

Holloman AFB EIS
501 Butler Farm Road #H
Hampton, VA 23666

November 14, 2017

Submitted via certified mail and online form

To Whom It May Concern:

Thank you for accepting our scoping comments on the proposal to expand Holloman's flight training exercises to areas over the Gila National Forest and Southeast New Mexico. We have serious concerns about this proposal's potential impacts on the Gila National Forest and its surrounding communities, as well as what we believe was inadequate public outreach during the scoping process.

Encompassing the nation's first wilderness area and New Mexico's last wild river, the Gila Region attracts retirees, outdoor recreation and tourism from throughout the U.S. and internationally. Holloman's proposed action, Alternative #2, will impact the environment and wildlife and significantly degrade the rural character and quiet solitude of this unique area, impacting real estate values, outdoor recreation, tourism, and the local economy. The Gila Region, Alternative #2, should not be considered a viable option for Special Use Airspace.

I. NEPA

The National Environmental Policy Act (NEPA) has two overarching goals: to allow an agency to reasonably predict the potential impacts of its proposed actions by analyzing a variety of alternative proposals, and to inform the public about its plans and consider the public's input and information. The latter goal is more important at the scoping phase, because the agency is still gathering information which will inform the creation of its proposal.

Public Involvement

The Council on Environmental Quality (CEQ) created NEPA guidance for agencies which states that agencies should make a demonstrable effort to inform and involve the members of the public who would be most interested and affected by a given proposal¹. Agencies are required to provide meaningful opportunities for public participation, and to make an effort to reach interested parties in the manner in which information will be most accessible to them. As noted in CEQ's Citizen's Guide to NEPA, "[a]s part of the process, agencies are required to identify and invite the participation of interested persons. The agency should choose whatever communications methods are best for effective involvement of communities, whether local, regional, or national, that are interested in the proposed action"².

¹ All NEPA guidance available at <https://energy.gov/nepa/council-environmental-quality-ceq-nepa-guidance-and-requirements>

² See the Citizen's Guide to NEPA, page 14, available at https://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-CitizensGuide.pdf

In this case, Holloman put a notification in the federal register on August 25, 2017. It seems to have mailed notification to one Silver City newspaper, but not the one read by the most people. Notice was not posted in any physical location in Silver City, nor was it announced on the radio. No public meeting was held in Silver City despite it being the largest population center in the Gila Region. Additionally, no notice was placed in any statewide newspaper like the Albuquerque Journal which would have made other New Mexicans aware of the proposal.

Indeed, people in the Gila Region remained unaware of the proposal until late September, and only became aware of it after a member of the Wilderness Alliance who had attended the meeting in Truth or Consequences contacted a staff member in Silver City.

We believe the actions taken by Holloman were insufficient to meet the spirit of NEPA and its accompanying regulations, because the people who are most interested in the proposal remained unaware of it until after the scoping period technically closed. Additionally, Holloman refused to have a public meeting in Silver City after many requests by residents, organizations, and businesses, citing an erroneous belief that it would have to “restart” formal scoping. Only after being asked repeatedly by elected officials did Holloman agree to present at a Grant County Commission meeting on November 14th.

From this point forward, Holloman must make a concerted effort to actively reach out to those members of the public who would actually be affected by its proposal. It should gather a list of interested persons who wish to remain informed about the project going forward, which should include, at a minimum, everyone who submitted a comment during scoping or contacted Holloman about having an additional public meeting. Holloman should create a space on the EIS page for people to easily sign up to receive updates and notifications. Lastly, it should ensure that from this point forward, public meetings are held in Silver City at each major point in the process.

NEPA requires consideration of a reasonable range of alternatives

Regarding NEPA’s other requirement to properly analyze the potential impacts of its actions, Holloman must consider a reasonable range of alternatives. The analysis of alternatives under NEPA is the “heart” of an EIS.³ An agency must “[r]igorously explore and objectively evaluate all reasonable alternatives” to a proposed action.⁴ Consistent with NEPA’s basic policy objective to protect the environment, this includes more environmentally protective alternatives.⁵ “The existence of a viable but unexamined alternative renders an [EIS] inadequate.”⁶ The

³ 40 C.F.R. § 1502.14.

⁴ *Id.* § 1502.14(a). *See also* 42 U.S.C. § 4332(2)(E) (agencies must “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources”).

⁵ 40 C.F.R. § 1500.2(e) (agencies must “[u]se the NEPA process to identify and assess reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment”). *See also, e.g., Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1121-22 (9th Cir. 2002) (citing cases), *abrogated on other grounds by The Wilderness Soc’y v. U.S. Forest Serv.*, 630 F.3d 1173, 1178-80 (9th Cir. 2011) (en banc).

