

October 10, 2018

Jennifer Miller
Deputy Assistant Secretary of the Air Force for Installations
Headquarters Air Force Pentagon
Washington, D.C.

Dear Deputy Assistant Secretary Miller:

Currently the Air Force is examining two alternatives for F-16 training. One is called "Alternative 2: Reshape and Expand Cato/Smitty MOA and Create a New MOA." It would lead to up to 10,000 F-16 flights over Grant County, Silver City, and the Gila Wilderness Area, dropping of aluminum chaff, and dropping of lighted flares within the wilderness and national forest.

Were this alternative to be chosen, a convergence of forces would be put into play that would, at best, *negatively affect the economics, quality of life, and well-being* of the citizens of Grant County and Silver City. At worst, such a decision could lead to a calamitous *collapse of the socio-economic communities in Grant County*. The following pages lay out information that the Town Council of Silver City requests you review and use in your considerations, and choose to **not** establish a new Military Operations Area over Grant County, the Gila National Forest, and Gila Wilderness.

Respectfully,

TOWN COUNCIL OF THE TOWN OF SILVER CITY, NM

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Silver City, NM is Already an Economically Distressed Community: It Can be Made Worse

A national report released in 2017 by the non-profit policy think tank, the Economic Innovation Group, identifies Grant County, NM, and the municipality of Silver City, NM, as being economically distressed. Drawing from census data gathered between 2011-2015, the analysts combined seven metrics into a broad-based assessment – the Distressed Communities Index - of community economic well-being in the United States.

Silver City, NM

Population: 10,000

Minority Share: 49.3%

Density: Low

	Silver City, NM	U.S.
No High School Diploma:	15.0%	13.3%
Housing Vacancy Rate:	9.9%	8.3%
Adults Not Working:	35.3%	28.2%
Poverty Rate:	20.5%	15.5%
Median Income Ratio:	91.3%	100%
Change in Employment:	-3.2%	9.4%
Change in Businesses:	-6.2%	4.2%
Distress Score:	82.4	

Note: Distress score = the measure of a given geography's economic well-being relative to its peers on the Distressed Communities Index. A community is considered Distressed if its score falls into the worst-performing quintile (fifth) of its peers. Since distress scores are normalized to reflect percentiles, scores over 80.0 are considered distressed.

The Distressed Communities Index can be used to compare well-being statistics, help analyze policy, and project actions to determine if they might improve, or worsen, the economics and well-being of a community.

There are a number of likely negative effects inherent in the alternative posed by the Air Force as "Alternative 2: Reshape and Expand Cato/Smitty MOA and Create a New MOA." If the Air Force were to choose that alternative, *a cascade of negative consequences could ensue that would propel Silver City even further into economic distress.* Here are some of the reasons why that would likely occur.

Economic Development by Outdoor Recreation Would be Derailed

Opportunities to diversify the economy in Grant County and Silver City are limited by our geography – being 50 miles off of any Interstate highway, you have to want to be here to get here. The traditional mining and ranching industries still are present, but ranching has been waning over decades, and at some point the mining efforts will taper off considerably. One of the major assets of this area is the incomparable Gila National Forest and Gila Wilderness, the nation's first designated wilderness area. Leveraging that natural resource, especially in terms of outdoor recreation, has been identified in numerous plans and proposals, including, but not limited to, a report from Headwaters Economics (2008), an economic development target industry analysis developed by Angelou Economics (2012), and current actions by the Town of Silver City to develop a Comprehensive Bicycle Plan, and a Greenways Trail plan, to empower an official Trails and Open Space Committee, and to fund a research report on Tourism Events in which some of the major events had to do with outdoor recreation.

The economics and vitality of Grant County depend on the Gila National Forest and Gila Wilderness Area. *The Air Force's proposed Alternative 2 threatens the very existence of our area.*

The growing tourism economy is not only due to campers, bicyclists, hikers, hunters, and fishers. The number one reason people come to visit our town is to go to the Gila Cliff Dwellings National Monument. Tourists are attracted to that magnificent site because of its history and the desire to learn more about the Mogollon culture that was here in ancient times. The local government and leaders in this community recognize that appropriate growth of our outdoor recreation tourism could move us away from economic distress.

