

Date submitted (Mountain Standard Time): 7/10/2019 12:00:00 AM

First name: Teresa

Last name: Seamster

Organization:

Title:

Comments:

Mr. James Melonas

Forest Supervisor

Santa Fe National Forest 11 Forest Lane

Santa Fe, NM 87508 Email: jmelonas@fs.fed.us May 17, 2019

Re: Santa Fe Conservation Alternative

Santa Fe Mountains Landscape Resiliency Project (SFMLRP)

Dear Supervisor James Melonas,

The members of Northern New Mexico Sierra Club, Defenders of Wildlife and WildEarth Guardians appreciate the opportunity to submit a community based [ldquo]Conservation Alternative[rdquo] to the Santa Fe Mountains Landscape Resiliency Project (SFMLRP). Our non-[shy]-profit conservation organizations are deeply involved in promoting best forestry and watershed management practices and preserving our unique New Mexico wildlife species and habitats for generations to come.

According to the Project Statement of Purpose and Need:

The purpose of the Santa Fe Mountains Landscape Resiliency Project is to increase the resilience of a priority landscape to future disturbances such as high-[shy]-severity wildfire, drought, and insect and disease outbreaks. Resilience is the [ldquo]ability of a social or ecological system to absorb disturbance while retaining the same basic structure and ways of functioning, the capacity for self-[shy]-organization, and the capacity to adapt to stress and change[rdquo] (Forest Service Manual 2020.5).

The Statement outlines how Santa Fe National Forest will achieve this change in forest status:

To increase the resilience of the forests, watersheds, and communities of the Fireshed, there is a need to:

[bull] Move forests and woodlands (including ponderosa pine, dry mixed conifer,

aspen, and pi[ntilde]on-[shy]-juniper) in the Project Area towards their characteristic species composition, structure and spatial patterns in order to improve ecological function;

[bull] Reduce the risk for high-[shy]-severity wildfire, create safe, defensible zones for firefighters in areas of continuous fuels and near valued resources that are at risk,

and avoid negative post-[shy]-fire impacts;

[bull] Improve the diversity and quality of habitat for wildlife; and

[bull] Improve soil and watershed conditions.

The SFMLRP has been presented to the public through public forums, county commission hearings, and face-[shy]-to-[shy]-face meetings with many conservation organizations and concerned landowners who live in Santa Fe County. The residents who have spoken in opposition to the project represent thousands of our organizations[rsquo] local members, deeply concerned about the SFMLRP and its potential impact on Santa Fe[rsquo]s forest, watershed, wildlife habitat, recreational values, landmark appearance, and wildfire risk.

The future ability of the forest to [ldquo]adapt to stress and change[rdquo] is at the heart of this project and has raised ongoing questions how treatments work, for how long, at what cost, and with what success in reducing wildfire damage.

As several members of the public have asked: [ldquo]If we[rsquo]re spending millions to cut and burn trees in the forest when many are likely to die from insects or wildfire anyway (i.e. the natural process), why not spend those funds on protecting communities, public preparedness training, and early fire detection?[rdquo]

1. Treated/untreated acres respond differently but are short-[shy]lived and over time are [ldquo]nearly identical[rdquo]

There is evidence that high intensity wildland fire impacts can be reduced if they burn over treated areas, and that some can contribute to achieving short-[shy]-term resiliency goals. Other evidence suggests that fuel treatments are much more effective in reducing low and moderate intensity fire, and are generally not that effective for very high intensity fire, for example Las Conchas Fire. Low to moderate and even some high intensity fire is considered to be beneficial to the fire-[shy]-adapted forest landscape, so that makes the efficacy of fuel treatments questionable in many cases.

Treatments are short-[shy]-lived and require repeated thins and prescribed burns to maintain their function.

In the study: [ldquo]Evaluating spatiotemporal tradeoffs under alternative fuel management and suppression policies: measuring returns on investment.[rdquo] (USFS,Thompson, Riley, Loeffler and Hass. 2016) Modeling results confirmed that fire-[shy]-fuel treatment encounters are rare, such that median fire suppression cost savings is zero. Sierra National Forest was used as study site to reflect a microcosm of many of the challenges surrounding contemporary fire and fuels management in the western U.S. [https://www.firescience.gov/projects/13-\[shy\]-1-\[shy\]-03-\[shy\]-12/project/13-\[shy\]-1-\[shy\]-03-\[shy\]-12_final_report.pdf](https://www.firescience.gov/projects/13-[shy]-1-[shy]-03-[shy]-12/project/13-[shy]-1-[shy]-03-[shy]-12_final_report.pdf)

There is also evidence that post-[shy]-fire recovery is initially similar in treated and untreated areas and that treatment benefits are nullified in the long term.

The 2002 Rodeo[ndash]Chediski fire, one of the largest wildfire in south-[shy]-western USA history, burned over treated stands and adjacent untreated stands in the Apache[ndash]Sitgreaves National Forest, setting the stage for a natural experiment testing the effectiveness of fuel reduction treatments under conditions of extraordinary fire severity. In seven pairs of treated[ndash] untreated study sites measured 2 years after the fire, thinning was strongly associated with reduced burn severity. Initial post-[shy]fire recovery was relatively similar between treated and untreated areas. Only fuel loadings and Manzanita density were significantly different. Fuel loading in terms of fine and coarse woody debris, as well as forest floor weight, were substantially greater in treated areas

Treated areas initially had more trees, but as untreated areas had more regeneration, they quickly became denser; this difference slowly declined over the course of the simulation. All treatment and regeneration combinations led to some self-[shy]- thinning, but Regen-[shy]-2 (scheduling measured regeneration in 2004 and adjusted regeneration in 2024) in untreated areas led to an especially high pulse of density and a correspondingly steep decline. After 100 years, treated and untreated areas were nearly identical.¹

Given the similar long-[shy]-term effects of fire over treated and untreated areas, and the probability that any fuel treatment will be encountered by a fire is very low, the potential benefits do not seem to justify the ecological damage from the impacts of widespread fuel treatments. Removing the forest understory mechanically and then burning regrowth of the understory with periodic prescribed burns profoundly damages many of the ecological cycles of the forest.

2. What steps work effectively to reduce Wildland Fire damage?

USFS Deputy Chief Victoria Christiansen testimony to the Senate Energy & Natural Resources Committee (2017) read: [ldquo]Wildland Fire Management programs at U.S. Forest Service and the Department

of the Interior seek to achieve a cost-[shy]-efficient and a technically effective fire management plan that meets resource and safety objectives. The guiding principles and priorities, as outlined in the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy), are to [ldquo]safely and effectively respond to wildfires, promote fire-[shy]-adapted communities, and create fire-[shy]-resilient landscapes through direct program activities and strong Federal, State, tribal and local collaboration. Firefighter and public safety are the primary considerations for all operations.[rdquo]

Wildfire prevention is a critical element to working collaboratively across land ownership boundaries. The agency uses cooperative fire agreements to further

1 Barbara A. Strom and Peter Z. Ful[eacute], [ldquo]Pre-[shy]-wildfire fuel treatments affect long-[shy]-term ponderosa pine forest dynamics[rdquo]. International Journal of Wildland Fire, 2007, 16, 128[ndash]138

the goals and implementation of the Cohesive Strategy. Nationally, nearly 9 out of 10 wildfires are caused by humans, including some of the most costly wildfires. (Note: In northern NM, Cerro Grande Fire was caused by a prescribed burn, Las Conchas Fire was caused by a downed transmission line, and Doghead Fire was caused by a spark from a USFS masticator). If we prevent unwanted, human-[shy]-caused fires from igniting, we can proactively use our resources to create resilient landscapes, improve our response to the other wildfires that need attention, and engage communities to be prepared for and live with wildfire.

The goal of wildfire prevention is to stop unwanted human-[shy]-caused wildfires before they start and to reduce the negative effects of wildfires. Prevention occurs in three main areas:

[bull] Education aimed at changing behavior through awareness and knowledge.

[bull] Engineering designed to shield an ignition source or prevent wildfire from impacting something we value. Examples include clearing debris from around a house, installing spark arrestors on equipment, and utilizing well-[shy]-designed campfire pits. (It can also be used to protect valuable infrastructure in flood-[shy]-prone areas.)

