FINAL SECOND SUPPLEMENT TO
THE ENVIRONMENTAL ASSESSMENT FOR PROPOSED PRAIRIE DOG MANAGEMENT PRACTICES AT BUCKLEY AIR FORCE BASE

CONSTRUCT FENCING AROUND AIRFIELD

November 2003

BUCKLEY AIR FORCE BASE
COLORADO

This page intentionally left blank.

FINAL FINDING OF NO SIGNIFICANT IMPACT
THE SECOND SUPPLEMENT TO
ENVIRONMENTAL ASSESSMENT FOR PROPOSED PRAIRIE DOG MANAGEMENT PRACTICES
(CONSTRUCT FENCING AROUND AIRFIELD)
BUCKLEY AIR FORCE BASE, COLORADO

AGENCY: United States Air Force, 460th Air Base Wing.

BACKGROUND: Pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations implementing the Act (40 Code of Federal Regulations [CFR] 1500-1508), Department of Defense Directive 6050.1, Regulation 5000.2-R, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*, as promulgated in 32 CFR Part 989, and other applicable Federal regulations, the United States Air Force (USAF) conducted an assessment of the potential environmental consequences of the Proposed Action, Proposed Alternative, and No Action Alternative.

PROPOSED ACTION: The Proposed Action consists of the construction and maintenance of a seven-foot high chain link fence around the perimeter of the airfield with a one-foot barbed wire outrigger on top. A two-foot opaque mesh would cover the lower portion of the fence, to serve as a visual barrier to prevent wildlife migration. The fence would be properly secured at least 1,000 feet from the centerline of the runway at Buckley Air Force Base (BAFB), Colorado;

PROPOSED ALTERNATIVE: The Proposed Alternative would construct a fence 1,000 feet from the centerline of the airfield runway similar to the Proposed Action. However, the fence would not include the two-foot opaque mesh on the bottom portion of the fence.

NO ACTION: This option would allow lethal means as well as natural population dynamics and ecosystem processes to control the wildlife populations at Buckley AFB. Wildlife fencing to better control wildlife migration across the airfield would not be implemented, and the airfield would continue to use reactive rather than proactive measures to reduce the potential for BASH incidences.

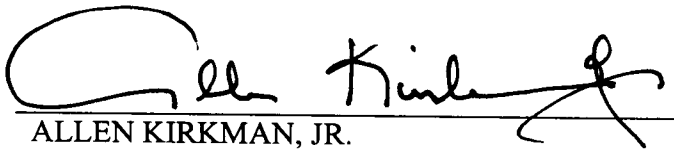
ALTERNATIVES CONSIDERED BUT ELIMINATED: An additional alternative was considered after several comment letters were received on the draft EA suggesting replacing the two feet of opaque mesh with a metal flashing barrier and chicken wire installed near the surface to prevent burrowing. However, this alternative was eliminated from further analysis due to cost constraints.

FACTORS CONSIDERED IN DETERMINING THAT NO ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED: *The Supplement to Environmental Assessment of Proposed Prairie Dog Management Practices* dated June 2001 (June 2001 SEA) analyzed the environmental impacts of the Proposed Action, Proposed Alternative, and No Action Alternative, taking into account all relevant environmental resource areas and conditions. In an effort to

eliminate repetitive discussions regarding potential environmental impacts at Buckley AFB, portions of this document supplements the June 2001 SEA, which is hereby incorporated by reference. Resources that might be affected by any one of the alternatives and are discussed further in this SEA include: air quality, biological resources (including wetlands, wildlife and vegetation), safety, and water resources. Impacts to these resources from any of the action alternatives would be transitory, minor, in association with construction or maintenance and readily controlled through best management practices, countered by benefits gained from the proposed project, or beneficial. Construction and maintenance of the airfield barrier fence is expected to disturb less than one acre of topsoil and would only result in short-term, temporary impacts to the affected environmental resources, which can mostly be offset by employing best management practices. Other resources have been omitted from discussion in this SEA either because they are anticipated to be unaffected by the various alternatives or because they have been adequately evaluated for comparable actions in the June 2001 SEA.

PUBLIC NOTICE: The National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, and the U.S. Air Force Environmental Impact Analysis Process require public review of the EA prior to Finding of No Significant Impact (FONSI) approval and implementation of the Proposed Action. The public had 15 days to review and submit comments on the EA. The public comment period ended on 19 Oct 03. The comments and concerns submitted by the public and agencies are incorporated into the analysis of potential environmental impacts as part of the SEA and are presented in Appendix D, Public and Agency Comment Letters, of the SEA.

FINDING OF NO SIGNIFICANT IMPACT: Based on requirements of NEPA, the CEQ, and 32 CFR Part 989, I conclude that the environmental effects of either the Proposed Action, the Proposed Alternative, or the No Action Alternative would not be significant, and therefore, an Environmental Impact Statement will not be prepared. A notice indicating that the SEA was available for public review for a 15-day period was published in the Denver Post, a Denver, Colorado newspaper, on 4 Oct 03. Printed copies of the Draft SEA and Draft FONSI were placed in the public libraries in Aurora and Denver, Colorado where they were available for review.



1 DEC 2003

ALLEN KIRKMAN, JR.
Colonel, USAF
Commander, 460th Air Base Wing

Date

COVER SHEET
FINAL SECOND SUPPLEMENT TO THE ENVIRONMENTAL ASSESSMENT FOR PROPOSED PRAIRIE DOG MANAGEMENT PRACTICES (CONSTRUCT FENCING AROUND AIRFIELD) AT BUCKLEY AIR FORCE BASE, COLORADO

Prepared by
460 CES/CEVP

a. Responsible Agency: U.S. Air Force, 460th Air Base Wing.

b. Proposed Action: The Proposed Action consists of the construction and maintenance of a seven-foot high chain link fence around the perimeter of the airfield with a one-foot barbed wire outrigger on top. A two-foot opaque mesh would cover the lower portion of the fence to serve as a visual barrier and further prevent wildlife migration. The fence would be properly secured at least 1,000 feet from the centerline of the runway at Buckley Air Force Base (BAFB), Colorado.

c. Written comments and inquiries regarding this document should be directed to: Elise Sherva, 460 CES/CEVP, 660 S. Aspen Street (Mail Stop 86), Bldg. 1005, Room 254, Buckley AFB, Colorado 80011-9551; telephone (303) 677-9077; e-mail: elise.sherva@buckley.af.mil.

d. Designation: Supplemental Environmental Assessment (SEA).

e. Abstract: This SEA evaluates the potential environmental consequences of constructing and maintaining a wildlife fence surrounding the airfield at BAFB to (1) ensure aircraft safety, in particular along the flight line, by reducing the potential for Bird Aircraft Strike Hazard (BASH) incidents and (2) ensure the safety of installation personnel and the general public surrounding Buckley AFB. The action being proposed in this SEA will also be examined to better identify and address potential cumulative impacts from the proposed activities and additional future activities on BAFB. The proposed action and alternatives addressed in this SEA include (1) construction and maintenance of wildlife fencing secured at least 1,000 feet from the centerline from the airfield runway, which would include an opaque mesh at the bottom of the fence to visually deter wildlife migration (Proposed Action); (2) construction and maintenance of similar wildlife fencing surrounding the airfield at the same designated minimum distances without the opaque mesh at the bottom (Proposed Alternative), and (3) continue current management practices without fencing (No Action Alternative). An additional alternative was examined after several comment letters were received on the draft EA suggesting replacing the two feet of opaque mesh with a metal flashing barrier. However, this alternative was eliminated from further analysis due to cost constraints.

This SEA has been prepared in accordance with the National Environmental Policy Act (NEPA) to analyze the potential environmental consequences of constructing and maintaining wildlife fencing around the airfield. Under the No Action Alternative, the wildlife fencing would not be

constructed, thus compromising safety, and promoting the continuation of BASH incidents and wildlife migration across the airfield at the current rates.

The environmental resources potentially affected by the proposed action and alternatives include air quality, biological resources (including wetlands, wildlife and vegetation), safety, and water resources. Impacts to these resources from any of the action alternatives would be transitory, minor, in association with construction or maintenance and readily controlled through best management practices, countered by benefits gained from the proposed project, or beneficial. Construction and maintenance of the airfield barrier fence is expected to disturb less than one acre of topsoil and would only result in short-term, temporary impacts to the affected environmental resources, which can mostly be offset by employing best management practices. Other resources have been omitted from discussion in this SEA either because they are anticipated to be unaffected by the various alternatives or because they have been adequately evaluated for comparable actions in the June 2001 SEA. Based on the nature of the activities that would occur during construction/ maintenance of the wildlife fence, the U.S. Air Force has determined that minimal or no adverse impacts to the above resources are anticipated.

f. The public comment period on the Draft SEA ended on: 19 October 2003

EXECUTIVE SUMMARY

Name of Action
Construction and maintenance of airfield fencing for wildlife management.

Summary
The United States Air Force (Air Force) currently manages black-tailed prairie dogs (*Cynomys ludovicianus*) per the June 2001 *Supplement to the Environmental Assessment of Proposed Prairie Dog Management Practices at Buckley Air Force Base, Colorado* (June 2001 SEA) to ensure aircraft safety in particular along the flight line to reduce Bird Aircraft Strike Hazards (BASH) incidents, the safety of installation personnel, and the general public surrounding Buckley AFB. The June 2001 SEA, prepared to assess additional management strategies to accommodate an increase in construction activities and expansion due to a change in the installation host, superceded the April 2000 *Environmental Assessment of Proposed Prairie Dog Management Practices at Buckley Air Force Base, Colorado* (April 2000 EA).

