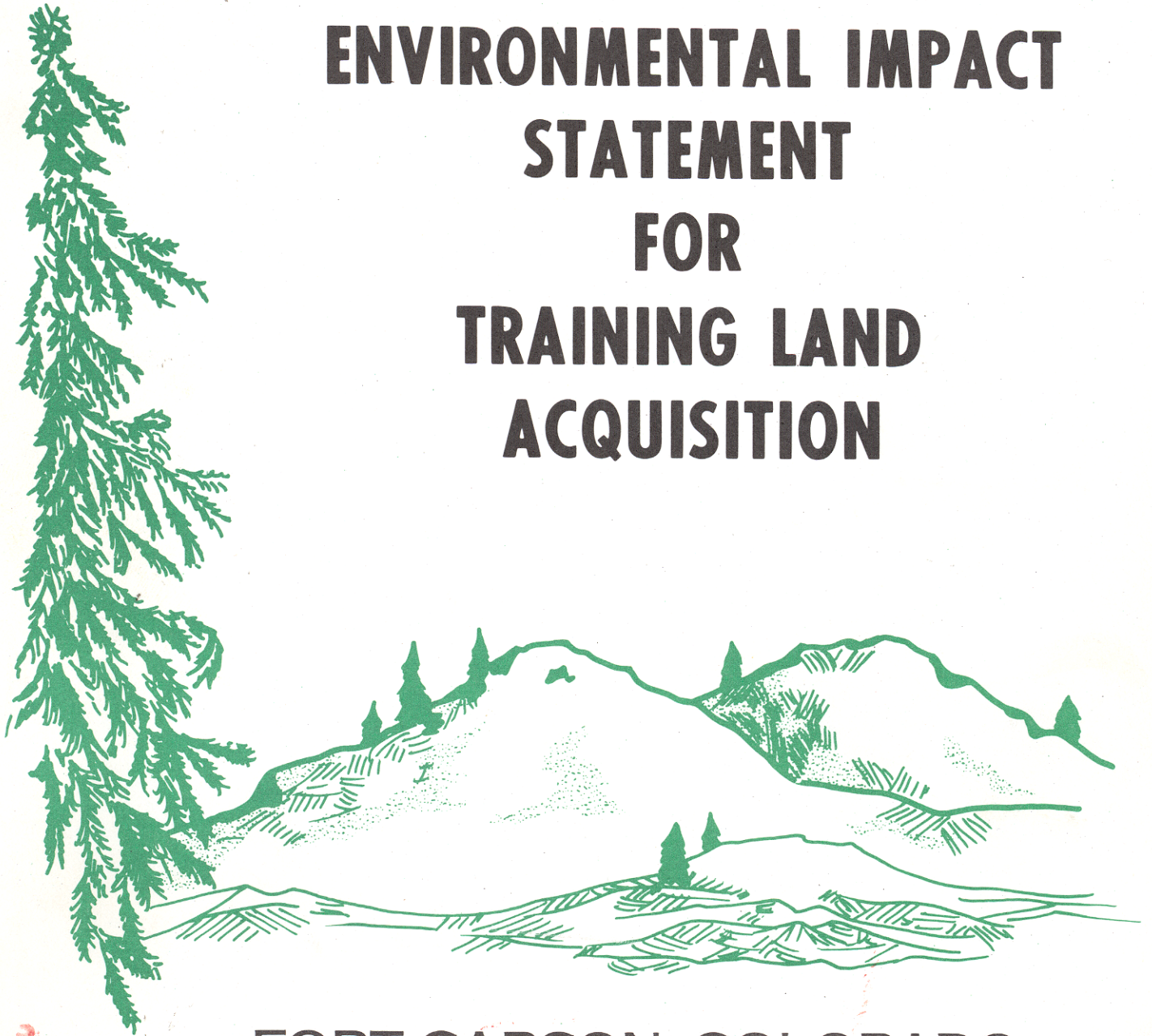


COLORADO

FINAL

**ENVIRONMENTAL IMPACT
STATEMENT
FOR
TRAINING LAND
ACQUISITION**



FORT CARSON, COLORADO

THE MOUNTAIN POST



DEPARTMENT OF THE ARMY
HEADQUARTERS, FORT CARSON AND 4TH INFANTRY DIVISION (MECHANIZED)

FINAL ENVIRONMENTAL IMPACT STATEMENT TRAINING LAND ACQUISITION FOR FORT CARSON, COLORADO

Prepared under the direction of:



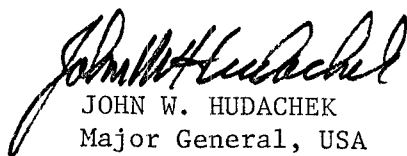
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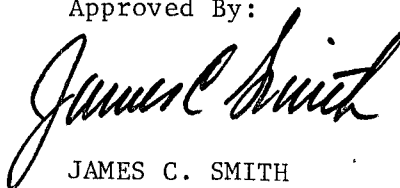
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RESPONSIBLE AGENCY:

DEPARTMENT OF THE ARMY

TITLE OF PROPOSED ACTION:

FINAL ENVIRONMENTAL IMPACT STATEMENT

ACQUISITION OF TRAINING LAND FOR FORT
CARSON, COLORADO IN LAS ANIMAS COUNTY
COLORADO

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ABSTRACT:

The Department of the Army proposes to acquire a parcel of land in southeastern Colorado to be used for combat maneuver training by the 4th Infantry Division (Mechanized), Fort Carson, Colorado. The preferred alternative is to acquire a site in Las Animas County referred to as the Pinon Canyon parcel. The environmental impacts associated with the acquisition and use of this site are very similar to those that would be experienced at the alternative site considered referred to as the Huerfano River parcel. However, because of the remoteness of the Pinon Canyon site as compared to the Huerfano River parcel there would be significantly less impact upon the human environment at the preferred site.

DATE OF FILING AND PUBLIC RELEASE:

DISTRIBUTION:

The two EIS volumes circulated as the DEIS are not being redistributed. Persons receiving this volume that did not receive the DEIS should get in touch with the above contact to request a copy or for information on library availability.

ACKNOWLEDGEMENTS

On behalf of the Department of the Army, Fort Carson and myself, I want to acknowledge the support of everyone who assisted with this project. Special thanks go to:

Both Bob's at DA; For trying to make it easy.
Ray at FORSCOM; For being there for the whole thing.
Marilyn; For not crying.
Tom, Katie and Jim; For your professionalism.
Don; For your energy and your example.
Earl; For keeping things light.
Jerry; For cooperating in the true sense of the word.
Byron, Larry and Pete; For trusting me.
Al and the gals at SJA; For being interested.
Rob, Tom, Bob, Tim, Bill, Gene and Sass; For your help.
Jane and Judi; For getting it done.
Sandy, Darren and Ryan; For being patient.

A special thank you goes to all the landowners for being open, honest and friendly, in spite of the situation.

MIKE HALLA

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SUMMARY

This summary supplements the summary contained in the main text of the Draft Environmental Impact Statement. For background information on the history of the project and the development of this EIS, see that summary on pages i-vii.

The Department of the Army proposes to acquire a parcel of land in southeastern Colorado referred to as the Pinon Canyon site in Las Animas County. The site would be utilized as a remote military training area by the 4th Infantry Division (Mechanized), currently stationed at Fort Carson, as well as Army Reserve and National Guard Units, for routine combat maneuver training.

The Pinon Canyon site is preferred over the second site that was under consideration for acquisition; the Huerfano River parcel located primarily in Pueblo County southeast of the city of Pueblo. The Pinon Canyon site is preferred primarily due to its remote location. Environmental impacts are very similar at both sites. However, the proximity of the Huerfano River site to the city of Pueblo and urban development trends toward the Huerfano parcel result in initially identical impacts being exacerbated simply by the presence of more people. Although vegetation at the Pinon Canyon site is slightly more fragile than the Huerfano River site, as evidenced by its slightly lower carrying capacity for grazing or military training uses, that factor is mitigated by means of the proposed Land Use and Management Plan (LUMP) and the development of specific military training carrying capacities. Potential economic impacts are much more favorable at the Pinon Canyon site because of existing conditions. Acquisition of the preferred site is in fact the most environmentally acceptable alternative.

Ten public hearing sessions were held on the Draft Environmental Impact Statement during the week of 7-11 July 1980. Two hearings per day were held in the following cities: Pueblo, La Junta, Trinidad, Walsenburg and Colorado Springs. All ten hearing sessions were recorded and transcribed. The transcripts were reviewed with all substantive comments identified, tabulated and synthesized for inclusion in Appendix K. The comment period was extended from July 21st to August 15th due to initial distribution problems of the Draft. All written comments received are contained at Appendix L. These comments were also reviewed with substantive issues identified, tabulated and synthesized for inclusion in Appendix K.

In general, the technical material contained in the Draft EIS defining the existing environment and predicting potential impacts was acceptable. Naturally, some areas required clarification and some errors and inconsistencies were pointed out. The responses to all issues raised in Appendix K provide the clarification requested. In addition, errata sheets are contained in this volume for the Draft EIS.

A number of important changes have been incorporated into the proposal based on comments received. Most changes provide some form of additional mitigation. Major additions or changes are discussed in the applicable section of Appendix K and are summarized as follows:

1. Modified Procurement Policy -- Changes in Department of Defense procurement restrictions will allow for up to 84% of procurement and construction contracts to be directed to the local area, dependent only upon qualifications of the businesses, labor surplus status of the community and receipt of fair and reasonable bids. (Socio-economic)
2. Land Use Technical Advisory Committee (LUTAC) -- Establishment of an advisory group to be made up of local and agency representatives having an interest in the land use and management portion of the Environmental Program. (Land Use)
3. Convoy Procedures -- All wheeled vehicle convoys to the Pinon Canyon site would be diverted to rail until a bypass from I-25 to Highway 350 is improved to handle military traffic. In addition, convoys to the Huerfano River site and, eventually, to the Pinon Canyon site would be spread out over a number of days and scheduled to avoid peak traffic hours. (Transportation)
4. Potable Water -- Several feasible alternatives for providing potable water are identified for each site, with a firm option contract negotiated for the Pinon Canyon parcel. (Water)
5. Construction Schedule -- Development of supporting facilities at the Pinon Canyon site within a short time frame could disrupt the economy, creating a "boom" effect. Lower priority facilities have been identified and would be scheduled to avoid disruptive effects. (Socio-Economic)
6. Cantonment Areas -- Proposed cantonment sites are changed at both sites in response to comments. (Land Use)
7. Limestone and Clay -- At the Huerfano River site, limestone deposits intended to be developed would be excluded from acquisition. Also access to clay deposits bordering the Huerfano River site would be negotiated. (Geology/Minerals)
8. Side Canyon Protection -- Additional side canyons would be included in the wildlife protection area of the Huerfano River and the quarter-mile buffer along the Purgatoire River if they are inaccessible to vehicles or especially important habitat. (Fish and Wildlife)
9. Cultural Resource Management -- A Memorandum of Agreement has been developed between Fort Carson, the State Historic Preservation Officer and the Advisory Council on Historic Preservation. (Cultural)

Finally, the regulations promulgated by the Council on Environmental Quality for the preparation of Environmental Impact Statements recommend that information contained in companion documents that accompany an Environmental Impact Statement and contain information evaluating alternatives, should be made available as part of the EIS. Therefore, excerpts from a companion document, the Analysis of Alternatives Study, are included herein at Appendix M. The sections of that study provided compare the two acquisition sites under consideration from all view points including environmental.

A decision by the Department of the Army as to whether a request for land acquisition will be submitted to Congress, will be announced after the 30 day waiting period from the filing date of this document as prescribed by the Council on Environmental Quality regulations.

ADDITIONAL ERRATA FOR MAIN TEXT OF DEIS

The following corrections and explanations are considered noteworthy. They are included to reduce any confusion that the original text might create. This list is not intended to be all inclusive. Corrections, additions and clarifications contained in Appendix K in direct response to issues are not all duplicated here.

<u>Reference</u>	<u>Correction or Explanation</u>
Page 3-32, 2nd paragraph	Change: (<u>Cymrorpinus Cyanocepholeus</u>) to (<u>Gymnorhinus Cyanocephalus</u>), and (<u>Thrydmanes Bewickii</u>) to (<u>Thryomanes Bewickii</u>).
Page 3-32, last paragraph	Change: (<u>Calamospiza Melanocrys</u>) to (<u>Calamospiza Melanocorys</u>).
Page 3-43, Air Quality	<p>Delete: 2nd and 3rd paragraphs (3rd paragraph ends on page 3-44.)</p> <p>Add: The state of Colorado revised their ambient air quality standards in May of 1979. These standards are presented as Table G-11 in Appendix G. Areas in Colorado are designated as attainment, non-attainment, or unclassified for a particular pollutant. An area is classified as attainment if it meets the state's primary standard for the pollutant. Likewise, if the concentrations measured in an area exceed the primary standard, the area is classified as non-attainment. An unclassified area is one where insufficient data prevents classification. Around Huerfano Parcel all areas are classified as attainment with the exception of the City of Pueblo, which is non-attainment for particulate matter.</p>
Page 3-44, 2nd and 3rd paragraphs	<p>Delete both paragraphs</p> <p>Add: One can see from the data presented in Table G-12 that all monitoring stations with the exception of Walsenburg exceeded annual Federal and State primary air quality standards in 1978. While the primary 24-hour standard was not exceeded in 1978 at any of the four monitoring stations, the secondary standard was exceeded at all stations except Walsenburg. It should be noted that the monitoring stations located in Pueblo are strongly</p>

ReferenceCorrection or Explanation

influenced by major industrial sources and urban activity and therefore are not representative of the ambient concentrations on the Huerfano Parcel.

Page 3-47, Table 3-11

Change: Location 2, Ldn = 53.2 to 53.3
Change: Location 5, Ldn = 47.0 to 51.3

Page 3-94, Air Quality

Delete: 2nd 3rd and 5th paragraphs

Add: The state of Colorado revised their air quality standards in 1979. The Pinon Canyon Parcel and areas around it are all classified as attainment for all criteria pollutants.

Retain 4th paragraph.

Add: It can be seen from viewing the data presented in Table G-18 that no exceedences of the Federal and State primary 24-hour particulate standard were recorded in 1978. Exceedences of the secondary 24-hour standard were recorded at Rocky Ford and La Junta in 1978. The Rocky Ford monitoring station was the only site to record an exceedence of the primary annual standard in 1978. It should be noted that all samples are located in urban areas and do not represent conditions in rural areas.

Page 4-26, 1st paragraph,
line 5

Change: 45 mg/m³ to 60 mg/m³

Page 4-26, last paragraph,
line 4

Change: Particulate to secondary, and: 45 to 60

Page 4-36, Table 4-12,
location 5

Change: 47.0, 50.9, and 3.9 to 51.3, 53.2 and 1.9

Page 4-58, 2nd paragraph,
line 7

Change: 45 mg/m³ to 60 mg/m³

Page 4-58, last paragraph

Delete: Last two sentences.

Add: Within the borders of the parcel, the annual secondary particulate standard is not expected to be exceeded. If this parcel is selected and the monitoring network showed an exceedence, the Colorado Department of Health would probably require the Army to restrict public access to the parcel during training activities.

<u>Reference</u>	<u>Correction or Explanation</u>
Page 4-61, Table 4-18	Change: Location 1 - 44.2 to 44.5 and +29.4 to 29.1 Location 3 - 34.8 to 35.1 and +22.6 to +22.3 Location 4 - 58.1 to 58.2 and +1.9 to +1.8

ADDITIONAL ERRATA FOR APPENDICES OF DEIS

The following corrections and explanations are considered noteworthy. They are included to reduce any confusion that the original text might create. This list is not intended to be all inclusive. Corrections, additions and clarifications contained in Appendix K in direct response to issues are not all duplicated here.

<u>Reference</u>	<u>Correction or Explanation</u>
Following title page	Add: Table of Contents Appendix A - Land Use and Management Appendix B - Geology/Minerals Appendix C - Soils Appendix D - Vegetation Appendix E - Hydrology Appendix F - Wildlife Appendix G - Meteorology and Air Quality Appendix H - Sound Appendix I - Socioeconomics and Land Use Appendix J - Other sites and Scoping Process
Page A-2, 2nd paragraph, line 2 lines 5 and 6	Change: Brigade to Battalion Delete: and brigade
Pages A-11 and A-12, Table A-9	Delete entire table
Pages F-14 and F-26, Footnote 2	Add: W = Winter Resident
Page F-23	Change: <u>Eutamias Quadrimaculatus</u> to <u>Eutamias</u> <u>Quadrivittatus</u> .
Page G-12, Table G-11, particulates	Delete: All standards shown for state Add: State standards are same as Federal as of 1979.
Appendix H, List of Figures	Add: Huerfano River Parcel to Tables H-2 through H-11, (Here and on each table). Add: Pinon Canyon Parcel to Tables H-12 through H-21, (Here and on each Table).

<u>Reference</u>	<u>Correction or Explanation</u>
Appendix H - List of Tables	Change: Title of Table H-3 to --- Rotary Wing Aircraft Landing, Level Flyover and Takeoff Equivalent Sound Level, dB (Here and on Table).
Page H-28, Display between 1st and 2nd paragraphs	Change: (.4) to (1.6) (.8) to (3.2) (2.0) to (8.0)
Pages I-30 and I-31, Tables I-27 and I-28	Delete: (In thousands of dollars) from both Table titles.
Page I-32, Table I-29	Delete entire table.

APPENDIX K
ISSUES AND RESPONSES FROM DRAFT EIS
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SOILS AND VEGETATION	121-135	K-91
SOUND	136	K-103
TRANSPORTATION	137-140	K-105
WATER	141-158	K-109

K-1

AIR

1. *ISSUE: Over 30 commentors indicated they were concerned about the impact of military training on ambient particulate levels.*

RESPONSE: The potential effect of military training on ambient particulate levels is discussed in depth in Sections 4.1.6 and 4.2.6 of the DEIS. As indicated there, all the assumptions utilized in projecting particulate level effects were extremely worst case. The results indicated that military training would not result in any standards violations off the site as long as worst case convoy movement on unpaved roads was kept 500 meters from the parcel boundary. The special case of the Pueblo nonattainment area will be discussed in a separate issue.

2. *ISSUE: One commentor indicated that the division exercise should have been utilized to represent the worst case training situation for projecting air quality impacts.*

RESPONSE: A division sized exercise could result in a greater impact on air quality over a short term. However, neither parcel is large enough to properly conduct a division sized exercise. Therefore, for the record, division exercises would not be conducted at either site.

3. *ISSUE: One commentor stated that particulate impacts on the City of Pueblo were only calculated and compared to the annual average standard while a more serious short term impact might occur during the windiest season which is not reflected in the annual average standard comparison. The commentor was also concerned about that short term impact on communities east and north-east of the Huerfano River site.*

RESPONSE: The commentor is incorrect when he states that the annual average standard was the only evaluation made for particulate impacts on the City of Pueblo. The potential effect on compliance with the 24 hour standard was also calculated using both worst case training in the area and worst case convoying on an unpaved road. The results show an insignificant level of particulates adjacent to the parcel in any direction, including east and northeast. This is discussed in Sections 4.1.6 and 4.2.6 as well as in Appendix G of the DEIS.

4. *ISSUE: One commentor stated that the potential contribution of particulates from helicopter activity should have been included as it might be a significant source.*

RESPONSE: The contribution of particulates from helicopter activity at either site would not be significant. Fugitive emissions generated by helicopter rotor downwash are a function of the helicopter weight, rotor diameter, height of the helicopter above ground level, silt content of the soil below the helicopter, vegetative cover, and the complex air dynamics beneath the helicopter.

No data or equations are presently available for calculating fugitive emissions caused by helicopter rotor downwash. Large, ground-based particulate emissions that would remain suspended occur only when the helicopters are close to a section of ground that has sparse vegetative cover and high silt content. During maneuvers, helicopters would generally be flying at an altitude of 200 feet or less above ground level to avoid detection. However, it is estimated that significant emissions occur only when the helicopters are within 25 to 35 feet of the ground. Helicopters rarely fly below 35 feet except during take-offs, landing and hovering. Therefore, assuming worst case, it is estimated that the helicopters would be within 35 feet of the ground less than 25 percent of the 3,715 annual flight hours.

If one assumes that the emissions generated each minute by helicopter takeoff or landing are equal to the emissions generated per minute by a tank traveling 15 miles per hour on a gravel road, the annual emissions from the helicopters would be about 6.6 tons of particulates. The estimated worst case particulate emissions from all sources are calculated to be about 13,000 tons per year. Projected emissions from helicopter downwash are therefore insignificant compared to annual emissions from other sources.

5. *ISSUE: One commentor requested that a 1/2 mile buffer from the rim of the Huerfano River and Purgatoire River canyons be established to prevent dust from training areas settling into the canyons.*

RESPONSE: A 1/4 mile buffer zone from the Huerfano and Purgatoire River Canyons has been established and is adequate to prevent any significant dust deposition in the canyon. The worst case annual emissions from either site is estimated to be about 13,000 tons of particulate per year from all sources. Utilizing the currently accepted portioning of settleable particulates established by the Environmental Protection Agency in its AP-42 document compiling air pollutant emission factors, 60 percent of all emissions would settle within the parcel and would amount to 0.8 gm/ft² if applied across the entire site.

Fallout from emissions would be most significant adjacent to major road surfaces. Sixty percent of emission settling would occur within 100 meters of the road, which represents less than 25 percent of the 1/4 mile buffer. Therefore, even if a major road were located right at the edge of the buffer, which is not proposed, the vast majority of particulates that will settle will do so within the buffer and not reach the canyon. A 1/2 mile buffer would result in no significant advantage to controlling fallout in the canyon areas.

6. *ISSUE: One commentor was confused about the use of micrograms per cubic meter (ug/m3) in describing 24 hour particulate concentrations from an area source shown on page G-28 and the use of milligrams per cubic meter (mg/m3) used in the projection of 24 hour particulate concentrations arising from a line source shown on page G-30. The commentor felt that perhaps different units of measurement were being utilized to confuse people and prevent them from realizing that the quantities represented by milligrams per cubic meter were much larger than those of micrograms per cubic meter.*

RESPONSE: Different units were not utilized to intentionally confuse anyone. Twenty-four hour particulate concentrations arising from an area source are significantly less than those arising from activity on a line source, i.e. an unpaved road. Consequently different units of measurement have been used so the levels expressed are in manageable form.

7. *ISSUE: Two commentors indicated that projected particulate concentrations appeared to represent worst case conditions in all respects but that dispersion modeling is only accurate to within a factor of plus or minus two. The commentor pointed out that the actual worst case impact might be as low as 0.75 micrograms per cubic meter or as high as 3.0 micrograms per cubic meter on the City of Pueblo.*

RESPONSE: The key in this area is the fact that all efforts were made to insure a worst case projection:

(1) The training level was set unrealistically high.

(2) The natural settling of dust over distance was not incorporated into the calculation, and

(3) wind erosion contributions in the City of Pueblo are over estimated by using the joint frequency distribution for winds in Pueblo because wind speeds in excess of 12 miles per hour required for wind erosion normally occur away from rather than towards Pueblo. These factors are all discussed in Section 4.1.6 and are central to the conclusion that particulate impacts to the City of Pueblo would not be significant.

8. *ISSUE: One commentor indicated that the use of wind data from the Pueblo airport for air pollution projections was not appropriate since the Huerfano River parcel is influenced more by the Huerfano River than the Arkansas River.*

RESPONSE: We agree that it would have been preferable to have wind data from the Huerfano River parcel rather than utilizing data from the Pueblo airport. However, it should be noted that the use of Pueblo airport data contributes to the fact that the particulate projections for the City of Pueblo are worst case since the influence of the Huerfano River would be to carry particulates away from Pueblo. The Arkansas River drainage carries particulates towards Pueblo under upslope meteorological conditions.

A graphic representation of the Pueblo airport annual wind rose is presented as Figure 3-12 on page 3-42 of the DEIS. It can be seen from that figure that there is a predominate east-west channeling of the air flow due to the Arkansas River Valley and the upslope drainage diurnal cycle. The Pueblo Airport is located on the north side of the valley while the Huerfano River parcel is on the south side. The land on the Huerfano gently rises to the southwest out of the Arkansas River Valley. Therefore, it is expected that winds on the parcel would be rotated slightly counterclockwise from those at Pueblo airport. Winds on the parcel probably have more of a southwest to northeast component than east to west. This would cause fugitive emissions to be transported away from the Pueblo area during the day and to the east of Pueblo at night. Differences in meteorology between the Pueblo airport and the parcel would tend to decrease the impacts on Pueblo.

9. *ISSUE: One commentor indicated that the equation used in projecting emissions from vehicle movement may not be totally applicable to tracked vehicle emissions such as our mechanized combat equipment.*

RESPONSE: The equation used to calculate fugitive dust emissions from the movement of vehicles is shown on page G-20 of the DEIS. The equation predicts emissions of particles smaller than 30 um in Stokes diameter generated by the movement of wheeled vehicles on unpaved roads with no vegetative cover. The equation was derived by Midwest Research Institute (MRI) under an EPA contract. The results of the study are presented in the EPA report entitled "Fugitive Emissions from Integrated Iron and Steel Plants" (EPA-600/2-78/050).

The equation, with its associated imprecisions, is considered state of the technology. EPA Region VIII recommends the use of this equation in their policy paper titled EPA Region VIII Interim Policy Paper on the Air Quality Review of Surface Mining Operations. This paper states that the equation derived by MRI is an acceptable method of calculating fugitive emissions which result from vehicle movement on unpaved roads. The MRI equation was used instead of an alternate because it is more conservative, resulting in worst case projections.

10. *ISSUE: One commentor indicated that they were not sure why a 35% reduction in particulate emissions from off road vehicle travel was utilized for the Huerfano River parcel.*

RESPONSE: A 35% reduction in vehicle emissions from off road vehicle travel was utilized to account for the average soil cover which acts to reduce the emissions. There is only one equation used to calculate particulate emissions from vehicle travel. It was developed for unpaved roads and does not consider soil coverings such as grass, rocks, sticks, leaves, etc. All these soil coverings reduce the amount of particles generated when vehicles drive off the road. Therefore, calculations for off road particulate emissions must be reduced to compensate for average soil cover.

Average soil cover for both the Huerfano River and Pinon Canyon sites were calculated utilizing cover data generated by field soil and vegetation surveys. Table C-1 and C-2 show the overall soil cover percentage for both sites. The Huerfano River parcel has an estimated soil cover of 38.8%; 35% was used in reducing particulate estimates to be conservative. The Pinon Canyon parcel has an estimated soil cover of 30.0%; 27% was used to be conservative.

11. *ISSUE: Several commentors indicated that to insure no significant impact occurs in Pueblo relative to the nonattainment area for particulates that a monitoring program be established.*

RESPONSE: A monitoring network consisting of four high volume samplers and a meteorological station are included in the project proposal on page 4-31 of the DEIS.

12. **ISSUE:** Two commentors compared the tons per year of total particulates projected to be generated at the Huerfano River site to the total particulate generation required in the Pueblo nonattainment area in 1982 to insure compliance with national standards. Their comparison attempted to show that while Pueblo was to be restricted to 18,384 tons per year by 1982, that military training at the Huerfano River parcel would be generating 12,993.5 tons per year leaving only 6,000 tons per year for Pueblo.

RESPONSE: It is incorrect to compare the tons of particulates generated by military training at the Huerfano River site to the tons per year allowed within the Pueblo nonattainment area. The Huerfano River site is not within the Pueblo nonattainment area. An insignificant portion of the particulates from the Huerfano River site would be dispersed into the Pueblo nonattainment area, an estimated 450 tons per year. At least 60% of all settleable particles would fall out within the parcel, (7,800 tons per year). The remainder would settle out between the parcel and Pueblo or be dispersed in other directions.

13. **ISSUE:** Two commentors suggested that a technical assessment be provided as to the ability of the Pueblo area to meet 24 hour total suspended particulate standards if the Huerfano River site is acquired and utilized for training.

RESPONSE: The EIS does contain an analysis of the impact of worst case training at the Huerfano River site on the 24 hour standard in Pueblo. That analysis is contained in Appendix G and discussed in Section 4.1.6 of the DEIS. It indicates that particulate contributions are of no significance as defined by the Environmental Protection Agency for a 24 hour average. The EPA has established $5\mu\text{g}/\text{m}^3$ as the lower level of significance and the estimated worst case 24 hour concentration increment in Pueblo is $2.9\mu\text{g}/\text{m}^3$.

14. **ISSUE:** One commentor inquired as to what recourse would be available to the City of Pueblo if particulate emissions from training at the Huerfano River parcel prevented compliance with federal standards and precluded the awarding of an attainment designation. A related comment indicated that Federal agencies are precluded from approving an activity that does not conform to an approved State Implementation Plan (SIP) and asked if use of the Huerfano River site would be in conformance.

RESPONSE: The ultimate recourse of the city would be to take legal action against Fort Carson and the Department of the Army. However, the need for such recourse is not realistic. All reasonable projections show there would not be a significant effect on the City of Pueblo. If an effect did occur, Fort Carson would initiate additional particulate control and reduce our impact.

The Huerfano River parcel is totally outside the Pueblo nonattainment area. At its closest point the parcel is approximately 10 miles from the center of Pueblo. The parcel area itself is presently classified as attainment for air pollutants. Nevertheless, it is appropriate to analyze use of the parcel on the Pueblo portion of the State Implementation Plan (SIP).

As of this writing, the Colorado SIP has been conditionally accepted by the EPA for the Pueblo nonattainment area. The remaining uncertainty centers on the ability of Pueblo to attain the 24 hour Federal particulate standard. The EPA maintains that the reduction in emissions proposed by the SIP will not be sufficient to attain a 24 hour standard. The EPA has accepted the SIP for its attainment of the annual primary standard by 1982.

The Pueblo area SIP sets forth certain strategies to bring the area into compliance with the Federal primary particulate standards. These include the following:

- (1) pave presently unpaved roads within the city limits of Pueblo;
- (2) pave selected roads outside the city limits of Pueblo;
- (3) control major mud and dirt carry-out sources;
- (4) pave alleyways within the city limits of Pueblo; and
- (5) improve street cleaning procedures.

With these measures and others to which CF&I has committed, Pueblo plans to attain the annual primary particulate standard by 1982 while gradual growth continues. The acquisition and use of the Huerfano River parcel as proposed can fit within the constraints set forth in the Pueblo SIP. It will, however, limit to some extent other types of growth in the Pueblo area or require additional control measures to offset the growth.

The result of the dispersion modeling in Section 4.1.6 of the DEIS indicates that, using worst case conditions, the estimated 24 hour concentration increase would be about 2.9 ug/m^3 . That is below the 5 ug/m^3 level of significance and, therefore, the impact on the Pueblo nonattainment area in meeting the 24 hour particulate standard should be insignificant regardless of the eventual conditions of the 24 hour SIP attainment plan.

The worst case annual concentration increment is estimated to be 1.5 ug/m^3 . This is just above the lower level of significance of 1.0 ug/m^3 set by the EPA for nonattainment areas. The impact of that increment is estimated to be equivalent to area sources based in Pueblo of about 450 tons per year.

15. ISSUE: One commentor indicated that if training at the Huerfano River site contributes significant quantities of fugitive dust to the region existing industry may be required to invest additional resources to reduce their emissions in order to insure regional compliance with standards.

RESPONSE: Fugitive particulate emissions are not projected to contribute significantly to any violations of air quality standards. Nevertheless, if problems were to occur the response to the above issue would be applicable to industrial firms as well as to the City of Pueblo.

16. *ISSUE: One commentor pointed out that the state of Colorado had revised their air quality standards and that several references to standards and compliance with standards were incorrect. For instance: ambient air quality standards were changed to coincide with federal standards meaning that the primary annual standard of 45 micrograms per cubic meter and the primary 24 hour standard of 150 micrograms per cubic meter used in the EIS were in error. In addition, the priority designation system used by the state in the past is no longer utilized; instead areas are now designated for criteria pollutants as either attainment, nonattainment or unclassified.*

RESPONSE: This correction is warranted. The present Colorado secondary 24 hour and annual particulate standards are 150 micrograms per cubic meter and 60 micrograms per cubic meter respectively. Furthermore, areas in Colorado are now designated as attainment, nonattainment or unclassified for a particular pollutant. An area is classified as attainment if it meets the states primary standard for the pollutant. Likewise, if the concentrations measured in an area exceed the primary standard, the area is classified as nonattainment. An unclassified area is one where insufficient data prevents classification. Around the Huerfano parcel all areas are classified as attainment with the exception of the City of Pueblo which is nonattainment for particulate matter. Around the Pinon Canyon parcel all areas are classified as attainment. This change does not affect any of the conclusions in the DEIS as to the relationship of impacts to compliance with state standards.

17. *ISSUE: Two commentors pointed out that the convoying of military vehicles along the interstate highway to travel to either of the training sites would have an effect on both particulate and gaseous pollutants in the vicinity of the highway. They requested that an analysis of that potential impact be provided.*

RESPONSE: A complete description of convoy action is contained in a response to a transportation issue, see page . As indicated therein, wheeled vehicles would be convoyed to the Huerfano River site in company sized units with 150 meters between individual vehicles and vehicles traveling an average of 40 MPH. A commitment has been made to rail all wheeled vehicles to the Pinon Canyon site until such time as transportation network improvements are in place. Nevertheless, convoys might eventually be utilized to reach the Pinon Canyon site if it were to be obtained. Therefore, for transportation of wheeled vehicles to either parcel it can be assumed that up to 826 vehicles would travel down the interstate from Fort Carson twice each month for each brigade training month. Travel through the City of Pueblo would consist of 20 miles, at the most, so the total mileage per year of convoy traffic through the city would be approximately 165,000 miles per year. According to the emission inventory of Pueblo as reported by the Air Quality Control Commission's Report to the Public (1979), about 560 million vehicle miles are driven inside the city limits of Pueblo yearly. Therefore, proposed convoy traffic inside the City of Pueblo represents at most, three hundredths of a percent (0.03%) of

the total mileage already traveled by private and commercial vehicles. Therefore, on an annual basis, convoying through Pueblo would have an insignificant impact on air quality in the city. Furthermore, a worst case analysis of convoy gaseous emissions shows that carbon monoxide would be the largest gaseous emission and that a worst case hourly average concentration of carbon monoxide 100 meters from the road surface would be 492 micrograms per cubic meter. This compares to the Colorado one-hour carbon monoxide standard of 40,000 micrograms per cubic meter. The contribution of gaseous emissions is insignificant.

K-10

CULTURAL RESOURCES

18. *ISSUE: Several commentors stated that the abundance, richness and importance of archaeological resources was not indicated or was understated. One commentor pointed out that paleontological remains were not mentioned and another felt that the historical importance of ranching was not adequately illustrated.*

RESPONSE: Sections 3.1.9 and 3.2.9 of the DEIS discuss cultural resources and acknowledge that historic, archaeological and cultural aspects of the sites are important features. As stated in those sections, there is an abundance of cultural resources in the region. Both prehistoric and historic.

