide lynx conservation efforts. The Steering Committee selected a Science Team, led by Dr. Leonard Ruggiero, FS-Rocky Mountain Research Station, to assemble the best available scientific information on lynx, and appointed a Lynx Biology Team, led by Bill Ruediger, FS-Northern Region (R1), to prepare a lynx conservation strategy applicable to federal land management in the contiguous United States. The first edition of the LCAS was completed in January, 2000, with the second edition issued in August, 2000. Several amendments and clarifications were subsequently issued through the Steering Committee. The LCAS is designed for application on federal lands. However, the information, concepts, and conservation measures could also be applied if desired when planning and managing lynx habitat on non-federal lands.*

This edition of the LCAS provides a full revision, incorporating all prior amendments and clarifications, substantial new scientific information that has emerged since 2000 including related parts of the Lynx Recovery Plan Outline, as well as drawing on experience gained in implementing the 2000 LCAS. The document has been reorganized and condensed to improve readability and reduce redundancy. Chapter 3, Lynx Geographic Areas, has been substantially revised to incorporate new information about lynx and lynx habitat. The map (Fig. 3.1) has also been updated. Chapter 4, formerly titled Risk Factors, is here retitled as Anthropogenic Influences on Lynx and Lynx Habitat. The anthropogenic influences are grouped into 2 tiers based on the potential magnitude of effects on lynx and their habitats. For each anthropogenic influence, there is an explanation of how it may influence key drivers of lynx population dynamics: the snowshoe hare (Lepus americanus) prey base, direct mortality of lynx, and the risks associated with small population size. The chapters that formerly described Planning Area and Project Level were eliminated in this edition. The original intent was to provide the perspective of a

> *multi-tier spatial hierarchy in discussing status, trends, and concerns relative to lynx and lynx habitat. In retrospect, however, these 2 chapters were redundant to material already presented in the previous chapters.*
>
> *Chapter 5, Conservation Strategy, incorporates concepts from the Canada Lynx Recovery Outline (U.S. Fish and Wildlife Service 2005). Specifically, conservation efforts for lynx are not to be applied equally across the range of the species, but instead more focus is given to high priority areas: the core areas. Further, we combined secondary areas and peripheral areas (which were also identified in the recovery outline) into one category, because they have similar characteristics and management recommendations. The intent is to place more emphasis on protection of the core areas, which support persistent lynx populations and have evidence of recent reproduction, and less stringent protection and greater flexibility in secondary/peripheral areas, which only support lynx intermittently. Chapter 5 presents conservation measures only for those anthropogenic influences that are within the authority of the federal agencies, and identifies areas where they should be applied. Guidance provided in the revised LCAS is no longer written in the framework of objectives, standards, and guidelines as used in land management planning, but rather as conservation measures. This change was made to more clearly distinguish between the management direction that has been established through the public planning and decision-making process, versus conservation measures that are meant to synthesize and interpret evolving scientific information."*

For the Forest Service, the LCAS has largely been superseded by the Southern Rockies Lynx Amendment (SRLA; Cables 2008), that amended seven forest plans in the Rocky Mountain Region of the National Forest System with lynx conservation direction, including the forest plan for the Rio Grande NF containing the ANILCA road right-of-way Project Area. Hence, the updated 2013 LCAS is most useful to other federal land management agencies that did not enact land management plan amendments for the Canada lynx. However, the LCAS does represent new information that national forests like the Rio Grande are expected to consider in forest plan revisions and section 7 consultations in tandem with project-level implementation of their current forest plan direction for lynx under the SRLA.

5-2. New ESA Actions and Related Developments

The U.S. Fish and Wildlife Service more recently made some listing decisions related to species evaluated in the 2013 Biological Assessment, of which some were included in the section 7 consultation at that time.

5-2-1. Gunnison sage-grouse

At the time of the 2013 Wolf Creek interagency consultation, the Gunnison sage-grouse (*Centrocercus minimus*) was proposed for listing under the Endangered Species Act. Since then, the USFWS on November 20, 2014, listed the Gunnison sage-grouse as Threatened[2] and designated critical habitat[3]. The effect determination in 2013 was "no effect" for the action alternatives including the ANILCA road access one, because neither the bird or its habitat occurred in the project area, or were expected to be directly or indirectly affected by the project. That remains the case today, including for the designated critical habitat units in Colorado that are situated a considerable distance from the Wolf Creek analysis area (Fig. 6). Consequently, these ESA actions related to the Gunnison sage-grouse do not alter our 2013 conclusion of *no effect* on the bird for the ANILCA access project. We also conclude *no effect* to its designated critical habitat.

5-2-2. Southwestern willow flycatcher

On December 29, 2017, the USFWS concluded a 12-month review of a petition to delist the southwestern subspecies of willow flycatcher (*Empidonax traillii extimus*) and reaffirmed the validity of the taxon and its Endangered status (82 FR 61725). Further, several threats identified earlier continue to act on the subspecies and its habitat warranting its listing status: habitat loss and modification due to dams and reservoirs, diversion and groundwater pumping, invasive plants and beetles, river management, urbanization, agricultural development, livestock grazing and management, fire and fire management, cowbird parasitism, and recreation; other natural or manmade factors such as drought and the effects of climate change, vulnerability of small or isolated populations, and genetic effects; and cumulative effects of these threats. Additionally, the existing regulatory mechanisms are not adequate to ameliorate these threats.

[2] www.gpo.gov/fdsys/pkg/FR-2014-11-20/pdf/2014-27109.pdf

[3] www.gpo.gov/fdsys/pkg/FR-2014-11-20/pdf/2014-27113.pdf

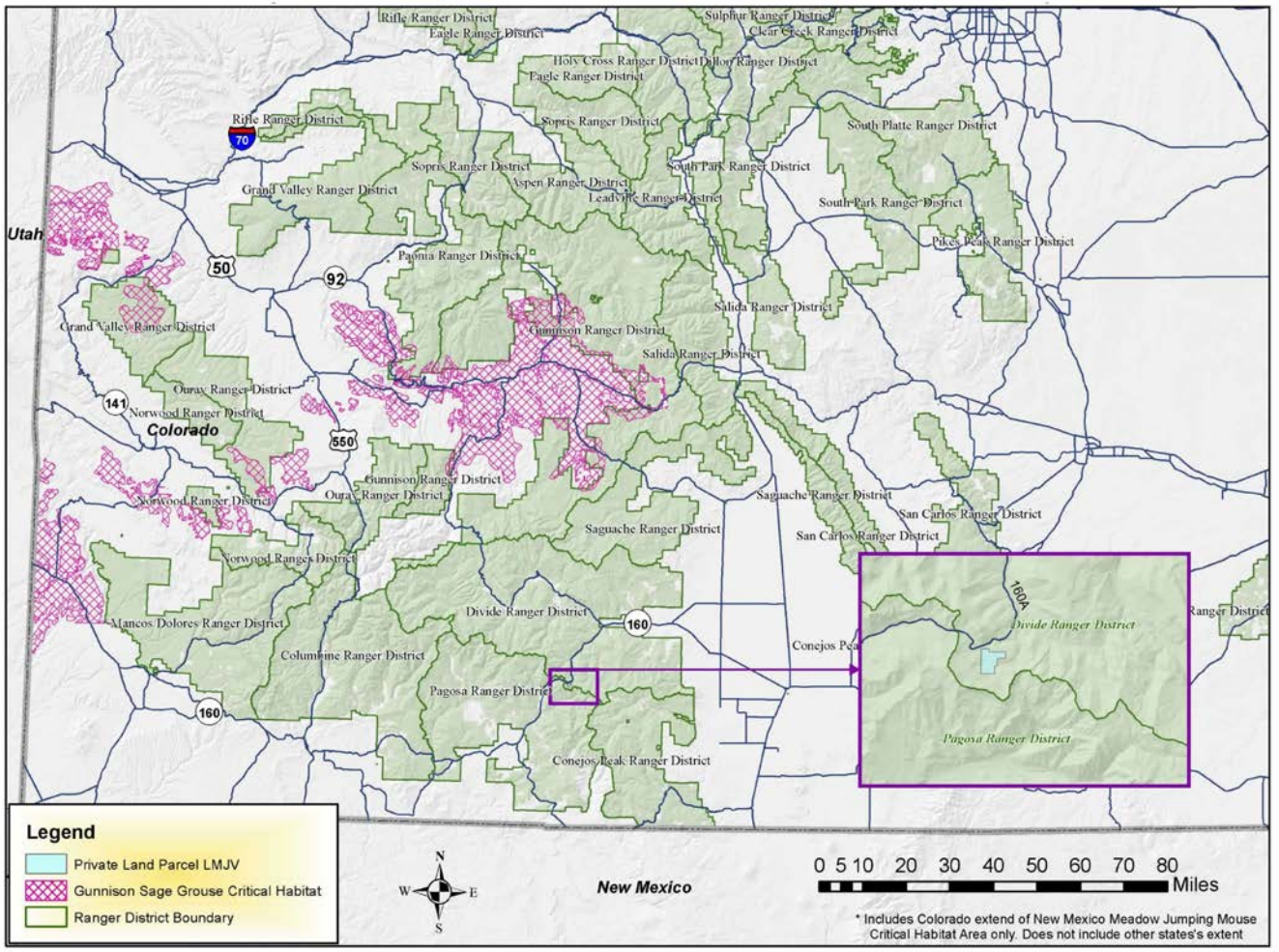

Figure 6. Designated critical habitat for the Gunnison sage-grouse in relation to the Project Area.

5-2-3. Yellow-billed cuckoo

On October 3, 2014, the USFWS determined that the western distinct population segment (west of the Continental Divide) of the yellow billed cuckoo (*Coccyzus americanus*) meets the definition of Threatened, and, on December 2, 2014, proposed critical habitat (79 FR 59991, 79 FR 71373). The listing decision was based on the immediacy, severity, and scope of threats to the DPS's continued existence, including habitat loss associated with manmade features that alter watercourse hydrology and have diminished natural processes needed to sustain riparian habitats of the cuckoo in western North America; loss and degradation of habitat due livestock overgrazing and encroachment from agriculture; and further exacerbation of these habitat losses from conversion of native habitat to predominantly nonnative vegetation. Habitat losses result in additional effects associated with small and widely separated habitat patches, such as increased predation and reduced dispersal potential. This threat is particularly persistent where small habitat patches are in proximity to human-altered landscapes, especially agricultural fields, resulting in the potential for pesticides to poison individual cuckoos and reduce their prey base. No critical habitat has been proposed for National Forest System lands in Region 2, including the Rio Grande National Forest, although final critical habitat designation has not been completed.

5-2-4. New Mexico meadow jumping mouse

The USFWS listed the New Mexico meadow jumping mouse as an Endangered species throughout its range on June 10, 2014, due to "present or threatened destruction, modification, or curtailment of its habitat or range; the inadequacy of existing regulatory mechanisms; and other natural and manmade factors" (79 FR 33119). The Service designated final critical habitat for the jumping mouse on March 16, 2016 (81 FR 14263).

Historical habitat of the New Mexico meadow jumping mouse includes riparian wetlands along streams in the Sangre de Cristo and San Juan Mountains from southern Colorado to central New Mexico, including the Jemez and Sacramento Mountains and the Rio Grande Valley from Espanola to Bosque del Apache National Wildlife Refuge, and into parts of the White Mountains in eastern Arizona.

5-2-5. Humpback chub

On March 22, 2018, the USFWS concluded from the findings of their Species Status Assessment and 5-year status review, that currently a low risk of extinction exists for the humpback chub, and it

could be reclassified under the Endangered Species Act from Endangered to Threatened[4]. The Service attributed this conclusion to extensive collaborative efforts that have stabilized populations in the Colorado and Little Colorado rivers in the Grand Canyon of Arizona (largest population center) and smaller populations in the Green and Colorado rivers of the upper Colorado River basin. The chub remains an Endangered species until the USFWS can finalize a downlisting rule. They first must develop a proposed reclassification rule and a revised recovery plan that will be made available for public comment in the future.

5-2-6. Canada lynx

On January 11, 2018, the U.S. Fish and Wildlife Service announced the completion of their Species Status Assessment and 5-year status review and concluded that the Canada lynx may no longer warrant protection under the Endangered Species Act and should be considered for delisting due to recovery in the lower 48 states[5]. The Service attributed this conclusion to the successful amendment of land management plans by the U.S. Forest Service in the Rocky Mountains to include conservation measures for the Canada lynx. Additionally, conservation easements protecting nearly 2.5 million acres on private lands in Maine have substantially benefited the species.

A proposed delisting rule is expected sometime in 2019, with a final rule estimated for 2020. Until a final delisting rule is published, the Canada lynx remains protected as a Threatened species under the Endangered Species Act.

[4] www.fws.gov/mountain-prairie/pressrel/2018/03222018_After_Scientific_Review_the_U.S._Fish_and_Wildlife_Service_to_Propose_Reclassification_of_the_Humpback_Chub_from_Endangered_to_Threatened.php

[5] www.fws.gov/mountain-prairie/pressrel/2018/01112018_Status_Review_Indicates_Canada_lynx_Recovery_inLower48.php

Part 6: Threatened, Endangered, and Proposed Species and Designated Critical Habitat Considered and Analyzed

Terrestrial and aquatic ecosystems, vegetation communities, and habitats in the project area are described at length in the 2014 FEIS and related documents (www.fs.usda.gov/project/?project=35945).

6-1. Species Considered, Evaluated, and Dropped

6-1-1. Plants

For the 2013 Biological Assessment prepared for the interagency section 7 consultation with the U.S. Fish and Wildlife Service, the Forest Service queried the U.S. Fish and Wildlife Service's IPaC database for species and critical habitats to evaluate in the project area. At the time, the proposed action was the land exchange, and a broad list was solicited for an area covering Mineral (the immediate location of the project area), Rio Grande, Hinsdale, and La Plata counties, based on potential indirect effects associated with future development of the private inholding. At that time, there were no reported records or suspected occurrences of any Federally listed or proposed plant species in Mineral and Rio Grande counties. The Forest Service concluded that the two listed plant species occurring in Hinsdale and/or La Plata Counties, Pagosa skyrocket (*Ipomopsis polyantha*, Endangered), and Knowlton's cactus (*Pediocactus knowltonii*, Endangered), are upland plants that do not occur in habitats that would be affected in the immediate project area, or indirectly outside of it. There was also no designated critical habitat for plants identified for Mineral, Rio Grande, Hinsdale, or La Plata Counties. Therefore, Federally listed and Proposed plant species were not anticipated to be present or affected by the project, directly or indirectly.