This supplement expands on the concepts presented in the June 2001 SEA to alleviate conflicts between conducting airfield activities and migrating prairie dogs and other wildlife, minimize wildlife casualties, and minimize potential threats to flight safety, installation personnel, and public safety. The June 2001 SEA did not assess airfield fencing because wildlife barriers within 500 feet of the airfield was not allowed per airfield management regulations. The request for the action within the allowable range of at least 1,000 feet was submitted after the publication of the SEA, which is assessed in this supplement.

Three alternatives for fencing around the airfield at Buckley AFB are presented in this supplement, including the Proposed Action, the Proposed Alternative, and the No-Action Alternative present. An additional alternative was examined after several comment letters were received on the draft EA suggesting replacing the two feet of opaque mesh with a metal flashing barrier. However, this alternative was eliminated from further analysis due to cost constraints. The alternatives analyzed in this supplement are as follows:

- **Proposed Action**
  Construction and maintenance of a seven-foot high chain link fence around the perimeter of the airfield with a one-foot barbed wire outrigger on top. Two feet of opaque mesh would cover the lower portion of the fence to serve as a visual barrier in attempting to prevent wildlife migration. The fence would be properly secured at least 1,000 feet from the centerline of the runway.

- **Proposed Alternative**
  Construction and maintenance of a seven-foot high chain link fence as specified in the Proposed Action, however, the fence would not include the two-foot opaque mesh wildlife barrier on the bottom portion of the fence. The fence would be properly secured at least 1,000 feet from the centerline of the airfield runway.

- **No-Action Alternative**
  This option would allow continuation of current methods, including lethal means, to control the wildlife populations migrating onto the airfield at Buckley AFB. Wildlife fencing to better control wildlife migration across the airfield would not be implemented, and the airfield would continue to use reactive rather than proactive measures to reduce the potential for BASH incidences.

Impacts to these resources from any of the action alternatives would be transitory, minor, in association with construction or maintenance and readily controlled through best management practices, countered by benefits gained from the proposed project, or beneficial. Construction and maintenance of the airfield barrier fence is expected to disturb less than one acre of topsoil and would only result in short-term, temporary impacts to the affected environmental resources, which can mostly be offset by employing best management practices. Other resources have been omitted from discussion in this SEA either because they are anticipated to be unaffected by the various alternatives or because they have been adequately evaluated for comparable actions in the June 2001 SEA.

TABLE OF CONTENTS

COVER SHEET I

EXECUTIVE SUMMARY III

LIST OF ACRONYMS VII

1.0 PURPOSE AND NEED FOR ACTION 1

2.0 PROPOSED ACTION AND ALTERNATIVES 2

2.1 Alternatives Analyzed 2

2.2 Alternatives Considered But Eliminated from Further Analysis 3

3.0 AFFECTED ENVIRONMENT 7

3.1 Biological Resources 7

3.2 Safety 7

3.3 Air Quality 8

3.4 Water Resources 8

4.0 ENVIRONMENTAL CONSEQUENCES 9

4.1 Biological Resources 9

4.1.1 Direct and Indirect Impacts under the Proposed Action 9

4.1.2 Direct and Indirect Impacts under the Proposed Alternative 10

4.1.3 Direct and Indirect Impacts under the No-Action Alternative 11

4.2 Safety 11

4.2.1 Direct and Indirect Impacts under the Proposed Action 11

4.2.2 Direct and Indirect Impacts under the Proposed Alternative 12

4.2.3 Direct and Indirect Impacts under the No-Action Alternative 12

4.3 Air Quality 12

4.3.1 Direct and Indirect Impacts under the Proposed Action 12

4.3.2 Direct and Indirect Impacts under the Proposed Alternative 12

4.3.3 Direct and Indirect Impacts under the No-Action Alternative 12

4.4 Water Resources 13

4.4.1 Direct and Indirect Impacts under the Proposed Action 13

4.4.2 Direct and Indirect Impacts under the Proposed Alternative 13

4.4.3 Direct and Indirect Impacts under the No-Action Alternative 13

5.0 CUMULATIVE IMPACTS 14

5.1 Cumulative Impacts to Environmental Resources 14

6.0 LIST OF PREPARERS 15

7.0 DISTRIBUTION LIST AND AGENCIES AND INDIVIDUALS CONTACTED 16

7.1 SEA Distribution List 16

7.2 Notification Letters 17

APPENDICES

Appendix A: USAF Form 813

Appendix B: Notice of Availability

Appendix C: Interagency Letters

Appendix D: Public and Agency Comment Letters and Responses

LIST OF FIGURES

Figure 1. Proposed Footprint of the Barrier Fence

Figure 2. Historic Structures within the Region of Influence

LIST OF ACRONYMS

AFB	Air Force Base
AFI	Air Force Instruction
ANGB	Air National Guard Base
BASH	Bird Aircraft Strike Hazards
BMP	Best Management Practice
CDPHE	Colorado Department of Public Health and Environment
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
NEPA	National Environmental Policy Act
NO_x	Nitrogen Oxides
O_3	Ozone
PM_{10}	Particulate Matter Greater than 10 Microns in Diameter
SEA	Supplemental Environmental Assessment
SO_x	Sulfur Oxides
TPY	Tons Per Year
USAF	United States Air Force
VOCs	Volatile Organic Compounds

This page intentionally left blank.

1.0 PURPOSE AND NEED FOR ACTION

This supplement has been prepared in accordance with regulations issued by the Council on Environmental Quality (CEQ), 32 CFR 989, *Environmental Impact Analysis*, and Air Force Instruction (AFI) 32-7061, *The Environmental Impact Analysis Process*. In accordance with the CEQ Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations (CFR) Parts 1500-1508, Section 1502.13), this chapter specifies the purpose and need for the proposed construction and associated maintenance of airfield fencing at Buckley Air Force Base (AFB), formerly known as Buckley Air National Guard Base (ANGB)[1].

Buckley ANGB, Colorado, published an *Environmental Assessment for Proposed Prairie Dog Management Practices at the Buckley Air Force Base, Colorado* in April 2000. A Finding of No Significant Impact (FONSI) was signed on 6 April 2000. A supplemental EA (SEA) amending the April 2000 EA was published in June 2001 to address the impacts of the growing prairie dog population on safety and, potentially, the mission of Buckley AFB. The June 2001 SEA analyzed additional methods to control prairie dogs within certain areas of the installation where they could potentially interfere with flight operations and/or pose a threat to human health and well-being.

Since the June 2001 SEA, the need for an immediate barrier was identified to prevent wildlife from migrating across the airfield and prevent the prairie dogs from relocating. The Proposed Action recommends erecting a seven-foot high chain link fence with two feet of opaque mesh on the lower portion of the fence secured at least 1,000 feet from the airfield runway centerline around the perimeter of the airfield. The opaque mesh on the bottom of the fence is intended to serve as a visual barrier in attempting to prevent wildlife migration across the airfield. The airfield barrier is needed to alleviate the conflicts with prairie dogs and wildlife within the airfield where they may interfere with both the airfield and the mission of Buckley AFB, and may pose a threat to the safety of installation personnel and the safety of the general public surrounding Buckley AFB.

This supplement expands on the concepts presented in the June 2001 SEA to alleviate conflicts between conducting airfield activities and migrating prairie dogs and other wildlife, minimize wildlife casualties, and minimize potential threats to flight safety, installation personnel and public safety. The June 2001 SEA did not assess airfield fencing because wildlife barriers within 500 feet of the airfield was not allowed per airfield management regulations. The request for the action within the allowable range of at least 1,000 feet was submitted after the publication of the SEA, which is assessed in this supplement.

[1] Buckley ANGB became Buckley AFB on 1 October 2000.

2.0 PROPOSED ACTION AND ALTERNATIVES

This supplement describes the Proposed Action, the Proposed Alternative, and the No-Action Alternative to construct and maintain fencing around the airfield at Buckley AFB for wildlife control and security.

2.1 ALTERNATIVES ANALYZED

The alternatives analyzed in this supplement are as follows:

- **Proposed Action:** The Proposed Action would construct and maintain a seven-foot high chain link fence around the perimeter of the airfield with opaque mesh covering the lower two feet of the fence. The opaque mesh would be attached to the fence at one-eighth inch aboveground and 24 inches high to serve as a visual wildlife barrier that would eliminate the ability for wildlife to view the airfield on the other side of the fence and deter migration onto the airfield. The fence would be properly secured at least 1,000 feet from the centerline of the runway. Installation of the fence would employ standard techniques with support posts placed into the ground ten feet apart and sunk three to three and a half feet into concrete foundations that are approximately 10-inches in diameter. The foundations would be poured in place from premixed concrete transported to the Base from an off-site batch plant. Three-strand barbed wire would be placed along the top no higher than one-foot above the top of the seven-foot fence wire mesh. The fence is required to be frangible within the north clear zone where the fence runs along Steamboat Avenue and East of Buildings 940 and 950. The proposed footprint of the fence includes an existing fence at Building 909, the Fire Department, and the munitions area. The new fence would be approximately 37,200 feet in length (excluding existing fences) and enclose approximately 1,135 acres. The proposed footprint is provided in Figure 1. Periodic maintenance activities may involve some vehicle traffic, but the fence line would not be patrolled by vehicle. The fence would be inspected when grounds maintenance actions occur (e.g., mowing or herbicide applications). A lawnmower or gator-type vehicle would be used for inspections.