[bull] Enforcement efforts to gain compliance with fire regulations and laws (primarily a State and local role). Elements of enforcement include detection to keep fires small, patrols to increase visibility and public awareness of fire danger, and public compliance with wildfire regulations.

Wildfire prevention education activities can reduce the number of human-[shy]-caused wildfires and thus fire-[shy]-related costs. A 2009 study on wildfire prevention education programs in the state of Florida found that the benefit to cost ratio could be as much as 35 to 1. That is, every additional dollar spent would have reduced wildfire related losses (e.g., home and timber losses, etc.) and suppression costs by 35 dollars. 2

A good example of fire prevention [ldquo]enforcement[rdquo] was the administrative decision to close Santa Fe National Forest, during High Fire Danger weather in 2018, to remove fire hazards from outdoor activities and camping, and to increase public awareness of wildfire risk.

3. Wildfire education, prevention of human source ignition, and enforcement are top priorities for Santa Fe County residents

2 Testimony of Victoria C. Christiansen, Deputy Chief, State & Private Forestry, USDA, Forest Service. US Senate Energy & Natural Resources Committee hearing. August 3, 2017.

Housing developments and new construction in the wildland-[shy]-urban interface are issues residents

are willing to discuss but not prohibit. The promotion of Firewise communities has gained popularity and with strong political leadership could become the norm with tighter housing ordinances in both city and county. Treated right-of-ways for neighborhood access roads, underground utility lines, fire retardant building and roofing materials, water tanks and surface ponds for fire fighting, are all desired conditions for residents living near the forest.

Wildfire preparedness clinics are well attended in Santa Fe as are workshops that demonstrate landowner treatments and clean ups. Programs that show fire behavior and wildfire simulations are equally popular. Funding for such ongoing programs by SFNF and City & County Fire Departments should be ongoing.

Mapping of potential Firewise Communities has already been done as part of the proposed project. Focal areas for Firewise education, fire prevention and enforcement, include Chupadero inholdings, Summit Estates (Hyde Park Road), Canyon Atalaya, La Barbaria, Canada de los Alamos, Glorieta and La Cueva. Within Santa Fe National Forest, Hyde Park Road to Ski Santa Fe has also been identified as a high risk, high value corridor.

Controlling low to moderate intensity wildfires away from focal areas, but letting them burn through forest areas with heavy fuel loads is generally well accepted by the public.

4. Santa Fe Conservation Alternative (SFCA): Recommendations

The [desired conditions] of the SFCA are as follows:

1) Require a site specific plan for each project within the SFMLRP that strategically targets limited areas to treat, creates buffered boundary areas to protect property and access ROWs, and safety zones to protect lives;

2) Require that riparian areas and critical wildlife habitat receive additional restoration monitoring and mitigation procedures developed in collaboration with NM Department of Game and Fish; and,

3) Encourage public input regarding preservation of places, landscapes, cultural sites and landmarks of local significance.

Thinning (Note: Projections for post treatment density are: 165.05 TPA across treatment stands [ndash] 4.0[rdquo]+ DBH. 29.3% of stands are >81 TPA and 90.3% of stands have

>52% trees <16[rdquo] DBH.)

[mdash]Limited hand thinning (up to 9") only in dry pine and mixed conifer outside of IRAs.

[mdash]Stumps cut down to the ground

[mdash]No thinning adjacent to the WUI for the purpose of protection of structures or communities except within 150 feet of structures, and for fire fighter safety zones.

[mdash]Maximum trees removed in most thinned areas to 80 BA

[mdash]Leave tree groupings (50% minimum) and maintain a shrub understory. Utilize a wildlife habitat based determination of tree and vegetation retention

[mdash]Identify riparian area concerns and plan to protect from erosion or sedimentation

Slash management

[mdash]Pile burning of activity fuels

[mdash]Reevaluate slash management timing and methods to avoid potential bark beetle outbreaks, and sterilization of soil under slash piles. No slash over 3[rdquo] left on the ground during the dry season

Prescribed burning

[mdash]Utilize managed wildland fire and pile burning wherever possible. Utilize minimal broadcast prescribed burns only in areas that are not assessable for pile burns.

IRAs

[mdash]No thinning in IRAs

[mdash]Identify Roadless Area concerns and develop policy to restore

Monitoring (Essential method of reaching desired outcomes of healthy forest habitat and protection of public health)

[mdash]Set aside test plots for monitoring purposes

[mdash]Soil sampling -[shy]- plot number and spacing to be determined

[mdash]Baseline species evaluation (i.e. population capacity and presence/absence)

[mdash]Improved air quality standards and monitoring to protect sensitive (human) population

Reclamation and restoration

[mdash]Reclamation of any USFS roads deemed unessential in Travel Management Plan

[mdash]Hand build structures (ex. Zuni bowls) in arroyos to slow flood waters

[mdash]Planting native, stream side vegetation where appropriate to slow floodwaters

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WUI and community forests

[mdash]Develop program to support fire-[shy]-proofing of structures and surrounding 100 feet, at least through increased outreach and education (County should make this a homeowner responsibility)

[mdash]If possible, support development of an alternative egress for communities with a single egress

[mdash]Leave most areas accessible to the public for recreation

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[mdash]Increase law enforcement to protect against unsafe fire behavior by forest visitors

Scenic quality

[mdash]Maintain the scenic quality of treated areas. Develop a standard for acceptable scenic quality with local input

All of Santa Fe and the surrounding inhabitants depend on the thousands of acres of forest that give us clean air and water, seasonal runoff and acequias, historically thriving pueblos and small rural communities, native fish and wildlife, several converging ecoregions with differing landscapes, and inspiring natural beauty.

We are all deeply invested in the success of this important project.

Respectfully,

Teresa Seamster

Bryan Bird

Sarah Hyden

Mr. James Melonas
Forest Supervisor
Santa Fe National Forest
11 Forest Lane
Santa Fe, NM 87508

Email: jmelonas@fs.fed.us

May 17, 2019

**Re: Santa Fe Conservation Alternative
Santa Fe Mountains Landscape Resiliency Project (SFMLRP)**

Dear Supervisor James Melonas,

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- Improve soil and watershed conditions.

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Respectfully,



Teresa Seamster
Chair, Northern New Mexico Group of Sierra Club
Ctc.seamster@gmail.com



Bryan Bird
Southwest Program Director, Defenders of Wildlife
bbird@defenders.org



Sarah Hyden
SFNF Protection Advocate, WildEarth Guardians
sarah.hyden@me.com

cc: Sandy Hurlocker, Steve Romero, Hannah Bergemann



PROJECT INFORMATION

Project Title: Santa Fe Fireshed The Nature Conservancy
Project Type: SPECIES LIST ONLY
Latitude/Longitude (DMS): 35.691369 / -105.844800
County(s): SANTA FE
Project Description: The Nature Conservancy requested a species list for the Santa Fe Fireshed. Of particular interest are threatened and endangered species and SGCN.