The IPaC database was queried again on May 2, 2018, to update the species and critical habitat lists for the project and 4-county analysis area and look for any changes in composition between 2013 and the current Biological Assessment. Knowlton's cactus and Pagosa skyrocket were again the only two listed plants identified by IPaC for the four counties. Critical habitat still has not been designated for Knowlton's cactus. Designated critical habitat does exist for the Pagosa skyrocket in Colorado, but not in the project or analysis area according to IPaC. For the reasons identified in 2013 and affirmed again by IPaC for the current Biological Assessment, listed plants or their critical habitats do not occur in the project area, or projected to be directly or indirectly affected from the Forest Service's implementation of the ANILCA access proposal.

6-1-2. Animals

Federally listed and proposed animal species that were earlier considered in the project planning for Wolf Creek, included those receiving concurrence from the USFWS (USFWS, Feb. 7, 2013 update, Ghormley 2012a, R. Ghormley, USFS, pers. comm., Feb. 7, 2013) as potentially present on San Luis Valley Public Lands (SLVPL), including the Rio Grande NF, and/or potentially affected by management decisions associated with the Federal Action. The southwestern willow flycatcher (*Empidonax traillii extimus,* Endangered), Uncompahgre fritillary butterfly (*Boloria acrocnema,* Endangered), humpback chub (*Gila cypha,* Endangered), bonytail chub (*Gila elegans,* Endangered), Colorado pikeminnow (*Ptychocheilus Lucius,* Endangered), razorback sucker (*Xyrauchen texanus,* Endangered), Gunnison sage grouse (*Centrocercus minimus,* Threatened), Mexican spotted owl (*Strix occidentalis,* Threatened), Canada lynx (*Lynx Canadensis,* Threatened), and North American wolverine (*Gulo gulo luscus,* Proposed), were the species identified as occurring or potentially occurring in the immediate project area or the larger 4-county analysis area. All species but the southwestern willow flycatcher and Canada lynx, were determined to warrant "*no effect*" or "*not likely to jeopardize*" (in the case of the "Proposed" wolverine) under all Alternatives including the ANILCA road access in the 2014 FEIS and were excluded from detailed analysis at that time.

The query of the IPaC database on May 2, 2018, affirmed these same species from 2013. There is no new information since then to warrant different effect determinations today for any of these species. In addition to the animal species identified in 2013, the 2018 IPaC query identified the following species or critical habitats for the action area: western yellow-billed cuckoo (*Coccyzus americanus*) and proposed critical habitat, New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) critical habitat, and Gunnison sage-grouse critical habitat.

Observations about these additional species or critical habitats are provided next:

Western Yellow-billed Cuckoo

Final critical habitat has not yet been designated for the western yellow-billed cuckoo, as of the writing of this Biological Assessment. None of the proposed critical habitat units are located on National Forest System lands, or near the ANILCA project area on the Rio Grande NF (Fig. 7).

At the time of the November 2013 Biological Opinion for Wolf Creek, the western yellow-billed cuckoo was a federal candidate for listing and not addressed in the Forest Service's Biological Assessment or the section 7 consultation with the USFWS. However, by policy in Forest Service Region 2, candidate species automatically carry Regional Forester Sensitive Species status, which

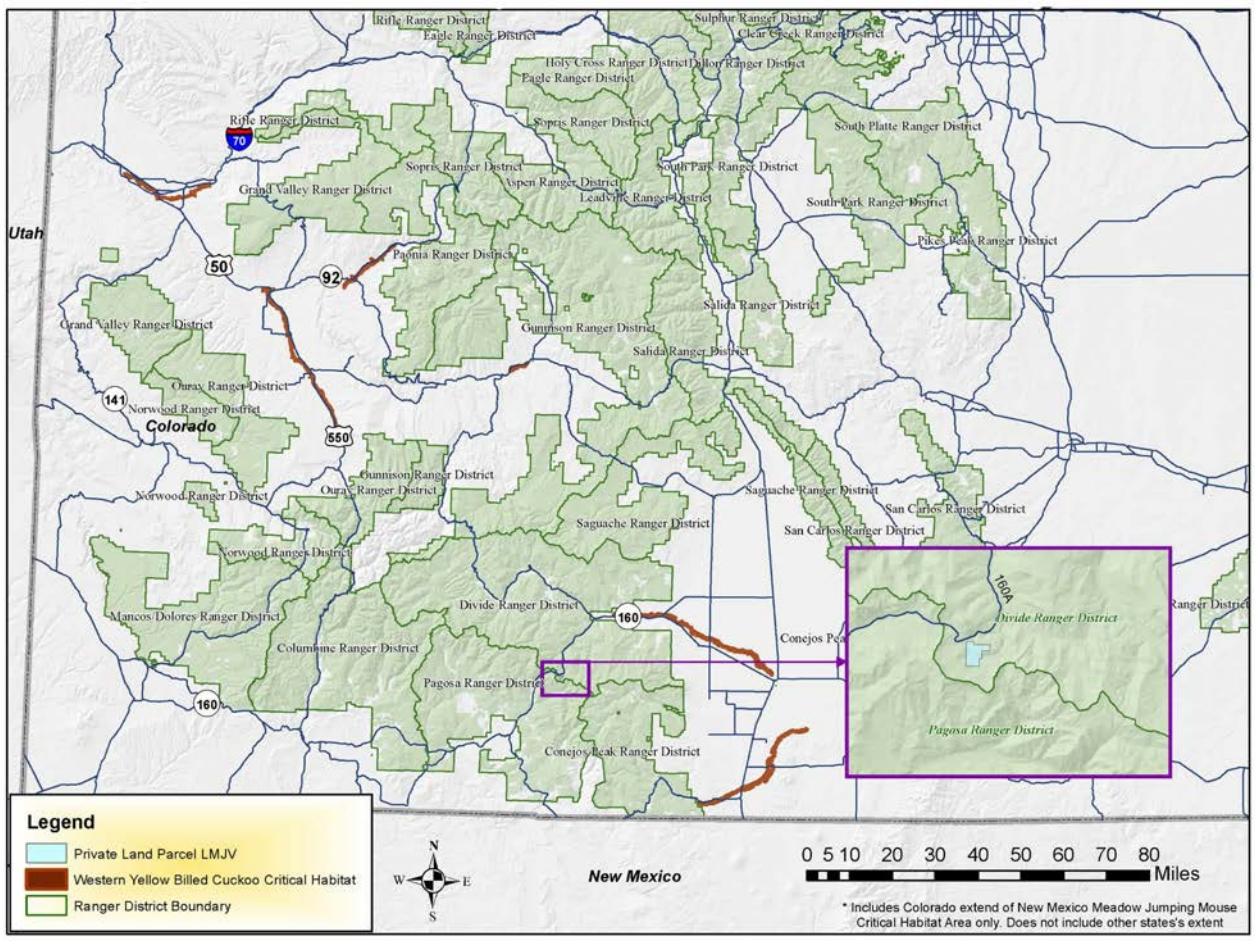

Figure 7. Proposed critical habitat for the western yellow-billed cuckoo in relation to the Project Area.

provides a species with special management attention including consideration during National Environmental Policy Act evaluations.

In their September 2013 Biological Evaluation and 2014 FEIS, the Forest Service concluded that the low-elevation riparian woodlands with dense understories associated with the western yellow-billed cuckoo did not exist on the Rio Grande National Forest or in or near the project area. During response to an objection to the pending 2015 Wolf Creek land exchange decision, the Forest Service expanded its discussion of the cuckoo under its new federal listing status as Threatened with proposed critical habitat[6]:

> *"There is no yellow-billed cuckoo habitat on the Rio Grande NF… . Although [how much water flow can be removed from North and South Pass Creeks before it would affect downstream riparian habitats inhabited by the cuckoo] is not expressly discussed in the Wildlife BE, the FEIS does detail the water depletion and augmentation plans. More specifically, there would be water depletions associated with the Moderate and Maximum Density Development Concepts for the Proposed Action. LMJV would utilize their existing water rights and the water would be drawn from existing infiltration galleries in North and South Pass Creeks and stored on-site. However, to avoid out of priority depletion effects to downstream Rio Grande Basin water users, these withdrawals would be augmented. Augmentation water would come from two sources as specified in the proponent's decreed plan for augmentation in Case No. 87CW7: 1) the Rio Grande Reservoir, located 32 air miles northwest of the project site and 2) on-site water storage.*
>
> *The augmentation water released from Rio Grande Reservoir would affect the Rio Grande River both upstream and downstream of its confluence with the South Fork of the Rio Grande in the Town of South Fork. The augmentation water released on-site would affect the approximate 21-mile-long reach of Pass Creek and the South Fork of the Rio Grande River, located between the Project Area and the town of South Fork, and then flow to the Rio Grande River. During wet and extremely wet time periods, augmentation may not be required. However, flows are expected to be high during these times.*

[6] Response to objection challenges on the Village at Wolf Creek Access Project located on the Rio Grande National Forest. March 23, 2015, letter from Rocky Mountain Region (Region 2) Deputy Regional Forester Maribeth Gustafson to Matt Sandler representing Rocky Mountain Wild, San Luis Valley Ecosystems Council, San Juan Citizens Alliance, Defenders of Wildlife, EcoFlight, Rocky Mountain Recreation Initiative, Wilderness Workshop and Great Old Broads for Wilderness. 66 pp.

> *Currently proposed critical habitat for the yellow-billed cuckoo begins on the Rio Grande River, approximately four and a half river miles east and downstream of the town of South Fork (Unit 59, CO–6 Upper Rio Grande 3; 79 FR 48547), below where the augmentation flows enter the Rio Grande River. Therefore, any water depletions associated with the Proposed Action would not extend to or affect any critical habitat of the yellow-billed cuckoo. Thus, a reinitiated consultation for a species that would not be affected by the Proposed Action is not necessary to meet section 7 requirements."*

The development and water use scenarios for the LMJV private inholding were the same between the land exchange and ANILCA road access alternatives when evaluated in the 2014 FEIS, and remain so for the ANILCA road right-of-way action today. Based on that understanding and the lack of substantive new information that might change the earlier effect conclusions, we continue to determine *no effect* of the ANILCA road right-of-way action on the western yellow-billed cuckoo and its proposed critical habitat.

New Mexico Meadow Jumping Mouse

Excerpted and abridged from the IPaC species profile and references therein: The New Mexico meadow jumping mouse (jumping mouse) is endemic to New Mexico, Arizona, and a small area of southern Colorado. The jumping mouse is a habitat specialist. It nests in dry soils, but uses moist, streamside, dense riparian/wetland vegetation up to an elevation of about 8,000 feet. It appears to only utilize two riparian community types: 1) persistent emergent herbaceous wetlands (i.e., beaked sedge and reed canarygrass alliances); and 2) scrub-shrub wetlands (i.e., riparian areas along perennial streams that are composed of willows and alders). It especially uses microhabitats of patches or stringers of tall dense sedges on moist soil along the edge of permanent water. Home ranges vary between 0.37 and 2.7 acres (0.15 and 1.1 hectares) and may overlap. The jumping mouse is generally nocturnal, but occasionally diurnal. It is active only during the growing season of the grasses and forbs on which it depends. The jumping mouse hibernates about 9 months out of the year, longer than most other mammals.

To-date, the jumping mouse has not been confirmed in suitable habitat on the Rio Grande National Forest and adjacent San Juan National Forest, nor does designated critical habitat occur in or near the Project Area (Frey 2011, Schorr 2015; Fig. 8). The Forest Service determination for the New Mexico meadow jumping mouse as a Regional Forester sensitive species in 2012 was "no effect,"

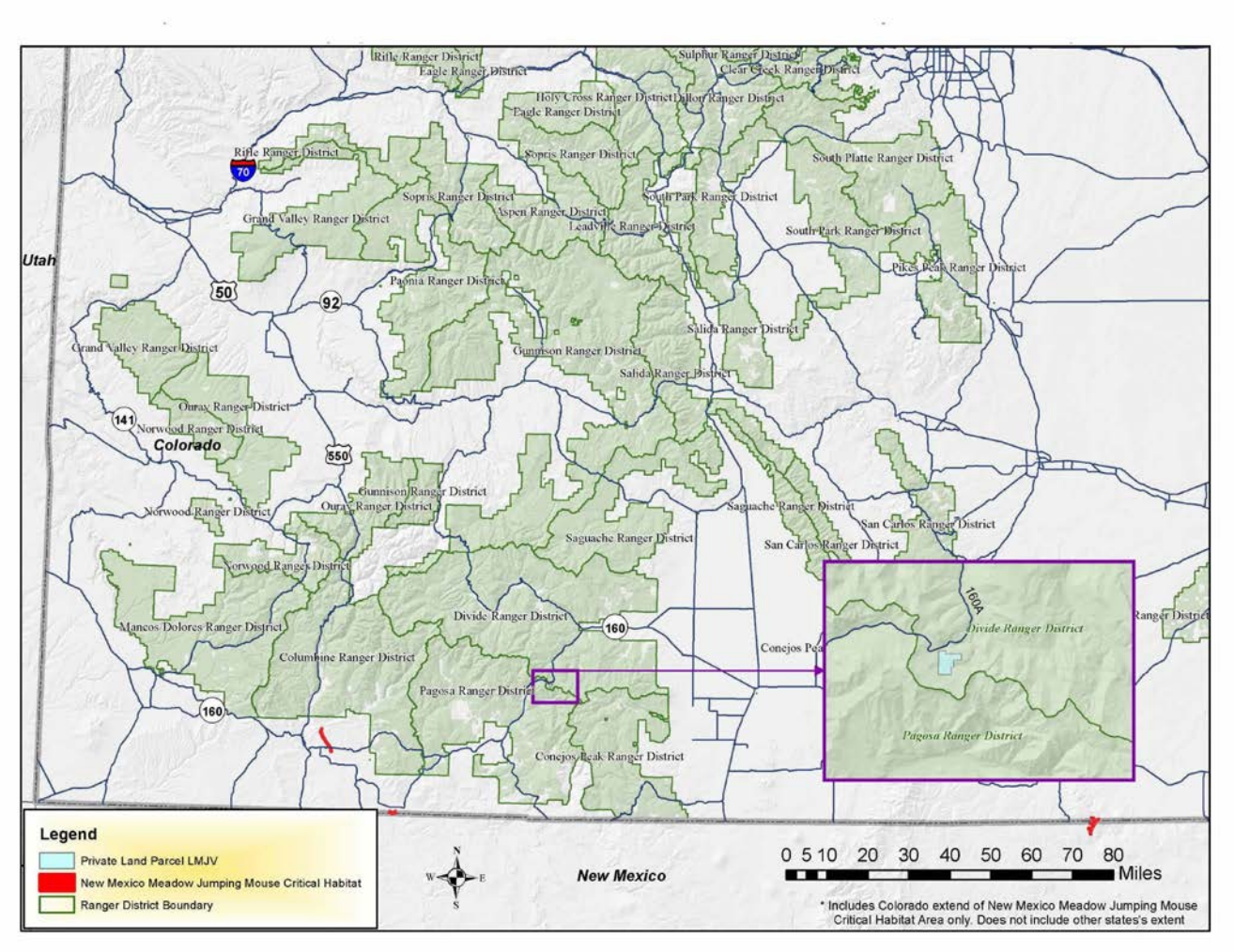

Figure 8. New Mexico meadow jumping mouse critical habitat in relation to the Project Area.

based on similar rationale as the western yellow-billed cuckoo. Designated critical habitat for the New Mexico meadow jumping mouse also does not occur in or near the Project Area or full analysis area. Therefore, our determination for the New Mexico meadow jumping mouse and its critical habitat remains "*no effect*." The species is not further addressed in this assessment, nor is the Forest Service requesting section 7 consultation with the USFWS for this species

Table 2 provides an updated summary of species considered and dropped from further evaluation in the 2014 FEIS and this current Biological Assessment, due to the lack of effects expected from implementation of the ANILCA road right-of-way action.