- **Proposed Alternative:** This Alternative proposes to construct and maintain a seven-foot high chain link fence around the airfield as specified in the Proposed Action, however, the fence would not include the two-foot opaque mesh wildlife barrier on the bottom portion of the fence. The fence would be properly secured at least 1,000 feet from the centerline of the airfield runway.

- **No-Action Alternative:** This Alternative would require no additional expenditures beyond the existing maintenance of the airfield and methods currently in place to control prairie dog populations.

This section does not include various other methods that can be used specifically for prairie dog control such as relocation, live trapping, soap and water foam, vacuum truck, and lethal prairie dog population control methods as these were thoroughly discussed in the June 2001 SEA.

2.2 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS

Several comment letters were received on the draft EA that suggested replacing the two feet of opaque mesh with a metal flashing barrier. The suggested barrier alternative would be approximately three feet above ground and two feet below ground, with chicken wire installed near the surface to prevent burrowing. The below ground portion would provide a more effective barrier.

The cost of the suggested barrier alternative was detailed at approximately $4.46 per linear foot for 37,200 linear feet, in addition to the cost of the proposed fence. The increased cost per linear foot of installing the suggested barrier would be double that or more of the fence with the opaque mesh as proposed in the document. Cost is a constraining factor given the amount of federal money available and the length of the fence.

This page intentionally left blank.

Figure 1. Proposed Footprint of the Barrier Fence

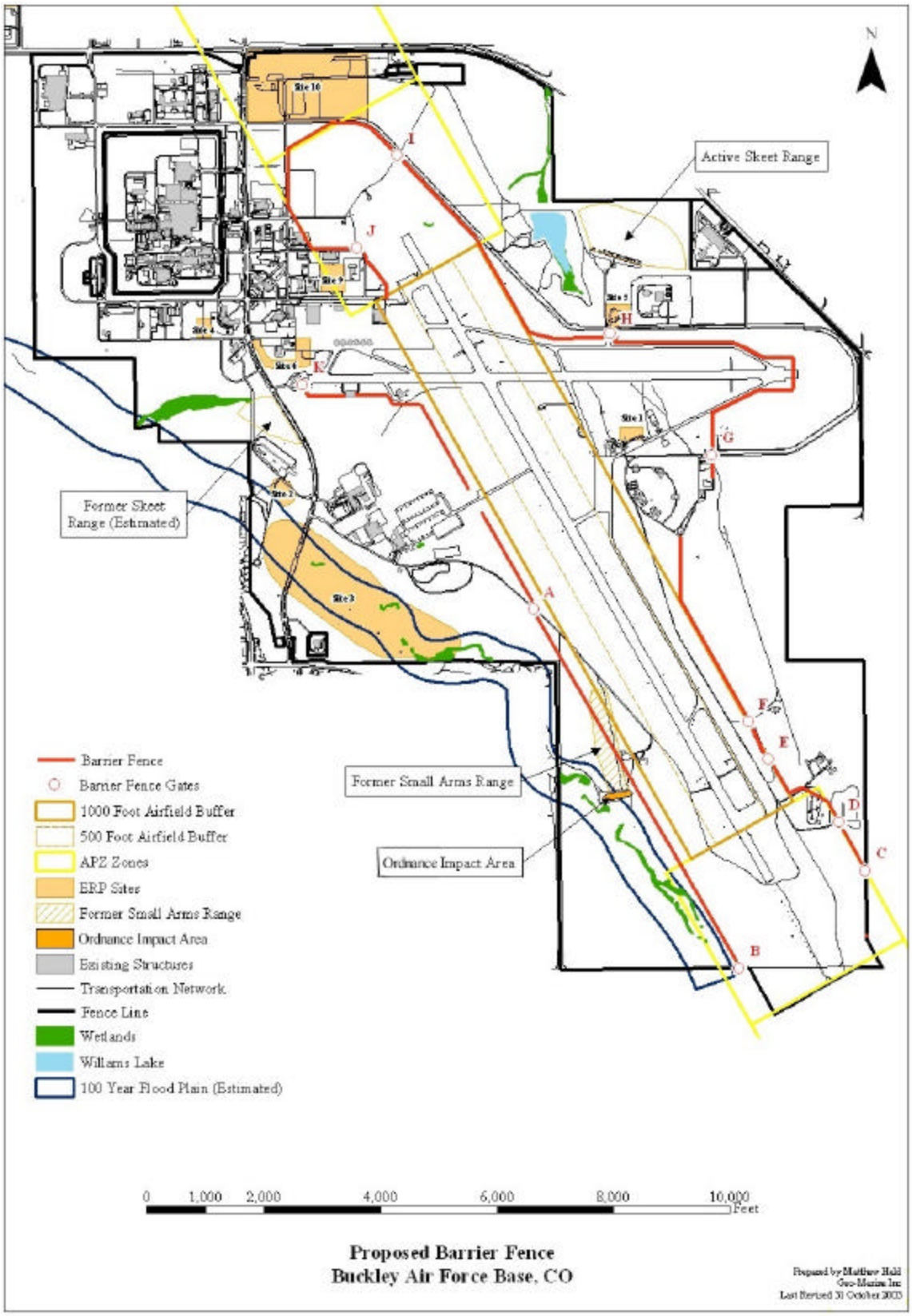
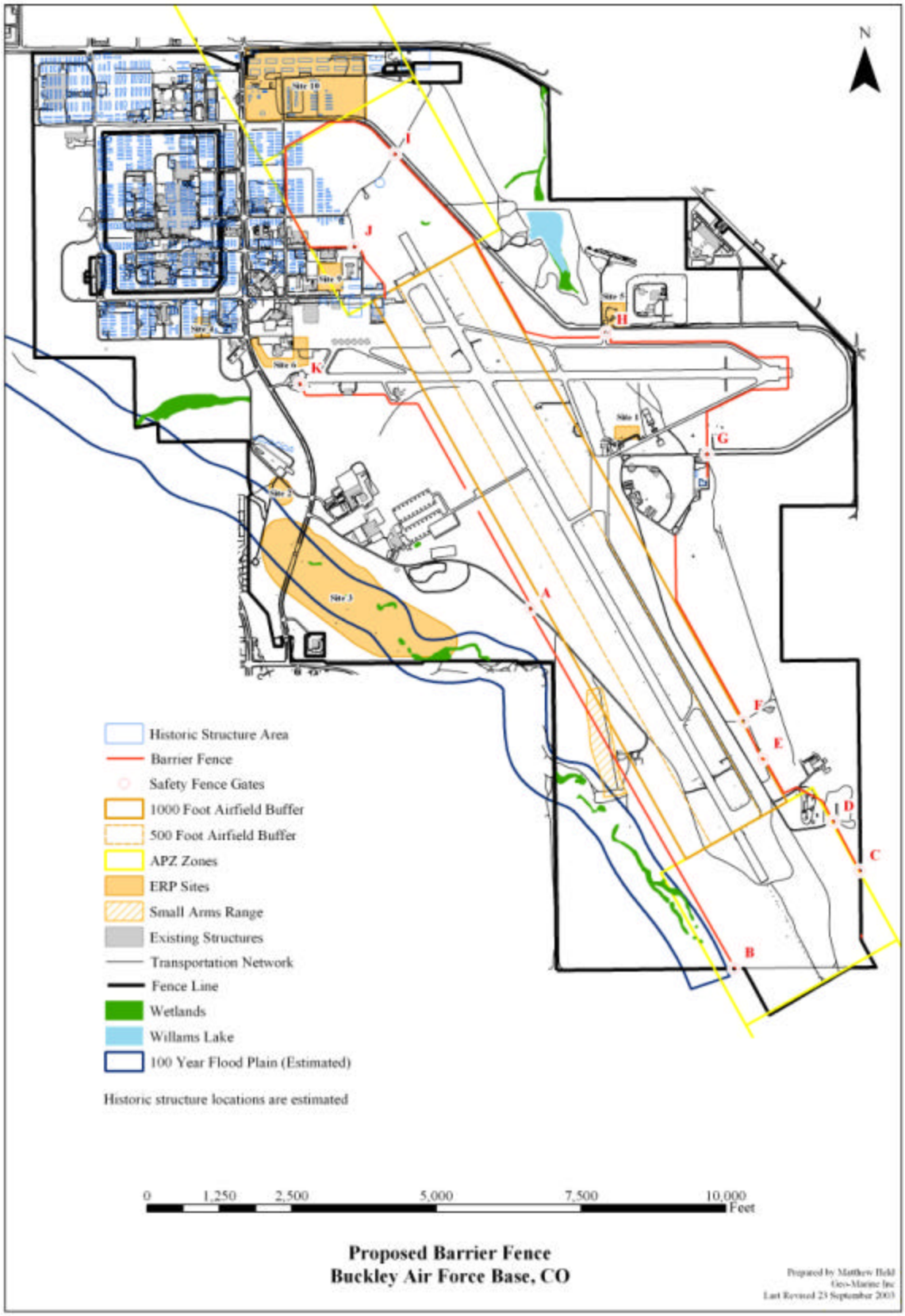


Figure 2. Historic Structures within the Region of Influence



3.0 AFFECTED ENVIRONMENT

Chapter 3, Affected Environment, of the June 2001 *Supplemental Environmental Assessment of Proposed Prairie Dog Management Practices at Buckley Air Force Base* is incorporated by reference for use in the analysis of this document. Resources that might be affected by any one of the alternatives and are discussed further in this SEA include: air quality, biological resources (including wetlands, wildlife and vegetation), safety, and water resources.