REQUESTOR INFORMATION

Project Organization: NGO CONSERVATION ORGANIZATION
Contact Name: Virginia Seamster
Email Address: virginia.seamster@state.nm.us
Organization: New Mexico Department of Game and Fish
Address: 1 Wildlife Way, Santa Fe NM 87507
Phone: 5054768111

OVERALL STATUS

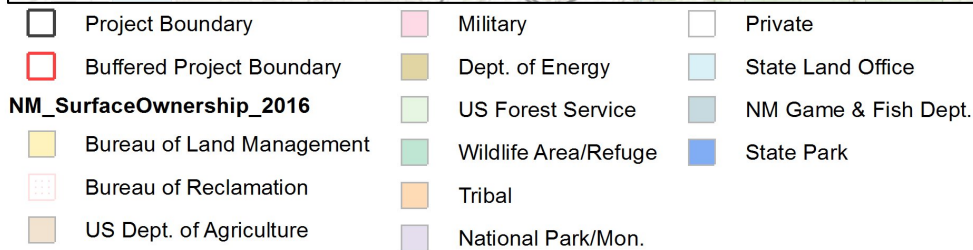
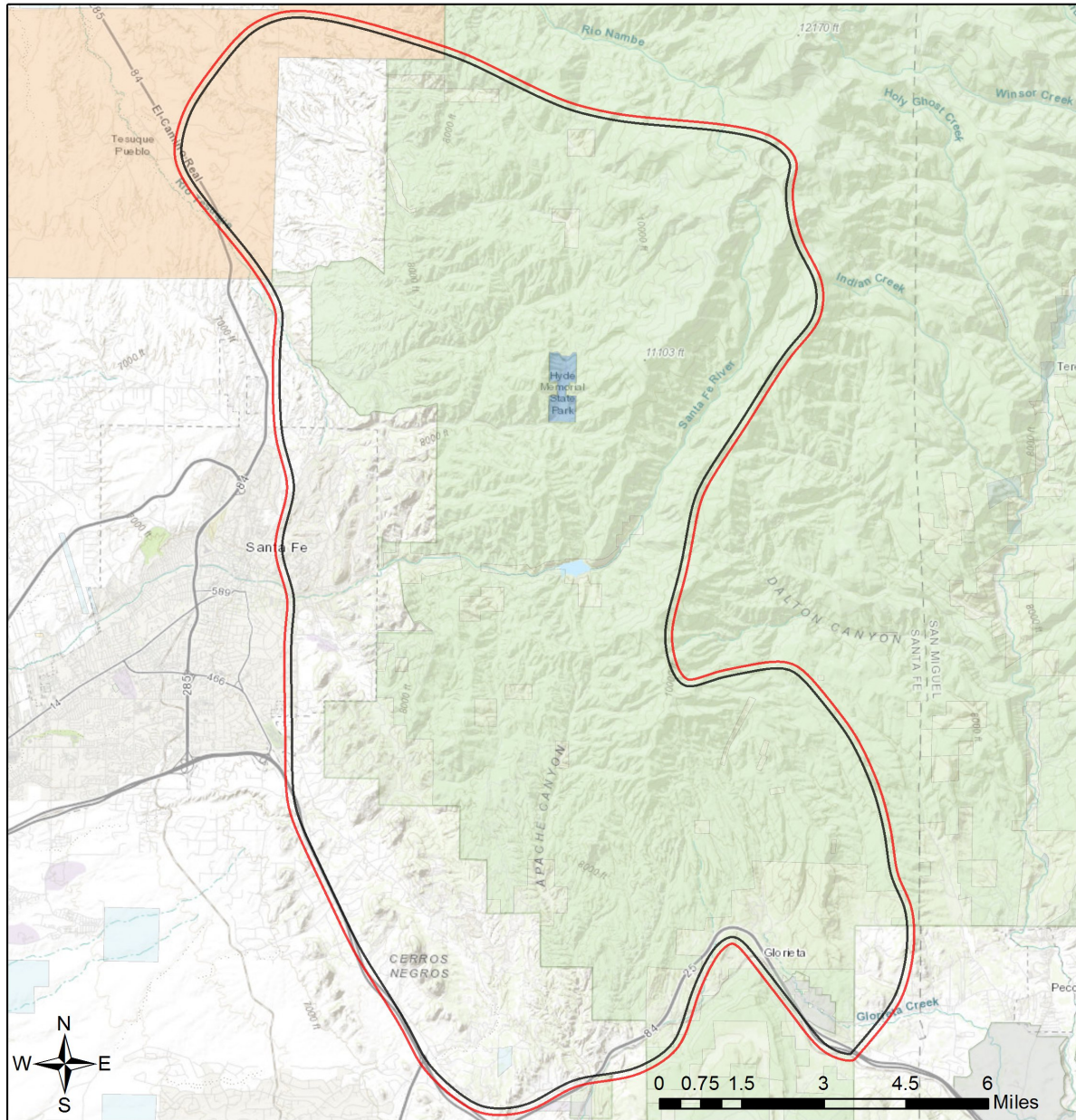
The information contained within this report comprises the recommendations of the New Mexico Department of Game and Fish (Department) for management and mitigation of proposed project impacts to wildlife and habitat resources. No further consultation with the Department is required.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their [Information for Planning and Consultation tool](#).
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species distribution models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report can not guarantee species presence or absence at a precise point location, as might be indicated through comprehensive biological surveys. Specific questions regarding the potential for adverse impacts to vulnerable wildlife populations or habitats, especially in areas with a limited history of biological surveys, may require further on-site assessments.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to assess impacts once project details are developed. The [New Mexico Crucial Habitat Assessment Tool](#) is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.



Santa Fe Fireshed The Nature Conservancy



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



Special Status Animal Species within 200 Meters of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Eared Grebe	Podiceps nigricollis			SGCN
American Bittern	Botaurus lentiginosus			SGCN
Bald Eagle	Haliaeetus leucocephalus		T	SGCN
Aplomado Falcon	Falco femoralis		E	SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Long-Billed Curlew	Numenius americanus			SGCN
Mexican Spotted Owl	Strix occidentalis lucida	LT		SGCN
Mexican spotted owl Designated Critical Habitat	CH for Strix occidentalis lucida	Threatened		SGCN
Boreal Owl	Aegolius funereus		T	SGCN
Black Swift	Cypseloides niger			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Gray Vireo	Vireo vicinior		T	SGCN
Grace's Warbler	Setophaga graciae			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Cassin's Finch	Haemorhous cassinii			SGCN
Spotted Bat	Euderma maculatum		T	SGCN
American Pika	Ochotona princeps			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Pacific Marten	Martes caurina		T	SGCN
Lilljeborg's Pea-Clam	Pisidium lilljeborgi		T	SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Mule Deer	Odocoileus hemionus			SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance



Special Status Plant Species within 200 Meters of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Santa Fe Cholla	Cylindropuntia viridiflora		E	SS
Cyanic Milkvetch	Astragalus cyaneus			SS
Giant Helleborine Orchid	Epipactis gigantea			SS

NMAC = New Mexico Administrative Code, NMRPCS = [New Mexico Rare Plant Conservation Strategy](#), SS = NM Rare Plant Conservation Strategy Species

Project Recommendations

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Although this project report may include management recommendations based on the project location, additional conservation measures may be needed. The Department can not fully assess potential effects and associated management recommendations until a project type and description have been submitted, and an appropriate impact buffer for that project type has been applied. Also, the species list within this report represents an estimation of special status species that could be present at the site of a small-scale project. Species lists for projects that occur across broader geographic scales (e.g., one or more counties, multiple habitat types) are more appropriately obtained from the Department's Biota Information System of New Mexico ([BISON-M](#)) database. Species lists generated by the ERT may contain modeled species distributions in order to predict species occurrences within areas that lack previous wildlife inventories or surveys. This list can be refined using occurrence-based information within BISON-M regarding wildlife-habitat relationships and biological needs for species that might be present within the project footprint.

The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint should avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area. If your project involves removal of non-native riparian trees or planting of native riparian vegetation, please refer to the Department's habitat handbook guideline for [Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems](#).



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- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
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- Additional coordination may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific recommendations may be proposed during ESA and/or NEPA analyses, or through coordination with affected federal agencies.

Mr. James Melonas
Forest Supervisor
Santa Fe National Forest
11 Forest Lane
Santa Fe, NM 87508

Email: jmelonas@fs.fed.us

May 17, 2019

**Re: Santa Fe Conservation Alternative
Santa Fe Mountains Landscape Resiliency Project (SFMLRP)**

Dear Supervisor James Melonas,

The members of Northern New Mexico Sierra Club, Defenders of Wildlife and WildEarth Guardians appreciate the opportunity to submit a community based "Conservation Alternative" to the Santa Fe Mountains Landscape Resiliency Project (SFMLRP). Our non-profit conservation organizations are deeply involved in promoting best forestry and watershed management practices and preserving our unique New Mexico wildlife species and habitats for generations to come.

According to the Project Statement of Purpose and Need:

The purpose of the Santa Fe Mountains Landscape Resiliency Project is to increase the resilience of a priority landscape to future disturbances such as high-severity wildfire, drought, and insect and disease outbreaks. Resilience is the "ability of a social or ecological system to absorb disturbance while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change" (Forest Service Manual 2020.5).