⁶ *Mont. Wilderness Ass’n v. Connell*, 725 F.3d 988, 1004 (9th Cir. 2013) (quotations and citation omitted).

“touchstone” of the inquiry is “whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.”⁷

In this case, Holloman should consider the Gila National Forest’s suggestions for mitigation of impacts as a separate alternative, and also provide an analysis of Department of Defense (DOD) land in accordance with the Master Agreement between DOD and the Department of Agriculture (USDA), which is discussed in more detail below. We also believe Holloman should consider an alternative which eliminates flights over designated wilderness at any altitude.

In 1988, DOD and USDA entered into a Master Agreement (included with these comments) which stated among other things that when DOD seeks to use USDA land for training exercises, it will demonstrate to USDA that its own land is not sufficient for those purposes (see Section IV (A)). DOD administers 19 million acres in military bases, training ranges, and more, making it the fifth largest land manager in the country. In New Mexico alone, DOD administers 3,395,090 acres of land⁸. Specifically, there are over 2.3 million acres of land among Kirtland Air Force Base (AFB), Holloman AFB, and White Sands Missile Range (WSMR) in New Mexico. Fort Bliss, although in Texas, is adjacent to WSMR and adds another 1.12 million acres. Cannon AFB and the Melrose Air Force Range add over 73,000 acres. Combined, this is nearly 5,500 square miles of land - nearly the size of Connecticut. At 3,200 square miles, WSMR is the largest military installation in the United States. It is extremely difficult to see why the Gila National Forest would be the only sufficient location for these overflights.

DOD land holdings were established to provide for the needs of our military, such as training exercises; precisely the activities involved with this project. Even if Holloman doesn’t plan to land on Forest Service land as part of these exercises, we believe the Master Agreement would still apply because of Holloman’s plan to drop flares and chaff over the Forest. Holloman has not yet provided a document to the Gila National Forest which demonstrates it cannot use DOD land for this purpose.

II. Specific concerns about the proposal

Fire

Holloman must thoroughly assess the wildfire risk from the use of flares and develop potential mitigation measures to reduce the risk, and also develop realistic plans for fighting a flare-induced fire. Three catastrophic wildfires have occurred over the past five years in the Gila National Forest and Gila and Aldo Leopold Wilderness Areas, burning nearly 500,000 acres, including the Whitewater-Baldy Complex Fire that still stands as the largest fire in New

⁷ *Id.* at 1005 (quotations and citation omitted).

⁸ Congressional Research Service. Federal Land Ownership: Overview and Data. February 8, 2012. Available online at <http://www.fas.org/sqp/crs/misc/R42346.pdf>.

Mexico's history. Climate change has brought about a dramatic decrease in winter snowpack in the mountains as well as long term drought, making the Gila extremely vulnerable to wildfire.

Holloman estimates that 15,360 flare units will be deployed annually. Although Holloman states that use of flares 2000 ft Above Ground Level will not pose a wild fire risk since flares will burn out by the time the material would reach the ground, there have been documented instances of wildfire caused by flare use including a wildfire in New Jersey that burned more than 12,000 acres⁹. In Southeastern Oregon, fire officials believe that flares caused a series of six wildfires on federal public lands on July 11, 2017¹⁰. We suspect there are many other examples and that these fires may sometimes go unreported or be attributed to another cause. The Gila Region cannot afford to risk another fire like those which have been experienced in recent years. Holloman must analyze the real fire risks associated with its proposal, and must avoid actions which could cause a fire disaster.

Noise, Solitude, and Quiet Recreation

We are concerned that Holloman's proposed expanded training will substantially decrease the extent and level of quiet soundscapes in the Gila National Forest and surrounding communities. The National Park Service's sound map of the United States shows that southwest New Mexico is currently one of the quietest areas in the nation¹¹. Residents of southwest New Mexico and visitors from around the country and the world visit the Gila National Forest to experience the solitude and quiet that is increasingly difficult to find. As home to the planet's first designated wilderness area, the Gila Wilderness, visitors' expectation is that the Gila National Forest will be quiet and serene. Noise heard in the forest is more jarring and disturbing than noise in urban environments, where clamorous conditions are the norm. It can also be dangerous and damaging to both humans and wildlife.