The region of influence (ROI) includes the area disturbed during the installation and maintenance of the airfield fencing, as well as outlying areas that may be influenced. Although the boundaries of the base or the fence location may constitute the ROI limit for some resources, potential impacts associated with certain resources (e.g., air quality and water resources) transcend those limits.

3.1 BIOLOGICAL RESOURCES

The ROI for vegetation is considered to be the ground surface disturbed by the Proposed Action or other alternatives. The ROI for wetlands includes those present immediately adjacent to the fence line positioned at least 1,000 feet from the centerline of the airfield. There are three wetland communities within 100 feet of the ROI southwest of the proposed fence line. The ROI for animal species is considered to be the aggregate home ranges of the individuals that collectively form the population represented within at least 1,000 feet of the centerline of the airfield during a substantive portion of its life cycle.

Sections 3.1 and Appendix A of the June 2001 SEA describes the affected biological resources, including vegetation, wildlife, and wetlands. A wetland survey conducted in 2002 identified a total of twenty-three wetlands on the Base. Seventeen additional wetlands were identified since the June 2001 SEA; however, these new wetlands are located outside the ROI. Wetlands on Base are presented in Figure 1.

3.2 SAFETY

The ROI for safety is considered to be the airfield at Buckley AFB and the sections of the City of Aurora that immediately surround Buckley AFB. Section 3.2 of the June 2001 SEA describes the current safety condition at Buckley AFB. In addition, a small portion of the fence footprint on the southwest would cross an abandoned Small Arms Range and a perimeter road around the airfield. This area is included in the ROI. The perimeter road is not a heavily used road on the Base nor a major element of the transportation system. The small arms range, which is no longer in use, is located in the southwest portion of the Base and is not the same as either the active skeet range, which is located in the northeast, or the former skeet range, which is located in the central west (Figure 1). The former small arms range is a validated site in the new Air Force Military Munitions Response Program (MMRP), which investigates and remediates non-operational ranges. A preliminary assessment and site inspection is programmed for this range in fiscal years 2005 and 2006. This SEA addresses unexploded ordnance clearance only to the extent necessary to safely install the fence across the abandoned small arms range.

The northwestern portion of the proposed fence is located on property where old World War II buildings once stood (Figure 2). While it is unknown whether debris from any of those buildings remains under the soil surface, there is the potential for discovery of asbestos containing material (ACM) during fence installation along the northwest portions of the fenceline. The proposed fenceline is not located within the former hospital area that is the subject of a September 30, 2003 Colorado Department of Health and Environment (CDPHE) Compliance Order.

3.3 AIR QUALITY

The ROI for air quality is considered to be the Denver metropolitan area. The status for air quality has changed in the Denver metropolitan area since the publication of the June 2001 SEA. Section 3.3 and Appendix A of the June 2001 SEA provides the basis for air quality conditions in addition to the modifications specified in this section.

The Denver metropolitan area was previously designated by the EPA as a serious non-attainment area for carbon monoxide (CO), a non-attainment area for the 1-hour ozone standard, and a moderate non-attainment area for particulate matter greater the 10 microns in diameter (PM_{10}). Recently, the EPA redesignated the Denver metropolitan area as an attainment/maintenance area for the following criteria pollutants: ozone (O_3) on 11 October 2001, CO on 14 January 2002, and PM_{10} on 16 October 2002. In addition, Buckley AFB's Title V Operating Permit originally issued on 28 August 1997, was recently reissued on 1 July 2002 and expires 30 June 2007. Buckley AFB's Title V Operating Permit has established emission limits for nitrogen oxides (NO_x) and sulfur oxides (SO_x) at 249.9 tons per year and emission limits for CO, volatile organic compounds (VOCs), and PM_{10} at 99.9 tons per year. This estimate includes calculations of the construction activities for that calendar year as well as on-going activities such as vehicle travel on unpaved roads. According to the 2002 air emissions inventory, the PM10 potential to emit estimated for 2003 construction projects was approximately 28 tons per year (TPY).

3.4 WATER RESOURCES

The Buckley airfield is located along the highest points on the base from which water drains into one of three creeks flowing adjacent to the base: East Toll Gate Creek, Murphy Creek, and Sand Creek. The majority of the airfield drains to East Toll Gate Creek, located on the western side of the Base. The eastern portion of the airfield flows directly to Murphy Creek. A small area in the northeastern portion of the airfield drains to Sand Creek. Williams Lake is the only surface impoundment on the Base, located near the northeast corner of Base and drains to Sand Creek. The 100-year and 500-year floodplain of East Toll Gate Creek is located southwest of the airfield. The ROI for this project constitutes these three watersheds, Williams Lake, and the East Toll Gate Creek floodplain. Section 3.4 and Appendix A of the June 2001 SEA describes the affected water resources.

4.0 ENVIRONMENTAL CONSEQUENCES

In this section, potential environmental consequences of the Proposed Action, the Proposed Alternative, and the No-Action Alternative are examined for environmental and human resource impacts. The potential impacts to the human environment were evaluated relative to the existing environment described in the Affected Environment of the *Supplemental Environmental Assessment for Proposed Prairie Dog Management Practices at Buckley Air Force Base*, June 2001. For each environmental resource or issue with potential consequences, anticipated direct and indirect effects were assessed considering both short- and long-term project effects. Only those resources that may be affected, and those consequences that have changed in relationship to the June 2001 SEA are presented as appropriate.

4.1 BIOLOGICAL RESOURCES

The potential impacts to the biological resources, including vegetation, wetlands, wildlife, and sensitive species, were examined based upon the implementation of either the Proposed Action or its alternatives. Only those consequences that have changed in relationship to the June 2001 SEA are presented in the following sections as appropriate.

Biological resources can be lost, altered, or displaced by disturbances to physical or other biological resources. Determination of the significance of potential impacts to biological resources is based on 1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource, 2) the proportion of the resource that would be affected relative to its occurrence in the region, 3) the sensitivity of the resource to proposed activities, and 4) the duration of ecological ramifications. Such impacts would be considered potentially significant if the viability of a protected or sensitive plant or animal species population or its habitat were jeopardized over relatively large areas. Impacts that enhance a species' population or its habitat would be considered beneficial.

4.1.1 Direct and Indirect Impacts under the Proposed Action

Vegetation
Vegetative communities within the region of influence would be temporarily disturbed during fence construction. Periodic maintenance activities may occasionally disturb vegetation temporarily. Noxious weeds would be controlled along the fence line in accordance with the Integrated Pest Management Plan. Areas rendered devoid of vegetation from fence construction or maintenance would be minimized and the disturbed area would be seeded with native species.

Wetlands
The footprint of the fence was modified to be constructed approximately 100 feet from the three wetlands southwest of the airfield; therefore, no habitat segmentation or direct impacts are anticipated. Wetlands along the fence line would be flagged by 460 CES/CEV and avoided during fence construction activities. Short-term, construction-related ground disturbance during implementation may indirectly affect nearby wetlands from soil erosion and runoff. Employing

best management practices during construction would minimize any potential impacts to nearby wetland areas.

Wildlife
Fence construction would benefit wildlife communities by reducing conflicts between migrating wildlife and airfield activities, in particular along the flight line. The opaque mesh covering the bottom of the fence would be more effective in controlling wildlife such as prairie dogs from attempting to cross below the fence, as the animals would not be able to view the landscape beyond the fence and into the airfield. Erecting the fence with a mesh barrier would minimize incidental wildlife casualties as well as wildlife loss through control measures, and reducing BASH incidents from the existing rate. Eliminating BASH incidents would reduce avian mortality on Base thereby improving the viability of those populations.

The airfield provides habitat to wildlife communities and many of the burrowing owls on Base. Construction of the fence may temporarily disturb wildlife, including burrowing owls. If these activities were conducted between April and July, an owl survey would be needed prior to construction. In addition, construction activities should not take place within 150 feet from burrowing owl nest areas.

Erecting a fence around the airfield would further reduce wildlife movement of smaller mammals, in particular on the southern end of the airfield. Connecting this fence with the southern boundary fence subdivides already limited habitat and encircles an additional 132 acres of undeveloped land, which serves as habitat to many animals. Smaller mammals on the eastern side of the airfield may be partitioned off from the creeks located on the western side of the airfield. The airfield will not tolerate wildlife within the proposed fence line to decrease BASH incidences and improve airfield safety. If wildlife migrated within the proposed fence line, more aggressive measures including lethal means may be employed to control them. Since Buckley AFB is located within an urban area, a fence line surrounding the base is already in place, and control measures are in place within 500 feet of the airfield, further reduction in wildlife movement is not considered significant.

4.1.2 Direct and Indirect Impacts under the Proposed Alternative

Vegetation
As discussed in 4.1.1, vegetation impacts would be the same as under the Proposed Action.

Wetlands
As discussed in 4.1.1, wetland impacts would be the same as under the Proposed Action.