6-2. Background and Environmental Baseline for Species Evaluated in Detail

6-2-1. Southwestern willow flycatcher

For the purposes of this analysis, the southwestern willow flycatcher Analysis Area is the entire upper Rio Grande basin (San Luis Valley) and areas to the west along the upper Colorado and San Juan River drainages.

In Colorado, willow flycatchers breed primarily in willows along foothill streams and in middle and high altitude willow (*Salix* ssp.) and alder (*Alnus* ssp.) carrs from 6,000 to 10,000 feet, mostly west of the Continental Divide. Southwestern willow flycatchers (*Empidonax trailii extimus*) are one of 4 - 5 subspecies of the willow flycatcher recognized in North America.

Southwestern willow flycatchers are insectivores that forage within and occasionally above dense riparian vegetation, taking insects on the wing and gleaning them from foliage. They generally nest in thickets of shrubs and trees 13-23 feet (min. 5 ft.) or more in height, with dense canopy foliage (>67%) from 0-14 feet above ground. While the project site is located in the Rio Grande Recovery Unit, it is not located within designated critical habitat (78 FR 343; Fig. 9). Surveys to assess potential habitat suitability for the southwestern willow flycatcher in the vicinity of the project site were initially conducted in 2000, 2001, and 2004. As part of the 2005 Village at Wolf Creek development analysis, it was concluded that the southwestern willow flycatcher and suitable nesting habitat were not present on the project site. As part of updated baseline surveys associated with the prior Wolf Creek land exchange proposal and following an updated survey protocol, another reconnaissance survey of the project site was conducted on July 8, 2011, to determine if potentially suitable southwestern willow flycatcher habitat exists within the project site. Prior to

Table 2. Species considered and dropped from further evaluation in the 2014 Wolf Creek FEIS and updated for the 2018 ANILCA road right-of-way action.

Common Name, Scientific Name	**Status**	**Rationale for Exclusion from Analysis[a] (Habitat), 2014 - 2018**
Uncompahgre fritillary butterfly *Boloria acrocnema*	E	No habitat (alpine snow willow stands >12,000 ft. on peaks ≥ 12,600 ft.)
Humpback chub *Gila cypha*	E	No additional CO River water depletions beyond previously authorized limits (far downstream in Colorado River)
Bonytail chub *Gilia elegans*	E	No additional CO River water depletions beyond previously authorized limits (far downstream in Colorado River)
Colorado pikeminnow *Ptychocheilus lucius*	E	No additional CO River water depletions beyond previously authorized limits (far downstream in Colorado River drainage) [a]
Razorback sucker *Xyrauchen texanus*	E	No additional Colorado River water depletions beyond authorized limits (far downstream in Colorado River) [a]
Gunnison sage-grouse *Centrocercus minimus*	T, with Critical Habitat	No sagebrush habitat affected (sagebrush grasslands); no critical habitat affected
Mexican spotted owl *Strix occidentalis*	T	No breeding habitat (steep canyons with a Douglas-fir, white fir, ponderosa pine/pinyon juniper component)
North American wolverine *Gulo gulo luscus*	P	No wolverine population in Colorado (historic range; remote mountains and alpine areas)
Western yellow-billed cuckoo *Coccyzus americanus*	T, with Proposed Critical Habitat (none for NFS)	Low elevation riparian habitats/critical habitats do not occur in the project area or expected to be affected indirectly
New Mexico meadow jumping mouse *Zapus hudsonius luteus*	E, with Critical Habitat	Low elevation riparian habitats/critical habitats do not occur in the project area or expected to be affected indirectly

[a] In the species' respective Analysis Area (AA).Note: Other Federally listed and Proposed species are not listed in this table because the project area is outside of the species' range, their habitats do not occur in the project area, they have no affinities to project area habitats, and the management decisions associated with Alternatives 2 and 3 would have "no effect" on the species, on their habitats, or on designated critical habitat. Species are listed phylogenetically. Federal status, listed after species, is as follows: E = Endangered, T = Threatened, P = Proposed. Potential pre-field survey occurrence on the project area and habitat affinity is summarized for each species. Candidate species are addressed in the Biological Evaluation (Powell and Thompson, 2013).

Source: Ghormley (2012, R. Ghormley, USFS, pers. comm. with R. Thompson, Feb. 7, 2013) and Western Ecosystems, Inc.

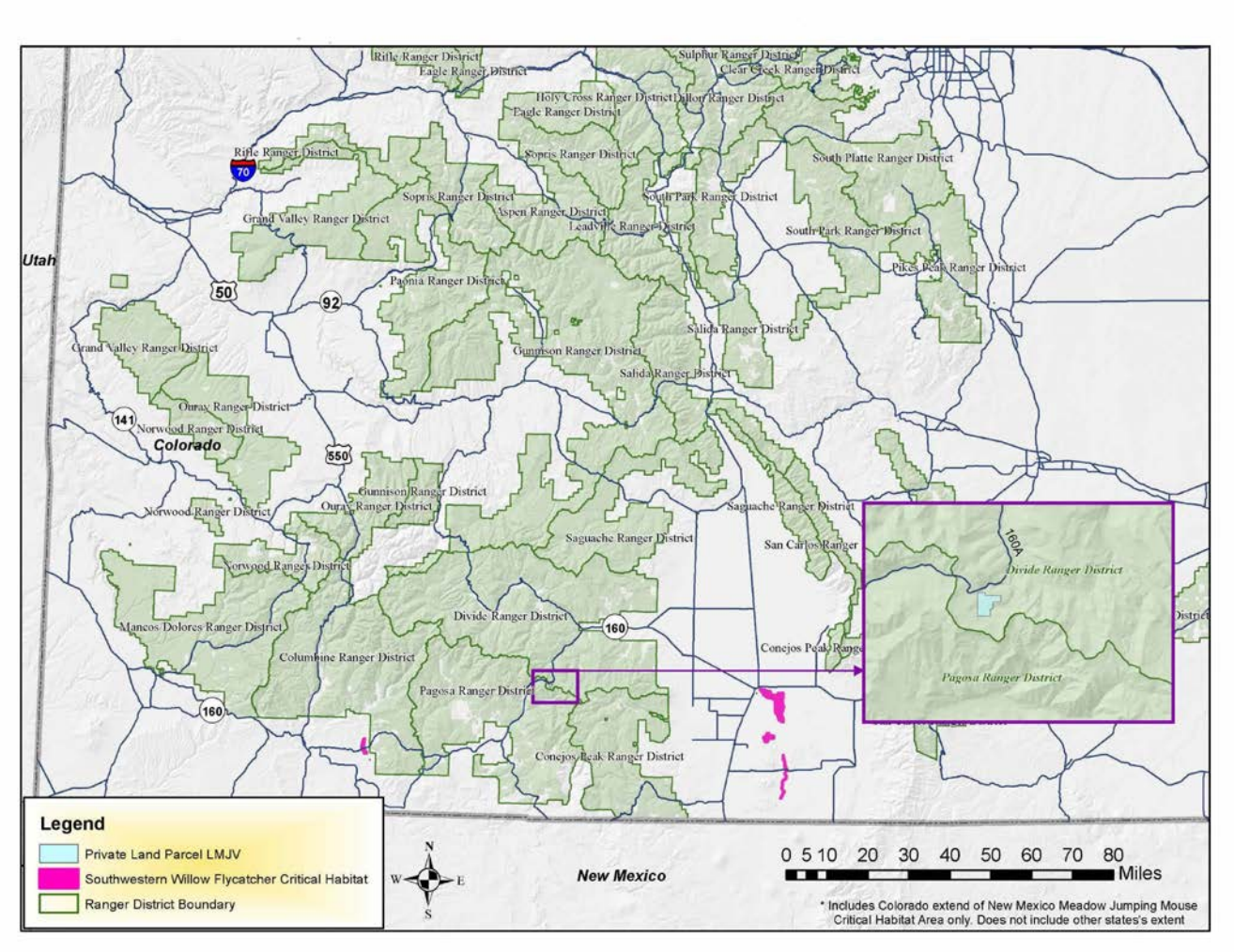

Figure 9. Southwestern willow flycatcher critical habitat in relation to the Project Area.

the field review of potential suitable breeding habitat, scrub-shrub wetlands (which could represent willow habitat) were mapped in GIS. These mapped shrub-scrub wetland habitats were evaluated in the field to determine whether they provided suitable southwestern willow flycatcher breeding habitat. Based on the current minimum habitat requirements, potentially suitable southwestern willow flycatcher breeding habitat was identified on the north end of Alberta Park where the private and Federal parcels adjoin and continues to the east on the Federal parcel.

The potentially suitable breeding habitat polygons totaled 4.42 acres (1.8 ha) within the project site. Of this total acreage, 3.87 acres (1.6 ha) were on National Forest System lands and 0.55 acres were within the private parcel. Collective impacts of historic to contemporary human land use changes that are part of the environmental baseline are unknown in the local action area.

Because the July, 2011 surveys were conducted partway into the 2011 breeding season, the complete survey protocol could not be implemented during that year. Surveys were conducted on May 21, June 4, 18 and 25, and July 9, 2012 per the 2010 protocol (Sogge et al. 2010). No southwestern willow flycatchers were detected and the habitat was considered unoccupied.

6-2-2. Canada lynx[7]

For the purposes of this analysis, the lynx Analysis Area, containing the most far-reaching potential effects of the ANILCA road right-of-way action, includes four Lynx Analysis Units, described below, that contain the entire Wolf Creek Pass Lynx Linkage (also described below) and a focal section of Hwy 160. This area is sufficiently inclusive to capture the most far-reaching potential direct, indirect, and reasonably certain effects associated with, or facilitated by, the ANILCA access.

Canada lynx are specialized predators that are highly dependent on snowshoe hares (*Lepus americanus*) for food. Red squirrels are also an important secondary prey for lynx in Colorado (Ivan and Shenk 2016). Canada lynx usually concentrate their foraging in areas where hare numbers are high, but they also require late successional forests with downed logs and windfalls to provide cover for denning sites, escape cover, thermal cover, and protection from severe weather. Similar to habitat associations in the northern Rockies (Holbrook et al. 2016), lynx/snowshoe hare habitat in Colorado consists of mature and late successional spruce-fir dominated coniferous forest and stands of dense lodgepole pine. Early successional stands are used principally by lynx for foraging.

[7] This discussion is largely taken from the 2014 Wolf Creek FEIS, edited for brevity and accuracy relative to Alternative 3, and updated to reflect relevant new information since the 2014 Wolf Creek land exchange FEIS and 2015 Record of Decision (discussed earlier in this Biological Assessment).

Lynx may also change their habitat selection and use depending on availability. For example, Holbrook et al. (2017) found that lynx in their northern Rockies study area, increasingly selected advanced regenerating forest as it became more available in winter and reduced use of stand initiation and sparse forest stands. Because female lynx used a narrower gradient of forest structures compared to males, particularly in the winter, and availability of advanced regeneration reflected high quality snowshoe hare/lynx foraging habitat, the authors recommended that managers should focus on the needs of females and implement vegetation management strategies that promote hares by maintaining and developing areas of advanced regeneration. Ivan and Shenk (2016) recommended that management of lynx habitat in the southern Rockies emphasize maintenance of mature, uneven-aged Engelmann spruce-subalpine fir stands with patches of dense and open habitats that collectively promote high hare densities.

Home range size of lynx varies depending on sex, age, population density, prey density, reproductive period, and survey method. Data from radio-collared Colorado lynx from the reintroduction program, suggests that lynx within home ranges may be relatively sedentary during winter, concentrating activity within a higher quality portion of their home range. Conversely, both males and females demonstrated more movement activity during the breeding season and in the summer (Buderman et al. 2018).

Suitable denning habitat for lynx consists of dense, senescent, coniferous forest on northern aspects containing large diameter woody debris in patches greater than 30 acres. The highest quality denning areas are those occurring in patches of moist, north-facing forest. Lynx use large woody debris, such as downed logs, root wads and windfalls, to provide denning sites with security and thermal cover for kittens. During the first few months of life, kittens are left alone at these sites when the female lynx hunts. Downed logs and overhead cover provide protection of kittens from predators, such as owls, hawks and other carnivores during this period.

Southern Rockies Ecoregion Lynx Population

The Southern Rockies Ecoregion represents the extreme southern edge of the range of the Canada lynx in North America. The southern boreal forest of Colorado and southeastern Wyoming is isolated from boreal forest in Utah and northwestern Wyoming by the Green River Valley and the Wyoming basin.

Records of lynx occurrence are available from throughout most of the Southern Rocky Mountains. The last specimens of native lynx taken in the Southern Rockies were from the late 1960s and early 1970s. No native lynx specimens had been documented since a lynx was illegally trapped in 1973

and the Colorado Division of Wildlife (CDOW, now Colorado Parks and Wildlife; hereafter referred to as CDOW/CPW) considered the population biologically extirpated.

In an attempt to reestablish a viable population, the CDOW/CPW released 218 lynx in the San Juan Mountains between 1999 - 2006. All releases were in the San Juan Core Area in southwestern Colorado. The first den was discovered in 2003, and a total of 48 dens had been found through 2010, the last year of telemetry monitoring in the reintroduction program.

Based on breeding surveys, monitoring results, and completion of the program's original goals, Colorado Parks and Wildlife declared the Canada lynx reintroduction a success in 2010. Today, an estimated 150-250 lynx are believed to occupy Colorado, particularly in the San Juan mountains, but elsewhere in the state also.