Alternative 2 directly threatens the growing outdoor recreation tourism in our area because having up to 10,000 flights a year, flying low, booming through the air would be the opposite of what the outdoor recreation tourist is seeking – peace, quiet, undisturbed wildlife, serenity, and the ability to enjoy a pristine wilderness. Derailing the potential for outdoor recreation tourism in Silver City would lead to even greater Economic Distress in our county and town.

Silver City Needs Relocating Retirees: Alternate 2 Could Stop Them

Silver City has consistently made some top lists of quiet and high-quality-of-life places to retire. People nearing retirement often have a set of criteria that includes the cost of living, medical care, pace of life, a friendly community, social event offerings, outdoor recreation opportunities, and beautiful natural surroundings. Alternative 2 would be disastrous to our local economy in Grant County. That's because a large source of personal income in our population is from retirees who move here from other geographic areas, bringing their retirement and investment income into Grant County.

Grant County economics are vitally dependent on retirees moving here for the wonderful quality of life. For example, economic data show that from 1970 to 2016, Grant County average earnings per job shrank from \$47,915 to \$41,300 (in real terms), a 14% decrease. However, in the same time frame of 1970 to 2016, per capita income grew from \$21,046 to \$36,825 (in real terms), a 75% increase. This is most readily explained by regular influxes of retirees, bringing with them income from investments, social security, rental property, and other non-labor sources. From 1970 to 2016, Grant County income from dividends, interest, and property rentals grew from \$56 million to \$205 million, an increase of 265 percent.

Retirees move to the Grant County/Silver City area primarily for the quality of life. Various publications echo the praise lavished by the website Best-Place-to-Retire.com. "Silver City is the gateway to the 3.3 million acre Gila National Forest. The forest offers the diversity of mountains, deep canyons, meadows, streams and rivers, and semi-desert country. Elevations range from 4,200 to 10,900 feet and cover over four out of six life zones. With a wonderful year-round climate, individuals are drawn to the area to enjoy hiking, biking, rock-hunting, golf, hunting, fishing, camping, bird-watching and much more. Silver City is the first "Gateway Community" along the Continental Divide Trail that runs from Mexico to Canada."

Retirees and others move here because our area currently offers high quality-of-life factors (pristine air, beckoning outdoors, and friendly community) combined with a low cost of living. As one realtor noted about retirees buying the higher end homes in Silver City, in an online article *Small Town Treasures In New Mexico*, “They’re coming from usually bigger cities, and are looking for quality of life, lower cost of living, a friendlier and welcoming place, a university town for continued learning, and outdoor recreation – biking, hiking, fishing, hunting, birding.”

Retirees to Silver City often talk about falling in love with the Gila National Forest and Wilderness – with the beauty, accessible hiking, bicycling, camping, hunting, and fishing. Retirees revel in taking a hike on trails with the delicious fresh air and the smell of pines, spotting hawks overhead, and coming upon quiet vistas where it seems no one has ever been before.

The Air Force proposal Alternative 2 *could completely ruin the attributes that attract these much-needed retirees to relocate to Silver City*. Silver City realtors are now speaking up in local government meetings, citing that they have had people choose to not buy a home here because of concerns about this F-16 training expansion, and expressing concern that more people will not relocate to Grant County if F-16 training is conducted here. If retirees do not relocate, our population will decline even more, property values will decline, tax revenues will decline, and businesses will suffer.

Silver City needs small business - Alternative 2 could hinder small business development

It is not just retirees and visitors that contribute to Silver City’s economy. In an effort to diversify our local economy from dependence on extractive industries, small business development initiatives build upon Silver City’s unique attributes. For example, there are active manufacturing operators like Syzygy and Agmechtronix that chose to locate here, invest here, and hire local people. Similarly, Little Toad Creek Brewery set up a brewing operation in downtown Silver City. Both Agmechtronix and Little Toad Creek are recipients of State of New Mexico Economic Development Department grant funding. These businesses could have located anywhere, but they chose to locate here for the quality of life amenities. This applies to other employment categories such as working artists who choose to live here as well, but could go elsewhere.