Wildlife
Construction of the Proposed Alternative fence would have similar impacts as the Proposed Action; however, the Proposed Alternative does not employ the use of visual barriers to manage migrating wildlife. As a result, this Alternative does not eliminate the possibility of conflicts for some animals, such as prairie dogs, that might be inclined to dig passageways below the fence structure if they are able to view the airfield through the new fencing.

4.1.3 Direct and Indirect Impacts under the No-Action Alternative

Vegetation
Implementation of the No-Action Alternative would result in no changes to vegetation from current conditions.

Wetlands
Implementation of the No-Action Alternative would result in no changes to wetlands from current conditions.

Wildlife
Implementation of the No-Action Alternative could result in the continued rate of wildlife mortality and BASH incidents.

4.2 SAFETY

Migrating wildlife present potential safety concerns in particular threatening aircraft safety with BASH incidents along the flight line, which in turn poses concerns for the safety of installation personnel and the general public surrounding Buckley AFB. These issues are covered extensively in the June 2001 SEA, however additional safety concerns are addressed as follows. An impact to safety would be considered potentially significant if the proposed action compromises safety on the Base, or a critical injury or loss of life occurs as a result of the action. Impacts that improve or eliminate a current threat or condition that impairs safety would be considered beneficial.

4.2.1 Direct and Indirect Impacts under the Proposed Action

Impacts associated with the Proposed Action include improving aircraft safety, in particular along the flight line, by reducing the possibility of BASH incidents and reducing the occurrence of migrating wildlife on the airfield. This would improve the safety of installation personnel and the general public surrounding Buckley AFB.

Installation of the fence as proposed would cross a portion of the abandoned small arms range, potentially compromising the safety of the construction and maintenance workers. The fence and its installation will not be traversing the small arms range "ordnance impact area." The area needed for construction of the fence will only require an area similar to that of a utility clearance, and Buckley AFB is aware of the proximity to the former small arms range and will manage construction according to all rules and regulations.

The fence line would cross the perimeter road southwest of the airfield in three places. However, the gates would remain open under normal threat conditions (THREATCON NORMAL and ALPHA) and would only be locked under higher threat conditions. The perimeter road is not a critical element of the Base transportation system. Due to restrictions on construction within the 1,000-foot perimeter from the center of the runway, no reasonably foreseeable development is anticipated to occur within this area and no significant impacts to access, traffic patterns, or security patrols are anticipated.

ACM may be encountered while constructing the fence in the northwest portion of the Base. This potential problem and the proper procedures to follow if ACM is discovered should be discussed at Buckley AFB's pre-construction meetings. CDPHE would need to be consulted regarding the location and proper handling procedures for ACM for this project.

4.2.2 Direct and Indirect Impacts under the Proposed Alternative

Impacts associated with the Proposed Alternative are the same as those described for the Proposed Action in Section 4.2.1.

4.2.3 Direct and Indirect Impacts under the No-Action Alternative

The No-Action Alternative would fail to proactively reduce the possibility of BASH incidents, in particular along the flight line. The airfield would not be protected from wildlife movement and, therefore, reactive methods to control wildlife migrating onto the airfield may not be sufficient to protect the safety of installation personnel and the general public surrounding Buckley AFB from BASH incidents.

4.3 AIR QUALITY

Impacts to air quality would be considered significant if any criteria pollutant emissions associated with the implementation of the Proposed Action or its alternatives exceeded the applicability thresholds for attainment/maintenance areas for CO, O_3 and $PM_{10.}$

4.3.1 Direct and Indirect Impacts under the Proposed Action

Fugitive dust from construction-related, ground disturbing activities would be generated during the installation of the Proposed Action. Fugitive dust could be generated from post hole excavation and installation; and equipment operation. Ground disturbing activities will entail post hole excavations and vehicle travel on native grasses. Conservative calculations for post hole excavations and driving on unpaved surfaces yields an estimated 2.4 additional TPY of PM10 emissions. The combined amount is still far below the General Conformity de minimis threshold of 100 TPY for PM10 emissions. These short-term, temporary increases are anticipated to be minor and, therefore, not a significant source of emissions. NOx emissions from construction equipment are estimated to be de minimus at less than one ton.

4.3.2 Direct and Indirect Impacts under the Proposed Alternative

Impacts associated with the Proposed Alternative would be similar to those described for the Proposed Action in Section 4.3.1.

4.3.3 Direct and Indirect Impacts under the No-Action Alternative

Implementation of the No-Action Alternative would result in no changes to air quality from current conditions.

4.4 WATER RESOURCES

An impact to water resources would be considered potentially significant if an aquifer, groundwater well, surface water body, or floodplain were impaired to the extent that a measurable change in the character of the water supply resulted or an exceedance of water quality standards occurred. An impact would be insignificant if the changes in the character of the water supply were immeasurable or the water quality did not exceed established standards.

4.4.1 Direct and Indirect Impacts under the Proposed Action

The proposed fence line is located outside the floodplain boundary and does not cross surface water. Short-term, construction-related ground disturbance during implementation would increase the potential for soil erosion and subsequent sedimentation. Some soil erosion may occur as a result of digging new post holes, which would be 10 inches in diameter. Disturbance is expected to be less than one acre and, therefore, no significant impacts are anticipated.

Once in place, the fence would not be patrolled by vehicle and only periodic vehicle traffic for maintenance may occur in addition to occasional mowing during inspections and herbicide applications as needed. Since vehicle traffic and maintenance inspections would only occur periodically, no significant impacts are anticipated to water resources from potential erosion. Herbicide applications would only be applied as needed in accordance with the Integrated Pest Management Plan, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and Air Force regulations. Herbicides would not be applied near water bodies and the increase in applications for the Base is not anticipated to result in significant impacts to water resources.

4.4.2 Direct and Indirect Impacts under the Proposed Alternative

Impacts associated with the Proposed Alternative would be similar to those described for the Proposed Action in Section 4.4.1.

4.4.3 Direct and Indirect Impacts under the No-Action Alternative

Implementation of the No-Action Alternative would result in no changes to water resources from current conditions.

5.0 CUMULATIVE IMPACTS

Cumulative impacts on environmental resources are those that may result from incremental impacts of proposed actions considered together with other past, present, and reasonable foreseeable future actions in an affected area. Cumulative impacts can result from minor, but collectively significant, actions undertaken over a period of time and by various agencies (federal, state, or local) or persons. In accordance with NEPA, a discussion of cumulative impacts resulting from reasonably foreseeable projects that are proposed, under construction, recently completed, or anticipated to be implemented in the near future is required.

Cumulative environmental impacts are most likely to arise when a relationship exists between a proposed action and other actions expected to occur in a similar location, time period, and/or involving similar actions. Projects in close proximity to proposed actions would be expected to have more potential for a relationship that could result in potential cumulative impacts than those more geographically separated. This analysis assesses the potential for the construction of wildlife fencing around the airfield on Buckley AFB to contribute to cumulative impacts in relation to other local projects.

5.1 CUMULATIVE IMPACTS TO ENVIRONMENTAL RESOURCES

Construction and maintenance of the airfield barrier fence is expected to disturb less than one acre of topsoil and would only result in short-term, temporary impacts to the affected environmental resources, which can mostly be offset by employing best management practices. This project would conservatively add approximately 2.4 TPY to the estimated 28 TPY from the 2002 air emissions inventory for 2003 construction projects, which is well below the applicability threshold of 100 TPY. No cumulative impacts are anticipated to these resources from the proposed activities. Cumulative impacts are thoroughly addressed in Section 5.0 and Appendix A of the June 2001 SEA.

The proposed construction of the barrier fence would contribute to reducing wildlife movement of small mammals, in particular on the southern end of the airfield. However, wildlife that migrate onto the airfield would be reactively controlled through aggressive means to reduce the potential for BASH incidences if a fence is not erected. Even though wildlife migration would be impaired across the approximately 1,135-acre area, wildlife populations would cumulatively benefit from the prevention of their migration with proactive fencing rather than loss of population through lethal means or other control methods. In addition, the barrier fence would only restrict wildlife from entering the airfield and not restrict wildlife movement to other areas on Base. Cumulative impacts to prairie dogs and prairie dependant species are thoroughly addressed in Section 5.0 and Appendix A of the June 2001 SEA.