The Colorado State Historic Preservation Officer indicates that, "Paleontological remains are not considered to be a cultural resource and are not protected by Cultural Resource laws." However, paleontological remains are often loosely grouped with cultural resources and may warrant protection. As a result, a separate paleontological survey has been conducted at Fort Carson as part of cultural resource analysis. A similar approach would be taken at either proposed training site and any significant resources found would be documented, recovered or protected as appropriate.

Although not specifically stated in Sections 3.1.9 and 3.2.9, the historical importance of ranching is recognized and would be documented as part of the cultural resource program to be implemented at either site. The lack of specific reference to ranching is primarily due to the fact that it is both modern history and current activity as opposed to American Indian and Western settlement activities.

19. *ISSUE: Several commentors stated that professional and "resident" (amateur) archaeologists were not contacted during preparation of the DEIS.*

RESPONSE: The following professional archaeologists were contacted during preparation of the DEIS:

Bruce Rippeteau, State Archaeologist
Betty LaFree, State Archaeologist's Office
William Buckles, University of Southern Colorado
Bob Alexander, Grand River Consultants (currently performing survey of Fort Carson)

The following "resident" or avocational archaeologists were contacted during preparation of the DEIS:

Julia Avery
Charles Ball
Donald Winters
Elizabeth Wright-Ingraham

With the exception of Mr. Alexander all of the above persons are listed as persons contacted in Section 7, "References" of the DEIS.

In response to this comment additional contact was made with both professional and avocational archaeologists to insure that all substantive data was obtained. Persons contacted were:

William Buckles, University of Southern Colorado
Arnold Withers, University of Denver
Caryl Wood, Archaeologist, Pueblo
Ruth Henritze, Colorado Historical Society, Trinidad
Howard J. Pomerantz, Acting State Archaeologist
Julia Avery
Willard Loudon
Howard Munsell
Jim Schuth
Donald Winters
Arthur C. Townsend, State Historic Preservation Officer

The result of this follow-up was to reinforce the information in Sections 3.1.9 and 3.2.9 of the DEIS; that the general region contains abundant, potentially significant cultural resources, both historic and prehistoric. These resources include:

Lithic scatters
Camp sites
Rock shelters
Stone rings
Rock art
Explorer expedition routes
Trails, stagelines and railroads
Ranches
Cemetaries

Specific procedures to identify and manage these resources are discussed in the following issue.

20. *ISSUE:* Many commentators were concerned about the lack of intensive field reconnaissance for cultural resources. They indicated that the potential impact to cultural resources could only be projected if the many thousands of sites were found and identified. One commentator states that without such information, cultural resources could not be one of the criteria considered in the process of selecting feasible sites. One commentator inquired as to the scope and cost of future study efforts.

RESPONSE: The abundance, diversity and potential significance of cultural resources at both the Huerfano River and Pinon Canyon sites is acknowledged in Sections 3.1.9, 3.2.9, 4.1.9 and 4.2.9 of the DEIS. The Colorado State

Historic Preservation Officer (SHPO) agreed with us in the early stages of DEIS preparation that a cultural resource survey of these sites would entail a great deal of time, effort, and expense and could not feasibly be accomplished as part of the EIS process. Furthermore, it was agreed that sufficient information as to the type of resources present already existed to allow a comparison of the two sites. Accordingly, a Memorandum of Understanding was developed between the SHPO and Fort Carson establishing a specific Cultural Resource Management Program for either site that might be obtained. It was our intention to have the Advisory Council on Historic Preservation (Council) subsequently issue a Memorandum of Agreement based on the Memorandum of Understanding with the SHPO. However, as a result of further coordination since publication of the DEIS, a Memorandum of Agreement between the SHPO, Council and Fort Carson has been developed that supercedes the Memorandum of Understanding contained in the DEIS. The new Memorandum is attached. It requires establishment of an Historic Preservation Program for Fort Carson and is applicable to any additional lands that might be acquired. It insures that the intensive field survey of concern to the commentors will be accomplished prior to training use and that measures will be implemented to adequately conserve significant resources.

All existing information indicates that the Huerfano River and Pinon Canyon sites contain very similar cultural resources since they are in the same Physiographic Province, are both transitional zones from Mountains to Plains and experienced similar prehistoric and historic settlement patterns. The analyses conducted, along with actual experience with military training impacts enabled cultural resources to be considered in this decision process.

The scope of future cultural resource study efforts is defined in the attached Memorandum of Agreement. Surveying would be accomplished on a phased basis and is projected to take at least two years. Phasing would probably follow the proposed training management units A-E at either site, with off-limits area being done last. The projected cost of surveying, based on experience at Fort Carson, is \$1,462,000 for the Huerfano River parcel and \$1,702,000 for the Pinon Canyon parcel. The scope and cost of mitigation or preservation measures would be developed subsequent to completion of the survey.

21. ISSUE: Several commentors expressed concern about specific potential impacts to cultural resources; destruction of caves and rock art from use of heavy vehicles, disturbance of lithic scatters from vehicle traffic, and natural concentration of training activities in high density cultural resource areas.

RESPONSE: A large percentage of the caves and rock art would be found in the main canyon area at both the Huerfano River and Pinon Canyon sites. These main canyon areas would not be used for training as shown on Figures 2-4 and 2-8 in the map pocket of the DEIS. Those caves and rock art in side canyons

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

MEMORANDUM OF AGREEMENT

WHEREAS, the Department of the Army, Headquarters Fort Carson and Headquarters 4th Infantry Division (Army), propose to continue training at the Fort Carson (Installation); and,

WHEREAS, the Army proposes to acquire additional training land within Southeastern Colorado (for the purposes of this Agreement the term "Fort Carson" includes the existing installation as well as any additional lands that may be acquired); and,

WHEREAS, the Army, in consultation with the Colorado State Historic Preservation Officer (SHPO), has determined that these undertakings as proposed may have an adverse effect upon cultural properties included in or eligible for the National Register of Historic Places; and,

WHEREAS, pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320), Section 2(b) of Executive Order 11593, "Protection and Enhancement of the Cultural Environment," the Army has requested the comments of the Advisory Council on Historic Preservation (Council) in accordance with the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800); and,

WHEREAS, representatives of the Council, the Army and the Colorado SHPO have consulted and reviewed the undertakings as proposed; and,

NOW, THEREFORE, it is mutually agreed that the implementation of the undertakings, in accordance with the following stipulations, will avoid, minimize, or mitigate adverse effects on cultural properties.

Stipulations

The Army will ensure that the following stipulations are carried out at Fort Carson (Installation).

- I. All survey, evaluations, data recovery, monitoring of land disturbing activities, or rehabilitation work performed in accordance with this Agreement will be conducted under the direct supervision of a person who meets at a minimum the appropriate professional qualifications set forth in 36 CFR Part 1210, Appendix C and who has professional experience relevant to Southeastern Colorado.
- II. The Army will ensure compliance with the Archeological Resources Protection Act of 1979 and will advise all contract and Army personnel

and resident dependents against illegal collection of cultural materials and of the penalties for such collection imposed by the Act.

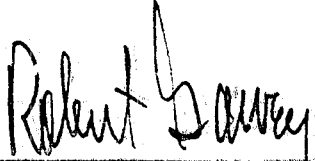
- III. Copies of all scopes of work, reports, plans, or other products generated under this Agreement will be provided to the Colorado SHPO for review and comment.
- IV. Copies of any final technical reports will be furnished to the Council and to Interagency Archeological Services (Heritage Conservation and Recreation Service, Department of the Interior, Washington, D.C. 20243), for possible submission to the National Technical Information Service (NTIS). Any precise locational data should appear in a separate appendix and may be withheld from NTIS publication pursuant to Section 11 of the General Authorities Act of 1970, as amended (P. L. 94-458).
- V. An Historic Preservation Program for the Installation will be developed and implemented in consultation with the Colorado SHPO and, as appropriate historical architects, archeologists, or other historic preservation specialists. The Historic Preservation Program will be included as an element of the Installation Master Plan and will be used to guide installation and training exercise planning. In order to promote consistency in the treatment of cultural properties on the Installation, the Historic Preservation Program will be responsive to Army Technical Manuals TM5-801-1, TM5-801-2, and Technical Note No. 78-17, dated September 15, 1978, until it is superseded by Army Technical Manual TM5-801-3 (presently in draft form).
 - A. The Historic Preservation Program must include, but need not be limited to, the following elements:
 1. A cultural property overview and archeological research design (or designs) that identifies the types of cultural properties that are expected to be found on the installation; that sets forth the research topics to be addressed; and that establishes survey and other investigation strategies for the identification and evaluation of such properties.
 2. A strategy for completing the cultural property survey required by Section 2(a) of Executive Order 11593, "Protection and Enhancement of the Cultural Environment." This strategy will include:
 - a. assignment of all installation land into land-use categories based on intensity of military use or land disturbing activities, such as planned construction and new training areas;
 - b. survey priorities based on the land-use categories;
 - c. time table for completion of the survey; and,

- d. staffing and funding programs.
- 3. An Installation procedure to be followed in determining historic and cultural properties eligible for inclusion in the National Register of Historic Places, which is consistent with 36 CFR 1204.
- 4. An Installation procedure for reviewing actions to determine effects (36 CFR Sec. 800.3) on National Register or eligible properties.
- 5. An Installation procedure for the preservation of affected National Register or eligible properties. This procedure will include, but need not be limited to, the following:
 - a. an assessment of alternatives that would avoid project effects by project design, relocation or physical means such as signing, fencing or patrolling,
 - b. an assessment of alternatives designed to mitigate any adverse effects, where it is not prudent and feasible to avoid effects.
 - c. a process for selecting an appropriate alternative course of action (avoidance or mitigation) that includes consultation with the Colorado SHPO. The Council will be afforded an opportunity to comment where agreement cannot be reached with the Colorado SHPO and the Army, the affected property is of national significance (recognized as a National Landmark, National Historic Site, National Historic Monument, or National Historic Trail), or beyond its historic or scientific value is known to have historic or cultural significance to a community, ethnic, or social group that would be impaired by its disturbance.
 - d. standards and guidelines for archeological data recovery that take into account 36 CFR Part 1210 and the Council's "Recommendations for Archeological Data Recovery" (Part III of Guidelines-attached).
 - e. a procedure to be followed, if after meeting all the responsibilities for identification of National Register or eligible properties, the Army finds or is notified after the undertaking has begun that the undertaking will affect a previously unidentified National Register or eligible property. This procedure should permit delay of the undertaking, consultation with the Colorado SHPO and compliance with Section 800.7 of the Council's regulations.

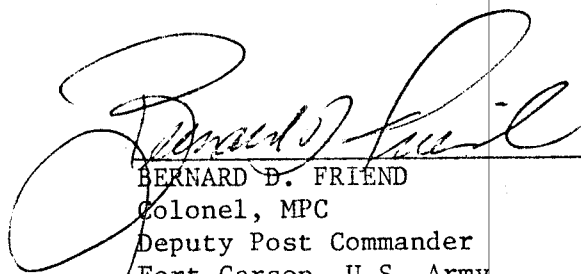
6. Provision for curation of all specimens, field notes, photographs, negatives, and processed data in a manner that makes them available for future study at an appropriately equipped institution that meets the standards set forth in 36 CFR Sec. 1210.4 and that makes these data available to other parties for research or other appropriate purposes. Specimens may be disposed of permanently only with the written concurrence of the Secretary of the Interior and the Colorado SHPO.
7. Provision for routine maintenance of all National Register or eligible properties consistent with Army Technical Manual TMS-801-1.
8. Provision for periodic review and refinement of the Historic Preservation Program in consultation with the Colorado SHPO.

B. After the Historic Preservation Program has been developed, it will be submitted to the Council and the Colorado SHPO for review. If, after 30 days, neither has provided written objections, the program may be implemented. Once approved, should the Historic Preservation Program be modified, the Council and the Colorado SHPO will be afforded an opportunity to provide written objections within 30 days of receipt of the modified program. Should the Council or the Colorado SHPO object to the proposed Historic Preservation Program, or any modifications thereof, the Army, Colorado SHPO, and the Council will consult to resolve the objections.

- VI. Within 180 days after ratification of this Agreement, the Army will submit a draft of the Historic Preservation Program to the Council and the Colorado SHPO.
- VII. Until the Historic Preservation Program is implemented and during any period in which objections between the Army and SHPO remains unresolved, the Army will follow the procedure set forth in 36 CFR Part 800.
- VIII. If any of the signatories to this Agreement determine that the terms of the Agreement cannot be met or believes a change is necessary, that signatory shall immediately request the consulting parties to consider an amendment or addendum to the Agreement. Such an amendment or addendum shall be executed in the same manner as the original Agreement.


Executive Director | Nov. 17, 1980 (date)
Advisory Council on Historic Preservation

Page 5
Memorandum of Agreement
U.S. Army
Fort Carson



26 Nov 50

BERNARD D. FRIEND
Colonel, MPC
Deputy Post Commander
Fort Carson, U.S. Army

(date)

Colorado State Historic
Preservation Officer

(date)

Chairman (date)
Advisory Council on Historic Preservation

that would support training could be impacted. Appropriate action to protect such resources would be taken following site surveys. It should be noted however, that caves and rock art occur at Fort Carson where training is conducted and there has been no evident damage.

Lithic scatters would be subject to disturbance by military training. However, before training is initiated, they will have been identified and recorded as a result of required surveying. Depending upon the significance of the site, detailed mapping, collection, sub-surface testing and possibly excavation would be accomplished to prevent the loss of valuable information.

Military training activities are not inherently concentrated in high density cultural resource areas. The highest density of cultural resources would probably be found within the off-limits, main canyon areas extending into the side canyons. Many of the side canyons are too rough for vehicle traffic and would not support concentrated training. Overlook sites would probably be subject to the greatest concentration of training and would receive special emphasis in survey and mitigation programs.

22. ISSUE: Several commentors indicated concern for the compatibility of proposed military training with the potential National Natural Landmark status of the Purgatoire/Red Rock Canyon area. The same commentors were concerned by the statement on page 3-100 of the DEIS that possible Landmark designation was put on hold by the Department of Interior pending a decision as to Army acquisition of the Pinon Canyon parcel. Finally, one organization requested that if either site is acquired that the designation of the Purgatoire River Canyon area as a National Natural Landmark or the designation of the Huerfano River Canyon as a Colorado Natural Area be endorsed and actively supported by Fort Carson.

RESPONSE: As discussed in Section 4.2.9 of the DEIS, mechanized military training is not compatible within the boundary of a National Natural Landmark but represents a minimal intrusion into a neighboring site. The quarter-mile buffer zone from the Purgatoire River should provide adequate separation to mitigate land-use conflicts.

The statement on page 3-100 that, "A delay in designation has been recommended by the Heritage Conservation and Recreation Service (HCRS) pending the completion of the Army studies and further inventories by local archaeologists and geologists.", is not correct according to the Department of Interior. In their letter providing review comments they point out that, "Designation is presently being delayed by a lack of landowner response."

If the Huerfano River site were to be acquired, Fort Carson would cooperate with the State of Colorado to pursue designation of the main canyon area not used for training as a Natural area. If the Pinon Canyon site were to be acquired, Fort Carson would support the designation of the Purgatoire River Canyon and appropriate side canyon areas as a National Natural Landmark.

23. *ISSUE: One commentor indicated he had experienced difficulty in obtaining a field research permit for work he wanted to do on Fort Carson when land was acquired during the 1960's, and was not optimistic that the situation would improve if either proposed site were acquired.*

RESPONSE: Field work accomplished at Fort Carson or any other lands that might be acquired is and would be performed in accordance with our Historic Preservation Program, normally by professional consultants. The survey and recording requirements that would have to be accomplished if land is acquired could not be properly completed by inviting individuals or agencies to come and perform research. On the other hand, it is quite possible that some research efforts can be incorporated into our overall program. Also, legitimate research efforts might be accommodated at Fort Carson or any additional lands acquired if they would not interfere with the Historic Preservation Program or training schedules.

24. *ISSUE: One commentor indicated that the statement on page 4-46 that archaeological "... sites in the canyon areas represent early agricultural cultures..." is incorrect. The commentor stated he had found no evidence of agricultural resources at numerous sites on the Huerfano River parcel.*

RESPONSE: According to the State Historic Preservation Officer, "Prehistoric pottery found in the Huerfano parcel has been associated with peoples who practiced horticulture. The horticulturalists on the western plains practiced a hunting and gathering lifeway supplemented by crop growing. Since these people were semi-nomadic, they often traveled through and used areas without growing crops. We do not know enough about the archaeology of the Huerfano River parcel to determine the exact use of the area during prehistoric times." If either parcel is obtained, a lot of new information about the prehistory of the region will be developed as part of our Historic Preservation Program.

25. *ISSUE: Two commentors inquired about the future of cemeteries located on the parcels and whether local residents would be allowed to visit them.*

RESPONSE: Cemeteries located at either parcel would not be disturbed or relocated. Visitation would be allowed at any time providing training in the area would not pose a safety hazard.

K-16

FISH & WILDLIFE

26. *ISSUE: Four commentors were critical of the description of the existing fish and wildlife environment. One indicated that the use of existing literature was inadequate. All four indicated that additional, site-specific species and population data should have been obtained to predict potential impacts.*

RESPONSE: The current status of fish and wildlife resources is described in Sections 3.1.5 and 3.2.5 of the DEIS. Its purpose is to provide a general overview of species occurrence and distribution. In coordination with the U.S. Fish and Wildlife Service and the Colorado Division of Wildlife, it was determined that detailed, on-site species distribution and population data would not be required for the DEIS. This decision took the following into consideration:

- (1) That sufficient general data exists to predict potential impacts.*
- (2) That the time and money required to conduct site studies on both potential parcels was not justifiable.*
- (3) That Fort Carson intends to conduct all required studies as part of the Environmental Program before a parcel would be utilized for training.*

Although we agree that definitive species data is necessary for an effective wildlife management program, we don't agree that such a program needs to be fully developed in the EIS phase. For example, based on existing information we know that both sites support mule deer, and we know where below average, average and above average densities of them would normally be found. Comparing that information to the proposed use of the properties, we can predict the potential impact of acquisition on mule deer, without knowing how many are in a particular side canyon, what their sex and age are, etc. It should be noted that a preliminary raptor survey was conducted and data is included in the DEIS. In addition, a preliminary antelope survey was conducted subsequent to publication of the DEIS.

Existing literature was utilized, as required, to determine existing conditions. There may be some literature that was not utilized, however the description provided is considered adequate.

27. *ISSUE: Several commentors were concerned about mitigating impacts and properly managing wildlife resources. Two commentors stated that the wildlife mitigation and management plans contained in the DEIS should have been described in more detail. One commentor requested that surveys for the Arkansas River Darter and the Arkansas River Speckled Chub eventually be conducted within the Huerfano River parcel. One commentor asked that the entire Purgatoire River Canyon be acquired and managed as a natural wildlife area. The same commentor wondered whether the quarter-mile buffer along the major canyons could be extended to half-a-mile without interfering with the training mission. Three commentors requested that additional side canyons be included in the designated wildlife protection areas and one commentor pointed out that strict enforcement of off-limits areas would be required.*

RESPONSE: The mitigation and management procedures described in Section 4.1.5 on pages 4-22 and 4-24 of the DEIS are considered to be of adequate detail for planning purposes. Further detail cannot feasibly be developed before acquisition of a site and completion of further studies.

If the Huerfano River site is acquired, the presence of the Arkansas River Darter and Speckled Chub would be investigated as part of the comprehensive fisheries inventory discussed in Section 4.1.5, (see the third page of Errata containing the Aquatic Ecology text).

With regard to the Purgatoire River canyon, the Summary and Section 2.6.1 of the DEIS point out that the canyon is not required for training and is not included in the proposed boundary. It was considered for acquisition and included in the planning maps in the event it was needed to insure usability of the rest of the property. Many individuals suggested it would be an ideal natural area. Fort Carson concluded that control of the canyon was not necessary to insure usefulness of the training site. To acquire it solely for the purpose of wildlife management would not be within our charter.

The quarter-mile buffer zone along the major canyons is considered to be adequate protection for wildlife and aesthetic values. Extending it to half-a-mile would interfere with the training mission. However, some additional side canyon areas may be included in the designated wildlife protection area as the Environmental Program is implemented. Likely candidates for inclusion would be Karrick and Sheep canyons at the Huerfano River site and any other areas that are too rugged to allow vehicle traffic. The addition of side canyons would not include a quarter-mile set back but would allow activity to the rim and foot traffic would be allowed.

With regard to enforcement of off-limits areas, all such areas on a military installation are strictly enforced.

28. *ISSUE: Three comments were submitted dealing with habitat impacts. One commentor asked what the indirect effect of erosion would be on side canyon pools. One asked what the effect of the proposed bridge over the Huerfano River would be on wildlife and one pointed out that the habitat impacts would be greatest in areas of cover where training is concentrated.*

RESPONSE: Based on experience at Fort Carson and the moderate soil erosion impacts anticipated, no significant effect is projected for side canyon pools. Nevertheless, they would be monitored as part of the water quality program and additional protection implemented if required.

The bridge over the Huerfano River proposed in Section 2.5.1 of the DEIS would have had a minor effect on wildlife; however, it has been eliminated with the relocation of the proposed cantonment site from Cedarwood north to Goat Butte.

With regard to the location of major habitat impacts, they would occur in areas of cover where training would concentrate. Some of the most important

habitat areas at either site are those in or near the major canyons which would be protected as part of the wildlife protection areas.

29. *ISSUE: Half-a-dozen commentors inquired about impacts to mammals. Several persons were concerned about effects on pronghorn antelope, one asked if fencing would be a problem and two were curious to know why predator populations might increase.*

RESPONSE: Potential impacts to mammals are discussed in Sections 4.1.5 and 4.2.5 of the DEIS. Pronghorns, as with all mammals, would be subject to direct disturbances from maneuver activity and indirect effects from habitat damage. Based on experience at Fort Carson and the key elements of the Land Use and Management Plan establishing training intensities, growing season deferment and training unit rotation, impacts are expected to be minor. Initial reactions of some species, including antelope, may be more severe, but animals and their off-spring become acclimated to periodic activity as observed at Fort Carson. Antelope would be included in initial management studies; in fact, a preliminary survey of both sites was conducted in June/July 1980.

Fencing would not be a problem as specifications would be coordinated with the Colorado Division of Wildlife to insure proper height and ground clearance to facilitate wildlife migration patterns.

Predator populations are projected to increase for two reasons: First, food sources for rodents and birds would increase due to land disturbance resulting in more prey for predators, and second, predators are generally under less control pressure on military installations than on private property. If predator populations become a nuisance to neighboring landowners, they would be allowed to hunt them in accordance with State regulations and training requirements.

30. *ISSUE: Four commentors inquired about impacts to birds. Two persons wondered how either site would retain any bird life if military training, especially jet and helicopter activity, was conducted. One specifically asked if geese would still feed in the area and one questioned the reliability of the raptor survey data since helicopters were used which would scare the birds away.*

RESPONSE: Potential impacts to birds are discussed in Sections 4.1.5 and 4.2.5 of the DEIS. Birds, as with mammals discussed in the previous issue, would be subject to direct disturbances from maneuver activity and indirect effects from habitat damage. The reference to jet and helicopter activity is especially interesting since both sites and especially the canyons have been exposed to such flights for years by aircraft flown by the Air Force and Colorado Air National Guard. Yet both sites are recognized for their abundance of birds, including noise sensitive raptor species such as the ferruginous hawk. The conclusion to be drawn from this is that, as with mammals, most

bird species will acclimate to intermittent disturbances, even of a severe nature. The same phenomena has been observed at Fort Carson where bird populations appear to be stable and roughly equivalent with areas of comparable habitat outside of Fort Carson. The most striking example was the regular nesting of a pair of ferruginous hawks directly under the approach flight path of National Guard jets using a strafing/bombing range. The jets flew over the nest at a height of about 200 feet on virtually a daily basis. The adult birds would leave the area during the flights, the young in the nest appeared to be unaffected.

With regard to geese feeding in the area, the Colorado Division of Wildlife indicated that it "...knows of no regular feeding use of either parcel by geese. Migrating flocks may occasionally rest on lands being considered by the Army. This use will probably continue but will shift to portions of the parcel not being used for training at the time."

With regard to the reliability of helicopter conducted raptor surveys, the Colorado Division of Wildlife was again consulted and stated: "Counting raptors by helicopter is a recognized census technique and is probably the most reliable method available. As with all wildlife census techniques, the results are always conservative. Under the most favorable conditions, a helicopter count can only be expected to count up to 75% of the birds in an area. However, the helicopter will usually flush birds from their nests so that they can be counted more accurately than if they remain on the nest."

31. *ISSUE: Two comments were received relative to fish. One commentor stated that brown trout, brook trout, perch, crappie, blue gill and bass could not possibly survive the impacts of Army maneuver training. The second commentor did not notice that the discussion of aquatic environment impacts at the Huerfano River site was contained in the errata (having been inadvertently deleted from the document), and wondered why one had not been included.*

RESPONSE: According to the Colorado Division of Wildlife neither parcel currently sustains brown or brook trout populations. Impacts to the other species mentioned are projected to be minimal as discussed in Sections 4.1.5 and 4.2.5.

32. *ISSUE: Two comments were received relative to endangered species. Three commentors stated that endangered species could not be protected as stated in the DEIS. Two commentors asked what the impact would be on the Black-footed Ferret.*

RESPONSE: Species listed as endangered by the U.S. Fish and Wildlife Service whose ranges include the Huerfano River and Pinon Canyon parcels are Black-footed Ferret, Peregrine Falcon and Bald Eagle. As discussed in Sections 3.1.5, 3.2.5 and Appendix F of the DEIS, neither site is known to support any of these species although Peregrine Falcons and Bald Eagles may use the sites for hunting and feeding while migrating or wintering. If any endangered specie

was found to be a resident of either site once it was acquired, it could and would be protected by means of appropriate habitat management. The Army has an excellent record of protecting endangered species.

If the Black-footed Ferret were to be found on either side, its habitat should improve since prairie dog populations are greater at Fort Carson than at other comparable locations. (Prairie dogs are preferred prey for the Black-footed Ferret and they reside in prairie dog burrows.)

33. *ISSUE: One commentor stated that "white muscle disease" might occur in the areas, affecting wildlife and cattle.*

RESPONSE: "White muscle disease" in cattle and wildlife is a condition produced by a deficiency of selenium in the diet. According to Captain Michael E. Paulsen, DVM of the Fort Carson veterinary office, "Under normal conditions, selenium moves from soil to plants to consuming animals. While muscle disease is primarily a problem of newly born cattle and sheep caused by a deficiency of metabolizeable selenium in cows and ewes during pregnancy and location." "A deficiency of metabolizeable selenium will result in muscle dystrophy which can result in calves and lambs dying from starvation (due to muscle impairment) or cardiac failure."

According to Jack Vayhinger of the Colorado Division of Wildlife, "White muscle disease has not been reported in wild animal populations on either parcel." "Both parcels would probably not be deficient because of the sedimentary origin of their soils." Mr. Vayhinger also pointed out that the disease can be caused by extreme physical stress, indicating a need to prevent the undue harassment of wildlife.

34. *ISSUE: A half-dozen technical corrections were submitted by individual commentors:*

(1) On page 4-20 the word "migrate" is used improperly to describe abandonment.

(2) Elk, Red-Breasted Nuthatch and Bullock Oriole should be included on the species list for the Huerfano River parcel.

(3) Figure 3-10 on page 3-36 should show Prairie Falcons in Hog Ranch Canyon and Doyle Arroyo.

(4) Table F-2 lists long-eared chipmunk, Eutamias quadrimaculatus which occurs in the central Sierras of California and adjacent Nevada, but not the Pinon Canyon site.

(5) Table F-2 lists Hooded Skunk, Mephitis macroura which does not occur north of Catron County, in southwestern New Mexico.

(6) Three scientific names of birds are misspelled on page 3-32.

One of the commentors indicated that individually such errors are trivial but that collectively they are symptomatic of a lack of concern for the natural resource.

RESPONSE: All of the corrections submitted are acknowledged and make this Final EIS a better document. The commentors are to be commended for their careful review. The errors are not indicative of a lack of concern but rather a draft document which was substantially free of significant errors.

K-23

GENERAL COMMENTS

35. *ISSUE: One commentor stated that in complying with the legal requirements for an EIS the document emphasizes the negative aspects of the project; nowhere are the benefits, whatever they may be, enumerated.*

RESPONSE: The requirement to present the worst case, potential impacts of a project does result in the emphasis of all negative effects and the de-emphasis of any positive effects. There are two positive impacts discussed in the DEIS: improved training and economic stimulation.

The primary benefit derived from acquiring additional maneuver land would be the training experience gained by military personnel. Training in areas of insufficient size eliminates a primary element of realism necessary to effectively practice long distance field coordination procedures required by modern, conventional warfare. To commit soldiers to a combat situation without proper training jeopardizes their lives and the defense of our country.

Local economic benefits would be realized from the initial purchase of the land and on a continuing basis by the purchase of goods and services from the local communities. Obviously, these benefits must be balanced against the loss of the cattle industry currently supported. In the long-term, a net positive economic impact is a realistic potential.

Other, less direct, benefits will result from the project that are not emphasized in the DEIS; reduced impact to natural resources at Fort Carson, increased public access to any land acquired, and long-term preservation of open space during a time of rapid development along the Front Range.

36. *ISSUE: A number of comments were submitted indicating that the Draft EIS was deficient in many respects and therefore did not comply with the National Environmental Policy Act (NEPA) or the Council on Environmental Quality (CEQ) regulations implementing that law. Commentors stated the document was deficient in that it was incomplete, inconsistent, replete with errors, not detailed enough to review, and biased in favor of the project. One commentor stated that because one error was found, the whole document was suspect.*

RESPONSE: The Draft and Final versions of this EIS were prepared in accordance with all statutory and regulatory requirements of NEPA and the CEQ regulations.

As far as specific deficiencies cited are concerned, it should be remembered that the document circulated was a Draft. It's purpose was to provide all interested parties an opportunity to participate in the decision process. It represented a sincere effort to present all pertinent information in a clear and unbiased manner. All significant errors and inconsistencies identified are addressed in this subsequent volume. In addition, a number of important refinements to the project have been made based on review comments.

37. *ISSUE: One commentor stated that the EIS should not be prepared by the Army or people working for the Army and that an independent group should be hired to review the document. One commentor stated that the Army should not have utilized a professional consultant but should have consulted with local residents.*

RESPONSE: The EIS is prepared and published by the Army because that is the procedure required by the National Environmental Policy Act. Professional consultants are frequently hired to assist in order to comply with the requirement that preparation be accomplished by an interdisciplinary team.

Independent review and access to local experts are integral to the EIS process. Significant local information and review were obtained in a number of ways; through the preliminary scoping process which included a letter sent to hundreds of agencies and individuals and a series of public meetings; through follow-up contact with Federal, State and local agencies as well as residents, including establishment of an ADHOC Advisory Committee; and by circulation of the DEIS and a series of public hearings.

38. *ISSUE: One commentor wanted to know who concluded that both proposed sites were reasonable and feasible and pointed out that someone else, utilizing the same information might reach a different conclusion. One commentor asked whether the consultant, Dames and Moore, had a preference between the Huerfano River and Pinon Canyon sites.*

RESPONSE: Fort Carson and the Army concluded that both proposed sites were reasonable and feasible. Although it is possible that other persons reviewing the same information might reach a different conclusion, it is presumed that any disinterested party reviewing the data on our training requirement and the land under consideration would concur that both parcels are reasonable and feasible candidates for a maneuver training area.

Dames and Moore did not present a preference between the two sites because that was not part of their task. Their function was to develop baseline information and predict potential impacts for both sites to be used in the DEIS. Selection of the preferred site was intentionally deferred until the Final EIS to insure full consideration of all information and viewpoints.

39. *ISSUE: One commentor indicated he had found that state agencies were ignored in the EIS process despite our claims of an open and honest approach.*

RESPONSE: No agency, organization or individual has been ignored. All phases of the land acquisition project have been made public through the media, mailings and the Federal Register. Anyone requesting information relative to the project has been accommodated. Most importantly, all concerned citizens and appropriate state, local and federal agencies have been directly contacted and requested to participate in coordination efforts. The distribution list in Section 6 of the DEIS indicates the broad contact we have pursued.

40. ISSUE: One commentor stated it is difficult to imagine why in a period of the most serious energy difficulties and with the balance of payment problem due largely to energy importation, the Army needs to consume even more energy and increase maneuver area.

RESPONSE: Although energy requirements for training exercises would increase with the acquisition of additional land, the Army is tasked with maintaining an effective and realistic defensive posture. Without the necessary land to train on, this mission cannot be accomplished. The energy resources required to perform the needed training must necessarily be committed.

41. ISSUE: One commentor was confused by the use of the word "conservative." He pointed out that the DEIS states that the number of vehicles shown to be used during each training period is a conservative estimate. A conservative estimate he felt, would be the least number likely and would depict the opposite of a worst case situation required for evaluation under CEQ guidelines.

RESPONSE: The term "conservative" no longer is used to depict the "least" of something, but rather to indicate that a "cautious" approach was used. Many disciplines, such as sound and air quality, utilize the term to indicate worst case assumptions. Depending upon the subject reference point it can mean the least or most of something. In the example cited, stating that the estimate of vehicles available for training is conservative means that it is the most number of vehicles since that is the cautious approach. Likewise, stating that air emissions are conservative means that the worst case or highest level is presented.

42. ISSUE: One commentor stated that more time was needed for agencies and experts to review the DEIS.

RESPONSE: The 45 day comment period as prescribed by the CEQ regulations terminated on 21 July 1980. However, because several reviewing agencies indicated the need for more time to review the document, the comment period was extended to 15 August 1980.

43. ISSUE: One commentor was concerned about the DEIS implying that the land was offered for sale.

RESPONSE: Initially, almost all of the land in both parcels was offered for sale. The proposals submitted to the Army did not identify any unoffered properties although some were included. Since the initial offers were made, several properties have been sold and are no longer offered. In addition, as discussed in Section 2 of the DEIS, some boundary changes have been incorporated that involve other lands not originally offered. With the lengthy planning and decision process involved in land acquisition it is not practical to expect land ownership and willingness to sell to remain static. The situation will continue to change.

44. ISSUE: One commentor pointed out that the figure of existing roads at the Pinon Canyon parcel on page 2-36 had some errors and did not include the pipeline road.

RESPONSE: It is acknowledged that not all roads are accurately reflected on that figure. The information presented in the map was derived from an existing USGS map. The purpose of the map was just to provide a general indication of existing routes that would serve as the basis for a training area road net. Total accuracy was not considered necessary.

45. ISSUE: Several commentors asked how the project would be submitted to Congress, how Congress would obtain public input and if additional hearings would be held on the Final EIS.

RESPONSE: If the Army decides to pursue land acquisition, the project would be submitted to Congress as part of the Army's Military Construction Program for Fiscal Year 1982. That construction program is controlled by the House and Senate Armed Services Committees. If they approve the project it must then be funded by the House and Senate Appropriation Committees. The committees will receive public input indirectly by means of this EIS and may also hold hearings on the project. The Army will not sponsor any additional hearings.

