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Re: Draft Environmental Assessment for the Establishment of Low Altitude Training for Cannon AFB, New Mexico

To Whom It May Concern:

These comments on the Draft Environmental Assessment for the Establishment of Low Altitude Training for Cannon Air Force Base (AFB), New Mexico (Draft EA) are submitted on behalf of Not 1 More Acre!, Purgatoire, Apishapa & Comanche Grassland Trust, and Jean Aguerre (collectively, Commenters). The public comment period for the Draft EA ends on November 5, 2011 and therefore these comments are timely.

Not 1 More Acre! is a Colorado non-profit corporation dedicated to protecting and preserving the natural and cultural heritage, economy and quality of life in southern Colorado and northern New Mexico. Not 1 More Acre! filed Articles of Incorporation with the Colorado Secretary of State on January 10, 2007 and has a mailing address of P.O. Box 773, Trinidad, Colorado 81082. Not 1 More Acre! has been active in raising public awareness regarding the potential environmental and economic impacts of military use of the Piñon Canyon Maneuver Site (PCMS).

The Purgatoire, Apishapa & Comanche Grassland Trust is a Colorado non-profit corporation dedicated to educating people about the importance of natural processes that create and protect healthy bioregions, which support flourishing and renewing communities of human, animal, plant, soil, and water life in southern Colorado and northern New Mexico. The Grassland Trust filed its Articles of Incorporation with the Colorado Secretary of State on January 10, 2007 and has its principal place of business at 14000 County Road 53.5, Trinidad, Colorado 81082.

Jean Aguerre is a native of La Junta and a ranch near the Timpas unit of the Comanche National Grassland. Ms. Aguerre played a key role in forcing the Army to transfer approximately 17,000 acres of the PCMS to the U.S. Forest Service, Comanche National Grassland in 1990. She is the founder of Not 1 More Acre! and Grassland Trust, organizations established to oppose military expansion and to protect environmental, cultural and economic health throughout

southern Colorado and northern New Mexico.

Commenters oppose the expansion of military aviation training over lands in Colorado and New Mexico. The proposed Low Altitude Tactical Navigation (LATN) Training Area (LATA) includes undisturbed, pristine natural areas with important ecological, archaeological, historical and economic values that must be protected. There are millions of acres of military airspace already designated within a short distance from Cannon AFB. Air Force Special Operations improperly defined the purpose and need for the Proposed Action narrowly in order to exclude reasonable alternatives. The Draft EA failed to consider a range of reasonable alternatives, instead limiting its analysis to only the Proposed Action and the No Action Alternative, in violation of the National Environmental Policy Act (NEPA).

For many years, the Department of Defense (DOD) has been seeking to militarize southern Colorado and northern New Mexico in order to create a Joint Forces Combat Training Center as part of military transformation. Commenters object to the DOD's sustained effort to segment its plans for the region into pieces in order to avoid the rigorous environmental evaluation and public disclosure requirements of NEPA. Commenters oppose the DOD's short-sighted vision for these critical bioregions, which include native grasslands, arid canyons, semi-arid shrublands, alluvial valleys, volcanic plateaus, forested mountains, headwaters streams and river basins, the Continental Divide, glaciated peaks, clean air, wetlands, watersheds, and a variety of aquatic habitats. The biological diversity in the area is enormous. In addition, the 69,699 square mile area targeted by DOD includes ancestral homelands for Native Nations and Pueblos, Spanish Land Grants, generational farm and ranch lands; public and private lands of global significance.

The Draft EA fails to meet the minimum standards of federal law. It is self-evident that three thousand four hundred and forty hours (3,440) of annual nighttime low altitude flight by experimental aircraft, in perpetuity, would cause significant harmful impacts to the quality of the human environment. The noise and startle caused by these overflights would disturb threatened and endangered species, other wildlife, domestic stock and pets. The Proposed Action will negatively impact the livelihoods of thousands of American citizens – rural residents, ranchers, farmers, backcountry outfitters, and others who depend upon this region's wealth of natural and cultural resources - as well as harm the interests of those who seek solitude and recreation in the open spaces and resorts of southern Colorado and northern New Mexico. There are numerous private and public airports in the proposed LATN area and substantial civilian air traffic that will be negatively impacted by the Proposed Action. Cannon Air Force Base has limited experience with V-22 Osprey and MC-130J aircraft and the Osprey is notorious for its poor safety record. The Proposed Action has great potential to cause the loss of human life and to inflict extensive irreparable damage to public and private lands. In addition, the Draft EA minimizes harmful

impacts to air quality, water purity and all other biological and cultural resources.

Ultimately, the Draft EA fails to take a "hard look" at potential environmental, archaeological, historical and socioeconomic impacts as required by NEPA. Impacts are often not disclosed, stated as obvious generalities without attempt at quantification or discussion, understated, or stated in a manner intended to mislead the public into believing they are insignificant. In fact, disclosure and discussion of the significance of the action's impacts on many resources is often simply absent. The Draft EA fails to disclose or consider how the Proposed Action's incremental or cumulative impacts will affect biological, cultural and economic resources when considered in light of the extensive existing military airspace used in the region. Proposed mitigation measures would not reduce the level of impacts below the significance threshold as claimed in the Draft EA. Moreover, there are no monitoring or enforcement mechanisms included as part of the proposal that would allow the public to ensure that the terms of the Draft EA are observed if the project is implemented. Preparation of an EA is not appropriate for a project of this magnitude, and issuance of a Finding of No Significant Impact (FONSI) would be arbitrary and capricious. For these reasons, Commenters request that the Proposed Action be withdrawn.

I. Cannon Air Force Base

Cannon AFB is located near Clovis, New Mexico. As part of the 2005 Base Realignment and Closure (BRAC) process, then-Secretary of Defense Donald Rumsfeld recommended closing Cannon AFB and distributing its F-16 fighter jets to other bases in order to realize annual recurring savings of $205,500,000 (with a 20-year net present value of $2,647,500,000). Exhibit 1.

Due to political expediency, not military need, BRAC Commission Recommendation #100 instead directed that Cannon AFB should remain open until December 31, 2009 to allow the Secretary of Defense time to "seek other newly-identified missions with all military services for possible assignment." *Id.* The BRAC Commission recommendations were accepted by President George W. Bush and became law when the Congress failed to take any contrary action within 60 days.

On June 19, 2006, the Secretary of the Air Force submitted to the Secretary of Defense a proposal to designate the Air Force Special Operations Command (AFSOC) mission to Cannon AFB and nearby Melrose Air Force Range (AFR), a 60,100 acre property that is used for live fire military training exercises as well as aircraft and helicopter landing and drop zones. AFSOC is the Air Force component of the United States Special Operations Command, a unified command located at MacDill AFB in Florida. AFSOC was created in 1990 and has its headquarters at

Hurlburt Field, Florida. The Secretary of Defense approved the proposal and the Air Force commenced an environmental review process pursuant to NEPA. The Air Force issued the Final AFSOC Assets Beddown at Cannon Air Force Base, New Mexico Environmental Impact Statement (AFSOC EIS) in July 2007. Exhibit 2. The AFSOC EIS attempt to analyze the potential environmental consequences of locating AFSOC assets at Cannon AFB and Melrose AFR and training these assets in Special Use Airspace (SUA) and Military Training Routes (MTRs) previously coordinated by the 27th Fighter Wing stationed at Cannon AFB, but made no mention of any need for LATN or LATA training.

The Air Force issued a Record of Decision (AFSOC ROD) approving the assets beddown on August 20, 2007 which concluded:

> The beddown and training of AFSOC assets at Cannon AFB, at Melrose AFR, and within Cannon AFB associated airspace permit AFSOC assets to meet expanding mission requirements. These requirements include the types of terrain, aircraft, operating conditions, and targets currently and projected to be part of AFSOC operations. Training for Cannon AFB assets will involve all phases of the operational use of personnel, equipment, and munitions, including weapons and tactics test and evaluation. Operational training includes forward presence and engagement, information operations, precision employment and strike, and SOF [Special Operations Forces] mobility.

Exhibit 3. On October 1, 2007, the DOD activated the 27th Special Operations Wing (27 SOW) at Cannon AFB under the jurisdiction of AFSOC. According to the AFSOC ROD, the mission aircraft to be stationed at Cannon AFB included several variants of the C-130 aircraft, the CV-22 tilt-rotor aircraft, Predator Unmanned Aircraft System (UAS), and additional warfare aircraft. Id. at 3. The AFSOC ROD further explained that:

> Cannon AFB schedules the restricted airspace supporting Melrose AFR, Military Operations Areas (MOAs), and MTRs. AFSOC aircraft missions require an annual average of 40 percent of their flights to occur during "environmental night" (10:00 p.m. to 7:00 a.m.). Night flights on some MTRs could increase from effectively none to 1,000 or more per year. MTR training flights would normally be from 4 to 5 hours with aircraft between 100 and 1,000 feet above ground level (AGL) and usually at 250 feet AGL or higher. Air refueling tracks would be in coordination with the Federal Aviation Administration (FAA) as the existing aerial refueling (AR) track (AR-602) is at too high an altitude for some AFSOC aircraft.

Id. at 4. The AFSOC ROD also authorized the establishment of "a transit area for the Predator UAS between the airspace associated with Cannon AFB and restricted airspace associated with the Melrose AFR." Id. at 5. According to the AFSOC ROD, "[t]his airspace could be transited under a Certificate of Waiver or Authorization (COA) issued by the FAA." Id. at 5. The AFSOC ROD noted that "[t]he Predator UAS is not authorized to fly in the National Airspace System without meeting an equivalent level of safety to the 'see and avoid' requirements of Federal Aviation Regulation (FAR) 91-113." Id. at 5.

During February 2009 AFSOC issued a Comprehensive Range Plan for Melrose AFR. AFSOC subsequently prepared an EA for the Comprehensive Range Plan and issued a Finding of No Significant Impact (FONSI) on July 15, 2011. Exhibit 4. On September 30, 2010 AFSOC approved a General Plan for Cannon AFB. Exhibit 5. The General Plan describes a vision for turning Cannon AFB into the "AFSOC Center of Excellence – West." Id. at 1-4. The 27 SOW conducts a range of training activities in the local military airspace. Other aircraft using the airspace include B-1B bombers from Dyess AFB; F-117A, T-38 and F-22 as well as Tornados from the German Air Force; Unmanned Aerial Systems (UAS or UAV); F-16; A-10, F-15, F/A-18, and B-52; C-130 variants including MC-130W, AC-130H and MC-130J; and various helicopters. Id. at 3-4. Large-force exercises conducted in the airspace can involve approximately 20 aircraft of various types. Id. at 3-9.

The General Plan confirms that the FAA approved a Military Fight Corridor "to permit transit of Remotely Piloted Vehicles (RPVs) from Cannon AFB to Melrose AFR. The General Plan explains that "[w]hile this now permits RPV operations between the two installations it imposes the requirement that trained observers or chase aircraft follow the RPV and are able to execute 'see and avoid' maneuvers." Id. at 4-60. The General Plan claims that this requirement "imposes a significant burden on the Air Force" and reports that the agency is "pursuing a relaxation of the need for observers or chase aircraft" in the RPV Airway. Id. at 4-60.

II. The Proposed Action

Just four years after the 27 SOW was activated, AFSOC is now proposing to conduct LATN training using "variants" of C-130 aircraft (including the MC-130J) and CV-22 Ospreys over vast swaths of private and public land in southern Colorado and northern New Mexico in perpetuity.[1] Currently, the 27 SOW uses existing MOAs and MTRs with altitude floors to 500

[1] The initial Proposed Action as described by AFSOC during the scoping process encompassed over 90,000 square miles of land. See, Figure 2-1, Draft EA at 2-12. The Proposed Action analyzed in the Draft EA encompasses 60,699 square miles of land because much of the land east of the Continental Divide in Colorado has apparently already been designated for low altitude military aviation training by the

feet or below and restricted areas as described in the AFSOC EIS. Draft EA at 5. Prior to any night mission outside of Special Use Airspace, 27 SOW regulations require the aircrew to conduct a day survey to identify waypoints and "ensure the safety of the low altitude segments." Id. at 2-22. Under the Proposed Action, the AFSOC would conduct "approximately" 688 training missions per year[2] in mountainous terrain, with each mission consisting of approximately five hours of flight time. Draft FONSI at 1. Thus, the Proposed Action contemplates a total of 3,440 hours of low altitude flying annually in the subject area. All missions would take place after dark and at least some would include simulated drops/retrievals of personnel and supplies and low altitude refueling. Id. at 2-2.

Of the 688 planned missions per year, 552 are estimated to be CV-22 flights and 136 are estimated to be C-130 flights. Id. at 4-2. During the scoping process, AFSOC indicated that aircraft would fly as low as 200' AGL in the LATA, which is also used extensively by civilian aircraft, and the Cannon AFB General Plan also declares that "[a]ircraft would fly as low as 200 feet" AGL. Exhibit 5 at 4-60; Exhibit 6. Now, according to the Draft EA, approximately 10% of each training mission would be flown between 300 and 500 feet Above Ground Level ("AGL") (68.8 missions or 244 hours), 40% between 500 and 999 feet AGL (275.2 missions or 1376 hours), and 50% between 1,000 and 3,000 feet AGL (344 missions or 1720 hours). Draft EA at 1. For reference purposes, the Washington Monument is 555' tall and the Eiffel Tower is 1,063' tall. If the Proposed Action is approved the public will have no ability to monitor the number of flights actually flown to ensure that the "approximate" number of flights stated is observed. Aircrews would not fly routes during daylight hours prior to commencing the night mission.

According to the Draft EA, any given geographic point in the LATA (outside of avoidance areas) could expect to be overflown within 1,000 feet as many as three times per month. Id. at 2. Although the Draft EA's environmental analysis assumes that only one aircraft would be involved in each mission, it is obvious that multiple aircraft would need to be involved in aerial refueling exercises. Moreover, in its description of the Proposed Action, the Draft EA notes that at night, AFSOC aircraft "typically fly at 200 nautical miles (nm) per hour, fly at low levels using NVGs, perform air refueling, and conduct formation operations." Id. at 2-2 (emphasis added). Does this mean the Proposed Action includes low altitude, nighttime formation operations involving multiple aircraft within the project area? The Draft EA utterly

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Colorado Air National Guard. See, Figure 2-4, Draft EA at 2-21.

[2] The Draft EA refers to an average of three training missions per day, which would work out to 1,095 missions per year, or about twice as many as analyzed by AFSOC. In addition, the September 2010 General Plan for Cannon AFB states that the LATN training "would consist of approximately 6 sorties (or training flights) per day, or approximately 1,476 annually, in the northern portion of New Mexico and the southern portion of Colorado." Exhibit 5 at 4-59. The uncertainty about the number of annual missions is a significant failing in the Draft EA and casts doubt on the validity of the AFSOC's impacts analysis.

fails to disclose or consider the potential impacts that could be caused by multi-aircraft missions.

III. Lands That Will Be Affected By The Proposed Action

The expansive area that AFSOC covets for low altitude warfare training is not limited and includes or is in close proximity to airspace over some of the most sacred Native American lands, generational farms and ranches, national grasslands, national parks, national monuments, national wilderness areas, national wildlife refuges, state wildlife areas, state trust lands, state parks, roadless areas, proposed wilderness areas, municipal and county open spaces, and biological conservation areas, including:

> Colorado: Comanche National Grasslands; Picket Wire Canyonlands; Pike National Forest, San Isabel National Forest, Great Sand Dunes National Park, Alamosa National Wildlife Refuge, Rio Grande B.L.M. Recreation Area, Zapata Blanc Sand Castle B.L.M. Recreation Area, Apishapa State Wildlife Area, Eleven Mile State Park, Spinney Mountain State Park, White River National Forest, Gunnison National Forest, Black Canyon of the Gunnison National Park, Colorado National Monument, San Juan National Forest, Rio Grande National Forest, Mesa Verde National Park, Monte Vista National Wildlife Refuge, Uncompahgre National Forest, Hovenweep National Monument, Four Corners National Monument, Chimney Rock Archeological Area, Navajo State Park, Weminuche National Wilderness Area, Grand Mesa National Forest, the Santa Fe National Trail; Florissant Fossil Beds National Monument; Canyons of the Ancients National Monument; Dominguez-Escalante National Conservation Area; McInnis Canyons National Conservation Area; Gunnison Gorge National Conservation Area and Wilderness; Adobe Badlands Wilderness Study Area; Yucca House National Monument; Old Spanish Trail National Historic Trail; Continental Divide National Scenic Trail; South San Juan, La Garita, Lizard Head, Mount Sneffels, West Elk, Powderhorn, Raggeds, Mt. Massive, Buffalo Peaks, Fossil Ridge, Collegiate Peaks, Uncompahgre/Big Blue Hunter-Frying Pan Wilderness Ares; Barr, Bear Creek, Calico, Crag Crest, Highline Loop, Lake Fork, Petroglyph Point, and West Lost Trail National Recreation Trails; Cochetopa Canyon, Dolores River, Gateway, Powderhorn Primitive Area, San Juan Triangle Special Use Management Areas.
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> New Mexico: Kiowa and Rita Blanca National Grasslands, Maxwell National Wildlife Refuge, Las Vegas National Wildlife Refuge, Carson

> National Forest, Santa Fe National Forest, Pecos Wilderness; San Pedro Parks Wilderness; Chama River Canyon Wilderness; Dome Wilderness; Bandelier National Monument, Chaco Culture National Historic Park, Aztec Ruins National Monument, De-Na-Zin Wilderness Area, Bisti Wilderness Area, Rio Arriba Wild and Scenic River, Capulin Volcano National Monument, Rio Grande National Wild and Scenic River; the Santa Fe National Historic Trail; Angel Peak Scenic Area; Ah-shi-sle-pah Wilderness Study Area; Wild River National Recreation Area; Wheeler Peak Wilderness Area; Latir Peak Wilderness Area; Cruces Basin Wilderness Area; Sablinoso Wilderness Area; Berg and Animas National Recreation Trail; Cabezon Peak Wilderness Study Area; Jemez National Recreation Area; Valle Caldera National Preserve; and Grulla National Wildlife Refuge.

The overflights in the AFSOC Draft EA would also occur over an area that encompasses many towns and cities, including but not limited to Durango, Crested Butte, Gunnison, Aspen, Cortez, Montrose, Ridgway, Telluride, Mancos and Ouray in Colorado, and Farmington, Las Vegas, Tucumcari, and Santa Rosa in New Mexico. The initial project area proposed by AFSOC also included the Colorado communities in and surrounding Alamosa, La Junta, Trinidad and Pueblo. The Draft EA identifies a separate LATN area established by the 302nd Airlift Wing stationed at Peterson AFB. See, Figure 2-3, Draft EA at 2-14. All or part of twenty-one Colorado counties are included within the project area – Archuleta, Chaffee, Conejos, Delta, Dolores, Fremont, Gunnison, Hinsdale, La Plata, Lake, Mesa, Mineral, Montezuma, Montrose, Ouray, Park, Pitkin, Rio Grande, Saguache, San Juan and San Miguel. An additional seventeen counties in New Mexico will be affected – Chaves, Colfax, Curry, De Baca, Guadalupe, Harding, Mora, Quay, Rio Arriba, Roosevelt, San Juan, San Miguel, Sandoval, Santa Fe, Taos, Torrance and Union. These counties include sparsely populated rural communities where residents enjoy a lifestyle that is characterized by a quiet landscape. Ranching, farming, recreation, and tourism activities constitute major sources of income in the region.

The vast majority of the communities that are affected by the proposal lack the resources to adequately research, reveal and address the information deliberately excluded from the AFSOC's grossly inadequate EA. On September 30, 2010, the Rio Arriba County Board of County Commissioners passed Resolution #2011-025 opposing the Proposed Action. Exhibit 7. Colorado State Representative Wes McKinley, a tireless champion for rural communities in Colorado, introduced House Bill 11-1066 opposing the Proposed Action before the Colorado General Assembly. Exhibit 8. The affected lands are home to old growth forest, threatened and endangered wildlife species, migratory bird corridors, native grasslands, valleys, and water bodies of great importance. Sovereign Native American tribes, Pueblos, traditional, and

generational lands lie within the path of the proposed overflights. The region under threat holds historic, archaeological and paleontological sites of outstanding universal value. The affected lands are used by residents and tourists for many recreational purposes, including bird watching, camping, hiking, solitude and the like, contributing significantly to the regional economy. All of the existing resources and land uses throughout 60,699 square miles of public and private lands are threatened by the Proposed Action.

IV. Regulation of Military Airspace Use in the United States

The Federal Aviation Administration (FAA) regulates both military and civilian airspace in the United States. Specific training areas were first assigned to the United States Air Force in the late 1950s. Today, most military flight training areas are designated as "special use airspace" through joint action taken by the FAA in coordination with the service that proposes to use the airspace pursuant to FAA Order 7400.2H (Procedures for Handling Airspace Matters). Exhibit 9. FAA Order 7400.8P defines and identifies regulatory and non-regulatory Special Use Airspace (SUA) in accordance with 14 C.F.R. Part 73. Exhibit 10. SUA areas are designed to alert users to areas of unusual flight hazards and separate those activities from other airspace users to enhance safety. Id. SUA areas include (1) Restricted Areas; (2) Military Operations Areas; (3) Military Training Routes; (4) Warning Areas; (5) Alert Areas; (6) National Security Areas; and (7) Controlled Firing Areas. Id.