Landscape Connectivity and Lynx Movements

The importance of landscape linkages and dispersal corridors to the landscape ecology of rare forest carnivores include (1) facilitating daily and seasonal intra- and inter-home range movements, (2) facilitating mating and genetic interchange, (3) allowing dispersal from population centers and colonization of otherwise suitable, vacant habitat, and (4) allowing populations to respond to natural and human-caused environmental changes and catastrophes. Squires et al. (2013) concluded that only a few putative corridors facilitated movement of lynx between Canada and the U.S. Maintaining the integrity of these corridors was of paramount importance to conservation of the Canada lynx in the northern Rockies. Similarly, at a more fine landscape scale, lynx in Colorado appear to use a "population level corridor" for high speed, landscape-level movements between southwestern Colorado (location of the Rio Grande NF) , along the eastern LaGaritas up the Sawatch Range, across I-70 east of the Eisenhower tunnel, and north over Berthoud Pass in northern Colorado (Baigas et al. 2017; J. Ivan, Colorado Parks and Wildlife, personal communication). Similar to reasoning for the northern Rockies, maintaining the integrity of corridors like this in Colorado is likely important to conservation of the Canada lynx in the southern Rockies.

Because of the patchy, discontinuous distribution of lynx habitat in the Southern Rockies Ecosystem, maintaining landscape-level habitat connectivity may be paramount to maintaining a viable population. Landscape linkages must be available to allow lynx movements between adjacent mountain ranges. Colorado lynx habitats are not only constrained by broad alpine zones and non-forested valleys, but also by towns, reservoirs, highways, and other human developments that fragment and isolate montane and subalpine lynx habitats. This does not mean that lynx will not

cross broad alpine zones, broad open valley bottoms, highways, or other landscape features, because they do. However, movements through such open habitats are not preferred because it predisposes animals to increased risk factors (e.g., predation, poaching, highway mortality) in habitats that do not support their primary suite of prey species. Any continuously forested corridor between mountain ranges supporting lynx habitat that is relatively free of human development has the potential to be an important landscape linkage. Large tracts of continuous forest are the most effective for lynx travel and dispersal.

Characteristics of lynx movements that are relevant to the present analysis include movement type, movement frequency, landscape familiarity, movement efficiency, dispersal distances, and daily travel distances that are further influenced by season and sexual differences. Lynx movements may be of four types: those associated with an established home range; those of transient or nomadic lynx that do not maintain home ranges; those of dispersing individuals; and those associated with extensive exploratory movements. The frequency that lynx may use a landscape linkage would theoretically decline from an area occasionally used as part of a resident's home range, to infrequent use within a nomadic range, to one-time use by dispersing and exploring individuals. Non-dispersing daily travel distances, the distance that resident animals move in a 24-hour period, are also relevant to the present analysis with respect to the ability of a lynx to cross through fragmented habitats between adjacent diurnal security areas. In general, project planning should consider mean daily travel distances of up to 3-6 miles for resident females. Recent data from radio-collared Colorado lynx suggests that lynx within home ranges may be relatively sedentary during winter, concentrating activity within a higher quality portion of their home range.

Lynx Analysis Units

The Canada Lynx Conservation Assessment and Strategy (LCAS; Ruediger et al. 2000) indicated that project planning should evaluate the effects to lynx habitat within designated Lynx Analysis Units (LAU) exceeding 25,000 acres (10,117 ha) in the southern Rocky Mountain Geographic Area (aka the Southern Rockies Ecoregion). LAUs are intended to provide the smallest scale at which the effects of management actions on lynx habitat are quantitatively evaluated. LAUs do not represent actual lynx home ranges, but their scale should approximate the size of an area used by an individual lynx. There are 25 LAUs on the Rio Grande NF (R. Ghormley, Rio Grande NF, personal communication).

The Analysis Area for this project includes the four LAUs that encompass the Wolf Creek Pass Lynx Linkage. Two of those LAUs, the Trout-Handkerchief and Trout Creek LAUs, occur on the east side

of Wolf Creek Pass in the Rio Grande NF. The other two LAUs, the West Fork San Juan River and East Fork San Juan River LAUs, occur on the west side of Wolf Creek Pass in the San Juan NF. These four LAUs were selected because: (1) the project site is located in the extreme southwestern corner of the Trout-Handkerchief LAU; (2) these four LAUs contain the entire Wolf Creek Pass Lynx Linkage (WCPLL); and (3) to assess habitat distribution within a broader landscape. These four LAUs, totaling 288,548 acres (116,771 ha; 2018 data), compose the largest quantitative lynx Analysis Area considered herein. This Analysis Area is also the focal habitat block where management decisions could influence lynx movements through the WCPLL and habitat connectivity with large surrounding blocks of habitat composing the San Juan Core Area (described below).

Wolf Creek Pass Lynx Linkage

The goal of linkage areas is to ensure population viability through population connectivity. Linkage areas are areas of movement opportunities between habitat blocks that may be separated by intervening areas of "non-habitat" such as basins, valleys, agricultural lands, or where lynx habitat naturally narrows between blocks. They exist on the landscape and can be maintained, degraded, or severed by management activities and human infrastructure, such as high-use highways, subdivisions or other developments. Lynx linkages are not "corridors" (which imply only travel routes), but broad areas of habitat where animals can find food, shelter and security, that also provide connectivity between larger habitat blocks. Such linkages would be expected to support greater use by transient or nomadic individuals. Linkages are also important for maintaining genetic diversity throughout the Southern Rockies lynx population.

Four lynx linkage areas have been identified on National Forest System lands within the Rio Grande NF due to their importance contributing to lynx connectivity with other Forests and other large blocks of habitat. These linkages include (1) Spring Creek Pass, (2) Wolf Creek Pass, (3) North Pass/Cochetopa Hills, and (4) Poncha Pass. One of these lynx linkages, the Wolf Creek Pass Lynx Linkage (WCPLL), is bisected by a high speed highway that would contain traffic associated with the proposed development. Due to its proximity to the project site, the WCPLL is discussed in detail below.

Lynx have been known to consistently use the WCPLL, including in the vicinity of the Project Area. The WCPLL appears to serve more as a movement corridor than for residence by lynx, connecting two primary, year-round use areas near the original lynx release sites close to the town of Creede and in an area centered northwest of Platoro Reservoir (Shenk 2005). The linkage spans a forested

swath over the Continental Divide between large blocks of highly effective subalpine habitat. Lynx denning and established home ranges have been identified to the north and south of the WCPLL. The linkage is part of the CDOW/CPW's "Core Research Area" in the San Juan Mountains, recognized as the largest continuous block of high quality lynx habitat in the state and where CDOW/CPW focused their 10-year lynx monitoring and research efforts. This core area (defined as New Mexico north to Gunnison, west to Taylor Mesa, and east to Monarch Pass) is where all 218 lynx were released. Much of this landscape has more recently been affected by a bark beetle outbreak. The effects of this disturbance to forest stands and lynx habitat and habitat selection on the Rio Grande NF is currently under investigation (Squires and collaborators 2018).

CDOW/CPW has documented numerous locations of collared animals in the habitat blocks to the north and south of this linkage, with movements between these habitat blocks involving animals crossing Hwy 160. By 2005, at least 54 radio-collared lynx were located south of Hwy 160 (T. Shenk, CDOW/CPW, personal communication with R. Thompson, July 9, 2004) and, based upon their locations, it is likely that virtually all of them crossed the highway in the WCPLL. Lynx have regularly used this linkage since the first (1999) releases. More recently, a habitat analysis of lynx reintroduced to Colorado indicated that over that 11 year period (1999-2010), the Wolf Creek Pass area appears to have functioned as the principal linkage for lynx moving between the South San Juan Wilderness and the main body of the San Juan Core Area to the northwest, with few lynx relocations in the immediate vicinity of the Hwy 160 corridor, probably because of more rapid and extended movements and less residency time.

Native lynx were also present in the general vicinity of this linkage (i.e., approximately 4 miles (6 km) south of the project site) as recently as 1991. Considering the percentage of collared lynx that have used the WCPLL, reduced permeability across Hwy 160 in the vicinity of the project area could affect the continued recovery of the Canada lynx in that area of the state.

The WCPLL was designated expressly because (1) this portion of the Continental Divide is known to be important for lynx (and multiple wildlife species) movements, (2) one lynx mortality has occurred along the highway (at Pass Creek on the east side of the pass in 2000), and (3) because of concern that the 2-3 lane, high speed Hwy 160 is presently impairing lynx movements. The WCPLL includes 47.83 mi^2 (30,613 acres/12,389 ha; 22,606 acres/9,148 ha on the Rio Grande, NF, 7,610 acres/3,080 ha on the San Juan NF, and 397 acres/161 ha in other ownership [largely the private land inholding]) on both sides of Hwy 160, on both sides of Wolf Creek Pass, and provides for north-south lynx movements (Ghormley 2011). It extends out from the highway to major

hydrologic/topographic divides. In the vicinity of the project site, the WCPLL extends south to the Continental Divide and includes the WCSA's entire 1,581-acre (640-ha) SUP and the private land parcel.

The WCPLL is an analysis area where potential qualitative impacts that could result from pending management decisions related to the proposed development could influence lynx movements through the WCPLL and habitat connectivity with surrounding habitat blocks.

San Juan Core Area

As part of the CDOW/CPW augmentation plan, all 218 lynx releases to date have been in the San Juan Mountains of southwestern Colorado, in what the CDOW defined as the San Juan Core Area (SJCA) and the Lynx Release Core Area. The SJCA is not a "recovery unit" as defined under the ESA. The SJCA (11,232 square mi; 7,188,480 acres/2,909,075 ha) is a qualitative lynx analysis area that extends from the Colorado/New Mexico border north to Gunnison, west to Taylor Mesa (approx. 20 miles NNE of Mancos), and east to Poncha Pass. The project site, the WCPLL, and the four LAUs considered herein are located within the interior of the SJCA. The SJCA is considered to be some of the best lynx habitat in the state because of large, contiguous, subalpine and montane habitat blocks supporting relatively high snowshoe hare densities, permeated by few highways, and supporting a relatively low human population density. This landscape and lynx habitat has been widely affected by bark beetles in more recent years.

The CDOW/CPW's successful lynx augmentation program was an attempt to reestablish a viable statewide population. However, to reestablish and maintain a viable population, lynx will have to disperse to other areas of the state. The concentrated lynx activity associated with the SJCA is considered herein as a metapopulation and dispersal source for other areas of the state.

Project Site Lynx Habitat

Figure 10 shows the location of lynx habitat and the WCPLL in relation to the project area. The baseline habitat conditions for each of the LAUs in the project area are summarized in Table 3 for the 2013 and current (2018) Biological Assessments.

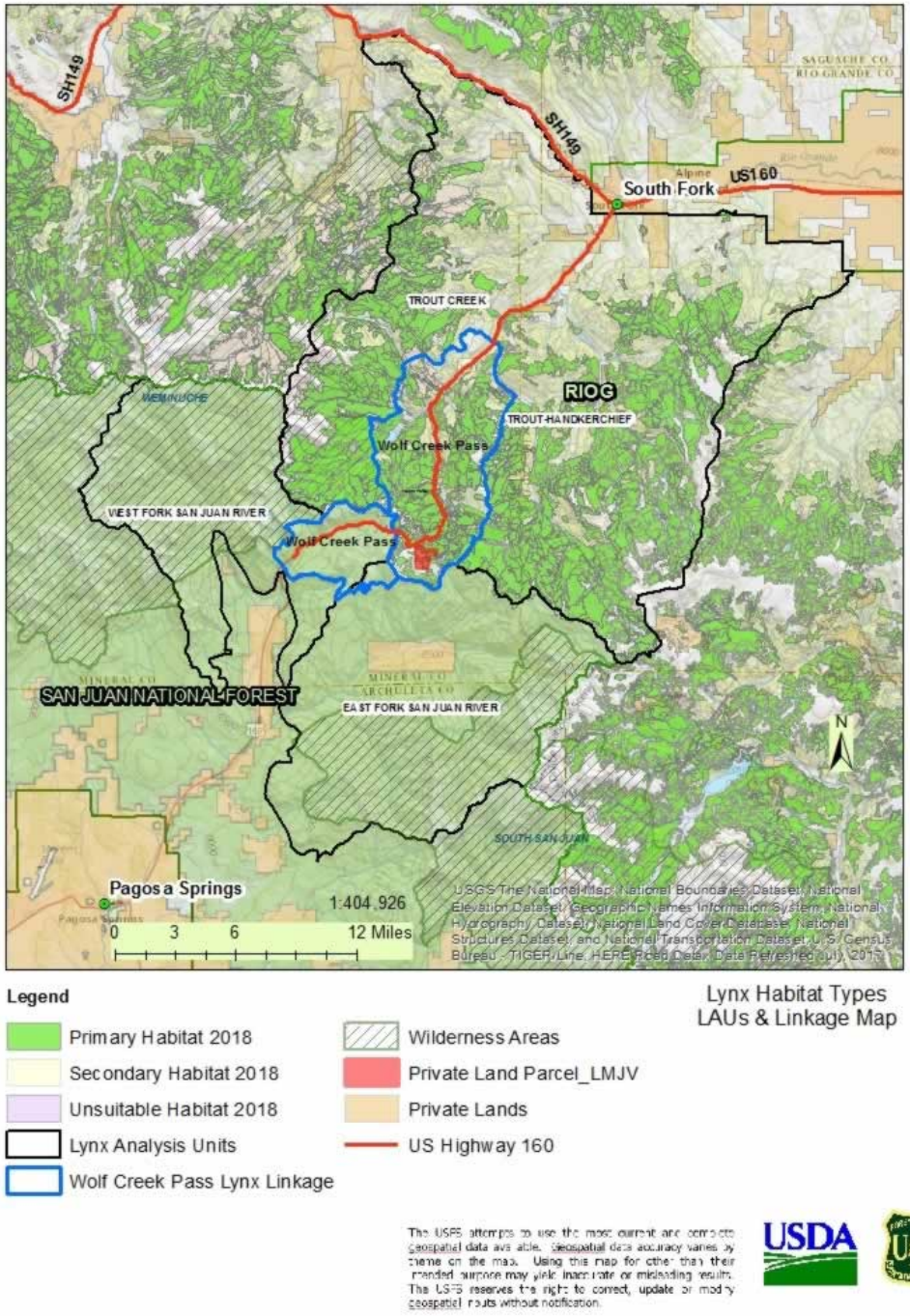

Figure 10. Location of Canada lynx habitat and the Wolf Creek Pass Lynx Linkage in relation to National Forest System lands and the private inholding in the Project Area

Table 3. Environmental baseline status changes in Canada lynx habitat in the analysis area during development of Biological Assessments for Wolf Creek ANILCA access proposals in 2013 and 2018.