6.0 LIST OF PREPARERS

Name	Affiliation	Degree	Expertise
Amy Wiedeman, Consultant	Booz Allen Hamilton	MURP, Urban and Regional Planning	3.5 years of NEPA experience
Melanie Martin, Senior Consultant	Booz Allen Hamilton	BSA, Environmental Protection	4.5 years of NEPA experience
Matthew Held, GIS Analyst	Geo-Marine Inc.	BA, Geography	4.5 years of GIS experience

7.0 DISTRIBUTION LIST AND AGENCIES AND INDIVIDUALS CONTACTED

7.1 SEA DISTRIBUTION LIST

Name	Organization	Address		
Lee Carlson, State Supervisor	U.S. Fish and Wildlife Service	755 Parfet Street, Suite 361	Lakewood, CO	80215
Eliza Moore, Wildlife Manager	Colorado Division of Wildlife	6060 South Broadway	Denver, CO	80216
Patricia Mehlhop	U.S. Fish and Wildlife Service/Denver Federal Center	PO Box 25486	Denver, CO	80225-0486
Jerry Craig, Wildlife Researcher	Colorado Division of Wildlife Wildlife Research Center	317 W. Prospect Road	Fort Collins, CO	80526
Cynthia Cody, NEPA Unit Chief	U.S. Environmental Protection Agency, Region 8	999 18th Street, Suite 500	Denver, CO	80202
Jennifer Lane	U.S. Environmental Protection Agency, Region 8	999 18th Street, Suite 500	Denver, CO	80202
David Rathke	U.S. Environmental Protection Agency, Region 8	999 18th Street, Suite 500	Denver, CO	80202
Denise Balkas, Director of Planning	City of Aurora	15151 E. Alameda	Aurora, CO	80012
Ed LaRock, Federal Facilities HMWM 2800	Colorado Department of Public Health and Environment	4300 Cherry Creek Drive, South	Denver, CO	80246-1530
James Ives, C.E.P., Planning, Environmental Division	City of Aurora	15151 E. Alameda	Aurora, CO	80012
Georgianna Contiguglia, State Historic Preservation Officer	Colorado History Museum	1300 Broadway	Denver, CO	80203-2137

7.2 NOTIFICATION LETTERS

Notification letters were sent to members of the Citizens Advisory Group (CAG) and individuals who submitted comments to the Draft Supplemental EA.

Name	**Organization**	**Address**		
William C. Allison V, Assistant Attorney General	Colorado Department of Law, Natural Resources and Environment Section	1525 Sherman Street, 5th Floor	Denver, CO	80203
Margee Cannon	City of Aurora Neighborhood Services	1470 South Havana	Aurora, CO	80012
Melissa Lobe	URS Group	8181 E. Tufts Ave	Denver, CO	80237
Laura Bishard	CDPH&E	6552 W. 81st Avenue	Arvada, CO	80003
Jennifer Lane[1]	EPA – Region VIII	999 18th Street, Suite 300	Denver, CO	80202 -2466
The Honorable Kathy Green	Aurora City Council Ward II	1470 South Havana Street	Aurora, CO	80012
William A. Gallant, R.G.	Principal, Gallant & Associates	17531 West 59th Avenue	Golden, CO	80403
Frank Weddig	Citizen			
Cuatro Hundley	EarthTech	5575 DTC Blvd #200	Denver, CO	80237
Ken Melcher	Citizen			
Jackie Emmons	Citizen			
Ed LaRock[1]	CDPHE/HMWWD	4300 Cherry Creek Drive South	Denver, CO	80246
David Rathke[1]	EPA – Region VIII	999 18th Street, Suite 300	Denver, CO	80202 -2466
David Crawford, Executive Director	Rocky Mountain Animal Defense			
Dianne A. Pacheco	Citizen			
Isabel Penraeth	Citizen			
Jennifer Anderson	Aurora Public Schools			
Judy Enderle	Citizen			

[1] Individual received a copy of the Draft Environmental Assessment and Draft Finding of No Significant Impact for review.

This page intentionally left blank.

APPENDIX A –USAF FORM 813

This page intentionally left blank.

APPENDIX B – NOTICE OF AVAILABILITY

This page intentionally left blank.

APPENDIX C – INTERAGENCY LETTERS

This page intentionally left blank.

APPENDIX D – PUBLIC AND AGENCY COMMENT LETTERS AND RESPONSES

PRAIRIE PRESERVATION Alliance

P.O. Box 12485 · Denver, CO 80212-0485 · (303)638-4672
www.prairiepreservationalliance.org

October 19, 2003

Elise Sherva
460 CES/CEVP
660 S. Aspen Street (Mail Stop 86)
Bldg. 1005, Room 254
Buckley AFB, CO 80011-9551
303.677.9077 telephone
elise.sherva@buckley.af.mil

Re: Draft Second Supplement to the Environmental Assessment for Proposed Prairie Dog Management Practices (Construct Fencing Around Airfield) Buckley Air Force Base, Colorado

Dear Ms. Sherva:

Thank you for accepting comments regarding the Supplemental Environmental Assessment (SEA) at Buckley Air Force Base BAFB) on behalf of the members and affiliates of Prairie Preservation Alliance. We sincerely appreciate the opportunity to submit our concerns and suggestions during this public process.

Prairie Preservation Alliance (PPA) energetically endorses the SEA, with its Proposed Action to Construct Fencing Around the Airfield. We commend BAFB for its initiative in drafting a proposed action that takes into consideration the value placed on wildlife by Colorado citizens and visitors.

We feel that the scope of the SEA might be broadened to include options that were not addressed (or not addressed sufficiently) in the SEA and provide you with the following ideas and input.

PPA enthusiastically supports the Proposed Action of constructing and maintaining a "seven-foot high chain link fence around the perimeter of the airfield" at BAFB as an alternative to No Action that would continue to allow "lethal means as well as natural population dynamics and ecosystem processes to control the wildlife populations at Buckley AFB."

However, the proposed addition of two-foot opaque mesh on the bottom portion of the fence might be enhanced by choosing a different method of visually deterring wildlife migration onto the airfield.

Alternative barriers, with pricing, visual images, and a description of the benefits used to justify this suggestion are attached. Prairie Preservation will be pleased to answer any questions or provide additional details concerning the alternative barrier.

Sincerely,

Judy Enderle, Vice President
Prairie Preservation Alliance
303.359.4167
judy@prairiepreservationalliance.org

Purpose and Need for Action
The Purpose and Need for Action as described in section 1.0 of the SEA contains accurate statements in the opinion of PPA.

After meeting with personnel from BAFB (John Spann, Elise Sherva, and Jeffery Harder) on November 14, 2002 we have a much better appreciation of some of the potential safety issues that could be caused by wildlife on the airfield.

During that meeting, we recommended the use of a barrier system to "alleviate conflicts between conducting airfield activities and migration prairie dogs and other wildlife, minimize wildlife casualties, and minimize potential threats to flight safety."

PPA agrees that a barrier system is needed to insure the safety of airfield activities and wildlife in the vicinity of the airfield.

Proposed Actions and Alternatives

Proposed Action
The Proposed Action to construct and maintain a seven-foot high chain link fence around the perimeter of the airfield meets PPA's expectations fully. The opaque mesh that would be attached to the fence at one-eighth inch above ground and 24 inches high to serve as a visual wildlife barrier could be substantially enhanced to more completely eliminate the ability of wildlife to view the airfield on the other side of the fence and migrate onto the airfield. The barrier we recommend would be two-to-three above ground and extend on-to-two feet below ground, with poultry-wire installed just below ground level to further deter migration onto the airfield.

Prairie Preservation Alliance is currently partnering with the City and County of Denver to construct a permanent barrier system that will eliminate the ability of prairie dogs to disperse from one side of the barrier to the other. The barrier is fashioned of three-by-four foot sections of metal roofing material that are securely fastened to each other and to metal fence posts and positioned one-to-two feet below ground. The material is opaque to obstruct the view of the wildlife and smooth enough to make scaling the material impossible. By locating the metal pieces underground and placing poultry wire just below the surface on the prairie-dog side of the barrier, egress to the airfield will be thwarted.

The barrier system we recommend has been successfully implemented in a number of locations:

> Boulder County installed a similar barrier over a year ago and has experienced no prairie dog dispersals since its construction. The City and County of Broomfield approved a $20,000 expenditure to construct a similar barrier to contain prairie dogs at Great Western Reservoir. As stated above, the City and County of Denver is constructing barriers at Kennedy Soccer Complex, is allocating funds for the construction of a second barrier at Rosamund Natural Area, and plans to use the

system as a model for other entities interested in managing wildlife in the urban setting.

Table 1 lists the materials needed to construct the barrier that PPA recommends attaching to the seven-foot high chain link fence.

Table 1

Barrier Pricing

ITEM	COST PER LINEAL FOOT
Fence Posts	$ 0.45
2X4X10	$ 0.35
Perforated Metal Strip	$ 0.13
Nuts, Bolts, Screws, Washers	$ 0.10
J-Channel	$ 0.59
Pro Panel II Siding	$ 2.52
Poultry Netting	$ 0.32
TOTAL	**$ 4.46**

Illustrations of the barrier system are attached in Appendix A.

Proposed Alternative

Although the seven-foot high chain link fence creates a barrier for wildlife that may wish to move onto the airfield, it is only a partial solution. The Proposed Action with its opaque barrier covering the lower two-to-three feet of the fence provides a comprehensive and permanent solution to the problem of wildlife migrating onto the airfield.

No-Action Alternative
While this alternative boasts that no additional expenditures will be required, the annual expenditures related to extermination of wildlife that are not yet contained or managed is far in excess of the one-time expenditure for the barrier system.

PPA recommends the Proposed Action from a budgetary standpoint as well as from a wildlife-friendly and permanent-solution standpoint. To continue to allocate funding for the extermination of wildlife will continue to be an annual drain to the resources and budget of BAFB. To address the issue using the Proposed Action allows the issue to be permanently and affordably rectified.

Affected Environment

Prairie Preservation concurs with the SEA in their findings that impacts to these environmental resources from the Proposed Action would be transitory and minor, and only associated with construction or maintenance of the barrier system.

Biological Resources
Prairie Preservation Alliance concurs with the findings of BAFB.

Safety
Prairie Preservation Alliance concurs with the findings of BAFB. In the event the abandoned Small Arms Range with its unexploded bullets would become an issue, we recommend the area be cleared of safety hazards using the most up-to-date methods available.