46. ISSUE: One commentor asked what the purpose of spending money on an EIS was if we go ahead and do whatever we want anyway.

RESPONSE: A decision as to whether Congress will be asked to purchase either parcel has not been made yet. The Draft EIS proposed that one of two sites be acquired and used for maneuver training. As a result of public and agency comments, this document now concludes that the Pinon Canyon site is preferred and proposes that it be obtained. In addition, many refinements to the proposal have been made in response to input received. This document will now be utilized by the Army to assist in making a decision whether to request land. If a request is submitted to Congress, committee members should also utilize this document. The EIS has been shown to be an effective planning and decision making tool.

47. ISSUE: One commentor indicated that the maximum relief of the Purgatoire River Canyon is not 450 feet as stated on page 3-57 of the DEIS, but rather 400 feet.

RESPONSE: A re-evaluation of the Purgatoire River Canyon relief resulted in the location of a maximum depth from rim to canyon of 600 feet in the area of Red Rock Canyon.

48. ISSUE: One commentor indicated that the base maps, Figures 2-4, 2-8, 3-6 and 3-22 had been reduced to the point of being very difficult to read.

RESPONSE: The initial printing of those maps was done at a small scale in error. They were immediately reprinted at a larger scale and mailed to all recipients of the DEIS.

49. ISSUE: One commentor indicated an error on page 4-37 in converting feet to meters.

RESPONSE: On page 4-37, 25 feet is incorrectly shown to equal 191 meters. The correct equivalence is 7.62 meters.

50. *ISSUE: One commentor indicated she was a property owner on the boundary of the Huerfano River site but had not been contacted or notified of the project.*

RESPONSE: Every conceivable effort has been made to contact all persons with an interest in the project, particularly landowners. Despite these efforts there are a number of persons listed as property owners by the County clerks that we have been unable to locate. Letters have been repeatedly undeliverable. By the same token, it seems inevitable that some owners are not listed or are improperly listed on County records. The commentor was added to our standing mailing list.

51. *ISSUE: One commentor asked who would hold Fort Carson accountable for using and disposing of hazardous materials at either site.*

RESPONSE: Although some materials that would be used at either site are hazardous, they would not be considered exotic. For example, petroleum products, cleaning solvents, blank ammunition, low toxicity pesticides, etc. would be utilized at a site but would not present a potential hazard to the environment or neighbors. As indicated in the Land Use Section of this Appendix, we intend to have wastes disposed of at a public landfill, if at all practical. Any materials regulated by the Environmental Protection Agency would be used and disposed of in accordance with applicable regulations.

52. *ISSUE: One commentor indicated that Fort Carson appeared to be working against its constitutional goals of protection since the project would have an adverse impact on the land, creatures that live on it and citizens that live around it.*

RESPONSE: Military training, as with all actions, has some unavoidable impacts. The purpose of this extensive planning process is to evaluate them and allow the decision-maker to determine if they are reasonable. The commentor is incorrect. Military training and resource protection are not mutually exclusive. The EIS indicates that either site could be used without irreversible damage and for most environmental attributes with no significant effects. In return, the 4th Infantry Division (Mechanized), as well as numerous Reserve and National Guard units would be better prepared to fulfill their task.

53. *ISSUE: Several commentors asked why potential impacts were assessed based on the Balanced Use/Protection scenario when the Increased Use scenario is recommended for implementation.*

RESPONSE: As indicated in Section 4.1, impacts were initially determined for the Balanced Use/Protection scenario. Then, impacts for the other two scenarios, (one less intense, one more) were developed by comparison. Impacts for all scenarios are discussed.

K-29

GEOLOGY/MINERALS

54. *ISSUE: Several commentors pointed out that an economic source of limestone for the Pueblo area is located in the northwest corner of the Huerfano River parcel. The deposit also extends west of the site. Some of it is owned by the State Land Board, which does not wish to release it because of potential royalties.*

RESPONSE: Acquisition of the area in question for maneuver training would preclude limestone development and would consequently have a significant impact as discussed in Sections 3.1.1 and 4.1.1 of the DEIS. Our latest inquiry found that the area has been leased, and development is expected to begin in several years, including a cement plant employing up to 300 people. A sixty to eighty year life for the quarrying operation is anticipated, and school trusts would receive royalty returns during this time. Since overall economic benefits for the Pueblo area would therefore be significant, the area in question, along with connecting land, would be omitted from the parcel if acquisition of the Huerfano River site occurs. The effect of this on training would be relatively minor, due to the flat terrain in the leased area. A slight conflict would remain in N.E. 1/4, Sec. 19, T225, R64W, which is at the very eastern side of the limestone development. That small area contains part of the proposed main access road to the cantonment area. This small portion of the leased area would be acquired.

55. *ISSUE: Many commentors stated that economic sources of minerals such as uranium, petroleum, gas, and oil shale might be present on the parcels, undiscovered without extensive investigations including core drilling. If asked to give up mineral rights, how will owners know their value?*

RESPONSE: As discussed in Sections 3.1.1, 3.2.1, 4.1.1, 4.2.1 and Appendix B of the DEIS, an analysis was conducted by the Colorado School of Mines Research Institute (CSMRI) on the possible existence and economic value of mineral or fuel deposits in the parcels. The CSMRI investigation concluded that, with the possible exception of uranium, no potentially economic deposits of leasable, locatable, or salable minerals or fuels are known to exist on or in close proximity to the two sites evaluated. All readily available maps, literature, aerial photographs, oil and gas well data, and field reconnaissance were used to make this evaluation. Economic uranium was excepted, not because it is known to exist, but because conditions were favorable for its concentration. The possibility of such concentrations appears to be slight, and detailed exploration programs beyond the scope of this investigation would be required in order to further evaluate this possibility.

56. *ISSUE: One commentor asked who would be responsible for approving site location if the Army decides to bury trash or hazardous materials or wastes on the parcels.*

RESPONSE: There are no plans to bury, store or otherwise dispose of radioactive materials on these parcels. All trash and debris, including that associated with construction of the cantonment facilities, is planned to be removed and disposed of off-site by a private contractor. If an acceptable,

off-site disposal point is not available and we are forced to landfill day to day, municipal type wastes on either parcel, the County involved would have to approve and permit the site in accordance with State law and Department of Health regulations.

57. *ISSUE: One commentor stated that in spite of what the Colorado School of Mines Research Institute (CSMRI) says about the potential for uranium the Department of Energy doesn't include either area in a "favorable" category for uranium.*

RESPONSE: The CSMRI analysis discussed in Sections 3.1.1 and 3.2.1 of the DEIS agrees with the comment that the possibility of economic uranium deposits occurring is slight. Several minor non-commercial occurrences of uranium have been reported in Las Animas county in both the Purgatoire and the overlying Dakota formation. It is known that sources of uranium and concentrating mechanisms exist in the Purgatoire-Dakota sequence in the general area of interest; thus, there is a possibility that economic deposits of uranium could be found on either or both of the two sites evaluated. The possibility is slight.

58. *ISSUE: One commentor speculated that although the Purgatoire and Morrison formations may not have uranium, perhaps the Permian does?*

RESPONSE: There is no indication from readily available literature that the Permian formation in the area has been investigated for economic uranium deposits. Furthermore, there is no evidence of uranium or favorable concentrating mechanisms present in the formation. Determining the potential for deposits in the Permian would require a much more extensive investigation program than would investigations in the lower Cretaceous, due to the depth of the Permian in the major portions of the parcels.

59. *ISSUE: One commentor stated that economic deposits of refractory quality clay are located adjacent to the Huerfano parcel in sections 1 and 11, T25S, R65W. Rights of way have been obtained through S1/2 Sec. 2, S.E. 1/4 Sec 3, N.E. 1/4 Sec. 3, W. 1/2 Sec. 3, E 1/2 Sec. 4, T25S, R65W., included in land within the proposed boundary for the Huerfano River parcel. Without these rights of way, transportation costs would be prohibitive and a valuable resource may be lost.*

RESPONSE: This is the only known clay deposit on or adjacent to either parcel which is of economic value as noted in Appendix B of the DEIS. It is located south of the "tail" of the Huerfano River and the transportation rights of way are in the canyon area that would not be utilized for training. This deposit of roughly 100,000 tons is expected to be developed within the next few years if access is available. If the "tail" area is purchased, use of the right of way described by the developer should be compatible with training maneuvers, and the developer may only require access for two months of each year. If access could not be allowed for any reason, the owner(s) of the clay mining operation would be compensated for any long term interest, (lease or easement) in the property being acquired.

K-32

LAND REQUIREMENT

60. *ISSUE: Half-a-dozen commentators questioned whether Fort Carson really needs more land; one asked if we could "prove it", one suggested we could obtain more maneuver area by relocating our impact area, and one indicated that units stationed in Europe get by with smaller training areas.*

RESPONSE: The requirement for training land at Fort Carson to support the 4th Infantry Division (Mechanized) has been analyzed and documented in great detail as discussed in Section 1 of the DEIS. The Department of the Army published uniform criteria for training land requirements in Training Circular 25-1, Training Land, dated 4 August 1978. Utilizing those criteria, Fort Carson analyzed current training areas and concluded that a minimum of 54,331 additional acres were required in order to properly train battalion-sized units. The 54,331 acres would be sufficient only if they were contiguous to present training areas, and environmental management requirements were not considered. The possibility of relocating the impact area and acquiring adjacent lands to make up this shortfall was studied and found to be impossible. Attention then turned to calculating the requirement for training land at a non-contiguous site, giving full consideration to environmental management. It was determined that 150,000 to 200,000 acres would be required assuming the area's ability to support training was similar to Fort Carson's. (Over 200,000 acres is proposed for acquisition at the Huerfano River or Pinon Canyon site because their ability to support training is less than that of land at Fort Carson.)

The complete analysis of land needs is documented in the Fort Carson Land Use and Requirements Study (LURS), which was approved by the Department of the Army in December 1978 and is summarized in Section 1 of the DEIS. This is the only "proof" of our need that can be offered. The criteria for training land requirements was developed by military professionals and is based on their collective experience as well as all available professional literature.

With regard to training practices in Europe, the United States Army has access to major training areas such as Baumholder and Grafenwoehr. In addition, open maneuvers, using public and private property and public roads, are conducted in Germany and other NATO countries on a regular basis.

61. *ISSUE: One commentator asked what sort of training would be conducted.*

RESPONSE: A complete description of proposed training activities is presented in Section 1.4 of the DEIS. Vehicles and troops would maneuver as battalions under the control of their parent brigade headquarters. No live firing would be conducted. Blanks and simulators would be used. Maneuver training is explained further in the attached monthly newsletter sent to approximately 1,500 persons and agencies on our standing mailing list.

62. *ISSUE: Half-a-dozen commentators indicated that the proposed land requirement and related land use seemed illogical to them. Specifically they stated our commitment for no live firing and estimated five month per year use level were empty promises that we have no intention of keeping. One commentator was confused about support facilities to be built indicating we would be requesting funds every year for permanent improvements despite a commitment for austerity.*

The underlying comment was one of trust: "How can we be sure the Army will live up to its commitments, especially for no live firing".

RESPONSE: As indicated in Sections 1 and 2 of the DEIS, Fort Carson has adequate ranges and impact areas for live firing training for the foreseeable future. Residential encroachment at Fort Carson is not a significant problem currently and we are optimistic that adjacent land uses will be developed that do not conflict with our firing activities. Furthermore, commercial and private air traffic corridors over both parcels would preclude live firing at either site.

Our projected training intensity of four to five brigade training months per year would provide every maneuver battalion in the 4th Infantry Division with 10 to 20 days of realistic maneuver training each year. That is 10 to 20 more days than they can get at Fort Carson. In addition, two of those five months are intended for use by Reserve and National Guard Units. The training time either parcel would provide is significant. Also, the five month period can be misleading. If individual battalions were deployed to the site it would take all year to accomplish the training. By deploying three to four battalions under the control of their Brigade Headquarters, and rotating units through the training area simultaneously, the same quantity of training can be accomplished in much less time. This serves three major purposes: Significant administrative cost savings, command and control training as a brigade, and significant environmental set-aside including a three month growing season deferment and the ability to defer use on a flexible basis during wet periods.

Although support facilities would be austere, permanent facilities would be constructed. As discussed in Section 4.1.8 and shown at Table I-29 of the DEIS Appendices. Facilities and estimated construction costs have now been developed in further detail and are reflected in the Socio-Economic Section of this Appendix (K). Ideally, site development would be accomplished in the three year period following acquisition. Accordingly, Fort Carson would submit a three year construction program request. As with land acquisition, congressional approval of the construction would be necessary.

The underlying issue of trust is difficult to address. Fort Carson has pursued this project in an open and honest fashion from its inception. Public input has been sought throughout and extensive efforts have been made to maintain effective communication. It is unlikely that those commentators indicating a lack of trust can be convinced or swayed in any event; they will have to wait and see.

63. ISSUE: Several related comments were submitted inquiring as to the significance of this project to national defense requirements. One commentator alluded to nuclear warfare indicating that with the present nature of world warfare, Fort Carson was not even necessary. One commentator stated that our national defense would not be jeopardized if the "no action" alternative was selected. Several commentators asked what the local impact of "no action" would be, wondering whether the post would be reduced in strength or closed.

RESPONSE: The 4th Infantry Division (Mechanized) and Fort Carson are an important part of the national defense of the United States. The 4th Division is the only mechanized/tank division in the continental United States (CONUS) with all three of its brigades assigned and on active duty. It is the strongest and most powerful division in CONUS with commensurate emergency deployment responsibilities in Europe and elsewhere.

The ability of the 4th Division to perform is directly related to the quality of training its units receive. Maneuvering under unrealistic conditions, particularly in a severely constricted area, does not provide quality training. The acquisition of additional maneuver land by Fort Carson would significantly improve the quality of training for the 4th Division (and all Reserve and National Guard Units affiliated with the Division), and would also enhance national defense.

The commentator that indicated Fort Carson is not necessary to National Defense apparently feels that conventional warfare has been superseded by nuclear capabilities. On the contrary, the current status of warfare indicates that conventional forces such as the 4th Infantry Division would be the focal point of defense. Since World War II, there have been no nuclear wars, but there have been several hundred conventional wars of varying intensities. There is every reason to believe that the retention of a strong, conventional force has served its main purpose: the maintenance of peace.

With regard to the "no action" alternative, its selection would not necessarily jeopardize national defense. As indicated above, the 4th Infantry Division plays an important role in national defense. If additional land is not acquired and the Division remains stationed at Fort Carson, its units would not receive quality maneuver training and if sent into combat would experience higher casualties than necessary. It would appear that the citizens of this Nation have the responsibility to provide the soldiers who have sworn to defend them the best chance for survival which includes providing them with the required amount of maneuver training land.

As far as the local impact of the "no action" alternative is considered, as indicated in Section 2.2 of the DEIS, it could have a serious negative effect in the long run. The acquisition of additional training land is an important part of the Fort Carson master plan; it is required for the orderly development of the installation and the long term preservation of its training areas. The "no action" alternative is considered to be an infeasible course of action for the future of Fort Carson. Therefore, although there are no current plans to close or reduce the strength of Fort Carson, if additional land is not acquired, the installation master plan and the future of Fort Carson would have to be re-evaluated. For additional information on the current master plan of Fort Carson, refer to the Draft Environmental Impact Statement for the Continuing Operation of Fort Carson, which was filed with the Environmental Protection Agency on 10 October 1980.

64. *ISSUE: Two comments were submitted indicating that it was a mistake to station a mechanized division at Fort Carson, suggesting that it be sent to another installation with more training land and replaced with a mission compatible with the amount and type of land provided by Fort Carson.*

RESPONSE: Mechanized training has been conducted at Fort Carson for more than fifteen years. When the decision to station a mechanized division here was made, sufficient contiguous maneuver area was made available to meet the training requirement. However, the rapidly changing technologies of warfare since then have created the need for additional training area to keep pace with the modern battlefield and new training strategies.

Changing the mission of Fort Carson is not a feasible alternative at this time because of the investment in permanent facilities and because there are no other installations that have the capacity to accept the 4th Division in terms of support or training facilities without massive expenditures for new construction. The 4th Infantry Division (Mechanized) is scheduled to be stationed at Fort Carson indefinitely. However, if additional land is not acquired, the future of Fort Carson would have to be re-evaluated and alternatives that are not feasible now may become so.

65. *ISSUE: Numerous comments were submitted dealing with alternative sites. One general comment requested that we include a summary of all alternative sites considered and reasons for their elimination. Three commentors suggested that areas contiguous to Fort Carson be acquired. About ten commentors stated that since the Federal Government already owns approximately 36% of the State of Colorado that 200,000 acres of that land should be utilized. One commentor suggested we utilize Federal land in other states such as the Nevada Desert Atomic Testing Area or White Sands Missile Range. About a dozen commentors had read recent publicity about the Army's new National Training Center being developed at Ft. Irwin, California and suggested we utilize that facility for all our training. One other related comment was asked by one person: "Why does the site have to be no more than one days motor march from Fort Carson."*

RESPONSE: Section 2 of the DEIS discusses all alternatives evaluated, Table 2-1 provides a listing of all sites considered for acquisition and the reasons for their being considered unsuitable. Appendix J contains maps of those sites.

The alternative of acquiring land adjacent to Fort Carson was re-evaluated for this project. Congress declined to purchase contiguous land in the early 70's citing extremely high cost. Since that time, training technology has resulted in a greater land requirement. Adjacent lands can no longer meet the needs of Fort Carson as set by current training doctrine. Addition of adjacent land to the reservation would not markedly increase the existing contiguous maneuver area due to the configuration of the terrain, impact areas and tank firing ranges. In addition, it would not provide enough acreage to allow for a rest and rotation program needed to insure long term conservation.

The identification of potential non-contiguous sites was pursued with considerable determination. Half-a-dozen sites had been offered for sale, but all land within a radius of one days motor march from Fort Carson was evaluated for its potential. The search included both public and private land and was accomplished using very general criteria, such as large size, no major urban development, and not excessively mountainous or flat. Ultimately, twenty potential sites were evaluated in further depth to determine their suitability. These sites were both Federal and private. Eighteen of the sites were rejected for reasons shown at Table 2-1. So although Federal ownership of Colorado approximates 36%, that land is not suitable for our training needs, much of it being too mountainous and much of it being in close proximity to urban/suburban populations.

The criteria that a training site be within one days motor march from Fort Carson is especially important. It was established for economic reasons; costs escalate dramatically when travel exceeds one day. Some samples are shown for illustration:

<u>Location</u>	<u>Estimated Cost to Move a Brigade Force One Way from Fort Carson</u>
Huerfano River	\$ 119,260
Pinon Canyon	\$ 264,000
----- One day travel time	
White Sands, N.M.	\$ 1,069,053
Fort Hood, TX	\$ 1,302,630
Fort Irwin, CA	\$ 1,896,903
Fort Lewis/Yakima, WA	\$ 2,168,006

(White Sands, New Mexico is between 1 and 2 days travel time from Fort Carson.)

When considering that each of the 4th Divisions three Brigades would travel to and from the site each year, it becomes obvious that training at a nearby site is the only feasible alternative and that Federal and Army land in other states would not be useful.

With regard to Fort Irwin and the National Training Center (NTC), in addition to the above transportation costs, the facility will be in too much demand to support all the maneuver training requirements of the 4th Division. The NTC concept will provide battalions with two weeks of intensive training every year and a half. Those two weeks at Fort Irwin should be viewed as a "final exam" for battalion training. It will serve as an excellent adjunct to our home station battalion level training, but it cannot serve as a substitute.

66. ISSUE: One commentor asked when the last Army land acquisition in the United States occurred. Another commentor asked if other installations are or will be trying to acquire more land.

RESPONSE: The last major acquisition took place in fiscal year 1980 when Fort Bliss, Texas obtained an additional 60,160 acres. Other installations have been directed by Department of the Army to prepare Land Use and Requirements Studies (LURS) similar to the one prepared by Fort Carson. No other installation is currently seeking to acquire additional land although preliminary findings of their LURS indicate some land shortfalls. The criticality of their requirements will have to be determined before land acquisition procedures can be initiated.

67. ISSUE: Several comments were submitted concerning the importance of defense needs and how they compare to other national and individual needs. One commentor stated that, "Preparing for war saps resources that could be used for the betterment of the human condition." Another asked why the Army's need is greater than theirs. One commentor indicated total disgust for the national defense mission stating, "Did it ever occur to you in the military that the 'defense' you offer us at such exorbitant (sic) rates, fiscal, cultural, and spiritual, does not make us feel any safer. Playing around with tanks, guns, and bombs may be your idea of security, but it is not mine. Making me finance your sport is the ultimate insult."

RESPONSE: The Army belongs to all citizens, it is the United States Army. As "our" Army, its needs constitute "our" needs. The citizens of the United States, through their elected representatives, have a constitutional responsibility to provide for the common defense, including raising and training an Army. The Army, in turn, has a responsibility to make its training requirements known to the Federal government. Our elected representatives have the responsibility of determining when those requirements supercede the needs of other national programs or of individual citizens.

With regard to utilizing national resources to prepare for war, it is far better to be prepared for a war which, as a result, may never come than to be unprepared for combat and suffer the loss of the freedoms we now enjoy. One has only to look at the lessons of World War II to realize the effect on "the human condition" when nations are not prepared to defend their fundamental human rights. Such preparation is by no means "playing around" or "sport". To paraphrase General of the Army Douglas MacArthur, no one wants war less than the soldier because he is the one who has to fight, bleed and die so that others may live.



DEPARTMENT OF THE ARMY
HEADQUARTERS, FORT CARSON
AND
HEADQUARTERS, 4TH INFANTRY DIVISION (MECHANIZED)
FORT CARSON, COLORADO 80913

AFZC-CG

19 December 1980

During our many meetings over the past several months, many of you have asked us to explain in more detail what constitutes "maneuver training." In this letter, I will outline the basics of our most land intensive and difficult battalion maneuver, the mechanized infantry battalion delay.

During combat operations a mechanized infantry battalion may be given the mission of delaying the enemy. In the delay, the intent is to orient on the enemy forces attacking the flanks and rear while trading space laterally or in depth for time thereby slowing their advance. This is accomplished by the delaying force temporarily occupying successive defensive or ambush positions with sufficient combat power to cause the enemy force to repeatedly halt, deploy and attempt to overcome the delaying force. As the enemy is bringing his force fully to bear, and at the last possible moment, the delaying forces leave their defensive positions and withdraw to the next rearward defensive position. The enemy must reorganize to resume his attack and the time consuming process is repeated again at each succeeding defensive position.

The delaying battalion commander places his units in defensive positions which provide for long range observation and fields of fire. Further, as time permits, the commander reinforces natural terrain obstacles, creates new obstacles, and emplaces mines to hold up enemy forces in the field of his defensive weapons.

Modern anti-tank weapons can defeat enemy armor at a distance of three kilometers (1.86 miles). The delaying force must inflict maximum punishment before the enemy closes to within two kilometers (1.24 miles) of its position since this is the maximum effective range of the enemy's direct fire weapons.

The delaying force must maintain a mobility advantage over the attacker. Units are positioned to expedite their movement and to make the best use of protected routes rearward to the next defensive position. In addition, a small highly mobile covering force is positioned in front of the delaying force to confuse the enemy as to the true location of the delaying force, to cause enemy forces to deploy early, to warn the delaying force of the approaching enemy, and to assist in the orderly withdrawal of the delaying force to the next rearward defensive position.

AFZC-CG

19 December 1980

To deny the enemy lucrative targets and to keep him concerned with our battle strategy, units within the battalion area of operations must be separated one from another. They must also be sufficiently mobile so as to disengage, attack or ambush as the situation develops.

Since our armor defeating munitions are effective in excess of three kilometers (1.86 miles), our combat units are able to separate as much as three kilometers (1.86 miles) from each other and maintain interlocking fields of fire. This allows a mechanized infantry battalion to effectively cover a twelve kilometer (7.44 mile) front during a delaying operation.

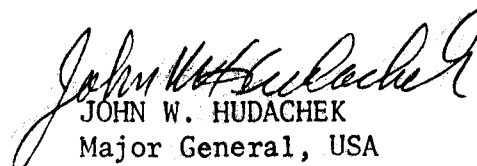
The twelve kilometer (7.44 mile) width provides ten kilometers (6.2 miles) for deployment of three company teams abreast with one kilometer (.62 miles) on each flank for the opposing force to attempt envelopment.

During training the three company teams abreast are separated from the opposing forces by six kilometers (3.72 miles) to allow three kilometers (1.86 miles) for the opposing force to organize, move, and deploy prior to its engagement by the friendly covering force at the maximum effective range of our anti-tank weapons. The covering force is deployed three kilometers (1.86 miles) in front of the initial company team delay positions. Subsequent delay positions allow each company team to support adjacent company teams at the maximum effective range of our anti-tank weapons. Each company team displaces four times. The last delay line affords seven kilometers (4.34 miles) for the battalion command post, direct support artillery units, mortar units, and the battalion supply trains. The total land required to practice the mechanized battalion delay is a contiguous 12 by 29 kilometer (7.44 by 17.98 miles) rectangle.

The delay is a defensive operation that demands perfect timing, unit cohesion, and continuous communications since a failure in any of these disciplines allows entrapment and annihilation. It is the most difficult of maneuvers to master since unit commanders must not only know the limitations of their men and equipment, they must also know the capability of their adversary. The ability of a commander to disengage in the face of the enemy and relocate his unit demonstrates the highest form of tactical competence. To achieve such excellence requires teamwork that is only obtained through realistic and dedicated training.

In this holiday season dedicated to peace, we at Fort Carson would like to assure you that we stand ready to keep the peace through the strength and training of your Army. My wife Anne and I extend our best wishes for a happy holiday and prosperous new year.

Sincerely,


JOHN W. HUDACHEK
Major General, USA
Commanding

K-41

LAND USE

68. ISSUE: Several organizations indicated concern over the selection of the Increased Use, Land Use and Management Plan (LUMP) scenario, since it calls for a training intensity 15% greater than the predicted carrying capacity of the sites. One organization specifically asked what additional mitigation had been included in the proposal to offset this greater use intensity.

RESPONSE: The Increased Use scenario was selected over the Balanced Use /Protection scenario because it increases available training area by approximately 50% each year with only a 15% increase in carrying capacity consumption. The benefit of the additional acreage to training flexibility is extremely important and the exceedance of the predicted carrying capacity by 15% is actually within the error limit of carrying capacity calculations which are extremely worst case. It must be recognized that the proposed training intensity of each LUMP scenario represents only a guideline. Considerable effort was expended to develop projected carrying capacities to insure that the sites could accommodate the training mission and so that potential, comparative impacts could be presented. In the final analysis, training intensity would be determined through a continuing evaluation of the vegetative condition of either site and would be modified as required. This concept is discussed in more depth in the following issue.

With regard to modifications to the proposed mitigation measures, an additional month of use deferment during the growing season was added to the Increased Use scenario. Originally only the months of April and May were to be deferred, the month of June was added as it provides significant protection to warm season grasses.

69. ISSUE: Several comments were made by organizations dealing with the administration and implementation of natural resource management measures and the overall Environmental program. One agency requested that a separate section of the EIS be used to describe the Environmental Management program. Two organizations requested that a specific person be identified as being responsible for insuring that the Environmental Management program be carried out. All three organizations requested that a review organization framework be established which would enable local and state agencies to participate in evaluating site conditions utilized in reaching land use and training intensity decisions.

RESPONSE: The proposed Environmental program for either site is clearly described in paragraph 2.4.5, Natural Resource Management Measures, beginning on page 2-14 of the DEIS. It is not appropriate to identify a specific individual that will be responsible for insuring that the Environmental program is carried out. As far as job positions are concerned the Environmental Program Director will be responsible for the day to day implementation of the program. Ultimately however, the Commanding General is the person responsible and accountable for land use and environmental management activities. Land use decisions such as annual modifications to training intensity, additional deferment periods, funding for mitigation measures, etc., will be made within

the Fort Carson organizational framework. The scope of those decisions will be within the proposal contained in this document. Nevertheless, as discussed in paragraph 2.4.4 on page 2-13 of the DEIS, military training land use will be continually reevaluated and adjusted as required in order to meet our twin objectives of combat readiness and natural resource protection. Training levels will vary in direct proportion with our success in avoiding or repairing maneuver damage as well as natural climatic variations. The authority for those decisions is reserved to the Commanding General of Fort Carson and the 4th Infantry Division (Mechanized). However, there is always room for technical input from any sector in reaching those decisions. Therefore, if a training site is acquired a Land Use Technical Advisory Committee will be established. Interested local and state agencies will be invited to participate such as Soil Conservation Districts, County or Regional Land Use personnel and representatives from State agencies at the pleasure of the Governor. In addition, all information dealing with the implementation of mitigation measures will be available to the public.

70. ISSUE: Two commentors were confused as to the growing season deferment period proposed. One indicated that paragraph 4, page A-1 and Table A-1 in the Appendices volume conflict with Figure 2-6 on page 2-20 of the DEIS. The commentor concluded that the site could only be rested during the month of April. The second commentor was confused by a statement that buildings would require heating only during approximately half the heating season because most of the training would be done during the summer. That commentor concluded that we couldn't train during the summer and have a growing season deferment period.

RESPONSE: The scheduled deferment periods for all Land Use and Management Plan scenarios are discussed in paragraph 2.5 and 2.6 and are shown on Figure 2-6, page 2-20 in the DEIS. The Increased Use scenario was projected to have a two month growing season deferment during April and May. However, as indicated in the summary on page iv of the DEIS, the month of June was added as an additional mitigation measure. Therefore, the proposal to adopt the Increased Use scenario at either site calls for a three month growing season use deferment during the months of April, May and June. Appendix A provides background information on the maximum training requirements that any noncontiguous training site might be expected to support. It is expressly pointed out on page A-1 that the information provided there does not represent proposed training levels but that "Actual training use would conform to levels discussed in section 2.5 and 2.6." in the DEIS.

With regard to the heating season, the months of July thru November would be available for training and with a projected maximum use of five months per year would be the most likely months during which training would occur. Therefore, buildings utilized to support training would only be heated approximately two to three months per year. That fact has no bearing on the growing season deferment from April thru June.

71. ISSUE: Several comments were submitted dealing with the Purgatoire River Canyon at the Pinon Canyon site. One commentor inquired as to whether the entire parcel would be fenced, and if so, would it be fenced to the bottom of the canyon. One commentor wondered whether vehicles would travel to the Purgatoire River and another commentor requested that we increase the quarter mile buffer between the Purgatoire River Canyon and the training management units to one half of a mile and include the side canyons of Red Rock, Lockwood and Bent.

RESPONSE: The entire property would be fenced. However, at the boundary of the Purgatoire River Canyon rim, the fence would be set back approximately a quarter mile to provide for the buffer zone committed to. As the fence line crosses a side canyon, decisions would be made when the fence is designed as to whether or not it can feasibly be constructed down the side canyon or whether the terrain negates the need for fencing. The bottoms of side canyons would normally need to be fenced. There would of course be no fencing in the main Purgatoire River Canyon. Furthermore, the travel of vehicles to the main Purgatoire River Canyon would be prevented by the fencing and would not be authorized.

Extending the quarter mile buffer zone to a half-mile from the Purgatoire River Canyon rim and including the side canyons of Red Rock, Lockwood and Bent could not be accommodated without eliminating the training potential of management units C and D and hence the entire Pinon Canyon site. A quarter-mile buffer zone is generally considered to be adequate to protect both the aesthetic and natural resource values of the river canyon.

72. ISSUE: One commentor requested that we include the site requirements of a cantonment area, a list of all possible cantonment sites within the Huerfano parcel, a prioritization of those sites and alternative transportation routes to each of them. A petition bearing 32 signatures was submitted asking that the Cedarwood Road not be utilized as the main access road to the Huerfano site, suggesting the Lime Road as an alternative.

RESPONSE: A discussion of possible cantonment sites within the Huerfano River and Pinon Canyon parcels was provided in Appendix A beginning on page A-15. Four potential locations (near Cedarwood, Lime, Doyle Road and Little Joe Canyon) were selected as cantonment candidates and evaluated utilizing nine criteria, including transportation routes. That preliminary analysis concluded that the Cedarwood site would be the most acceptable location for a cantonment facility. However, the petition from individuals living along Cedarwood Road suggested that the Lime Road be developed as the primary access route rather than the Cedarwood Road and that we extend the Lime Road to the Cedarwood location within the Huerfano parcel. In essence, their position was that since the Lime access road was considerably shorter than the Cedarwood access road we could eliminate conflict with Cedarwood residents by providing our own access road on the parcel with no increase in cost. An in depth evaluation of this proposal has been conducted and

we agree with it. By relocating the cantonment area from the Cedarwood siding north to Goat Butte, the access road would not be as lengthy, and a more direct approach to crossing the Huerfano River could be obtained from the cantonment area. This does necessitate an improved tank trail from the Cedarwood siding north to the Goat Butte cantonment area. See Figures 1 and 2. Although the commentor was concerned only with the Huerfano River Parcel, it is worthy of mention that the proposed cantonment site for the Pinon Canyon parcel has also been relocated from the Thatcher railroad siding southwest to the Simpson railroad siding which provides a better facility. Furthermore, the terrain at the Simpson location is much flatter than that near Thatcher and would reduce construction costs of the cantonment facility, see Figures 3 and 4.

73. ISSUE: Several comments were submitted indicating that the bridge across the Huerfano River that was proposed as something that might be built in the long term would be huge and would cost millions of dollars. Others felt that it might interfere with the off-limits wildlife protection area in the Huerfano River Canyon.