	RIO GRANDE NF				SAN JUAN NF			
	Lynx Analysis Unit (LAU)							
	Trout-Handkerchief[b]		Trout Creek		West Fork San Juan River		East Fork San Juan River	
Lynx Habitat Description	**2013**	**2018**	**2013**	**2018**	**2013**	**2018**	**2013**	**2018**
Total LAU area in acres	104,875	104,875	71,925	71,925	21,316	47,164	72,906	64,584
Total Lynx Habitat acres (% of Total Acres in LAU)	78,171 (74.5)	74,238 (70.1)	52,560 (73.1)	49,695 (69.1)	32,533 (57.1)	27,589 (58.5)	44,665 (61.3)	34,094 (52.8)
Suitable Habitat acres (% of Total Lynx Habitat in LAU)	77,285 (98.9)	54,776 (73.8)	52,315 (99.5)	29,056 (58.5)	32,357 (99.5)	10,852 (34.2)	44.592 (99.8)	32,239 (94.6)
Currently Unsuitable Habitat acres (% of Total Lynx Habitat in LAU)	886 (1.1)	19,462 (26.2)	245 (0.5)	20.639 (41.5)	176 (0.5)	16,737 (60.7)	72 (0.2)	1,855 (5.4)
Total Non-habitat acres (% of Total Acres in LAU)	26,704 (25.5)	30,637 (29.2)	19,365 (26.9)	22,230 (30.9)	20,499 (36.0)	19,575 (41.5)	23,262 (31.9)	30,490 (47.2)

[a]Based on habitat remapping in 2018 on both the Rio Grande NF and across all landownerships including 617 habitat acres on non-federal (R. Ghormley, 4/27/2018) and San Juan NF (M. Hammer, 4/30/2018). Changes in quantities of suitable vs unsuitable lynx habitat on the Rio Grande NF and the ANILCA road right-of-way Project Area are due largely to extensive effects of bark beetles in the project area and corrections and updates during remapping of habitat on both forests.

[b]LAU containing the ANILCA road right-of-way Project Area.

The majority of the project site contains Canada lynx habitat. The land area of the Trout-Handkerchief LAU in which the immediate project area lies, consists of about 71% lynx habitat. Habitat in the remaining LAUs in the WCPLL analysis area range from 53 – 69% of the LAU.

Traffic on Regional Highways in the Lynx Analysis Area

This section addresses the conflicts between lynx and highways, environmental baseline traffic volumes on Hwy 160, and lynx use of the WCPLL. Data and discussion are taken from the 2013 Biological Assessments (original and supplemental) and 2014 FEIS.

Conflicts between Lynx and Highways. High-speed, high-volume highways can result in lynx roadkills, fragment and restrict lynx habitat use, impair home range effectiveness, and inhibit local and dispersing movements that may lead to reduced habitat connectivity and the decline of some wildlife populations and species over time due to genetic isolation. Highway mortality levels can increase appreciably with relatively small increases in traffic volumes and speeds. Fourteen of the 218 lynx reintroduced in Colorado were killed attempting to cross highways, including one in 2000 along Hwy 160 within the WCPLL at Pass Creek, on the east side of the pass. Introduced lynx are more vulnerable to highway mortality than resident animals because they exhibit more extensive movements through unfamiliar landscapes. While road-kills might not be a significant mortality source in resident lynx populations, it can be a significant mortality source in depleted or recovering populations until the population becomes viable. An analysis of known lynx highway mortality in Colorado suggests a decline as animals establish and remain within home ranges.

The lynx population is now established into several generations. However, lynx undergoing mating season, dispersing, and even movements within home ranges will remain vulnerable to highway mortality. As a summary of highway traffic volume and carnivore road-kill probabilities (see Thompson 2005 or Powell and Thompson 2013 for detailed literature reviews), annual average two-way daily traffic (AADT) volumes within or above the 2,000-5,000 vehicles per day (VPD) range have been documented to impair lynx movements.

A relatively large percentage of Hwy 160 on each side of Wolf Creek Pass contains barriers and restrictions along the Right-of-Way (generally on the north [cut slope] side) that would likely cause any lynx attempting to cross the highway to move parallel to traffic before landforms would allow an escape. Lynx road-kill probabilities involve multiple variables. Considering only contiguous landforms, compared to other Colorado highway sections where lynx have been road-killed (i.e., I-70 and 550), this section of Hwy 160 over Wolf Creek Pass is less permeable and contains a higher percentage of obstacles that could increase highway mortality probabilities of lynx that attempt

crossings. Ruediger and Haas (2014) recommended more monitoring of lynx in the Hwy 160 and Wolf Creek Pass area to better understand current and potential lynx crossing sites.

Current and Future Baseline Traffic Volumes and Effects. Traffic analyses in this document assess environmental baseline traffic, future traffic projections unrelated to the ANILCA action, traffic increases associated with private land development under the ANILCA road access, and traffic effects on lynx highway mortality and habitat permeability. Pertinent environmental baseline traffic volumes presented in this section are based on Year 2016 traffic volumes from the Colorado Department of Transportation website as projected out to 2018[8]. Throughout the analysis, the reader should keep in mind the relative range of baseline and future traffic volumes compared to the relative range of traffic levels known to affect lynx movements discussed in the "Conflicts between Lynx and Highways" section earlier.

The quantitative Hwy 160 traffic Analysis Area extended from Mile Marker (MM) 184.659 to MM 154.046. These were the two closest points to the east and west sides of the WCPLL, respectively, for which traffic count data considered representative of actual vehicle use through the linkage were available. This Analysis Area extended from Mineral County Road 380 (northeast of Park Creek Rd.) on the east (corresponding to the eastern end of the WCPLL), west past Saddlebrook and over Wolf Creek Pass, to Archuleta County Road AA (north of East Fork Rd.), approximately 10 miles east of Pagosa Springs.

AADT traffic volumes crossing through the WCPLL as of the most recent state monitoring data (2016) ranged from 2,800 vehicles per day on the west side to 3,100 on the east side of the WCPLL. Monthly traffic volumes on Hwy 160 through the WCPLL can vary seasonally, with the lowest levels in winter (Dec. and Jan.) and the highest levels in summer, peaking in July. Relative to the Canada lynx, these average daily traffic volumes were within the 2,000-5,000 VPD range that have been documented to impair lynx movements, but below those (>4,000 VPD) that are more serious threats to mortality and habitat fragmentation. Theobald and Shenk (2011) analyzed 11 years of habitat use by a subset of the 218 Canada lynx that were reintroduced to Colorado. For the entire database (Southern Rockies Ecoregion-wide), lynx habitat use areas occurred away from highways

[8] Colorado Department of Transportation's "Online Transportation Information System," http://dtdapps.coloradodot.info/otis/ (accessed July 12, 2018). The 2016 figures here are smaller than baseline numbers presented later in Table 7, because the table figures start with a 2018 "projected" baseline using projected traffic volumes by the OTIS system for that year to compare against future Wolf Creek development scenarios.

with high traffic volumes (AADT >10,000 VPD), averaging at least 26.9 miles away, with the majority of use at least 16.9 miles away.

Baigas et al. (2017) found in the southern Rockies that lynx regularly crossed highways in their home ranges, though usually at night or early morning hours during low traffic volumes. They also cited anecdotal evidence that lynx were able to regularly cross I-70 by utilizing below-grade crossings at large underpasses. The authors suggested from their landscape analyses of lynx highway crossings, that more effective highway mitigation to enhance highway connectivity for lynx may include reducing speed limits at night and ensuring sufficient vegetation cover next to potential crossing sites.

The science is incomplete about use and avoidance of roads by Canada lynx, and more investigation is needed to better understand this relationship in ways that can inform future highway and land management planning by state and federal agencies. However, recent studies already cited provide important glimpses into the potential for highways and high traffic volumes to alter lynx movement and avoidance behavior that can potentially degrade habitat functionality and landscape permeability for the Canada lynx in the southern Rockies in uncertain and potentially damaging ways. This may be happening already to some extent in the WCPLL. This is particularly concerning for an animal that relies at least seasonally on broad-scale movements for successful hunting, dispersal to vacant habitats, and improving breeding opportunities and likelihood of breeding success. All important factors for promoting robust and healthy populations well-distributed in the environment, and, ultimately, continued recovery of the Canada lynx in the southern Rockies ecoregion. Lynx-friendly project designs and mitigation related to highways and adjacent land management are especially important in key movement and connectivity areas like the WCPLL.

Other Factors Potentially Affecting Lynx in the Analysis Area

Other activities that may influence Canada lynx in the Analysis Area are provided here. New activities since the 2013 BA/2014 FEIS are included here only, except for those activities or factors identified in the earlier documents as ongoing ones.

- *Del Norte Peak Spruce Beetle Salvage.* The salvage activities on the Divide Ranger District involve two LAUs, including two harvest units in the Trout-Handkerchief. Within the Trout-Handkerchief LAU, the management activities will convert 1,324 acres (536 ha) of suitable lynx habitat into temporarily unsuitable habitat. The LAU's current baseline will increase from 26.22% to 28.00% unsuitable habitat. The district determined an adverse effect to the Canada lynx from implementation of the project, although they concluded the effects were within

effects analyzed in the Tier 1 programmatic Biological Opinion for the Southern Rockies Lynx Amendment. The USFWS in their project Tier 2 Biological Opinion agreed with this assessment.

- *Ongoing Use and Maintenance of Hwy 160 through the WCPLL.* The highway and its use currently adversely affect lynx as a result of habitat loss and fragmentation, impaired local and landscape-level habitat connectivity through the Wolf Creek Pass area (including all four Analysis Area LAUs), and increased road-kill probabilities.

- *Ongoing Operations at Wolf Creek Ski Area.* Operations and maintenance across the 1,581-acre (640-ha) SUP in the Trout-Handkerchief LAU. Almost all of WCSA's operations are conducted on NFS lands within its SUP area. The ski area owns 12.5 acres of private lands (limited to skiing activities) along the A-way ski trail and the Waterfall ski terrain. Also, portions of the Alberta chairlift and surrounding ski trails are within the 287.5-acre private inholding.

- *Wolf Creek Ski Area Meadow Lift Development.* On August 23, 2017, Rio Grande National Forest Supervisor Dan Dallas, submitted to the U.S. Fish and Wildlife Service a Biological Assessment and requested concurrence on the Forest Service's determination of "not likely to adversely affect" the Canada lynx. The determination was based on the Forest Service's conclusion that some effect to the Canada lynx could occur, based on the project's position in the Wolf Creek Pass Lynx Linkage Area and some projected impacts to the functionality of a relatively small amount of habitat. The U.S. Fish and Wildlife Service (Ann Timberman, Western Colorado Supervisor) concurred with this effect determination on September 6, 2017.

- *Fat Bear Hydro Axe. Hydro axe of approximately 250 acres on the Divide Ranger District for big game habitat improvement.* The project occurred in the Trout-Handkerchief LAU but did not directly affect lynx habitat.

- *Fox Mountain Roadside Salvage/Firewood.* Commercial firewood cutting of up to 250 acres along existing closed roads in the Divide Ranger District. The activity occurred in the Trout-Handkerchief LAU but did not directly affect lynx habitat.

- *Castor Salvage Sale. Approximately 250 acres of salvage harvest in the Trout-Handkerchief LAU on the Divide Ranger District.* No lynx habitat acres were converted to unsuitable.

- *Wolf Creek Pass Closure Order Reissuance. Renewing a closure order north of 160 to prohibit off-trail over-snow vehicles and confining snowmobiles to County Road 402.* Situated in the Trout Creek LAU, this had no potential to directly or indirectly affect lynx habitat.

- *Tucker Ponds Campground Hazard Tree Removal.* Removal of all dead trees from within the campground.

- *Pass Creek Yurt.* The Pass Creek Yurt is an existing, Forest Service- permitted user fee lodging facility for non-motorized winter recreation located approximately 5.5 miles up FSR 391 (Pass Creek Rd.) from Hwy 160.

- *Wolf Creek Pass Weather Station.* An automated weather station is maintained by Colorado Department of Transportation on the top of Wolf Creek Pass, approximately 0.33 mile west of the Continental Divide and approximately 0.5 mile south of Hwy 160.

- *Spruce Beetle Effects on Lynx Habitat.* Since 1996, spruce beetle has affected 1.2 million acres/485,623 ha of high-elevation Engelmann spruce forests in Colorado and Wyoming. In 2011, spruce beetle infestations expanded in forests in the San Juan Mountains and upper Rio Grande Basin, where the outbreak was first detected in 2003. While most of the mature spruce trees in the Weminuche Wilderness have been killed, new attacks were detected in high-mountain areas outside the wilderness, from the town of South Fork south to Wolf Creek Pass. Spruce beetles are presently at epidemic levels within and around the project site and 2012 aerial surveys recorded spruce beetle activity over the majority of the project site. Forests in the vicinity of the project area are approximately 90% spruce and 10% fir, so a majority of local forest stands could be affected. Forest stands in the project area have been buffered somewhat by the active removal of trees within the ski area boundary, but beetles continue to spread (T. Malecek, USFS, personal communication with R. Thompson, Mar. 21, 2012). There is a high probability that most spruce trees over five inches diameter-at-breast-height (dbh) in the project area will be lost to spruce beetles within the next few years (K. Self, USFS, personal communication with R. Thompson, Mar. 12, 2012). August, 2012 ocular surveys found that 70-90% of the overstory has been infected. Within spruce-dominated forests, spruce beetle mortality will likely alter structural forest stand conditions, which may influence lynx prey species abundance and lynx habitat use.

  Additional analysis of the spruce beetle effects on lynx habitat use are contained in the April 2013 BA and August 2013 BA supplement (Attachment A). Additional beetle impacts to forest stands on the Rio Grande have continued since the earlier analyses, but have largely exhausted themselves more recently due to the extensive effects already experienced across much of the forest. Current habitat figures provided earlier in Table 3 reflect the latest post-beetle (and fire) baseline habitat conditions (as of February 2018; also includes mapping corrections).