The Statement outlines how Santa Fe National Forest will achieve this change in forest status:

To increase the resilience of the forests, watersheds, and communities of the Fireshed, there is a need to:

- Move forests and woodlands (including ponderosa pine, dry mixed conifer, aspen, and piñon-juniper) in the Project Area towards their characteristic species composition, structure and spatial patterns in order to improve ecological function;
- Reduce the risk for high-severity wildfire, create safe, defensible zones for firefighters in areas of continuous fuels and near valued resources that are at risk, and avoid negative post-fire impacts;

- Improve the diversity and quality of habitat for wildlife; and
- Improve soil and watershed conditions.

The SFMLRP has been presented to the public through public forums, county commission hearings, and face-to-face meetings with many conservation organizations and concerned landowners who live in Santa Fe County. The residents who have spoken in opposition to the project represent thousands of our organizations' local members, deeply concerned about the SFMLRP and its potential impact on Santa Fe's forest, watershed, wildlife habitat, recreational values, landmark appearance, and wildfire risk.

The future ability of the forest to "adapt to stress and change" is at the heart of this project and has raised ongoing questions how treatments work, for how long, at what cost, and with what success in reducing wildfire damage.

As several members of the public have asked: "If we're spending millions to cut and burn trees in the forest when many are likely to die from insects or wildfire anyway (i.e. the natural process), why not spend those funds on protecting communities, public preparedness training, and early fire detection?"

1. Treated/untreated acres respond differently but are short-lived and over time are "nearly identical"

There is evidence that high intensity wildland fire impacts can be reduced if they burn over treated areas, and that some can contribute to achieving short-term resiliency goals. Other evidence suggests that fuel treatments are much more effective in reducing low and moderate intensity fire, and are generally not that effective for very high intensity fire, for example Las Conchas Fire. Low to moderate and even some high intensity fire is considered to be beneficial to the fire-adapted forest landscape, so that makes the efficacy of fuel treatments questionable in many cases. Treatments are short-lived and require repeated thins and prescribed burns to maintain their function.

In the study: "Evaluating spatiotemporal tradeoffs under alternative fuel management and suppression policies: measuring returns on investment." (USFS, Thompson, Riley, Loeffler and Hass. 2016) Modeling results confirmed that fire-fuel treatment encounters are rare, such that median fire suppression cost savings is zero. Sierra National Forest was used as study site to reflect a microcosm of many of the challenges surrounding contemporary fire and fuels management in the western U.S. https://www.firescience.gov/projects/13-1-03-12/project/13-1-03-12_final_report.pdf

There is also evidence that post-fire recovery is initially similar in treated and untreated areas and that treatment benefits are nullified in the long term.

The 2002 Rodeo–Chediski fire, one of the largest wildfire in south-western USA history, burned over treated stands and adjacent untreated stands in the Apache–Sitgreaves National Forest, setting the stage for a natural experiment testing the effectiveness of fuel reduction treatments under conditions of extraordinary fire severity. In seven pairs of treated– untreated study sites measured 2 years after the fire, thinning was strongly associated with reduced burn severity. **Initial post-fire recovery was relatively similar between treated and untreated areas.** Only fuel loadings and Manzanita density were significantly different. Fuel loading in terms of fine and coarse woody debris, as well as forest floor weight, were substantially greater in treated areas

Treated areas initially had more trees, but as untreated areas had more regeneration, they quickly became denser; this difference slowly declined over the course of the simulation. All treatment and regeneration combinations led to some self- thinning, but Regen-2 (scheduling measured regeneration in 2004 and adjusted regeneration in 2024) in untreated areas led to an especially high pulse of density and a correspondingly steep decline. After 100 years, treated and untreated areas were nearly identical.¹

Given the similar long-term effects of fire over treated and untreated areas, and the probability that any fuel treatment will be encountered by a fire is very low, the potential benefits do not seem to justify the ecological damage from the impacts of *widespread* fuel treatments. Removing the forest understory mechanically and then burning regrowth of the understory with periodic prescribed burns profoundly damages many of the ecological cycles of the forest.

2. What steps work effectively to reduce Wildland Fire damage?

USFS Deputy Chief Victoria Christiansen testimony to the Senate Energy & Natural Resources Committee (2017) read: “Wildland Fire Management programs at U.S. Forest Service and the Department of the Interior seek to achieve a cost-efficient and a technically effective fire management plan that meets resource and safety objectives. The guiding principles and priorities, as outlined in the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy), are to “safely and effectively respond to wildfires, promote fire-adapted communities, and create fire-resilient landscapes through direct program activities and strong Federal, State, tribal and local collaboration. Firefighter and public safety are the primary considerations for all operations.”

Wildfire prevention is a critical element to working collaboratively across land ownership boundaries. The agency uses cooperative fire agreements to further

¹ Barbara A. Strom and Peter Z. Fulé, “Pre-wildfire fuel treatments affect long-term ponderosa pine forest dynamics”. *International Journal of Wildland Fire*, 2007, **16**, 128–138

the goals and implementation of the Cohesive Strategy. Nationally, nearly 9 out of 10 wildfires are caused by humans, including some of the most costly wildfires. *(Note: In northern NM, Cerro Grande Fire was caused by a prescribed burn, Las Conchas Fire was caused by a downed transmission line, and Doghead Fire was caused by a spark from a USFS masticator).* If we prevent unwanted, human-caused fires from igniting, we can proactively use our resources to create resilient landscapes, improve our response to the other wildfires that need attention, and engage communities to be prepared for and live with wildfire.

The goal of wildfire prevention is to stop unwanted human-caused wildfires before they start and to reduce the negative effects of wildfires. Prevention occurs in three main areas:

- **Education** aimed at changing behavior through awareness and knowledge.
- **Engineering** designed to shield an ignition source or prevent wildfire from impacting something we value. Examples include clearing debris from around a house, installing spark arrestors on equipment, and utilizing well-designed campfire pits. (It can also be used to protect valuable infrastructure in flood-prone areas.)
- **Enforcement** efforts to gain compliance with fire regulations and laws (primarily a State and local role). Elements of enforcement include detection to keep fires small, patrols to increase visibility and public awareness of fire danger, and public compliance with wildfire regulations.

Wildfire prevention education activities can reduce the number of human-caused wildfires and thus fire-related costs. A 2009 study on wildfire prevention education programs in the state of Florida found that the benefit to cost ratio could be as much as **35 to 1**. That is, every additional dollar spent would have reduced wildfire related losses (e.g., home and timber losses, etc.) and suppression costs by 35 dollars.²

A good example of fire prevention “enforcement” was the administrative decision to close Santa Fe National Forest, during High Fire Danger weather in 2018, to remove fire hazards from outdoor activities and camping, and to increase public awareness of wildfire risk.

3. Wildfire education, prevention of human source ignition, and enforcement are top priorities for Santa Fe County residents

² Testimony of Victoria C. Christiansen, Deputy Chief, State & Private Forestry, USDA, Forest Service. US Senate Energy & Natural Resources Committee hearing. August 3, 2017.

Housing developments and new construction in the wildland-urban interface are issues residents are willing to discuss but not prohibit. The promotion of Firewise communities has gained popularity and with strong political leadership could become the norm with tighter housing ordinances in both city and county. Treated right-of-ways for neighborhood access roads, underground utility lines, fire retardant building and roofing materials, water tanks and surface ponds for fire fighting, are all desired conditions for residents living near the forest.

Wildfire preparedness clinics are well attended in Santa Fe as are workshops that demonstrate landowner treatments and clean ups. Programs that show fire behavior and wildfire simulations are equally popular. Funding for such ongoing programs by SFNF and City & County Fire Departments should be ongoing.

Mapping of potential Firewise Communities has already been done as part of the proposed project. Focal areas for Firewise education, fire prevention and enforcement, include Chupadero inholdings, Summit Estates (Hyde Park Road), Canyon Atalaya, La Barbaria, Canada de los Alamos, Glorieta and La Cueva. Within Santa Fe National Forest, Hyde Park Road to Ski Santa Fe has also been identified as a high risk, high value corridor.

Controlling low to moderate intensity wildfires away from focal areas, but letting them burn through forest areas with heavy fuel loads is generally well accepted by the public.