Military Operations Areas (MOA) are large expanses of airspace designed to accommodate a wide variety of nonhazardous military flight training maneuvers. Id. MOAs are not created to prevent access by other aircraft, but rather to show civil aircraft pilots where nonhazardous military flight training may be taking place. Id. Activities conducted in MOAs include, but are not limited to, aerobatics, air combat tactics, and formation training. Id. Controlled Firing Area (CFAs) contain civilian and military activities that could be hazardous to non-participating aircraft, such as rocket testing, ordnance disposal, and small arms fire. Id. CFAs are differentiated from MOAs and restricted areas in that the hazardous activities are suspended to avoid a potential hazard to a non-participating aircraft. Id. Radar or a ground lookout is utilized to indicate when an aircraft might be approaching the area, and activities are then suspended. Id.

In Restricted Areas, aircraft flight is not wholly prohibited, but subject to restriction. Id. Restricted Areas are designated pursuant to rulemaking initiated under 14 C.F.R. Part 73, where restrictions are placed on all non-participating aircraft. Id. This airspace is used to contain military activities that are hazardous to a non-participating aircraft within the territorial airspace of the United States, such as live firing of weapons and/or aircraft testing. Id. Warning Areas are designed to contain activity that may be hazardous to a non-participating aircraft. Id.

Warning Areas may be located over domestic waters, international waters, or both. Id. Alert Areas are designated to inform pilots of a high level of training activity or any unusual activity where prior knowledge would significantly enhance air safety, such as very busy airports or areas of high-density oil-rig helicopter traffic. Id. In National Security Areas (NSA), there is a requirement for increased security and safety of ground facilities. When it is necessary to provide a greater level of security and safety, flight in NSAs may be temporarily prohibited by regulation under the provisions of Title 14 Code of Federal Regulations, Part 99.7, *Special Security Instructions*. Id.

Military Training Routes (MTR) are narrow corridors that serve as flight paths to a particular destination. Id. A standard MTR usually ranges from 500 feet to 1,500 feet above ground level. Id. Aircraft are allowed to fly at speeds in excess of 250 knots. Id. MTRs are designed to provide military pilots with training routes to practice navigational skills over a variety of terrain types on the way to MOAs, air-to-ground gunnery ranges, and other destinations. Id. MTRs are further subdivided into Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) MTRs. Id. VFR flight is restricted to altitudes below 18,000 feet MSL when weather conditions meet minimum requirements – generally three miles of visibility with aircraft being able to remain clear of clouds by at least 500 feet. Id. IFRs are used by the military for the purpose of conducting low altitude navigation and tactical training in both IFR and VFR weather conditions at airspeeds in excess of 250 KIAS [Knots Indicated Air Speed] below 10,000 feet MSL [Mean Sea Level]. Id. VFRs are used by the military for the purpose of conducting low altitude navigation and tactical training under VFR at airspeeds in excess of 250 KIAS below 10,000 feet MSL. Id.

V. Low Altitude Training Areas

The Air Force has also has adopted regulations governing military use of airspace. Air Force Instruction (AFI) 13-201 provides that "[m]ilitary users should acquire only that airspace required for mission accomplishment and return airspace to the National Airspace System (NAS) or host nation in a timely manner when not in use or when no longer required." Exhibit 11. Air Force Instruction 13-201 defines SUA in the same manner as FAA regulations. However, section 2.2 of AFI 13-201 also identifies a category of airspace uses designated as Airspace for Special Use (ASU), which includes both aerial refueling tracks and anchors and low altitude tactical navigation training areas. Id. at 16. According to AFI 13-201, such designations are described in "either FAAO 7610.4 or in military regulations and documents." Id. However, the current version of FAAO 7610.4 -- FAAO 7610.4P, which was issued on August 25, 2011 and governs "Special Military Operations" -- is considered classified and not available to the public.[3]

[3] Pursuant to instructions on the FAA website, the undersigned e-mailed Mr. Steve Culbertson to request a

Exhibit 12. The most recent version of FAAO 7610.4 that Commenters were able to acquire is FAAO 7610.4K, which became effective on August 5, 2004. Exhibit 14. Although the acronym LATN is defined in FAAO 7610.4, the term is not used anywhere else within the document. Therefore it is unclear what procedural or substantive requirements apply to LATN areas, and as a result the public does not have a true opportunity to understand the potential environmental impacts of the Proposed Action, and the purposes of NEPA are frustrated. Perhaps FAAO 7610.4P contains more detailed information about LATN areas, but this document is kept secret by the FAA and cannot meet the public disclosure requirements of NEPA.

AFI 13-201 does briefly address some characteristics of LATN areas from the Air Force perspective in Section 2.2.3. AFI 13-201 indicates that LATN areas are "[u]sually large geographic areas established for random VFR, low altitude navigation training to preclude flying over the same point more than once per day." Exhibit 11 at 17-18. In a LATN area, compliance with FARs is mandatory, and aircraft may not exceed an airspeed of 250 Knots Indicated Airspeed (KIAS). Id. AFI 13-201 notes that "MAJCOMs will determine establishment criteria" for LATN areas, but it appears that such criteria have not been made known to the public. Id. Most disturbingly, AFI 13-201 then goes on to explain that "[t]here is no required coordination with the FAA" with respect to LATN areas, which "are not published on aeronautical charts." Id.

VI. Aerial Refueling

Refueling operations are also the subject of regulation in AFI 13-201 and FAAO 7610.4. Chapter 10 of FAAO 7610.4K – a version that was issued on February 19, 2004 and cancelled on March 8, 2007 - is devoted to Aerial Refueling and contains extensive requirements for such activities. Section 10-1-3 of FAAO 7610.4K provides that "[t]he U.S. military services have agreed, to the maximum extent possible, aerial refueling will be conducting on existing published tracks/anchor tracks and to conduct aerial refueling operations in accordance with the provisions of this chapter which provides standard guidance for all user commands involved in refueling operations." Exhibit 14 at 10-1-1. The rest of FAAO 7610.4K Chapter 10 contains detailed requirements for aerial refueling operations. Id. Of course, the public cannot know what these regulations state today because the current version of FAAO 7610.4 is classified.

As mentioned earlier, the Air Force considers Aerial Refueling Airspace to be Airspace for Special Use, or ASU, and not Special Use Airspace, or SUA. Section 2.2.1 of AFI 13-201

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copy of FAA Orders JO 7610.4P, along with FAA Order JO 7110.67 ("Special Aircraft Operations by Federal, State Law Enforcement, Military Organizations and Special Activities"). Exhibit 13. The FAA responded by noting that due "to the classification of the orders "For Official Use Only" I am unable to provide a copy of either order." Id.

defines Aerial Refueling Airspace (AR Airspace) as "[a]irspace developed according to the provisions of FAAO 7610.4 to conduct air refueling." Exhibit 11 at 46. AFI 13-201 goes on to state that:

> Permanent air refueling airspace is designated as either a track or an anchor or established via a letter of agreement (LOA) with the appropriate ATC facility responsible for the airspace. After coordination with ATC, refueling routes or anchors are processed through the appropriate AFREP for publication in FLIP. Temporary or special AR airspace may also be established by coordination/agreement with the ATC facility having purview over the airspace.

Id. at 16. The Interagency Airspace Coordination Guide states that AR "tracks" are between 2 and 400 miles long and that "anchors" are 20-50 miles long, generally holding a pattern associated with an MOA or RA. Exhibit 15. The Guide also notes that there are special "anytime, anywhere" routes established for low altitude military refueling exercises below 3,000 feet AGL, and that some VFR refueling routes are designed to be flown at or below 1,500 feet AGL. Id. According to the Guide, such a track is "normally 50-100 NM long and normally four NM in width either side of a centerline unless otherwise specified." Id. AF 13-201 describes some technical requirements for aerial refueling, but Section 2.1.2.3 provides that:

> The above procedures do not apply when aircraft are operating on an altitude reservation (ALTRV) or when clearance has been granted for aircraft to operate as an en route cell. In these cases, the altitude block should provide airspace necessary to accommodate the type of formations being used: standard or nonstandard with at least 1000 feet between the highest receiver and lowest tanker during rendezvous and at least 1000 feet below the air refueling formation once the rendezvous is completed.

Exhibit 11 at 17. Note 2 to section AFI 13-201 § 2.2.1.2.3 also provides that:

> Due to C-130 performance limitations, low altitude air refueling (LAAR) restrictions do not apply. Units providing refueling support to C-130 receivers are authorized to refuel at the receiver's optimum refueling altitude, but not lower than 5000 feet Above Ground Level (AGL). For KC-135 units, aircraft inspected and meeting LAAR criteria should be used, if available.

Id. The undersigned could find no reference to any LAAR criteria in any other official government document. Once again, it appears that the public has been deprived of any opportunity to understand what low altitude aerial refueling operations are permitted and how decisions with respect to LAAR are made.

VII. The Draft EA and Impacts Analysis Are Flawed Because Insufficient Information Regarding the Proposed Action and Approval Process Has Been Disclosed

AFI 13-201 is mentioned just twice in the Draft EA – once listed in Section 6 (References) and once in Section 2.3.6: "The basic premise of a low altitude training area (as defined in Air Force Instruction [AFI] 13-201) precludes flying over the same point more than once per day." Draft EA at 2-7. FAAO 7610.4 is also mentioned twice in the Draft EA – once in section 3.1.2.1, describing the establishment of MOAs, and once in section 3.1.2.3, describing the establishment of MTRs. Id. at 3-2 & 3-5. There is no mention in the Draft EA of any FAA authority over LATN areas, and indeed there seems to be none. This is cause for serious concern and makes it much more likely that the project will cause significant impacts to the quality of the human environment. Although we know very little about the establishment of LATN areas, the available documentation appears to indicate at a minimum that:

(1) LATN Areas are not subject to any FAA regulation or coordination;

(2) The current version of FAAO 7610.4P, which may contain regulations applicable to LATN areas, is classified and not available to the public;

(3) Air Force regulations allow the agency to create its own criteria for judging LATN area proposals without making this criteria known to the public; and

(4) LATN Areas are not published on any aeronautical charts.

Will the area that the Draft EA indicates is already designated LATN by the 302nd Airlift Wing be used by these same aircraft? Will the areas where the existing LATN and the LATA that is the subject of the AFSOC's inadequate EA be doubly affected by being caught in two low altitude training areas they can know nothing about?

In addition, although the Draft EA states that MC-130J and CV-22 aircraft based at Cannon AFB would be the "primary" users of the proposed low altitude training area, the term "C-130" was used as a general term for the MC-130J and all variations of the 27 SOW C-130 aircraft. Id. at 2-2. In fact, the Cannon AFB 2010 General Plan discloses that many variations of

C-130s will be stationed at Cannon AFB, along with the Predator Unmanned Aerial Vehicle (UAV) and other unmanned systems including the MQ-9 Reaper. Exhibit 5 at 3-5. According to the General Plan, the following variants of the C-130 aircraft will be assigned to Cannon AFB and fly over pristine public and private lands in diverse bioregions including watersheds, farm and ranch lands, outstanding and undisturbed wildlife habitats, ancient and historic archaeological sites, science study areas, hot springs, rivers, and world-class adventure lands providing jobs and quality of life throughout southern Colorado and northern New Mexico communities, giving travelers from around the world extraordinary outdoor experiences such as skiing, hiking, riding (bikes and horses), fishing, hunting, and wildlife watching in treasured grasslands, mountains and valleys found nowhere else on Earth:

> AC-130 Gunships: The four-engine turboprop AC-130H gunship's primary mission is close air support, interdiction, and force protection. Missions in close air support are troops in contact, convoy escort, and urban operations. The existing AC-130H Spectre model will be replaced by the AC-130J, currently under production.
>
> MC-130E (Combat Talon I) & MC-130H Combat Talon II ($76 million per unit, 2008 dollars). This aircraft provides infiltration, exfiltration, and resupply of SOF and equipment in hostile or denied territory. Secondary missions include psychological operations and helicopter air refueling.
>
> MC-130J: The MC-130J includes the MC-130J Combat Shadow II and the MC-130J Super Hercules, a significant upgrade to the C-130 Hercules. AFSOC mentions the MC-130J only two times in the Draft EA. The impacts analysis is based on characteristics of the C-130 instead of the individual C-130 variants.
>
> MC-130P ($115 million per unit) and MC-130W ($60 million per unit): The Combat Shadow (P model) and Combat Spear (W model) fly low visibility, single or multi-ship missions in politically sensitive or hostile territory to provide air refueling for special operations aircraft. The MC-130P/Ws primarily fly during darkness to reduce the probability of being visually acquired and intercepted by airborne threats. Secondary mission capabilities may include airdrop of leaflets, small special operations teams, bundles and combat rubber raiding craft as well as night vision goggle use, takeoff and landing procedures, and in-flight refueling as a receiver. The Combat Shadow will be replaced by the MC-130J model.

> C-130E: The C-130E is similar to other C-130 variants and is used for activities such as material or personnel transport or for some training that does not require a higher cost mission aircraft. C-130E flights are used in training and/or transport operations.

Id. at 3-7 to 3-9. Other aircraft based at Cannon AFB include C-47 Type Aircraft and UH-1 Helicopters, fixed- and rotary-wing aircraft that are common mobility platforms used by partner nations. Id. at 3-8. The aircraft currently used are a variant of the C-47 called the BT-67. Id. at 3-8. Similar to the BT-67, UH-1 Huey helicopters are common airlift and gunship platforms in countries where AFSOC personnel operate. Id. Two UH-1 Hueys were proposed for beddown at Cannon AFB. Id.

As mentioned earlier, Cannon AFB is also home to at least two UASs - the MQ-1 Predator ($4.5 million per unit, 2006 dollars) and the MQ-9 Reaper (per unit cost: $53.5 million). The Reaper is a remotely-piloted, armed, unmanned aircraft operated by, among others, AFSOC's 33rd Special Operations Squadron. The Reaper's primary role is close air support, intelligence and surveillance operations. It can be armed with AGM-114 Hellfire missiles (per unit cost: $68,000), GBU-12 Paveway II laser-guided bombs (per unit cost: $19,000), and GBU-38 Joint Direct Attack Munitions (per unit cost: $70,000+). As a single-engine, medium-altitude, long-endurance, remotely piloted aircraft, the Predator's primary mission is interdiction and conducting armed reconnaissance against critical, perishable targets. When the Predator is not actively pursuing its primary mission, it acts as the Joint Forces Air Component Commander owned theater asset for reconnaissance, surveillance, and target acquisition in support of the Joint Forces Commander.

The Draft EA fails to analyze potential impacts to human health and the environment associated with each of the specific aircraft that will be flying in the proposed LATA in New Mexico and Colorado. Therefore, the impacts analysis is fatally flawed and the Draft EA violates NEPA.

The existing regulations also raise serious questions about the nighttime aerial refueling exercises contemplated as part of the Proposed Action. This process involves inherent risks of fuels spills, air pollution, noise, lighting impacts, and potential aircraft crashes. The Draft EA states that airborne fuel will be "offloaded by C-130 aircraft to a helicopter or tilt rotor aircraft," presumably the CV-22 Osprey. Draft EA at 1-1. Will any other aircraft be involved in refueling operations? Although this information is not disclosed in the Draft EA, there have been reports that the MC-130P Combat Shadow, the HC-130 Super Hercules and the MC-130 Super Hercules (all of which are stationed at Cannon AFB) are capable of engaging aerial refueling with the CV-22 Osprey. Is this what is contemplated as part of the Proposed Action? Will aerial refueling be

"dry" – meaning that no actual fuel is exchanged during the exercise? "Wet" refueling operations would pose even greater threat of harm to the environment.

Where are existing refueling routes in New Mexico and Colorado? The Draft EA fails to address any of these questions. At what altitudes will refueling occur? Presumably the AFSOC intends to conduct refueling exercises as low as 300 feet AGL because this is part of a LATN proposal. However, if C-130s are involved in refueling, the pertinent FAA regulations state that refueling cannot occur below 5,000 feet AGL. Does this restriction apply to the MC-130J Combat Shadow? If not, when was the regulation changed? Where will new refueling exercises happen? The Draft EA states that "[p]roposed C-130/CV-22 Aerial Refueling (AR) tracks would be established in conjunction with the Federal Aviation Administration (FAA) concerning appropriate low altitude route segments outside the existing local training area." Id. at 1-1. Does this mean that Aerial Refueling will not be permitted to occur at random locations within the 60 million acre fly zone (outside avoidance areas)? Or does the Air Force intend to designate the entire LATN area as an AR track or anchor? Why are the specific tracks or anchors not defined as part of the Draft EA so that the public will know where they are located?

How often will refueling be a part of the 688 training missions per year authorized as part of the Proposed Action? Will the requirements in Chapter 10 of 7610.4 be followed? Or are LATN refueling exercises considered to be operations conducted on an altitude reservation (ALTRV) that are exempt from some of these requirements? Indeed, what are the current requirements contained in Chapter 10 of FAAO 7610.4P and why is this classified information? None of this information is disclosed or discussed in the Draft EA.

VIII. The Proposed Action Will Violate FAA Regulations Regarding Minimum Safe Altitudes

FAA regulations prescribe minimum safe altitudes for flight in the United States. 14 C.F.R. § 91.119. Exhibit 16. In pertinent part, the regulation provides that "[e]xcept when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

> (a) *Anywhere.* An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.
>
> (b) *Over congested areas.* Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
> (c) *Over other than congested areas.* An altitude of 500 feet above the surface,

> except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

Id. The regulation also provides that a helicopter may be operated at less than the minimums in sections (b) and (c), provided each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA. Id. The Draft EA states repeatedly that under the No Action alternative, AFSOC would continue to abide by the minimum safe altitudes established in 14 C.F.R. § 91.119. See, e.g., Draft EA at 2-22. Under the Proposed Action, however, AFSOC would violate these minimum safe altitudes.[4] If the AFSOC wishes to undertake low altitude training not in violation of the FAA regulations, it should seek to amend the regulations before doing so.

Ten years ago, the 10th Circuit Court of Appeals considered a case involving military overflights in Colorado. *Custer County Action Ass'n v. Garvey*, 256 F.3d 1024 (10th Cir. 2001). In *Garvey*, the plaintiffs challenged a decision by the FAA approving the Colorado Airspace Initiative (CAI), which involved certain changes to MOAs and MTRs used by the 140th Tactical Fighter Wing of the Colorado Air National Guard stationed at Buckley Air Force Base near Denver. The EIS for the CAI stated that low altitude airspace would be "charted to 300 feet above ground level, but not flown lower than 500 feet above ground level except in national emergencies or special training requirements." Id. The plaintiffs maintained that this statement indicated that (1) the FAA violated its own regulations by charting airspace below the minimum safe altitudes; and (2) the FAA unlawfully delegated its power to define minimum safe altitudes to the military.

The 10th Circuit rejected these claims, noting that the FAA regulation does not specify a minimum safe altitude over sparsely populated areas, so long as the aircraft is no "closer than 500 feet to any person, vessel, vehicle, or structure." Id. The 10th Circuit also held that the fact that FAA Order 7610.4J permits the military to establish appropriate altitudes under very narrow circumstances did not constitute "the wholesale abrogation of authority" claimed by the plaintiffs. Id. The Court relied upon provisions of FAA Order 7610.4J requiring military pilots to adhere to the requirements of 14 C.F.R. § 91.119 when flying IFR or VFR routes. The AFSOC Proposed Action differs from the fact situation presented in *Garvey* for many reasons, including:

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[4] 14 C.F.R. § 91.119 is only mentioned in the Draft EA in connection with the No Action Alternative and Concept Alternative E, which involved the use of new and existing MOAs and MTRs and was dismissed from consideration by AFSOC.

(1) The CAI affected only the limited, defined airspace in designated MTRs and MOAs, instead of the 60,699 square miles that will be affected by the Proposed Action here;

(2) The CAI only provided for "charting" of airspace down to 300 feet above ground level. The CAI only provided for flights below 500 feet AGL in cases of national emergency or special training requirements. By contrast, the Proposed Action is intended to authorize flights as low as 200 feet to 300 feet AGL on a regular basis;

(3) The CAI actually had the effect of raising the minimum flight altitudes rather than lowering them. The minimum flying altitude was raised from 100 feet to 300 feet AGL for the Kit Carson MOA. In addition, the minimum flight altitude for all MTRs was raised to either 300 feet or 500 feet AGL;

(4) The Colorado National Guard prepared an EIS for the CAI, rather than merely an EA;

(5) The FAA actually signed off on the CAI by preparing its own EIS and issuing a ROD. Here, AFSOC contends that no coordination with the FAA is necessary; and

(6) The Colorado Air National Guard indicated that minimum safe altitudes identified in 14 C.F.R. § 91.119 would be observed.

In this case, the Proposed Action will certainly lead to violations of 14 C.F.R. § 91.119. AFSOC does not pretend that overflights will comply with 14 C.F.R. § 91.119. Even though the stated intent of the Proposed Action is to avoid population centers, and limit overflights to "sparsely populated areas," there are many people living and recreating in sparsely populated areas in New Mexico and Colorado. Indeed, there are many more people, vehicles and structures in the mountains of southern Colorado and northern New Mexico than there were ten years ago when the *Garvey* decision was rendered. Moreover, the Proposed Action contemplates that pilots will not have an opportunity to fly the area during the day to plan the nighttime LATN flights. As a result, there is no way that they can know where structures, vehicles or persons may be located before they come upon them at 250 KIAS. MTRs are well defined routes that are routinely flown by Air Force pilots, but here the flight patterns are intended to be random and irregular. When you consider that the Proposed Action seeks to authorize at least 3,440 hours of

low altitude flying per year with varying routes, there is little doubt that some overflights will come within 500 feet of a person, vehicle or structure. In addition, there is simply no mechanism for any monitoring or enforcement of the minimum safe altitude regulation. Therefore, the Proposed Action, and the Draft EA and FONSI, are arbitrary and capricious and violate the FAA regulation codified at 14 C.F.R. § 91.119.