- *West Fork Fire Complex.* The West Fork Fire Complex started by lightning in the San Juan Mountains of southwest Colorado on June 5, 2013. The fire started on the San Juan NF, west of the Continental Divide, but eventually developed into three separate fires, two of which (the West Fork and Papoose Fires) burned primarily on the Rio Grande NF, east of the Divide. The fire burned a total of 109,615 acres/44,360 ha on both the San Juan NF and Rio Grande NF. Three of the four action area LAUs were burned to some extent. The Trout-Handkerchief LAU, which contains the Project Area, was unburned. The effects of the fire on lynx and lynx habitat were detailed in the August 2013 supplemental BA (Attachment A) and were considered in the final BO. In summary, of all lynx habitat in all four LAUs composing the action area, 16.9% burned to some extent and 61.7% of all lynx habitat that burned (21,881 ac. / 8,855 ha) was converted to unsuitable lynx habitat. Conversely, 38.3% of all lynx habitat that burned retained the majority of its former habitat values. The fire burned 1,386 acres (561 ha), 5.7% of the WCPLL, and 2.2% of the lynx habitat present. With the updated fire data, unsuitable lynx habitat in the WCPLL would total 3.2% of the linkage and 96.8% would remain suitable.

- *Climate Change.* Climate change is reducing the snow pack in western North American mountains and is shifting the distribution of boreal forest northward and up mountain slopes. As a result, climate change is altering the geographic location and distribution of potential lynx habitat, threatening the long-term viability of lynx in the contiguous United States. Based on three climate change scenarios, potential lynx habitat in the lower 48 United States could decrease by 47-69% by 2100 A.D. Climate change could also result in increased intra-year periods of a more consolidated snowpack, which could reduce the competitive advantage that lynx have over competitors and predators in the backcountry. Furthermore, climate change could result in more frequent, larger, and more destructive wildfires that could affect lynx habitat and their prey base. In addition, climate change could result in altered future forest composition that could benefit or adversely affect snowshoe hare and lynx habitat use. Various development scenarios associated with the private parcel would be completed in Years 2020 to 2043, possibly before any measureable climate change effects that could be discerned from normal background variation would be realized in those montane and subalpine habitats within the lynx analysis area.

Additionally, the 2013 Biological Assessment considered in the baseline at that time a proposed Saddle Brook residential community development along the South Fork of the Rio Grande River on the south side of Hwy 160 approximately 12 miles (19 km) east of WCSA and in the Trout-Handkerchief LAU. The project was estimated at the time to contribute under full build-out an

additional 1,520 AADT to the highway corridor, LAU, and WCPLL. That project has not come to fruition and the property remains vacant with no known plans to proceed with the project in the foreseeable future (personal communication with Rio Grande National Forest Deputy Supervisor, 7/11/2018). The county administrator for Mineral County in which the property is located, confirmed there has been no recent permitting requests or activity associated with the property and nothing on the horizon that the county is aware of (personal communication with J. Kukuk, 7/13/2018). Hence, the project is not reasonably foreseeable or certain to occur and is removed from the baseline and any further analysis in this Biological Assessment for the Wolf Creek ANILCA access action.

Overall, this section of the Biological Assessment illustrates that the Canada lynx and its habitat continues to face multiple disturbance factors in uncertain ways and degrees in the analysis area and the WCPLL. Habitat quality and quantity has continued to diminish, albeit at reduce rates, since the 2014 FEIS in the LAUs and larger analysis area on both the Rio Grande and San Juan national forests (Table 3). Some of the changes in habitat numbers is due to recent habitat re-mapping and refinement on both forests to take advantage of new information and procedures for correcting and updating habitat maps. However, the numbers also reflect the substantial impact bark beetles have had on forest stands and lynx habitats in the larger analysis area, with forests on the Rio Grande National Forest particularly impacted. Additionally, wildfires continue to affect stands and diminish habitat function on the forests. Salvage harvest activities have increased to respond to the changed conditions and short-term timber output opportunities and represent additional impacts. This is particularly the case in the Trout-Handkerchief LAU on the Rio Grande National Forest, where the main project area lies. Recreational use of the ski area and this region of the state will likely continue to grow not unlike other areas of Colorado and increasingly encroaching into lynx habitat in the WCPLL. Current and projected traffic volumes along Hwy 160 and across the WCPLL, remain relatively small in the state but are expected to continue to grow and reaching levels that the literature indicates may decrease habitat values and landscape permeability for the Canada lynx. This is the case even without private land development at Wolf Creek. Consequently, measures to avoid and minimize further cumulative negative impacts to the Canada lynx and landscape permeability for lynx in a key conservation area of the state should be a priority.

Part 7: Effects of the Proposal

The direct, indirect, and cumulative effects to threatened, endangered and proposed species were disclosed in detail in the 2014 FEIS (Vol. 1, starting page 4-131, alternative 3) and summarized here along with consideration of new information since then.

7-1. Southwestern willow flycatcher

Direct effects resulting would be those disturbances associated with the Forest Service authorizing a road access corridor from Hwy 160 to the private parcel under ANILCA and a ski area access road. There would be no direct physical effects of this action to vegetation types, southwestern willow flycatcher habitat, or to southwestern willow flycatchers as a result of this action. Effects associated with constructing the access road and private development of a Village would be future effects that are addressed under Indirect Effects, below.

Indirect effects would be those associated with development of private lands (including traffic-related), development of the interchange and access road across National Forest System land to the private parcel, and development of the ski area access road under the Moderate and Maximum Density Development Concepts. It is assumed that the ski area access road would not be constructed for the Low Density Development Concept.

The Rio Grande National Forest is not known to be occupied by the southwestern willow flycatcher. Almost 2,000 acres (809 ha) of suitable southwestern willow flycatcher habitat has been identified on the Rio Grande NF and has been surveyed annually for flycatchers since at least 2007 without any detection of the bird (R. Ghormley, 2018 unpublished report). Surveys were also conducted in 2012 specifically during the environmental reviews for the Wolf Creek land exchange action and similarly failed to detect southwestern willow flycatchers in potentially suitable breeding habitat. Potential indirect effects to potential, but unoccupied, southwestern willow flycatcher breeding habitat under the Low Density Development Concept would total 0.10 acres (0.04 ha) of the 4.42 acres (1.79 ha) present in the project area, and 0.16 acres (0.06 ha) under the Moderate and Maximum Density Development Concepts. All disturbances would be on National Forest System land. Differences in the disturbance areas under Low and Moderate/Maximum Density Development Concepts are due to differences in the road design between the development concepts. The willow habitat is a wetland and would be buffered and avoided.

The entry and ski area access roads would not affect any potential southwestern willow flycatcher breeding habitat.

When considering the potential direct, indirect, and cumulative effects, overall there is minimal to unlikely effects to potential, though unoccupied, breeding habitat of the southwestern willow flycatcher on federal or private land in the analysis area. However, we not entirely rule out the possibility of the southwestern willow flycatcher occupying suitable habitat sometime in the future in the analysis, despite the lack of evidence over the past decade or so. Consequently, given the availability of potentially suitable habitat and future uncertainty, we conclude that implementation of the ANILCA road right-of-way action *"**may affect, but is not likely to adversely affect**"* the southwestern willow flycatcher.

7-2. Canada lynx

Much of the discussion and analyses in the 2013 Wolf Creek Biological Assessments, 2014 FEIS, and 2015 Forest Service Record of Decision related to the ANILCA road right-of-way action (Alternative 3) remain relevant today. They are captured here with additional consideration of new information as needed to further inform the conclusions of effect on the Canada lynx later in this section.

Under the ANILCA road right-of-way action, the Rio Grande NF would grant a road special use authorization to LMJV across National Forest System lands to connect the private land parcel to Hwy 160. The 1,612-foot-long (491 m) road would be within a 60-foot to 100-foot (18 – 30 m) wide corridor; the width of the road would be determined based on the size of the development approved by Mineral County. In addition, a road corridor would be authorized for the construction of a ski area access road that would connect the eastern end of Tranquility Road to the private land parcel (Moderate and Maximum Density Development Concepts) (Fig. 4 and Fig. 5).

7-2-1. Effects on the Rio Grande National Forest

Direct Effects on Lynx Habitat from the ANILCA road right-of-way action. Direct effects would be those associated with the Forest Service authorization of a road access corridor from Hwy 160 to the private parcel under ANILCA, as well as a ski area access road. There would be no direct physical effects to vegetation types, lynx habitat, or to lynx attributable to this authorization, and no irreversible or irretrievable loss of lynx resources from the Rio Grande NF.

Indirect Effects on Lynx Habitat from the ANILCA road right-of-way action. Indirect losses of lynx habitat on the Rio Grande NF resulting from future development of the entry access road corridor and the ski area access road (Moderate and Maximum Density Development Concepts) would range from 1.93 acres (0.78 ha) under the Low Density Development Concept, to 4.28 and 4.37 acres (1.73 and 1.77 ha) under the Moderate and Maximum Density Development Concepts, respectively (Table 4). Most of this affected lynx habitat might have somewhat impaired effectiveness as a result

of the fragmented character of the spruce-fir stands and their close proximity to Hwy 160. There would be relatively minor effects to lynx habitat effectiveness, the lynx prey base and foraging functionality, diurnal security habitat and thermal cover, habitat connectivity, and lynx home range efficacy in habitats surrounding the access road corridor as a result of its development and use.

Indirect Access Road Effects on Trout-Handkerchief LAU Habitat Parameters. Changes to environmental baseline lynx habitat statistics for the entire Trout-Handkerchief LAU resulting from development of the access roads under the ANILCA action would be relatively minor, with impact acreages rounded to 2, 4, and 4 acres (0.8, 1.6, and 1.6 ha) for the Low, Moderate, and Maximum Density Development Concepts, respectively (Table 4).

Table 4. Indirect effects (acres/ha) to lynx habitat facilitated by development of the Hwy 160 entry and ski area access roads across the Rio Grande National Forest to the LMJV private inholding.

	Density Development Concept		
Lynx Habitat [a]	**Low[b]**	**Moderate**	**Maximum**
Total acres / hectares	1.93 / 0.78	4.28 / 1.73	4.37 / 1.77

[a] Primary vegetation based on updated Rio Grande NF lynx habitat modeling and mapping criteria (Ghormley 2011).
[b] The ski area access road would not likely be constructed under the Low Density Development Concept.
Source: Rio Grande NF, Wildlife Specialties, L.L.C., and Western Ecosystems, Inc.

7-2-2. Effects Across All Landownerships

Indirect Effects on Lynx Habitat. Under the ANILCA road right-of-way action, future (indirect) loss of lynx habitat would be lowest under the Low Density Development Concept (9.44 acres), followed by Moderate (42.2 acres) and Maximum (70.35 acres) (Table 5). The ski area access road would not impact any designated lynx habitat on the Rio Grande NF. Impacts to lynx habitat could increase by 4.0 acres under the Maximum Density Development Concept, depending on whether the final design and siting of water tank facilities extend disturbances into lynx habitat outside of the current water tank farm footprints. In addition to development-related lynx habitat losses, there would be additional reduced habitat effectiveness in surrounding areas as a result of habitat fragmentation, perforation, extensive fencing, and risk factors and disturbances related to human activity and presence. Lynx habitat conversion resulting from indirect effects facilitated by the ANILCA road right-of-way action would be additive to habitat changes from the ongoing spruce beetle epidemic.

Table 5. Indirect loss of lynx habitat by land ownership category and habitat remaining in the Trout-Handkerchief LAU.

	Acres / Hectares of Canada Lynx Habitat Impacted by Development Concept (% of Total Lynx Habitat in Trout-Handkerchief LAU)[1]					
	NATIONAL FOREST SYSTEM LANDS ONLY			**STATE AND PRIVATE LANDS ONLY**		
	Development Concept					
	Low	Moderate	Maximum	Low	Moderate	Maximum
Total Lynx Habitat Impacted	1.9 / 0.7 (0.002)	1.4 / 0.6 (0.002)	3.1 / 1.3 (0.004)	7.6 / 3.1 (1.23)	40.8 / 16.5 (6.6)	67.2 / 27.2 (10.9)

	ALL LANDS		
	Development Concept		
	Low	Moderate	Maximum
Total Lynx Habitat Impacted	9.4 / 3.8 (0.01)	42.2 / 17.1 (0.06)	70.4 / 28.5 (0.09)
Habitat Remaining in the LAU	74,846	74,813	74,785

[1] From Table 3 of this Biological Assessment, 2013 BA, and 2014 Wolf Creek land exchange FEIS, i.e., based on 74,238 and 617 acres of total lynx habitat [sum = 74,855 ac.] on National Forest System and other land ownerships, respectively.

Indirect Effects on Trout-Handkerchief LAU Habitat Parameters. Changes to environmental baseline lynx habitat statistics for the entire Trout-Handkerchief LAU resulting from effects (all indirect) that can be attributed to the ANILCA road right-of-way action, would be modest to appreciable, with impact acreages rounded to 9, 42, and 70 acres for the Low, Moderate, and Maximum Density Development Concepts, respectively. These impact acreages could increase by 0 to 4 acres for the Moderate and Maximum Density Development Concepts, respectively, as a result of final water tank siting, as described above. Table 5 provides updated LAU statistics reflecting all indirect effects of implementation of the ANILCA road right-of-way action across federal vs. non-federal landownerships under the three LMJV potential development scenarios on the private inholding in the action area. While effects would vary considerably between the different development concepts, the resulting changes to LAU statistics would be minor under all concepts due to the large size of the LAU. Total suitable habitat would remain above about 73% under all development concepts.

Unsuitable habitat in the LAU would remain at about 26% when also factoring in the effects of beetles and fires.

Indirect Traffic Contributions. Because FHU (2012) did not calculate traffic contributions for the Moderate and Maximum Density Development Concepts under the ANILCA road right-of-way action evaluated in the 2014 FEIS, the FHU (2012) external trip generation rates per unit/room per day for the land exchange alternative (Alternative 2) were applied to the equivalent number of land use code units for the current ANILCA road right-of-way action (Alternative 3 in the 2014 FEIS) to develop total traffic contributions for the two development concepts.

Table 6 provides updated projections of Hwy 160 traffic volumes on each side of the WCPLL, with the addition of projected traffic contributions under the private land development scenarios compared to baseline (no LMJV private inholding development) levels. Under the Low, Moderate, and Maximum Density Development Concepts, total private land development-related traffic additions in the WPCLL, would range from 26 to 876 AADT in Year 2028 and from 26 to 6,659 AADT in Year 2058.

Under the ANILCA road right-of-way action - Low Density Development Concept, the eight single family residences would generate a total of 77 AADT to future traffic at and beyond full build-out, with 26 and 51 AADT traveling east and west through the WCPLL, respectively (Year 2028; Table 6). These contributions would represent 0.7 to 1.4% of the total baseline traffic volume going through the linkage in Year 2028, decreasing to 0.6 to 1.2% of total traffic by Year 2043, as unrelated traffic volumes continue to rise on this regional highway.