Additionally, if the bullets are composed of lead, we recommend they be removed to insure the safety of avian species that may ingest bullets—resulting in lead poisoning.

Air Quality
Prairie Preservation Alliance concurs with the findings of BAFB.

Water Resources
Prairie Preservation Alliance concurs with the findings of BAFB. A single concern for PPA is the possible contamination of waterways from the bullets that may still reside in the Small Range Area. Runoff from the area may affect the creeks and watersheds mentioned in this section and we request that this issue be addressed regardless of the results of the SEA.

Environmental Consequences

Prairie Preservation Alliance concurs with the findings of BAFB.

Biological Resources
Prairie Preservation Alliance concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Action
PPA concurs with the findings of BAFB regarding *Vegetation*, *Wetlands*, and *Wildlife*, with the substitution of PPA's proposed opaque barrier rather than the

opaque mesh described in the Proposed Action.

Direct and Indirect Impacts under the Proposed Alternative
PPA concurs with the findings of BAFB regarding *Vegetation, Wetlands*, and *Wildlife*, with the addition of PPA's proposed opaque barrier rather than no additional barrier as described in the Proposed Alternative.

Direct and Indirect Impacts under the No-Action Alternative
PPA concurs with the findings of BAFB regarding *Vegetation, Wetlands*, and *Wildlife.*

Safety
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Action
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Alternative
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the No-Action Alternative
PPA concurs with the findings of BAFB.

Air Quality
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Action
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Alternative
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the No-Action Alternative
PPA concurs with the findings of BAFB.

Water Resources
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Action
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the Proposed Alternative
PPA concurs with the findings of BAFB.

Direct and Indirect Impacts under the No-Action Alternative
PPA concurs with the findings of BAFB.

Cumulative Impacts
PPA concurs with the findings of BAFB.

Cumulative Impacts to Environmental Resources
PPA concurs with the findings of BAFB.

Summary
Prairie Preservation Alliance wishes to commend Buckley Air Force Base personnel for their pro-active approach to managing and coexisting with the wildlife of the Shortgrass Prairie Ecosystem, arguably the most endangered Ecosystem on the Planet. By electing to manage, rather than destroy, the fragment of Prairie Ecosystem remaining, Buckley makes a conscious commitment to the preservation of Colorado's heritage and ensures the viability of the native plains wildlife that the State holds in sacred trust for its citizens. With the approval of the Proposed Action and the addition of PPA's recommended barrier, BAFB becomes part of the solution to preserving the prairie, rather than a contributor to the decline of the prairie's flora and fauna.

It is PPA's recommendation that BAFB consider the addition of our suggested metal barrier to more completely obstruct the view and passage of wildlife onto the airfield. This decision will result in constricting wildlife movement without the use of lethal or other control means.

Judy Enderle
Prairie Preservation Alliance
PO Box 12485
Denver, CO 80212-1485
303.359.4167

APPENDIX A

Lt Col Christopher C. McLane
Commander, 460th Civil Engineer Squadron
660 South Aspen Street, Stop 86
Buckley AFB CO 80011-9551

Judy Enderle
Prairie Preservation Alliance
P.O. Box 12485
Denver CO 80212-1485

Dear Ms. Judy Enderle

Thank you for your comments regarding the draft Second Supplemental Environmental Assessment (SEA) and draft Finding of No Significant Impact (FONSI) for Proposed Prairie Dog Management Practices at Buckley Air Force Base (BAFB). We appreciate your interest in the project and information you provided in your letter dated 19 October 2003.

We have reviewed and considered your suggestions for improvements, including alternative barriers and visual images for the barrier fence around the airfield. This information has been included in Section 2.0 of the Final EA as an additional alternative considered but eliminated from further analysis due to cost constraints. The increased cost per linear foot of installing the modified fencing, which you have suggested, would be double that or more of the fence with opaque mesh as proposed in the document. Cost is a constraining factor given the amount of federal money available and the length of the fence. In addition, please note that the Final EA has been modified to reflect a total of 37,200 linear feet of opaque mesh. The mesh would not be installed on the gates. We value your suggestions and will retain this information for future reference if additional federal money becomes available.

We have reviewed your suggestion to remove bullets from the small arms range for the safety of avian species, as well as protecting nearby waterways from contamination. While we find both issues outside of the scope of this SEA, they are valid comments that will be more thoroughly addressed under a different program. This will be addressed under the new Air Force Military Munitions Response Program (MMRP), which investigates and remediates non-operational ranges. This program will be initiated at the abandoned small arms range with a preliminary assessment in 2005. Our Second Supplemental Environmental Assessment addresses unexploded ordnance clearance only to the extent necessary to safely install the fence across the abandoned small arms range.

If you have any further questions please feel free to contact Ms. Elise Sherva, Environmental Planning Chief, at 303-677-9077, E-mail elise.sherva@buckley.af.mil, or Ms. Janet Wade, Environmental Flight Chief, at 303-677-9977, E-mail janet.wade@buckley.af.mil.

CHRISTOPHER C. McLANE, Lt Col, USAF
Base Civil Engineer

Prairie Conservation Land Trust
P.O. Box 470642
Aurora, CO 80047-0642

October 19, 2003

Elise Sherva
Environmental Planning Chief
460 CES/CEVP
660 S. Aspen St. Stop 86
Buckley AFB, CO 80011-9551

Dear Ms. Sherva:

Prairie Conservation Land Trust (PCLT) agrees with the intent of the Proposed Action as outlined in the Second Supplement to the Environmental Assessment (SEA) for Proposed Prairie Dog Management Practices at Buckley Air Force Base. However, to insure the success of this project we recommend replacing the two feet of opaque mesh with a metal flashing barrier that would be both a visual and physical deterrent to prevent animals from burrowing under the fence. This barrier would work in conjunction with the chain link fence, extending eighteen inches underground with thirty inches above ground.

An additional physical deterrent would be to add three feet of chicken wire along the ground from the chain link fence. For further information on fencing materials and construction methods contact PCLT at P.O. Box 470642, Aurora, CO 80047-0642; telephone 303-517-3167; info@prairielandtrust.org.

These methods would be more cost-effective due to the durability of the metal flashing, which would also require less maintenance. The metal flashing would last indefinitely whereas the opaque mesh would not due to adverse impacts of the elements.

The above recommendations are based on first hand experience in the preparation of sites for wildlife habitat including migration prevention. These preparations will ensure long-term success of the project, and have proven reliability in the field.

Thank you for your consideration of our recommendations. PCLT appreciates the opportunity to share with you our experience and expertise in this matter. We are interested in receiving updates on your progress.

Sincerely,

Ellen P. Belef
Paula M. Boltz
Sandy Nervig
Executive Board

Lt Col Christopher C. McLane
Commander, 460th Civil Engineer Squadron
660 South Aspen Street, Stop 86
Buckley AFB CO 80011-9551

Executive Board
Prairie Conservation Land Trust
P.O. Box 470642
Aurora CO 80047-0642

Dear Executive Board

Thank you for your comments regarding the draft Second Supplemental Environmental Assessment (SEA) and draft Finding of No Significant Impact (FONSI) for Proposed Prairie Dog Management Practices at Buckley Air Force Base (BAFB). We appreciate your interest in the project and information you provided in your letter dated 19 Oct 03.

We have reviewed and considered your suggestions for improvements, including alternative barriers and visual images for the barrier fence around the airfield. This information has been included in Section 2.0 of the Final EA as an additional alternative considered but eliminated from further analysis due to cost constraints. The increased cost per linear foot of installing the modified fencing, which you have suggested, would be double that or more of the fence with opaque mesh as proposed in the document. Cost is a constraining factor given the amount of federal money available and the length of the fence. In addition, please note that the Final EA has been modified to reflect a total of 37,200 linear feet of opaque mesh. The mesh would not be installed on the gates. We value your suggestions and will retain this information for future reference if additional federal money becomes available.

If you have any further questions please feel free to contact Ms. Elise Sherva, Environmental Planning Chief, at 303-677-9077, E-mail elise.sherva@buckley.af.mil, or Ms. Janet Wade, Environmental Flight Chief, at 303-677-9977, E-mail janet.wade@buckley.af.mil.

CHRISTOPHER C. McLANE, Lt Col, USAF
Base Civil Engineer

City of Aurora

Planning Department
15151 E. Alameda Parkway
Aurora, Colorado 80012
Phone: 303-739-7250
Fax: 303-739-7268
www.auroragov.org

October 15, 2003

Ms. Elise Sherva
Conservation Chief
460 CES/CEVP
660 S. Aspen Street, Stop 86
Buckley AFB, CO 80011-9551

Dear Ms. Sherva:

RE: Comments on Draft Second Supplemental EA and FONSI for Proposed Prairie Dog Management Practices, BAFB

The staff for the City of Aurora, Colorado has reviewed the above-referenced document and has the following comments on the Draft Second Supplemental Environmental Assessment (SEA) and Draft Finding of No Significant Impact (FONSI) for the proposed Prairie Dog Management Practices Facility at Buckley Air Force Base (AFB):

Staff concurs with the assessment that the anticipated environmental consequences associated with the proposed alternative will be minor, short-term, and transitory. The impacts will be primarily related to construction activities. However, Buckley AFB is within the attainment/maintenance portion of the Denver-Aurora metropolitan area and is therefore subject to the requirements of the General Conformity rule. There is a concern that air quality impacts from the proposed project should be calculated and added to emissions from other construction projects and proposed changes in aircraft operations occurring in the same year to determine significance with respect to the General Conformity rule. The specific comments associated with this concern follow:

Page 2, Proposed Action – Emissions from the portable batch plant should be quantified and discussed in the air quality impacts section. A relocation notice for the batch plant will need to be filed with the Colorado Department of Public Health and Environment, Air Pollution Control Division. If pre-mixed concrete is transported to the base from off-site batch plants, vehicular emissions and fugitive dust emissions from travel on unpaved roads need to be calculated.