Noise

There are thousands of studies on the impacts of noise on our physical and psychological wellbeing. Indeed, the sheer volume of studies points to the magnitude of the problem. Virtually all existing noise research has been about its negative impacts. There is very little research on the effects of quiet, partly because there is so little quiet available. What has been done suggests that quiet helps people relax, makes them more willing to help others, and enables them to do better on tests and to get a good night's sleep. Research with children who have attention-deficit (hyperactivity) disorder shows that experiencing quiet in nature is as effective for them as medication¹².

⁹ New York Times, Thousands Flee New Jersey Wildfire Ignited by Flare from F-16, May 16, 2007, available at <http://www.nytimes.com/2007/05/16/nyregion/16fire.html>

¹⁰ Oregon Public Broadcasting, July 11, 2017, "Feds Examine Military Flares In Mysterious Oregon Wildfires" <http://www.opb.org/news/article/feds-examine-military-flares-in-mysterious-oregon-wildfires/>

¹¹ https://www.nps.gov/subjects/sound/upload/CONUS_Existing_L50dBA_SummerDay_Legend.png

¹² Gordon Hempton, The Sun Magazine September 2010 <https://www.thesunmagazine.org/issues/417/quiet-please>

A May 2017 article in Science, titled “Noise Pollution is Invading Even the Most Protected Natural Areas,” states that, “[n]oise pollution from humans has doubled sound levels in more than half of all protected areas in the United States—from local nature reserves to national parks—and it has made some places 10 times louder, according to a new study. And the cacophony isn’t just bad for animals using natural sounds to hunt and forage—it could also be detrimental to human health¹³.”

The increased presence of aircraft over the Gila National Forest poses risks to human safety. Loud, low-flying aircraft that appear to “come from out of nowhere” can easily spook horses and mules, who may throw their riders, causing injuries and even fatalities to equestrians, hunters, packers, and outfitters. Jet noise also covers the sound of an approaching flash flood, a not uncommon occurrence in the Gila National Forest, and one that has caused many deaths in this arid region. Holloman should also analyze what may be a considerable risk of hearing loss to residents resulting from continuous low level flights.

The proposed expansion of Holloman’s training includes 1,000 supersonic sorties annually at or above 30,000 feet mean sea level. The EIS website contains very sparse information on timing and location of sorties. How many jets participate in a single sortie? Will supersonic sorties take place all days of the week, including weekends, when visitation to the forest is highest? According to the poster titled Special Use Airspace (SUA) Utilized by Holloman AFB, 10% of sorties will take place at night. Will any nighttime events be supersonic? If so, how will the impacts of these sorties be different than supersonic events during the day?

According to Holloman’s online poster on Aircraft Noise, “[t]he distance to the point on the ground where the boom is heard depends on the altitude, flight path, and size and shape of the aircraft.” This is accurate but incomplete, as it fails to take into account “focus,” which is caused by maneuvering supersonic aircraft. Edward Haering, principal investigator for the Superboom Caustic Analysis and Measurement Program (SCAMP) at NASA’s Dryden Flight Research Center in California, reports that, “[w]hen a supersonic aircraft accelerates to its cruise speed, a focusing effect occurs that makes the sonic boom five to 10 times louder than its normal cruise sonic boom over a small region. This effect is similar to how light rays are focused by a lens¹⁴.”

The Aircraft Noise poster on the EIS website briefly describes the noise modeling and mapping to be conducted as part of the NEPA analysis. We urge Holloman to do a particularly robust study of the impacts of noise, including sonic booms, on human communities, both in urban and forest settings. We further ask Holloman to fully disclose the timing and location of all supersonic flights.

Quiet Recreation

The Gila National Forest is a prime destination for local residents and global citizens alike. At 3.3 million acres, the Gila is one of the largest national forests in the nation. Its three

¹³ Available at <http://www.sciencemag.org/news/2017/05/noise-pollution-invading-even-most-protected-natural-areas>

¹⁴ <https://www.nasa.gov/centers/dryden/Features/scamp.html>

wilderness areas comprise 789,000 acres. Visitors use the forest in a variety of ways, displayed in the table below from the Gila National Forest’s 2011 National Visitor Use Monitoring Report¹⁵. This same report reveals that 54% of Gila National Forest users surveyed were local residents, having traveled less than 50 miles to access the forest. The Gila National Forest is a vital component of the quality of life enjoyed by the community, and many older residents note its existence as one of the top reasons they retired in southwest New Mexico. The loss of quiet areas in the Gila National Forest and surrounding communities would be devastating to the quiet recreation community, both locally and nationally.