Not only would Alternative 2 people stop people coming to Grant County, working people already here would leave as well.

Alternative 2 - Bad for Grant County and Silver City – Perhaps Good for Alamogordo

There are potential tremendous negative effects on the Town of Silver City if a federal decision makes it a place people do not want to live. Air Force proposal Alternative 2 would therefore lead to even more Economic Distress in Silver City.

Many current Grant County and Silver City residents choose to live here to enjoy the landscape, wilderness, quiet, clean air, and culture. Yet this proposed Alternative 2 could turn the Town of Silver City and surrounding municipalities into a national sacrifice zone, destroying the potential outdoor recreational economies we are developing and hoping will diversify our economy. Alternative 2 would drive away residents, and keep people from relocating here.

Any proposed economic benefits from Alternative 2 may be realized around the Alamogordo area – but this proposal would saddle Silver City and Grant County with all the drawbacks, while handing Alamogordo all the benefits.

Alternative 2’s Potential Negative Effects on Lives of Citizens: Noise

The proposal by Holloman Air Force Base to establish a Military Operations Area for F-16 training over central Grant County will bring a lot of very loud noise to a currently quiet place.

Here are the numbers: 10,000 sorties annually, 30 sorties every 24 hours on average, 10% at night, 10% at supersonic speed, flights as low as 500 feet above ground level.

The F-16 is a multi-role fighter aircraft that can fly 1,500 mph, more than twice the speed of sound, and climb 50,000 feet in one minute. When the aircraft flies at 500 feet above the ground, at 500 mph, a person on the ground will hear between 103 and 114 decibels of noise—a sound equivalent to a chain saw starting up 3 feet away. This could be happening up to thirty times a day and at night. Sonic booms are louder. Sometimes the noise breaks windows. Holloman Air Force Base has a hotline number to call if you want to seek compensation, which might be scant comfort if windows are broken in a home that was meant to be a retreat for solitude and quiet.

Noise is by definition an unwanted sound. The noise of military aircraft like F-16s is especially disturbing because of its intensity, rapid onset, and unpredictability in space and time. During a single sortie, an F-16 might fly repeatedly over an area, practicing air to ground attacks, air to air attacks, and evasion with tight turns, rapid ascents, and hiding among the contours of topography before the aircraft returns to base. It is not like an airliner flying overhead. The noise of F-16s in a mountainous place like the Gila echoes through the valleys, extending the noise over time and distance. This could be happening up to thirty times a day and at night.

Annoyance and decibel averaging are the metrics typically used by authorities to analyze the willingness of a community to tolerate noise by military aircraft. Increasingly, studies show that decibel averaging underestimates the level of community annoyance. Decibel averaging is an inappropriate measure for use for naturally quiet areas, for example. And “annoyance” is a mild word to use, when the *issue is really stress, and associated negative health impacts*. There is a large body of research literature demonstrating adverse health consequences associated with noise. Loud, frequent, impulsive noise is a stressor that affects the nervous system, and can result in hypertension, anxiety, sleep disturbance, hearing loss over time, and more.

Residents are not the only community of people who will be disturbed. Visitors to protected natural areas like the Gila Wilderness expect tranquil surroundings and the ability to hear natural sounds unmarred by industrial scale noise pollution. The peacefulness of the Gila is the kind of asset that is declining in the world. It is worth protecting now by strongly recommending the Air Force not pursue Alternative 2. That would be an affirmation of this natural area for current residents of Silver City, for future residents, for our children, and for visitors.

Alternative 2's Potential Negative Effects on Lives of Citizens: Negative Impacts on Children's Education

Because of the proximity of the pristine Gila National Forest and Wilderness, a number of schools in Grant County and Silver City use the wilderness and forests for educational purposes. The proposed Alternative 2 for F-16 training over these pristine areas would negatively impact these remarkable educational programs.