Page 9, Section 4.3.1 – Fugitive Dust Emissions – Fugitive dust would also be generated from vehicular traffic on unpaved roads. An annual emission estimate of PM_{10} emissions from all construction activities should be calculated. This estimate should include concrete batching (if on-site), material handling (probably minimal as stated in the text), and construction related travel on unpaved roads. This annual emission estimate

should be added to exhaust PM_{10} emissions from heavy-duty construction equipment and compared with the General Conformity de minimus levels.

Page 9 (Air Quality Impacts) – Exhaust emissions from the operation of construction equipment, worker vehicles, and supply trucks should be calculated. The calculations should include the types of construction equipment to be used, the horsepower, appropriate emission factors, and the hours of operation of each piece of equipment. For cumulative impacts, these emissions should be added to the expected emissions from all other construction projects occurring on base in each year. The total emissions from all projects should then be compared with the General Conformity de minimus thresholds (generally 100 tons per year) to determine if the impacts in any given year are significant.

We have one additional comment related to the former small arms range:

Page 8, section 4.2.1, second paragraph – In addition to conducting a subsurface unexploded ordnance clearance in the abandoned small arms range, the Air Force will need to develop a management plan for handling and disposal of lead-contaminated soil. It is recommended that remediation of the abandoned small arms range is conducted prior to fence construction.

Thank you for giving the City the opportunity to respond to the draft SEA and FONSI. We look forward to receiving the Final Environmental Assessment.

Sincerely,

Denise M. Balkas, A.I.C.P.
Director of Planning

DMB/jai
P:\coordination projects/2003/Enviro/BAFB/comments_DraftSEA_PrairieDogMgmt.doc

cc: Nancy Freed, Deputy City Manager of Operations
Jim Ives, Environmental Program Supervisor

RECEIVED
OCT 20 2003

Lt Col Christopher C. McLane
Commander, 460th Civil Engineer Squadron
660 South Aspen Street, Stop 86
Buckley AFB CO 80011-9551

Denise M. Balkas, Director of Planning
City of Aurora
Planning Department
15151 East Alameda Parkway
Aurora CO 80012

Dear Ms. Balkas

Thank you for your comments regarding the draft Second Supplemental Environmental Assessment (SEA) and draft Finding of No Significant Impact (FONSI) for Proposed Prairie Dog Management Practices at Buckley Air Force Base (BAFB). Your letter dated 15 October 2003 discussed concerns regarding impacts from increased particulate emissions during construction and remediation of the small arms range. We have reviewed your comments and our responses are discussed further in the table below.

Section Referenced	Comment Issue	Response
Page 2, Proposed Action	Concrete Batch Plant	There will not be a portable batch plant as part of the project. Premixed concrete will be transported to the Base from an off-site batch plant. This has been clarified in the text in Chapter 2 under the Proposed Action.
Page 9, Sec 4.3.1 Page 9, Air Quality Impacts	Fugitive Emissions	Buckley AFB does prepare an annual emission estimate of PM10 emissions in accordance with its State of Colorado Issued Title V Operating Permit. This estimate includes calculation of the construction activities for that calendar year as well as on-going activities such as vehicle travel on unpaved roads. The PM10 potential to emit for construction projects during 2003 was approximately 28 tons per year. Conservative calculations estimating 30 days of construction yields only an estimated 2.4 additional TPY of PM10 emissions. The combined amount is still far below the General Conformity de minimis threshold of 100 TPY for PM10 emissions. The EA will be expanded to provide estimates of short-term, temporary increases in particulate

		emissions. These estimates will be compared to the total amount of particulate matter produced by the Base under the cumulative impacts discussion.
Page 8, Section 4.2.1	Former Small Arms Range	We will be addressing your concerns regarding the former small arms range under the new Air Force Military Munitions Response Program (MMRP), which investigates and remediates non-operational ranges. This program will be initiated at the abandoned small arms range with a preliminary assessment in 2005. This environmental assessment addresses unexploded ordnance clearance only to the extent necessary to safely install the fence across the abandoned small arms range. While not in the EA we will leave the displaced soil from the area of the old range until such time as testing can be done to insure that this soil is not lead-contaminated.

If you have any further questions please feel free to contact Ms. Elise Sherva, Environmental Planning Chief, at 303-677-9077, E-mail elise.sherva@buckley.af.mil, or Ms. Janet Wade, Environmental Flight Chief, at 303-677-9977, E-mail janet.wade@buckley.af.mil.

CHRISTOPHER C. McLANE, Lt Col, USAF
Base Civil Engineer

STATE OF COLORADO

Bill Owens, Governor
Douglas H. Benevento, Acting Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

http://www.cdphe.state.co.us

Laboratory and Radiation Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

Colorado Department
of Public Health
and Environment

October 7, 2003

Ms. Elise Sherva
460 CES/CEVP
660 S Aspen Street, Stop 86
Buckley AFB, CO 80011-9551

RE: "Draft Second Supplement to the Environmental Assessment for Proposed Prairie Dog Management Practices at Buckley Air Force Base, Construct Fencing around Airfield, Buckley Air Force Base, Colorado" dated October 2003.

Dear Ms. Sherva:

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division (the Division) has reviewed the above referenced document received October 6, 2003. The Division has the following comments:

1) The document mentions an abandoned small arms range. Is this the same as the skeet range? If the small arms range is not the same as the skeet range, this amplifies prior Division concerns regarding an expanded Preliminary Assessment effort for the base. The document (page 8) discusses an unexploded bullets (UXB) clearance for fence construction; this action was not considered for the skeet range and may need to be considered if UXB is expected or found there. The Division will want to review any UXB clearance work plans.
2) Will any of the fence post digging be in areas of asbestos containing materials (ACM)? If not, this should be noted. If so, plans to handle any ACM need to be provided.

Thank you for the opportunity to comment. Please contact me at 303-692-3324 or ed.larock@state.co.us if there are any questions.

Sincerely,

Ed LaRock, P.G.
Environmental Protection Specialist
Hazardous Materials and Waste
Management Division

RECEIVED
OCT 9 2003

cc: Jeff Edson, CDPHE
Monica Sheets, CDPHE
Mark Spangler, Buckley Air Force Base
David Rathke, EPA Region 8
File RD003-1.1

Lt Col Christopher C. McLane
Commander, 460th Civil Engineer Squadron
660 South Aspen Street, Stop 86
Buckley AFB CO 80011-9551

Ed LaRock, Environmental Protection Specialist
Colorado Department of Public Health and Environment
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver CO 80246

Dear Mr. LaRock

Thank you for your comments regarding the draft Second Supplemental Environmental Assessment (SEA) and draft Finding of No Significant Impact (FONSI) for Proposed Prairie Dog Management Practices at Buckley Air Force Base (AFB). In a letter dated 7 October 2003, you submitted comments regarding UXB clearance in the small arms range and the potential for asbestos containing material along the fenceline.

To clarify, the former small arms range is located in the southwest portion of the Base and is not the same as either the active skeet range, which is located in the northeast, or the former skeet range, which is located in the central west. The former small arms range is a validated site in the new Air Force Military Munitions Response Program (MMRP), which investigates and remediates non-operational ranges. A preliminary assessment and site inspection is programmed for this range in fiscal years 2005 and 2006. Furthermore, the fence and its installation will not be traversing the small arms range "ordnance impact area." The area needed for construction of the fence will only require an area similar to that of a utility clearance, and a dig permit would be required to ensure utility clearance and other safety clearances. Buckley AFB is aware of the proximity to the former small arms range and will manage construction according to all rules and regulations. An updated map from the Final SEA is attached for your reference. The Final SEA has been updated to reflect these considerations more clearly.

You also noted a concern regarding encountering asbestos contaminated material (ACM) during construction. This area is not within the former Hospital area that is the subject of a September 30, 2003 CDPHE Compliance Order. However, the northwestern portion of the fence will be on property where old World War II buildings once stood. While we have no knowledge that debris from any of those buildings remains under the soil surface, there is the potential for discovery of ACM during fence installation along the northwest portions of the fenceline. Buckley AFB's pre-construction meetings will identify this potential problem and the proper

procedure to follow if ACM is discovered. We will also consult with CDPHE regarding the location and proper handling procedures for ACM. The document has been modified to reflect this information in the text and study area map. The attached figure also outlines the locations of previous WWII buildings in relation to the fenceline.

If you have any further questions please feel free to contact Ms. Elise Sherva, Environmental Planning Chief, at 303-677-9077, E-mail elise.sherva@buckley.af.mil, or Ms. Janet Wade, Environmental Flight Chief, at 303-677-9977, E-mail janet.wade@buckley.af.mil.

CHRISTOPHER C. McLANE, Lt Col, USAF
Base Civil Engineer

Attachment:
Map