4. Santa Fe Conservation Alternative (SFCA): Recommendations

The “desired conditions” of the SFCA are as follows:

- 1) Require a site specific plan for each project within the SFMLRP that strategically targets limited areas to treat, creates buffered boundary areas to protect property and access ROWs, and safety zones to protect lives;
- 2) Require that riparian areas and critical wildlife habitat receive additional restoration monitoring and mitigation procedures developed in collaboration with NM Department of Game and Fish; and,
- 3) Encourage public input regarding preservation of places, landscapes, cultural sites and landmarks of local significance.

Thinning (Note: Projections for post treatment density are: 165.05 TPA across treatment stands – 4.0”+ DBH. 29.3% of stands are >81 TPA and 90.3% of stands have >52% trees <16” DBH.)

- Limited hand thinning (up to 9”) only in dry pine and mixed conifer outside of IRAs.
- Stumps cut down to the ground
- No thinning adjacent to the WUI for the purpose of protection of structures or communities except within 150 feet of structures, and for fire fighter safety zones.

- Maximum trees removed in most thinned areas to 80 BA
- Leave tree groupings (50% minimum) and maintain a shrub understory. Utilize a wildlife habitat based determination of tree and vegetation retention
- Identify riparian area concerns and plan to protect from erosion or sedimentation

Slash management

- Pile burning of activity fuels
- Reevaluate slash management timing and methods to avoid potential bark beetle outbreaks, and sterilization of soil under slash piles. No slash over 3" left on the ground during the dry season

Prescribed burning

- Utilize managed wildland fire and pile burning wherever possible. Utilize minimal broadcast prescribed burns only in areas that are not assessable for pile burns.

IRAs

- No thinning in IRAs
- Identify Roadless Area concerns and develop policy to restore

Monitoring (Essential method of reaching desired outcomes of healthy forest habitat and

protection of public health)

- Set aside test plots for monitoring purposes
- Soil sampling - plot number and spacing to be determined
- Baseline species evaluation (i.e. population capacity and presence/absence)
- Improved air quality standards and monitoring to protect sensitive (human) population

Reclamation and restoration

- Reclamation of any USFS roads deemed unessential in Travel Management Plan
- Hand build structures (ex. Zuni bowls) in arroyos to slow flood waters
- Planting native, stream side vegetation where appropriate to slow floodwaters
- Reintroduction of beaver where appropriate

WUI and community forests

- Develop program to support fire-proofing of structures and surrounding 100 feet, at least through increased outreach and education (County should make this a homeowner responsibility)
- If possible, support development of an alternative egress for communities with a single egress
- Leave most areas accessible to the public for recreation
- Take into account local opinion to preserve areas that are special to communities, like Cougar Canyon
- Increase law enforcement to protect against unsafe fire behavior by forest visitors

Scenic quality

—Maintain the scenic quality of treated areas. Develop a standard for acceptable scenic quality with local input

All of Santa Fe and the surrounding inhabitants depend on the thousands of acres of forest that give us clean air and water, seasonal runoff and acequias, historically thriving pueblos and small rural communities, native fish and wildlife, several converging ecoregions with differing landscapes, and inspiring natural beauty.

We are all deeply invested in the success of this important project.

Respectfully,



Teresa Seamster
Chair, Northern New Mexico Group of Sierra Club
Ctc.seamster@gmail.com



Bryan Bird
Southwest Program Director, Defenders of Wildlife
bbird@defenders.org



Sarah Hyden
SFNF Protection Advocate, WildEarth Guardians
sarah.hyden@me.com

cc: Sandy Hurlocker, Steve Romero, Hannah Bergemann



PROJECT INFORMATION

Project Title: Santa Fe Fireshed The Nature Conservancy
Project Type: SPECIES LIST ONLY
Latitude/Longitude (DMS): 35.691369 / -105.844800
County(s): SANTA FE
Project Description: The Nature Conservancy requested a species list for the Santa Fe Fireshed. Of particular interest are threatened and endangered species and SGCN.

REQUESTOR INFORMATION

Project Organization: NGO CONSERVATION ORGANIZATION
Contact Name: Virginia Seamster
Email Address: virginia.seamster@state.nm.us
Organization: New Mexico Department of Game and Fish
Address: 1 Wildlife Way, Santa Fe NM 87507
Phone: 5054768111

OVERALL STATUS

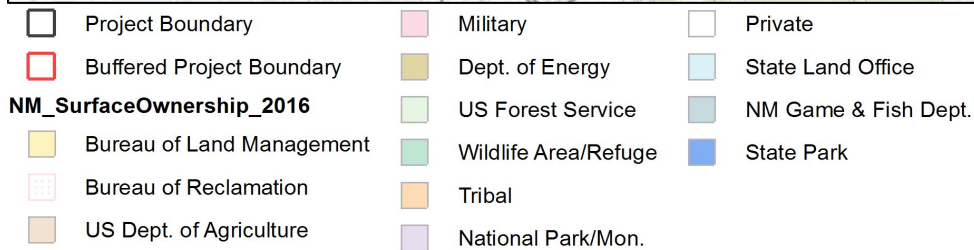
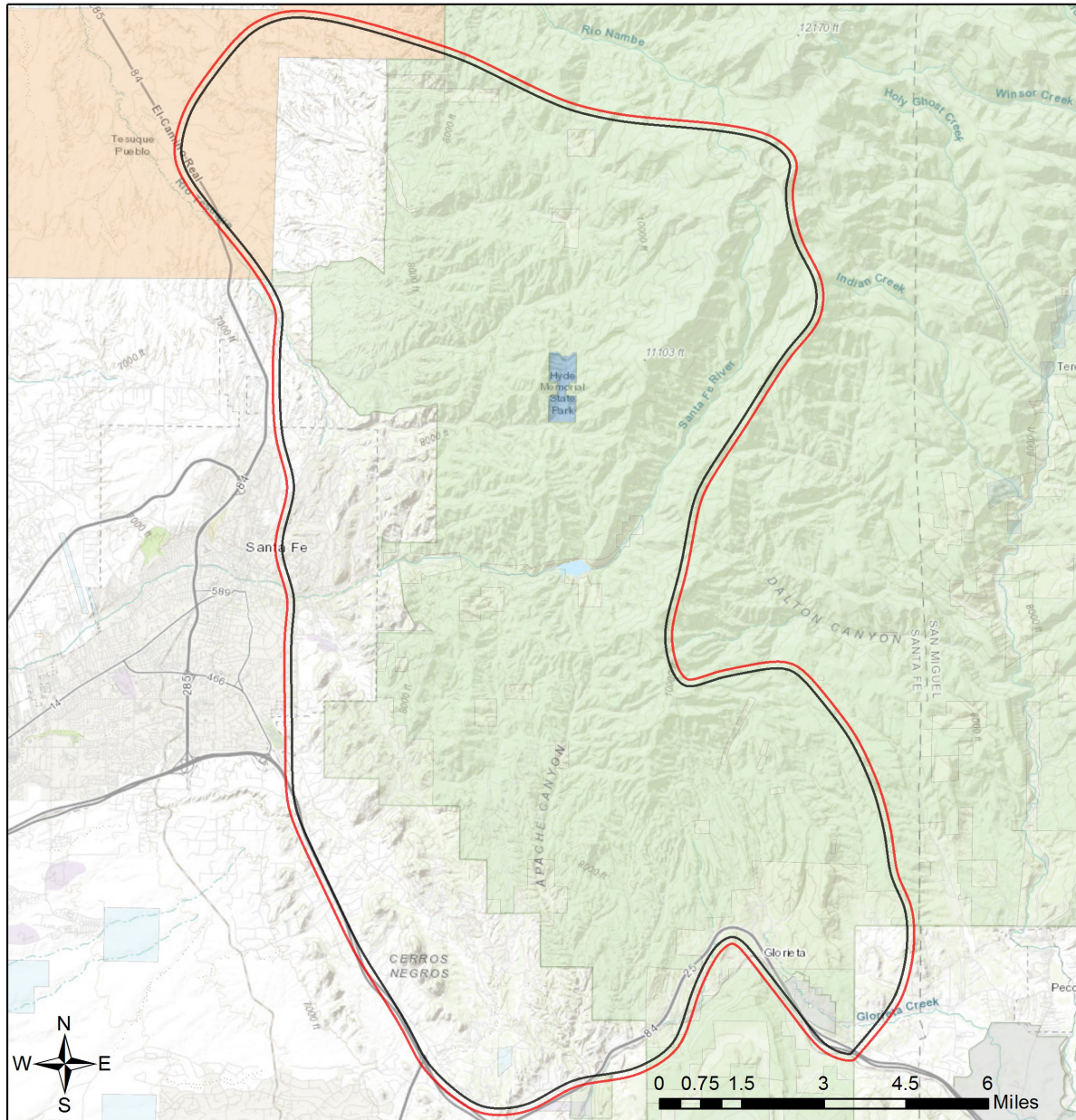
The information contained within this report comprises the recommendations of the New Mexico Department of Game and Fish (Department) for management and mitigation of proposed project impacts to wildlife and habitat resources. No further consultation with the Department is required.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their [Information for Planning and Consultation tool](#).
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species distribution models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report can not guarantee species presence or absence at a precise point location, as might be indicated through comprehensive biological surveys. Specific questions regarding the potential for adverse impacts to vulnerable wildlife populations or habitats, especially in areas with a limited history of biological surveys, may require further on-site assessments.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to assess impacts once project details are developed. The [New Mexico Crucial Habitat Assessment Tool](#) is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.