These contributions do not consider the relatively small, short-term increases in construction-related traffic. While those contributions would be additive to traffic volumes within the range of those documented to impair lynx movements and pose more serious threats to mortality and habitat fragmentation, those contributions would represent 0.7 to 1.4% of total Year 2020 baseline highway volumes, declining slightly to represent 0.6 to 1.2% of total Year 2043 baseline highway volumes, as unrelated traffic volumes continue to rise on this regional highway. These numbers have remained largely unchanged since the 2014 FEIS. Because these Low Density Development contributions to Hwy 160 traffic through the WCPLL would be additive to traffic volumes already within the range of those documented to impair lynx movements, these small incremental increases

Table 6. Future traffic volumes (AADT) under the ANILCA road right-of-way action with contributions of development on the private land and taken at focal Hwy 160 monitoring points on the east and west sides of the Wolf Creek Pass Lynx Linkage (WCPLL).

Hwy 160 Monitoring Point	CDOT Ref. Pt.	Total Traffic Volume (Development Contribution/ % Village Contribution to Traffic Volume Growth[a])		
		Development Concept		
		Low	Moderate	Maximum
			YEAR 2018 (Baseline)	
East side WCPLL	184.659		3,190	
West side WCPLL	154.046		2,884	
			YEAR 2021[b]	
East side WCPLL	184.659		3,325 (0 / 4.2%)	
West side WCPLL	154.046		2,968 (0 / 2.9%)	
			YEAR 2028[c]	
East side WCPLL	184.659	3,665 (26 / 0.7%)	4,077 (438 / 12.0%)	4,077 (438 / 12.0%)[d]
West side WCPLL	154.046	3,355 (51 / 1.5%)	4,180 (876 / 26.5%)	4,180 (876 / 26.5%)[d]
			YEAR 2051[c]	
East side WCPLL	184.659	4,699 (26 / 0.6%)	5,111 (438 / 9.4%)	7,998 (3,325 / 71.1%)
West side WCPLL	154.046	4,321 (51 / 1.2%)	5,146 (876 / 20.5%)	10,929 (6,659 / 155.9%)

[a] The baseline and development years were updated from those used in the 2014 FEIS (Alternative 3), but using similar time spans between years as used earlier. CDOT's OTIS was accessed for updated traffic volume projections in the WCPLL over the new baseline and development scenario timelines. It was assumed that the contributions of the Village at Wolf Creek to traffic volume under the development scenarios still apply today. The % Village Contribution to Traffic Volume Growth is the % of Village traffic contributions to traffic relative to what traffic levels would be for that year without Village contributions. For example, in Year 2020, for the Moderate Density Development Concept, the Village would add 438 AADT to the 3,639 AADT that would have been moving through the eastern part of the WCPLL without Village traffic, thus 438/3,639=12.0%, not the (4,077-3,190)/3,190=27.8% increase over 2010 baseline traffic that also includes unrelated traffic growth.

[b] Year that groundbreaking starts at the Village at Wolf Creek project under the ANILCA road right-of-way action.

[c] Full build-out (7 yrs.) of the Low and Moderate Density Development Concepts of the Village at Wolf Creek project under the ANILCA road right-of-way action.

[d] Because FHU (2012) did not provide interim (e.g., Year 2020) traffic calculations for the partial build-out of the Maximum Density Development Concept, we used full build-out numbers for the Moderate Density Concept.

[e] Full build-out (30 yrs.) of the Low and Maximum Density Development Concepts of the Village at Wolf Creek project under Alternative 3.

Source: CDOT website, traffic impact study by Felsburg Holt & Ullevig (FHU 2012), Western Ecosystems, Inc., ITE (2008), and TDA Colorado.

by themselves warrant an "adverse" determination for lynx (K. Broderdorp, US Fish and Wildlife Service, 2012 personal communication with R. W. Thompson).

Under the ANILCA road right-of-way action - Moderate Density Development Concept, the private land development would generate a total of 1,314 AADT to future traffic within the WCPLL by full build-out (Year 2028), with 438 and 876 AADT traveling east and west through the WCPLL, respectively (Table 6).

These contributions represent 11.9 to 23.6% of the total baseline traffic volume going through the linkage in Year 2028, decreasing to 9.4 to 18.4% of total traffic by Year 2051, as unrelated traffic volumes continue to rise on this regional highway. As with the Low Density Development Concept, these numbers have remained largely unchanged since the 2014 FEIS.

Under the ANILCA road right-of-way action - Maximum Density Development Concept, the private land development would generate a total of 9,984 AADT to future traffic within the WCPLL at and beyond full build-out (Year 2051), with 3,325 and 6,659 additional AADT traveling east and west through the WCPLL, respectively (Table 6). These contributions represent 71.1 to 155.9% of the total baseline traffic volume through the linkage in Year 2051. The percentage Village contributions to traffic are larger than in the 2014 FEIS for the period. This is because CDOT's online OTIS database actually projected smaller "non-development" AADT in the WCPLL than earlier, even though the time period was extended from 2043 to 2051. Consequently, the Village's contributions to the smaller project traffic volume without the Village, became proportionately larger in the current analysis. Village contributions to Hwy 160 traffic through the WCPLL would be additive to traffic volumes within the range of those documented to impair lynx movements and pose more serious threats to mortality and habitat fragmentation, and would represent significant contributions by themselves.

Traffic contributions under the Moderate and Maximum Density Development Concepts would be additive to traffic volumes through the WCPLL already within the range of those documented to impair lynx movements; these substantial increases by themselves warranted an "adverse" effect determination for the Canada lynx during earlier discussions (K. Broderdorp, US Fish and Wildlife Service, 2012 personal communication with R. W. Thompson) and likely continue to do so today in the absence of substantial new information to conclude differently.

Table 7 provides winter day traffic volumes on "internal" roads associated with the Low, Moderate, and Maximum Density Development Concepts. Daily village traffic contributions would range between 80 (Low Density), 2,050 (Moderate Density), and 5,500 (Maximum Density) VPD

along the access road, respectively, with lower volumes in the core areas and on residential streets. Most of this traffic activity would occur during daylight hours when lynx are less likely to be active; however, lynx can be active at any time of day. This internal traffic would further reduce habitat effectiveness around the private land development areas and road corridors, and further impair habitat connectivity through the broad development infrastructure. Under the Moderate and Maximum Density Development Concepts, it is unlikely that lynx would attempt to cross through the developed area, the extensive 35-55 foot (11-17 m) tall retaining walls along the highway's acceleration/deceleration lanes would represent barriers, and some type of crossing structure(s) for lynx in this local area would likely go unused. Because internal roads would be designed and posted for relatively low speeds (e.g., 25 mph / 40 kmh), the risk of lynx road-kill would be insignificant and discountable.

Table 7. Typical winter day daily traffic volumes on "internal" roads projected under the ANILCA road right-of-way action, private land development concepts.

Development Concept	Extent of Paved Road (miles)	Daily Project Volume on Hwy 160		Village Daily Traffic Volume Range by Location (vehicles per day)		
		Oriented WEST	Oriented EAST	Village Road at Hwy 160 to Core	Village Core Streets	Residential Streets
Low	1.51	55	25	80	N.A.	10-80
Moderate	2.90	1,400	700	2,100	1,000 –1,200	100-500
Maximum	4.80	3,700	1,900	5,600	2,000 –2,500	100-650

Source: TDA Colorado using Felsburg Holt & Ullevig March 2012 WCV Traffic Study, Table 4 & TDA estimates.

Indirect Hwy 160 Effects on the Canada Lynx. Total daily traffic contributions under the Maximum Density Development Concept would increase substantially by 2051, compared to any other development scenario and years, totaling 9,984 AADT; 3,325 and 6,659 AADT on the east and west sides of the WCPLL, respectively (Table 7). Contributions to Hwy 160 would represent 71.1 to 155.9% of the total baseline traffic volume going through the linkage in Year 2051, totaling 7,998 and 10,929 AADT on the east and west sides of the WCPLL, respectively.

Total Year 2018 traffic volumes through the WCPLL are currently within the 2,000-5,000 VPD range that have been documented to impair lynx movements. Sometime around Year 2028-2029, baseline traffic volumes through the WCPLL unrelated to the private land development are projected to exceed the >4,000 VPD threshold, presenting more serious threats to lynx mortality

and habitat fragmentation. In Year 2051, without the private land development, baseline traffic volumes through the linkage will have increased by 46.5 (east WPCLL) to 48.1% (west) from current 2018 levels, or 4,673 to 4,270 additional AADT, respectively.

The private land development contributions to traffic through the WCPLL would be additive to traffic volumes within the range of those documented to impair lynx movements and pose more serious threats to mortality and habitat fragmentation, and would represent significant contributions leading to an "adverse" determination for lynx by themselves. The development-related traffic contributions are similar between all development concepts and are well above levels posing more serious threats to lynx mortality, habitat fragmentation, and impaired habitat connectivity.

Development effects could result in appreciable, year-round increases in vehicular traffic on Hwy 160 that could increase lynx highway mortality probabilities, rising to the level of "take" of Canada lynx. Further, greater lynx avoidance of the Hwy 160 corridor could further inhibit effective habitat use along the highway, impairing the ability of lynx to maintain adjacent home ranges, and impairing some local dispersal movements that may lead to reduced landscape connectivity between large habitat blocks in the San Juan Core Area and the designated WCPLL that are important to the Southern Rockies lynx population. While the implementation of conservation measures related to the highway and traffic effects should reduce the risk of "take" and adverse effects to habitat connectivity, the risk of "take" from highway mortality could still increase over existing levels and habitat connectivity could be further impaired from the existing environmental baseline.

ANILCA road right-of-way action and consistency with the Southern Rockies Lynx Amendment Management Direction. The April 2013 Biological Assessment and/or 2014 FEIS concluded that the ANILCA action (land exchange or road access alternatives) was consistent with all applicable SRLA management direction except ALL 01 and ALL S1. The ALL 01 objective states: "Maintain or restore lynx habitat connectivity in and between LAUs, and in linkage areas." The ALL S1 standard states: "New or expanded permanent developments and vegetation management projects must maintain habitat connectivity in an LAU and/or linkage area."

The earlier conclusions of inconsistency with these two pieces of management direction were in error. The SRLA management direction applies to activities and habitat on National Forest System lands. Unlike NEPA and ESA analysis, there is no such thing as "indirect effects" under the National Forest Management Act (NFMA). NFMA only requires that instruments for use and occupancy of

National Forest System lands be consistent with land management plans (16 U.S.C. 1604(i)). The act of authorizing access across the Rio Grande NF to the private land inholding has already been established as not directly affecting the Canada lynx on the forest. While there may be some limited indirect effects to lynx on the Rio Grande NF from diminishment of habitat or habitat effectiveness associated with any future improvements to the Hwy 160 access road and/or ski area access road, there would continue to be ample habitat remaining on the forest in the project area, LAU, and linkage. Hence, the Forest Service act of authorizing access under ANILCA across the Rio Grande National Forest, in itself does not result in effects to the Canada lynx on these lands that would rise to the level of violating forest plan direction.

Although the "connectivity" objective and standard from the SRLA and Rio Grande NF plan does not apply to the private land development, the 2013 Biological Assessment, 2013 Biological Opinion, and current Biological Assessment, conclude the future development on the private inholding would result in potentially substantial adverse effects to the Canada lynx. This is based on conclusions of indirect habitat and traffic-related lynx mortality and avoidance effects associated with the development of the private land facilitated by the Forest Service's ANILCA road access authorization. Because the private land development would not occur "but for" the ANILCA access authorization by the Forest Service, those effects must be surfaced and considered in the overall analysis under the Endangered Species Act of the agency's access authorization.

Additional Lynx-related Conservation Measures. Conservation measures needed to reduce adverse effects and "take" associated with future development of the private inholding have been agreed to by LMJV (summarized earlier in Section 3-3; full conservation measures in Appendix B). The most important measures will be those associated with maintaining habitat connectivity across Hwy 160 and minimizing highway mortality in the WCPLL under any of the development scenarios. The current conservation measures address these issues, based on extensive coordination and consultation among LMJV applicant, Forest Service, and USFWS during the 2013 Wolf Creek environmental reviews and section 7 consultation. Given the more recent investigation of lynx behavior related to highway crossings (Baigas et al. 2017), two additional measures might be considered for the lynx conservation strategy related to the ANILCA road right-of-way action and related indirect effects from the private land development and increased traffic effects: 1) reducing speed limits at night along the Hwy 160 corridor and access routes to the private land development, and 2) cooperative efforts among the stakeholders in the vicinity to ensure maintenance of adjacent forest/vegetation conditions along Hwy 160 that promote viable crossing sites by Canada lynx (as

discussed in more detail by the authors)[9]. These additional measures not currently addressed in the conservation strategy and measures supported by LMJV, may have additive conservation value and are worthy of consideration for the overall conservation strategy in the Project area and greater WCPLL.

ANILCA Road Right-of-Way Action Lynx Effects Summary. The collective direct and indirect effects of implementation of the ANILCA road right-of-way action and subsequent private land development, on lynx foraging, sheltering, and breeding would exceed the definitions of insignificant and discountable (USFWS and NMFS, 1998). Therefore, the Moderate and Maximum Density Development Concepts warrant a *"**may affect, likely to adversely affect**"* determination for the Canada lynx. While the Low Density Development Concept would have appreciably smaller adverse effects relative to the other two development concepts, it also warrants a *"**may affect, likely to adversely affect**"* determination for Canada lynx due to 1) its full build-out traffic contributions would be additive to highway sections where existing traffic volumes already impair lynx movements (Broderdorp 2012), and 2) relatively small habitat losses but additive effects to the Canada lynx in a key designated linkage area for lynx in Colorado. The projected effects are "adverse" for purposes of section 7-related effects analyses and focus for the requested interagency consultation with the USFWS. Some take of lynx could occur due to increased highway mortality and/or more traffic-related avoidance of Hwy 160 by lynx leading to reduced effectiveness of the WCPLL as an important landscape connectivity mechanism in southern Colorado. The proposed Conservation Measures, most of which were developed among the U.S. Fish and Wildlife Service, U.S. Forest Service, and LMJV proponent during the 2013 Wolf Creek consultation, should appreciably reduce the potential indirect adverse effects of the action and help sustain connectivity in the WCPLL during and following implementation. The more recent addition of language in LMJV's proposal providing more specificity about LMJV's commitment to the Conservation Measures, reinforces the likelihood of success of those Conservation Measures toward conservation of the Canada lynx in a key stronghold area for lynx in Colorado.

Action agencies are not required by regulation or policy to address jeopardy where the Biological Assessment makes a "may affect, likely to adversely affect" determination. However, the district court in its May 19, 2017, ruling emphasized that ESA Section 7(a)(2) imposes a duty on the Forest Service to insure that the proposed action is not likely to jeopardize the Canada lynx. The Forest

[9] The Technical Panel that would be formed under the current proposed Conservation Measures could also consider these at the appropriate time.