IX. The National Environmental Policy Act

NEPA was enacted by Congress to ensure that federal agencies thoroughly evaluate potential environmental impacts of and reasonable alternatives to proposed actions before making a commitment of federal resources. The analysis of environmental effects must show a good-faith objectivity on the part of the agency. *Metcalf v. Daley,* 214 F.3d 1135, 1142 (9th Cir. 2000) ("the comprehensive 'hard look' mandated by Congress . . . must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made."). The process followed by AFSOC here suggests that preparation of the Draft EA was undertaken to justify a decision already made, in violation of NEPA.

Pursuant to NEPA, all federal agencies are required to undertake thorough public review of the environmental consequences of all "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). Congress intended that NEPA review would help "prevent or eliminate damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action." *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 & n.14 (1989) (citations and quotations omitted); *see also Robertson v. Methow Valley Citizen's Council*, 490 U.S. 332, 349 (1989). NEPA ensures that federal agencies elevate the consideration of the environmental effects of their proposed actions to the same level as other, more traditional, factors.

Preparation of an EIS serves two primary purposes: (1) "to inject environmental considerations into the federal agency's decision making process"; and (2) "to inform the public that the agency has considered environmental concerns in its decision making process." *Weinberger v. Catholic Action of Hawaii,* 454 U.S. 139, 143 (1981); *see also Sierra Club v. Hodel,* 848 F.2d 1068, 1088 (10th Cir. 1988). An EIS also enables critical evaluation of an agency's actions by those outside the agency. *Catron County Bd. Of Comm'rs v. U.S. Fish & Wildlife Serv.,* 75 F.3d 1429, 1434 (10th Cir. 1996); *Envtl. Defense Fund, Inc. v. Froehlke,* 473 F.2d 346, 351 (8th Cir. 1972). The EIS thus "helps insure the integrity of the process of decision," providing a basis for comparing the environmental problems raised by the proposed project with those in the alternatives. *Silva v. Lynn,* 482 F.2d 1282, 1285 (1st Cir. 1973). Federal agencies must comply with NEPA to the fullest extent possible. 42 U.S.C. § 4332.

NEPA requires an EIS to include an analysis of "the environmental impact of the proposed action," 42 U.S.C. § 4332(2)(C)(i), including ecological, aesthetic, historical, cultural, economic, social, and health impacts, whether direct, indirect, or cumulative." 40 C.F.R. § 1508.8. Council on Environmental Quality (CEQ) regulations implementing NEPA state that information included in NEPA documents "must be of high quality. Accurate scientific analysis ... [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). In addition:

> Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analysis in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.

40 C.F.R. § 1502.24. Where an agency has incomplete or no information on potential impacts, it must develop the information as part of the NEPA process. 40 C.F.R. § 1502.22. Air Force regulations implementing NEPA are codified at 32 C.F.R. Part 989 and AFI 32-7061 provides additional detail regarding the required Environmental Impact Analysis Process. Exhibit 17.

X. AFSOC improperly limited its consideration of alternatives by narrowly defining the purpose and need for the Proposed Action in violation of NEPA

While an agency has the discretion to define the purpose and need of a project, it may not "define its objectives in unreasonably narrow terms." *City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997). AFSOC improperly narrowed the purpose and need of the proposed project in order to exclude other reasonable alternatives from consideration. The military has already appropriated most of the airspace in New Mexico and Colorado. Figure 3-1 in the Draft EA clearly demonstrates that there are numerous different types of military airspace over and in close proximity to Cannon AFB, including three Restricted Areas, which can be used for hazardous operations such as firing weapons, fourteen Military Operating Areas, an Air Refueling Route, and an extensive network of Military Training Routes, which are established for both VFR and/or IFR flights. Draft EA at 3-3. The MOAs controlled by Cannon AFB alone cover a total area of 15,590 square miles, or 9,977,600 acres of land, much of it mountainous. Although the highest Colorado peaks are roughly 15% higher than New Mexico's highest peaks, for the most part the terrain in the two states is very similar.

There are three other military bases in New Mexico: Holloman Air Force Base, Kirtland Air Force Base, and the White Sands Missile Range. The 49th Wing at nearby Holloman AFB near Alamogordo manages and has primary scheduling responsibility for the three Beak and three

Talon MOAs which are all very close to Cannon AFB and encompass millions of additional acres. Draft EA at 3-2. Holloman AFB is a 60,000 acre military base located between the Sacramento and San Andreas mountain ranges in New Mexico. The base is also home to the Air Combat Command. Manned 49th Wing aircraft include the F-22 Raptor and the T-38 Talon. Holloman AFB also hosts German Air Force training involving 25 Luftwaffe Tornado aircraft. Several Unmanned Aerial Systems (UAS) are also deployed at Holloman AFB, including the MQ-1 Predator, the MQ-9 Reaper and the QF-4 Phantom II Full Scale Aerial Target drone.

On April 30, 2009, the Air Force issued a FONSI that authorized Holloman AFB to conduct 2,880 sorties per year involving 28 MQ-1s and 10 MQ-9s alone, representing a 7% overall increase in the use of its airspace. Exhibit 18. Of the 2,880 planned sorties, the FONSI notes that 480 would occur at night. Id. at 9-11. The Draft Holloman AFB EA notes that the Air Force "has access to a multitude of restricted areas within White Sands Missile Range (WSMR) and Fort Bliss' McGregor Range airspace to allow UAS training." Id. at 15. The Draft EA notes that "Holloman AFB has access to a generous amount of DOD managed airspace to conduct UAS training activities and provides excellent airspace and ranges." Id. at 16. The Draft EA includes a map showing all of the available military airspace located in the vicinity of Holloman AFB, including areas used by Cannon AFB. Id. at 17.

Kirtland AFB, a 51,000 acre military base located near Albuquerque, is home to the Air Force Materiel Command's Nuclear Weapons Center, which is composed of the 377th Air Base Wing and the 498th Armament Systems Wing. Kirtland AFB is also home to the 58th Special Operations Wing (58 SOW), a unit that provides formal aircraft training to the AFSOC special operations forces (SOF). The 58 SOW operates the MC-130H Combat Talon II, MC-130P Combat Shadow, HC-130 King, UH-1N Huey, HH-60G Pave Hawk and CV-22 Osprey aircraft. The 150th Fighter Wing of the New Mexico Air National Guard is also home-based at Kirtland, operating the F-16 Fighting Falcon.

Earlier this year, on June 2, 2011, the Air Force issued a FONSI authorizing the conversion of existing HC-130N tanker and transport aircraft and the AFSOC MC-130P SOF tanker aircraft to the new Hercules HC/MC-130J tanker aircraft. Exhibit 19. According to the Kirtland AFB EA, the proposed action would increase the use of air military airspace by 578 annual sorties and 2,485 airspace hours. Id. at 16. Figure 3-6 in the Kirtland AFB EA depicts wide-ranging restricted areas, helicopter LATN areas, and MC-130P/H MTRs extending from southeastern New Mexico all the way into southeastern Colorado, terminating near the Army's Pinon Canyon Maneuver Site (PCMS). Id. at 60. The Cannon AFB LATA EA reports that Kirtland AFB maintains four LATAs that allow training from 50 feet to 200 feet AGL – the Jemez, Rio Puerco, Manzano, and Red Rio LATN areas. Draft EA at 2-5. These LATAs are primarily used by helicopters and CV-22s flying en route to one of 39 different helicopter landing

zones located within the training area. Id. All told, the Draft EA discloses that some 2,553 low altitude missions per year occur in these existing LATAs administered by Kirtland AFB. Id.

White Sands Missile Range (WSMR) is an Army-administered rocket range encompassing almost 3,200 square miles in parts of five counties in southern New Mexico. WSMR is the largest military installation in the United States and includes Oscura Range and the WSMR Otero Mesa bombing range. WSMR and the 600,000-acre McGregor Range Complex, at Fort Bliss to the south, form a contiguous swath of territory – roughly 2,648,000 acres – that is available for military aviation training. Fort Bliss is the second largest military installation in the United States, encompassing a total of 1,700 square miles of land. Fort Bliss provides the largest contiguous tract of virtually unrestricted airspace in the continental United States.

It is wrong for the military to claim that there is need for new low altitude training that cannot be met using existing military airspace. Just four years ago, when the DOD made the decision to station AFSOC assets at Cannon AFB, the Air Force issued a Record of Decision based on the conclusion that existing airspace associated with Cannon AFB and Melrose AFR was sufficient to meet expanded mission requirements, with the "types of terrain, aircraft, operating conditions, and targets currently and projected to be part of AFSOC operations." Exhibit 2 at ES-1. At that time AFSOC also based its decision in part on the fact that the airspace at Cannon AFB is more representative of conditions overseas than Florida. Nothing has changed since that time. The No Action alternative studied in the Draft Cannon AFB LATA EA is still sufficient to meet AFSOC needs – 27 SOW can simply continue "training using existing Military Training Areas (MTRs) and Military Operations Areas (MOAs) with altitude floors to 500 ft or below and restricted areas," and also "continue to conduct low altitude training in accordance with AFI 11-202V1, AFI 11-2MC-130V3, and FAA VFR (14 CFR Part 91, 91.119)." Draft EA at 4-7. The Draft EA even acknowledges that "[m]ission planning would make sure that flights were dispersed so that the same location was not overflown more than once per night. Id.

XI. AFSOC failed to analyze a range of reasonable alternatives in the Draft EA as required by NEPA

NEPA requires federal agencies to consider alternatives to their proposed actions. 42 U.S.C. § 102(2)(c)(iii). The CEQ has described the alternatives requirements as the "heart" of the environmental impact statement. 40 C.F.R. § 1502.14. According to the CEQ, federal agencies must "rigorously explore and objectively evaluate all reasonable alternatives" and explain why any alternatives were eliminated. 40 C.F.R. § 1502.14(a). The purpose of the alternatives requirement is "to ensure that each agency decision maker has before him and takes

into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit analysis. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made." *Calvert Cliffs Coordinating Comm'n, Inc. v. Atomic Energy Comm'n,* 449 F.2d 1109, 1114 (D.C. Cir. 1971).

The Draft EA examines only two alternatives in detail: the proposed action and the no action alternative (which the military is required to consider under NEPA). AFSOC summarily eliminated seven other alternatives from detailed analysis, including the use of existing LATN areas, the use of existing MTRs and MOAs, the creation of new MOAs and MTRs, and the use of flight simulators. Alternatives A and B simply represent different configurations for a new LATA. Contrary to the Draft EA's claim, existing LATAs in New Mexico are adequately sized for realistic training. The CV-22 Ospreys stationed at Kirtland AFB are already using these lands for LATN training. Exhibit 21. The DOD recommended closure of Cannon AFB and that recommendation should have been followed.

The Draft EA fails to identify any specific training activities that cannot be accomplished in existing military airspace. The tens of millions of acres of military airspace in the United States include varied terrain that would be sufficient for training. Cannon AFB was recommended for closure by DOD. The cost to taxpayers for "finding a new [political] mission" is not sufficient under NEPA. The Draft EA dismisses the idea of using existing LATN areas because the "[d]istance to other existing LATNs would increase the percentage of commute time during training missions." Draft EA at 2-6. The Draft EA complains that because "extensive low altitude after dark training is not currently conducted in existing LATN areas, and thus "[a]ircrews would need to map obstacles for 27 SOW night training." Id. at 2-15. The fact that commute times would be increased or mapping of avoidance areas required is not sufficient justification for eliminating an alternative from consideration. In light of current economic conditions, AFSOC should be making every effort to make the most efficient use of military resources that are already in place rather than trying to establish new areas.

AFSOC should have studied a broad range of alternatives before pre-deciding to establish the new LATA, including alternatives that examine the impacts related to a reduction in military airspace and new higher flight levels. A reduction in airspace could be combined with more efficient use of other ranges/other airspace and increased use of flight/war game simulators to economize and reduce harmful global warming climate change gas emissions and contrails. AFSOC should have considered shifting uses out of pristine wild lands, wildlife habitats and recreational areas while intensifying uses in already greatly altered or disturbed landscapes. AFSOC should be considering alternatives for lessening the military footprint and associated disturbances in Colorado and New Mexico. AFSOC should have also considered an alternative

that involves an established end-date for the proposed LATN experiment, along with a requirement to study actual impacts caused by the training accompanied by full public disclosure of the results of such study.

XII. A Finding of No Significant Impact Would Be Arbitrary and Capricious Because the Proposed Action Will Cause Significant Adverse Impacts to Human Health and the Environment

The Draft EA forms the basis for determining whether this project will be considered "major" in that it could "significantly affect the quality of the human environment." 42 U.S.C. § 4332(2)(C). If so, AFSOC is obliged by law to prepare a "detailed statement on the environmental impact of the proposed action," or an EIS. *Id.* CEQ regulations define "effects" broadly to include "ecological, aesthetic, historic, cultural, economic, social and health effects." 40 C.F.R. § 1508.8. NEPA requires consideration of direct, indirect and cumulative impacts. *See,* 40 C.F.R. §1508.25(c). The Draft FONSI arbitrarily and capriciously concludes that no significant impacts to the quality of the human environment will be caused by the Proposed Action.

CEQ regulations provide that the term "major" in NEPA simply reinforces the phrase "significantly affecting" and does not have any independent meaning of its own. 40 C.F.R. § 1508.18. The District Court of Colorado has adopted an interpretation of "major" that is consistent with the CEQ regulations, holding that a "federal action is 'major' where it has a significant impact upon the environment." *City & County of Denver v. Bergland*, 517 F. Supp. 15 (D. Colo. 1981), *aff'd & rev'd in part on other grounds*, 695 F.2d 465 (10th Cir. 1982). In addition to direct impacts, the significance determination must also take into account indirect and past, present and reasonably foreseeable future cumulative impacts. 40 C.F.R. § 1508.7.

Although the significance determination is made on a case-by-case basis, the magnitude and geographic scope of an action are often indicators of the potential for impacts to the quality of the human environment. The proposed action here clearly qualifies as a "major" federal action. The size of the EA itself—224 pages--is an indication that an EIS should be prepared. According to CEQ guidance:

> Agencies should avoid preparing lengthy EAs except in unusual circumstances, where a proposal is so complex that a concise document cannot meet the goals of Section 1508.9 and where it is extremely difficult to determine whether the proposal could have significant environmental effects. In most cases, however, a lengthy EA indicates that an EIS is needed.

CEQ, "Memorandum: Questions and Answers About the NEPA Regulations," 46 Fed. Reg. 18026 (Mar. 23, 1981), *as amended*, 51 Fed. Reg. 15618 (April 25, 1986).

"Significantly" is defined in regulations implementing NEPA to encompass elements of both "context" and "intensity." 40 C.F.R. § 1508.27. The regulations require that an action be analyzed in several contexts, considering the geographic setting (such as the affected region and the locality) and temporal setting (including both short- and long-term effects). 40 C.F.R. § 1508.27(a). The setting for this project encompasses some 60,699 square miles of private and public land, including homes, ranch lands, historic structures, parks, forests, wilderness areas. The Proposed Action would have far-reaching implications for hundreds of thousands of people, if not millions, for generations to come.

Intensity generally refers to the severity of the impact. CEQ regulations set forth eleven aspects of intensity that should be considered by an agency in determining whether a project "significantly affects" the human environment. 40 C.F.R. § 1508.27(b). One factor to be considered in determining significance is "the degree to which the proposed action affects public health or safety." 40 C.F.R. § 1508.27(b)(2). The CEQ regulations also require consideration of "proximity to historic or cultural resources and park lands" in determining significance. 40 C.F.R. § 1508.27(b)(3). In addition, the regulations mandate consideration of "the degree to which the action may adversely affect sites and structures listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources." 40 C.F.R. § 1508.27(b)(8).

An adverse effect under the National Historic Preservation Act exists "when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association." 36 C.F.R. 800.5. "Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative." *Id.* Adverse effects can include changes to the character of the property's use and the introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features. *Id.* If adverse effects are found, then the agency must develop measures to mitigate those effects. CEQ regulations instruct that if a project's effects on the quality of the human environment are likely to be highly controversial or are uncertain, then an EIS may be warranted. 40 C.F.R. § 1508.27(b)(4).

The Proposed Action in this case will affect, at a minimum, some 69,699 square miles of public and private land that includes unfathomable numbers of cultural and historic properties.

The Proposed Action is likely to have severe economic consequences for local citizens and tourists who use the affected area for business purposes and recreation. In this case, AFSOC has scheduled dozens of public meetings in communities throughout New Mexico and Colorado and the project is opposed by the vast majority of Americans who live in the affected areas. As discussed below, the proposed LATA is merely the latest in a series of military aviation actions affecting the airspace in the region. There is no defined end date for the proposed training activities – presumably AFSOC will be permitted to conduct LATN training in perpetuity should a FONSI issue based on the Draft EA. Under these circumstances it was simply not appropriate for AFSOC to prepare an EA for this project.

XIII. The Draft EA fails to take into account cumulative impacts to airspace related to the extensive existing military training that already takes place in New Mexico and Colorado

The AFSOC LATN proposal will adversely affect local and regional airspace. Potential impacts include delays of the take-offs and landings of commercial and private aircraft, impacts on human resources needed for air traffic control, and potential aircraft crashes. The LATN proposal has the potential to interfere with several large air spaces, such as Colorado Springs, Albuquerque, Santa Fe, Pueblo, and Grand Junction. The LATN proposal also has the potential to impact numerous local airports, such as Durango, Farmington, Taos, Alamosa, Montrose, Telluride, Crested Butte, Aspen, Gunnison, and La Junta. In addition, there are numerous even smaller airports in many small towns in the affected airspace.

An agency must analyze the cumulative impacts of the proposed action viewed together with the impacts from "other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.27(b)(7). "An environmental impact statement must analyze not only the direct impacts of a proposed action, but also the indirect and cumulative impacts." *Custer County Action Ass'n*, 256 F.3d at 1035 (internal quotation omitted); see also 40 C.F.R. § 1508.25(a)(2) (scope of EIS is influenced by cumulative actions and impact). CEQ regulations define "cumulative impact" as:

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7. "[T]he general rule under NEPA is that, in assessing cumulative effects, the Environmental Impact Statement must give a sufficiently detailed catalogue of past, present, and

future projects." *The Lands Council v. Powell*, 395 F.3d 1019, 1028 (9th Cir. 2005); *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 809-10 (9th Cir. 1999) (same). The level of detail must be sufficient to assist "the decision maker in deciding whether, or how, to alter the program to lessen cumulative impacts." *Id.* General conclusory assertions from agency experts are not adequate; the agency must provide the underlying data supporting that rationale in language decipherable to the public; the analysis must include "some quantified or detailed information." *Klamath Siskiyou Wildlands Center v. Bureau of Land Mgmt.*, 387 F.3d 989, 993-94 (9th Cir. 2004) (citations omitted). "General statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided." *Id.* The discussion must be more than "perfunctory" and must include a "useful analysis." *Id.*

The Draft FONSI concludes that "[n]o significant airspace management impacts would be expected from implementation of the Proposed Action." Draft FONSI at 2. However, this conclusion fails to take into account the fact that military airspace in Colorado and New Mexico has been steadily and incrementally expanding for more than a decade. The Proposed Action is an expansion of the available air space and number of hours over and above what already exists – no existing routes will be eliminated. As discussed above, the Air Force maintains two bases in New Mexico in addition to Cannon AFB -- Holloman AFB and Kirtland AFB. Each of these bases has designated Restricted Areas, MOAs and MTRs that collectively cover virtually the entire state of New Mexico, with slight intrusions into the neighboring states of Texas and Colorado. In addition, the DOD controls a huge area of airspace associated with WSMR and Fort Bliss. The Draft EA did not analyze the cumulative impacts to New Mexico's natural and cultural resources that will be caused by the Proposed Action's increase in low altitude military aviation training over such a vast area.

Similarly, the Draft EA ignores the fact that Colorado airspace is also currently subject to extensive military aviation training exercises. Buckley AFB in Aurora, Colorado is an Air Force Space Command base that is home to the 460th Space Wing and the Colorado Air National Guard's 140th Tactical Fighter Wing, which includes the 120th Fighter Squadron, which flies F-16C fighters. In addition, the Colorado Army National Guard operates the Army Aviation Support Facility at Buckley AFB with CH-47 Chinook, UH-1 Huey, and UH-60 Blackhawk helicopters, aircraft associated with the Army's Transformed Combat Aviation Brigades. The 140th Tactical Fighter Wing is the primary user of three MOAs located in southern Colorado, all of which lay within the initial LATN area proposed by AFSOC: the Cheyenne MOA, the La Veta MOA, and Two Buttes MOA. Exhibit 10. Aircraft can fly from 300 feet to 18,000 feet AGL within the Cheyenne MOA, from 1,500 feet to 18,000 feet AGL in the La Veta MOA, and from 300 feet to 18,000 feet AGL in the Two Buttes MOA. Id. The 140th Wing uses an extensive network of established MTRs to travel to and from these MOAs. The 140th Wing also uses the

Airburst Range MOA on Fort Carson in Colorado Springs for low altitude bombing training. Id. One year ago the 140th Wing began flying night operations from Buckley AFB in the fall and winter with the aid of night vision goggles. Exhibit 21.