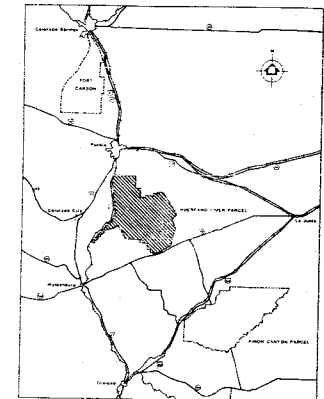
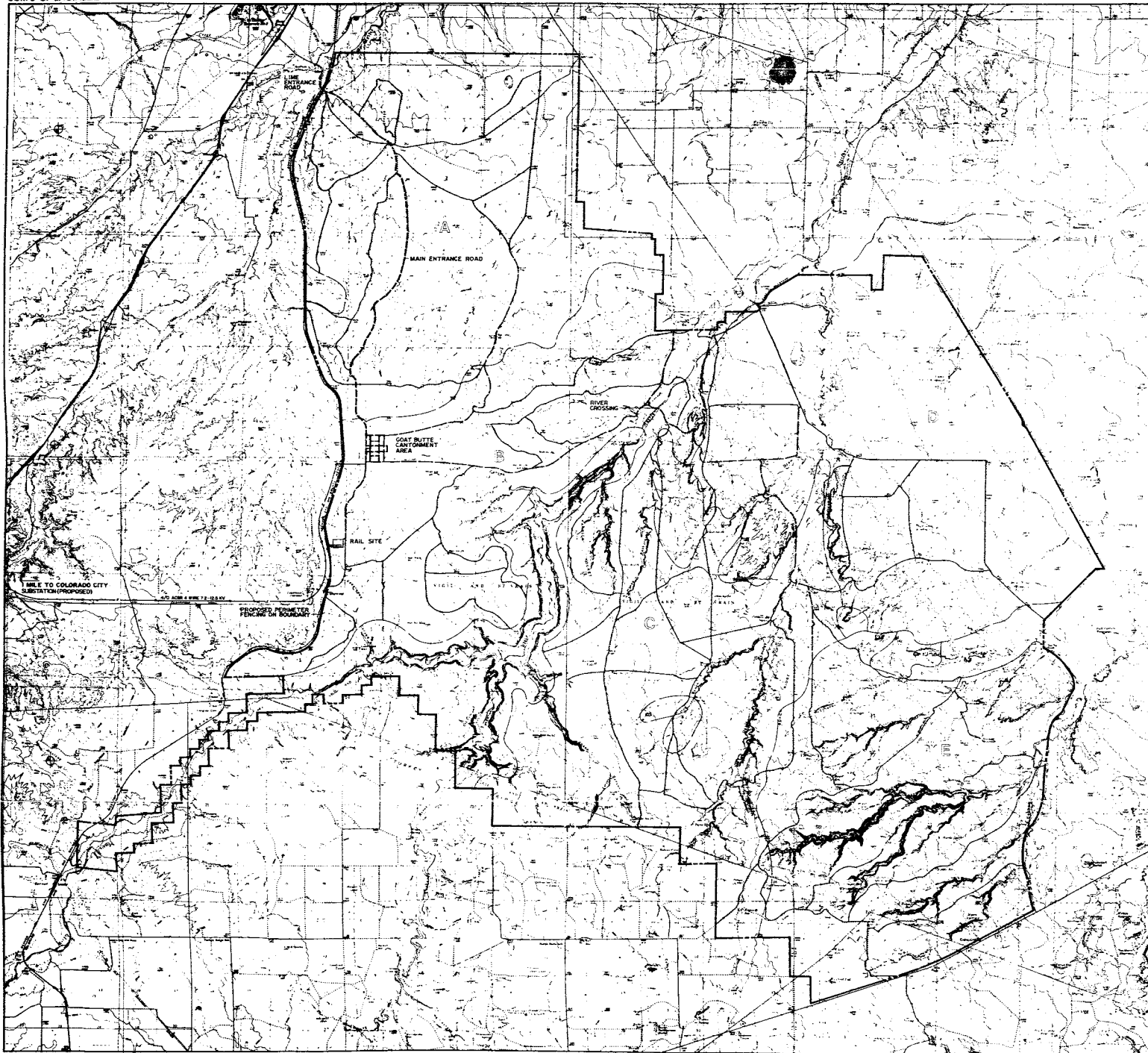
RESPONSE: The potential requirement for a bridge across the Huerfano River Canyon was included because of the proposed location of the cantonment near the Cedarwood railroad siding. It was felt that a more direct transportation route to training management units C, D and E would be desired and to insure full disclosure of all potential actions the bridge was included as a possibility. The proposed location of the cantonment area has now been moved further north from Cedarwood and adequate access across the river and to training management units C, D and E will be possible without the construction of a major bridge across the canyon. Therefore, all references to that bridge should be ignored; it will not be required.

74. ISSUE: One commentor indicated that the areas along the Huerfano River north of the wildlife protection area where crossings would be made to travel from training management unit B to Units C, D and E is frequently the consistency of quicksand and is unable to support the weight of a truck.

RESPONSE: If difficulty is encountered crossing the Huerfano River between the wildlife protection area and the northern boundary of the parcel due to quicksand or high water, engineer bridges would be employed. If continuing difficulties are encountered there is a possibility that a more permanent crossing would be constructed.

75. ISSUE: Several commentors asked whether aircraft would stay within the boundaries of the training area.

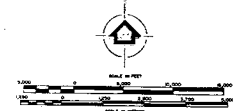
RESPONSE: Aircraft would not be permanently stationed at the training area and would not remain within the boundaries at all times. Aircraft activity is described in detail in Section 1.4.2 and Appendix H of the DEIS. Those discussions point out that helicopters would maintain a minimum altitude of a thousand feet above ground level when off the site and jet aircraft would maintain a minimum altitude of 10,000 feet above ground level enroute to the site and an altitude of 1,000 to 5,000 feet above ground level as they approach the site within five miles of the boundary.



LEGEND

	EXISTING	PROPOSED
RAILROADS		
ROADS, SURFACED PUBLIC ACCESS		
ROADS, CATEGORY 1		
ROADS, CATEGORY 2		
ROADS, CATEGORY 3		
TRAILS		
RAILROADS		
HARVESTING AREA		
VEHICLE PARKING AREA, GRAVEL		
CONCRETE TEXT PADS		
RESERVATION BOUNDARY, PREEXISTING		
TRAINING MANAGEMENT AREA BOUNDARY		
COUNTY BOUNDARY		
FENCING		
BRIDGE		
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
ELEVATION MARK		
ELECTRICAL SUPPLY LINE		

NOTE: OFF-POST TELEPHONE SYSTEM LINE LOCATION TO BE DETERMINED/INSTALLED BY MOUNTAIN BELL TELEPHONE COMPANY.



CONTOUR INTERVAL, 20 FEET

FORT CARSON NON-CONTIGUOUS TRAINING AREA SITES COLORADO

HIGGINBOTHAM AND ASSOCIATES
ARCHITECTS AND PLANNERS
COLORADO SPRINGS, COLORADO

US ARMY ENGINEER DISTRICT, OMAHA
CORPS OF ENGINEERS
OMAHA, NEBRASKA

MASTER PLAN FUTURE DEVELOPMENT PLANS GENERAL AREA PLAN MUERFANO RIVER TRAINING SITE

Recommended by the Installation Planning Board for approval.

DATE:

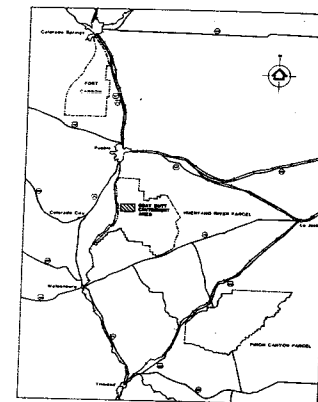
Reviewed and commented on by Major Commander
and forwarded to the Chief of Engineers

DATE:

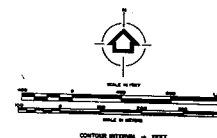
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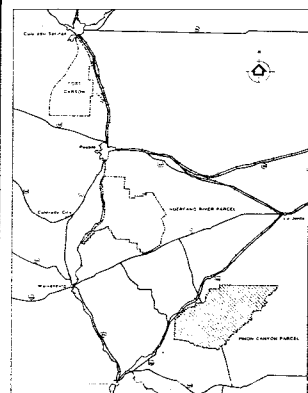
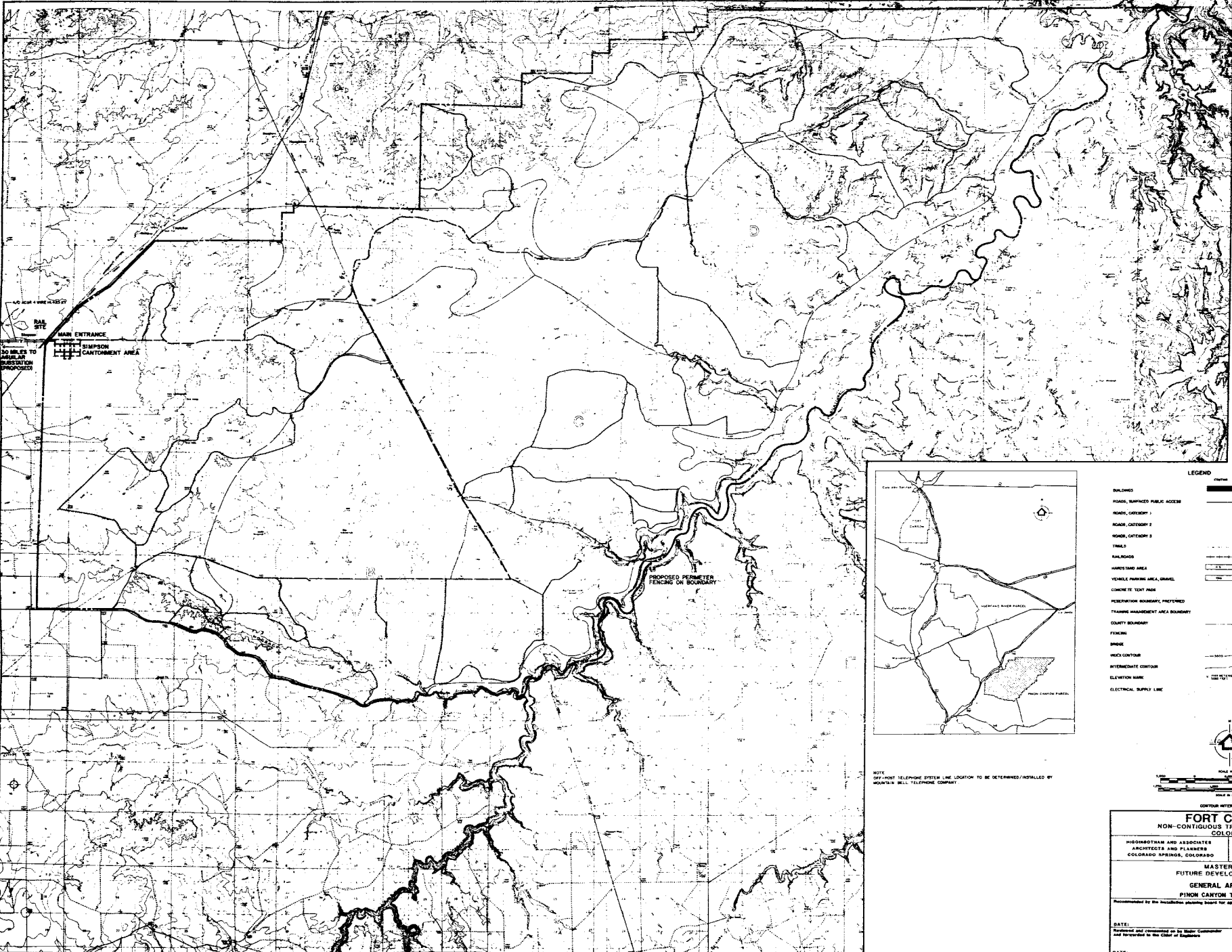
AREA NO.:



LEGEND



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<p>HIGHMOUNTAIN AND ASSOCIATES ARCHITECTS AND PLANNERS COLORADO SPRINGS, COLORADO</p>	<p>US ARMY ENGINEER DISTRICT, AND CORPS OF ENGINEERS DEAL, NEVADA</p>
<h3>MASTER PLAN</h3> <h3>FUTURE DEVELOPMENT PLANS</h3> <h3>GENERAL SITE PLAN</h3>	
<p>MUERFANO RIVER TRAINING SITE (GOAT BUTTE CANTONMENT AREA)</p>	
<p>Recommended by the Institution attaching report for approval</p>	
<p>DATE: _____</p> <p>Reviewed and transmitted to the Major Commander and forwarded to the Chief of Engineers</p>	
<p>DATE: _____</p>	<p>DATE _____ TIME _____</p> <p>SECT _____</p> <p>BASE NO. _____</p>



NOTE: OFF-POST TELEPHONE SYSTEM LINE LOCATION TO BE DETERMINED/INSTALLED BY MOUNTAIN BELL TELEPHONE COMPANY.

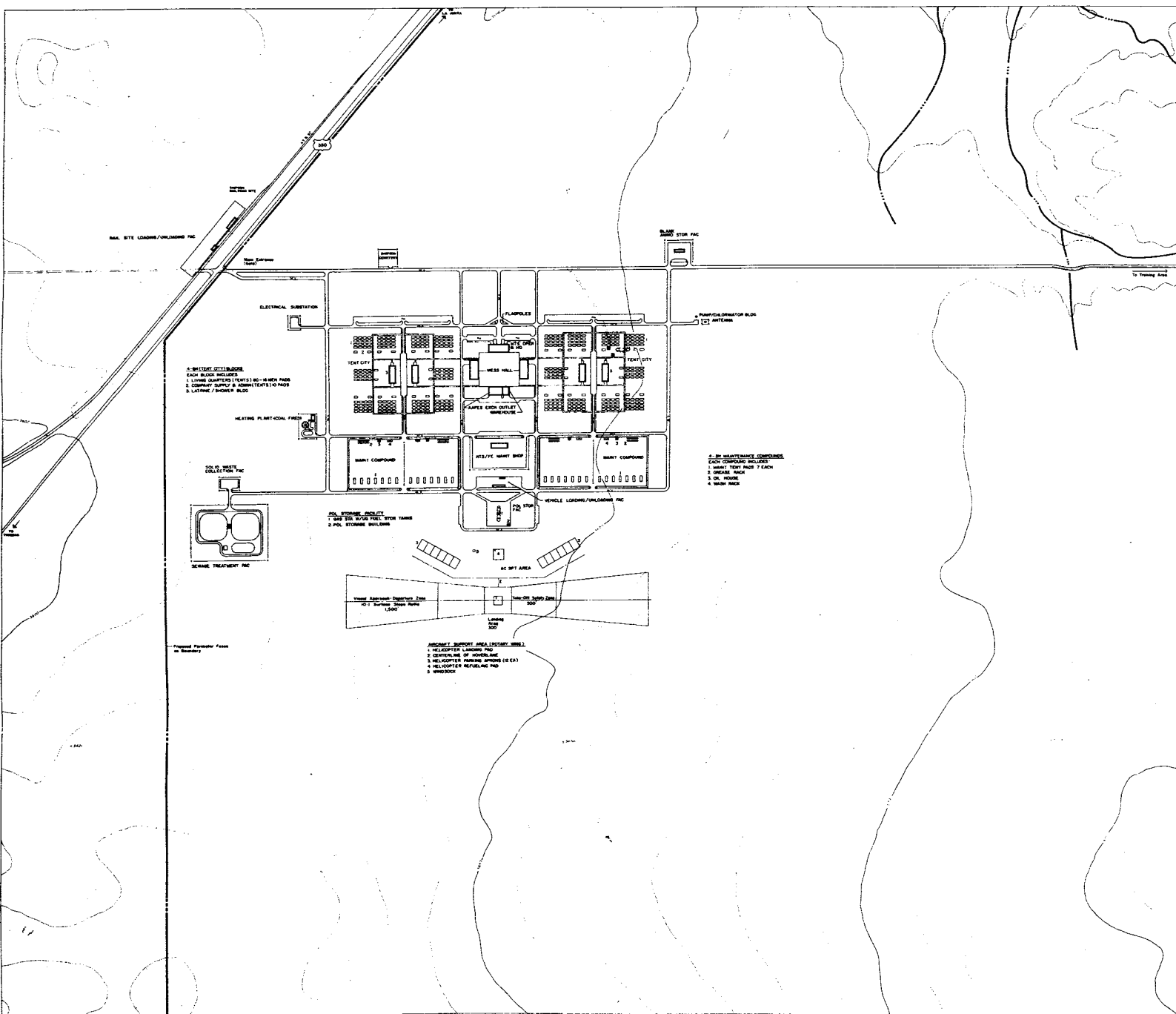
LEGEND

BUILDINGS	ROAD, IMPROVED PUBLIC ACCESS	ROAD, CATEGORY 1	ROAD, CATEGORY 2	ROAD, CATEGORY 3	TRAILS	RAILROADS	HARVESTING AREA	VEHICLE PARKING AREA, GRAVEL	CONCRETE TIE PADS	PERIMETER BOUNDARY, PROPOSED	TRAINING MANAGEMENT AREA BOUNDARY	COUNTY BOUNDARY	FENCING	BRIDGE	WATER CONTOUR	INTERMEDIATE CONTOUR	ELEVATION MARK	ELECTRICAL SUPPLY LINE	
[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]	[Symbol]

SCALE: 1" = 1 MILE

CONTOUR INTERVAL: 40 FEET

FORT CARSON NON-CONTIGUOUS TRAINING AREA SITES COLORADO	
HIGGINS & ASSOCIATES ARCHITECTS AND PLANNERS COLORADO SPRINGS, COLORADO	US ARMY ENGINEER DISTRICT, CORPS OF ENGINEERS OMAHA, NEBRASKA
MASTER PLAN FUTURE DEVELOPMENT PLANS GENERAL AREA PLAN PINE CANYON TRAINING SITE	
Recommended by the Installation Planning Board for approval	
DATE: Reviewed and approved by the Major Commander and forwarded to the Chief of Engineers	DATE APPROVED SHEET NO. 5 OF 6



76. *ISSUE: Two commentors inquired as to whether neighbors at either training parcel would be allowed to bring cattle on the land.*

RESPONSE: In general, no. The parcel would be fenced and cattle grazing would be allowed only in conjunction with the experimental grazing program described on page 2-16 of the DEIS.

77. *ISSUE: One commentor indicated that it would be advantageous to incorporate public recreation into the land use management plan in conjunction with the wildlife management area.*

RESPONSE: This comment essentially applies only to the Huerfano River parcel since we are proposing not to acquire the main canyon of the Purgatoire River at the Pinon site. Public recreation can and would be accommodated in the Huerfano River wildlife management area at levels consistent with the natural attributes of the area. The State is very interested in having that canyon area designated as a Natural Area. If acquired we would pursue that course of action and recreation activities would be developed as part of the inter-agency agreement entered into for that area.

78. *ISSUE: One commentor inquired as to whether military units stationed at other installations would be allowed to use either site if acquired.*

RESPONSE: Yes, either site, if acquired could be utilized by other military units. It should be noted, however, that use by such other units would displace an equivalent amount of the projected use by the 4th Infantry Division (Mechanized) rather than be in addition to that training intensity.

79. *ISSUE: One commentor indicated that the vegetative condition of either site would improve if the Army were to manage it as opposed to its condition under management by ranchers.*

RESPONSE: The current condition of vegetation at both sites is discussed in Sections 3.1.3 and 3.2.3 of the DEIS and is shown to be fair to poor. Sections 4.1.3 and 4.2.3 discuss the potential impact to vegetation and state that the condition is predicted to remain fair to poor if used for military training. Table 4-2 indicates that at the Huerfano, approximately 52% of the parcel would be in equal or better condition under Army management while 48% would be in poorer condition. At the Pinon Canyon site 47% of the property would be in equal or better condition and 53% would be in poorer condition, as shown on Table 4-14. These are rough approximations based on site conditions and our experience with military training damage.

80. *ISSUE: One commentor indicated that urban development within Pueblo County is occurring to the south and southeast in the St. Charles and Vineland Mesa areas. The commentor asked for a discussion of the potential effect on this development if the Huerfano parcel is acquired, and the possible impact to our proposed use of the parcel if such development continued and encroached upon the parcel in the future.*

RESPONSE: Urban development near the Huerfano site is not currently a problem. However, the potential for continuing development is an important consideration. If the Huerfano River site were to be obtained it would be important to insure that residential development does not occur directly up to the parcel boundary as that would necessitate the development of additional and larger buffer zones within the property. Non-residential urban development of an industrial or commercial nature could be accommodated directly up to the parcel boundary. Obviously it would be important to obtain protective zoning to insure the long term usefulness of the site.

81. *ISSUE: One commentor questioned the speed at which vehicles would be traveling both on roads and off roads and the percent of time projected for on road travel versus off road travel.*

RESPONSE: Average speeds of 15 MPH on roads and 10 MPH off road are considered reasonable. Obviously, different vehicles may travel at different speeds under different circumstances. Nevertheless, these averages are realistic. The estimate of 60% of all vehicle traffic occurring on roads is also realistic since off road travel is utilized only when necessary to accomplish a specific mission objective.

82. *ISSUE: One commentor indicated that the information contained in Appendix A beginning on page A-33 led to the conclusion that neither parcel could support the proposed land use.*

RESPONSE: The description of both parcels contained in Appendix A is an objective presentation of the limitations of both sites. However, the existence of natural limitations does not in itself preclude military training as a land use, but merely dictates the level at which it can be used.

83. *ISSUE: One commentor indicated that while there is a need for providing military training, land which is least suitable for other uses (in particular for food production) should be selected. Commentor was unsure whether either parcel was suitable for military training but that if one must be selected it should be the Pinon Canyon parcel as it is least suitable for other uses.*

RESPONSE: In general, this commentor was reflecting national policy towards establishment of military facilities, i.e. that prime, productive lands should not be utilized for military training. In keeping with that philosophy prime agricultural or urban development lands were not considered to be feasible acquisition sites in our analysis. Although the carrying capacity for agricultural production is slightly less at the Pinon Canyon site than at the Huerfano, they are roughly equivalent.

84. *ISSUE: One commentor indicated that it was his intent to retire on property neighboring the Pinon Canyon site and to utilize the nearby Comanche National Grasslands for recreation purposes including hunting and that our land use at the Pinon Canyon site would conflict with his intentions.*

RESPONSE: There does not appear to be any major conflict between our land use and that intended by this commentor. Military training will not have a significant effect on any portion of the Comanche National Grasslands. Furthermore, hunting would also be allowed on the Pinon Canyon site in accordance with state hunting requirements and our Land Use and Management Plan.

85. *ISSUE: One commentor inquired as to the potential effect on surrounding land values.*

RESPONSE: The potential effect on surrounding land values is very difficult to predict. Based on past experience at Fort Carson and other military installations, there would be no measurable effect on most surrounding lands. However, in the vicinity of the cantonment area an increase in housing demand and services is projected for the small population to be stationed there. This should result in increases in property values.

86. *ISSUE: One commentor indicated that the proposed boundary for the Pinon Canyon site cut up his property and left parcels remaining which would be virtually useless in a ranching operation or any other use.*

RESPONSE: If the proposed boundary bisects a property in such a manner as to leave the remaining land useless, the unpurchased portion(s) would be considered to be an uneconomic remnant. All portions of properties defined as uneconomic remnants are purchased by the government at the option of the owner. In other words, the government offers to buy the uneconomic remnant; the owner has the option to sell or retain it.

87. *ISSUE: One commentor stated that she did not understand why the quality of land to be acquired would effect the training intensity to be conducted.*

RESPONSE: The quantity and quality of land to be utilized for military training would only be unimportant if the land were considered to be a sacrifice area in trade for the accomplishment of the training mission. In other words, the training mission would be considered so important that the land would be sacrificed to accomplish it. That philosophy is contrary to National, Army and Fort Carson policy. Furthermore, such a philosophy would require an unending supply of land since the land would provide very little training benefit once its natural cover had been sacrificed. Consequently, it is imperative that sufficient quantities of land be obtained in order to meet our twin objectives of military readiness and natural resource protection. The quantity of land required is dependent upon it's quality and capacity to support training.

88. *ISSUE: One commentor was curious to know why we wanted more land to destroy.*

RESPONSE: It is important to note that military training has not destroyed the land currently entrusted to us at Fort Carson. Furthermore, additional land is being sought to allow for improved management and protection of the natural resources already present at Fort Carson as well as enabling the military training mission to be accomplished.

89. *ISSUE: One commentor pointed out that Table A-11 on page A-21 conflicts with the last sentence on page A-28.*

RESPONSE: Table A-11 is in fact correct. The reference to it on page A-28 is in error. The last sentence on that page should read "Table A-11 presents estimates of recovery time for resource areas following different levels of disturbance when adapted treatments and enhancement techniques are not applied."

90. *ISSUE: One commentor pointed out there is both irrigated and non-irrigated cropland immediately west of the Huerfano River site not shown on the Land Use map, Figure 3-14. The commentor also felt the scale of the map was intentionally selected to leave out communities to the north of the Huerfano River site.*

RESPONSE: The presence of cropland is acknowledged. The scale of the map was selected solely to allow the entire parcel areas to be shown with meaningful detail.

91. *ISSUE: One commentor indicated that the DEIS failed to note the presence of natural gas or petroleum product pipelines and went on to point out that training management Unit A at the Pinon Canyon site has 2 parallel, 8 inch natural gas pipelines which later combine into one 20 inch line. The commentor asked that we indicate the potential impacts of training on these pipelines.*

RESPONSE: Fort Carson was aware of these pipelines, but did not discuss them in the DEIS because there are no projected impacts to underground pipelines as a result of maneuver training proposed.

92. *ISSUE: One commentor indicated that his land adjoins the Pinon Canyon parcel proposed boundary and requested that it be acquired also, if the Pinon Canyon parcel is obtained. Since our use conflicts with his intentions.*

RESPONSE: The subject property is a relatively small tract that would be of little utility to the training mission. Nevertheless, slight boundary changes can be accommodated as negotiations with individual landowners are conducted. This offer would be evaluated at that time.

K-54

SOCIO-ECONOMIC

93. *ISSUE: At least a dozen commentors asked for additional detail on the costs of all aspects of the project: acquisition; construction of supporting facilities; and annual operation and maintenance costs including environmental management.*

RESPONSE: Estimated costs for land acquisition, construction of supporting facilities and annual operation and maintenance (O&M) are shown below:

	<u>Huerfano River</u>	<u>Pinon Canyon</u>
Acquisition	\$24,506,902	\$22,385,048
Construction -- optimum	61,369,000	61,780,000
-- minimum	(40,581,200)	(40,530,530)
Annual O&M	4,843,913	5,419,455

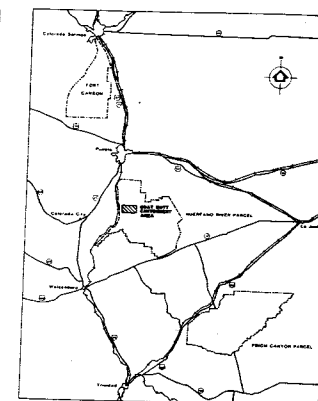
The estimated acquisition costs are extracted from the Real Estate Planning Report and are itemized on the following page.

In an effort to disclose as much information as possible about total project costs, a concept design for an optimum cantonment area was developed along with detailed development costs. (The proposed location of the cantonment areas, along with a map, is discussed in the Land Use section of the EIS.) A general site plan and itemization of the estimated costs follows this response. These costs supercede those shown at Table I-29 of the DEIS Appendices which were estimated without benefit of a concept design. The sub-figure shown in parentheses above represents those items that are considered minimum essential and would be requested during the first three years following acquisition. The balance of the facilities would be requested as soon as possible, consistent with Army programming limitations and the ability of the local area to absorb the expenditures. The programming of the total construction requirement within a three year period would have the potential of overloading local support systems and creating a negative "Boom-Town" effect. This potential applies only to the Pinon Canyon site and can be mitigated by spreading out the construction activity. It should also be noted that baseline environmental management costs are included as a separate item under this category. The cost shown would cover the full spectrum of the program, including cultural resources, land management, air, water, etc. The cost shown would be duplicated at either parcel during the second year following acquisition, before being reduced to an annual, reoccurring cost as shown under O&M.

Estimated annual operation and maintenance costs shown above are itemized on separate pages following. They have also been developed in additional detail as requested by commentors and supercede O&M costs contained in Sections 4.1.8 and 4.2.8 of the DEIS.

ESTIMATED ACQUISITION COSTS

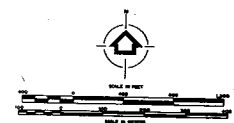
	<u>HUERFANO RIVER</u>	<u>PINON CANYON</u>
SIZE (ACRES)	224,976	257,236
FEEL TITLE AND IMPROVEMENTS	\$16,873,200	\$15,494,160
MINERAL RIGHTS	449,952	514,472
SEVERANCE	2,356,750	1,549,416
CONTINGENCIES	4,500,000	4,500,000
UNIFORM RELOCATION ASSISTANCE	75,000	75,000
ACQUISITION ADMINISTRATION COSTS	252,000	252,000
	<hr/>	<hr/>
TOTAL	\$24,506,902	\$22,385,048



LEGEND

	THIN	THICK	THICK
BUILDING, PERMANENT			
ROADS, SURFACED			
ROADS, UNSURFACED			
RAILROAD			
FENCE			
PARKING			
BOUNDARY			
TEXT AND			
SIDEWALK			
FUEL DISPENSING POINT			
FLAGPOLE			
DRAINAGE CHANNEL			
IRREG. CONTOUR			
INTERMEDIATE CONTOUR			
DEPRESSION			

NOTE:
NO HISTORIC PLACES NOTED ON THIS PLAN.
THIS AREA IS NOT LOCATED IN ANY KNOWN FLOOD PLAIN.



CONTAINS INFORMATION OF VALUE

FORT CARSON
NON-CONTIGUOUS TRAINING AREA SITES
COLORADO

HIGGINSBOTHAM AND ASSOCIATES ARCHITECTS AND PLANNERS COLORADO SPRINGS, COLORADO	US ARMY ENGINEER DISTRICT, OMAHA CORPS OF ENGINEERS OMAHA, NEBRASKA
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MASTER PLAN
FUTURE DEVELOPMENT PLANS
GENERAL SITE PLAN

HUERFANO RIVER TRAINING SITE (GOAT BUTTE CANTONMENT AREA)
Contributed by the Installation planning board for approval

DATE:	Reviewed and commented on by Master Commander and forwarded to the Chief of Engineers	DATE AUGUST 1960	DR
DATE:		SHEET NO. 2 of 2	

CONSTRUCTION OF SUPPORTING FACILITIES

COST ESTIMATE SUMMARY - HUERFANO RIVER TRAINING SITE

A.	Roads and Fencing - Open Range Area	\$17,944,000*
B.	Access Road (Including Tank Trail Crossings) and Tank Trail from R.R. Spur to Cantonment Area	5,570,000*
C.	Roads and Peripheral Tank Trail -	1,640,000*
D.	Sidewalks - Cantonment Area	249,000
E.	Site Preparation - Cantonment Area	1,626,000**
F.	Utilities to Cantonment Area from	372,000**
G.	Utilities - Cantonment Area	4,459,000**
H.	4 - BN (Tent City) Blocks	8,221,000
I.	2 Mess Halls	3,495,000
J.	Operations and Headquarters Building	1,886,000*
K.	AAFES Exchange Outlet	1,669,000
L.	Warehouse	356,000*
M.	4 - BN Maintenance Compounds	2,464,000
N.	NTS/FE Maintenance Shops	1,200,000*
O.	POL Storage Facility	679,000*
P.	Ammunition Storage Building	457,000
Q.	Railroad Spur and Loading/Unloading	1,787,000*
R.	Facility (On-site) Loading/Unloading Facility -	725,000*
S.	Cantonment Area Aircraft Support Facilities	525,000
T.	Off-Installation Road, Railroad and Utility Supply Systems 1. Federal, State or County Road Network Improvements	1,815,000*
	2. Railroad System Improvements (Other Than Spur/ Siding Installation/Improvement)	16,000*
	3. Water Supply Lines	2,108,000*
	4. Electrical Power Service	121,000*
	5. Communication (Telephone) Service Lines	334,000*
U.	Baseline Environmental Management	1,651,000*
TOTAL		\$61,369,000

*Minimum essential for safety, sanitation, security, and to meet environmental regulations.

**Can be adjusted decrementally, depending on the final level of site development.

CONSTRUCTION OF SUPPORTING FACILITIES

COST ESTIMATE SUMMARY - PINON CANYON TRAINING SITE

A.	Roads and Fencing - Open Range Area	\$23,280,000*
B.	Access Road to Cantonment Area	434,000*
C.	Roads and Peripheral Tank Trail	1,796,000*
	Cantonment Area	
D.	Sidewalks - Cantonment Area	256,000
E.	Site Preparation - Cantonment Area	1,681,000**
F.	Utilities to Cantonment Area from	579,000**
	point of entry onto installation	
G.	Utilities - Cantonment Area	4,750,000**
H.	4 - BN (Tent City) Blocks	8,746,000
I.	2 Mess Halls	3,756,000
J.	NTS Operations and Headquarters Building	2,036,000*
K.	AAFES Exchange Outlet	1,779,000
L.	Warehouse	380,000*
M.	4 - BN Maintenance Compounds	2,609,000
N.	NTS/FE Maintenance Shops	1,276,000*
O.	POL Storage Facility	721,000*
P.	Ammunition Storage Building	471,000
Q.	Loading/Unloading Facility - NOT APPLICABLE	-0-
	At Railroad Siding (Off-site)	
R.	Loading/Unloading Facility -	1,786,000*
	Cantonment Area including R.R. Spur	
S.	Aircraft Support Facilities	556,000
T.	Off-Installation Road, Railroad and Utility Supply Systems	
1.	Federal, State or County Road Network Improvements	-0-
2.	Railroad System Improvements (Other Than Spur/ Siding Installation/Improvement)	96,000*
3.	Water Supply Lines	2,000,000*
4.	Electrical Power Service	552,000*
5.	Communication (Telephone Service Lines)	369,000*
U.	Baseline Environmental Management	1,871,000*
	TOTAL	\$61,780,000

*Minimum essential for safety, sanitation, security, and to meet environmental regulations.

**Can be adjusted decrementally, depending on the final level of site development.

ANNUAL OPERATIONS AND MAINTENANCE COSTS

<u>FORECAST SERVICES/ACTIVITIES</u>	<u>HEURFANO RIVER SITE</u>	<u>PINON CANYON SITE</u>
1. Annual Salaries/Payroll		
25 Military (Note 1)	\$ 303,165	\$ 303,165
10 DA Civilians (Note 2)	205,240	205,240
NAF Employees	35,000	35,000
Sub-Total	\$ 543,405	\$ 543,405
2. Transportation Services-Contract		
Admin Motor Services (14 vehicles)		
- Contract Maintenance	29,276	29,276
- POL Purchases	19,276	19,276
Sub-Total	\$ 48,552	\$ 48,552
3. Maneuver Training Operations - Contract		
POL Purchases for Training	\$ 600,000	\$ 600,000
4. Laundry Services - Contract		
Organizational Laundry (Note 3)	83,300	83,300
5. Food Services - Contract		
Ice	3,000	3,000
Bread	70,000	70,000
Milk	18,000	18,000
KP Contract, if Executed	(Note 4)	(Note 4)
Sub-Total	\$ 91,000	\$ 91,000
6. Telephone Services - Lease		
Foreign Exchange Lines (2)	\$ 3,000	\$ 3,000
Local Exchange Lines (20)	5,500	5,500
Sub-Total	8,500	8,500
7. Preservation of Order		
MP Operations (12 Military)	(Note 5)	(Note 5)
8. Operation of Utilities - Contract		
Water, Sewage, Heat, Etc	861,700	835,900
9. Maintenance of Real Property - Contract		
Building Maintenance & Repair	106,700	113,600
Improved Grounds Maintenance	12,700	10,800
Surfaced Area Maintenance	434,600	333,300
Railroad Maint/Repair	2,300	-0-
Maint of Utility Systems	302,400	333,500
Fence Maint/Repair	33,800	32,200
Sub-Total	\$ 892,500	\$ 823,400

<u>FORECAST SERVICES/ACTIVITIES</u>	<u>HUERFANO RIVER SITE</u>	<u>PINON CANYON SITE</u>
10. Continuing Environmental Management		
Range Conservation (unimproved grounds)	170,000	200,000
Soils and Vegetation Survey	50,000	50,000
Fish and Wildlife Surveys	75,000	75,000
Air Quality Monitoring	20,000	20,000
Noise Monitoring	5,000	5,000
Water Monitoring	30,000	30,000
Sub-Total	<u>350,000</u>	<u>380,000</u>
11. Minor Construction - Contract Alterations and minor projects	\$146,560	\$154,340
12. Other Engineering Support - Contract		
Fire Prevention and Protection	(Note 2)	(Note 2)
Custodial Services	9,900	10,600
Packing and Crating	57,500	57,500
Snow Removal	15,000	5,000
M&S Equip, Purchase/Repair	200,000	200,000
Refuse	82,200	82,200
Entomology	63,200	76,200
Mgmt Engineering	75,000	75,000
(Includes Admin, Master Planning, and other Overhead)		
Sub-Total	<u>\$502,800</u>	<u>\$ 506,500</u>
13. Brigade Movement Transportation		
3-Brigade Round Trips	715,596	1,344,558
Ft Carson/Training Site		
GRAND TOTAL	<u>\$4,843,913</u>	<u>\$5,419,455</u>

Note 1. (The 25 military slots are forecast to support the following annual operating requirements: Office of Site Commandant, 6 personnel; Supply/Storage, 3 personnel; MP Operations, 12 personnel; Organizational Maintenance, 2 personnel; uncommitted, 2 personnel.)