In 2016, the PEW Research Center compiled a report focused on the economic impacts of quiet recreation on public lands administered by the Bureau of Land Management in the eleven Western states¹⁶. It found that 63% of all visits to those lands were to participate in a form of quiet recreation like hiking, camping, or stargazing. In New Mexico alone, 2.3 million visits are made each year to BLM lands specifically for quiet recreation purposes. While PEW has not conducted a similar study on lands administered by the Forest Service, we suspect the results would be similar or even higher, since areas like the Gila and the Pecos Wilderness experience a particularly high visitor use. Holloman must analyze the potential impacts (both economic and recreational) of the loss of quiet which will result from an increase in overflight activities.

Gila National Forest National Visitor Use Monitoring Report

Activity	% Participation*	% Main Activity‡	Avg Hours Doing Main Activity
Viewing Wildlife	57.0	3.9	2.5
Viewing Natural Features	56.8	12.1	2.3
Hiking / Walking	51.9	21.4	2.8
Driving for Pleasure	49.3	12.0	3.5
Relaxing	45.3	7.6	26.9
Hunting	20.2	19.7	50.2
Primitive Camping	17.6	0.1	20.0
OHV Use	17.5	1.8	1.0
Picnicking	14.6	4.1	2.7
Motorized Trail Activity	11.7	0.0	0.0
Fishing	11.2	7.3	7.5
Visiting Historic Sites	11.0	0.8	3.7
Some Other Activity	7.0	6.7	3.1
Developed Camping	6.6	0.8	43.8
Nature Study	6.2	0.0	4.0
Gathering Forest Products	4.4	0.1	3.2

¹⁵ Report available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd486618.pdf

¹⁶ Report available at <http://www.pewtrusts.org/en/research-and-analysis/analysis/2016/03/31/the-economic-value-of-quiet-recreation-on-blm-lands>

Nature Center Activities	4.1	0.0	0.0
Backpacking	2.9	0.3	28.9
Horseback Riding	2.1	2.0	2.0
Other Non-motorized	1.1	0.3	4.5
Other Motorized Activity	0.9	0.9	15.0
Bicycling	0.9	0.2	5.3
Resort Use	0.1	0.0	0.0
Non-motorized Water	0.1	0.1	10.0
Motorized Water Activities	0.0	0.0	0.0
Snowmobiling	0.0	0.0	0.0
Downhill Skiing	0.0	0.0	0.0
Cross-country Skiing	0.0	0.0	0.0
No Activity Reported	0.0	0.0	

Wildlife impacts

Frequent low-altitude flights can disrupt the feeding and breeding habits of wildlife and livestock. Many of the same impacts to humans outlined above in the section on noise will be felt by animals as well, including stress. Excessive noise can also mask the presence of dangers to humans, such as the warning vocalizations of wildlife. Some of the most significant impacts from noise on wildlife are caused by chronic exposure. Holloman is proposing ten thousand low-altitude flights per year, an amount which can surely be considered “chronic exposure”. In 1988 the US Fish and Wildlife Service (FWS) conducted a survey of wildlife refuges to determine the impacts of low level flights on wildlife. Refuges reported significant visible disturbances to birds and ungulate species, but lacked sufficient data to determine effects on smaller animals¹⁷. Acoustic ecologists are now finding that the impacts from chronic noise exposure on wildlife can be detrimental in many ways and therefore are extremely important considerations that Holloman must analyze in the DEIS¹⁸. Holloman must also consider how the timing of its proposed exercises over the course of a year will affect game species and hunting and fishing in the Gila, which contains some of the state’s best elk herds and most sought-after hunting permits.

There are many extremely sensitive species in the Gila region and several which are listed through the Endangered Species Act (ESA), including the Mexican Gray Wolf, Gila Trout, Yellow-Billed Cuckoo, and Chiricahua Leopard Frog. The seminal Supreme Court case *TVA v. Hill* stated that Congress intended protection of endangered species to be the “highest priority” for federal agencies¹⁹. Section 7(a)(2) requires federal agencies to ensure, through consultation

¹⁷ Effects of Aircraft Noise and Sonic Booms on Fish and Wildlife, June 1988, available at <http://www.nonoise.org/library/fishwild/survey.htm>

¹⁸ Effects of Noise on Wildlife, National Park Service, https://www.nps.gov/subjects/sound/effects_wildlife.htm

¹⁹ *Tennessee Valley Authority v. Hill*, 437 U.S. 153 at 174 (1978)

with the FWS, that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of critical habitat. We believe that threshold is met by this proposal and Holloman must analyze the potential impacts of its proposal on federally listed species in the Gila region, in addition to impacts on other wildlife and livestock.