Located near Colorado Springs, Peterson AFB is home to the United States Northern Command, North American Aerospace Defense Command, Air Force Space Command 21st Space Wing, Army Space Command, and the Air Force Reserve's 302nd Airlift Wing. The 302nd Wing uses the C-130H Hercules aircraft. The Draft EA discloses that the 302nd Airlift Wing controls an extensive LATN training area located in southern Colorado (as depicted on Figure 2-3). Draft EA at 2-14. According to 21st Space Wing Instruction 11-20101, the 302nd TAW conducts extensive low level tactical training from surface to 3000' above ground level (AGL). Exhibit 22. "Training includes single ship, formation, airdrop, and defensive maneuvers." Id. at 2.

Commenters were unable to find any information about how this LATN area was established. However, the Draft EA reports that "[a]pproximately 500 sorties per year are flown in this area and each sortie consists of two low altitude missions or 1,000 low altitude flights per year." Draft EA at 3-5. According to the Draft EA, this area is "exposed to military aircraft noise on a regular basis" due to training operations of C-130 aircraft based at Peterson AFB. Id. at 3-12 to 3-13. The Draft EA also reports that "[a]pproximately 200 other low altitude flights occur from other transient units within that existing training area." Id. The Draft EA does not disclose whether any of these flights occur at night or involve aircraft other than the C-130H. AFSOC included all of the 302nd Airlift Wing's LATN area within its initial proposal for a new LATN area; the revised map still shows a large area of overlap between the Proposed Action and the existing LATN area. See, Figure 2-3, Draft EA at 2-14.

Two other Air Force bases are located near Colorado Springs - Schriever AFB and the Air Force Academy. Schriever AFB is home to the 50th Space Wing of Air Force Space Command. The 50th Space Wing has established a Restricted Area around Schriever AFB from the surface to 1,000 feet AGL. Exhibit 10 at 20. The area surrounding the Air Force Academy has been designated as an Alert Area with military training occurring daily from the surface to 17,500 feet AGL. Id. at 163. There is also a National Security Area covering a radius of three nautical miles from the U.S. Army's Pueblo Chemical Depot. Id. at 195.

Fort Carson is a 137,000 acre Army base located southeast of Colorado Springs. Airspace directly over Fort Carson has been designated as a Restricted Area. Id. at 19-20. Fort Carson is also the primary user of the Pinon Canyon MOA, which covers the Army's Piñon Canyon Maneuver Site (PCMS) in southern Colorado. Id. at 135. The Pinon Canyon MOA is adjacent to the Two Buttes MOA – both of which were included in AFSOC's original proposed

LATN area. Military training may occur between 100 feet AGL and 1,000 Feet MSL within the Pinon Canyon MOA. Id. Fort Carson recently constructed a clamshell vehicle maintenance facility designed to accommodate tanks and other armored vehicles or Army aviation aircraft including helicopters. Exhibit 23. Army records indicate that the facilities were intended to provide maintenance for helicopters as well as to provide fire protection for C-130s that utilize the airfield. Id. The Army has reported that eight Tactical Unmanned Aerial Systems and 48 Small Unmanned Aerial Systems are presently in use at Fort Carson and the PCMS, along with 85 helicopters. Exhibit 24. Fort Carson has designated all airspace associated with the PCMS as an MOA pursuant to FAR Part 71. Exhibit 25 (FC Reg. 95-1, § 2-12 (Feb. 1, 2010)). Fort Carson regulations specifically authorize terrain flight below 200 feet above ground level over the PCMS. Id. at § 5-15.

Fort Carson regulations also permit the operation of UAVs at the PCMS. Exhibit 26 (FC Reg. 95-23, § 2-2 (Aug. 1, 2010)). According to the regulations:

> Operations at PCMS for UAV's are conducted under the applicable FAA, Certificate of Authorization (COA). PCMS is located outside of restricted airspace and the airspace is uncontrolled. A COA is valid for a period of one year; therefore, it must be renewed annually. Operations at PCMS will not be conducted if the COA is not valid.

Id. Commenters are aware that UASs operating from the ground up to 1200' above ground level have been in use at the PCMS since 2007 without any environmental analysis under NEPA. On May 24, 2010, Fort Carson submitted a Notification of Class G Airspace Operations to the Federal Aviation Administration. Id. at 13-14. The notification memorandum recites that Fort Carson intends to operate the Predator UAS below 1200 feet above ground level in Class G Airspace at the PCMS from June 19, 2010 through June 18, 2011. Id. An alert sent to potential users of the airspace recommends caution due to "heavy military helicopter and UAV training from the surface to 1000 feet AGL." Exhibit 27.

The Army has also issued decisions purporting to authorize the stationing of a new Combat Aviation Brigade (CAB) consisting of approximately 116 helicopters at Fort Carson. The Fort Carson Grow the Army EIS expressly states that "the CAB is part of Army Transformation" and that "[t]he stationing of a CAB to support these units would support and enhance integrated training at Fort Carson." Exhibit 28 at 1-3. Fort Carson noted as justification for the CAB that "the Army is making progress in its efforts to emphasize urban, Special Forces, intelligence gathering, and joint and multinational training at Fort Carson and PCMS to ensure current and future mission success." Id. (emphasis added). The Fort Carson GTA EIS recites that "[t]raining would involve execution of day-to-day support operations and routine joint

military training at nearby training lands and ranges." Id. at 2-13. Although Commenters have maintained that the stationing of a new CAB at Fort Carson would violate NEPA, at this point it appears that the Army intends to proceed with the action in violation of law governing public disclosure and environmental analysis.

Tables 4 and 5 in the CAB Programmatic EIS issued by the Department of the Army estimate that a Heavy CAB will engage in an average of 22, 957 "critical flying hours" per year while a Medium CAB will engage in an average of 24,789 critical flying hours per year, and that up to one-third of the total flight time may take place at the Army's Piñon Canyon Maneuver Site, Colorado. Exhibit 29 at 2-4, 2-14. Using the Army's figures, then, the CAB PEIS assumes that helicopters will spend somewhere in the range of 7,575 to 8,180 hours flying at the PCMS each year, ten times more than what was authorized in the original EIS that authorized acquisition of the land – largely through eminent domain – to establish the 237,000 acre PCMS. In addition, Fort Carson's Garrison Commander is quoted as estimating that the CAB will fly 3,000 missions annually, "only slightly more than last year's 2,700, many of which were flown by visiting units from elsewhere." Exhibit 30.

Fort Carson and the Colorado Army National Guard have also operated a High Altitude Mountain Environmental Training (HAMET) program in Colorado since at least 2010. Approval for HAMET training was apparently based on an "Environmental Assessment for the Use of National Forest System Lands for Mountain/High Altitude Military Helicopter Training" issued in 2007, but Commenters have been unable to obtain a copy of this document. It has been reported that the HAMET program culminates in training incorporating multi-aircraft night vision system operations and different types of aircraft. The Colorado Army National Guard also operates a High-Altitude Aviation Training Site in Gypsum, Colorado and the Army use 16 landing zone sites in the Pike and San Isabel National Forests for HAMET training.

At least four Combat Aviation Brigades (CABs) have conducted HAMET training in Colorado in the past two years. The 4th Combat Aviation Brigade from Fort Hood engaged in HAMET training from February to April, 2010. The 10th Combat Aviation Brigade from Fort Drum engaged in HAMET training from May 3 through July 18, 2010. On June 30, 2010, an Army AH-64D Longbow helicopter from Fort Drum crash-landed in the Pike National Forest during a high-altitude training mission. The 1st Air Cavalry Brigade, 1st Cavalry Division from Fort Hood ended three months of HAMET training at Fort Carson on March 15, 2011. Finally, the 82nd Combat Aviation Brigade from Fort Bragg conducted HAMET training at Fort Carson from early April through June 2011. In addition to aviation training at San Isabel and Pike National Forests, a transient aviation unit from Fort Hood has recently developed an agreement with the Bureau of Land Management (BLM) for the short-term use of BLM lands in the vicinity of Canon City. This agreement allows the unit to use 20 landing zones for training of

aircraft prior to their deployment. The Army notes that this type of short-term usage of BLM lands around Canon City by transient units may continue intermittently in the future.

The Draft EA gives scant consideration to "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions," regardless of what agency or person undertakes such other actions in the region. The affected lands and communities have considerable natural resource amenities that enhance the quality of life for those who live and recreate there. These lands also generate economic activity, jobs, and income by attracting recreationists and others. The public uses the lands of the LATN airspace for sightseeing, camping, hiking, motorized activity, hunting, fishing, bird watching, nature study, aesthetic and other appreciation. All of these activities may be negatively impacted by incessant Air Force noise, disturbance, contrail pollution, accident-caused fires, and other cumulative impacts related to rapidly increasing military use of airspace, land and water in Colorado and New Mexico. The Draft EA's failure to take a hard look at potential cumulative impacts violates NEPA.

XIV. The Proposed Action Has Been Unlawfully Segmented From The DOD Plan To Establish a Joint Forces Warfare Training Center in Colorado and New Mexico

Fort Carson has been planning to turn the public and private lands surrounding the Army's PCMS into a Joint Forces Training Center for more than a decade. The origins of the concept date back to 1999 when the DOD announced a broad program of "Transformation" for the armed forces. Key attributes of Transformation include increased joint force operations and use of experimental aircraft and weapons (previously referred to as Future Combat Systems). According to Pinon Vision Operations Order 05-09, Fort Carson began the process of expanding the PCMS "in order to obtain adequate training areas and ranges to support current and future Army and Joint Force mobilization, mission rehearsal and training requirements." Exhibit 31 at 2.

The Army's intent was "to acquire additional, sustainable training land in the PCMS area in order to support current and anticipated future Army multi-component and joint force training requirements." Id. According to Order 05-09, "[l]and expansion and appropriate infrastructure must accommodate current and future Army and joint force training requirements with minimum restrictions/constraints on land and airspace usage." Id. The Army concluded that "[t]he ability to support joint training is a critical component of this land expansion." Id. The Army's records prove that it seeks "[t]he capability to integrate with and directly support joint training and mission rehearsal activities." Id. According to Order 05-09, the Army intended to seek United States Joint Forces Command (USJFCOM) involvement because USJFCOM is "a lucrative venue for additional funding from joint accounts." Id. at 19.

Fort Carson also prepared a Land Use Requirements Study (LURS) that concluded that acquisition of additional training land "will vastly increase the opportunities for Joint training by making PCMS extremely attractive to sister services." Exhibit 36 at vii. The LURS goes on to explain that:

> By addressing current land shortfalls at PCMS, the Army benefits from investing in this unique training facility, and provides the Department of Defense the ability to expand to meet the maneuver area requirements projected for the Future Joint Force. Although the exact maneuver area requirements for the Future Forces cannot be accurately determined due to evolving doctrine, analysis based on ARRM calculations for the Current Force suggests that the training land shortfall identified in this study applies to the Future Forces. Based on increased lethality of weapons systems, improved C4ISR systems, use of robotics and the asymmetrical battlefield, future force battle space will certainly increase.

Id. The LURS concludes that "[i]f the Army moves now to acquire the land that is available, it can not only meet Army training needs well into the foreseeable future but it can provide the joint service community with a truly world class training area to develop and perfect joint tactics, techniques and procedures that cannot be honed anywhere outside of combat. A Piñon Canyon Maneuver Site that is expanded as envisioned in this document, digitally connected to simultaneously support live, virtual and constructive training and postured to meet joint force commander needs will provide a powerful complement to service Combat Training Centers and deployed Joint Force Commanders conducting combat operations." Id. at viii.

A contemporaneous Analysis of Alternatives Study (AAS) also found that "an expanded PCMS will serve as a Joint and Combined DOD training facility for all U.S. and allied forces." Exhibit 33 at 4. The AAS determined that the acquisition of additional land "provides the most cost effective and training efficient alternative to meet both the current and future requirements of Army and Joint forces. The demonstrated efficacy of using Fort Carson and Piñon Canyon as an integrated training facility will be multiplied by the acquisition of additional land sufficient to meet the training requirements of the Modular Force and, in all probability, the bulk of the requirements of the Future Joint Force." Id. at 8.

AFI 13-201 explains that the Air Force "sponsors regional and national ARC [Airspace/Range Council] meetings to ensure that all USAF offices involved in airspace and range operations have a common understanding of objectives and key issues." Exhibit 11 at 11. The Airspace/Range Council Meetings commenced in 1989 and are modeled after the Air

National Guard long range planning process. In 1995, Air Force Headquarters formally endorsed the regional process and now co–chairs and sponsors all council meetings. According to AFI 13-201, ARCE meetings "are open to all military services, land management agencies, and other interested or concerned parties." Id.

Colorado is located with the Northwest Mountain Region Airspace/Range Council (Northwest Council). At the March 5, 2008 proceedings of the Northwest Council, Major Pat Hanlon of the 140th Fighter Wing at Buckley Air Force Base reported that:

> The Pinon Canyon MOA supports training over the Army ground training area. The Army is look[ing] at increasing the training area and a higher MOA/ATCAA over that area would increase joint training.

Exhibit 34 at 2. In January 2008, Cannon AFB participated in the proceedings of the Western Pacific Region Airspace/Range Council (the Southwest Council). Exhibit 35. Colonel Frank Carillo appeared on behalf of the 150th Fighter Wing of the New Mexico Air National Guard. Colonel Carillo reported that Pecos/Melrose ATCAA/MOA is scheduled by Cannon AFB, which uses New Mexico airspace for a "variety" of Special Operations Aircraft including Unmanned Aerial Systems. Id. at 2. Colonel Carillo added that:

> The next deployment may have a completely different set of training requirements that make the New Mexico Training Range Initiative so important even with the change of mission at Cannon AFB. Being able to train with the Army at Ft Bliss and the Special Operations forces in the Pecos/Melrose Complex will be essential to "Training like you Fight."

Id. At the same meeting, Lieutenant Colonel Toby Corey from the 27th SOW at Cannon AFB reported that Air Force Special Operations Command was replacing Air Combat Command's three F-16 squadrons with up to eight Special Operations Squadrons. Id. at 3. Lt. Col. Corey disclosed that at that time Cannon AFB had MC-130W aircraft, PC-12 aircraft, and the PQ-1 UAS system. Id. He also stated that future aircraft to be stationed at Cannon AFB included the AC-130 Gunship, the CV-22 Osprey, the MC-130J and the MQ-9 UAS. Id. at 3-4. With respect to airspace, Let. Col. Corey reported that "[f]our new Military Training Routes will provide mountainous terrain for Special Operations aircrew training; will compliment [sic] existing Special Use Airspace." Id. at 4. He concluded by stating that "New Mexico provides the mountain training environment not available at other Special Operations training locations." Id.

Recent news reports tout the fact that the OH 58 Kiowa Warrior helicopter "has groundbreaking capabilities that will enable interoperability among multiple aviation platforms."

Exhibit 36. Apparently these capabilities were shown at a "Manned Unmanned System Integration Capability" demonstration sponsored by the U.S. Army at Dugway Proving Ground in Utah last month. Id. It was reported that "[t]he OH-58 Kiowa Warrior demonstrated its capability to receive sensor video from a variety of the Army's large Unmanned Aircraft Systems, such as the Shadow, Hunter, Gray Eagle and legacy Raven and Puma." Id. According to the Army, "[t]his exercise marked the first time both manned and unmanned aircraft systems operated under a single commander." Id.

Cannon AFB forces have already engaged in joint forces training with Army troops. According to a media report, "[f]lying squadrons from the 27th Special Operations Wing performed a joint base exercise, Operation Dark Night, with the 3rd Special Forces Group (Airborne), Fort Bragg, N.C., at Melrose Air Force Range Sept. 21-22," 2011. Exhibit 37. The account states that "Operation Dark Night incorporated the AC-130H Spectre Gunship and MC-130W Dragon Spear into the exercise, adding a realistic flair for both sides. The aircraft provided air support for ground forces during a simulation of a downed air crew and recovery of personnel." Id. Cannon AFB representatives indicated that they are "soliciting outside ground forces to better train the aircrews," and that "[e]xercises like this one with the U.S. Special Forces soldiers, are an event that we would like to do twice a year." Id. The Army Captain involved in the exercise "said he jumped at an opportunity to come out to Melrose Air Force Range because the Army Special Forces do many joint operations with the Air Force." Id.

Training schedules produced by the Army suggest that the PCMS has already been used for joint Army and Air Force training exercises. Exhibit 38 (Summary). Training exercises scheduled for July and August 2011 for the 10th Special Forces Group included both ground and aviation components, and the Warhorse Rampage exercise in July and August 2010 also involved air-ground training operations. Id. The Air Force 29th Weapons Squadron[5] was scheduled to use PCMS for 14 days for airborne operations and homeland security training, while the 2nd Battalion, 135th Aviation Regiment of the Colorado Army National Guard[6] was scheduled to use PCMS for 13 days with live fire from July 23 to August 3, which would have overlapped with Special Forces training at the site from August 1 to August 12. Id. "Airborne Operation" is not listed under the "Event Name" column for the 135th Aviation Regiment, although the Special Forces do list "Airborne Operation" as part of their description. Id. The 160th Special

[5] The 29th Weapons Squadron is assigned to the USAF Weapons School stationed at Little Rock AFB in Arkansas. The mission of the squadron is to provide C-130 Hercules instructional flying.

[6] The 2nd Battalion 135th Aviation Regiment is an Army helicopter battalion that flies the UH-60 Black Hawk, the CH-47 Chinook and the OH-58 Kiowa helicopters. They are home based out of Buckley AFB, Colorado, as part of the Colorado Army National Guard Aviation Command.

Operations Aviation Regiment[7] was scheduled to use PCMS for 7 days, mostly for aviation operations. *Id.* Finally, the Army Reserve Component was scheduled to use the PCMS on 11 days, eight of which involved airborne operations. Id.

All told it appears that PCMS was scheduled for at least 54 days of aviation use this year prior to May 18, 2011, more than half the total days scheduled for training. Records produced by the Army also show that the PCMS has been used for training for the CV-22 Osprey. Low altitude tactical navigation training at PCMS was authorized by the Army in 2009 based upon a Record of Consideration (REC) without pre-existing or previous NEPA documentation. Exhibit 39. Training records produced by the Army show that the Army Reserve was scheduled to conduct operations on downrange landing zones with Osprey aircraft on March 3, April 4, April 8, April 15, April 19, and November 3, 2011, apparently in coordination with the 71st Special Operations Squadron from Kirtland Air Force Base in New Mexico. Citizens living near the PCMS have reported seeing Osprey helicopters frequently flying below 200 feet AGL and landing on the Comanche National Grasslands.

The LATN proposal is a further step to establish a Joint Forces Training Center that would stretch across northern New Mexico and southern Colorado. Before taking steps toward establishing such a Joint Forces Training Center in this expansive geographical area, the full scope and impact of the proposal should have been disclosed to the public so that potential impacts could be evaluated at one time. Instead, the DOD has proceeded in a piecemeal fashion, authorizing increases in training area size and use and new weapons systems pursuant to the Transformation doctrine without ever considering the combined and cumulative destructive impacts of these actions. The AFSOC EIS stated that no additional airspace would be needed to accommodate the additional AFSOC forces to be stationed at Cannon AFB. However, a mere three years later, AFSOC is now proposing to expand the airspace for Cannon to cover half of the State of New Mexico and half of the State of Colorado. This illegal segmentation of the DOD's desire to turn northern New Mexico and southern Colorado into an enormous joint forces training center makes a mockery of the NEPA process.

XV. The Proposed Action Will Jeopardize Air Safety

The Draft EA falsely states that "[t]here is no significant impact to flight or ground safety

[7] The 160th Special Operations Aviation Regiment (Airborne) is a special operations unit of the Army that provides helicopter aviation support for general purpose forces and Special Operations Forces. Its missions have included attack, assault, and reconnaissance, and are usually conducted at night, at high speeds, low altitudes, and on short notice. The 160th SOAR is headquartered at Fort Campbell, Kentucky.

resulting from the Proposed Action." Draft FONSI at 3. One of the two primary aircraft to fly in the new proposed LATA will be the CV-22 Osprey. The Bell-Boeing V-22 Osprey is an American military tilt-rotor aircraft. The Osprey program was terminated by the DOD in 1989 as a failure, but subsequently resurrected by Congress. The Government Accountability Office (GAO) presented testimony concerning the Osprey to the House Committee on Oversight and Government Reform on June 23, 2009. Exhibit 40. According to the GAO, the cost of an MV-22 is $64 million and the cost of a CV-22 is $76 million. Id. Operating costs were $11,000 per flying hour - twice the target cost. Id. At that point in time 138 Ospreys had been delivered, with 99 currently in service with the Marines and 450 more on order. Id. Over the lifetime of this failed system costs have increased over 200%. Id. The GAO reports that taxpayers paid $25.7 billion for the V-22 program from FY1982 through FY 2008. Id. The estimated immediate funding need for the V-22 was an additional $100 billion, and the GAO recommended re-examining the entire program. Id.

On November 10, 2010, the bipartisan National Commission on Fiscal Responsibility and Reform released a draft proposal to cut $200 billion from the federal budget by 2015, including $100 billion in cuts to the defense budget. In their "illustrative list" of proposed defense cuts, the commission co-chairs GOP Senator Alan Simpson and Clinton White House Chief of Staff Erskine Bowles identified a host of Pentagon programs that they feel should be scaled back or eliminated. Among the defense programs to be cut, the co-chairs recommended ending procurement of the Osprey aircraft—the very aircraft that is the subject of the AFSOC proposal. If production of the CV-22 aircraft is terminated, it would negate the environmental analysis in an EIS because the noise and flight characteristics of the V-22 are unique and would not apply to any substituted aircraft, such as the MH-60.