Note 2. (The 10 DA civilians are forecast for fire prevention/protection. Potential exists for contract award at an estimated annual cost of \$310,000; however, this option is not costed in the above analysis.)

Note 3. (The Contract Services for Item 4 (Laundry - \$83,300) will likely be satisfied by sources foreign to the local vicinity of the training site. Consequently those costs are of doubtful economic benefit to the training site community.)

FORECAST
SERVICES/ACTIVITIESHUERFANO
RIVER SITEPINON
CANYON SITE

Note 4. (If the Food Service Attendants (KPs) were contracted their annual costs would be estimated at \$375,000. This option is excluded from above estimates.)

Note 5. (Security Services afford potential for contract at a minimum annual cost estimate of \$96,000. These services are currently included in the military costs at Item 1.)

94. *ISSUE: Five commentors asked for further detail on transportation costs for convoys to travel to either site.*

RESPONSE: One way transportation costs for a brigade and it's supporting units to travel to the sites are estimated in 1980 dollars, as follows:

<u>FORT CARSON TO:</u>	<u>HUERFANO RIVER</u>	<u>PINON CANYON</u>
Wheels by Road, Tracks by Rail	\$86,740	\$155,401
All Vehicles by Rail	\$131,196	\$172,253
Personnel by Bus	\$32,520	\$51,840

95. *ISSUE: One commentor asked what the cost of repairing an area damaged by maneuvers would be.*

RESPONSE: Methods proposed for managing maneuver damage are discussed in Section 2.4 of the DEIS. Costs for implementing conservation measures such as pitting, seeding, construction of erosion control dams, etc., have been estimated at \$5.00 per acre based on average, per acre costs experienced at Fort Carson. That does not mean that a severely maneuver damaged acre of grassland can be treated for \$5.00. Treatment of that acre might require two to three hundred dollars. However, when treatment required by a complete training area is averaged out for all acres, (many of which require no treatment), the per-acre cost, in 1980 dollars, is estimated at \$5.00.

96. *ISSUE: Two commentors requested that procurement of materials and services to support the proposed training facility be directed to the local area to offset land withdrawal impacts. One of the commentors asked about the process involved in maximizing local bidding.*

RESPONSE: As indicated in Sections 4.1.8 and 4.2.8 of the DEIS, Fort Carson is precluded by procurement regulations from guaranteeing the awarding of procurement or construction contracts to a specific firm or locale. In addition, at the time of DEIS publication, Congress prohibited the Department of Defense from implementing Department of Labor regulations giving preference to contracting in labor surplus areas. That prohibition has now been removed from the Department of Defense Appropriation Bill. Fort Carson agrees with the commentors that procurement of materials and services, including construction projects, should be maximized within the local area (Pueblo, Huerfano, Las Animas and Otero counties). Therefore, the following policies will form the basis for all procurement actions in support of either site that might be obtained:

1. Direct implementation of Defense Manpower Policy Number 4A (DMP4A) which encourages Federal agencies to procure goods and services and locate Federal facilities in areas defined by the Department of Labor as labor

surplus. (Labor surplus is defined by comparison of local unemployment to national averages. Pueblo and Huerfano counties are presently listed as labor surplus. (Las Animas county has been listed in the past.) Under DMP4A Federal agencies must:

a. Use their best efforts to award procurement contracts and grants and enter into agreements, more than \$2,500, to firms that will perform a substantial portion of the work (manufacturing, production, or services) in the labor surplus area, so long as the purchase can be made to satisfy the government's need.

b. Ensure that firms in labor surplus areas on appropriate government bidders' mailing lists are given the opportunity to submit offers on all contracts for which they are qualified. Firms can be placed on a bidders' list by submitting a registration form to the Fort Carson Contracting Office. If they need the form request it by telephone (579-5040/5041) or mail.

c. Establish programs to encourage prime contractors to award sub-contracts to firms that agree to perform a substantial portion of the work (manufacturing, production, or services) on those contracts in the labor surplus area. This is done by making this requirement a part of the prime contract.

d. Cooperate with other Federal departments and agencies in achieving the objectives of the DMP4A.

2. Indirect implementation of DMP4A which requires that the Small Business Administration (SBA), accomplish the following:

a. Make available all of its services to small business firms in labor surplus areas.

b. Maximize participation of small business in government procurement.

c. Consider the needs of small business firms in making joint small business set asides with government procurement agencies.

Implementation of this policy will be accomplished through close coordination with the SBA to insure continuing program emphasis.

3. Indirect implementation of Section 8(a) of the Small Business Act which provides that the SBA may require any Federal Agency to set aside any potential contract for award by the SBA to a firm owned by socially disadvantaged persons. The SBA is responsible for determining who is socially disadvantaged. When a fair and reasonable price has been negotiated with Fort Carson, the SBA awards a sub-contract to the firm. Fort Carson will encourage the Small Business Administration (SBA) to seek out and certify firms eligible for 8(a) contract awards in the local area.

By utilizing the above policies in conjunction with normal prerogatives in awarding small procurement contracts locally, positive economic contributions to the region will be maximized. A review of contractor capabilities in the local four-county region by Fort Carson's procurement office indicates that all annual operation and maintenance contracts and all facility construction except for railroad spurs could potentially be set aside for small businesses in the labor surplus area or for 8(a) qualified firms.

The ultimate performance of this procurement policy is dependent upon fair and reasonable bids from firms seeking the set-aside contracts. Fort Carson's estimate of local award success utilizing this policy is that up to 84% of all contracts awarded can potentially stay in the local area.

97. *ISSUE: At least six commentors indicated some form of dissatisfaction with the description of economic impacts. One commentor stated that the impact description was vague and incomplete, and asked that all potentially significant impacts be reorganized into a comprehensive analysis summary. Five commentors stated they doubted that any economic gain would accrue to the local area. One of the five felt that gains were assessed to a much greater extent than were losses. One commentor indicated military installations normally improve an economy and potential gains should be described instead of just potential losses under worst case conditions.*

RESPONSE: Potential economic impacts are discussed in detail in Section 4.1.8, 4.2.8 and Appendix I of the DEIS. As discussed there, a predictive model developed by the Army's Construction Engineering Research Laboratory was used to describe potential changes to the local economy. The model is known as the Economic Impact Forecast System (EIFS). The impacts predicted by it are shown at Tables I-27, I-28 and I-30. Those results were based on the worst case impact and show that while acquisition and short-term construction requirements would be a positive economic stimulus, long-term operation and maintenance expenditures would not totally off-set the existing agricultural activity. Being worst case, those predictions took no credit for any local contracting. Predictions were in no way biased towards economic gains.

In order to respond to the request for a more easily understood presentation of potential impacts, one additional analysis was performed and a graphic display of key impacts developed. The updated costs provided in the first response of this socio-economic section were utilized, and three different levels of local contracting were evaluated: 84%, 50%, and 20%.

The additional analysis performed was to compare the predicted impacts to the average historic growth rate of the local economy. This is known as the Rational Threshold Value (RTV) technique and it provides an indication of the magnitude of impacts.

Ten years of Bureau of Economic Analysis data (1965-1975), for business volume, personal income, and employment was examined. An average, real growth rate (i.e. discounting inflation), was developed for all three

economic indicators in the Huerfano River and Pinon Canyon areas. Then the maximum deviation from this average was obtained. In the attached figures, the maximum deviations from the average real growth rate are shown in solid black. For example, at the Huerfano River site, the maximum historical deviation from the average real growth in business volume was found to be about 6% on the positive side and 4.5% on the negative side.

Rational Threshold Values were then calculated by applying the percentages shown below to the maximum historical deviations.

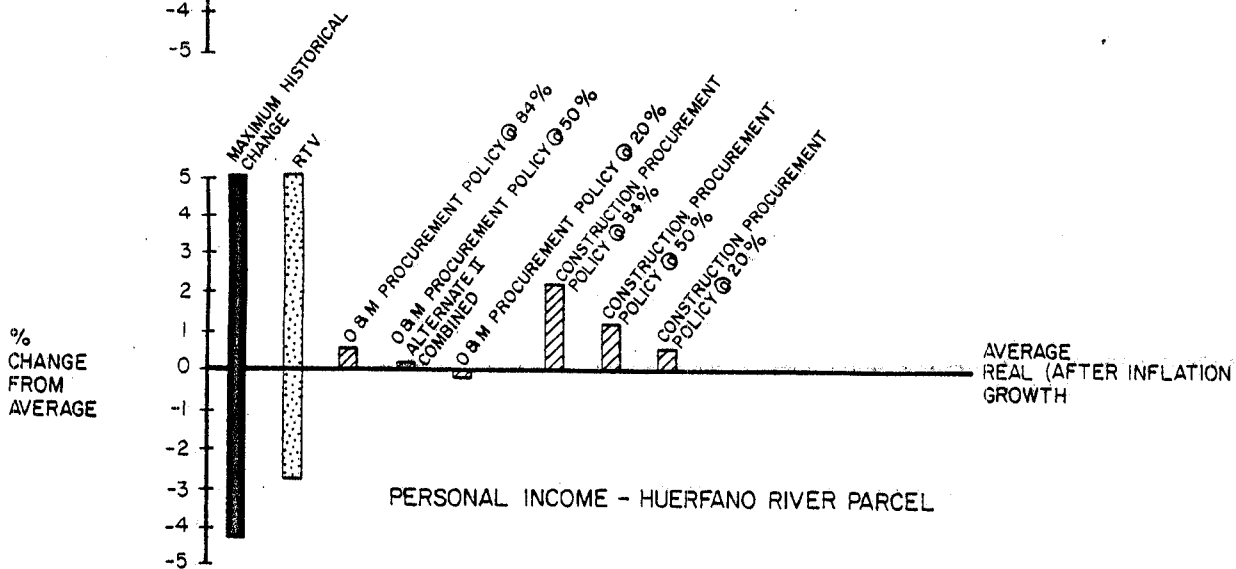
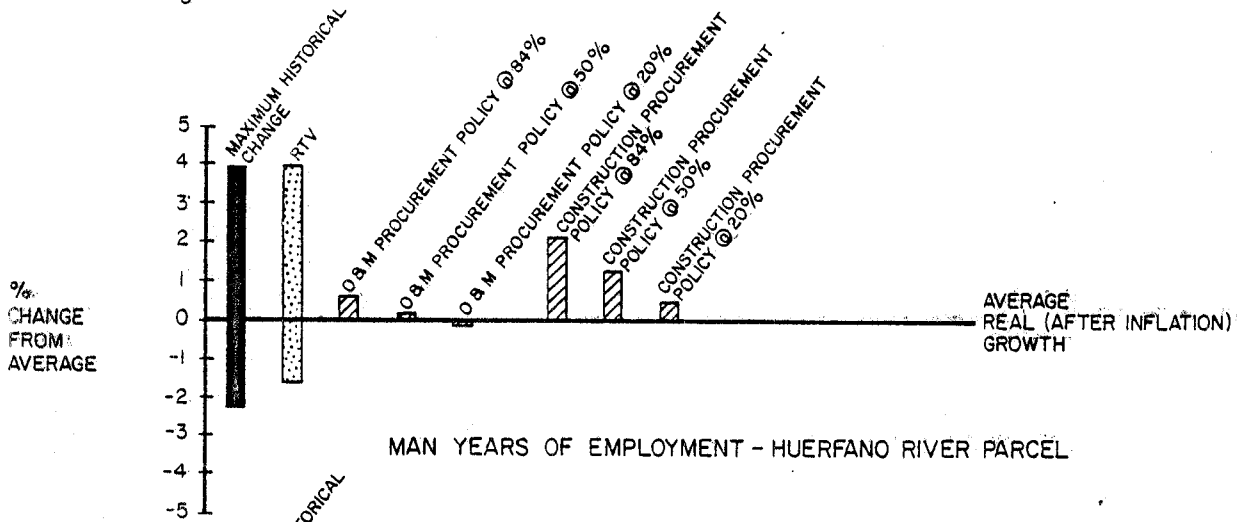
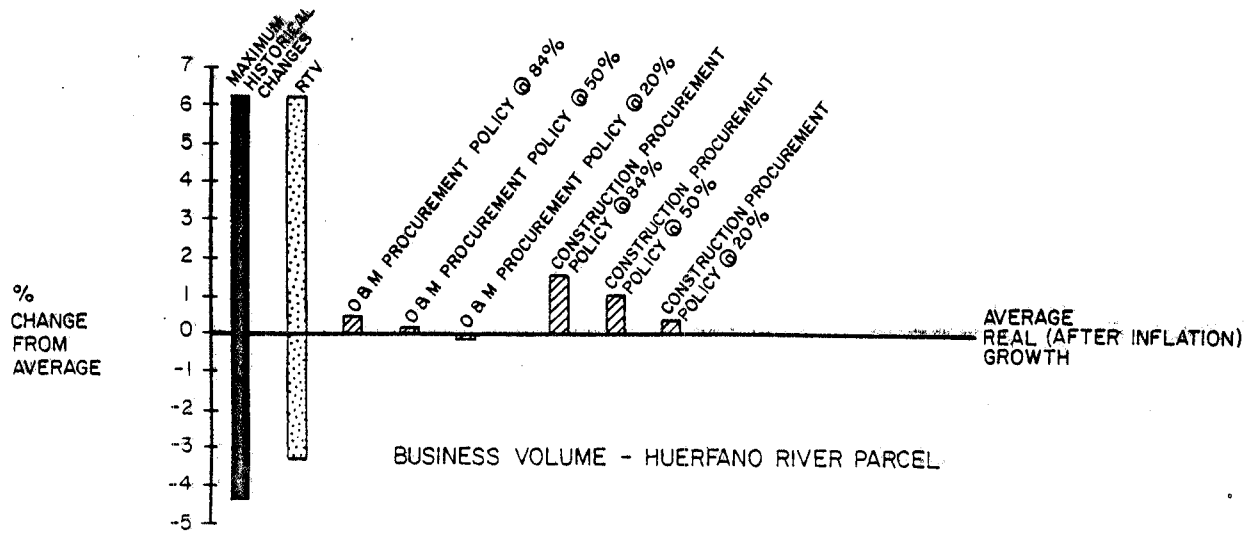
Percentages of Maximum Historical Deviation
From Average Growth Allowed for RTV's

	Increase	Decrease
Change in Total Business Volume	100%	75%
Change in Personal Income	100%	67%
Change in Total Employment	100%	67%

The percentages were developed through the cooperative efforts of Department of Defense personnel, consultants from Battelle-Columbus Laboratories and the University of Illinois. They are based on the premise that a local economy can absorb up to 100% of its maximum historic deviation on the positive side, and a lesser percentage of its maximum historic deviation on the negative side without experiencing a significant impact. This premise is generally valid because positive changes are normally perceived as beneficial while negative changes are perceived as disruptive. Referring again to the Huerfano River site figure for business volume, the RTV is shown in black stipple and is 6% on the positive side (100% of deviation), but only 3.5% on the negative side (75% of deviation).

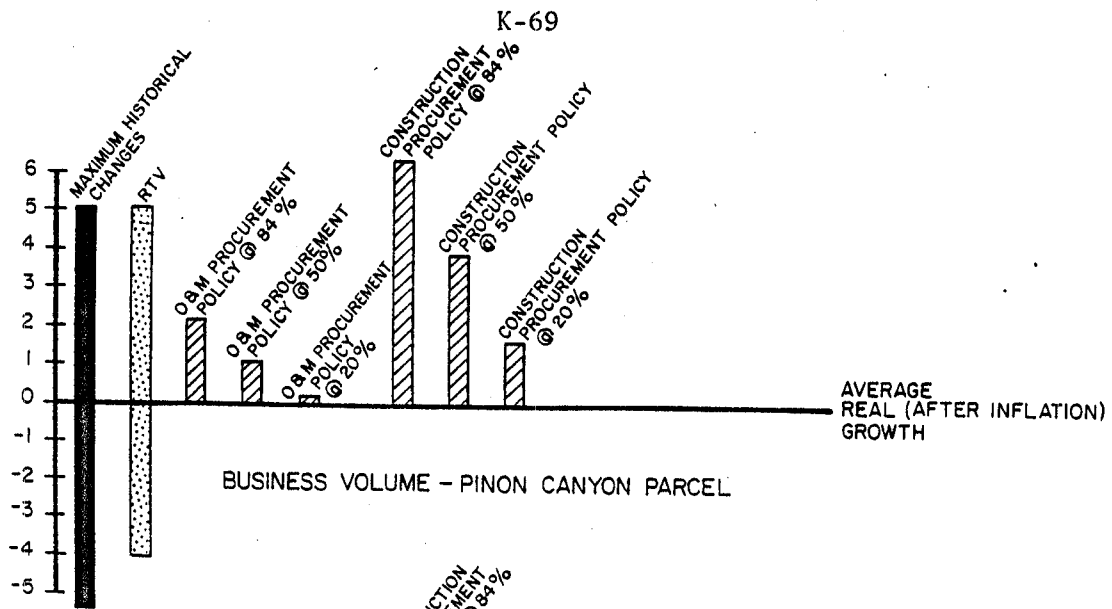
Predicted impacts falling within the RTV values, although certainly important to be aware of, are said to not be significant since the economy has experienced fluctuations as large or larger in the past. By comparing economic fluctuations from historic growth levels predicted by EIFS with the RTV's for the area, the potential significance of the proposed action can be determined.

The first of the three tables attached provides a summary of potential impacts at both sites from short-term construction activities when during the first three years support facilities would be built. All the Tables reflect local contracting at the 84% level. For the Huerfano River site, the positive, short-term impacts fall well within the RTV's. However, at the Pinon Canyon site, changes to business volume and man years of employment exceed the maximum historical change and thus the rational threshold as well. In other words, the existing local economy would be seriously stressed. This type of a "boom" economy can overload local public services such as police and fire protection, and water and sewer services. As indicated in the first

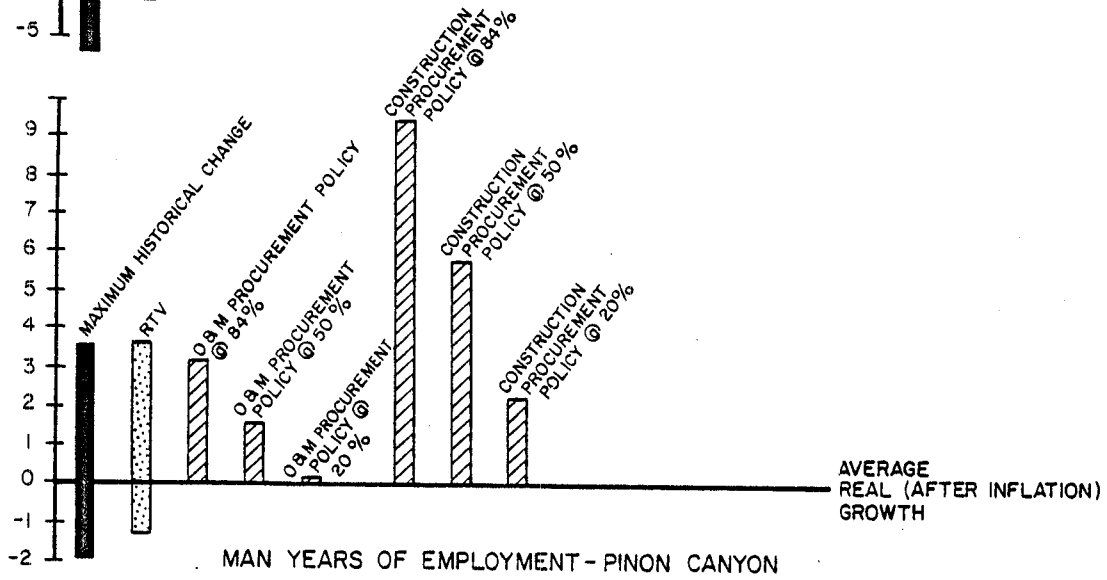


Huerfano River parcel comparison
of relative economic effects by key indicators

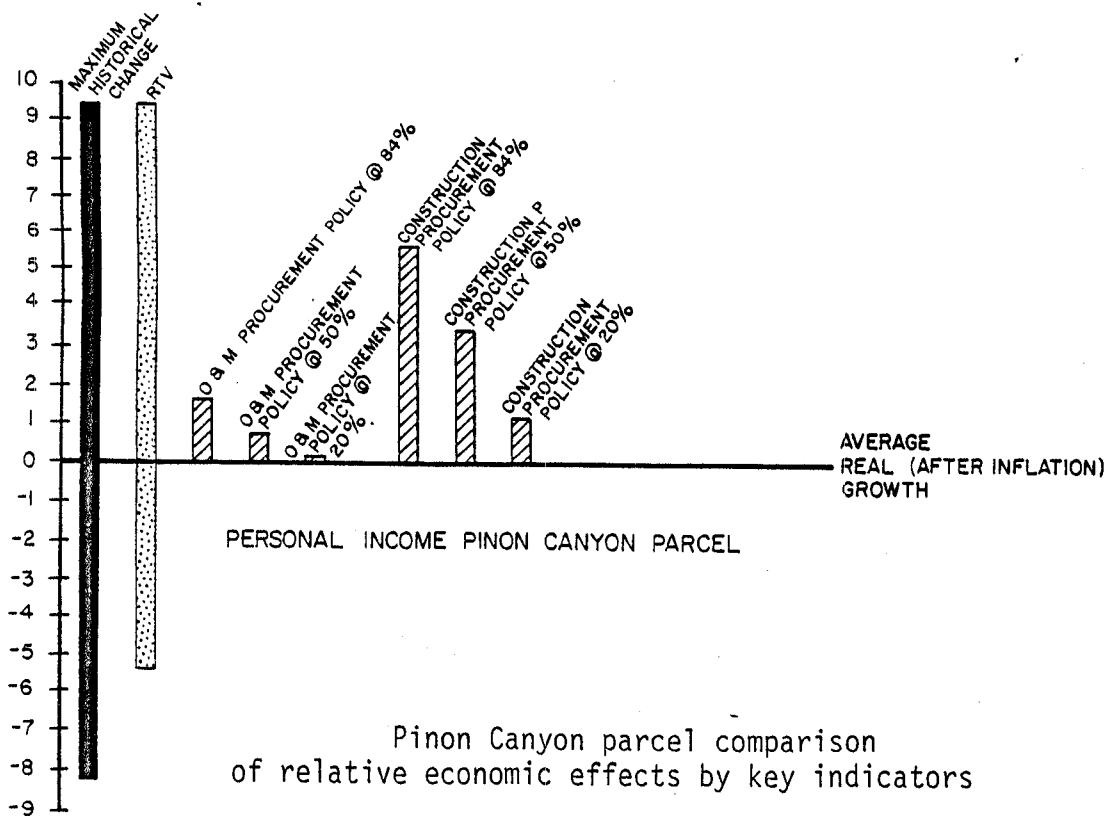
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Pinon Canyon parcel comparison
of relative economic effects by key indicators

Summary Comparison of Potential Short-Term Construction Socioeconomic Impacts,

Huerfano River and Pinon Canyon Parcels, Fort Carson Acquisition

Impact Category With Selected Indicators	Huerfano River			Pinon Canyon		
	Proposed Construction	% ⁽¹⁾	RTV% ⁽²⁾	Proposed Construction	% ⁽¹⁾	RTV% ⁽²⁾
SOCIAL						
Population						
--Directly Affected ⁽³⁾						
--Number School Children ⁽³⁾						
Employment						
--Number of Jobs (Direct) ⁽³⁾						
Civilian ⁽³⁾						
Military ⁽³⁾						
--Total Man Years Employment Provided ⁽⁴⁾	1,163	2.104	-1.591 to 3.965	1,372	9.497	-1.271 to 3.567
ECONOMIC (all estimates in 000's Dollars)						
Personal Income ⁽⁴⁾	23,434	2.148	-2.973 to 5.216	14,408	5.686	-5.542 to 9.491
Total Business Volume ⁽⁴⁾	23,205	1.686	-3.322 to 6.367	27,115	6.458	-4.066 to 5.161
Expenditures for Housing ⁽⁴⁾	4,218			2,593		
Non-housing Expenditures ⁽⁴⁾	14,763			9,077		
Local Government						
--Total Tax Revenue (State, Local) ⁽⁴⁾	4,717			5,144		
--Local Government Costs ⁽⁴⁾	1,234			1,351		
--Cost to Schools	-			-		
Direct Purchases for Local Services and Supplies	17,183			17,183		

Notes:

- (1) Percent of average growth rate
- (2) Rational threshold values - measure of fluctuations from the average growth rate
- (3) Not known
- (4) EIFS predicted

socio-economic issue in this Appendix, that potentially disruptive impact would be mitigated by only accomplishing the mission essential support facilities in the first three years, leaving the remaining facilities to be programmed later. To be sure the Table is clear, refer to the Pinon Canyon columns across from "Total Man Years Employment Provided." The Table shows that 1,372 man years of employment would be provided, which represents a 9.497 percent change from the average real growth of the area. The positive RTV is 3.567 percent. Therefore, the proposed construction program would result in local employment increases almost 6% above the maximum historical increase. The construction impacts are shown on the previous figures and can easily be compared to the RTV's. Comparative impacts for contracting locally at the 50 and 20 percent levels are also included.

The last two tables provide a summary of local impacts as a result of the long-term, day-to-day, operation and maintenance of both sites compared to the current impacts of agricultural activity. The tables are interpreted as in the example above and are also shown graphically on the preceding figures.

At the Huerfano River site, as was indicated in Section 4.1.8 of the DEIS, the ability to contract locally would result in a slightly positive impact, less than 1% and not significant. If local contracting drops to 20% of expenditures as can be seen on the figure, impacts shift to the negative side, but nothing significant.

At the Pinon Canyon site, potential positive impacts are more substantial, and remain positive even if local contracting slips to 20%. For instance, the 3% growth in man years of employment approaches the RTV and although easily absorbable by the local economy would be considered a substantial, favorable impact.

98. *ISSUE: Two commentators indicated concern over the applicability and effectiveness of the Economic Impact Forecast System (EIFS) predictive model and asked why alternative models were not used.*

RESPONSE: All predictive models have limitations. Limitations of the EIFS model are clearly described in Sections 4.1.8, 4.2.8 and Appendix I of the DEIS. Three different models being used or used in the past by Colorado state agencies and considered for use in the DEIS are described below:

<u>Model & Status</u>	<u>Developed By</u>	<u>Limitation(s) of Use To This Study</u>
Conceptual Colorado Interindustry Model; Current Status Unknown	Colorado State University Contact: S.L. Gray or J.R. McKean	- Developed primarily for water use analyses in State's economy

Summary Comparison of Potential Long-Term Operational Socioeconomic Impacts,
Huerfano River, Fort Carson Acquisition,

Impact Category With Selected Indicators	Existing Base		Proposed		Predicted		RTV	% (2)
	(Ranching/Livestock)	% (1)	Gov't Services Base (Military Operations)	% (1)	Change	% (1)		
SOCIAL								
Population								
--Directly Affected	35		112 (3)		+77			
--Number School Children	7		39		+32			
Employment								
--Number of Jobs (Direct)								
Civilian	28(4)		13		-15			
Military	--		22		+22			
--Total Man Years Employment Provided	232	(.420)	525	(+.951)	+293	(+.531)	(-1.591 to 3.965)	
ECONOMIC (all estimates in 000's Dollars)								
Personal Income (5)	4,687	(.430)	10,606	(+.972)	+5919	(+.542)	(-2.973 to 5.216)	
Total Business Volume(5)	4,630	(.336)	10,482	(+.762)	+5852	(+.426)	(-3.322 to 6.367)	
Expenditures for Housing(5)	844		1,909		+1065			
Non-housing Expenditures(5)	2,953		6,682		+3729			
Local Government								
--Total Tax Revenues (State,Local)(5)	941		2,131		+1190			
--Local Government Costs	121(6)		557 (7)		-678			
--Cost to schools	35(6)		25 (7)		-60			
Direct Purchases for Local Services and Supplies	1,970		4,098		+2128			

Notes:

- (1) Percent of average growth rate.
- (2) RTV - Rational Threshold Values measure of fluctuations from average growth rate.
- (3) 35 Permanent Civilian and Military Employees x 3.2 persons/household (1974) average household size for study area) - 112 person
- (4) Presumes all population other than school age children are gainfully employed.
- (5) EIFS Predicted.
- (6) Revenue lost when parcel is withdrawn. Personal communication with local governmental and school officials; these locally obtained estimated are in current (1979) dollars.
- (7) EIFS Predicted Increased Costs.

Summary Comparison of Potential Long-Term Operational Socioeconomic Impacts,
Pinon Canyon Parcel, Fort Carson Acquisition,

Impact Category With Selected Indicators	Existing Base		Proposed		Predicted		RTV	% (2)
	(Ranching/Livestock)	% (1)	Gov't Services Base (Military Operations)	% (1)	Change	% (1)		
SOCIAL								
Population								
--Directly Affected	46		112 ⁽³⁾		+77			
--Number School Children	10		39		+29			
Employment								
--Number of Jobs (Direct)								
Civilian	36 ⁽⁴⁾		13		-23			
Military	--		22		+22			
--Total Man Years Employment Provided	182	(1.259)	642	(+4.45)	+460	(+3.186)	-1.271 to 3.567	
ECONOMIC (all estimates in 000's Dollars)								
Personal Income ⁽⁵⁾	1,550	(.612)	5,677	(+2.24)	+4,127	(+1.629)	-5.542 to 9.491	
Total Business Volume ⁽⁵⁾	3,595	(.856)	12,692	(+3.023)	+9,097	(+2.167)	-4.066 to 5.161	
Expenditures for Housing ⁽⁵⁾	279		1,022		+743			
Non-housing Expenditures ⁽⁵⁾	976		3,577		+2,601			
Local Government								
--Total (State, Local) ⁽⁵⁾	682		2,408		+1,726			
--Local Government Costs	59 ⁽⁶⁾		632 ⁽⁷⁾		-691			
--Cost to Schools	34 ⁽⁶⁾		25 ⁽⁷⁾		-59			
Direct Purchases for Local Services and Supplies	1,400		4,592		+3,182			

Notes:

- (1) Percent of average growth rate.
- (2) RTV - Rational Threshold Values measure of fluctuations from average growth rate.
- (3) 35 Permanent Civilian and Military Employees x 3.2 persons/household (1974) average household size for study area) - 112 person
- (4) Presumes all population other than school age children are gainfully employed.
- (5) EIFS Predicted.
- (6) Revenue lost when parcel is withdrawn. Personal communication with local governmental and school officials; these locally obtained estimated are in current (1979) dollars.
- (7) EIFS Predicted Increased Costs.

<u>Model & Status</u>	<u>Developed By</u>	<u>Limitation(s) of Use To This Study</u>
		<ul style="list-style-type: none"> - Contains constant water use coefficients - Does not contain a governmental services sector - Data base is 1970
Colorado Econometric Model; currently in use to forecast State revenues quarterly	Colorado State Office of Planning and Budget Contact: Bill Kendall	<ul style="list-style-type: none"> - Agricultural sector includes cropland data without isolating livestock industry - Model driven by selected national economic variables
Employment/Population Multipliers; currently in use to project energy impact to Western Slope Counties	Colorado State Dept. of Local Affairs Office of Impact Assistance Contact: Steve Colby	<ul style="list-style-type: none"> - Primarily limited in scope to simple algorithms in generating construction employment multipliers and operations employment multipliers

Based on limited observations noted above and because of special applications thereof, it appeared that none of the three models are any better or more appropriate than the EIFS model originally used to gauge the potential economic impacts of the proposed military action for the Huerfano River and Pinon Canyon parcels. In actuality, the EIFS model is more adaptable to the economic impact analysis than any of these State models notwithstanding some of its problems. Therefore, it was concluded that the most applicable model to assess economic impacts of the proposed military acquisition is the EIFS model.

99. *ISSUE: One commentor stated that the 15 percent increase in retail sales from 1978 to 1979 in Pueblo County shown at Table I-6 does not appear to indicate a declining or stagnant economic situation as stated in paragraph 1, page I-1. The commentor felt that this would affect the economic predictions, making them seem more beneficial. The same commentor asked which regional population figure was used for economic impact predictions. Section 3.1.8 provides a range and the commentor felt the one used would affect impacts.*

RESPONSE: A 15 percent increase in retail sales is considered to represent very slight growth after discounting inflation. Page I-1 also points out that although the Huerfano River parcel is declining or holding even, it is not in an economic slump.

With regard to the range of 1990 population projections for the affected counties, they apparently were confusing to the commentor. They were provided as an indication of the most likely direction of future population growth as forecast by the State's Department of Local Affairs. They are not used in predicting potential economic impacts.

100. *ISSUE: About a dozen commentors indicated they were concerned about the loss of agricultural land and the potential negative economic impacts of losing that agricultural production. Many thought the DEIS underestimated the importance of agricultural activity to the region's economy.*

RESPONSE: The DEIS discusses the importance of agricultural activity in Sections 3.1.8 and 3.2.8. Paragraph 4 on page 3-48 states: "Agriculture remains an important aspect of the overall economy in the region..." The major economic activity and predominant culture of Las Animas and Huerfano Counties is farming and ranching."

The economic impact predictions contained in Sections 4.1.8, 4.2.8 and Appendix I include full consideration of the loss of agricultural activity to the region. As shown there, and in earlier issues in this section of the Appendix, a high percentage of procurement and contracting would have to be accomplished in the local area to off-set the loss of agricultural economy.