Economic Impact to Local Communities

A clean, quiet environment is directly linked to the tourism and outdoor recreation economy in the Gila region. The tourism economy in New Mexico is growing and in some places, is breaking records.

Birding is an important component of the tourism economy in the region. More than 350 species of birds are found in the Gila Region. This premier birding region attracts birders from in-state and out-of-state. The Southwest New Mexico Birding Trail and Map guides birders to the best locations throughout the Gila Region, including six Important Bird Areas (IBAs)²⁰ that could be affected by sorties under Alternative #2.

A 2013 New Mexico Department of Game and Fish Study showed that hunting and angling are significant contributors to Grant County's economy²¹. That year alone, 10,000 people participated in angling in Grant county for 100,000 angler-days, spending \$6.5M, supporting 74 jobs, generating \$1.9M in labor income, and contributing \$10M to federal, state and local taxes. That same year, nearly 7000 people participated in hunting for nearly 38,000 hunter-days, spending \$8.9M, and supporting 112 jobs that generate \$2.8 M in labor income and \$1.4M in federal, state and local taxes.

Headwaters Economics studies the economic benefit of living near protected public lands. It finds that counties with at least 30% protected public land created jobs 4 times faster over a 10-year period than counties with none. On average, western rural counties have a per capita income that is \$436 higher for every 10,000 acres of protected federal lands within their boundaries. Additionally, Americans spend \$887 billion every year on outdoor recreation; more than they spend on cars, medication, utilities, or gasoline. Most of that revenue is spent in the rural communities which house protect public land²².

Increasing low-level military training exercises in these areas is likely to be significantly harmful to local economies. Revenues from retirees moving into the area, from entrepreneurs

²⁰ Audubon Society Important Bird Areas, available at <http://www.audubon.org/important-bird-areas/state/new-mexico>

²¹ The Economic Contributions of Fishing, Hunting, and Trapping in New Mexico in 2013: A statewide and county-level analysis, New Mexico Department of Game and Fish, prepared by Southwick Associates, July 2014, available at <http://www.wildlife.state.nm.us/download/publications/press-release/NMDGF-Economics-of-Fishing-Hunting-and-Trapping-Final.pdf>

²² See West Is Best: Protected Lands Promote New Mexico Jobs and Higher Incomes, Headwaters Economics, November 2012, available at <https://headwaterseconomics.org/economic-development/trends-performance/west-is-best-value-of-public-lands-nm/>, See also The Outdoor Recreation Economy, Outdoor Recreation Industry, 2017, available at <https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/>

establishing businesses, and from tourists are significant parts of the local economy. Many of these people are drawn to the Gila Region by its natural beauty and tranquility as well as the outdoor recreational opportunities offered by the nearby mountains and rivers and forests. 10,000 sorties annually of low-flowing military aircraft and 30 sonic booms a day would ruin that attraction for most people. The decline of local revenues would impair the provision of services both private and public even to people who rarely venture outdoors.

Increased military training over Silver City and the Gila region could cause depressed values for homes and commercial properties. High decibel, frequently-occurring noise by military aircraft also has a direct effect on the decline of property values. One study estimated that, “[the] percent change in property value per one decibel increase in noise level for detached houses, condominiums and vacant land is 0.65 percent, 0.90 percent, and 0.16 percent respectively.”²³

The Federal Aviation Administration’s 1985 report *Aviation Noise Effects* states, “[s]tudies have shown that aircraft noise does decrease the value of residential property located around airports. Recent studies continue to confirm this. Although there are many socio-economic factors which must be considered because they may negatively affect property values themselves, all research conducted in this area found negative effects from aviation noise, with effects ranging from a 0.6 to 2.3 percent decrease in property value per decibel increase of cumulative noise exposure.”²⁴ A University of Illinois study found that, “[e]stimates by Realtors of reductions in the values of single family dwellings ranging from 3.9% (low estimate) to 7.7% (high estimate) for moderate noise levels (65-70 Ldn) , from 9.6% to 13.0% for substantial noise levels (70-75 Ldn), and from 11.2% to 21.6% for severe noise levels (75-80 Ldn).”²⁵

Thousands of people live in the vicinity of the proposed Lobo MOA, and they could lose significant amounts of their equity value through no fault of their own. No one living in quiet rural areas wants to live under 10,000 annual sorties of low-flying military aircraft and 30 sonic booms a day. And no one considering moving to a tranquil rural area would consider moving into a community with loud and busy military trainings.

Contamination of Land, Air, and Water

Military training over the Gila Region will generate significant amounts of pollutant emissions and contaminant releases to the environment, potentially causing air quality, visibility, land and water quality problems.