AFSOC attempts to minimize the poor safety record of the CV-22 by admitting that "[t]he CV-22 is a new aircraft and has a Class A mishap rate of approximately 2.0 per 100,000 flight hours" but then claiming that "[o]ver time, the CV-22 is expected to have a Class A mishap rate comparable to other military rotorcraft." Draft FONSI at 3. The GAO discovered faults in the V-22's ice protection system in areas where icing conditions are more likely to be experienced, such as the mountainous areas in the proposed LATA. Exhibit 40 at 5. V-22 engines also fell significantly short of service life expectancy, lasting less than 400 hours. Id. at 5-6. The Air Force states in the Draft EA that "the Pilots flying the MC-130J and CV-22 aircraft are some of the most experienced in the military, and as such, have multiple hours in those specific airframes." Draft EA at 3. However, the first CV-22 did not arrive at Cannon AFB until May 19, 2010,[8] suggesting that the pilots at Cannon AFB have little experience flying the CV-22 for low-altitude night training in the new proposed LATA area. The Air Force's first operational

[8] Exhibit 41.

CV-22 Osprey was delivered to the 58th SOW at Kirtland AFB on March 20, 2006. There are many reports describing the poor safety record of the CV-22, which experienced multiple crashes and accidents in the past decade, including "four significant failures during flight testing, one combat-zone crash, and a number of minor incidents." Exhibit 42. All told, "[t]he V-22 has had 5 crashes with a total of 34 fatalities." Id. On April 9, 2010, a CV-22 crashed in Afghanistan, killing four and injuring 16 other Americans. Id. The aircraft was destroyed in place, at a total cost to U.S. taxpayers of more than $87 million. Id.

Flights of the new MC-130J will also be extremely risky because the Combat Shadow II is a brand new aircraft and pilots at Cannon AFB have no experience flying the brand new MC-130J. The first flight of the MC-130J was completed on April 22, 2011 at the Lockheed Martin facility in Marietta, Georgia. Exhibit 43. Less than one month after a rollout ceremony for the AFSOC, the MC-130J began a series of flight tests prior to delivery to Cannon AFB in September 2011. On October 3, 2011, the Air Force reported that "its first new-build MC-130J Combat Shadow II special-mission aircraft" was received at Cannon AFB on September 29, 2011. Exhibit 44. The purpose of the Draft EA is to establish a new LATA in northern New Mexico and southern Colorado where the 27 SOW has no prior training experience. The new proposed LATA is essentially the "testing ground" for this new aircraft. Scheduling low altitude flights at night will only increase the danger.

The primary aircraft in this EA is the MC-130J, not the C-130. Exhibit 45. The MC-130J Combat Shadow II includes new turboprop engines with six-bladed, all-components propellers. Id. However, AFSOC fails to discuss the mishap history of other variants of C-130s that will be flying in the proposed LATA. As mentioned earlier, the 2010 General Plan for Cannon Air Force Base discusses AC-130 Gunships, the MC-130H Combat Talon II, the MC-130P Combat Shadow (which is being replaced by the MC-130J Combat Shadow II), the MC-130W Combat Spear, the MC-130W and the MC-130J Super Hercules, and the MC-130E Combat Talon I. Exhibit 5. These are all different 27 SOW aircraft with different specifications and different potential impacts to human health and the environment. The AFSOC fails to identify and discuss all of the aircraft that will be flying in the proposed LATA and attempts to minimize the impacts of the Proposed Action by evaluating the impacts of only the CV-22 and the "C-130." The Draft EA is therefore inadequate.

The Draft EA states:

> 27 SOW aircrews are required to maintain flight proficiency in varying terrain including mountainous terrain, varying threat levels, different climatic conditions, and low altitude after dark missions to support Special Operations Forces…

> With the Proposed Action, aircrews would plan and fly low altitude routes in mountainous terrain (especially at high elevations) to ensure that aircraft power capabilities are not compromised and that the crew avoids potentially hazardous situations."

Draft FONSI at 1. However, the Proposed Action will be more dangerous because pilots will not pre-survey flight segments during the day prior to after dark training. Id. at 2. AFSOC states that under non-emergency situations, aircraft would not dump fuel. The Draft EA states:

> If an emergency requiring a fuel dump were to occur, the aircraft would climb to an altitude greater than 2,000 ft above the highest obstacle within five miles prior to initiating the dump. At this altitude, the vast majority of dumped fuel would vaporize prior to reaching the ground.

Id. at 3. This statement acknowledges that some dumped fuel will impact the ground. AFSOC also fails to discuss the hazards of mountain flying. According to the FAA:

> Your first experience of flying over mountainous terrain...could be a *never-to-be-forgotten nightmare* if proper planning is not done and if you are not aware of the potential hazards awaiting. Those familiar section lines are not present in the mountains; those flat, level fields for forced landings are practically nonexistent; abrupt changes in wind direction and velocity occur; severe updrafts and downdrafts are common, particularly near or above changes of terrain such as cliffs or rugged areas; even the clouds look different and can build up with startling rapidity.

Exhibit 46 at 4. Some of the hazards the FAA discusses include Mountain Obscuration, Density Altitude, and Mountain Wave. Id. at 5-7. The Draft EA fails to discuss the safety risks of the Proposed Action in light of the unique flying conditions in Colorado and New Mexico. According to an article in the SW Aviator Magazine, "[f]lying through Colorado mountain passes at altitudes of 10,000 feet or higher presents challenges for both general aviation aircraft and even the most experienced pilots. When this is coupled with Colorado's unpredictable weather conditions, it can present a formula for disaster." Exhibit 47.

AFSOC also fails to discuss the safety risks of flying using Night Vision Goggles (NVGs). The military has reported that:

> It is a medical fact that during periods of high stress (and the stress of

> high DA, max gross weight, mountainous, NVG, and combat ops would certainly quality) our perceptual field narrows or collapses. It is our training that comes to the foe and determines the result of our endeavors. If our training, our habit formation (both in recognition and response), is weak then so is our execution. It has been demonstrated using the the Power Management Training System that no matter how aware a crew is as to what the correct control input should be, under pressure they usually cannot overcome bad habits to actually accomplish the intent.

Exhibit 48 at 2. In 1991, Major George H. Keating, USMC, wrote a paper titled "In The Dark Of The Night: NVG Mishaps Lessons Learned," in which he reported:

> During calendar years 1984-1990, the Marine Corps recorded eleven Class "A" helicopter mishaps involving NVGs. These mishaps have resulted in the destruction of thirteen tactical helicopters and the death of 55 combat Marines. The estimated cost of these mishaps was over $240 million dollars."

Exhibit 49 at 4. The lessons were derived from the author's analysis of each mishap based on the evidence presented by the aircraft mishap boards. Some of the causes of these "mishaps" included:

> Weather and Visibility Restrictions. In one third of the NVG mishaps, planners and operators failed to consider weather and visibility restrictions which serve to reduce ambient light levels…
>
> Effects of Low Angle Moon. In 63 percent of the mishaps, aircrews failed to consider the effects of a low angle moon. A low angle moon in mountainous terrain can cause shadows, which will affect obstacle avoidance…
>
> NVG Limitations. NVG mishaps have also indicated that aircrews exceeded the capabilities of the NVGs. Although the new ANVIS-6 NVGs are a significant improvement over the older FVS-5 NVGs, the limitations of reduced visual acuity, limited 40 degree FOV, reduced contrast, reduced depth perception, and visual fatigue still exist…
>
> NVG Mission Planning and Briefing. In over one-half of the mishaps, the safe execution of the NVG mission was jeopardized from the start due

> to inadequate planning and briefing…
>
> Effect of Fatigue. In over half of the NVG mishaps, fatigue was cited as a causal factor. Fatigue, especially cumulative fatigue associated with circadian rhythm disruptions and sleep deprivate, poses a genuine threat to NVG flight safety…
>
> Crew Coordination. The lack of crew coordination was cited in 82 percent of all NVG mishaps…
>
> Overconfidence and Complacency. It appears that as aircrews become more proficient with NVG flight, confidence and complacency have become problems to safe mission execution. Overconfidence and complacency both tend to lure the aircrew to over-fly their own capabilities as well as those of the NVGs…
>
> Aeronautical Judgment. The Corp's NVG mishaps are full of example where aircrews failed to exercise good judgment and flight leadership…
>
> Tactical Airspace Management (TASM). Some form of aircraft deconfliction is necessary whenever large numbers of aircraft are in the operating area…
>
> NVG Training. In several mishaps, aircrews did not progressively train from high to low light levels. Consequently, they were ill-prepared to deal with the demanding conditions of the low light level environment…
>
> Night Aircraft Equipment. In three mishaps, the required aircraft equipment for NVG flight was incorrectly set or not installed.

Id. In 2002, the U.S. Air Force reported that:

> First of all, it is very difficult at times to recognize when you are flying, or about to fly, into certain atmospheric conditions like clouds while wearing NVGs. Secondly, it may be surmised that the MP may have been overconfident in what the NVGs were providing him as far as visual acuity is concerned.

* * * * * * * *

> What can be said about NVGs? They provide you with an enhanced ability to see at night. They also provide you with opportunities to become spatially disoriented while maneuvering, and with the ability to fly into IMC conditions without realizing it and run into other airplanes, if you're not keeping your eyes outside when you're within 10 NM during your intercept…

Exhibit 50. In 2008, Maj. Jonathan Beasley, an instructor pilot with the 56th Training Squadron at Luke Air Force Base, Arizona stated that "[i]f you look at all the mishaps we've had in fighters using goggles, almost all of them were caused by reliance on some type of visual cue that you're not supposed to be relying on with night-vision devices." Exhibit 51. Major Beasley then explained: "actually flying with goggles is an acquired habit. Their most dangerous idiosyncrasies are a lack of peripheral vision and a circular field of view that is limited to only 40 degrees," and "[y]ou don't have any depth perception." Id. Major Beasley continued: "A light three miles away and a light 50 miles away looks the same through goggles. It's harder to fly formation and figure out how far away you are from the other planes." Id. Thus, it is clear that low-altitude flights at night using Night Vision Goggles (NVGs) will be a significant threat to safety of the people and environment in the proposed LATA.

AFSOC also fails to discuss the increased hazards from bird strikes by military aircraft at night. In 2009, Capt. Zach Johnson, 421st Fighter Squadron, Hill AFB, Utah, reported in an article on Air Force bird strikes at night that:

> From January 1, 2007 through January 2009, there were 10,158 reported bird strikes Air Force-wide. Of those, 9,917 were Class E (minor bird strikes) and 241were reported as Class A/B/C bird strikes (major bird strikes). For minor bird strikes, we have time-of-day data for 9,166 incidents, with 197 (2 percent) of them occurring at dawn, 4,270 (47 percent) during the day, 477 (5 percent) at dusk, and 4,222 (46 percent) at night. Of the 241 major bird strikes, 2 (1 percent) were at dawn, 128 (53 percent) during the day, 15 (6 percent) were at dusk, and 96 (40 Percent) at night. Of these major bird strikes, only a handful were related to species of birds that we would expect to be nocturnal, such as owls or nighthawks.
>
> It's important for pilots to realize that hazards associated with birds don't go away after the sun sets. In fact, the danger to flying operations increases for several reasons. During normal daytime ops, the SOF and airfield

> management can identify an increase in bird activity and dictate a change in the bird watch condition to limit exposure. At night, it's far more difficult to detect and adjust to a change in bird traffic. Pilots often talk about keeping their visors down when operating at low altitudes during the day for an added layer of protection should a catastrophic frontal bird strike occur. At night, when wearing night vision goggle brackets, it's not possible to add that protection while at low altitude on departure or recovery. Lastly, even minor emergencies with aircraft can become far more dangerous at night. Impact with a bird causing significant damage to flight controls, avionics, the power plant or simply impairing forward visibility on a canopy is far more difficult to handle without good outside visual cues and the ability to easily read checklists.

Exhibit 52. It is clear that hazards in the proposed LATN area will increase from bird strikes at night at low altitudes.

Based on the significant safety hazards of the proposed action to human health and the environment, it is arbitrary and capricious for the Air Force to issue a Draft FONSI concluding that "implementation of the Proposed Action would not result in significant impacts to the quality of the human or the natural environment."

XVI. The Proposed Action Will Cause Significant Noise Impacts

Loud noise from low flying military aircraft will undoubtedly startle wildlife and domestic animals, such as cattle and horses, and interfere with people's ability to enjoy and use private and public properties within the training area. Excessive noise will affect sensitive human populations the most – young children, the elderly and individuals with post-traumatic stress disorder. AFSOC tries to minimize the significance of these impacts by relying on noise modeling that considered Single Exposure Levels ("SEL") and Day-Night average monthly sound Levels ("DNL"). The AFSOC modeling was designed to reinforce the claim that noise impacts will not be significant because: (a) flights over any given location would occur "relatively rarely"; and (b) the cumulative average increase in noise from the overflights would not be greater than 3 db.

According to the Draft FONSI, "noise generated by operations in the proposed training area would not contribute to overall noise levels exceeding 55 dB DNL, which was identified by Environmental Protection Agency (EPA) as being the noise level above which to assess public

health and welfare." Draft FONSI at 2-3. AFSOC claims that its modeling shows that the Proposed Action would all less than 0.1 db to overall noise levels at locations where existing levels are greater than 45 db and less than 3 db where existing levels are less than 45 db. However, since the Proposed Action provides that population centers will be avoided, and most overflights will occur over sparsely populated areas, the areas that will be impacted will be very quiet and the corresponding impacts much greater.

In addition, using a DNL as the basis for analyzing noise impacts is improper because missions will be flown only at night. In general, noise levels are much lower at night than during the day, meaning that the vast majority of lands that are subject to this training will have existing DNL that are much less than 45 db – rural ambient noise levels are usually between 20 and 30 db. If only night noise levels were considered, the model would have predicted a much greater increase in noise level averages due to the overflights. Due to the logarithmic nature of decibel measurements, noise impacts from the LATN proposal amount to anywhere from a 10- to 1,000 fold increase in noise. Wilderness areas, Indian Nations, and other rural areas should not have to endure loud aircraft simply because their background levels are so low that an urban dB threshold is not exceeded. In addition, the AFSOC noise modeling does not take into account the cumulative noise increase associated with operations in the many different LATNs and MOAs and MTRs that already exist today. The Draft EA is inadequate because it fails to fairly characterize the existing baseline of noise in the affected environment so that the significance of the noise increases in this setting can be understood.

The AFSOC argument is essentially that extreme noise will not cause significant impacts because it won't happen very frequently in any given location. According to the USAF, the training area is sufficiently large that three training flights per night would be able to avoid overflight of the same location in any given night "to the maximum extent possible." Using modeling, the AFSOC concludes that:

> *Any given location in the LATA outside avoidance areas would be overflown within 1,000 feet, on average, approximately three times per month;
>
> *Any given location outside avoidance areas would experience noise greater than 70 db three times per month;
>
> *Any given location outside avoidance areas would experience noise greater than 80 db once every three months;
>
> *A person sleeping would be awakened by an overflight once per year if his

or her windows were open; and

*A person sleeping would be awakened by an overflight once every two years if his or her windows were closed;

However, the significance of an individual noise event should not be judged under a standard that only takes into account average noise increase. Instead, AFSOC should have analyzed the direct impact to ground receptors that would be caused by an overflight of a low flying military aircraft. The Draft EA and FONSI report that single exposure noise levels generated by C-130 and CV-22 aircraft could be as high as 98 dB SEL and 90 dB SEL, respectively. An important characteristic of noise from an aircraft at low altitude is that it has a high onset rate, i.e., it arrives very quickly and there is a relatively short time (often only a few seconds) from ambient to the maximum sound. This causes noise from such overflights to be more annoying than would be expected from their measured SEL.

AFSOC has stated that it intends to fly 688 missions that will each last for an average of five hours – a total of 3,440 flying hours. There are 8,760 hours per year, meaning that a military aircraft will be flying at some location in the LATA area about 40% of the year. Since all of the LATA flights will be flown after dark, no flights will occurring during daylight hours, which on average account for about 12 hours per day (varies from 9.5 hours to 15 hours). In other words, a military aircraft will be flying at low altitudes somewhere in the LATA about 80% of the time each night. According to the Draft EA, ten percent of these flight hours will be happening at or below 500 feet AGL, and these flight hours will have the severest impacts on wildlife and humans. The CV-22, which is nearly twice as loud at the MC-130J (there is a doubling of sound for every 10 decibels), will be flying four times as frequently than its counterpart. The AFSOC noise analysis also fails to quantify noise from existing military airspace use in Colorado and New Mexico for the purposes of cumulative impacts analysis.

There are new ways of examining noise inputs so that the effects on wild public lands, recreationists and native ecosystems can be better understood. As articles at the Acoustic Ecology website show, there is increasing evidence that wildlife and humans are adversely affected by unnatural noise and noise pollution. See, AcousticEcology.org/scienceresearch.html. AFSOC should not just pay attention to protection of acoustic resources over designated Wilderness, Wilderness Study Areas, roadless areas, sensitive species habitats and other wild landscapes, although these areas are certainly paramount. The noise evaluation must take into account the increases in localized noise in areas which have almost no non-natural background noise, such as the Wild and Scenic River Corridors, that would result from lowering the operational floor above those corridors. Without a valid evaluation against the baseline of almost unbroken silence in the Wild and Scenic River Corridors, Wilderness areas, and Wilderness

Study Areas the noise evaluation is arbitrary and capricious. The failure to evaluate noise properly would also lead to an action which, if adopted, would violate the substantive laws which protect the naturalness and prohibit the mechanization and undue degradation of these areas, including the Wild and Scenic Rivers Act, the Wilderness Act, and the Federal Lands Policy and Management Act.

Quietude is a valuable resource throughout the proposed LATA. Recreational users of public lands, especially those seeking peace, quiet and solitude in a primitive and natural setting face an increasingly crowded world, and an ever-expanding industrialization, road building, and noise on public lands. Humans and animals can't hear as clearly with loud droning noises. Human perception of a pleasurable experience is altered by noise. Humans come to wilderness areas and public lands for a pleasurable experience, not to cover their ears to try to lessen loud irritating droning plane noise. While humans can still see beauty, the quality of the experience of beauty is diminished by disruptive or offensive noise. Thus, the quality of the wilderness and public wild lands experience will be diminished in areas of expansion.

Animals may spend increased time scanning looking for predators. They may hole up, and become less active with noise as it is more difficult to detect predators. Or it may be more difficult to detect food – for example –coyotes preying in mice under snow. Low altitude flights may cause birds to flush from nests – increasing the risk of bird-aircraft collisions and making the birds more subject to predation. Sage-grouse, pygmy rabbits, bighorn sheep, rare bats, and migratory birds will all be negatively impacted by the Proposed Action, both in the short and long term. What is the hearing range of affected animals? How intense will noise be within this hearing range? How will various components of the plane or other training-linked noise disturbances interfere with, or otherwise adversely affect, the displays, mating, calling, foraging communication, echolocation or other behaviors of migratory birds, sage-grouse, large and small mammals including bats? These questions were not adequately studied in the Draft EA.

The sound from aircraft activity can cause archaeological resources and structures to vibrate. It can also cause contemporary structures to vibrate and windowpanes to shatter.[9] Simply because the noise level does not exceed some threshold, such as urban standards, does not mean that the noise does not impact Native American ceremonies or sacred sites.[10] Noise from aircraft and helicopters may adversely affect traditional ceremonies.[11]

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[9] *See* Hanson, C.E. 1991. "Aircraft Noise Effects on Cultural Resources: Review of Technical Literature," HMMH Report No. 290940.04-1, NPOA Report No. 91-3.

[10] *See generally* U.S. Department of the Interior, National Park Service, "Report on Effects of Aircraft Overflights on the National Park System" (July 1995).

[11] *See* Greider, Thomas. 1993. "Aircraft Noise and the Practice of Indian Medicine: The

XVII. The Proposed Action Will Significantly Affect Biological Resources and Threatened and Endangered Species

The Air Force fails to identify and analyze the adverse impacts of the proposed action to biological resources. The Air Force concludes that:

> In summary, although a startle response or other reaction could occur in protected species (similar to the discussion for non-protected wildlife), such reactions are not necessarily detrimental to a species, nor is reaction alone enough to imply adverse effect. Given the average of approximately three sorties per day spread randomly throughout the proposed training area, low altitude aircraft noise may affect, but is not likely to adversely affect, listed species under the proposed training area.

Draft EA at 4. To the contrary, the adverse impacts to all of the biological resources in the proposed LATN/LATA area will be significant.

"Deposition of nitrogen compounds at levels greater than the biological demand or need of the affected system can impact forest and other terrestrial systems in significant ways. Too much nitrogen can lead to a surplus of nutrients resulting in over-fertilization. This can impact species diversity by favoring some nitrogen-tolerant species over other species that are more sensitive to the nutrient. In some ecosystems, such as grasslands, nitrogen is the limiting factor for growth. In these systems, other nutrients are in sufficient supply, and so the amount of available nitrogen dictates what growth can take place. Plants living in these systems have adapted to low levels of nitrogen and are especially vulnerable to increased levels of nitrogen deposition. Their decline may lead to changes in the mix of plant species in an area, causing a decrease in species diversity. New plants may also move into nitrogen-rich ecosystems, further challenging native species. Animals that depend on specific plants for habitat and food may also be threatened by the changes resulting from nitrogen inputs. Excess levels of nitrogen can change the natural cycle of plant uptake, transformation, and release, robbing soils of their capacity to absorb nitrogen compounds. Known as nitrogen (N) saturation, this phenomenon involves the long-term removal of N limitations on biological activity, accompanied by a decrease in the ability of ecosystems to retain N inputs. As a result, nitrogen can migrate to surface waters or leach into groundwater, particularly in sensitive ecosystems with poorly buffered or thin soils (e.g., mountainous areas in the Colorado Front Range) (emphasis provided). As more terrestrial

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Symbolic Transformation of the Environment," Human Organization 52(1):76-82; Schoepfle, Mark. 1989.

ecosystems reach the point of N saturation, nitrogen inputs reach groundwater and surface water in greater quantities, with effects that are discussed below." Exhibit 53.