101. *ISSUE: One commentor indicated that the range carrying capacity for the Huerfano River parcel cited in paragraph 4 of Page I-1 as 50 to 70 acres per animal unit month was a serious underestimation and would bias economic impact projections. The commentor indicated the Butler Ranch currently supports an animal year on 45 acres.*

RESPONSE: The discussion on Page I-1 has to do with taxation rather than economic impact forecasting. Specifically, the range carrying capacity cited is that used by the county to compute assessed value. The range carrying capacity utilized for economic impact projections can be found on page 3-49 and is given as a range of 40 (actual practice) to 60 (recommended) acres per animal unit.

102. *ISSUE: Three commentors asked how the Colorado Springs economy is affected by ranching.*

RESPONSE: According to Wanda Reeves of the Colorado Springs Chamber of Commerce staff, ranching does not have a major effect on Colorado Springs.

103. ISSUE: Eighteen commentors indicated a concern for the projects impact on county and school district tax revenues and costs. Most wanted clarification as to whether taxes would have to be raised. One asked for a more detailed itemization of tax losses.

RESPONSE: Estimated impacts to local tax bases are summarized in Sections 4.1.8 and 4.2.8 of the DEIS. For clarity, they are shown below:

Huerfano River Site	<u>Estimated Loss</u>
Pueblo County	\$112,500 (0.3% of Base)
Las Animas County	1,880 (0.06% of Base)
Huerfano County	1,100 (0.06% of Base)
Pueblo County - District 70	\$32,000 (0.73% of Base)
Las Animas County	1,200
Huerfano County - RE 1	550
Pinon Canyon Site	
Las Animas County	\$59,232 (1.8% of Base)
R3-Hoehne School	\$31,300 (27% of Base)
R98-Kim School	2,338
R82-Branson	228

The above represent the direct tax loss from removing the property from the tax roles. The other important effect to local tax bases is related to increased costs to counties and school districts as a result of increased population to be served. This must be predicted as discussed in Sections 4.1.8 and 4.2.8. For clarity these impacts are shown below (refer to Tables in previous socio-economic response for source.):

	<u>Estimated Increase In Local Government Costs</u>
Huerfano River Site	
Long-Term Operation and Maintenance (O&M)	\$557,000 - County \$25,000 - Schools
Short-Term Construction Phase	\$1,234,000 - County
Pinon Canyon Site	
Long-Term Operation and Maintenance (O&M)	\$632,000 - County \$25,000 - Schools
Short-Term Construction Phase	\$1,351,000 - County

Mitigation of these potential impacts is also discussed in Sections 4.1.8 and 4.2.8. Local government losses may be totally replaced by increased tax revenues. In fact, they may experience a net increase depending on the

portion of the total revenue that goes to the state. Increased revenues from the latest projections, as shown in a previous response, are shown below:

	Estimated Increase In Total Tax Revenues <u>(State & Local)</u>
Huerfano River Site	
Long-Term O&M	\$1,190,000 (compares to a combined tax & cost loss of \$678,480)
Short-Term Construction Phase	\$4,717,000 (compares to a cost of \$1,234,000)
Pinon Canyon Site	
Long-Term O&M	\$1,726,000 (compares to a combined tax & cost loss of \$691,232)
Short-Term Construction Phase	\$5,144,000 (compares to a cost of \$1,351,000)

As discussed in the DEIS, mitigation of school revenue losses and increased costs is routinely handled by the Department of Education. Unlike local governments, school districts cannot makeup for property tax losses through increases in other taxes. School districts affected by this project should be eligible for funds under at least two Department of Education programs. The loss of tax revenue can, at least partially, be off-set by funds provided pursuant to 20 U.S.C. 237. That statute requires that Federal funds be provided to a school district to off-set "current expenditures" when the United States acquires real property in the district which has a value of over 10% of all the real property in the district. This certainly appears to be applicable to the Hoehne School District. It should be noted, however, that "current expenditures" excludes capital outlay and debt service so that the commitment in the DEIS to request special line item funds to retire that portion of the outstanding bond indebtedness attributable to the acreage withdrawn, is still effective.

Mitigation of increased costs to schools due to an increase in children would, at least partially, be offset by 20 U.S.C. 238 impact funds provided for the number of school children whose parents reside or work on Federal property.

If either local governments or schools still experience a negative impact in spite of the above mitigation, it would seem appropriate for them to seek additional off-setting funds from the State which would realize substantial increases in tax revenue as shown above. If that were to fail, individuals taxes might be raised as determined by the local elected officials and school boards.

104. *ISSUE: One commentor asked what the assessed value of the properties is. About eight commentors asked what the appraised value of the properties is. One stated that a neighbor just sold some land for \$100-300 an acre.*

RESPONSE: The assessed value of land in Pueblo County is given as \$5.68 per acre on page I-1 of the DEIS. The value for Las Animas county is \$2.35 to \$2.92. The assessed value is supposed to represent 30 percent of full value.

The appraised value of property within either site would not be determined until acquisition is authorized and would then be done on an individual basis. A gross appraisal value is provided in the response to the first socio-economic issue in this Appendix. If acquisition is approved, the size and location of tracts of land and its use potential will cause a wide range in appraised values. Although records show no sales of large tracts of land in the area of either site for over \$100 an acre, smaller tracts with other potential uses normally sell for more than larger grazing land tracts.

105. *ISSUE: Thirteen commentors asked for additional information on the Land Acquisition and Relocation process itself. One commentor asked how the landowner would be compensated and whether replacement land would be equal to or better than what they now own. One commentor asked if any state or local agencies would be required to assist in the relocation process and what costs those agencies might incur. One commentor indicated attention should be paid to the social and psychological consequences of displacing people.*

RESPONSE: The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 is mentioned in Section 4.1.8 of the DEIS. Under that act, persons would be compensated for their property under the "Fair Market Value" concept. Fair Market Value is defined as the price a willing seller will accept and what a willing buyer will pay, neither being under any compulsion to sell or buy. This Fair Market Value is estimated by an appraisal process.

With regard to Replacement Property, no one can guarantee that equivalent replacement property would be available in the open market for an equivalent cost. However, the history of past Federal land acquisition projects shows that the Fair Market Value concept and the relocation benefits available to displaced persons normally places them in a position at least equivalent to their current situation.

With regard to relocation assistance, local housing authorities, and city and state relocation offices can provide assistance to persons being displaced but would not be required to. Federal Agencies that would provide assistance include the Farmers Home Administration, the Federal Housing Authority and the Veterans Administration. The Corps of Engineers, as the agency administering the acquisition would pay for moving and related

expenses, supplemental housing payments for displaced owners and tenants and many of the expenses involved in conveying property to the Government.

Care is taken to be sensitive to the possible psychological effects of moving people from their home. The procedures discussed above minimize psychological impacts when people find they will be treated fairly. A brochure developed by the Omaha Corps of Engineers District Office entitled, Federal Government Land Acquisition Procedures is reproduced on the following pages to provide as much information as possible.

FEDERAL GOVERNMENT LAND ACQUISITION PROCEDURES - A SYNOPSIS

1. DETERMINATIONS OF VALUE:

The Corps of Engineers intends to pay each owner a price for his property which is just and reasonable, consistent with its authorities from Congress and with guidelines set forth in Federal Court decisions. In furtherance thereof, but only as a guide to the Corps of Engineers, appraisal of the property will be made by one professionally qualified and familiar with local market conditions in the vicinity of the property to be appraised. The appraiser may be an employee of the Corps of Engineers or a private appraiser with whom the Corps of Engineers has contracted. Owners or their representatives will be contacted by these appraisers and invited to accompany them during their inspections of the property. All factors bearing upon values within the scope of law will be given full consideration in preparation of these appraisals. The price to be paid for the acquisition of the property, however, will be the amount either as mutually agreed upon as the result of purchase negotiations or the sum determined by the local United States District Court under eminent domain proceedings, as hereinafter explained.

2. ACQUISITION BY PURCHASE:

It is the policy of the Corps of Engineers to acquire title to project land expeditiously by purchase through negotiations. Negotiations will be conducted generally the same as between private parties. Before the initiation of negotiations, the Corps of Engineers will establish an amount which it believes to be just compensation for the property and will make an offer to acquire the property for the full amount so established. In no event will such amount be less than the approved appraisal of the fair market value of such property. The Corps will provide the owner with a written statement of, and summary of the basis for, the amount established as just compensation, including where appropriate a separate statement showing the amount for damages to his remaining land. The opinions of owners will be given full consideration in all negotiations. When an agreement as to purchase price is reached, the owner will be requested to execute an offer to sell which will include all the terms and conditions of the sale. When accepted and executed by the Government, this offer forms a contract of sale.

It usually takes less than 90 days from the date an offer is accepted until the check is delivered, provided the title is clear.

If the acquisition of only a part of a property would leave its owner with an uneconomic remnant, the Corps will offer to acquire the entire property.

After payment of the purchase price or deposit in court of funds to satisfy the award of compensation in an eminent domain proceeding to acquire the real property, the Corps will reimburse the owner, to the extent deemed fair and reasonable, for expenses he necessarily incurred for (1) recording fees, transfer taxes, and similar expenses incidental to transferring title to the property to the United States, (2) penalty costs for prepayment of any preexisting recorded mortgage entered into in good faith encumbering such real property, and (3) pro rata portion of real property taxes allocable to a period subsequent to the date of vesting title in the United States, or the effective date of possession of the property by the United States, whichever is the earlier.

3. EMINENT DOMAIN ACQUISITION:

As stated before, it is the policy of the Government to purchase rights required in the property whenever possible. Under no circumstances is an owner compelled to sign an offer to sell. However, if a mutually satisfactory agreement cannot be reached between the owner and the Government after a reasonable period of negotiations, the Government will have no recourse but to acquire the property under eminent domain proceedings filed in the local United States District Court. Offers and counteroffers by the owner and the Government during purchase negotiations will not be binding, in such proceedings, on either the owner or the Government.

In the event of such eminent domain proceedings, the Government will deposit in the Registry of the Court the sum it estimates to be just compensation for the acquisition of the property. The Court will permit the owner to withdraw nearly all of the amount deposited provided the owner's title is clear. The amount which may be withdrawn is discretionary with the Court. The withdrawal does not in any way prejudice the owner's right to go ahead with his claim for more money than the sum deposited. Inquiries about withdrawals should be made to the local United States Attorney who will represent the Government in the eminent domain proceedings.

Should the owner and the Government be unable to agree by stipulation in the eminent domain proceedings to a mutually satisfactory settlement, it will be necessary that any matters of dispute be determined by a trial in these proceedings. The trial will be conducted in accordance with the established rules and procedures of such Court. No attempt is made here to relate such rules and procedures. All parties will be permitted to present evidence to the Court for the purpose of supporting their views as to the value of the property acquired. The Court or jury will determine the compensation to be paid by the Government for the property.

4. TITLE CLEARANCE:

The law requires that the title to an owner's land be approved before it can be bought by the Government. If defects in the title are found and they can't be taken care of otherwise, the Government cannot pay the owner immediately for the property but will be required to file eminent domain proceedings. When such proceedings are instituted only for purpose of clearing the title, there usually is little for the owner to do other than to cooperate with the United States Attorney to the extent that he can in correcting the defects found to exist.

5. RESERVATION OF IMPROVEMENTS AND CROPS:

Except in the few instances where the Government needs particular improvements in connection with the project, the owner may salvage the buildings or improvements on the property. He is not required to do so. The agreed salvage price will be deducted from the Government's payment for lands acquired. The improvements must be removed from the land within a specified period. The reservation of the right to remove improvements will be included as an item in the contract for the purchase of the property or in a stipulation in eminent domain proceedings, as appropriate.

Owners will be encouraged to reserve right to remove growing crops except in rare cases where there is a probability that possession of the land will be required prior to the harvest season. If this occurs, payments will be made for the fair value of the growing crops as they exist.

6. POSSESSION OF LANDS:

Owners and tenants of land utilized for agricultural or related purposes will be allowed to remain on the property, if consistent with project requirements, until the crops have been harvested. It is anticipated there will be no instance where scheduling will require displacement of persons or vacation less than 90 days after purchase negotiations are initiated.

7. UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACQUISITION
POLICIES ACT OF 1970:

The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their homes, businesses or farms by Federal and federally assisted programs and to establish uniform land acquisition policies for Federal and federally assisted programs. In carrying out the responsibilities of land acquisition by the Government, individuals and families at times must move from their dwellings, farms and businesses and relocate elsewhere. This may cause serious problems to the people involved. It is the earnest desire of the Corps of Engineers to reduce to a minimum the inconveniences and problems resulting from its real estate activities. Public Law 91-646 which was passed by the Congress and signed into law by the President on January 2, 1971, eliminates many of the existing differences in relocation benefits incidental to acquiring real estate by various Federal agencies. This law provides for furnishing relocation assistance to people who will be displaced by a project which is partly or totally financed by Federal funds and authorizes many new and important benefits to them. The kinds of payments authorized to be considered pursuant to Public Law 91-646, among others, are:

Moving and Related Expenses. Any displaced person, business or farm operation may be eligible to be reimbursed for actual reasonable costs of moving from the acquired property for a distance of not to exceed 50 miles, except where the displacing agency determines that relocation beyond the 50 mile area is justified. Reimbursable items include dismantling, disconnecting, crating, loading, transporting, unloading, temporary storage, reinstalling and insuring. Within certain limitations, a displaced person, business or farm operation may elect to apply for a fixed amount rather than prove actual expenses incurred in the move. These optional fixed payments are determined as follows: A person displaced from a dwelling may elect to receive a moving expense allowance, determined according to a schedule, not to exceed \$300.00, plus a dislocation allowance of \$200.00. A person who is displaced from his business or farm operation may elect to receive a fixed payment in an amount equal to the average net annual earnings of the business or farm operation and such payment shall not be less than \$2,500.00 or more than \$10,000.00. Such payment can only be made as to a business after it is determined that the business cannot be relocated without a substantial loss of existing patronage and that such business is not part of a commercial enterprise having at least one other establishment not being acquired which is engaged in the same or similar business. When only part of a farm is required, the optional fixed payment will be made only if it is determined that the part taken meets the definition of a farm operation.

Supplemental Housing Payment for Homeowners. In addition to being paid for the property acquired by the Government and the reasonable expenses of moving, a homeowner who is displaced by the program or project may be eligible under the law for a supplemental housing payment if necessary to assist in the purchase and occupancy of a comparable, decent, safe and sanitary house; provided the person has owned and occupied the present home not less than 180 days prior to initiation of negotiations to acquire the property.

Supplemental Housing Payments for Tenants and Certain Others. Tenants and those homeowners who have owned their homes less than 180 days but more than 80 days, must have lawfully occupied their dwellings for not less than 90 days prior to initiation of negotiations to acquire the property in order to be eligible to receive a supplemental or additional amount of excess of the rent presently being paid or would have been paid necessary to enable the person to lease or rent a decent, safe and sanitary dwelling adequate for his needs for a period of not to exceed four years and the supplemental amount cannot exceed \$4,000.00. Should the person elect to buy a home instead of renting, he may elect to reserve an amount based on average home financing requirements, again limited to \$4,000.00, to apply toward the down payment and closing costs, except that the person must in this case equally match each dollar in excess of the first \$2,000.00 of any supplemental payment in order to be entitled to the maximum supplemental payment determined to be applicable.

Additional information regarding the provisions of this law is contained in an explanatory brochure, copies of which are available at this time.

8. INCOME TAX PROVISIONS:

Responsibility for the administration of the Federal Income Tax Laws rests with the Internal Revenue Service. As presently written, these laws contain special provisions with respect to gains derived from the sale of real estate, including sales made to the Government. Any questions concerning the application of these provisions should be referred to the appropriate District Director of the local office of the Internal Revenue Service.

9. CEMETARIES:

If any owner or tenant knows of any private burial or cemetery on their property, please inform the District Engineer so that suitable arrangements can be made with next-of-kin to relocate the remains or take other appropriate measures to preserve the remains in place.

10. CORPS OF ENGINEERS ASSISTANCE TO OWNERS:

The District Engineer and his staff assigned to land acquisition are always desirous of providing every assistance possible for the benefit of owners and their tenants.

106. *ISSUE: Four commentators asked what the effect of acquisition would be on tourism since both sites have scenic natural resources.*

RESPONSE: To date, under private ownership, tourism activity has been negligible. If one of the sites is acquired for maneuver training, areas not actively being trained in would be available to the public on a controlled access basis. As indicated in Section 2 of the DEIS. Activities allowed on the site would be of a low stress nature and the term "tourism" does not seem appropriate for what is envisioned. Nevertheless, the potential for tourism, resulting from increased public access, would be enhanced.

107. *ISSUE: One commentator asked why the Balanced Use/Protection Land Use and Management Plan (LUMP) scenario was used to predict the net loss of jobs since the Increased Use scenario is the one intended for use.*

RESPONSE: The recommended LUMP scenario was not selected until the DEIS was completed. The Balanced Use/Protection scenario was used so that impacts would be representative. By selecting the Increased Use scenario, the predicted job losses are actually too high since more induced jobs would result from it than the Balance Use/Protection scenario.

108. *ISSUE: Nine commentators asked who would pay to repair roads utilized for convoy traffic.*

RESPONSE: According to Mr. Maurice Mitchell of the Federal Highway Administration-Denver, the agency having jurisdiction over a road would normally fund any needed repairs. There are two or three statutes that govern the use of Federal aid funds for highways, and special assistance can be provided under special circumstances of damage. However, the projected use of highways by wheeled vehicles is not projected to result in abnormal maintenance requirements. Eighty percent of all our wheeled vehicles have a carrying capacity of 2 1/2 tons or less, which is considerably less than most commercial trucks.

109. *ISSUE: Six commentators indicated this project would benefit the economy of Colorado Springs and Pueblo more than communities near the proposed sites. One stated that communities near the site would just get the effects of training while Colorado Springs and Pueblo would retain all the economic value associated with the cantonment support facility. One commentator suggested that we move part of the Division down to one of the proposed sites or build the proposed new hospital for Fort Carson in Trinidad, to provide a fair share of economic impact to the area being effected.*

RESPONSE: This project would benefit the economy of Colorado Springs, Pueblo -- the whole State of Colorado -- by providing for the continued viability of Fort Carson as the home of the 4th Infantry Division (Mechanized). While the bulk of expenditures would not be shifted to the acquisition site, the procurement policy established and described

earlier in this Section would insure a significant potential for economic growth in either area, but specially in the Pinon Canyon area. Moving part of the Division or building the hospital at either site is not feasible because of the existing support facilities at Fort Carson and their inter-relationships.

110. *ISSUE: Two commentors asked what percentage of consummable supplies used at Fort Carson are purchased locally.*

RESPONSE: About 64 percent of all consummable supplies used at Fort Carson are purchased locally.

111. *ISSUE: Three commentors asked if the sentimental value of either site had been considered.*

RESPONSE: Yes - indirectly. Although Fort Carson cannot be fully aware of all the sentiments associated with a particular site, the emotions of losing one's land and home are certainly clear. A basic criteria of site feasibility is that it support a very small population. Displacing a large number of people was considered unacceptable. Fort Carson has made every effort to insure that staff members coordinating with landowners were sensitive to possible sentiment.

112. *ISSUE: One commentor asked how the project would affect people that heat their homes with firewood.*

RESPONSE: Unless persons have been acquiring wood within the boundaries of the sites, acquisition by Fort Carson would have no affect on home heating with firewood. Wood gathering would not be permitted on either site acquired.

113. *ISSUE: One commentor indicated the state claimed that this project as proposed is bad for the state economically.*

RESPONSE: Sections 4.1.8 and 4.2.8 of the DEIS show an overall potential positive impact on the economy. Official comments on the DEIS from the State of Colorado are reprinted in Appendix L and do not support the commentors position.

114. *ISSUE: Five commentors stated that increased crime and drug activity would accompany the arrival of troops.*

RESPONSE: Statistics in the Colorado Springs area show that, for their age group, the crime rate for soldiers is no greater than for native Colorado sons and daughters. In addition, the DEIS shows that only about thirty-five persons would be permanently stationed at the site and have access to surrounding communities on a regular basis. Soldiers from the brigades engaged in actual training would be restricted to the site.

115. *ISSUE: Two commentors indicated that since the geographic area being evaluated for acquisition was well defined, actual population statistics including individuals characteristics should have been obtained.*

RESPONSE: There are a number of reasons more detailed demographic data was not obtained. The foremost one relates to a couple of issues discussed previously in this section: psychological impacts and sentiment. It would have been very insensitive in many instances to conduct the type of census gathering suggested. The second reason it was not done is that the Federal Government has become aware of problems relative to such inquiries and has prohibited agencies from taking censuses without approval of the Census Bureau. The third reason it wasn't done is that the EIS and other planning studies can be accomplished using rough estimates from existing sources, such as city and county planning offices and schools.

116. *ISSUE: Two commentors were concerned about disease vectors, potential health threats and control methods that might be used.*

RESPONSE: This issue was not raised during the scoping process and was not addressed in the DEIS since it was not considered to be a significant issue. It is still not considered to be a significant issue. Disease vectors present at either site are not unique. Plague is endemic to the area as it is throughout southeastern Colorado. When outbreaks occur, rodent populations may be treated to protect them and stop the spread of the disease. The potential for Anthrax will be discussed separately. Control of pests in the field is accomplished by trained field sanitation personnel within each training unit. Materials available to them are low toxicity. Pest management in the cantonment area would be accomplished using the integrated pest management philosophy. All materials used would be registered and approved and personnel would be properly trained and certified.

117. *ISSUE: One commentor in particular pointed out that the DEIS did not address the potential health related problems associated with Anthrax. The commentor indicated Anthrax has the potential of becoming endemic in the Huerfano River area. Several other commentors then echoed this concern and one commentor stated it was just a scare tactic, that there was nothing to it.*

RESPONSE: Anthrax was not addressed in the DEIS because it was not raised in the scoping process and was not considered an issue. The Surgeon General was asked to evaluate the issue. The following information was extracted from the Surgeon General's report relative to this question:

"There is no reason to believe that military maneuvers in either of the proposed training sites would increase the incidence of anthrax infections in man or animals.

"Anthrax spores can be found in the soil throughout much of the United States including the soil of both prospective training sites. They can also be recovered from soil at Fort Carson, yet extensive training throughout the years has not caused either human or animal anthrax. Moreover, many other major military installations such as Fort Hood, Texas; Fort Sill, Oklahoma; Fort Riley, Kansas; and Fort Polk, Louisiana are located in anthrax endemic areas, yet their training has not caused human or animal anthrax cases. Despite extensive exposure to dust and soil containing anthrax spores, human disease rarely occurs primarily due to the large number of spores required to cause infection. To bring the issue into better perspective, during the 4-year period 1975 through 1978, within the entire United States, there were a total of 10 human cases of anthrax reported to the U.S. Public Health Service, none of which occurred among individuals from [the] prospective training areas. Regarding animal disease, there have been no anthrax outbreaks reported within the past 5 years from either the Huerfano River or Pinon Canyon regions according to the Federal District Office USDA Animal and Plant Health Inspection Service in Denver. These sites are indeed located in anthrax endemic areas but the risk of anthrax among cattle in these areas would be considered low especially since the cattle herds are immunized with anthrax vaccine.

"Neither humans or animals are normally infected with soilborne anthrax spores via the respiratory route. With few exceptions, human anthrax results from direct physical contact with animal meat, tissue, hair (including wool) or hides contaminated with anthrax spores. Animal anthrax typically occurs by ingestion of vegetation heavily contaminated with anthrax spores, usually following major floods. The infective dose of anthrax spores necessary to infect man via the airborne route is extremely high and is not likely to occur under natural conditions.

"Movement of anthrax spores resulting from dust raised during military maneuvers is felt to be of little significance when compared to dust generated by natural phenomenon such as wind and animal grazing.

"In summary, the threat of anthrax in the proposed training areas is considered to be inconsequential."

118. *ISSUE: One commentor recommended a detailed alternative acquisition technique. The method would be to pay all landowners \$600 an acre, (the estimated national average per acre land cost) with payment spread over fifteen years and tax exempt. Funding would involve Congressional appropriation of \$180 million to be deposited in banks in Trinidad, Colorado. Assuming a 10% interest rate, earned interest of \$18 million a year would be utilized to make annual payments of \$12 million to the landowners with the remaining \$6 million diverted to the Army Relief Fund.*

RESPONSE: This proposal is vastly different than Federal land acquisition procedures described earlier in this Section. It would require special Congressional action, which would, we believe, be very difficult to obtain.

119. ISSUE: One commentor indicated he considers himself a victim of our interest. The commentor claimed he could not sell his land, could not borrow against it, and was losing time and patience.

RESPONSE: The requirement for detailed planning, public involvement and full public disclosure of project details is mandatory. Hopefully, persons would not make major decisions based solely on preliminary announcements of interest.

120. ISSUE: One commentor indicated that the Department of Defense and Congress should be aware of the imbalanced economic impact of military expenditures in Colorado. The bulk of all positive impacts accrue to Denver and Colorado Springs. If this project is to succeed more benefits should be directed to the area involved. The commentor asked that Congressional Hearings be held on this issue.

RESPONSE: The procurement policy described earlier should help in resolving this imbalance perceived by many area residents. Congressional Hearings must be initiated by Congress, rather than Fort Carson.

K-91

SOILS AND VEGETATION

SOILS AND VEGETATION

121. *ISSUE: Over 40 landowners, local citizens, and agency representatives submitted comments expressing varying degrees of skepticism in regards to the two parcels capacity to sustain the proposed training activity. They state that soil and vegetation conditions which are typical of the semi-arid climate and parent rock material are unsuitable for mechanized training.*

RESPONSE: The DEIS acknowledged all soil and vegetation impacts that could result with project implementation. In fact, it states that between the balanced use and increased use scenario from 40% to 53% of either parcel could potentially experience severe to extreme impact to vegetative cover. This means that under worst case conditions approximately 50% of either parcel could potentially lose 40% of its existing vegetative cover. Tables 4-2 and 4-14 summarize these impacts.

The DEIS also discussed potential increases in sedimentation. Table 4-6 projects that the Huerfano River parcel could potentially realize increases in sedimentation of approximately 12% over baseline conditions. Table 4-16 projects that 2/3 of the Pinon Canyon parcel could experience a 6 to 10% increase in sedimentation while one-third could experience increases of 12% to 30%. These projections are extremely worst case for a number of reasons. Experience with training impacts on Fort Carson should be used to qualify them.

On the basis of a 1975 Fort Carson sediment study conducted by the U.S. Army Corps of Engineers - Waterways Experimentation Station (WES) projections in tables 4-6 and 4-16 are considered to be significantly overestimated. The study, Analysis and Assessment of Soil Erosion in Selected Watersheds, draws two conclusions: (1) Soil losses in six watersheds analyzed at Fort Carson were found to be roughly equivalent to losses experienced in other small watersheds in the Rocky Mountains foothill region, and (2) The Universal Soil Loss Equation (USLE) can be used as a basis to derive a watershed erosion index that considers the collective influence of rainfall, soil erodibility, topography and land use but does not account for erosion control measures. (It should be noted that the USLE must be modified to show a good correlation to actual field measurements, see following issue.)

In addition to using the USLE unmodified, another factor that contributes to the high sediment yield estimates is that assumptions were made that tend to overestimate rather than underestimate sediment yield, in order to insure a worst case prediction.

Thus, in view of existing measured sediment yield at Fort Carson, and the fact that overestimates are inherent with use of the USLE, net sedimentation yields are expected to be much less than predicted in the DEIS. This qualification is further substantiated by the fact that land use intensity would be less than that at Fort Carson, while erosion control would receive the same emphasis.

122. *ISSUE: One commentor asked why the Universal Soil Loss Equation (USLE) was used since it doesn't apply to the land at either site.*

RESPONSE: According to Sheldon G. Boone, State Conservationist with the Department of Agriculture, Soil Conservation Service, "Even though USLE was originally developed for predicting water erosion in cropland it still remains as the best available method of quantifying erosion on all land including rangeland when properly applied."

As discussed in the previous issue, the USLE has worked effectively in studies at Fort Carson once a modifying index is applied. Without the index, the USLE results are routinely high. Even when the modifying index is used, the projections do not account for the effects of erosion control and consequently overestimate projected sediment yields.

123. *ISSUE: Four commentors pointed out that between water and wind erosion, most of the land on both parcels has a high to very high potential for eroding, as shown on Figures 3-3, 3-4, 3-19, and 3-20 in the DEIS.*

RESPONSE: As indicated, there are two principal types of soil erosion; water and wind. It is generally true that those lands not eroded by water are eroded by wind. The soils on sloping drainage areas are susceptible to wind erosion.

124. *ISSUE: Half-a-dozen commentors asked if adequate soil and vegetation impact studies were conducted. They asked if tests and analyses were done at Fort Carson, and if such tests included the areas in southern Fort Carson that are similar to the two proposed sites. They also wondered whether any field maneuver tests had actually been conducted at either site.*

RESPONSE: The Land Use and Management Plan proposed for each parcel and the resultant impacts to soils and vegetation are based on studies conducted at Fort Carson, including those areas that approximate conditions at both proposed sites. In 1977, a Land Use and Management Plan was developed for Fort Carson that included a comprehensive inventory of soil types and vegetation. By evaluating the effects of mechanized maneuver training on all the range sites present on Fort Carson, carrying capacity estimates were made. These determinations were developed with the assistance of the Soil Conservation Service and a professional consultant. Through evaluation of range site characteristics, revegetation success, and over ten years of experience with maneuver damage, this team of experts was able to develop an index as to a range sites inherent capacity to sustain military training activity.

With regard to the proposed sites, each was analyzed to define range site types, extent and condition. Analyses were developed from information provided by the local and regional SCS offices and from on-site data collection efforts. Through this analysis range site similarities and stability correlation were established between the two proposed parcels and equivalent range sites at Fort Carson.

125. *ISSUE: Two commentators were confused by the discussions of vegetation impacts. One concluded that all grass on the parcel would eventually be destroyed, while one concluded that range condition would decrease by two condition classes.*

RESPONSE: The commentator that concluded all grass would be destroyed was apparently confused by two distinct concepts: impacts to individual plants shown at Table 4-5 and overall land impacts shown at Table 4-2 of the DEIS. The impact upon individual plants would not be parallel to impacts on total land area. Land used for mechanized maneuver training is characterized by severe disturbance in one area and negligible to no disturbance in an area that is in close proximity to it. For example, on lands used for such training at Fort Carson, areas of damage occur immediately adjacent to areas which are virtually untouched. This impact pattern permits the revegetation of disturbed areas by the adjacent vigorous-growing undisturbed plants. It is especially impressive to observe this phenomena in sod-forming grasses such as western wheatgrass and galleta. These species extend plant growth by underground runners into disturbed areas such as ruts formed by vehicle traffic.

The commentator that concluded range condition would decrease two condition classes neglected to consider that range condition would presently have to be Good to drop by two classes. Present condition of both parcels is generally no higher than Fair. The change projected in current vegetative cover shown in Tables 4-2 and 4-15 are not intended to give a direct indication of range condition. As discussed above, training use would alter range condition both upward and downward from current conditions; differences in range condition would develop with patterns of Good and Poor forming in close proximity to one another. Range condition over the entire property is projected to remain Fair.

126. *ISSUE: Four commentators pointed out that vegetation on the proposed sites varies considerably from year to year depending on precipitation. They were concerned that the two abnormally good years experienced during our studies would bias our studies and leave a false impression of the lands capabilities.*

RESPONSE: Special emphasis was given to the vagaries of the climate of the parcels as discussed in Section 4.1.3 and Appendix D of the DEIS. In addition, vegetation conditions were taken into account for projecting impacts. As indicated in Tables 2-4, 2-5, 2-9 and 2-10 carrying capacities were developed reflecting range conditions being in Fair to Poor condition. Even with recent, better than average precipitation, vegetation has remained in a rather unimproved state. This is due to the relationship between range condition and climax plant potentials, which do not change rapidly.

127. *ISSUE: One commentor asked how the impact on land can be predicted when little documentation exist concerning the effects of mechanical injuries to plants as stated on page 4-46 of the DEIS. A second commentor stated that literature on mechanical injury does exist but was not used.*

RESPONSE: The impact of mechanized maneuver training on vegetation was predicted from observations at Fort Carson over a period of more than ten years. There is not a wealth of information documenting such impacts in published literature. What does exist pertains to humid regions, alpine tundra and Mohave Desert environments. None was found for the soil-vegetation-climatic conditions of the parcels. Documentation does exist describing impacts on vegetation from recreational off-road vehicular use. However, very little documentation is available describing impacts of military training, particularly in semi-arid regions. Although similar impacts, such as increased erosion and sedimentation, occur from military training and recreational off road vehicles, the intensity of the impacts are not comparable. Four wheel drive vehicles and dirt bike activities tend to concentrate on trails, their speed and activities are essentially uncontrolled and their range of terrain accessibility are greater. The latter is of particular contrast since use of military vehicles are severely limited in areas of sharp variable relief. As a consequence military activity cannot readily impact those areas most susceptible to erosion problems. Further, areas studied for the effects of off-road recreational vehicles did not have the benefit of an extensive erosion control and reseeding program. Therefore, the impact analysis derived from information provided by studies at Fort Carson and at the parcels is considered most applicable and definitive for describing potential impacts.

128. *ISSUE: Three comments were received criticizing the data used to describe the existing vegetation environment. One commentor pointed out that Appendix D does not list all plant species known to occur on the Huerfano River site and listed a number of species not included. One commentor stated that field sampling was woefully inadequate, claiming that 12 transects, 100 meters by 5 centimeters is insufficient. One commentor stated that the vegetation transects should have measured basal plant cover instead of areal plant cover. As that would have provided more accurate predictions of watershed and erosion impacts.*

RESPONSE: The EIS certainly does not contain a complete list of all plant species occurring at either proposed site. Such a list in a planning document would be impractical. The listings for each parcel were intentionally entitled "List of the Principal Plant Species of the Parcel ..." A knowledge of the principal species is adequate for impact projections. Additional plant surveys would be conducted if acquisition occurs to facilitate implementation of the Environmental Mitigation Program.

With regard to the adequacy of the field sampling, belt transects of 5 cm widths serve very satisfactorily in the sampling of plant communities. The procedure is discussed in Appendix D of the DEIS. The method provided the advantages of length, randomization and rapidity of data collection. A

skilled and experienced observer of the vegetation can quickly obtain data from a plot 100 cm by 5 cm in size. A comparison of quadrats, (rectangular, square, or circular plots) to transects found that transects gave decidedly more accuracy than quadrats. This finding was particularly true when the analysis was based on coverage. The percentage of the line covered in the transect samples gave a considerably more accurate indication of true areal coverage in the entire assemblage than was the percent of the area covered within quadrat samples (Bauer, H.L., 1943, *The Statistical Analysis of Chaparral and Other Plant Communities by Means of Transect Samples*, Ecology 24, 45-60.)

With regard to measuring basal plant cover as opposed to areal cover, it is agreed that additional information would have been obtained. However, it is the areal or foliage cover that is needed to determine hydrology and erosion values. Spatial cover reflects a plant's importance as it affects the environment and is a relationship between root growth, wind erosion, and precipitation. Basal cover is of less importance in this instance.