Military jets emit criteria air pollutants which are regulated by the US Environmental Protection Agency. The Gila Region is currently in attainment of all National Ambient Air

²³ A Technical Note on Aircraft Noise and its Cost to Society, Lazic and Golaszewski, April 2006, available at <https://westcoastactionalliance.org/wp-content/uploads/2015/01/Aircraft-Noise-and-its-Cost-to-Society.pdf>

²⁴ *Aviation Noise Effects*, Federal Aviation Administration, 1985, available at <http://www.nonoise.org/library/ane/ane.htm>

²⁵ *Effects of Noise and Airport Activity on Residential Property Values: A Survey Study* (1988), University of Illinois, available at <https://westcoastactionalliance.org/wp-content/uploads/2015/01/effects-of-aircraft-noise-on-property-values.pdf>

Quality Standards. Holloman Air Force Base estimated the increase in criteria air pollutant emissions for bringing two squadrons of F-16's to Holloman from Hill Air Force Base²⁶. The total emissions estimated from this action are 39.28 metric tons of volatile organic compounds (VOC); 101.55 metric tons of nitrogen oxides (NO_x) (both VOC and NO_x combine to form ozone), 87.46 metric tons of carbon monoxide (CO), 14.16 metric tons of particulate matter of 2.5 microns or less in diameter (PM_{2.5}), 15.74 metric tons of particulate matter 10 microns or less in diameter (PM₁₀), 7.59 metric tons of sulfur dioxide (SO₂), and 21,123 metric tons of carbon dioxide (CO₂), a greenhouse gas that causes climate change. What is the proportion of these emissions estimated to be released over the Gila Region under Alternative #2? The associated impacts on ambient air quality concentrations and visibility impairment in Class I wilderness areas must be assessed. Included in this evaluation should be disclosure of the use of mid-air refueling, fuel dumping, and assessment of the air quality impacts of these practices.

According to available EIS documentation, Holloman estimates annual deployment of 15,360 chaff units over the Gila Region under Alternative #2. These aluminum-coated plastic fibers would introduce metals and plastics into pristine wilderness areas and the Gila National Forest. Wildlife can ingest these materials by mistaking these small particles for food. The chaff material can also enter waterways and pose a water quality concern. Our estimation is that 77 trillion pieces of chaff per year (5 million pieces/chaff unit x 15,360 chaff units/year = 7.68 x 10¹⁰ pieces/year) would be released to the Gila Region under Alternative #2²⁷. The EIS should estimate the concentration of chaff fibers in the Silver City area, Gila National Forest and Gila and Aldo Leopold Wilderness Areas and evaluate the environmental fate and risk of deposition of this material to our environment and waterways.

Wilderness

Much of the proposed expansion of Holloman's flight training appears to be located above the Gila and Aldo Leopold Wilderness areas in the Gila National Forest. Wilderness is the most protective designation which can be placed on public land, and is reserved for the most pristine and special places. It is also extremely rare, especially in New Mexico, where a mere 2% of the state's land is designated Wilderness (tying with Utah for the lowest percentage of designated Wilderness in any Western state).

In 1924, the Gila Wilderness became the first Wilderness area ever designated in the United States, and it remains the largest Wilderness in New Mexico at 558,014 acres. The Aldo Leopold Wilderness, immediately adjacent to the Gila Wilderness, was designated in 1980 and is comprised of 202,016 acres. Together they comprise (by far) the largest permanently protected area in the state.

²⁶ Technical Memorandum regarding potential air quality impacts from implementing the interim relocation of two F-16 FTUs to either Holloman AFB, NM or JBSA-Lackland (Kelly Field, TX), available at <http://www.holloman.af.mil/Portals/101/Environmental%20documents/Technical%20Memorandum%20Air%20Quality%202017-2a.pdf?ver=2017-07-25-151214-440>

²⁷http://www.hollomanafbairspaceeis.com/Resources/Documents/Poster%20_SUA%20Used%20by%20Holloman.pdf

Wilderness areas are protected specifically for their undisturbed pristine nature, and are to be kept that way in order to provide opportunities for visitors to recreate in primitive, non-motorized ways, as well as to experience solitude. As noted in previous sections of this letter, low-altitude military overflights can greatly disturb these activities anywhere, but quiet and solitude are considered sacred experiences in Wilderness areas.