"When NOX and SO2 emissions enter the atmosphere, they can be transformed into acids through complex chemical interactions. These acids return to the earth via precipitation or when plants come into direct contact with acidic cloud droplets or gases and airborne particles. Atmospheric deposition of nitrogen compounds and other pollutants modifies soil chemistry and concentrations of important soil nutrients. While a majority of acid deposition in the United States is due to SO2 emissions, NOX emissions are now recognized as an increasingly important source of the problem. Extremely high levels of acid deposition, especially from cloud deposition, damage plant leaves and leach nutrients directly from foliage. Indirect effects of acid deposition are also responsible for damage to forest ecosystems, as acidic ions in the soil displace calcium and other nutrients from plant roots, inhibiting growth. Acid deposition can also mobilize toxic amounts of aluminum, increasing its availability for uptake by plants. Although overall acid deposition rates have declined during the past decades, ecosystems continue to show symptoms of chronic acidification. Moreover, evidence suggests that acid deposition due to nitrogen rather than sulfur emissions is not declining." Id.

The adverse impacts of the Proposed Action will be significant for all of the biological resources in the proposed Cannon AFB LATN/LATA area. The adverse impacts of the proposed action to all species in the proposed LATN/LATA area are the same as those discussed in the Threatened and Endangered Species section of this Comment Letter.

Pursuant to Section 7 of the Endangered Species Act (ESA), federal agencies must consult with the U.S. Fish and Wildlife Service (FWS) when any action the agency carries out, funds, or authorizes *may affect* a listed endangered or threatened species. 16 U.S.C. § 1536. The Draft EA states:

> A federal agency may make a request to USFWS for a list of any listed or proposed species or designated or proposed critical habitat that may be present in the action area. If the Federal agency determines that the Proposed Action will not affect any proposed or listed species or proposed or designated critical habitat, no further action is necessary. In addition, if the Federal agency determines with the written concurrence of the USFWS that the Proposed Action may affect, but is not likely to adversely affect, listed species or critical habitat, the consultation process is terminated, and no further action is necessary. If it is determined that the Proposed Action may adversely affect listed species or critical habitat, then formal consultation must be initiated, which results in a biological

> opinion from the USFWS. Letters were sent to the appropriate USFWS offices and state agencies informing them of the Proposed Action and requesting data regarding applicable protected species.

Draft EA at 2-24. Simply sending letters to FWS offices and state agencies 'informing' them of the Proposed Action and requesting data regarding protected species fails to satisfy even the requirements for informal consultation. According to the FWS:

> A Federal agency, in the early stages of project planning, approaches the Service and requests informal consultation. Discussions between the two agencies may include what types of listed species may occur in the proposed action area, and what effect the proposed action may have on those species.
>
> If the Federal agency, after discussions with the Service, determines that the proposed action is not likely to affect any listed species in the project area, and if the Service concurs, the informal consultation is complete and the proposed project moves ahead. If it appears that the agency's action may affect a listed species, that agency may then prepare a biological assessment to assist in its determination of the project's effect on a species.

Exhibit 54. The proposed LATA includes all or portions of 17 counties in New Mexico and 21 counties in Colorado. The area already designated to allow low altitude navigation by the military affects additional New Mexico and Colorado counties and impacts all but four of the 21 Colorado counties doubly. The ESA requires that AFSOC initiate discussions with the FWS offices representing each county in the proposed LATN area. Since the Proposed Action will affect listed species, AFSOC is required to request a formal Section 7 consultation.

AFSOC has understated the impacts to wild lands, wildlife and wildlife habitat that will be caused by the intensive sound disturbances associated with the Proposed Action. These fragile ecosystems are already under greatly increased stress from all manner of human disturbances. Any additional stress will jeopardize sensitive and important species and move them closer to extirpation and extinction. There is now a large amount of scientific knowledge about the increasingly perilous status of many species of native wildlife in the lands used for training and under the existing and expanded airspace. See, e.g., Connelly et al. Sage-grouse Conservation Assessment 2004. Species of critical concern include sage-grouse, pygmy rabbit, Brewer's sparrow, and loggerhead shrike. Sensitive large mammals like bighorn sheep will also be negatively impacted by the noise caused by military overflights. Sage-grouse are particularly

sensitive to disturbance at certain times of the year. Wildlife may become more susceptible to predators, stressed, and unable to forage or reproduce. The abilities to hear sounds and noise and to communicate assist wildlife in maintaining group cohesiveness and survivorship.

A. Birds

The Central Flyway for migratory birds traverses both the eastern and western sides of the Rockies. The western branch covers western Colorado and western New Mexico. The Draft EA notes that "[t]wenty-six federally protected species may occur within the proposed training area ROI including nine birds, ten fish, one reptile, five mammals, and one insect species." Table 4-7, Draft EA at 4-15. According to the Draft EA, the birds include three raptors, three shorebirds, two neotropical migrants, and one grouse species. Id. In reality, there are at least 17 federally and/or state-protected bird species in the proposed LATA, including:

- Bald eagle (Federal Delisted/Monitor; NM Threatened) located in at least 24 counties in the proposed LATN area;

- Southwestern willow flycatcher (Federal Endangered; NM Endangered; CO Endangered) located in at least 21 counties in the proposed LATN area;

- Northern aplomado falcon (Federal Endangered; NM Endangered) located in at least 1 county in the proposed LATN area;

- Mexican spotted owl (Federal Threatened; CO Threatened) located in at least 24 counties in the proposed LATN area;

- Least tern (Federal Endangered; NM Endangered; CO Endangered) located in at least 6 counties in the proposed LATN area;

- Lesser prairie chicken (Federal Candidate) located in at least 8 counties in the proposed LATN area;

- Mountain plover (Proposed Threatened-Removed May 2011; CO – Species of Special Concern) located in at least 18 counties in the proposed LATN area;

- Piping plover (Federal Endangered; NM Threatened; CO Threatened) located in at least 2 counties in the proposed LATN area;

- Yellow-billed cuckoo (Federal Candidate; NM Candidate; CO Candidate) located in at least 24 counties in the proposed LATN area;

- Greater sage grouse (Federal Candidate) located in at least 5 counties in the proposed LATN area;

- Gunnison sage grouse (Federal Candidate) located in at least 7 counties in the proposed LATN area;

- Whooping crane (Federal Experimental Population) located in at least 17 counties in the proposed LATN area;

- Brown pelican (NM Endangered) located in at least 3 counties in the proposed LATN area;

- White-tailed ptarmigan (NM Endangered) located in at least 2 counties in the proposed LATN area;

- Peregrine falcom (Federal Recovery; NM Species of Concern) located in at least 24 counties in the proposed LATN area;

- Boreal owl (NM Threatened) located in at least 1 county in the proposed LATN area;

- Gray vireo (NM Threatened) located in at least 2 counties in the proposed LATN area.

The proposed LATA includes the Central Flyway, which is one of the principal bird migration routes in the United States.

Scientific studies have confirmed that low altitude overflights may cause bird-aircraft collisions and flushing of birds from nests or feeding areas. Exhibit 55 at 16. Birds can be disturbed by either the sight or sound of aircraft, responding to the sound before the vehicle becomes visible and tracking the aircraft as it passes overhead. Id. "Sudden aircraft approaches that cause surprise may also influence responses. Raptors, for example, panicked and exhibited

frantic escape behavior when helicopters appeared from over the tops of cliffs, but did not do so when helicopters could be seen approaching from a distance." Id. at 17. Hence topography should be taken into consideration when predicting animal responses to overflights. Id. at 17.

Bird-aircraft collisions have cost the lives of many pilots and damaged aircraft. Id. at 15. Military aircraft are most vulnerable to bird strikes since they fly at low altitudes and high speeds. Id. "The US Air Force reports 3,500 bird strikes annually (Spectrum Bird Aircraft Strike Hazard Team 1994)..." Id. In 2009, Captain Zach Johnson of the 421st Fighter Squadron at Hill AFB, Utah, reported in an article on Air Force bird strikes at night. He reported that:

> From January 1, 2007 through January 2009, there were 10,158 reported bird strikes Air Force-wide. Of those, 9,917 were Class E (minor bird strikes) and 241were reported as Class A/B/C bird strikes (major bird strikes). For minor bird strikes, we have time-of-day data for 9,166 incidents, with 197 (2 percent) of them occurring at dawn, 4,270 (47 percent) during the day, 477 (5 percent) at dusk, and 4,222 (46 percent) at night. Of the 241 major bird strikes, 2 (<1 percent) were at dawn, 128 (53 percent) during the day, 15 (6 percent) were at dusk, and 96 (40 Percent) at night. Of these major bird strikes, only a handful were related to species of birds that we would expect to be nocturnal, such as owls or nighthawks.

Exhibit 52. The author continues:

> It's important for pilots to realize that hazards associated with birds don't go away after the sun sets. In fact, the danger to flying operations increases for several reasons. During normal daytime ops, the SOF and airfield management can identify an increase in bird activity and dictate a change in the bird watch condition to limit exposure. At night, it's far more difficult to detect and adjust to a change in bird traffic. Pilots often talk about keeping their visors down when operating at low altitudes during the day for an added layer of protection should a catastrophic frontal bird strike occur. At night, when wearing night vision goggle brackets, it's not possible to add that protection while at low altitude on departure or recovery. Lastly, even minor emergencies with aircraft can become far more dangerous at night. Impact with a bird causing significant damage to flight controls, avionics, the power plant or simply impairing forward visibility on a canopy is far more difficult to handle without good outside visual cues and the ability to easily read checklists.

Id. Raptors in the proposed LATA include the bald eagle, Mexican spotted owl, and northern aplomado falcon. Although AFSOC recognizes that aircraft noise can disrupt these species' hunting and roosting activities, the Draft EA claims that "raptors appear to be more tolerant of aircraft noise than other types of birds." Draft EA at 4-12. However, the National Park Service (NPS) reports that:

> Raptors (birds of prey) have also been monitored for signs of disturbance from overflights during the breeding season. Occasionally, raptors are disturbed by aircraft enough to respond by flushing from their perches or nests. One pair of bald eagles at Cross Creeks National Wildlife Refuge in Georgia reportedly abandoned nesting activities altogether and left the area after repeated overflights by a military helicopter (Gladdys 1983)..."

Exhibit 55 at 13. The Draft EA arbitrarily and capriciously concludes that the proposed overflights will cause no significant impacts to waterfowl – even federally listed shorebird species such as the least tern, mountain plover and piping plover, which are present in the proposed LATA. However, AFSOC falsely claims that literature reviews "generally conclude that aircraft noise results in little to no response in shorebird species." Draft EA at 4-15. To the contrary, reports have shown adverse impacts to waterfowl from low altitude military overflights. According to the National Park Service:

> When the sudden sight and/or sound of aircraft causes alarm, the physiological and behavioral responses of animals are characterized as manifestations of stress. The effects of chronic stress form overflights have not been formally studied, though several national wildlife refuge managers suspect that stress from overflights makes waterfowl more susceptible to disease.

Exhibit 55 at 2. The report goes on to explain that "[t]here are dozens of reports, mostly from national wildlife refuges, of waterbirds flying, diving or swimming away from aircraft. This is apparently a widespread and common response." Id. at 3. The report explains that:

> Whether or not overflights have indirect effects on breeding success depends on the circumstances and types of behavioral response of the adult birds: whether or not they flush from their nests, whether the exposed nests are vulnerable to predators, proximity of other nests (some birds nesting close together tend to fight after a disturbance, resulting in egg breakage), and physical characteristics of nests and of the adults.

> Many refuge managers have reported that birds flush from nests in response to overflights (Gladwin et al. 1987, USFWS 1993). This is considered a problem because of the potential for losses of eggs and young. Gulls, cormorants, and murres, for example, kick eggs from nests when they flush during disturbance, and eggs are lost, broken or eaten by predators. These events have been documented to occur on several national wildlife refuges (USFWS 1993). Some species, such as tundra swans and pelicans, apparently abandon nests due to chronic disturbance from overflights (Gladwin et al. 1987, USFWS 1993). Leaving eggs exposes to sun or rain also jeopardizes their survival.

Id. at 13. The report goes on to explain that:

> Waterfowl biologists and national wildlife refuge managers have expressed concern about how waterfowl use of open water and emergent wetland habitats is disrupted by aircraft overflights. Overflights have been reported to cause disturbance of dozens of wildlife refuges in 30 states (Gladwin et al. 1987). Most often, waterfowl flush from lakes and fly away, but return once the noise levels in the area return to ambient. On the other hand, several refuges have reported that some waterfowl species have been completely driven off by frequent aircraft activity. Belanger and Bedard's (1989a,b) study on snow geese energetic and disturbance showed a significant drop—50 percent in the number of geese using feeding grounds on days following aircraft disturbance. Waterfowl using lakes in Canada were displaced for several days when disturbed by light aircraft overflights (Schweinsburg et al. 1974b). Wintering sandhill cranes leave feeding and loafing areas (resting areas) for extended periods when low-altitude overflights take place over Cibola and Imperial Wildlife Refuges (USFWS). Wood storks many also abandon habitat in response to overflights (USFWS 1993). Observations by refuge biologists suggest that the endangered Palila Bird in Hawaii underutilizes a sizable portion of its critical habitat because of low-altitude military aircraft overflights (Gladwin et al. 1987). It is not currently known how the use of ponds, lakes and wetlands in national parks is affected by overflights.

Id. at 15. The authors go on to explain that:

> There is a particular concern that birds may suffer from energy losses due to chronic disturbance, especially during periods when increasing and

> storing energy reserves is critical for survival. During winter, the energetic costs of daily activities, such as keeping warm and feeding, mean that animals can spare little extra energy. During other seasons, such as the staging period or breeding season, large net grins of energy are required for migration and/or raising young. For example, the high energy requirements of ducks and geese during the molting season may not be met if these birds continuously swim, diver, or run from aircraft (Gollop et al. 1947b). Migrating birds such as snow geese may be vulnerable to disturbance during the staging season, when energy accumulation must be great enough to prepare for the high energetic demands of migration. Salter and Davis (1974) documented snow geese flushing repeatedly in response to overflights during the staging period just prior to their migration. The amount of time available for and the limits to compensatory feeding, or making up for lost time, are unknown. When animals are already feeding for a significant portion of the day, the opportunity for compensatory feeding is probably limited.

Id. at 14. The Draft EA recognizes that "[o]verflight noise could potentially have more of an effect on the neotropical migrant species (southwestern willow flycatcher and yellow-billed cuckoo)," such as impacts to reproductive success, while claiming that the potential response of the lesser prairie-chicken to aircraft noise is "uncertain." Draft EA at 4-15. The Draft EA admits that overflights "may disrupt brooding behavior." Id.

"Behavioral responses of wild animals to overflights nearly always accompany physiological responses...When animals are more severely disturbed, escape is the most common response. Perching or nesting birds may flush (fly up from a perch or nest) and circle the area before landing again." Exhibit 55 at 3. In addition, "[f]or many species, it has been argued that disturbance could cause reproductive losses by altering patterns of attendance to young. Disturbed mammals and birds have been noted to run or fly away from the stimulus (i.e. the aircraft), and leave eggs or young exposed. Birds that quickly flush from nests may accidentally break eggs or kick eggs or young from their nests." Id. at 12.

The Draft EA admits that protected bird species exposed to noise from aircraft overflights may exhibit detrimental startle responses including flushing, repeated interruptions of nesting or breeding, or abandonment of young. Draft EA at 4-15. However, the Draft EA then simply assumes without foundation "that some species are, or may become, acclimated to noise." Id. To the contrary, it is clear that the Proposed Action has the potential to cause significant adverse impacts to bird species. Bird species in most of the proposed LATA have not previously experienced nighttime, low altitude military overflights on this scale. AFSOC has not adequately

studied or disclosed potential impacts to bird species, and therefore the Draft is inadequate under NEPA.

B. Fish, Reptiles and Amphibians

The Draft EA admits that "[t]he effects of aircraft overflight noise on fish, reptiles, and amphibians have been poorly studied." Id. at 4-15. AFOSC identified 10 federally protected fish species in the proposed LATA. However, there are actually at least 19 federally and/or state protected fish species in the proposed LATN area, including:

- Arkansas River shiner (Federal Threatened, New Mexico Endangered) located in at least six counties in the proposed LATN area;
- Bonytail chub (Federal – Endangered, Colorado Endangered) located in at least 17 counties in the proposed LATN area;
- Colorado pikeminnow (Federal Endangered, NM Endangered, Colorado Threatened) in at least 16 counties in the proposed LATN area;
- Greenback cutthroat trout (Federal Threatened, CO Threatened) located in at least 9 counties in the proposed LATN area;
- Humpback chub (Federal Endangered, CO Threatened) located in at least 15 counties in the proposed LATN area;
- Pecos bluntnose shiner (Federal Threatened, NM Endangered) located in at least 2 counties in the proposed LATN area;
- Pecos gambusia (Federal Endangered, NM Endangered) located in at least 1 county in the proposed LATN area;
- Razorback sucker (Federal Endangered, NM Endangered, CO Endangered) located in at least 17 counties in the proposed LATN area;
- Rio Grande cutthroat trout (Federal Candidate, NM Candidate) located in at least 14 counties in the proposed LATN area;
- Rio Grande silvery minnow (Federal Endangered, NM Endangered) located in at least 3 counties in the proposed LATN area;

- Roundtail chub (Federal Candidate, NM Endangered) located in at least 2 counties in the proposed LATN area;

- Arkansas darter (Federal Candidate, CO Threatened) located in at least 1 county in the proposed LATN area;

- Pecos pupfish (Federal – Under Review) located in at least 1 county in the proposed LATN area;

- Arkansas River speckled chub (Federal – Under Review) located in at least 1 county in the proposed LATN area;

- Southern redbelly dace (NM Endangered) located in at least 2 counties in the proposed LATN area;

- Peppered chub (NM Threatened) located in at least 1 county in the proposed LATN area;

- Suckermounth minnow (NM Threatened) located in at least 6 counties in the proposed LATN area;

- Bigscale logperch (NM Threatened) located in at least 1 county in the proposed LATN area;

- Rio Grande sucker (CO Endangered) located in at least 2 counties in the proposed LATN area;

The Draft EA recognizes that fish startle in response to low flying aircraft noise and shadows but claims that the fish habituate over time. Draft EA at 4-15. Other adverse impacts to fish will be caused by air pollutant emissions that affect water quality and the aquatic habitat critical to survival of the fish. The 45 tons of nitrogen oxide emissions per year from the Proposed Action will add a significant amount of atmospheric nitrogen that will increase pollution of the lakes, reservoirs, rivers and streams in the LATA. Increased atmospheric nitrogen fixated by plants, such as algae, increases eutrophication and results in anoxia, levels of dissolved oxygen too low for fish survival. Exhibit 56. To help put the 45 tons of airborne nitrogen oxide emissions per year into context, the Colorado Department of Public Health and Environment (CDPHE) adopted "a nitrogen deposition-reduction plan with the ultimate management goal of limiting the annual

load of wet nitrogen deposition to 1.5 kg per hectare, the threshold below which ecosystem changes are unlikely to occur." Exhibit 57. Forty-five tons is equal to 40,823.313 kg. It is clear that introduction of 45 tons per year of nitrogen oxides into the lower atmosphere will have significant impacts on water quality and habitat for fish species.

According to the EPA, NOx emissions can affect people and natural resources through the formation of ozone in the lower atmosphere. Exhibit 53. NOx is key to the reaction that forms ozone, effectively producing many molecules of ozone for each NOx molecule that is emitted. Id. While ozone is a beneficial component of the upper atmosphere, it is damaging to both ecological and human health when found in the lower atmosphere. Id. Once again, it is clear that introduction of 45 tons per year of nitrogen oxides into the lower atmosphere will have significant impacts on water quality and habitats for fish species. AFSOC also failed to consider the new Colorado proposed nutrient (nitrogen and phosphorus) water quality criteria to take effect beginning in 2012. The current proposed nitrogen concentrations are in micrograms per liter (µg/l). Forty-five tons is thus equal to 40,823,313,300,000 µg. Once again, it is clear that the introduction of 45 tons per year of nitrogen oxides into the lower atmosphere will have significant impacts on water quality and habitats for fish species.

The Draft EA also fails to adequately study potential impacts to reptiles and amphibians. There are at least two federally protected amphibians and one reptile in the proposed LATN area:

- Jemez Mountains salamander (NM Endangered) located in at least two counties in the proposed LATN area;

- Boreal toad (NM Endangered) located in at least 10 counties in the proposed LATN area.

- Sand dune lizard (Federal Candidate, NM Candidate) located in at least 2 counties in the proposed LATN area.

AFSOC recognizes that "[l]ow-frequency noise (approximating thunder) apparently induces one species, the spadefoot toad (presumably *Scaphiopus couchii* or *Spea* spp.), to emerge from hibernation" and admits that "[e]mergence in unfavorable conditions caused by anthropogenic noise could be harmful." Draft EA at 4-15. Even though the Draft EA finds that information on such effects is "limited," AFSOC concludes that there will be no significant impacts because "habituation could occur." Id. This analysis is not adequate under NEPA and it is clear that the Proposed Action has the potential for significant adverse impacts to reptiles and amphibians in the proposed LATN area.