129. *ISSUE:* Numerous comments were submitted about vegetation restoration efforts. Six commentors were concerned about seeding efforts: one asked what type of seed would be used; four stated the DEIS failed to point out that seeding in the region is rarely successful due to unpredictable precipitation; and one, on the other hand, stated the DEIS made it very clear that seeding was seldom successful and that the condition of the vegetation would be continually declining as a result.

Five commentors were concerned about projected vegetation recovery times; two questioned what the actual recovery time would be, indicating uncertainty over the applicability of Table A-11 because of repetitive disturbances; two stated that the only conclusion they could draw is that recovery would take so long that ultimately the whole site would be destroyed and require between one hundred and two hundred years to recover; and one stated that, based on observations of Fort Carson's current program, our total land management and mitigation program would have no effect on the natural recovery times shown in Table A-11 and therefore soil and vegetation resources could not be protected.

One commentor asked what was meant by the statement on page 4-3 that "... vegetative cover would be restored to an acceptable level..." The commentor indicated that cover equal to or better than present condition would be "acceptable."

One commentor indicated that the discussion of mechanical range treatments on page A-25 led to the conclusion that six of the nine range sites present at each site would not be rehabilitated since mechanical treatments could only be used effectively on three range sites. According to the commentor this would result in 43.2% of the Huerfano River site and 48.1% of the Pinon Canyon site untreatable.

RESPONSE: The land management portion of the environmental program is discussed in Section 2 and Appendix A of the DEIS.

With regard to seeding, we intend to use the Lovington selection of Blue Grama and the other species listed in Tables A-12, 13 and 14. They would be obtained from certified seed dealers who sell quality seed that is harvested from locations up to 150 miles from areas to be seeded. Seed would be purchased far enough in advance of planting so that it would be available should one or more years of low seed production be experienced.

The DEIS does indicate that there is a historical lack of seeding success in the region. Past failures are attributable to many reasons including the following:

1. Planting at the improper season of the year with respect to the occurrence of expected beneficial precipitation.
2. Use of unsatisfactory seeding equipment.
3. Failure to adapt species and species selection to the site.
4. Failure to protect seeded areas from livestock grazing or pests for a sufficient length of time for plants to become fully established.

Certainly reseeding efforts are difficult even when the above causes of failure are avoided. There are three major reasons why Fort Carson may achieve better reseeding success than past efforts. First is the availability of material and manpower resources. Whether reseeding would be done by in-house labor or contract, the resources are available to accomplish seeding as required. Second is that in most areas the grasses would not be completely eliminated so that natural seed production is also occurring and the potential for success is enhanced. This is in contrast to areas that have been plowed which is the common example used to relate past seeding failures. Third, seeded areas would be protected as long as possible whereas past efforts have not always been able to be protected from livestock grazing.

With regard to vegetation recovery time, Table A-11 does not consider any special kind of repeated disturbance. It gives the estimated time for recovery in years with no intervening disturbances and also with no land management measures employed to assist natural recuperation. The time lengths shown can be greatly reduced, up to 50%, by the application of land management measures. On the other hand, if a treated area is re-disturbed before recovery, the time requirement reverts back.

The commentor that concluded the entire site would be destroyed is incorrect and confused about the nature of Mechanized Maneuver Training Impacts as described in Tables 4-2 and 4-14; nearly half of either parcel would improve in vegetation condition over the current situation. The commentor that observed recovery activities at Fort Carson and concluded that a similar program would not reduce recovery times shown in Table A-11 is also incorrect.

There have been some decided recovery successes at Fort Carson. Areas that have been less than successful to date are those that are mission essential and cannot be rested even for short periods, and those that are being rested but were subject to intense use for five to eight years before being protected.

Apparently, the concept of recovery as described in the proposed Land Use and Management Plan was not clear. It is not intended that all damage that would occur in a training management unit during its three years of use would be recovered in the two year rest period. If that were the goal a much larger site would be required. Such a goal is not considered feasible. What is feasible is that enough training area would be available that the maneuver impacts would occur sporadically across the range sites that provide desired terrain features would never fully recover while the site is used for training. However, by stabilizing these areas and because adjoining areas would likely be only slightly impacted or even improve over current conditions, irreversible damage to high use areas would be avoided. Fort Carson, which, for the last 15 years, has been used much more intensely than either proposed site would be, and other military installations, are "living" proof that maneuver training does not necessarily destroy an entire property and that impacts can be managed.

With regard to the statement on page 4-3 that vegetative cover would be restored to an acceptable level, this means that vegetation would be in Fair condition or better. Please note, however, that the context of the statement is that areas of intense use would either be stabilized through physical cover or would be rested long enough to achieve acceptable revegetation.

With regard to mechanical range treatments being applicable to only three of the nine range sites the commentor has overlooked the fact that mechanical treatments are only one technique available for rehabilitation. The other two techniques discussed in Appendix A are range seeding and resting. The most effective recovery program would utilize elements of all three techniques. All range sites can be treated with at least one of these techniques and be rehabilitated.

With regard to restoration costs, recent experience at Fort Carson shows that an average cost for a training area is approximately \$5.00 per acre. It is certainly possible that a denuded acre could cost \$600 an acre to restore but most training areas have very few acres totally denuded. The average per acre cost is very useful because it takes into consideration the sporadic impacts of maneuver training. For instance, a 40,000 acre training area may require seeding on 10,000 acres, pitting on 4,000 acres and two new erosion control dams. The total cost of those treatments applied to the full 40,000 acres results in the per acre cost, which at Fort Carson has been running about \$5.00 an acre.

130. ISSUE: About eight comments were submitted that address what can loosely be called "Land Management." Four commentors indicated that a comprehensive range inventory should be developed prior to use of either site; that an annual review of vegetation condition should be performed with the involvement of local, state and other federal representatives; and that the management plan should be flexible.

Several commentors indicated that some of the most serious, difficult to manage, impacts occur when vehicles are used in muddy conditions. One commentor asked what management measures would be used to deal with pest problems, such as grasshopper infestations.

One commentor indicated that a plant species that was proposed for endangered status, Haplopappus fremontii sp. monocephalus, should be inventoried and properly managed.

One commentor asked what type of use would continue in high impact areas that would be protected by straw, gravel or other cover.

One commentor stated that the Army would not care for the land with the same stewardship that the ranchers do.

RESPONSE: Section 2.4.5 of the DEIS indicates that a comprehensive vegetation survey would be conducted prior to training use. It also indicates that detailed conservation plans would be developed and implemented prior to training use and that surveying and conservation plan modifications would be an ongoing action. The suggestion that outside agencies be involved in an annual review has been adopted and is discussed under the Land Use section. The Land Use Technical Advisory Committee would coordinate with the Fort Carson Environmental Director and make recommendations to the Commanding General who would retain full authority for Land Use and Environmental Management decisions. The inherent flexibility of and continuing analysis required by the proposed Land Use and Management Plan for each parcel is discussed in Section 2.4.4 on page 2-13 of the DEIS.

With regard to extreme damage occurring under muddy conditions, the problem was identified in the scoping process and resulted in inclusion of a mud training deferment program as discussed in Section 2.4.5 on page 2-16 of the DEIS.

With regard to endangered plant species management, Haplopappus fremontii sp. monocephalus, a member of the sunflower family resembling Fremont Goldenweed, has not been placed on the endangered species list and according to the Denver office of the U.S. Fish and Wildlife Service is not being considered for listing. Nevertheless, it would be inventoried during detailed vegetation surveys. Any plant species that might be listed as endangered or threatened in the future would be managed and protected, as required.

With regard to continuing use in high impact areas, the most likely activity to continue would be vehicle traffic. An example would be a ridgeline providing clear vision of a broad plain. Numerous overlooks, observation posts and defensive positions would become established and, if crucial to the use of the area for training, would continue to be used after impacts would normally require their being rested.

With regard to the quality of care the Army would provide to the land, it is not really appropriate to compare between us and ranchers. Suffice it to say that we are charged by National and Army policy to exhibit leadership in the management of natural resources and other environmental programs. We believe the Land Use and Management Plan proposed for either parcel is the first step in fulfilling that responsibility for this project.

131. *ISSUE: One commentor pointed out that according to a publication referenced in the DEIS, The Manual of the Plants of Colorado (Harrington, 1954, page 102), Blue Grama is a sod forming grass rather than a bunch grass as stated on page 4-10 of the DEIS.*

RESPONSE: The commentor is correct about the reference, however Blue Grama does not exhibit sod characteristics in Colorado. Range management specialists have long understood the benefits of managing Blue Grama as a bunch grass because it produces much more forage as a bunch type grass than as a depauperate sod type grass. The growth habit of Blue Grama is characterized by numerous nodes with exceptionally short internodes. This short internodal characteristic reflects the outstanding adaption of Blue Grama over a long evolutionary period to resist close grazing. Close grazing induces a short low-vigor growth of Blue Grama which can easily be mistaken for a sod grass. Blue grama, when properly managed on rangelands, exhibits a beautiful productive growth habit that is in sharp contrast to the short sod so often seen. The Soil Conservation Service also considers Blue Grama a bunch grass in Colorado when properly managed.

132. *ISSUE: One commentor questioned the relationship between grazing impacts and training impacts. The commentor interpreted the third paragraph on page 4-5 as equating moderate training use to moderate grazing and stated that was inappropriate since moderate grazing stimulates growth of forages while moderate; training destroys 0 to 40% of vegetation cover according to Table 4-2.*

RESPONSE: The commentor was apparently confused by the representation of current impacts from grazing. Both sites are currently experiencing impacts considered to be moderate overall from grazing. That does not mean grazing is moderate; in fact, on the average, grazing is excessive, resulting in poor to fair vegetation conditions. Nevertheless, the current situation is reflected in Table 4-2 as a moderate level of impact. If the land were acquired and used for maneuver training portions of the site would be less impacted and portions would be more severely impacted as shown at Table 4-2.

133. *ISSUE: One commentor indicated that the assumption made in paragraph 3 of page C-9 that the cover provided by litter would not change under military training use is not valid since live vegetation would be reduced and so litter would be also.*

RESPONSE: The assumption is generally valid. Although there would be a reduction of perennial grass cover, there would also be a corresponding increase in annual plant growth, especially where pitting is accomplished. Although annuals are less desirable overall than perennials, they provide considerable quantities of litter.

134. *ISSUE: One commentor asked how to interpret Tables C-1 and C-2 on pages C-10 and C-11, and wondered which scenario was used to develop them.*

RESPONSE: Tables C-1 and C-2 are self-explanatory. The key to interpreting them is Footnote b which points out that the present condition represents a moderate impact, resulting in an overall parcel soil cover of 38.8% which was obtained by field analysis as mentioned on page C-9. From that point, the Table can be used to predict changes in soil cover by mapping unit given the level of impact. The Table is non-specific with regard to scenarios. For example, if one had the choice of locating a battalion headquarters bivouac site on either a Loamy Plains (LP) site or a Pinyon Juniper-Rockland Complex (TrG) site, Table C-1 would be referred to and the decisionmaker would know that such an extreme impact activity would result in a 12.2% soil cover on the LP site as opposed to a 44.8% soil cover remaining on the Pinon-Juniper site. This could then be factored into the site selection.

135. *ISSUE: One commentor indicated that Table C-5 is highly questionable.*

RESPONSE: Tables C-5 and C-7 summarize the pertinent factors obtained for each soil-range mapping unit within the Huerfano and Pinon Canyon parcels as they affect present and anticipated soil erosion losses due to sheet and rill erosion. For a discussion of the methodologies used, refer to pages C-8 thru C-15 of the appendix and to current publications regarding the Universal Soil Loss Equation.

The following additions to the tables should be made to insure clarity:

- a. Above Column 1 add the heading "Soil-Range Mapping Unit".
- b. To the bottom of the tables, add the following clarifying legend,

Average Slope - Slope of mapping unit based upon multiple measurements on topographic maps with field verification, averaged.

Average Observed Slope Length - see page C-14. The average distance runoff is anticipated to travel before infiltrating or entering a defined drainage channel.

USLE Factors - Factors used in the Universal Soil Loss Equation based on: $A=RKLSC$, R=rainfall energy, K=soil detachability, LS=length and percent of slope, and C=the percent of cover on the ground surface that will break the direct impact of raindrops.

Baseline C=the amount of cover afforded by rocks, woody litter and vegetative parts observed in multiple field examination of mapping units in November and December 1979.

Disturbed C=the amount of cover anticipated to be present in areas experiencing concentrated overland traffic during training maneuvers before rest or mitigation. This includes 20% of vegetative cover plus inert matter including woody litter and rocks.

Baseline A - the amount of soil in (tons/ac/yr.) predicted to be lost each year from an acre of land within a given mapping unit under observed (winter) cover conditions.

Disturbed A - the amount of soil predicted to be lost each year from an acre of land within a given mapping unit when 80% of the vegetative cover has been removed due to concentrated overland traffic.

The 80% vegetative cover figure reflects anticipated average vegetative cover in extremely impacted areas with recognition that a range of 0 to 50% of present cover may be found within these areas due to uneven use caused by traffic patterns.

K-103

SOUND

136.ISSUE: A dozen commentors indicated a concern for increased sound levels affecting area residents. Several commentors inquired as to what the sound impact would be; others were more specific indicating a concern for simulated artillery, convoy traffic, helicopter and jet activity, and specific impacts on Pueblo, Colorado City/Rye, St. Charles and Vineland mesas. One commentor indicated that the Pinon Canyon parcel should be preferred because of the noise Pueblo would be subject to while two commentors indicated that a primary reason for their wanting to live in Las Animas County was to get away from crowds and noise which would not be possible if the Pinon Canyon site were to be utilized.

RESPONSE: Current sound levels in the vicinity of both parcels are described in sections 3.1.7 and 3.2.7 of the DEIS. Figure 3-13 on page 3-45 shows the five monitoring locations at each parcel. Tables 4-12 and 4-18 on pages 4-36 and 4-61 show the potential increase in sound levels from the combination of all proposed training activities including ground vehicles, helicopters, jets, and simulated artillery fire. The projected levels are extremely worst case. For example, the increase shown for site 5 (Pueblo on Table 4-12 assumes that all types of training are occurring simultaneously one-half mile inside the parcel boundary nearest to the measurement location. The chance of that combined activity occurring is extremely slight. Obviously, the potential impact on the city of Pueblo is insignificant. Similarly, at measurement location 1 at the Pinon Canyon site just north of the proposed boundary, the chance of the predicted increase in sound level being realized is extremely slight since it is unlikely that the combined activities would be concentrated into a small area approximately one-half mile inside the parcel boundary from that monitoring location. Furthermore, if the potential were realized, that sound level would probably be experienced no more than once a year.

With regard to Pueblo, Colorado City/Rye, the St. Charles and Vineland mesas, the potential impact to Pueblo, and the Colorado City/Rye area is insignificant. The potential impact to the St. Charles and Vineland mesas is greater but obviously less than might be experienced at location three at the northern site boundary. Furthermore, the likelihood of all combined training occurring within one-half mile of the northern boundary is further reduced by the provision for a quarter-mile buffer zone around the northern end of the Huerfano River parcel.

K-105

TRANSPORTATION

137. ISSUE: Several comments were received expressing a concern for the effects that vehicle convoys would have on highway traffic flow and what mitigation procedures would be implemented to reduce those effects.

RESPONSE: Transportation routes and impacts are described in Sections 3.1.8, 3.2.8 and 4.1.8, 4.2.8 of the DEIS. It is expected that convoys between Fort Carson and either remote site would occur, at a maximum, seventy days out of a year. This represents travel requirements for five brigade training months. The following is an example of how a brigade would convoy wheeled vehicles. All tracked vehicles will be transported by rail.

a. Four days before the start of the brigade training month, an advance party comprised of one serial would be deployed. (A "serial" is generally comprised of 30 vehicles, 150 meters apart traveling at approximately 40 miles per hour.) - 30 vehicles.

b. Two to three days before the start of the brigade training month three support serials would be deployed - 90 vehicles.

c. One day before the start of the brigade training month six battalion serials would be deployed - 180 vehicles.

d. On the first day of the brigade training month six battalion serials would be deployed - 180 vehicles.

e. On the second day of the brigade training month six battalion serials would be deployed - 180 vehicles.

f. On the third day of the brigade training month five battalion serials would be deployed - 150 vehicles.

g. On the fourth day of the brigade training month one trail party would be deployed - 16 vehicles.

Total - 826 vehicles.

A similar procedure would be followed to return to Fort Carson. However, battalion serials would deploy first on a consecutive day basis, followed by the support serials with the advance party and on the last day by the trail party.

It is estimated that a single serial traveling on I-25 would require about 25 minutes to pass through the metropolitan area of Pueblo (roughly 20 miles). With six serials passing through Pueblo on a given day it can be assumed that the metropolitan area would experience 2-1/2 hours of military convoy traffic. On page H-30 it is indicated that at least a 15 minute time gap would be provided between each serial. With this length of interval a serial would be entering the metropolitan area as the previous one is leaving it. It would require approximately four minutes for a serial to pass a specific point, such as an Interstate entrance ramp. However, with 150 meters between each vehicle

within a serial, incoming ramp traffic could merge onto the Interstate without significant difficulty.

There are many ways to mitigate problems posed by convoys. The most important is to select the route with the least conflicts. For the Huerfano River site, the DEIS proposed Interstate 25 to the Cedarwood Road exit. This has now been modified to the Lime Road exit to avoid residences along Cedarwood Road. This route avoids traffic problems inherent with Highway 50. For the Pinon Canyon site, the DEIS proposed Interstate 25 to Highway 350 at Trinidad, Highway 350 to the site. Although the most practical route, the interchange in Trinidad is already overloaded and Highway 350 requires upgrading. The State Highway Department has planned to construct a bypass from I-25 to 350 for many years as well as improve Highway 350. Therefore, if the Pinon Canyon site is acquired, wheeled vehicles would be transported to the site by railroad (along with all tracked vehicles) until construction of the bypass and upgrading of Highway 350 is completed. At that time, the use of convoys versus railroad would be reevaluated for cost effectiveness. While wheeled vehicles are being railed, there would be administrative traffic as well as buses transporting troops. Having selected the best route, additional measures can be taken to minimize traffic conflicts. As indicated above, the average convoy time required during a convoy day is 2-1/2 hours at any given point. Convoy departure would be scheduled to avoid peak traffic hours in Pueblo. The spacing of serials would be lengthened as required to avoid those peak traffic hours. If necessary, convoys would be deployed during nighttime.

Finally, a Troop Movement Officer would be appointed to administer each unit convoy. That Officer would coordinate all convoy traffic, state and local highway officials and traffic patrols. Press releases would be made to local media informing them of upcoming convoy traffic.

138. ISSUE: One commentor asked what the effect on rail traffic would be.

RESPONSE: Sections 4.1.8 and 4.2.8 of the DEIS discuss potential impacts to rail traffic. The projected five round trips each year to either site can be integrated into existing and anticipated traffic.

139. ISSUE: Several commentors asked what the effect on air traffic would be. One wanted a "Definite commitment" that restricted airspace would not be required.

RESPONSE: This is also discussed in Sections 4.1.8 and 4.2.8 of the DEIS. A follow-up inquiry to the Pueblo Memorial Airport verifies the DEIS conclusions. According to Mr. Paul Eubanks, a team supervisor in the control tower, aircraft activity at the Pinon site would pose no air traffic problems. Activity at the Huerfano River site would require considerable coordination of flights to insure proper safety. According to Mr. Eubanks, the proposed maximum mission level of six or seven missions during a training day would not overload his air traffic control capability.

140. ISSUE: *One commentor indicated there was no discussion of ammunition transportation and storage requirements.*

RESPONSE: Ammunition would consist entirely of blanks and simulators. They may be transported to the site from Fort Carson or they may be ordered and delivered directly to the site. Eventually, a storage facility would be programmed for construction at this site.

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WATER

141. ISSUE: One commentor indicated that predicting sediment yield with the Universal Soil Loss Equation (USLE) results in serious overestimates of potential impact.

RESPONSE: Persons applying the USLE to situations other than areas it was designed for have long acknowledged that it yields high results. This situation is discussed in detail in an issue under the Soils/Vegetation Section of this Appendix. The method is still considered to be the best for analyzing sediment yield, as indicated in Section 4.1.4 and Appendix E of the EIS.

142. ISSUE: Eighteen commentors were concerned about potential salinity effects. Comments were all related but took many forms including:

- (1) salinity effects should be better defined;
- (2) would downstream irrigators be effected?;
- (3) downstream irrigators would be effected!;
- (4) the salinity issue was treated as if it were unimportant;
- (5) it's not mentioned that salinity between La Junta and Kansas border is getting progressively worse;
- (6) how can the project be feasible if salinity might increase?; and
- (7) the potential cost of controlling salinity should be addressed.

RESPONSE: Salinity is discussed in Sections 4.1.4 and 4.2.4 of the DEIS. As indicated there, additional dissolved salts may potentially be contributed to local waters as a secondary effect of increased erosion and sedimentation. Unfortunately, there is no known direct relationship between sediment yield and dissolved salts. Too many variables occur on large sites, such as soil type, impermeability of subsurface materials, past and current erosion losses, etc., to allow development of an easily applied factor. In addition, there are virtually no useful studies or other literature that can be utilized to quantify potential salinity changes. Although we have considerable quantities of high alkaline soils at Fort Carson, a salinity problem has never been found, so we have no experience to draw on there.

The feasibility of developing a relationship between stream discharge and specific conductance (related to dissolved solids), was investigated but judged to be impractical with limited existing data. One study published by the Colorado State University Cooperative Extension Service in cooperation with the Environmental Protection Agency entitled "Salinity in the Arkansas Valley of Colorado", (May, 1977), discusses the impact of salinity on agriculture, but evaluates the causes of salinity from the viewpoint of consumptive uses such as irrigation, municipal and industrial demand reducing

stream flow and increasing salinity concentrations. That publication was reviewed during preparation of the DEIS, but since no applicable data was found it was inadvertently left off the list of references.

Although the potential impact on salinity cannot be quantified, several factors can be considered to determine the potential for impact and available means to mitigate that potential. First, as mentioned in the previous issue and as discussed in depth under the soils and vegetation section of this Appendix, projected increases in erosion and sediment yield contained in the DEIS are extremely worst case figures. Actual field data from Fort Carson shows that sediment yield is roughly equivalent to that found in similar areas of the Front Range. The lower the impact to sedimentation is, the less potential exists for salinity increases.

Second, as mentioned above, although sedimentation and salinity are related, the tie is not direct due to many variables. As part of the detailed soils and vegetation surveys to be accomplished if a site is acquired, areas projected to yield excessive quantities of soluble salts would be identified. Management of these areas through a combination of protection from training, erosion control measures and water retention in sealed erosion control dams would be effective in mitigating potential salinity increases. Costs for implementing such management would be higher than for other, less sensitive, areas on the site. Overall, average-per-acre costs would not be increased significantly.

Third, as indicated in the Colorado State University/EPA report referenced above, although initial salt loadings need to be controlled, "The salinity problem in the Arkansas River Basin is more one of full development of a limited water resource than it is of salt loading. About 85% of the total surface water supply of the basin is consumed before the river leaves Colorado." With the salts being concentrated in the reduced stream flow and considering the high return of salts from agricultural irrigation, it appears that the basin's problem with salinity would not be significantly effected by salt loading or control of soluble salts at either parcel. The CSU/EPA report also concludes that although it is desirable to control salt loading to the greatest extent practical, it can be expected that high salinity levels will remain as long as the water is used.

Fourth, to insure that excessive salt loading does not become a problem if either site is acquired, special attention would be given to this parameter when developing the monitoring program for water quality described in Section 2.4.5 of the DEIS. If monitoring results indicate more than a minor impact as currently projected, the mitigation measures addressed above would be pursued. It should be noted that if water retention is required it would be done only in selected watersheds with excessive salt contributions. If retention effects downstream users, flow augmentation would be pursued as required. Water retention in selected watersheds would be the simplest, most effective control since the salts would be trapped and left as a

residue as water evaporates. The residue would be disposed of periodically. To summarize, salinity effects cannot be fully defined at this point. Potential effects and available mitigation measures indicate salinity changes would be minor. Downstream irrigators would not be significantly effected. Salinity is certainly an important issue. Due to water use, salinity has been getting progressively worse in the Arkansas River Basin, especially between La Junta and the Kansas border. Soluble salt loading from either site can be managed fairly inexpensively so that the salinity issue does not make the proposed project infeasible.

143. ISSUE: Six commentors wondered what effect erosion control practices, such as erosion control dams, would have on downstream water users.

RESPONSE: No significant impact on downstream water users is anticipated. Erosion control structures such as erosion control dams, terraces, diversions, and pitting are critical in controlling surface runoff and erosion, especially where training would result in soil compaction and loss of vegetation. Although these structures would increase evaporation losses, they may also serve to augment downstream flow conditions by stabilizing stream flow patterns. This would occur essentially by two processes:

(1) Erosion control structures act to impede the rapid runoff of water, releasing it in a slower more stable manner. This is particularly important during the common high-intensity, short-duration storm events when large volumes of water are discharged rapidly.

(2) Erosion control structures afford water the opportunity to percolate into the ground water system and subsequently infiltrate to the local stream beds, thus acting to augment stream flow through ground water recharge.

It is important to note that the purpose for erosion control structures is to detain the flow of water not to restrict it. The only exception to this would be in selected watersheds where salt loading control may be needed. Even when erosion control dams create a backwater condition, trickle tubes can be inserted to allow for controlled release of that water. Overall, no significant depletion or other adverse effects are expected on downstream water.

144. ISSUE: Eleven commentors inquired about or commented on providing for potable water requirements. The primary comment was the question of where we would get the water and how would it effect other water users. One commentor was concerned that someone in the area would have to sacrifice their water. Three commentors indicated water would probably have to be piped in to the Pinon Canyon site.

RESPONSE: As indicated on page vi of the DEIS summary, the provision of potable water to either site was an unresolved issue at the time. After

the comments on the Draft were received, an analysis of all potential alternatives was completed, see attached study report. That analysis concluded that piping treated water to both sites was the most feasible and cost effective means of obtaining adequate potable water. The source recommended for the Pinon Canyon site is an offer from a private partnership, with the City of Trinidad also being a possibility. At the Huerfano River site, the City of Pueblo is the recommended source with Colorado City and a private well as additional possibilities.

The impact to other, current water users of obtaining water from the recommended sources is virtually none. The proposed consumption would not be available for other new uses, but existing users would be unaffected.

We agreed with the commentators that the provision of potable water should be resolved. Therefore, a water purchase option contract was negotiated with the partnership of Oxley and Dawn to clarify this issue at the preferred acquisition site, the Pinon Canyon. The option contract was negotiated at no cost to the government and provides for the purchase of potable water, storage, filtration and transportation line to the Simpson cantonment site. The option is for a period of two years, or for a period of 90 days following Congressional funding for acquisition of the Pinon Canyon parcel.

It should be noted that if more than one utility is capable of providing the needed water, that competitive bidding may be required.

145. ISSUE: One commentator requested additional information of the impact ground water development would have on either parcel.

RESPONSE: A general discussion of potential ground water impacts is provided on pages 4-17 and 4-18 of the DEIS. It is important to note that those impacts would occur only if the full potable water requirement were obtained from ground water sources. Existing data indicates that subsurface water supplies are neither of sufficient quality or volume to provide for the potable water requirement. Accordingly, development of on-site wells is not being considered as a permanent water supply.

Existing on-site water resources, such as stock ponds and wells, would be retained for downrange uses. Consumption rates would be significantly less than existing user rates. As such no adverse impacts are expected.

146. ISSUE: One commentator pointed out that what are referred to as "standards" for the Arkansas River Basin throughout Sections 3 and 4 and Appendix E of the DEIS are currently only guidelines since the Water Quality Control Commission has not completed the stream classification process. The commentator also noted that final definition of stream use classifications had been adopted since publication of the DEIS, making Table E-2 outdated.

INFORMATION PAPER

WATER SOURCES FOR LAND ACQUISITION SITES

1. The following is an examination of potential water sources for the proposed land acquisition sites in Southeastern Colorado. All options were analyzed and evaluated against their meeting the requirements of the 4th Infantry Division (Mechanized). Specifically, the requirements are that a dependable and continuous water source be available to meet the demands of a training population of 5080 personnel, with each person utilizing 124 gallons of water a day for a maximum of 150 days per year. Additional demand would derive from 35 assigned individuals working year round, from the vehicle wash racks (57,600 gallons/day for 150 days), and from flushing the 750,000 gallon tank six times a year. Total demand would be 108,990,000 gallons annually.

2. An investigation into water resources in the vicinity of the two sites shows the following options:

- a. Utilizing surface water on site.
- b. Acquiring water off site and transporting by rail.
- c. Acquiring water off site and transporting by truck.
- d. Acquiring water off site and transporting by pipeline.
- e. Utilizing subsurface water on site.

3. The remainder of this examination will be directed towards the dependability and economic feasibility of each of the options listed above.

a. Surface Waters. The flow of both the Huerfano and Purgatoire Rivers through the proposed sites is highly variable. They are both frequently dry by early summer. The construction of storage facilities would not insure a dependable source of water, as historical data has shown current storage facilities have had periods when no water is available for diversion. The utilization of surface water is not recommended for supplying the proposed sites.

b. Rail Transport. Acquiring water off site and transporting it to the cantonment areas by rail would require 37 railroad tankers (20,000 gallon capacity). All of the Army's tanker fleet is currently being used to transport POL products and industrial chemicals. It would cost up to \$15,000 per car to convert them to water carriers. Furthermore, the cars could not be used permanently.

The cost of buying new cars would be \$2,220,000 for 37 large capacity cars. The cost of leasing the same 37 cars would be \$254,930 annually. In addition, mileage costs would total \$445,258 per year. The cost of purchasing water is estimated at \$124,249 per year. The total cost for leasing would be \$824,437 per year. The total cost of buying would be an initial cost of \$2,220,000 with annual charges of \$569,507.

c. Truck Transport. Acquiring water off site and transporting it to the cantonment areas by truck would require 146 tankers (5,000 gallon capacity) per day. Such an operation would not be feasible as the flow of water could be disrupted by road and weather conditions. Furthermore, the availability of drivers and vehicle maintenance could also contribute to disrupting the flow of water. This would not be a dependable source of water.

d. Pipeline. There are several sources of water which can supply the proposed parcels. This discussion will examine each alternative for the particular parcel it would serve.

(1) Huerfano River

(a) The City of Pueblo has the capability to supply the Army with the necessary water. The Board of Water Works has requested additional information before committing itself to full unlimited service. The questions raised concern computer projections on the best location for the pipeline interface and the effect on the city's water supply in the year 2000. A cost estimate of obtaining service from Pueblo is as follows:

Pipeline	(17.2 miles @ \$20.00/ft)	\$1,816,320
Booster Stations	(3 each)	288,000
		<u>\$2,104,320</u>

Water Charge (\$1.14/1000 gallons)	\$ 124,249 per year
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(b) The City of Colorado City has sufficient water to supply the Army's needs. The Board of Directors of the Colorado City Metropolitan District have also requested more time to study the proposal before committing itself. The cost of service from Colorado City is as follows:

Pipeline	(19.0 miles @ \$20.00/ft)	\$2,006,400
Booster Stations	(4 each)	384,000
		<u>\$2,390,400</u>

Water Charge (\$2.00/1000 gallons)	\$ 217,980 per year
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(c) The owner of a non-tributary well, adjudicated at 700 gpm has expressed a willingness to sell the water rights to the Army. A pipeline from this source could follow the route of an old railroad pipeline from Rye to Cedarwood. The cost of obtaining this right of way could increase this alternative's cost significantly. The cost of this service is as follows:

Pipeline (22.6 miles @ \$20.00/ft)	\$2,386,560
Booster Stations (5 each)	480,000
Water Right Purchase (\$1,000/acre-ft; 1,095 acre-ft)	1,095,000
Treatment Plant (Water would require treatment)	200,000
	<u>\$4,161,560</u>

Treatment cost (\$0.45/1000 gallons
treated) \$ 49,046 per year

(d) The owner of a non-tributary well adjudicated at 350 gpm has expressed a willingness to sell 91 acres of land together with its water rights. Water quality is poor and would require extensive treatment. An additional well would have to be drilled to meet the 440 gpm necessary for the Army's needs. The cost of this alternative is listed below:

Pipeline (17.5 miles @ \$20.00/ft)	\$1,848,000
Booster Stations (3 each)	288,000
Water Rights	225,000
Treatment Plant (Water would require treatment)	500,000
	<u>\$2,861,000</u>

Treatment cost (\$0.45/1000 gallons
treated) \$ 49,046 per year

(2) Pinon Canyon Parcel

(a) The special partnership of Oxley-Dawn has made a proposal to provide the Army with the necessary water. The water supply will be very dependable as it includes 2 wells adjudicated at 400 gpm each, the surface run-off of the Furness Arroyo, run-off from the Model Ditch, and 6,000 acre-ft. of water held in storage in Trinidad Lake. The Model Land and Irrigation Company holds the senior rights to water held in Trinidad Lake. Oxley-Dawn own sufficient construction equipment which enables them to build the necessary facilities at a reduced cost. Furthermore, the partnership is willing to enter into a preliminary contract option agreement fixing proposed costs with no obligation on the part of the Army. The cost of this alternative is estimated below:

Pipeline (20.0 miles), 2 Booster Stations, Treatment Plan	\$2,000,000
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Water charge (.90/1000 gallons treated) 98,091 per year

(b) The City of Trinidad has offered to provide water to the Army to meet its needs. The cost of this service is as follows:

Pipeline	\$6,800,000
Water charge (.90/1000 gallons treated)	\$ 99,181 per year

e. Subsurface Water. All information gathered points to the fact that groundwater present on each site is of poor quality and in limited amounts. The amount needed at the cantonment area (440 gpm) is far above any well presently in use within either parcel. Wells dug in the Huerfano and Purgatoire River alluviums could possibly yield this amount, but as in surface water it would not be dependable. Test wells must be dug at each site before a final determination could be made. An expensive treatment facility would have to be constructed to bring the water quality up to accepted standards. Furthermore, even if a well field is constructed and initially meets the requirements, it is possible for the aquifer water table to lower to where future pumping would be undesirable and expansion impossible. The cost of on-site wells is estimated below:

Test wells (2 at each site; \$25,000 per well)	\$ 100,000
Well costs (\$40.00/ft, 1000 ft well, 5 wells)	200,000
Pump Costs (\$40,000 per pump, 5 pumps)	200,000
Interior Pipeline (10 miles @ \$20.00/ft)	1,056,000
Treatment Plant	1,500,000
Booster Stations (2 each)	192,000
	<u>\$3,248,000</u>
Treatment cost (\$0.50/1000 gallons treated)	\$ 54,495 per year
Pump Maintenance	25,000 per year
Operator Costs	60,000
	<u>\$139,495</u>

4. It has been shown that of the alternatives available that acquiring water off-site and transporting it by pipeline is the best solution. Surface water utilization is not advisable due to the extremely intermittent characteristics of the rivers involved. Transportation by rail is not a viable alternative due to the high cost. Transportation by truck is not dependable due to potential disruption by road and weather conditions, driver availability, and vehicle maintenance. Development of on-site water would involve a high initial cost to overcome small yield wells that provide poor quality water. In addition, the long term effects of pumping great amounts of water could affect aquifer performance. This would cause delays in training schedules or acquiring additional water resources at a later date. It is evident that acquiring off site water and transporting it by pipeline is the most dependable and economically feasible alternative.