Santa Fe Fireshed The Nature Conservancy



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



Special Status Animal Species within 200 Meters of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Northern Leopard Frog	Lithobates pipiens			SGCN
Eared Grebe	Podiceps nigricollis			SGCN
American Bittern	Botaurus lentiginosus			SGCN
Bald Eagle	Haliaeetus leucocephalus		T	SGCN
Aplomado Falcon	Falco femoralis		E	SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Long-Billed Curlew	Numenius americanus			SGCN
Mexican Spotted Owl	Strix occidentalis lucida	LT		SGCN
Mexican spotted owl Designated Critical Habitat	CH for Strix occidentalis lucida	Threatened		SGCN
Boreal Owl	Aegolius funereus		T	SGCN
Black Swift	Cypseloides niger			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Gray Vireo	Vireo vicinior		T	SGCN
Grace's Warbler	Setophaga graciae			SGCN
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Cassin's Finch	Haemorhous cassinii			SGCN
Spotted Bat	Euderma maculatum		T	SGCN
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Pacific Marten	Martes caurina		T	SGCN
Lilljeborg's Pea-Clam	Pisidium lilljeborgi		T	SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
Mule Deer	Odocoileus hemionus			SERI

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Special Status Plant Species within 200 Meters of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Santa Fe Cholla	Cylindropuntia viridiflora		E	SS
Cyanic Milkvetch	Astragalus cyaneus			SS
Giant Helleborine Orchid	Epipactis gigantea			SS

NMAC = New Mexico Administrative Code, NMRPCS = [New Mexico Rare Plant Conservation Strategy](#), SS = NM Rare Plant Conservation Strategy Species

Project Recommendations

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- Additional coordination may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific recommendations may be proposed during ESA and/or NEPA analyses, or through coordination with affected federal agencies.

Federal or State Threatened/Endangered Species

Santa Fe

<u>Taxonomic Group</u>	<u># Species</u>	<u>Taxonomic Group</u>	<u># Species</u>
Birds	12	Molluscs	1
Mammals	3		

TOTAL SPECIES: 16

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>USFWS</u>	<u>Critical Habitat</u>	<u>SGON</u>	<u>Photo</u>
Spotted Bat	<i>Euderma maculatum</i>	T			Y	View
Pacific Marten	<i>Martes caurina</i>	T			Y	View
Meadow Jumping Mouse	<i>Zapus luteus luteus</i>	E	E	Y	Y	View
White-tailed Ptarmigan	<i>Lagopus leucura</i>	E			Y	View
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T			Y	View
Peregrine Falcon	<i>Falco peregrinus</i>	T			Y	View
Arctic Peregrine Falcon	<i>Falco peregrinus tundrius</i>	T				No Photo
Least Tern	<i>Sterna antillarum</i>	E	E		Y	View
Yellow-billed Cuckoo (western pop)	<i>Coccyzus americanus occidentalis</i>		T		Y	View
Boreal Owl	<i>Aegolius funereus</i>	T			Y	View
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>		T	Y	Y	View
Violet-crowned Hummingbird	<i>Amazilia violiceps</i>	T			Y	View
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	E	Y	Y	View
Gray Vireo	<i>Vireo vicinior</i>	T			Y	View
Baird's Sparrow	<i>Ammodramus bairdii</i>	T			Y	View
Lilljeborg's Peadam	<i>Pisidium lilljeborgi</i>	T			Y	No Photo

Species of Greatest Conservation Need

Santa Fe

<u>Taxonomic Group</u>	<u># Species</u>	<u>Taxonomic Group</u>	<u># Species</u>
Fish	2	Mammals	9
Amphibians	2	Molluscs	2
Reptiles	2	Crustaceans	1
Birds	46		

TOTAL SPECIES: 64

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>USFWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
Pale Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>				Y	View
Spotted Bat	<i>Euderma maculatum</i>	T			Y	View
Pacific Marten	<i>Martes caurina</i>	T			Y	View
North American River Otter	<i>Lontra canadensis</i>				Y	View
Black-tailed Prairie Dog	<i>Cynomys ludovicianus ludovicianus</i>				Y	View
Gunnison's prairie dog (prairie subspecies)	<i>Cynomys gunnisoni zuniensis</i>				Y	View
Gunnison's Prairie Dog (montane subspecies)	<i>Cynomys gunnisoni gunnisoni</i>				Y	View
Meadow Jumping Mouse	<i>Zapus luteus luteus</i>	E	E	Y	Y	View
American Pika	<i>Ochotona princeps incana; saxatilis</i>				Y	View
White-tailed Ptarmigan	<i>Lagopus leucura</i>	E			Y	View
Clark's Grebe	<i>Aechmophorus darkii</i>				Y	View
Eared Grebe	<i>Podiceps nigricollis</i>				Y	View
American Bittern	<i>Botaurus lentiginosus</i>				Y	View
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T			Y	View
Peregrine Falcon	<i>Falco peregrinus</i>	T			Y	View
Mountain Plover	<i>Charadrius montanus</i>				Y	View
Snowy Plover	<i>Charadrius nivosus</i>				Y	View
Long-billed Curlew	<i>Numenius americanus</i>				Y	View
Least Tern	<i>Sterna antillarum</i>	E	E		Y	View
Yellow-billed Cuckoo (western pop)	<i>Coccyzus americanus occidentalis</i>		T		Y	View
Boreal Owl	<i>Aegolius funereus</i>	T			Y	View
Burrowing Owl	<i>Athene cucularia</i>				Y	View

Species of Greatest Conservation Need

Santa Fe

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>USFWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
Flammulated Owl	Psiloscops flammeolus				Y	View
Mexican Spotted Owl	Strix occidentalis lucida		T	Y	Y	View
Common Nighthawk	Chordeiles minor				Y	View
Mexican Whip-poor-will	Antrostomus arizonae				Y	View
Black Swift	Cypseloides niger				Y	View
Violet-crowned Hummingbird	Amazilia violiceps	T			Y	View
Williamson's Sapsucker	Sphyrapicus thyroideus				Y	View
Lewis's Woodpecker	Melanerpes lewis				Y	View
Red-headed Woodpecker	Melanerpes erythrocephalus				Y	View
Olive-sided Flycatcher	Contopus cooperi				Y	View
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y	Y	View
Loggerhead Shrike	Lanius ludovicianus				Y	View
Gray Vireo	Vireo vicinior	T			Y	View
Pinyon Jay	Gymnorhinus cyanocephalus				Y	View
Clark's Nutcracker	Nucifraga columbiana				Y	View
Bank Swallow	Riparia riparia				Y	View
Juniper Titmouse	Baeolophus ridgwayi				Y	View
Pygmy Nuthatch	Sitta pygmaea				Y	View
Mountain Bluebird	Sialia currucoides				Y	View
Western Bluebird	Sialia mexicana				Y	View
Bendire's Thrasher	Toxostoma bendirei				Y	View
Grace's Warbler	Setophaga graciae				Y	View
Black-throated Gray Warbler	Setophaga nigrescens				Y	View
Red-faced Warbler	Cardellina rubrifrons				Y	View
Virginia's Warbler	Oreothlypis virginiae				Y	View
Baird's Sparrow	Ammodramus bairdii	T			Y	View
Cassin's Sparrow	Peucaea cassinii				Y	View
Sagebrush Sparrow	Artemisospiza nevadensis				Y	View
Vesper Sparrow	Pooecetes gramineus				Y	View
Cassin's Finch	Haemorhous cassinii				Y	View
Brown-capped Rosy-Finch	Leucosticte australis				Y	View