One example is Aldo Leopold Charter School, which has an emphasis on experiential outdoor education, conducts regular outdoor science field trips, and backpacking, as well as service-learning projects, in the forest. A second example is Western New Mexico University's Outdoor Program, offering an educational Outdoor Leadership minor, as well as a variety of outdoor experiences. These outdoor experiences, most of which take place in the Gila Wilderness and National Forest, include training in backpacking, first aid, mountain climbing, and search and rescue.

Not only do such outdoor educational programs offer a healthy way of learning, a number of studies have documented that such outdoor educational activities and events positively increase school performance. Research has found a positive relationship of outdoor education with: increased standardized test scores, a positive attitude about school, improved in-school behavior and class attendance, and overall enhanced student achievement. Many researchers contribute the increases in performance to increased relevance and

hands-on experience with outdoor learning programs.

An emphasis of learning science via outdoor education, especially in the biologically diverse Gila National Forest and Wilderness, increases student understanding of our natural and human environment. Through connecting to the forest, wildlife, streams, trees, and plants, students develop stronger environmental attitudes and civic behaviors. Outdoor learning experiences are fundamental aspects of raising the next generation of active citizens who take care of their natural and human communities.

We beg the Air Force to realize that even if there are no school buildings located in the Gila National Forest and Gila Wilderness, there are abundant schooling and educational activities taking place there. Having up to 10,000 sorties a year, dropping flares and chaff in many of the areas where currently students are doing environmental science and learning outdoor skills, would clearly be detrimental to their education.

Were Alternative 2 to be chosen, the immersive training and experience, and all the benefits, of outdoor education would suffer. *Alternative 2 would harm the education of children.*

Alternative 2's Potential Negative Effects on Lives of Citizens: Veterans Suffering from PTSD would Suffer More

Grant County, NM has a very high proportion of veterans, almost 10% of the population. Out of a population of about 28,000 people, 2772 are veterans, according to the US Census. Of those, about 580 are Vietnam vets. Armando Amador, one of the founders of the local Vietnam Veterans of America Chapter 358, says that more than 100 combat veterans from their chapter are seeking help for PTSD.

The National Center for PTSD notes that symptoms of PTSD in veterans can include debilitating flashbacks to combat events, anti-social behavior, inability to sleep or feel relaxed, depression, and a myriad of other disabling reactions. The symptoms of pain and disruption can be triggered by sights and sounds that overwhelm veterans and remind them of the traumatic events. Seeing and hearing the roar of F-16 fighters would be a clear trigger.

Our local, and visiting, veterans hike and camp in the Gila National Forest and wilderness as a means for healing and peace. Some emerging research shows that time spent in wilderness and forests can be an effective means of dealing with PTSD and other trauma. Silver City, as a Gateway Community to the Continental Divide Trail, is visited by veterans groups like the Wounded Warriors that sponsor trips through the Gila Wilderness as part of their PTSD recovery therapy.

Veterans suffering from PTSD will be triggered with greater frequency should the Air Force move to having F-16 training missions, with up to 10,000 training flights a year, flying down to 500 ft above the forest. The Gila Region, Alternative #2, should not be considered a viable option for Special Use Airspace as it would worsen the suffering of veterans with PTSD living in Grant County.

Alternative 2's Potential Negative Effects on Environment: Harm to Wildlife and Livestock

Alternative #2 would mean thousands of jet flights, many at 500 feet above ground level, at 500 mph with F-16 aircraft generating 114+ dBA, over an area where there is a rich diversity of wildlife – elk, deer, various birds, and fish. As well as the wildlife, the same area will have campers, horseback riders, fishers, and hunters.

The Air Force has knowledge about the damaging effects of low-flying, high-noise, suddenly appearing aircraft sending cattle into panics. In specific cases where ranching operations herd livestock for weaning and branding, low-level over-flights have caused cattle to spook and resulted in damage to both the livestock and fencing.