C. Mammals

The Draft EA reports that "federally protected mammals in the ROI include small species (New Mexico meadow jumping mouse and Gunnison's prairie dog) and relatively larger predatory species including the black-footed ferret, Canada lynx, and North American wolverine." Draft EA at 4-16. There are at least 10 federally and/or state protected mammal species in the proposed LATA:

- Black-footed ferret (Federal Endangered, EXPN; NM Endangered, EXPN; CO Endangered) located in at least 33 counties in the proposed LATN area;

- Canada lynx (Federal Threatened; CO Endangered) located in at least 26 counties in the proposed LATN area;

- North American wolverine (Federal Candidate; CO Endangered) located in at least 20 counties in the proposed LATN area;

- New Mexico meadow jumping mouse (Federal Candidate; NM Endangered) located in at least 8 counties in the proposed LATN area;

- Gunnison's prairie dog (Federal Candidate) located in at least 15 counties in the proposed LATN area;

- Least shrew (NM Threatened) located in at least 2 counties in the proposed LATN area;

- Spotted bat (NM Threatened) located in at least 2 counties in the proposed LATN area;

- American marten (NM Threatened) located in at least 2 counties in the proposed LATN area;

- River otter (CO Threatened) located in potentially all counties in the ROI (38 counties).

The Draft EA claims that the effects of military aircraft overflight noise on small mammals are minor and "occur at relatively high noise levels (69 to 115 dBA)." Draft EA at 4-16. However, it is well known that "low-level flights over wild animals may cause physiological and/or behavioral responses that reduce the animals' fitness or ability to survive." Exhibit 55 at 1. Overflights can also "interfere with raising young, habitat use, and physiological energy budgets." Id. According to the National Park Service Report, "few studies have addressed the indirect consequences" of overflights on mammals. Id.

Scientific studies in the literature have identified "alteration in movement and activity patterns of mountain sheep (Bleich et al. 1990); decreased foraging efficiency of desert big horn sheep (Stockwell and Bateman 1991); panic running by barren ground caribou (Calef et al. 1976); decreased calf survival of woodland caribou (Harrington and Veitch 1992); increased heartrate in elk, antelope, and rocky mountain big horn sheet (Bunch and Workman 1993); and adrenal hypertrophy in feral house mice (Chesser et al. 1975)." Id. Biologists also caution that "the consequences of disturbance, while cumulative, are not additive," meaning that impacts from recurring overflights from different sources (this project and others) could be much worse than those caused by isolated overflights, "especially when coupled with natural catastrophes such as harsh winters or water shortages." Id. at 3.

Panic reactions, chronic stress and escape responses can compromise mammal growth and reproduction by preventing animals from ingesting food necessary for survival and increasing energy expenditure associated with moving away from the aircraft. Id. at 13. Running can increase an ungulate's metabolism twenty-fold over the normal resting rate. Id. The disturbance from even infrequent overflights could cause sensitive animals to abandon their habitats altogether with serious consequences, "particularly for species whose high-quality habitat is already scarce such as mountain sheep and mountain goats." Id. at 14. Colorado Parks and Wildlife biologists recently moved at least 22 bighorn sheep from the southern Sangre de Cristo range into the mountains of northeastern Saguache County over the past two years. Exhibit 58. Before 2010, the northern Sangre de Cristo Mountains had not had bighorn sheep since the 1980s. Id.

The Draft EA wrongly concludes that there will be no effect on designated critical habitat will not be impacted by the Proposed Action because "[o]rdnance or other materials would not be released to impact the ground or water surfaces." Draft EA at 4-16. Designated critical habitat is located in many of the counties in the proposed LATA. In addition to impacts related to animals leaving critical habitat areas, there will be potentially significant impacts to ground, vegetation, and water surfaces from the emissions of pollutants from the military aircraft flying in the proposed LATN area. The Draft EA fails to fairly study or disclose potential adverse impacts to mammal species in the proposed LATA in violation of NEPA.

D. Vegetation

Although the Draft EA recognizes that protected plant species occur in the proposed LATA, AFSOC did not analyze any impacts to such species because "ordnance or other materials will not be intentionally released to impact the ground, and potential effects to biological resources are expected to be limited to noise impacts." Draft EA at 3-26. The following federally and/or state protected plant species are located in the proposed LATA:

- Pagosa skyrocket (Federal Endangered) located in at least 1 county in the proposed LATN area;
- Colorado hookless cactus (Federal Threatened) located in at least 3 counties in the proposed LATN area;
- Clay-loving wild buckwheat (Federal Endangered; CO Endangered) located in at least 2 counties in the proposed LATN area;
- Skiff milkvetch (Federal Candidate) located in at least 2 counties in the proposed LATN area;
- Knowlton's cactus (Federal Endangered; CO Endangered) located in at least 2 counties in the proposed LATN area;
- Penland alpine fen mustard (Federal Threatened; CO Threatened) located in at least 2 counties in the proposed LATN area;
- DeBeque phacelia (Federal Threatened) located in at least 1 county in the proposed LATN area;
- Schmoll milk-vetch ((Federal Candidate) located in at least 1 county in the proposed LATN area;
- Mancos milk-vetch (Federal Endangered; CO Endangered) located in at least 2 counties in the proposed LATN area;
- Mesa Verde cactus (Federal Threatened; CO Threatened) located in at least 2 counties in the proposed LATN area;

- Sleeping Ute milk-vetch (Federal Candidate) located in at least 1 county in the proposed LATN area;

- Ute ladies'-tresses (Federal Threatened; CO Threatened) is located in at least 1 county in the proposed LATN area;

- Pecos sunflower (Federal Threatened; NM Threatened) located in at least 2 counties in the proposed LATN area;

- Kuenzler hedgehog cactus (Federal Endangered; NM Endangered) is located in at least 1 county in the proposed LATN area;

- Wright's marsh thistle (Federal Candidate) is located in at least 2 counties in the proposed LATN area;

- Holy Ghost ipomopsis (Federal Endangered; NM Endangered) is located in at least 1 county in the proposed LATN area.

The Air Force failed to analyze impacts to these plant species when, in fact, there is significant potential for adverse impacts to these plant species from pollutant aircraft emissions.

Based on the above, it is arbitrary and capricious for the Air Force to conclude that impacts to biological resources, including threatened, endangered, and candidate species, as well as critical habitat, are not likely to be significant, and to fail to request a formal ESA Section 7 consultation for the Proposed Action.

XVIII. The Proposed Action Will Significantly Impact Air Quality

Jet fuel consists of a complex mixture of hydrocarbons, including poly aromatic hydrocarbons (PAHs), naphthalene and benzene (a known carcinogen) that may impact human health, animals and even plants. Exhibit 59. Increased use of aircraft can contribute to air quality problems from the storage and combustion of jet fuel, including contribution to ozone pollution, particulate matter pollution, nitrogen oxide pollution, and sulfur dioxide pollution. The EPA is in the process of developing new National Ambient Air Quality Standards (NAAQS) for each of these criteria pollutants.

The Air Force attempts to minimize the impacts of the proposed action on air quality by stating that "[p]roposed operational emissions within the proposed low altitude training area

from 136 C-130 and 552 CV-22 flights per year would not exceed an applicable Prevention of Significant Deterioration (PSD) threshold of 250 tons per year and would not impact visibility or air quality values within affected federal Class 1 areas." Draft EA at 3. AFSOC fails to discuss the adverse impacts of pollutant emissions in the 'lower' atmosphere to air quality, human health, biological resources, wildlife, and water resources that will be caused by the low altitude training flights.

The Air Force attempts to minimize the impacts of 42 tons of nitrogen oxide emissions per year, which will adversely impact both human health and the environment. Nitrogen dioxide NO_2 is one of a group of highly reactive gasses known as "oxides of nitrogen," or "nitrogen oxides (NOx). Other nitrogen oxides include nitrous acid and nitric acid. According to EPA, "[w]hile ozone is a beneficial component of the upper atmosphere, it is damaging to both ecological and human health when found in the lower atmosphere." Exhibit 53, The Draft EA fails to discuss multiple transport and exposure pathways of airborne nitrogen emissions; atmospheric concentrations and ozone and particulate matter; nitrogen wet deposition, cloud deposition, and dry deposition; regional effects of nitrogen emissions on health, visibility and materials; atmosphere concentrations of particulate matter; visibility impact/material damage; aquatic concentrations and nitrate concentrations in drinking water; terrestrial systems; freshwater ecosystem effects; and the impacts on water quality. Id.

NOx emissions can affect people and natural resources through the formation of ozone in the lower atmosphere. NOx is key to the reaction that forms ozone, effectively producing many molecules of ozone for each NOx molecule that is emitted. While ozone is a beneficial component of the upper atmosphere, it is damaging to both ecological and human health when found in the lower atmosphere. Impacts on trees and plants include impairment of growth and commercial yield, reduction in the survival of seedlings, increase in susceptibility to disease and foul weather, and reduction in habitat quality for wildlife." Id. at 8. Nitrogen oxides can travel long distances from their origins. Id. at 13.

Ozone has an especially strong impact on respiratory function when individuals are exercising, irritating even healthy lungs, decreasing the volume of air a person can take in with each breath, and causing fast, shallow breathing. Concentrations as low as 80 parts per billion (ppb) can cause damage when people are exposed for over eight hours at a time, as can levels of 120 ppb over even short periods of time. These conditions are common in urban areas across the country, especially in summer months when heat and humidity promote the production of ozone. In addition, ozone increases respiratory and pulmonary sensitive and inflammation and overall susceptibility to respiration disease. Id. at 13.

Nitrogen emissions also contribute to the formation of particulate matter. The term

particulate matter (PM) refers to a combination of dust, soot, and solid and liquid masses that form in the atmosphere. Nitrogen oxides interact with other compounds to form the fine particles and droplets that constitute PM. While PM restricts visibility and contributes to haze problems, these particles are of greatest concern because of their impact on human health, contributing significantly to respiratory damage." Id.

Wet deposition of sulfur and nitrogen compounds that contribute to acidification of lakes, streams, and soils is commonly known as acid rain, although such *acid deposition* also takes the form of snow, sleet, or hail. Certain nitrogen compounds interact with water vapor and droplets in the atmosphere so that the water becomes acidic. Wet deposition is intermittent, since acids only reach the earth when precipitation falls. Id. at 9. Wet deposition contributes to seasonal variation in nitrogen inputs to an ecosystem. When acidic or nitrogen-contaminated snow falls during the winter, many of the nitrogen compounds remain stored in the snow until it melts. Id.

Dry deposition is similar to the other pathways, but takes place when acidic gases and particles in the atmosphere are deposited directly onto surfaces when precipitation is not occurring. This process provides a more constant source of deposition than the other pathways. Dry deposition is therefore the primary acid deposition pathway in arid regions in the West. Id. at 11.

Nitrogen exists in ground- and surface waters in the form of nitrate ions (NO3), whose levels are increasing in many parts of the country. The most notable human health impact from nitrate contamination of water supplies is methemoglobinemia, or Blue Baby Syndrome. This most frequently affects infants under one year of age and can cause brain damage or death. A 1990 survey estimated that 4.5 million people a year were potentially exposed to nitrate levels above the EPA's Maximum Contaminant Level (MCL) of 10 mg/L. In addition, increased levels of nitrate in water supplies can increase the acidity of the water and make toxic metals such as mercury more soluble and therefore more available to fish, some of which might be consumed by humans. Id. at 15

Along with SO_2 emissions, nitrogen emissions contribute to an increase in regional haze and a resulting decrease in visibility. The same gases and particles that pose risks to lung tissue as fine particles also contribute to regional haze and obstruct views. Scientists estimate that the natural range of visibility, absent the effects of pollution, would be approximately 110 to 115 miles in the western U.S. and 60 to 80 miles in the East. Under current conditions, visibility in the West is between 30 and 90 miles and 15 to 30 miles in the East. Id. at 14. The Proposed Action has great potential to harm Air Quality Related Values (AQRV) including visibility and specific scenic, cultural, physical, biological, ecological, and recreational resources in Federal Class I Areas including: Great Sand Dunes National Park & Preserve; Mesa Verde National Park; Black Canyon of the Gunnison National Park; Weminuche Wilderness; La Garita Wilderness;

West Elk Wilderness; Maroon Bells Snowmass Wilderness; Pecos Wilderness; Wheeler Peak Wilderness; Bandelier National Monument; and San Pedro Parks Wilderness.

Nitrogen emissions can also harm buildings and other structures, especially those made of calcite-rich materials such as marble and limestone. When nitric, sulfurous, and sulfuric acids in polluted air react with the calcite in marble and limestone, the calcite dissolves. Stone surface material may be lost all over or only in spots that are more exposed. While not as obvious as the damage done to stone, a wide variety of other materials are damaged byproducts of NOx emissions. Ozone chemically attacks elastomers (natural rubber and certain synthetic polymers), textile fibers and dyes, and to a lesser extent, paints. For example, elastomers become brittle and crack, and dyes fade after exposure to ozone. Id. at 14-15.

Too much nitrogen can also lead to a surplus of nutrients resulting in over-fertilization. This can impact species diversity by favoring some nitrogen-tolerant species over other species that are more sensitive to the nutrient. In some ecosystems, other nutrients are in sufficient supply, and so the amount of available nitrogen dictates what growth can take place. Plants living in these systems have adapted to low levels of nitrogen and are especially vulnerable to increased levels of nitrogen deposition. Their decline may lead to changes in the mix of plant species in an area, causing a decrease in species diversity. New plants may also move into nitrogen-rich ecosystems, further challenging native species. Animals that depend on specific plants for habitat and food may also be threatened by the changes resulting from nitrogen inputs. Id. at 16.

Excess levels of nitrogen can change the natural cycle of plant uptake, transformation, and release, robbing soils of their capacity to absorb nitrogen compounds. Known as nitrogen (N) saturation, this phenomenon involves the long-term removal of N limitations on biological activity, accompanied by a decrease in the ability of ecosystems to retain N inputs. As a result, nitrogen can migrate to surface waters or leach into groundwater, particularly in sensitive ecosystems with poorly buffered or thin soils, such as the mountainous areas in Colorado. As more terrestrial ecosystems reach the point of N saturation, nitrogen inputs reach groundwater and surface water. Id. at 17.

When NOx and SO_2 emissions enter the atmosphere, they can be transformed into acids through complex chemical interactions. These acids return to the earth via precipitation or when plants come into direct contact with acidic cloud droplets or gases and airborne particles. Atmospheric deposition of nitrogen compounds and other pollutants modifies soil chemistry and concentrations of important soil nutrients. Id. at 17. Extremely high levels of acid deposition, especially from cloud deposition, damage plant leaves and leach nutrients directly from foliage. Indirect effects of acid deposition are also responsible for damage to forest ecosystems, as acidic

ions in the soil displace calcium and other nutrients from plant roots, inhibiting growth. Acid deposition can also mobilize toxic amounts of aluminum, increasing its availability for uptake by plants. Id. at 17. Acidification affects fauna throughout the food chain, resulting in significant direct and indirect damages to local fish populations. Even when fish are not immediately killed by increase in acidity, impacts on food sources may force specific species to migrate to less acidic areas. Acidification of surface waters leads to a decline in species diversity as sensitive species are replaced by species that are more acid-tolerant. Id. at 19.

The Draft EA fails to consider the new Colorado proposed nutrient (nitrogen and phosphorus) water quality standards. The current proposed nitrogen concentrations are in micrograms per liter (µg/L). For comparison, 45 tons of NOx per year is equal to 40,823,313,000 micrograms (µg). A recent estimated cost for treatment as a result of these new water quality standards in Colorado alone is $23 billion dollars.

AFSOC also failed to discuss other aircraft engine contaminant emissions in the proposed LATN area, such as Carbon Dioxide (CO2), Carbon Monoxide (CO), Hydrocarbons (HC), Sulfur Oxides, Particulate Matter (PM), Volatile Organic Compounds (VOCs), Ozone (O3), Semi-Volatile Organic Compounds (SVOCs), and Metals. While the estimated 42 tons per year of NOx is very significant, the pollutant with the greatest emissions in the proposed training area is not NOx, but CO_2. In Table 4-4 in the Draft EA, AFSOC shows 17,612 tons per year of CO_2 emissions in the proposed LATA. Draft EA at 4-10. CO_2 does not have a PSD Significant Threshold, but it is the most significant greenhouse gas emitted by aircraft. According to the Government Accounting Office (GAO) in a June 2009 report to Congressional Committees:

> Aircraft emit a variety of greenhouse and other gases, including carbon dioxide—the most significant greenhouse gas emitted by aircraft—and nitrogen oxides, as well as other substances such as soot and water vapor that are believed to negatively affect the earth's climate.

Exhibit 60. During flight operations, carbon dioxide emissions from aircraft are a direct result of fuel burn. For every gallon of jet fuel burned, about 21 pounds of carbon dioxide are emitted. Id. at 3.

Global warming and climate change are now an acknowledged and pressing concern. AFSOC failed to properly analyze the effects of the Proposed Action in altering local and/or regional climates – through increased cloud cover from contrails, emissions in the expanded airspace, and other effects. The Draft EA failed to include a cumulative effect analysis of the carbon and global warming footprint of the existing use of military airspace in the region when considered in light of all expanded and foreseeable military airspace uses in the area and region.

AFSOC did not conduct baseline monitoring in areas with and without military overflights in the region in order to assess the effects on air and water quality or determine how far air emissions will travel from their source based on seasonal weather patterns.

Persistent jet contrails are made up of ice crystals and water vapor and other material, and it is known that water vapor may have climate effects. Some NASA studies show that persistent jet contrails may exacerbate global warming and may alter climate by producing man-made clouds. Water vapor is a significant by-product of commercial and military aviation. Changes in global cloud cover may contribute to long-term changes in Earth's climate. Persistent contrails represent a human-caused increase in the Earth's cloudiness, and are likely to be affecting climate and ultimately our natural resources. The Draft EA fails to include a thorough examination of the effects of contrails from military and civilian airspace use. Exhibit 61.

The NAAQS for Carbon Monoxide are 9 ppm [parts per million] 8-hour and 35 ppm 1-hour Primary Standards. Exhibit 62. Colorado is currently in non-attainment for Carbon Monoxide in El Paso County, Teller County, Adams County-Denver Metro Area, Arapahoe County-Denver Metro Area, Boulder County-Denver Metro Area, Broomfield County, Denver County, Douglas County-Denver Metro Area, Jefferson County-Denver Metro Area, Larimer County, Greeley County, Longmont County, Boulder County-Portion of Longmont, and Weld County-Portion of Longmont. Exhibit 63. New Mexico is currently in non-attainment for Carbon Monoxide in Albuquerque, Bernalillo County. Id. CO can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. At extremely high levels, CO can cause death. Exhibit 64. Short-term exposures to SO_2, ranging from 5 minutes to 24 hours, may cause an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. SO_2 emissions also contribute to an increase in regional haze and a resulting decrease in visibility and harmful impacts to historic buildings and structures. Exhibit 65. Nitrogen Dioxide emissions also contribute to adverse respiratory effects. Exhibit 66.

AFSOC inadequately considered impacts related to In-Flight Emergency Fuel Release, i.e., the release or venting of fuel as a safety measure. According to the Draft EA, JP-8 jet fuel released at low altitudes appears as a fine mist and may not volatilize before reaching the ground surface. Exhibit 61. The Draft EA reveals that there is no AFI or Technical Order addressing the specific amount of fuel leakage expected to occur between the C-130 basket and the helicopter/CV-22 drogue. Furthermore, AFSOC fails to discuss the emissions of the MC-130J, one of the primary aircraft included in the Proposed Action, or to identify and discuss pollutant emissions for the 'variants' of the C-130 that will also be flying in the proposed LATA. Without discussion of the pollutant emissions of all of the aircraft that will be flown in the proposed airspace, as well as calculations of emissions of each type of aircraft, the public has no way of

evaluating the total air quality impacts of the Proposed Action. Air pollutant emissions from the aircraft flying in the proposed LATN area will have significant adverse impacts on human health and the environment and therefore issuance of a FONSI would be arbitrary and capricious.

XIX. The Proposed Action Will Cause Significant Adverse Effects to Water Resources

The AFSOC fails to adequately analyze the Proposed Action's potential impacts to water resources. The Draft EA concludes that no impacts to water resources are expected because "[p]roposed training would not involve any interaction with bodies of water as aircraft would remain aloft during the entire training event and would not release or recover any items. Draft EA at 3-2. However, AFSOC fails to discuss the adverse impacts of pollutant emissions in the 'lower' atmosphere on water resources that will be caused by the low altitude training flights.

As discussed above, the Draft EA fails to discuss the adverse impacts of nitrogen oxide emissions on aquatic concentrations; nitrate concentrations in drinking water; freshwater ecosystem effects; water quality; and the economy. AFSOC fails to consider nitrogen wet deposition and dry deposition; aquatic concentrations and nitrate concentrations in drinking water; freshwater ecosystem effects; and the impacts on water quality. Changes in the environment resulting from elevated nitrogen and phosphorus levels (e.g., algal blooms, toxins from harmful algal blooms (HABs), and hypoxia/anoxia) can cause a variety of effects on fish, shellfish, and wildlife populations. When excessive nitrogen and phosphorus loads change a water body's algae and plant species, this can result in altered habitat and quality of available food resources, and subsequently affect the entire food chain. Algal blooms can also increase the turbidity and impair the ability of fish and other aquatic life to find food. Algae can also damage or clog the gills of fish and invertebrates.