Species of Greatest Conservation Need

Santa Fe

<u>Common Name</u>	<u>Scientific Name</u>	<u>NMGE</u>	<u>USFWS</u>	<u>Critical Habitat</u>	<u>SGCN</u>	<u>Photo</u>
Evening Grosbeak	Coccothraustes vespertinus				Y	View
Chestnut-collared Longspur	Calcarius ornatus				Y	View
Sonoran Mud Turtle	Kinosternon sonoriense				Y	View
Desert Massasauga	Sistrurus tergeminus				Y	View
Boreal Chorus Frog	Pseudacris maculata				Y	View
Northern Leopard Frog	Lithobates pipiens				Y	View
Rio Grande Chub	Gila pandora				Y	View
Rio Grande Sucker	Catostomus plebeius				Y	View
Sangre de Cristo Woodlandsnail	Ashmunella thomsoniana				Y	No Photo
Lilljeborg's Peacdam	Pisidium lilljeborgi		T		Y	No Photo
Mexican Clam Shrimp	Cyzicus mexicanus				Y	No Photo

Date submitted (Mountain Standard Time): 7/10/2019 3:40:40 PM

First name: Teresa

Last name: Seamster

Organization:

Title:

Comments:

SFMLRP - Wildlife comments

Please accept the attached wildlife species lists and information, as part of the SFNF scoping process for the SF Mountains Landscape Resiliency Project. This data was provided by NM Department of Game & Fish in response to a request by Sierra Club to TNC to include NMERT (NM Environmental Review Tool) sub-county level wildlife data as part of the project's "valuable resources" assessment. The species lists are based on spatial data provided by TNC for the Santa Fe Watershed plus a 200m buffer. Consideration of seasonal wildlife needs and habitat requirements are important for a successful SFMLRP.

Best regards,

Teresa Seamster

Chair, Northern NM Group
Rio Grande Chapter of Sierra Club
1807 Second Street, Suite 45
Santa Fe, NM 87505
505-983-2703
505-466-8964
ctc.seamster@gmail.com

Date submitted (Mountain Standard Time): 7/12/2019 12:00:00 AM

First name: Teresa

Last name: Seamster

Organization:

Title:

Comments:

SF Mountain Landscape Resiliency Project Comments

July 12, 2019

Re: Santa Fe Mountain Landscape Resiliency Project

Please accept this re-sending of our SFMLRP Comment Letter and NMERT Data in case our emails on July 10th were not properly delivered.

Thank you for extending the comment period.

Teresa Seamster

Chair, Northern NM Group

Rio Grande Chapter of Sierra Club

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Attached Comment:

"

Mr. James Melonas

Forest Supervisor

Santa Fe National Forest 11 Forest Lane

Santa Fe, NM 87508 Email: jmelonas@fs.fed.us May 17, 2019

Re: Santa Fe Conservation Alternative

Santa Fe Mountains Landscape Resiliency Project (SFMLRP)

Dear Supervisor James Melonas,

The members of Northern New Mexico Sierra Club, Defenders of Wildlife and WildEarth Guardians appreciate the opportunity to submit a community based [ldquo]Conservation Alternative[rdquo] to the Santa Fe Mountains Landscape Resiliency Project (SFMLRP). Our non-[shy]-profit conservation organizations are deeply involved in promoting best forestry and watershed management practices and preserving our unique New Mexico wildlife species and habitats for generations to come.

According to the Project Statement of Purpose and Need:

The purpose of the Santa Fe Mountains Landscape Resiliency Project is to increase the resilience of a priority landscape to future disturbances such as high-severity wildfire, drought, and insect and disease outbreaks. Resilience is the [ldquo]ability of a social or ecological system to absorb disturbance while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change[rdquo] (Forest Service Manual 2020.5).

The Statement outlines how Santa Fe National Forest will achieve this change in forest status:

To increase the resilience of the forests, watersheds, and communities of the Fireshed, there is a need to:

- [bull] Move forests and woodlands (including ponderosa pine, dry mixed conifer, aspen, and piñon-juniper) in the Project Area towards their characteristic species composition, structure and spatial patterns in order to improve ecological function;
- [bull] Reduce the risk for high-severity wildfire, create safe, defensible zones for firefighters in areas of continuous fuels and near valued resources that are at risk, and avoid negative post-fire impacts;
- [bull] Improve the diversity and quality of habitat for wildlife; and
- [bull] Improve soil and watershed conditions.

The SFMLRP has been presented to the public through public forums, county commission hearings, and face-to-face meetings with many conservation organizations and concerned landowners who live in Santa Fe County. The residents who have spoken in opposition to the project represent thousands of our organizations' local members, deeply concerned about the SFMLRP and its potential impact on Santa Fe's forest, watershed, wildlife habitat, recreational values, landmark appearance, and wildfire risk.

The future ability of the forest to [ldquo]adapt to stress and change[rdquo] is at the heart of this project and has raised ongoing questions how treatments work, for how long, at what cost, and with what success in reducing wildfire damage.

As several members of the public have asked: [ldquo]If we're spending millions to cut and burn trees in the forest when many are likely to die from insects or wildfire anyway (i.e. the natural process), why not spend those funds on protecting communities, public preparedness training, and early fire detection?[rdquo]

1. Treated/untreated acres respond differently but are short-lived and over time are [ldquo]nearly identical[rdquo]

There is evidence that high intensity wildland fire impacts can be reduced if they burn over treated areas, and that some can contribute to achieving short-term resiliency goals. Other evidence suggests that fuel treatments are much more effective in reducing low and moderate intensity fire, and are generally not that effective for very high intensity fire, for example Las Conchas Fire. Low to moderate and even some high intensity fire is considered to be beneficial to the fire-adapted forest landscape, so that makes the efficacy of fuel treatments questionable in many cases.

Treatments are short-lived and require repeated thinning and prescribed burns to maintain their function.

In the study: [ldquo]Evaluating spatiotemporal tradeoffs under alternative fuel management and suppression policies: measuring returns on investment.[rdquo] (USFS, Thompson, Riley, Loeffler and Hass.

2016) Modeling results confirmed that fire-fuel treatment encounters are rare, such that median fire suppression cost savings is zero. Sierra National Forest was used as study site to reflect a microcosm of many of the challenges surrounding contemporary fire and fuels management in the western U.S. https://www.firescience.gov/projects/13-1-03-12/project/13-1-03-12_final_report.pdf

There is also evidence that post-fire recovery is initially similar in treated and untreated areas and that treatment benefits are nullified in the long term.

The 2002 Rodeo-Chediski fire, one of the largest wildfire in south-western USA history, burned over treated stands and adjacent untreated stands in the Apache-Sitgreaves National Forest, setting the stage for a natural experiment testing the effectiveness of fuel reduction treatments under conditions of extraordinary fire severity. In seven pairs of treated-untreated study sites measured 2 years after the fire, thinning was strongly associated with reduced burn severity. Initial post-fire recovery was relatively similar between treated and untreated areas. Only fuel loadings and Manzanita density were significantly different. Fuel loading in terms of fine and coarse woody debris, as well as forest floor weight, were substantially greater in treated areas

Treated areas initially had more trees, but as untreated areas had more regeneration, they quickly became denser; this difference slowly declined over the course of the simulation. All treatment and regeneration combinations led to some self-thinning, but Regen-2 (scheduling measured regeneration in 2004 and adjusted regeneration in 2024) in untreated areas led to an especially high pulse of density and a correspondingly steep decline. After 100 years, treated and untreated areas were nearly identical.¹

Given the similar long-term effects of fire over treated and untreated areas, and the probability that any fuel treatment will be encountered by a fire is very low, the potential benefits do not seem to justify the ecological damage from the impacts of widespread fuel treatments. Removing the forest understory mechanically and then burning regrowth of the understory with periodic prescribed burns profoundly damages many of the ecological cycles of the forest.