There are economic benefits of wilderness areas and public lands, which are outlined above, but there are significant non-economic benefits of wilderness as well. More than twelve million people visit Wildernesses each year²⁸. In 2003, the US Forest Service sponsored research into the non-economic, social values of wilderness. The result was a paper describing fourteen social values of wilderness, with the specific goal in mind of informing federal policy²⁹. The report acknowledged the existence of traditional, economic measures of the values of wilderness, but also noted that, “traditional measures often fall short of representing the true value of wilderness”. The values provided by wilderness discussed in the report are individual (sense of self) value, character-building, therapeutic, personal wellbeing, enlightenment, societal value, educational value, spiritual value, family and social values, engaged citizenship, historical and cultural values, artistic value, esthetic value, epistemological value, recreation and leisure, research, and inherent value to humanity.

Allowing frequent, loud, low-altitude flights over Wilderness areas would destroy the quiet and solitude for which they were designated. The Federal Aviation Administration has issued a Notice to Airmen that a minimum altitude of 2,000 feet above the terrain (or above the uppermost rim of a canyon or valley) over wilderness and National Parks should be observed by all aircraft³⁰, meaning the Forest Service’s “request” that this altitude be maintained over wilderness areas is merely an assertion of an existing requirement Holloman already has.

Holloman must analyze the potential impacts of its proposal to Wilderness values, specifically on both its economic and social benefits.

Impacts to veterans

Holloman should analyze the impacts of this proposal to veterans. Many veterans recreate on public lands as a means for healing and peace. Research is beginning to show (research on this issue is entirely recent and so is just now becoming measurable) that time spent in wilderness and on public land can be an extremely effective means of dealing with PTSD and other trauma³¹. As documented in the 2015 High Country News Article, Wilderness As

²⁸ See <https://wilderness.nps.gov/how.cfm>

²⁹ The Social Values of Wilderness, Schuster, Tarrant, and Watson, 2004, available at https://www.fs.fed.us/ne/newtown_square/publications/technical_reports/pdfs/2004/317papers/schuster317.pdf

³⁰ Federal Aviation Administration Flight Advisories, Regulations Regarding Flights Over Charted National Park Service Areas, U.S. Fish and Wildlife Service Areas, And U.S. Forest Service Areas, FAA Advisory Circular (AC 91-36C) available at https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/fs/alaskan/advisories/parks/media/ac91-36c.pdf

³¹ Exploring the Possibility of Using Outdoor Recreation to Provide Mental Health in Veterans with PTSD, Dana Erickson, Pacific University, 2011, available at

Therapist, “[Brandon] tried the VA, but at the clinic in Lakewood, Washington, he saw soldiers with amputated limbs and gruesome scars, and “it scared the shit out of me,” he recalled...[h]e started getting together with Army buddies, doing crash courses with a local mountain guide, and then going out on expeditions, where teamwork and goals created a positive space for recovery...it was, he says, “awesome.” Somewhere along the way, the death eyes went away”³².

There are many wilderness therapy programs available for veterans of the US Military who are dealing with PTSD³³, and many veterans specifically move to quiet places like the Gila region for this purpose. The LA Times documented this in 2006 in an article about why veterans were moving to Alaska: “[y]ou come to get away from everything, especially if you've seen stuff you don't want to remember,” said McCue, who has since lived out many of his boyhood imaginings of Alaska”³⁴. The number of veterans turning to the outdoors for healing is growing, and outdoor recreation is supplementing an overwhelmed Department of Veterans Affairs, which cannot practically provide the level of mental health treatment which is being sought.

Exposing veterans to an ongoing series of low altitude military training exercises would not only remove the palliative aspects of the quiet forest, but could actually cause further damage.

Additionally, while it is true that the military’s overarching purpose is to secure and defend the country as a whole, a crucial aspect of that is defending our most beautiful places, and the freedom to use and enjoy them. It is hard to imagine what the Air Force would be fighting for, if it isn’t fighting specifically for places like the Gila. Recent surveys have shown that 75% of post-9/11 veterans living in Western states support protection of federal public lands, even referring to it as “defending our land a second time”³⁵.