Service's position is that the agency's amendment of 25 forest plans with the Northern and Southern Rockies lynx amendments (and the tiered consultation process with the U.S. Fish and Wildlife Service for projects implementing those forest plans across over 25 million acres (10 million ha) of Canada lynx habitat on National Forest System lands) amply meets the Section 7(a)(2) obligation to "insure" that this project is "not likely to jeopardize" the continued existence of the Canada lynx.

Within the context of the overwhelming majority of the lynx habitat in the western United States occurring on federal land, the coordinated federal land management standards and guidelines and tiered consultation process are key to conservation and recovery of this species. In contrast, the LCAS, the SRLA, the listing decision and the U.S. Fish and Wildlife Service Biological Opinions have not found private land development to be a serious threat to the species in the western United States due to the small proportion of private land within the landscape dominated by federal land, but do recommend federal cooperation with private landowners to reduce adverse impacts and conserve the species, particularly in important landscape connectivity areas for the Canada lynx. Therefore, the combined federal land planning and tiered consultation response is likely to insure conservation and recovery of the species and granting statutorily-required access to the LMJV inholding is not likely to jeopardize the Canada lynx.

While the Conservation Measures are valuable to address habitat connectivity in an important, and threatened, linkage in the far southern end of the species range, the Conservation Measures are not relevant to our jeopardy conclusion. If there were no conservation measures for this project, the species would not be jeopardized because the vast majority of habitat for the species in the Southern Rockies, in Colorado and in the San Juan mountains is on National Forest System lands, which are protected by a comprehensive set of land management standards and guidelines that compensate for the adverse impact of this private development. Hence, the Forest Service does not rely on the Conservation Measures to insure that the proposed action is not likely to jeopardize the Canada lynx. Rather, the Forest Service views the Conservation Measures as meeting its objective to cooperate with the private landowner and the USFWS to reduce adverse impacts, the potential for incidental take, and to contribute to conservation of the local population of Canada lynx.

Part 8: Responsibility for a Revised Biological Assessment

This Biological Assessment was prepared based on presently available information. If the action is modified in a manner that causes effects not considered, or if new information becomes available that reveals that the action may impact endangered, threatened, or proposed species in a manner or to an extent not previously considered, a new or revised Biological Assessment may be required.

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Appendix A

April 2013 Biological Assessment and August 2013 Biological Assessment Supplement for the Village at Wolf Creek ANILCA Land Exchange Access Project, Divide Ranger District, Rio Grande National Forest, Colorado

(provided separately)

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Appendix B

MEMORANDUM OF UNDERSTANDING FOR CANADA LYNX CONSERVATION MEASURES

(April 12, 2018)

Whereas, Leavell-McCombs Joint Venture ("LMJV") owns certain land at the base of Wolf Creek Ski Area, and

Whereas, LMJV wishes to use its land to design, build and operate a mixed use development that will be compatible with the existing ski area and preserve the natural beauty of the surrounding area (the "Development"), and

Whereas, as a result of an extensive Biological Opinion conducted in connection with a possible land exchange between LMJV and the United States Forest Service, possible impacts to Canada Lynx that reside in the area of the Ski Area were identified, and

Whereas, the Biological Opinion specifically found that the proposed development would not jeopardize the continued existence of the species or affect critical Lynx habitat, and

Whereas, LMJV committed to certain conservation Measures to mitigate the impacts on individual Canada Lynx as a result of potential development scenarios for LMJV's property ("Conservation Measures") , and

Whereas, in an opinion dated May 19, 2017, the United States District Court for Colorado made certain findings that questioned the specificity, enforceability, and implementation of the Conservation Measures, and

Whereas, LMJV, the USFS and the United States Fish and Wildlife Service ("FWS ") wish to enter into a further MOU to address the concerns expressed by the Court,

IT IS HEREBY AGREED AS FOLLOWS:

1. ***A Technical Panel*** shall be created to oversee implementation of the Conservation Measures.

   A. Composition. The Technical Panel shall have 5 members. The Panel will consist of technical representatives with expertise in lynx biology, traffic, and other relevant disciplines from the Colorado Department of Transportation, the F W S, Colorado Parks and Wildlife, the Forest Service, and one representative of the Applicant's choosing representing relevant traffic and biology expertise. Individual Panel members nominated by the respective entity shall be subject to the Service's review and approval. In the event that any other Government agency fails to appoint an acceptable representative to the Technical Panel, the FWS shall appoint additional representatives from the FWS to serve until the appropriate agency makes an approved appointment. The Applicant shall provide a non-partisan executive secretary to schedule and coordinate meeting sand take meeting notes. The executive secretary may also be designated by the Technical Panel to open accounts and disburse funds as directed by the Technical Panel. Travel and time for Panel members shall be provided at the expense of the sponsoring governmental agency or Applicant.

   B. Governance and Authority. The Technical Panel shall have the power to expend the funds set forth below and designated for Lynx Conservation Measures as it sees fit. Members of the Technical Panel shall receive notice of meetings at least 10 days prior to any meeting. Decisions shall be made by a majority of the members voting at any meeting. Three members shall constitute a quorum at any meeting of the Technical Panel. The Technical Panel may take action without a meeting by written consent signed by a majority of members voting. The Technical Panel shall be appointed within 60 days following the granting of road access to LMJV. The granting of access shall occur upon issuance of a Special Use Permit for primary road access to all or any portion of LMJV' s property if access is granted through a road across Forest Service land, or upon final approval of an exchange, settlement or other means of access, whichever is earlier. The Technical Panel shall meet at such times and at such places in

Colorado as it deems appropriate. However, the Technical Panel shall meet at least quarterly to review the implementation of the Conservation Measures.

2. ***Funding for Conservation Measures***. Funding for the Technical Panel shall be provided initially by LMJV as set forth in Paragraph 2(a) below. In addition, LMJV shall provide additional funding as set forth in Paragraphs 2(b)-(e) below in an amount that shall increase as the number of units are approved by Mineral County, and building permits are issued, up to a maximum of $1,000 per unit up to a maximum of 1 700units, or $1. 7 million. All funds shall be deposited into an interest bearing account and the Technical Panel shall receive and be authorized to further expend any interest earnings on funds deposited. However, the Technical Panel may accept additional funding from other sources as appropriate. LMJV shall pay into an account established for the Technical Panel(the "Account") the following amounts:

(a) "Initial Funding." upon establishment of the Technical Panel, LMJV shall pay $250,000, an amount equal to $500 per unit anticipated in Phase I of the Development. Except that such payment may be deferred in the event of any delay in completing access to the Property as a result of any judicial intervention until after the successful completion of such action, including all appeals, in favor of access.

(b) Following the Initial Funding, LMJV shall pay an additional $500 for each unit that receives final plat approval as set forth in the planned unit development approval, in excess of the 500 units contemplated by the Initial Funding, up to a maximum of 1700 units.

(c) Upon issuance of a building permit for any unit within the PUD, LMJV shall pay an additional $500 per unit up to a maximum of 1700 units. For multi-family buildings, a unit shall consist of each distinct occupancy unit, or key, within the building.

(d) In no event shall LMJV be obligated to pay more than $1.7 million for Conservation Measures pursuant to this MOU. All amounts described above, shall be adjusted upwards for any change in the Consumer Price Index ("CPI") for years commencing after the execution of this MOU.

3. ***Content of the Conservation Measures.*** Although the Technical Panel shall have the authority to expend the funds on deposit for the purposes of Lynx conservation as it deems appropriate and to seek and expend funds in furtherance of such Measures, and although it is the intent of these Conservation Measures that they be adaptive in nature and will be informed by the best information available at the time that funds are committed for Conservation Measures, the following specific Lynx Conservation Measures shall be implemented by the Technical Panel:

1. The initial funds advanced under 1 (C) above, shall be used to fund two programs: (i) a **corridor assessment** recommended by the Service (estimated to cost $15,000), and (ii) a **trapping/collaring program** 1n the WCPLL administered by the Colorado Parks and Wildlife in conjunction with the United States Forest Service (estimated to cost $25,000) to determine lynx movement across Highway 160 between South Fork, Colorado and Pagosa Springs, Colorado. Both programs when combined will provide the most comprehensive and scientific method of determining a prioritization of crossings used most by lynx across Highway 160 and will assist the technical Panel in its determination of the use of future available funds for the implementation of practical conservation methods to minimize adverse effects to lynx. As technology advances during future phases, the technical Panel may determine it prudent to conduct additional programs to gain additional information on lynx movement and may deem it best to advance further funds for this purpose.

2. Following completion of the specific Measures set forth above, the Technical Panel may expend the remaining funds and any additional funds it receives for any purpose related to Lynx Conservation as it deen1sappropriate including **crossing structures, signage, training, Lynx replacement importation, education, habitat acquisition, or other Measures.**

3. Additional Measures. The Applicant further agrees to undertake, independent of the above conservation Measures, additional actions intended to reduce potential impacts to Canada lynx.

a. Worker Orientation. Applicant will conduct worker orientation concerning Canada lynx conservation.

b. Worker Shuttle. Applicant will bus workers to and from the project site to minimize potential construction traffic-related impacts to lynx during the infrastructure development period.

c. On-Site Employee Housing. In Phase 1 and subsequent phases of Village development, the Applicant will provide employee housing for certain construction workers at the Village to minimize those employees' traffic impacts and will offer bus service to its other employees to reduce the amount of traffic they would otherwise add to Highway 160. The amount of such housing will be reasonable and will be determined in light of relevant factors including cost, duration of various jobs (housing is not intended for short term jobs), type of job (day long versus intermittent), peak vs. ordinary job levels, number of employees and other relevant factors.

d. On-Site Convenience to Reduce Highway Traffic. As to its future owners and guests, the Applicant anticipates that they will have fewer trips along Highway 160 during their stay than other similar developments in that the Applicant plans to provide the necessary essentials (i.e., grocery store, restaurants, etc.) at the Village to minimize their need to travel outside the Village for such items

e. Property Owners and Guests Lynx Awareness Programs. The Applicant also proposes to provide an orientation program to its owners and guests that will advise them of the lynx movements in the area and the importance of motorists being aware of their potential lynx crossings on Highway 160 within the WCPLL.

f. Land Use Restrictions and ESA Compliance. The Technical Panel shall not have land use regulatory authority. However, LMJV shall provide all development plans and construction drawings to the Technical Panel prior to commencement of construction. The Technical Panel may make recommendations to LMJV for construction and land use modifications that

it believes will help reduce the risk of traffic related Lynx take. LMJV shall consider such recommendations in good faith and may implement those recommendations that it, in its sole discretion deems reasonable. LMJV shall be subject to the requirements of the ESA at all times and nothing in this MOU shall relieve it of its obligations under the ESA.

g. Crossing Structures. LMJV shall not be obligated to construct crossing structures. Such structures may be constructed if the Technical Panel chooses to construct them and has funding available for such purpose. To the extent that construction of a crossing structure requires access to LMJV property, LMJV shall grant an easement for use of its property to facilitate the construction of such structure to the extent that such structure does not unreasonably interfere with an approved PUD or plat. The Technical Panel will seek to avoid interference with the Development to the maximum extent practicable, and both parties will seek to integrate any crossing structure so as to be compatible with the Development.

h. Highway signage. LMJV shall pay for additional highway signage on US 160 as ordered by the Technical Panel and approved by the necessary state authorities including the Colorado Department of Highways to warn motorists of the presence of Lynx and to use caution to avoid Lynx crossing the highway.

i. Lynx replacement. The current Biological Opinion dated November 15, 2013 identifies an increased risk of Lynx take during the construction period associated with Phase I of the Development equal to .5 Lynx over a six year period, and proposes the issuance of an Incidental Take Statement to protect the Forest Service and LMJV as applicant from ESA liability in the event that such increased risk of take actually materializes into an actual take. Lynx are not endangered in their native Canadian habitat and there exist plentiful supplies of Lynx in places other than the lower 48 states. Therefore, in the event that the Technical Panel, the FWS, or the Colorado Department of Wildlife concludes that Lynx replacement should be implemented in order to mitigate the potential loss of .5 Lynx over a 6 year period or such other loss as directly and proximately results from the building or operation of the Development, LMJV further agrees 1nthis MOU to pay for the cost of replacing any Lynx during the six year

period following issuance of the first certificate of occupancy for any unit within the Development, up to a maximum of 5 Lynx (1 Ox the projected possible loss of Lynx over a six year period)and up to a maximum of $25,000, which amount exceeds the most recent actual costs incurred in Lynx reintroduction programs. Such replacement shall be overseen by the Technical Panel and the appropriate government agency to assure appropriate importation, integration and release of any replacement Lynx.

4. ***Projected Budget from Funding***. Attached to these proposed conservation Measures is a projected budget derived from the aforementioned funding commensurate with the total build-out of the project using the minimum$500 per unit amount and an annual 1.5% increase in the CPI during the life of the project (40 years). By way of example, within that budget is a projection of some potential uses of the funds for (i) the design, construction, and maintenance and monitoring of three lynx crossing structures based upon estimates provide by the Service, and (ii) traffic and speed control Measures based upon estimates provided by Colorado Department of Transportation. At each meeting of the Technical Panel, the budget and projected conservation Measures within that budget will be reviewed and forecasts for the implementation of the Measures with the funding available at that time will be adopted.

5. ***Enforcement of this MOU.*** This MOU shall be binding on LMJV, and its successors and assigns, and shall be recorded in the public land records of Mineral County, Colorado as a covenant that runs with the land which shall be binding upon subsequent purchasers of the Property to the extent unsatisfied. Any party to this MOU may bring an action to collect any unpaid sum, to enjoin any violation of this MOU which cannot be remedied by a money judgment and to obtain affirmative injunctive relief as appropriate to compel performance of the MOU.

   In addition, the Technical Panel may initiate an action to enforce this MOU in its name, or in the name of one of its members or through the Department of Justice ex rel United States of America or through any other agency of government with standing to pursue enforcement of this MOU. In the event that any action is successfully brought to recover sums owed by LMJV

under this MOU, or to affirmatively enjoin LMJV to perform any obligation under this MOU, LMJV shall pay to the party that brings the action its reasonable attorney's fees and costs.

6. ***Change in Circumstances***. In the event that the Canada Lynx is delisted as an endangered species in Colorado the parties agree to consult in good faith to determine whether these conservation measures should be modified in light of such delisting. However, unless otherwise agreed, these conservation measures shall remain binding notwithstanding delisting of the Canada Lynx.