2. What steps work effectively to reduce Wildland Fire damage?

USFS Deputy Chief Victoria Christiansen testimony to the Senate Energy & Natural Resources Committee (2017) read: "Wildland Fire Management programs at U.S. Forest Service and the Department of the Interior seek to achieve a cost-efficient and a technically effective fire management plan that meets resource and safety objectives. The guiding principles and priorities, as outlined in the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy), are to safely and effectively respond to wildfires, promote fire-adapted communities, and create fire-resilient landscapes through direct program activities and strong Federal, State, tribal and local collaboration. Firefighter and public safety are the primary considerations for all operations."

Wildfire prevention is a critical element to working collaboratively across land ownership boundaries. The agency uses cooperative fire agreements to further

¹ Barbara A. Strom and Peter Z. Fulmer, "Pre-wildfire fuel treatments affect long-term ponderosa pine forest dynamics". International Journal of Wildland Fire, 2007, 16, 128-138 the goals and implementation of the Cohesive Strategy. Nationally, nearly 9 out of 10 wildfires are caused by humans, including some of the most costly wildfires. (Note: In northern NM, Cerro Grande Fire was caused by a prescribed burn, Las Conchas Fire was caused by a downed transmission line, and Doghead Fire was caused by a spark from a USFS masticator). If we prevent unwanted, human-caused fires from igniting, we can proactively use our resources to create resilient landscapes, improve our response to the other wildfires that need attention, and engage communities to be prepared for and live with wildfire.

The goal of wildfire prevention is to stop unwanted human-caused wildfires before they start and

to reduce the negative effects of wildfires. Prevention occurs in three main areas:

[bull] Education aimed at changing behavior through awareness and knowledge.

[bull] Engineering designed to shield an ignition source or prevent wildfire from impacting something we value. Examples include clearing debris from around a house, installing spark arrestors on equipment, and utilizing well-[shy]-designed campfire pits. (It can also be used to protect valuable infrastructure in flood-[shy]-prone areas.)

[bull] Enforcement efforts to gain compliance with fire regulations and laws (primarily a State and local role). Elements of enforcement include detection to keep fires small, patrols to increase visibility and public awareness of fire danger, and public compliance with wildfire regulations.

Wildfire prevention education activities can reduce the number of human-[shy]-caused wildfires and thus fire-[shy]-related costs. A 2009 study on wildfire prevention education programs in the state of Florida found that the benefit to cost ratio could be as much as 35 to 1. That is, every additional dollar spent would have reduced wildfire related losses (e.g., home and timber losses, etc.) and suppression costs by 35 dollars. 2

A good example of fire prevention [ldquo]enforcement[rldquo] was the administrative decision to close Santa Fe National Forest, during High Fire Danger weather in 2018, to remove fire hazards from outdoor activities and camping, and to increase public awareness of wildfire risk.

3. Wildfire education, prevention of human source ignition, and enforcement are top priorities for Santa Fe County residents

2 Testimony of Victoria C. Christiansen, Deputy Chief, State & Private Forestry, USDA, Forest Service. US Senate Energy & Natural Resources Committee hearing. August 3, 2017.

Housing developments and new construction in the wildland-[shy]-urban interface are issues residents are willing to discuss but not prohibit. The promotion of Firewise communities has gained popularity and with strong political leadership could become the norm with tighter housing ordinances in both city and county. Treated right-[shy]-of-[shy]-ways for neighborhood access roads, underground utility lines, fire retardant building and roofing materials, water tanks and surface ponds for fire fighting, are all desired conditions for residents living near the forest.

Wildfire preparedness clinics are well attended in Santa Fe as are workshops that demonstrate landowner treatments and clean ups. Programs that show fire behavior and wildfire simulations are equally popular. Funding for such ongoing programs by SFNF and City & County Fire Departments should be ongoing.

Mapping of potential Firewise Communities has already been done as part of the proposed project. Focal areas for Firewise education, fire prevention and enforcement, include Chupadero inholdings, Summit Estates (Hyde Park Road), Canyon Atalaya, La Barbaria, Canada de los Alamos, Glorieta and La Cueva. Within Santa Fe National Forest, Hyde Park Road to Ski Santa Fe has also been identified as a high risk, high value corridor.

Controlling low to moderate intensity wildfires away from focal areas, but letting them burn through forest areas with heavy fuel loads is generally well accepted by the public.

4. Santa Fe Conservation Alternative (SFCA): Recommendations

The [ldquo]desired conditions[rldquo] of the SFCA are as follows:

1) Require a site specific plan for each project within the SFMLRP that strategically targets limited areas to treat, creates buffered boundary areas to protect property and access ROWs, and safety zones to protect lives;

2) Require that riparian areas and critical wildlife habitat receive additional restoration monitoring and mitigation procedures developed in collaboration with NM Department of Game and Fish; and,

3) Encourage public input regarding preservation of places, landscapes, cultural sites and landmarks of local significance.

Thinning (Note: Projections for post treatment density are: 165.05 TPA across treatment stands [ndash] 4.0[rddquo]+ DBH. 29.3% of stands are >81 TPA and 90.3% of stands have

>52% trees <16[rddquo] DBH.)

[mdash]Limited hand thinning (up to 9") only in dry pine and mixed conifer outside of IRAs.

[mdash]Stumps cut down to the ground

[mdash]No thinning adjacent to the WUI for the purpose of protection of structures or communities except within 150 feet of structures, and for fire fighter safety zones.

[mdash]Maximum trees removed in most thinned areas to 80 BA

[mdash]Leave tree groupings (50% minimum) and maintain a shrub understory. Utilize a wildlife habitat based determination of tree and vegetation retention

[mdash]Identify riparian area concerns and plan to protect from erosion or sedimentation

Slash management

[mdash]Pile burning of activity fuels

[mdash]Reevaluate slash management timing and methods to avoid potential bark beetle outbreaks, and sterilization of soil under slash piles. No slash over 3[rddquo] left on the ground during the dry season

Prescribed burning

[mdash]Utilize managed wildland fire and pile burning wherever possible. Utilize minimal broadcast prescribed burns only in areas that are not assessable for pile burns.

IRAs

[mdash]No thinning in IRAs

[mdash]Identify Roadless Area concerns and develop policy to restore

Monitoring (Essential method of reaching desired outcomes of healthy forest habitat and protection of public health)

[mdash]Set aside test plots for monitoring purposes

[mdash]Soil sampling -[shy]- plot number and spacing to be determined

[mdash]Baseline species evaluation (i.e. population capacity and presence/absence)

[mdash]Improved air quality standards and monitoring to protect sensitive (human) population

Reclamation and restoration

[mdash]Reclamation of any USFS roads deemed unessential in Travel Management Plan

[mdash]Hand build structures (ex. Zuni bowls) in arroyos to slow flood waters

[mdash]Planting native, stream side vegetation where appropriate to slow floodwaters

[mdash]Reintroduction of beaver where appropriate

WUI and community forests

[mdash]Develop program to support fire-[shy]-proofing of structures and surrounding 100 feet, at least through increased outreach and education (County should make this a homeowner responsibility)

[mdash]If possible, support development of an alternative egress for communities with a single egress

[mdash]Leave most areas accessible to the public for recreation

[mdash]Take into account local opinion to preserve areas that are special to communities, like Cougar Canyon

[mdash]Increase law enforcement to protect against unsafe fire behavior by forest visitors

Scenic quality

[mdash]Maintain the scenic quality of treated areas. Develop a standard for acceptable scenic quality with local input

All of Santa Fe and the surrounding inhabitants depend on the thousands of acres of forest that give us clean air and water, seasonal runoff and acequias, historically thriving pueblos and small rural communities, native fish and wildlife, several converging ecoregions with differing landscapes, and inspiring natural beauty.

We are all deeply invested in the success of this important project.

Respectfully,

Teresa Seamster

Bryan Bird

Sarah Hyden"