In June 1998, EPA published the National Strategy for the Development of Regional Nutrient Criteria. Exhibit 67. The National Strategy specifically states that the EPA will establish nutrient criteria that reflect the different types of water bodies and different ecoregions of the country. Every state in the United States is mandated by the U.S. EPA to develop nitrogen and phosphorus (nutrient) water quality criteria. The AFSOC fails to consider and evaluate the new proposed nutrient (nitrogen and phosphorus) water quality standards for New Mexico and Colorado. New Mexico is in the process of developing nutrient water quality criteria. The Draft EA fails to consider the new Colorado proposed nutrient (nitrogen and phosphorus) water quality standards. Cost estimates to remove nitrogen and phosphorus by upgrading wastewater treatment plants in the United States could exceed $54 billion. Costs for small communities to remove nitrate from drinking water can also be significant. It is clear that the adverse impacts of the Proposed Action to water resources, human health, and the economy will be significant.

A significant additional indirect impact of the Proposed Action will be the drawdown of the Ogallala aquifer by Cannon Air Force Base. According to the September 2010 Cannon Air Force Base General Plan:

> Cannon AFB is completely independent from outside water sources. Potable and nonpotable water is supplied by nine government-owned wells, all of which are located on-base. Six wells provide potable water and three wells are nonpotable. The wells draw water from a regionally significant aquifer, the Ogallala Formation, which extends across the Great Plains into portions of New Mexico, Texas, Oklahoma, Kansas, Colorado, Nebraska, and South Dakota.

Exhibit 5 at 4-67. The General Plan also notes that "[t]he amount of surface recharge to the aquifer is low due to very limited precipitation, high evapotranspiration, and the presence of impervious caliche in the upper geologic zone," and that "[r]egional groundwater levels have declined for the past 65 years with an average decline slightly over 2 feet per year." Id. Groundwater withdrawals from the Ogallala aquifer have exceeded groundwater recharge. The Proposed Action in the Cannon AFB LATN/LATA EA is part of a much greater plan by the Air Force, as described in the September 2010 Cannon Air Force Base General Plan. According to the General Plan:

> **1.2 CANNON AFB 2027 VISION**
>
> A revolutionary change at Cannon AFB is underway. This change is the result of a number of related actions over the last nine years.
>
> The 11 September 2001 attack on the United States by terrorists resulted in a number of U.S. military actions around the world. Each of these actions showed the growing need for special operations forces (SOF). The AFSOC at Hurlburt Field, Florida, continued to grow and build out to the point of being constrained by available land area.
>
> Congress established the Base Realignment and Closure (BRAC) process to close unneeded military bases. The Air Force and the Secretary of Defense recommended that F-16s at Cannon AFB be reassigned and that the Air Combat Command (ACC) base be closed. The Defense Base Closure and Realignment Commission of 2005 (the "BRAC Commission") recommended that Cannon AFB aircraft be reassigned and that the base not be closed, but instead be put into caretaker status until

the Secretary of Defense identified a new mission or recommended closure by 31 December 2009. The BRAC Commission, in a separate action, directed that the multi-service F-35 Initial Joint Training Site and the U.S. Army 7th Special Forces Group (Airborne) be located at Eglin AFB. These actions made the finite Eglin Range assets even more scarce for all existing Eglin Range users, including major user AFSOC co-located at Hurlburt Field.

The 2006 Quadrennial Defense Review recommended the growth of the AFSOC mission by 15 percent and the establishment of an unmanned aerial vehicle squadron under AFSOC. AFSOC conducted a study of how to expand. Three alternatives were considered:

Expand Hurlburt Field

Establish units at Davis-Monthan AFB, Arizona

Establish Cannon AFB and Melrose Air Force Range (AFR) as a special operations base.

The third listed alternative 1 was rated the most desirable on 9 of 11 evaluation criteria.

Secretary of Defense Rumsfield announced on 20 June 2006 that Cannon AFB and Melrose AFR would become AFSOC assets as of 1 October 2007 and would support the expansion of Air Force SOF and their training needs with the establishment of the 27 SOW.

As a result, the 60 ACC F-16s assigned to Cannon AFB departed and are being replaced with 108 turboprop aircraft along with an accompanying base population projected to increase by 50 percent. The base will be developed at a final cost of approximately $965 million to support AFSOC mission beddowns.

Although a separate *Comprehensive Range Plan* for the Melrose AFR has been produced, it must be considered as a critical part of the mission beddown at Cannon AFB. Because the two installations provide AFSOC an opportunity to train and certify operational capabilities in desert mountain terrain and conditions, they represent a significant expansion of

Air Force SOF worldwide deployment, training, and readiness capabilities. The opportunities offered at Cannon AFB and the Melrose AFR complex will eventually involve all phases of the operational use of multi-service joint-use personnel, equipment, and munitions, including weapons testing and evaluation. AFSOC needs Cannon AFB and Melrose AFR facilities and future operational training opportunities to meet the increased need for SOF worldwide.

The Cannon AFB and Melrose AFR complex supports several important capabilities for AFSOC and the overall SOF capability of U.S. forces. The quality of flying training at Cannon AFB and Melrose AFR is more representative of ongoing, real-world deployments that support the Global War on Terrorism than the Eglin Ranges. AFSOC, located at Hurlburt Field, competes for limited range time at Eglin AFB in a southeastern U.S. sea level environment, while Melrose AFR is dedicated to special forces training in a southwestern arid, high-planes environment. Being a one-base major command (MAJCOM) at Hurlburt Field, AFSOC is vulnerable to a catastrophic event (i.e., hurricane). With a second base in the western United States, AFSOC solves many of its operational security (OPSEC) problems and has a ready deployment field if a natural or man-made disaster should require evacuation from Hurlburt Field. The Cannon AFB and Melrose AFR complex and the Hurlburt Field and Eglin Range complex create a unique complementary synergy for AFSOC.

The vision for Cannon AFB and Melrose AFR is to mirror Hurlburt Field with schools, aircraft maintenance, simulators, and an emphasis on joint SOF training and operations. The Cannon AFB and Melrose AFR complex has a tremendous upside for AFSOC because it offers the opportunity for a Range Operations Center (ROC) on Cannon AFB to electronically link "live/virtual/constructive" activities at Melrose AFR and Cannon AFB with AFSOC and United States Special Operations Command (USSOCOM) training and exercises. The ability to conduct integrated air/ground operational training provides AFSOC that high-level team training so necessary for success in special operations.

The vision for Cannon AFB and Melrose AFR is the "AFSOC Center of Excellence – West" (Figure 1-1). To make the vision happen, planning, significant improvements to base facilities and quality of life features,

> and the necessary funding are needed. All of these factors are addressed in this plan to make the Cannon AFB vision a reality.

Exhibit 5 at 1-2 to 1-4.

While part of the Air Force's vision, the location at Cannon AFB is not essential. There are two other alternatives: Expand Hurlburt Field or Establish units at Davis-Monthan AFB, Arizona. The impacts of this vision to create an "AFSOC Center of Excellence – West" at Cannon Air Force Base will destroy the Ogallala Aquifer "that provides water for South Dakota, Nebraska, Colorado, Wyoming, Kansas, Oklahoma, Texas, and New Mexico. It spans an area of 800 miles from north to south, and 400 miles from east to west." Exhibit 68.

"Groundwater is the second largest reserve of freshwater on earth. It also makes up 40% of the freshwater used in the U.S. alone...When groundwater is depleted, the effects on the landscape and the people are drastic. "Cones of depression" can be formed if too much water is drawn out of a water table without letting it recharge. A cone of depression is where the water table sinks in an area that has been heavily pumped, creating a large are that has sunken. "Sinkholes" may also form when an underground cavern or channel collapses and creates a crater in the earth's surface." Id.

"In the U.S. Great Plains, the Ogallala Aquifer is a prime example of groundwater depletion. This aquifer provides water for South Dakota, Nebraska, Colorado, Wyoming, Kansas, Oklahoma, Texas, and New Mexico. It spans an area of 800 miles from north to south, and 400 hundred miles from east to west." Id at 2. "It was first tapped in 1911 when a farmer dug a well by hand for irrigation purposes. In the 1950s there were approximately 80 wells a year that were being dug to tap the aquifer in Colorado alone. There were some restrictions placed on digging wells to tap the Ogallala Aquifer, but these limitations did not stop farms and cities from depleting the aquifer. This aquifer supplies 70% of the water used daily in Kansas." Id at 3.

"The water pumped from Ogallala Aquifer is used mostly for irrigation purposes. The land in the Great Plains is semi-arid and the water that is available evaporates quickly. Due to the need for greater amounts of water for irrigation, the aquifer is being depleted because the recharging process cannot keep up with the withdrawal of water." Id at 3. "Since people had started to rely on the Ogallala Aquifer for irrigation of their fields, 6% of the aquifer has dropped to an unusable level that can no longer be pumped. If irrigation continues to draw water from the aquifer at the same rate, about 6% of the aquifer will be used up over 25 years. One estimate states that the aquifer is being depleted at a rate of approximately 12 billion cubic meters per year. The biggest problem facing people who use the Ogallala Aquifer is that they do not know

how long the water supply will last." Id at 4.

The Air Force attempts to justify the creation of this new "AFSOC Center of Excellence – West" at Cannon Air Force Base because "[w]ith a second base in the western United States, AFSOC solves many of its operational security (OPSEC) problems and has a ready deployment field if a natural or man-made disaster should require evacuation from Hurlburt Field." Exhibit 5 at 1-4. This is completely failed justification for destroying the Ogallala Aquifer since Hurlburt Field has existed for 68 years, being established on March 2, 1943. Exhibit 69.

The impacts of this proposed AFSOC Center of Excellence-West at Cannon Air Force Base and the associated Proposed Action to develop a new low-altitude flying area in Northern New Mexico and Colorado, based on the destruction of the Ogallala Aquifer alone, will be catastrophic.

XX. The Proposed Action Will Significantly Affect Cultural Resources

The proposed LATA area contains the richest archaeological, historical and paleontological resources in Colorado and New Mexico. Any damage to archaeological sites is permanent and cumulative: archaeological resources are not renewable resources. The sound from aircraft activity can cause archaeological resources and structures to vibrate. It can also cause contemporary structures to vibrate and windowpanes to shatter. This is particularly the case for masonry stone structures of Ancestral Pueblo and Navajo cultural affiliation such as those found throughout New Mexico and Colorado at such places as Hovenweep National Monument, the Ute Mountain Ute Tribal Park, Chimney Rock Archaeological Area, and Mesa Verde National Park in Colorado and Aztec National Monument, Largo Canyon, and Gobernador Canyon in New Mexico. The same damages could occur to the stone structures on some of the historic homesteads found throughout Colorado and northern New Mexico. Furthermore, rock art throughout the entire region affected by the LATN plan may be on unstable panels that may crack or slough off and sites within rock shelters and alcove sites may be subject to damage and burial from roof fall as a result of vibrations from sonic events.[12]

The Draft EA erroneously concludes that "[t]he proposed flights would not be expected to result in induced vibrations with potential to damage ancient stone structures." Draft EA at 4. However, the environmental analysis does not specifically take into account the sound pressure level of the MC-130J, one of the two primary aircraft that is one of the two primary aircraft in the proposed action.

[12] *See* Hanson, C.E. 1991. "Aircraft Noise Effects on Cultural Resources: Review of Technical Literature," HMMH Report No. 290940.04-1, NPOA Report No. 91-3.

As noted earlier, the Draft EA fails to consider the degradation of cultural resources due to nitrogen emissions. AFSOC also fails to identify and analyze impacts of the Proposed Action to paleontological resources in the proposed LATN/LATA area. According to the U.S. Geological Survey (USGS), "[a] chance discovery in October of Ice Age fossils at Ziegler Reservoir in Snowmass Village, Colorado [Pitkin County] is providing scientists with a vegetative and climate history spanning more than 100,000 years." Exhibit 70. The Snowmass site, considered to be one of the most significant Ice Age sites discovered in Colorado, contains the fossils of Columbian mammoths, mastodons, bison and deer. Id. "Initial radiocarbon dating indicates that the site is more than 43,500 years old and geologists estimate the site could be as old as 130,000 years, said the Denver Museum of Nature & Science (DMNS)." Id. In Rio Arriba County, New Mexico, is the famous dinosaur site, the Ghost Ranch. Exhibit 71.

The vibration impacts to cultural resources in the proposed LATA will be significant. AFSOC fails to consider other sound impacts to cultural and historical properties, such as how structures respond to airborne sound; the character of sound produced by aircraft; and damage potential of the structure itself (short-term and long-term effects). Aircraft overflights create sound levels of frequencies low enough to induce natural frequency vibrations in structures. Helicopters produce a substantial amount of their energy at the natural frequency of structures. The size of the rotor (which provides life as well as propulsion) produces significant acoustic energy, and the relatively slow speed of the rotor causes this energy to be concentrated at low frequencies. In general, the heavier the helicopter, the greater the radiated low frequency energy.

The CV-22 Osprey has a wingspan of 84', 7", a length of 57', 4", a height of 22', 1", and a maximum rolling takeoff weight of 60,500 pounds. The MC-130J Combat Shadow II has a wingspan of 132', 7", a length of 97', 9", a height of 38', 10", and a maximum takeoff weight of 164,000 pounds. These are very large aircraft that have the potential to cause structural vibrations and adverse impacts to cultural and historical properties. Long term effects created by repeated exposures at lower acoustic levels has the potential for significant adverse impacts to the cultural and historic properties in the proposed LATA and the Draft EA should have studied and disclosed these impacts. Cultural and historic properties are spread throughout the proposed LATA, including on private properties.[13] As discussed above, AFSOC fails to consider the impacts of air pollution on cultural and historic properties. Exhibit 72.

The proposed LATA includes air space over the following sovereign Native American

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[13] *New Mexico National Register of Historic Places,* www.nationalregisterofhistoricplaces.com/nm/state.html, *Colorado State and National Register of Historic Properties,* www.historycolorado.org/archaeologists/colorado-state-register-historic-properties.

Nations: Jicarrilla Apache Nation; Navajo Nation, Ute Mountain Nation, and the Southern Ute Nation. This expansive area also includes air space over numerous Native American pueblos, including: Acoma, Cochiti, Isleta, Jemez, Laguna, Nambe, Ohkay Owingeh, Picuris, Pojoaque, San Felipe, San Ildefonso, Sandia, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Zia, and Zuni. These Native American Pueblos have historic stone and adobe constructed buildings that are very sensitive to both vibration and pollution. The Proposed Action will cause noise, visual, and pollution impacts on Native American resources and cultural activities, including traditional ceremonies and physical resources.

The Draft EA fails to adequately disclose and consider impacts on the Native American historic structures, the solemnity of sacred sites, and the interference with Native American ceremonies. According to the National Park Service, "[a]n illustrative example of how overflights can impact site solemnity, speech communication, and historic structures is the situation at Taos Pueblo, one of the oldest living communities still existing in the United States. Exhibit 72. According to the Taos Pueblo, continual overflights intrude into the sensitive areas of their village and sacred wilderness lands, which are places of retreat and prayer. Overflight intrusions threaten the continuance of an ancient way of life. To Native Americans such as the Taos Pueblo, air is part of the "sacred realm" that must be protected along with land and water. Native Americans note that undisturbed habitats, particular resources, and contexts are pivotal to the success of religious practices. Contemplative activities involving communication with holy beings require the intense concentration that quiet, restful surroundings engender. Unnatural disturbances during religious ceremonies portend harm to traditional practitioners of sacred acts and their intended beneficiaries.

Based on the foregoing, it is clear that there is potential for significant adverse impacts to Native American cultural and historical properties, sacred ways, traditions, sacred shrines, wilderness areas, and the air as part of the 'sacred realm', in the proposed LATA The AFSOC proposal to stay away from "avoidance areas" will not prevent impacts because significant cultural and historic sites are ubiquitous throughout the affected area. Therefore, the Draft EA's failure to take a hard look at these impacts renders the analysis arbitrary and capricious.

XXI. The Proposed Action Will Adversely Affect Land Use and Recreation

According to the FAA, "[e]xcessive aircraft noise can result in annoyance, inconvenience, or interference with the uses and enjoyment of property, and can adversely affect wildlife. It is particularly undesirable in areas where it interferes with normal activities associated with the area's use, including residential, educational, health, and religious structures and sites, and parks, recreational areas (including areas with wilderness characteristics), wildlife refuges, and cultural and historical sites where a quiet setting is a generally recognized feature or attribute." Exhibit

73. An area is "noise sensitive" if noise interferes with normal activities associated with the area's use. "Examples of noise-sensitive areas include residential, educational, health, and religious structures and sites, and parks, recreational areas (including areas with wilderness characteristics), wildlife refuges, and cultural and historical sites where a quite setting is a generally recognized feature or attribute." Id. The FAA recommends that "pilots operating noise producing aircraft (fixed-wing, rotary-wing and hot air ballons) over noise-sensitive areas should make every effort to fly not less than 2,000 feet above ground level (AGL), weather permitting...The intent of the 2,000 feet AGL recommendation is to reduce potential interference with wildlife and complaints of noise disturbances caused by low flying aircraft over noise-sensitive areas." Id.

Noise and vibration caused by the LATN proposal will adversely impact or alter various land uses including churches, schools, colleges and universities, and businesses operated throughout the evening or 24 hours a day/seven days a week. The LATN proposal also has the potential to adversely affect recreational users of public and private lands. Many recreationists seek clear, untrammeled and less polluted skies – including for relaxation with untrammeled vistas, nature and wildlife photography, and other activities. The public who appreciates peace and quiet and clear skies is increasingly sandwiched into smaller and smaller areas of the American West with each new, linked, segmented and connected military airspace and/or activity expansions further eating into untrammeled wild lands. Few areas in Colorado and New Mexico, outside cities and towns, remain free of existing military airspace and training. The scarcity of untrammeled airspace was not considered in the Draft EA.

XXII. The Proposed Action Will Significantly Affect Socioeconomics

Colorado and New Mexico residents have been forced to endure serial abuse of the NEPA process due to the DOD's relentless pursuit of military expansion, at a huge cost in terms of time, money and resources spent defending their homes and livelihoods. The Proposed Action will cause significant adverse impacts to property values. As discussed throughout this letter, environmental impacts will interfere with the ability of residents to enjoy their homes and surroundings and make economic use of their property. In *United States v. Causby*, 328 U.S. 256, 66 S.Ct. 1062, 90 L.Ed. 1206 (1946), the Supreme Court held that landowners have exclusive control of the immediate reaches of the enveloping atmosphere. The Court held that the landowner owns at least as much of the space above the ground as he can occupy or use in connection with the land. If "continuous invasions of it" affect the use of the surface, then this could amount to a taking under the U.S. Constitution, if "they are so low and so frequent as to be a direct and immediate interference with the enjoyment and use of the land." The Proposed Action is likely to result in multiple takings lawsuits against the federal government which will be resisted by the federal government at taxpayer expense. As discussed above, the Proposed

Action will also cost taxpayers billions of dollars for water treatment due to new nutrient water quality standards.

The Air Force fails to discuss the unit cost of these two new aircraft to the taxpayers. The U.S. Air Force reports that the Unit cost of the CV-22 Osprey is $89 million (fiscal 2005 dollars); the 27th Special Operations Wing, Cannon Air Force Base, NM, received its first CV-22 in May 2010, and a total of 50 CV-22 aircraft are scheduled to be delivered by 2016. The average cost per CV-22 Osprey aircraft is $110 million. The U.S. Air Force reports that the Unit cost of the new MC-130J Combat Shadow II is $67 million (FY 10 dollars). Ospreys require significantly more maintenance time between flights than older helicopters, and the engines need to be removed and sent back to the U.S. for complete overhaul much more often than helicopter engines. Eliminating the Osprey program could save taxpayers at least $10 billion, at a time when the Pentagon is looking to cut at least $450 billion over the next decade.

Recreation and tourism are critical to New Mexico and Colorado. According to the Wilderness Society, "Outdoor recreation supports more than 107,000 jobs and contributes $10 billion annually to Colorado's economy" alone. Exhibit 74. To this end, the San Juan Mountains Wilderness Act has been introduced in Congress to expand the existing Mt. Sneffels and Lizard Head Wilderness Areas, establish the McKenna Peak Wilderness in western San Miguel County, create the Sheep Mountain Special Management Area along the Alpine Ridge between San Miguel and San Juan Counties, and prohibit oil and gas development in Naturita Canyon near Norwood. Id. The Proposed Action jeopardizes this renewable source of economic prosperity for the region.

XXIII. The Proposed Action Will Significantly Affect Environmental Justice

The area chosen for the LATA contains some of the poorest minority communities in the United States. For example, the largely Hispanic San Luis Valley of Colorado is one of the poorest regions of the county. The LATN proposal also would impact Native American reservations, which contain some of the highest unemployment rates in the nation. The Draft EA's conclusion that the Proposed Action would not have disproportionate effects to minorities or low income populations is not accurate, and the Draft EA is deficient because it fails to fairly consider these issues. AFSOC also fails to consider the low incomes populations living in remote areas in the mountains.

Conclusion

For the reasons stated in this letter, Commenters oppose the AFSOC proposed LATN area. The LATN proposal will have serious economic impact to generational ranchers and farmers, rural communities, the cities, counties and states (NM/CO) that depend on healthy economies generated by family agriculture. The AFSOC proposal will adversely impact soils, crops, and livestock thus hurting the extensive family agriculture in the region. Ranchlands and farms of Colorado and New Mexico are among the region's most valuable and historic assets. The loss of this pristine, scenic open space threatens those who make their living here and the unspoiled natural and cultural resources of the region. The LATN proposal will endanger working landscapes causing irreparable harm to agriculture, the environment and economic health of the entire region. The Draft EA is fundamentally flawed and violates the intent and plain language of NEPA in a myriad of respects. Therefore, AFSOC should withdraw the proposal.

Thank you for the opportunity to submit these comments, and please don't hesitate to contact me directly if you have any questions about these matters.

Very truly yours,

Stephen D. Harris