Sudden onset sounds, such as the noise created by low-altitude high-speed aircraft, can be startling to humans and animals, and there is a special concern among the horseback riders in our area. Members of the Back Country Horsemen have expressed grave concern about the safety of riders in the Gila were Alternative 2 to be chosen. Even though some studies have shown habituation to a frequent noise (such as a generator), no such habituation occurs with random, sudden, high-level sounds.

Other hikers and horseback riders have expressed fear of an F-16 appearing from seemingly nowhere, flying 500' above the ground. Their fear is the reaction time a pilot has to avoid persons (campers, hikers, horseback riders, hunters, etc. who are on the ground when an F-16 flies at a typical speed, only 500' above the ground. Would the pilot have quick enough reactions, and opportunity, to not seriously frighten the people and the animals?

Such natural tendencies of wildlife and livestock to startle, and run in fear, in response to loud noise, such as will be made by F-16's flying low over the terrain, *puts both those animals and humans in danger.*

Alternative 2's Potential Negative Effects on Environment: Unacceptable Risk of Wildfires in the Wilderness and Forest

The threat of fires caused by Air Force F-16 training involving use of flares is very real.

There have been numerous occurrences of such fires around the country. For example, in 2007 a 17,000-acre fire in New Jersey, with 13 homes destroyed, was started by an F-16 deploying flares too low. In southwest Oregon in 2017, a string of seven fires was apparently started by an F-15 training exercise. Closer to Silver City, in the fall of 2017, a 1000-acre grass fire was started by flares near Mule Creek, NM. Thirty responders from several fire districts were involved. The danger to humans, property, flora and fauna can be long-lived: 'dud' flares can remain 'live' on the ground for a long time. A woman in Graham County, AZ in 2017 was burned over nearly 50% of her body when she handled a 'dud' flare that was lying on the ground.

Flares are devices that use chemical reactions to burn for 3-4 seconds and achieve temperatures of over 2000° F. They are designed to be over 96% reliable and can actually achieve 99% reliability. But the remaining 1% can cause serious problems: some ignite late, burn longer, or reach the ground before igniting. With 15,000 flares per year deployed over the region under Alternative 2, roughly 150 could malfunction.

Other factors can increase the chances of flares igniting fires. Local weather conditions such as strong downdrafts can increase the speed at which a flare reaches the ground or the tops of trees. Pilot error (whether intentional or not) can cause release of flares at too low an altitude. The topography of the region is extremely variable, with altitudes ranging from 4,500 ft to 11,000 ft over a short distance. Over such a terrain, the intention to drop flares at a minimum altitude of 2000 ft. is easily compromised.

The Gila region has a dry climate with corresponding dryland vegetation. Fire danger levels, as defined by the U.S. Forest Service, seem simple: Low, Moderate, High, Very High, Extreme. The danger level is defined by the USFS for the entire region for a given time. But since the terrain, vegetation, and rainfall patterns are highly variable, the reality is much more complicated. Even during a Moderate danger level, there are 'islands' of High, Very High, or Extreme fire danger. Grasslands, in particular, are almost always in at least High fire danger.

The scale of wildfires in this area has been larger than other places in New Mexico. The Whitewater-Baldy Fire remains the largest in New Mexico history. The remoteness and the ruggedness of the terrain make it difficult to fight fires that are ignited.

Climate change is also a major concern. Recent trends in the Gila have shown extended elevated fire danger periods, with fire season coming earlier in the spring and lasting later into the summer. Additionally, with climate change the landscape vegetation is more vulnerable to smaller ignition triggers. These factors pose an

unacceptable risk of wildfire from potential flare use.

Use of flares in the Gila region is clearly dangerous and inappropriate. Since part of the F-16 training would include dropping these fire-starting flares, *we strongly urge the Air Force to seek other alternatives, not Alternative 2 expansion over the Gila National Forest and Gila Wilderness.*

Conclusion

Silver City and the Gila Region could be significantly harmed by Alternative 2 as described above. The Town of Silver City asks that the Air Force **not** establish a new Military Operations Area over Grant County, the Gila National Forest, and Gila Wilderness

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