Cumulative impacts

Adequate NEPA analysis requires consideration of cumulative impacts and of the existing impacts (baseline data) already occurring on the forest³⁶. NEPA defines cumulative impacts as, “the impact on the environment which results from the incremental impact of the

<http://commons.pacificu.edu/cgi/viewcontent.cgi?article=1019&context=otmh>, See also [Veterans Find Healing in Wilderness](#), November 2013, available at <http://wilderness.org/blog/veterans-find-healing-wilderness>

³² High Country News, [Wilderness as Therapist](#), Tay Wiles, February 16, 2015, available at <http://www.hcn.org/issues/47.3/wilderness-as-therapist>

³³ See [Outdoor Adventure Therapy for Military Veterans](#) at <http://www.military.com/military-report/outdoor-adventure-therapy-program-for-veterans.html>, See also [Veterans Expeditions](#) at <http://www.vetexpeditions.com/>, See also [PTSD Wilderness Therapy](#) at <http://ritesofpassagewildernesstherapy.com/the-ranch/diagnosis/ptsd/>, See also [Outward Bound Veterans](#) at <https://www.outwardbound.org/veteran-adventures/outward-bound-for-veterans/>, See also [Huts for Vets](#) at <http://hutsforvets.org/>, and many more.

³⁴ LA Times, [America’s Veterans Being Drawn to the Last Frontier](#), Jeannette Lee, December 10, 2006, available at <http://articles.latimes.com/2006/dec/10/news/adna-vets10>

³⁵ High Country News, [Wilderness as Therapist](#), Tay Wiles, February 16, 2015, available at <http://www.hcn.org/issues/47.3/wilderness-as-therapist>

³⁶ See CEQ’s [Considering Cumulative Effects Under the National Environmental Policy Act](#), 1997, available at https://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumulEffects.pdf

action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (Federal or non-federal) or person undertakes such other actions” (40 CFR §1508.7). Cumulative impacts analysis was included in the NEPA regulations out of growing evidence that the most damaging environmental effects are caused not by a single action, but by the accumulation of the impacts from many individual actions over time.

There are already many permitted activities over the areas proposed for training expansion here, including existing military training from other bases over parts of the Gila. In July 2017, Fort Bliss approved an Environmental Assessment for Local Flying Area and Local Flying Rules that will allow the Army to conduct helicopter training over a broad area of southern New Mexico, including the Gila National Forest and Gila and Aldo Leopold Wilderness Areas. This is in addition to the military training exercises conducted within the existing Morenci, Reserve and Cato/Smitty Military Operations Areas that include portions of the Gila National Forest and Gila Wilderness. These are all already having an impact on people who live in the Gila. A resident of Gila Hot Springs, a village completely surrounded by the Gila National Forest, reported through an email that, “[l]ast night, we had stealth bombers within several hundred feet of the ridge top, and minutes ago, in full light, another. These planes are literally buzzing the hills surrounding our homes.” Residents of Gila Hot Springs and other small rural communities are already being exposed to the very noise and disturbance they sought to escape by relocating to southwest New Mexico. The DEIS must include documentation of the other activities and flight training, as well as an analysis of what the combined effect would be if Holloman’s proposal went forward.

III. Impacts from military overflights in other places

Cibola National Forest

While statistics are lacking, there is much anecdotal evidence about military pilots who ignore regulations on above-ground levels and flight areas and test their aircraft and skill by flying in an inappropriate and even dangerous manner – too fast, too low, and too close to homes and obstacles.

Citizens have little recourse and are met with routine denial upon reporting these incidents to military authorities. Holloman must fully disclose flight regulations, times, and flight paths, and establish a hotline where citizens can report pilot violations. Over the last two decades, Kirtland AFB has been conducting jet trainings and exercises over and on the Cibola National Forest, subject to a Special Use Permit. The Cibola has been in the process of updating this permit for the last several years, and many organizations and local landowners have participated in the NEPA process and spoken out about the impacts they experience with the exercises which are already taking place.

These impacts include extremely loud noise even at night, broken windows, an abundance of trash and ordnance on both private property and USFS land, and scared domestic animals. We are including a link to a film made several years ago by local residents, many of whom moved out to New Mexico’s rural places specifically for their peace and quiet, and who feel like the military overflight presence is severely harming their way of life. We expect there

would be similar impacts to residents of the Gila region. We strongly urge Holloman to watch the video, which can be found at <https://www.youtube.com/watch?v=rquV-qDnhho>

Olympic National Forest, Washington

Navy EA-18G Growler flights over the Olympic Peninsula have had a tremendous impact on communities, tourism, real estate, outdoor recreation and wildlife. Numerous newspaper reports documented the thousands of complaints about the extreme noise and impacts to local tourism and outdoor recreation in state parks³⁷.

Thank you for considering our comments, and please keep all of us on the list of interested parties as this analysis moves forward.

Very Sincerely,

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³⁷ Seattle Times, April 6, 2016, Jets, Helicopters, Rockets: Military Plans more uses of federal public lands, available at <https://www.seattletimes.com/seattle-news/politics/jets-helicopters-rockets-military-plans-more-uses-of-northwest-public-lands/>

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