5. If the Huerfano River parcel is selected it is recommended that the City of Pueblo be chosen to provide the necessary water. The Board of Water Works has the facilities and water supply necessary to meet the Army's needs. It is also the most economically feasible alternative for that site.

6. If the Pinon Canyon parcel is selected, the most desirable off-site pipeline option available is that offered by the Oxley-Dawn partnership. With an initial cost of \$2,000,000 and a yearly fee of \$98,091 for 20 years, this would be the most economically feasible choice. This option is also the most dependable, as the contract could be worded to provide the Army with first rights to all the resources of the Model Land and Irrigation Company as well as the other previously mentioned water sources.

ROBERT F. JONES
1LT, AD
Ecologist

RESPONSE: The commentor is correct. In fact, the Water Quality Control Commission has scheduled a public hearing for December 15, 1980 to receive comment on regulations published September 29, 1980 establishing basic standards and a system for classifying waters for the entire Arkansas River Basin. Appropriate excerpts from those regulations showing proposed classifications and standards are included here for information. The commentor is also correct about adoption of final stream use classifications. An updated Table E-2 is also included here.

147. ISSUE: One commentor pointed out that water quality of the Apishapa River was not discussed in the DEIS even though part of the Huerfano parcel drains to it.

RESPONSE: The Apishapa River was not discussed in detail because its water quality is comparable to that of both the Huerfano and Purgatoire. The stream classifications and water quality standards proposed for all three drainages in the vicinity of the parcels are identical. The following summary indicates that near Fowler, Colorado fecal coliform and ammonia levels exceed the proposed standards of 2000/100 ml and 0.1 mg/l, respectively.

APISHAPA WATER QUALITY SUMMARY (1963-1978)

<u>Parameter</u>	<u>Unit</u>	<u>Value</u>
Salinity	mg/l	3010
Hardness, Total	mg/l	1095
Iron	mg/l	591
Dissolved Oxygen	mg/l	98
Field pH	su	80
Conductivity	micromho	1990
Sulfate	mg/l	1062
Temperature	Deg C	16.0
Fecal Coliform	#/100 ml	4910
NH ₃ & NH ₄	mg/l	0.33

148. ISSUE: One commentor asked what use was referred to by the statement on page 3-25, second paragraph, second line: That the quality of water in the Cucharas is marginal.

RESPONSE: According to the Water Quality Management Plan for Huerfano and Las Animas Counties(1979) the Cucharas River below Walsenburg at I-25 to its confluence with the Arkansas River is suitable for secondary recreational purposes, i.e., boating. The river generally exceeds total suspended solids limits for aquatic life, total dissolved solids and sulfate limits for a water supply source, and total suspended solids limits for stock and irrigation purposes, making it marginal for those uses.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 7

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BASIN: Middle Arkansas River

Stream Segment Description

Mainstem of Sixmile Creek from the source to the confluence with the Arkansas River.

Mainstem of the Huerfano River, including all tributaries, lakes, and reservoirs, from the source to I-25, except for specific listings in Segment 22.

Mainstem of the Huerfano River from I-25 to the confluence with the Arkansas River.

Mainstem of the Cucharas River, including all tributaries, lakes, and reservoirs, from the source to the point of diversion for the Walsenburg public water supply.

Mainstem of the Cucharas River from the point of diversion for the Walsenburg public water supply to the outlet of Cucharas Reservoir.

Mainstem of the Cucharas River from the outlet of Cucharas Reservoir to the confluence with the Huerfano River.

CLASSIFICATIONS										NUMERIC STANDARDS				TEMPORARY MODIFICATIONS and QUALIFIERS
HIGH QUAL		REC.		AQUATIC LIFE				PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS mg/l				
CLASS 1	CLASS 2	CLASS 1	CLASS 2	COLD	WARM	COLD	WARM			WATER SUPPLY	AGRICULTURE			
			X					X	X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml				
		X		X					X X	D.O. = 6.0 mg/l. 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 200/100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = .005 S as H ₂ S = 0.002 undiss. Boron = 0.75 Nitrite (NO ₂) = 0.0 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 250.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.0004 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.005 Lead (Pb) = 0.004 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = .05	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.05 Selenium (Se) = 0.01 Silver (Ag) = 0.0001 Zinc (Zn) = 0.05 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0	
			X					X	X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.1, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undiss. Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.03 Lead (Pb) = 0.05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.02 Silver (Ag) = 0.00015 Zinc (Zn) = 0.2 Iron (Fe, tot) = Manganese (Mn, tot) = 1.0	
		X	X					X	X	D.O. = 6.0 mg/l. 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = .005 S as H ₂ S = 0.002 undiss. Boron = 0.75 Nitrite (NO ₂) = 0.05 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 250.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.001 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.025 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = .05	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.1 Selenium (Se) = 0.01 Silver (Ag) = 0.0001 Zinc (Zn) = 0.05 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0	
		X		X					X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.06; unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undiss. Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.02 Silver (Ag) = 0.00015 Zinc (Zn) = 0.1 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0	
		X						X	X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml				

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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 7	Page 12 of 15	CLASSIFICATIONS										NUMERIC STANDARDS										TEMPORARY MODIFICATION and QUALIFIERS
		HIGH QUAL		REC.		AQUATIC LIFE				WATER SUPPLY	AGRICULTURE	PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS mg/l								
		CLASS 1	CLASS 2	CLASS 1	CLASS 2	COLD		WARM														
						CL. 1	CL. 2	COLD	WARM													
Stream Segment Description																						
1. Mainstem of the Arkansas River from the confluence with Fountain Creek to the Colorado/Kansas border.					X					X	X	X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.1, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 2200.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.03 Lead (Pb) = 0.05 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = 0.05	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.01 Silver (Ag) = 0.001 Zinc (Zn) = 0.35 Iron (Fe, tot) = 8.0 Manganese (Mn, tot) = 1.0 Uranium (U) = 0.3						
2. All tributaries to the Arkansas River, including all lakes and reservoirs, from the Colorado Canal headgate to the Colorado/Kansas border except for specific listings in Segments 3 through 14.					X					X	X		D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml									
3. Mainstem of the Apishapa River, including all tributaries, lakes, and reservoirs, from the source to I-25.					X	X					X		D.O. = 6.0 mg/l. 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.05 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 350.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.009 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.02 Lead (Pb) = 0.1 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = 0.05	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.3 Selenium (Se) = 0.02 Silver (Ag) = 0.0002 Zinc (Zn) = 0.3 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0						
4. Mainstem of the Apishapa River from I-25 to the confluence with the Arkansas River.					X					X	X		D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.1, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.001 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.025	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.1 Selenium (Se) = 0.02 Silver (Ag) = 0.0001 Zinc (Zn) = 0.14 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0						
5. Mainstem of the Purgatoire River from the confluence of the South and North Forks to the inlet to Trinidad Reservoir.					X	X				X	X		D.O. = 6.0 mg/l. 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 200 /100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.05 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 250.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.001 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.012 Lead (Pb) = 0.025 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = 0.05	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.1 Selenium (Se) = 0.01 Silver (Ag) = 0.0001 Zinc (Zn) = 0.19 Iron (Fe, tot) = 4.0 Manganese (Mn, tot) = 1.0						
6. All tributaries to the Purgatoire River, including all lakes and reservoirs, from the headwaters of the North, Middle, and South Forks, to the inlet to Trinidad Reservoir, including the mainstems of the North, Middle and South Forks.					X	X				X	X		D.O. = 6.0 mg/l. 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 200 /100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.05 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 250.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.001 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.025 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = 0.05	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.1 Selenium (Se) = 0.01 Silver (Ag) = 0.0001 Zinc (Zn) = 0.05 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0						

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STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 6 and 7	Page 13 of 15	CLASSIFICATIONS										NUMERIC STANDARDS				TEMPORARY MODIFICATIONS and QUALIFIERS	
		HIGH QUAL		REC.	AQUATIC LIFE		WATER SUPPLY	AGRICULTURE	PHYSICAL and BIOLOGICAL	INORGANIC mg/l	METALS mg/l						
		CLASS 1	CLASS 2		CLASS 1	CLASS 2							COLD	WARM	COLD		WARM
BASIN: Lower Arkansas River		CLASS 1	CLASS 2	CLASS 1	CLASS 2	COLD	WARM	COLD	WARM								
Stream Segment Description																	
Mainstem of the Purgatoire River from the inlet to Trinidad Reservoir to the confluence with the Arkansas River.				X					X		X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.1, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.012 Lead (Pb) = 0.05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.02 Silver (Ag) = 0.00015 Zinc (Zn) = 0.165 Iron (Fe, tot) = 1.6 Manganese (Mn, tot) = 1.0		
Mainstem of Ricardo Creek, including all tributaries, lakes, and reservoirs, which are within Colorado (Costilla and Las Animas Counties).		X										EXISTING	QUALITY				
Mainstem of Adobe Creek and Gageby-Creek from the source to the confluence with the Arkansas River; Mainstem of Willow Creek from Highway 287 to the confluence with the Arkansas River.				X		X					X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.06 unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.02 Silver (Ag) = 0.00015 Zinc (Zn) = 0.1 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0		
Two Buttes Reservoir, Hasty Lake, Holbrook Reservoir, Burchfield Lake.			X		X						X	D.O. = 6.0 mg/l, 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 200 /100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = .005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.05	Arsenic (As) = 0.05 Cadmium (Cd) = 0.001 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.025	Mercury (Hg) = 0.00005 Nickel (Ni) = 0.1 Selenium (Se) = 0.02 Silver (Ag) = 0.0001 Zinc (Zn) = 0.05 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0		
John Martin Reservoir.			X			X				X	X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 200 /100 ml	NH ₃ = 0.06 unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5 Nitrate (NO ₃) = 10.0 Chloride (Cl) = 250.0 Sulfate (SO ₄) = 2200.0	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.03 Lead (Pb) = 0.05 Iron (Fe, sol) = 0.3 Manganese (Mn, sol) = .05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.01 Silver (Ag) = 0.00015 Zinc (Zn) = 0.35 Iron (Fe, tot) = 8.0 Manganese (Mn, tot) = 1.0		
Lake Henry, Adobe Creek Reservoir, Nee-So-Pah Reservoir, Nee-Mo-Shee Reservoir.			X			X					X	D.O. = 5.0 mg/l pH = 6.5 - 9.0 Fecal Coliforms = 200 /100 ml	NH ₃ = 0.06 unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.02 Silver (Ag) = 0.00015 Zinc (Zn) = 0.1 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0		
Las Animas Kid's Pond, Lathrop Reservoir.				X	X						X	D.O. = 6.0 mg/l, 7.0 mg/l spawning pH = 6.5 - 9.0 Fecal Coliforms = 2000/100 ml	NH ₃ = 0.02, unionized Residual Cl ₂ = 0.003 Cyanide (free) = 0.005 S as H ₂ S = 0.002 undi Boron = 0.75 Nitrite (NO ₂) = 0.5	Arsenic (As) = 0.05 Cadmium (Cd) = 0.005 Chromium (tri) = 0.05 Chromium (hex) = 0.025 Copper (Cu) = 0.01 Lead (Pb) = 0.05	Mercury (Hg) = .00005 Nickel (Ni) = 0.2 Selenium (Se) = 0.02 Silver (Ag) = 0.00015 Zinc (Zn) = 0.1 Iron (Fe, tot) = 1.0 Manganese (Mn, tot) = 1.0		

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TABLE E-2

COLORADO WATER QUALITY CONTROL COMMISSION,
STATE USE CLASSIFICATIONS, JULY 1979

- (a) Recreation
 - (i) Class 1 - Primary Contact - These surface waters are suitable or intended to become suitable for prolonged and intimate contact with the body or for recreational activities when the ingestion of small quantities of water is likely to occur. Such waters include but are not limited to those used for swimming.
 - (ii) Class 2 - Secondary Contact - These surface waters are suitable or intended to become suitable for recreational uses on or about the water which are not included in the primary contact subcategory.
- (b) Agriculture

These waters are suitable or intended to become suitable for irrigation of crops usually grown in Colorado and which are not hazardous as drinking water for livestock.
- (c) Aquatic Life

These surface waters are suitable or intended to become suitable for the protection and maintenance of aquatic life forms as described below:

 - (i) Class 1 - Cold Water Aquatic Life - These waters provide, or could provide, a habitat consisting of water quality levels and other considerations such as flow and stream bed characteristics which do or could protect and maintain a wide variety of cold water biota, including sensitive species. Cold water biota are considered to be life forms, including trout, in water where temperatures do not normally exceed 20°C. If there are limitations to the potential variety of life forms, they are due primarily to uncorrectable water quality conditions. This information will be considered in assigning specific standards.
 - (ii) Class 1 - Warm Water Aquatic Life - These waters provide or could provide, a habitat consisting of water quality levels and other considerations such as flow and stream bed characteristics which do or could protect and maintain a wide variety of warm water biota, including sensitive species. Warm water biota are considered to be the life forms in waters with temperatures frequently exceeding 20°C. If there are limitations to the potential variety of life forms, they are due primarily to uncorrectable water quality conditions. This information will be considered in assigning specific standards.
 - (iii) Class 2 - Cold and Warm Water Aquatic Life - These are waters where the potential variety of life forms is presently limited primarily by flow and stream bed characteristics. Standards will be assigned to protect existing species and encourage the establishment of more sensitive species which are compatible with the flow and stream bed characteristics.

TABLE E-2 (Continued)

- (d) Domestic Water Supply
These waters are suitable or intended to become suitable for potable water supplies. There may be waters which do not fit into either the Class 1 or Class 2 classifications but which may be suitable for domestic water supplies after special treatment.
- (i) Class 1 - Uncontaminated Ground Waters - These are ground waters which receive a high degree of natural protection and meet, without treatment, all Colorado drinking water regulations and any revision, amendments, or supplements thereto. Colorado drinking water regulations require disinfection of all domestic water supplies regardless of source unless a waiver has been obtained.
- (ii) Class 2 - Waters Requiring Disinfection and/or Standard Treatment - These are waters which, after receiving approved disinfection such as simple chlorination or its equivalent or which after receiving standard treatment (defined as coagulation, flocculation, sedimentation, filtration, and disinfection with chlorine or its equivalent) will meet Colorado drinking water regulations and any revisions, amendments, or supplements thereto. This class may include ground waters which, due to natural or human causes, do not meet the requirement for Class 1 waters.
- (e) Existing High Quality Waters
Waters currently of a quality higher than necessary to support primary contact recreation and propagation of fish, shellfish, and wildlife and are generally suitable for agriculture and domestic water supply may be classified as high quality waters. This classification precludes the necessity to classify for other beneficial uses.
- (i) Class 1 - These are high quality waters which constitute an outstanding state or national resource such as waters in national and state parks and forests, wildlife refuges, and waters of exceptional recreational and ecological significance.
For example, waters which provide a unique habitat for an endangered or threatened species or rivers designated under the Wild and Scenic Rivers Act may be designated as outstanding state or national resource waters. No degradation of these waters will be allowed; thus, these waters will be protected and maintained at their existing quality.
- (ii) Class 2 - These are other high quality waters which are not classified as outstanding state or national resources. These waters shall be maintained and protected at their existing quality unless the Commission chooses, after full intergovernmental coordination and public participation, to allow lower water quality as a result of necessary and justifiable economic or social development. In no event, however, may degradation of water quality interfere with or become injurious to existing instream water uses.

TABLE E-2 (Concluded)

(2) Qualifiers

The following qualifiers may be appended to any classification to indicate special considerations. Where a qualifier applies, it will be appended to the use classification; for example, "Class 1, Warm Water Aquatic Life (Goal)."

(a) Goal -

A qualifier which indicates that the waters are presently not fully suitable but are intended to become fully suitable for the classified use. "Goal" will be used to indicate that a temporary modification for one or more of the underlying numeric standards has been granted.

(b) Seasonal -

A qualifier which indicates that the water may only be suitable for a classified use during certain periods of the year.

(c) Interrupted Flow -

A qualifier which indicates that due to natural or human-induced conditions the continuity of flow is broken, not necessarily according to a seasonal schedule. This qualifier appended to a classification indicates that the flow conditions still permit the classified use during periods of flow.

(3) Areas Requiring Special Protection

In special cases where protection of beneficial uses requires standards not provided by the classification above, special standards may be assigned after full public notice and hearings. Cases where special protection may be needed include but are not limited to wildlife preserves and waterbodies endangered by eutrophication.

149. *ISSUE: One commentor indicated that although limited data is available on ground-water quality in the parcel, other water-quality data besides those contained in McLaughlin (1966) are available for the Dakota Sandstone and the Cheyenne Sandstone member of the Purgatoire formation. This data, while not necessarily from wells on the parcel, suggests the possibility that levels of dissolved iron and radium-226 may exceed drinking water standards.*

RESPONSE: The study referred to, "Radium and Uranium Concentrations and Associated Hydrogeochemistry in Ground Water in Southwestern Pueblo County, Colorado", is an examination of 37 wells tapping the aquifer system of the Dakota Sandstone and Purgatoire Formation. This study points out that the wells have a wide range of values which define several areas of high level radioactivity and dissolved iron in the ground water. These areas of high radioactivity are most likely associated with uranium occurrences and the active leaching of these uranium bearing structures. Although levels of Radium-226 and dissolved iron do exceed drinking standards in some of the wells, these are localized occurrences. The cities of Colorado City and Rye, both draw water from ground water sources which meets acceptable drinking standards. There is a definite potential of finding water with high levels of radioactivity and dissolved iron in localized areas of the Dakota Sandstone aquifer. The same situation occurs at Fort Carson. This possibility is always evaluated if a well is being considered as a remote source of potable water.

150. *ISSUE: One commentor pointed out that in many tables in Appendix E the number of samples collected, stream discharge data and location of sample collection are incomplete or not provided.*

RESPONSE: In almost every case, the references used did not provide that information. The sampling locations for Tables E-3 and E-4 are known. Respectively, they are:

(1) Near the mouth of the Huerfano River at Boone, Colorado, just upstream of the confluence with the Arkansas River.

(2) Near the mouth of the St. Charles River just upstream of the confluence with the Arkansas River,

All monitoring studies initiated if acquisition occurs would record all of the items suggested.

151. *ISSUE: One commentor asked that, where available, a brief description of water quality be included in the last column of Table 3-10 on page 3.30.*

RESPONSE: In most cases, water quality data is so limited indicating it separately would not be worthwhile. The last column of Table 3-10 lists a use for the ground water derived from the various aquifers shown. This implies a certain use. For instance, indicating that an aquifer yields

water to domestic and stock wells at the Huerfano River parcel implies that the water is adequate for human consumption.

152. *ISSUE: One commentor indicated that heavy metals and selenium may be present in soil parent material and could cause downstream health problems.*

RESPONSE: The commentor is correct, heavy metals and selenium may be present in soils and could be present in sediment. However, heavy metals and selenium typically have low solubility constants, would not be present in high concentrations and would not result in health problems downstream.

153. *ISSUE: One commentor indicated that additional on site water quality and quantity data should be obtained. Three commentors indicated that a comprehensive monitoring program should be initiated if a parcel is obtained and that data should be obtained prior to the start of training.*

RESPONSE: The establishment of a comprehensive water quality monitoring network is included as part of the project proposal in Section 2.4.5 of the DEIS. The network would be established and data obtained prior to the initiation on training to allow for analysis of training impacts and effectiveness of mitigation programs.

The existing water quality and quantity data, although frequently not site specific, was sufficient to show that water resources in the region exhibit very similar characteristics from stream to stream. The existing data and resultant generalizations were adequate to project potential impacts.

154. *ISSUE: One commentor indicated that the discussion of oil spills in Sections 4.1.4 and 4.2.4 seemed to gloss over the potential water quality effects.*

RESPONSE: As discussed in the referenced sections, Fort Carson has an existing program to prevent spills of hazardous materials and to respond to spills on a contingency basis when prevention fails. The primary material that would be used at either parcel that could be hazardous if spilled is fuel and other petroleum products. The major concentration of petroleum products would occur in the cantonment area. Standard procedures for handling these materials are normally sufficient to prevent hazards. In addition, facilities are designed to contain any significant spillage. Field operations are performed to insure that petroleum products are not stored near water sources. Overall, the potential impact of hazardous material spillage is minimal.

155. *ISSUE: One commentor asked that the water distribution and waste water treatment systems be described.*

RESPONSE: The design of water distribution and waste water treatment systems only exists in the concept phase, alternatives may still be pursued. Suffice it to say that from the point of delivery, the on-site water distribution system would include a water storage tank and would be designed and constructed

to meet all applicable Federal, State and local codes. With regard to waste water treatment, an aerated lagoon followed by chlorination and discharge is being considered, but a zero discharge lagoon system, septic tanks and package treatment plant are also feasible alternatives. Once again, any system would be designed, constructed and operated in accordance with all applicable codes and regulations. A non-discharging system is not utilized.

156. ISSUE: One commentor indicated that portions of the Purgatoire River, Chacuaco Canyon, and Huerfano River have been identified by the Nationwide Rivers Inventory, and asked that we discuss what the identification involves.

RESPONSE: Portions of the Huerfano and Purgatoire Rivers and Chacuaco Canyon have been tentatively identified by the Department of Interior as eligible for inclusion in the National Wild and Scenic Rivers System. Identification came as part of a Nationwide Inventory conducted by the Heritage Conservation and Recreation Service (HCRS). The purpose of the inventory is to designate the best free flowing rivers in the nation and to insure that they remain largely unaffected by future development. The President, in a directive issued August 2, 1979 directed all Federal agencies to determine their impact on rivers identified as candidates for the Rivers System. The following river sections were identified that are pertinent:

- (1) Huerfano River - a nine mile long section from the Huerfano-Cucharas Ditch Diversion to the Cucharas River.
- (2) Purgatoire River - from Smith Canyon to Trinchera Creek
- (3) Chacuaco Creek - from the Purgatoire River to Highway 160.

The portion of the Huerfano River identified is within the area proposed for wildlife and natural area management. That area has a quarter mile buffer zone extending from both sides of the river canyon. Acquisition and use of the Huerfano River site would have no effect on inclusion of this segment in the National Wild and Scenic Rivers System.

The portion of the Purgatoire River identified is not proposed for acquisition as part of the Pinon Canyon parcel. Acquisition up to the canyon rim is proposed, but a quarter mile buffer from the canyon would be established. Acquisition and use of the Pinon Canyon parcel would have no effect on inclusion of this segment in the National Wild and Scenic Rivers System.

The portion of the Chacuaco Creek Canyon identified is on the far side of the Purgatoire River canyon from the Pinon Canyon parcel and would not be effected by use of the parcel.

According to Barry Tollefson of the HCRS's Denver Office in a letter of September 25, 1980, the final inventory list should be published in December 1980.

157. ISSUE: A number of commentors pointed out technical errors. Four pointed out that page 4-15 of the DEIS contains two errors: one in the second paragraph indicating that bromine and iodine would convert to chloride; and one in the fourth paragraph where "anerobic" should read "aerobic". One commentor pointed out that both conversion factors on Tables 3-9, 3-23, 4-6 and 4-16 are incorrect. One commentor pointed out that the St. Charles River does not flow into the Huerfano River, as stated on page 3-25, it flows into the Arkansas.

RESPONSE: The reference to bromine and iodine being converted to chloride should be disregarded. The word "anaerobic" should read "aerobic". With regard to the conversion factors, one was corrected in the DEIS errata. The second is noted: one ton/square mile/year = $2.2 \times 10^{-3} \text{ m}^3/\text{hectare/year}$ (approximately), not $2.8 \times 10^{-6} \text{ m}^3/\text{hectare/year}$.

158. ISSUE: One commentor suggested that the following definitions should be used instead of the ones given in the DEIS. They are taken from the National Handbook of recommended methods for water-data acquisition. Definitions of "Sediment delivery ratio," "sediment yield" and "stream discharge" should be added to the glossary.

Glossary

Bed material - The sediment mixture of which the bed is composed. In alluvial streams bed-material particles are likely to be moved at any moment or during some future flow condition.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Gravel - Sediment particle sizes between 2 and 64 millimeters.

Particle size - A linear dimension, usually designated as "diameter," used to characterize the size of a particle. The dimension may be determined by any of several techniques, including sedimentation, sieving, micrometer measurement, or direct measurement.

Sediment - (1) Particles derived from rocks or biological materials that have been transported by a fluid.

(2) Solid material (sludges) suspended in or settle from water.

Sediment delivery ratio - The ratio of sediment yield to gross erosion expressed in percent.

Sediment yield - The average annual amount of sediment from a square mile transported by water from source areas into local water courses. This sediment yield represents an average over a long period such as 25 years or more.

Silt - Sediment particle sizes between .004 and .062 m.m.

Stream discharge - the quantity of flow passing a stream transect in a unit of time. (The flow contains both dissolved solids and sediment.)

RESPONSE: The above definitions are acknowledged. The minor differences between those provided in the DEIS reflect a different source document. The definitions provided in the DEIS were developed specifically for their usage in the DEIS and need not be changed.

GOVERNMENT AGENCIES

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

Reply to:

Lake Plaza South, Suite 616
44 Union Boulevard
Lakewood, CO 80228

June 16, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

The Council has reviewed your draft environmental statement (DES) for the proposed Acquisition of Training Land for Fort Carson, Colorado in Huerfano, Las Animas and Pueblo Counties, Colorado, circulated for comment pursuant to Section 102(2)(C) of the National Environmental Policy Act. We note that included in the DES is a Memorandum of Understanding between the Colorado State Historic Preservation Officer, Arthur Townsend and the Department of the Army. A review of this Memorandum finds that it appears to contain quite adequate consideration of cultural resources and a commitment to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320). However, for any such agreement to be valid in regard to Section 106 and the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800), it must also involve the Council.

It is also noted that many specific mentions are made of archeological sites which appear eligible for the National Register of Historic Places. These sites and any other cultural resources which are deemed eligible are, of course, subject to compliance with Section 106 and the Council's regulations. Circulation of a DES, however, does not fulfill your agency's responsibilities under Section 106 of the National Historic Preservation Act.

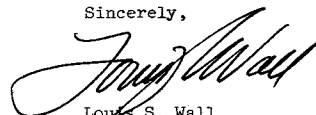
Prior to the approval of the expenditure of any Federal funds or prior to the granting of any license, permit, or other approval for an undertaking, Federal agencies must afford the Council an opportunity to comment on the effect of the undertaking on properties included in or eligible for inclusion in the National Register in accordance with the Council's regulations. Until these requirements are met, the Council considers the DES incomplete in its treatment of historical, archeological, architectural, and cultural resources. You should obtain the Council's substantive

Page 2

Mr. Michael E. Halla
Fort Carson Potential Resources
June 16, 1980

comments through the process outlined in 36 CFR Section 800.9. These comments should then be incorporated into any subsequent documents prepared to meet requirements under the National Environmental Policy Act. Ms. Marjorie Ingle may be contacted at (303) 234-4946, an FTS number for further assistance.

Sincerely,



Louis S. Wall
Chief, Western Division
of Project Review

P.S. Your letter of 9 June 80 was received today. Ms. Ingle will contact you with regard to preparing the required agreement in the near future.

1-1

Commissioners

ROWENA ROGERS
WM H CLAIRE
TOMMY NEAL



BOARD OF LAND COMMISSIONERS
Department of Natural Resources
620 Centennial Building
1313 Sherman St., Denver, Colorado 80203
(303) 839-3454

July 1, 1980

ANTHONY SABATINI
Administrator

THOMAS E. BRETZ
Minerals Director

ROBERT L. HAPGOOD
Chief Accountant

CITY OF COLORADO SPRINGS

OFFICE OF THE MAYOR
P.O. BOX 1575 COLORADO 80901

July 11, 1980

TEL. (303) 471-6600

ROBERT M. ISAAC
MAYOR

Major General Louis C. Menetrey, U.S.A.
Department of the Army
Headquarters, Fort Carson &
4th Infantry Division (Mechanized)
AFZC-FE, Building 304
Fort Carson, Colorado 80913

Dear General Menetrey:

The Colorado State Land Board has informed you previously that it was negotiating a lease for limestone extraction in the northwest corner of the Huerfano site for the expansion of Fort Carson.

The Land Board now has reached agreement on the lease terms with Mineral Reserves, Inc., and they soon will commence exploratory drilling throughout the site. In addition, the first steps have been taken toward bringing a railroad spur into the site.

Sincerely yours,

Rowena Rogers
President

RR:mlp

cc's: Mr. Michael E. Halla
Office of Commanding General
4th Infantry Division and Fort Carson
AFZC-FE-EQ, Building 304
Fort Carson, Colorado 80913

Lieutenant Colonel Donald B. Safford
United States Army
DPAE, Environmental Office
Land Acquisition Committee
Headquarters, Fort Carson &
4th Infantry Division (Mechanized)
Fort Carson, Colorado 80913

Major General Louis C. Menetrey
Commanding General
4th Inf. Div. (M) & Fort Carson
Fort Carson, CO 80913

Dear General Menetrey:

The City of Colorado Springs City Council discussed the land expansion plans of Fort Carson during its informal meeting on July 7, 1980 and fully supports the United States Army in this action. Our reasons are as follows:

The nation's military forces must have adequate space and facilities in which to train if we are to maintain national preparedness. Recent international events have sharply dramatized this need.

We strongly feel that relocating even a part of this installation will be costly to all taxpayers in the United States and create time delays that are unacceptable to our military forces.

The State of Colorado has the needed space for expansion requirements.

Relationships between the civilian and military communities are extremely good and have flourished because of the close cooperation enjoyed. Operations such as the MAST helicopter service has saved numerous lives statewide since it began. Calls for help during severe storms have always been answered. Fort Carson and its people have been and are good neighbors.

The land under Fort Carson's jurisdiction has been used responsibly and we feel that future commanders will continue to be sensitive toward the environment.



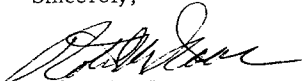
Major General Louis C. Menetrey
Page 2
July 11, 1980

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203

August 5, 1980

The economic impact of Fort Carson's contracts and wages is of great local and statewide importance. We estimate that \$380 million annual contribution to our economy is generated by this establishment. Loss of this income would be severely detrimental to the economy of this community and the State of Colorado.

Sincerely,


Robert M. Isaac
Mayor

nib

Louis C. Menetrey
Major General, USA
Commanding
Headquarters, 4th Infantry Division (Mechanized)
Office of the Commanding General
Fort Carson, Colorado 80913

Dear Sir:

This is to acknowledge receipt of the Draft Environmental Impact Statement for the proposed acquisition of training land for Fort Carson.

Date received: June 23, 1980, date due August 15, 1980.

The Department of the Army, Fort Carson, and the Colorado State Historic Preservation Officer signed a Memorandum of Understanding concerning the protection and preservation of cultural resources.

Once the conditions outlined in the Memorandum have been met, in consultation with this office, in accordance with 36 CFR 800, compliance for cultural resource management will be achieved.

This office feels that the cultural resource sections in the DEIS do not adequately illustrate the density and cultural complexity of sites in either the Pinon Canyon or the Huerfano Canyon parcels. Sites within the two areas date from the Paleo-Indian through the historic periods. Later prehistoric sites are known to be part of a cultural boundary area between the prehistoric plains and the southwestern groups. In addition to the types of sites mentioned in the text (p. 3-50) major habitation sites also exist within the two parcels.

The historical importance of ranching to the two areas was also not adequately addressed. The significance of ranching from its very beginnings to the present cannot be underestimated. The lands within the Huerfano Canyon parcel are part of the Historical Vigil and St. Vrain Grant.

1-3

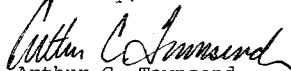
Louis G. Menetrey
July 24, 1980
Page two

On page 4-46, the report states that "Once the survey is completed, the inevitable disturbance by tracked vehicles of surface remnants such as lithic scatters, is not thought to be a critical problem, since the data concerning cultural remnants will be on file." This is erroneous. In regard to sites that are determined eligible for inclusion in the National Register of Historic Places, mitigation of the adverse impacts of Army activity to eligible properties by measures other than simple site recordation, must be considered.

The Army should be aware that cultural resource management is an important element in its planning operations and that there are many important cultural resources within both of these areas. Simply because few sites have been recorded does not mean that few sites exist, only that there have been no surveys to identify them.

We anticipate reviewing the final EIS and working with the Army to complete their compliance responsibilities.

Sincerely,



Arthur C. Townsend
State Historic Preservation Officer

ACT/WJG:bff



COLORADO STATE SOIL CONSERVATION BOARD

618A State Centennial Building
1313 Sherman Street
Denver, Colorado 80203
Phone 839-3351

Richard D. Lamm
Governor

Allen J. Campbell
Director

July 21, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

We have reviewed the draft EIS on the acquisition of training land for Fort Carson and found it to be well written in most areas.

Both tracts of land under consideration are very fragile from the stand point of the soils and vegetation. The Estimated Recovery Time (Table A-11) is questionable. The recovery time is based on no new disturbances of the treated area over that period of years. This will not be the case as every three years the treated areas will be disturbed by a training exercise.

Structures such as terraces, diversions, pitting and erosion control Dams will not be the answer to the erosion problems. All these practices will reduce the runoff from the watershed and this will interfere with the irrigation water rights of the downstream water users.

We would certainly encourage the development of a monitoring plan for the quality and quantity of stream flows of the area. The amount of sediment and TDS will need to be closely observed as the land use changes.

In reviewing the sections on terrestrial wildlife, we have found the EIS to be lacking. It appears that the authors have relied heavily on Colorado Division of Wildlife inventory data in the preparation of their wildlife assessment. The validity of DOW's data is not in question. However, their data tends to be centered around relatively few species, primarily those of economic or social value. As a result the wildlife sections of the EIS lack breadth in terms of species diversity. For example, no accurate data is presented for small mammal populations.

Tables F-1 and F-2 in the appendices lists species that potentially occur on the Huerfano and Pinon Canyon parcels. Little value is obtained from exhaustive lists of species that potentially occur in an area. This data appears to have been obtained from general species distribution maps and not from on-site investigations. A more meaningful contribution would include a comprehensive list of species which presently occur on each of the sites along with

population estimates. It was implied on page 4-22 of the EIS that such inventories would take place before and after project implementation. It is imperative that baseline data (e.g., small mammal demographics) be established prior to project implementation. The EIS in its present form offers little baseline data for population parameters on either micro or macrofauna. As a result it is difficult to discuss present species or population trends and would be impossible to accurately do so after implementation. On page 4-21 it is stated that "scientific research data is unavailable to compare existing populations to previous populations". This statement was in reference to the highly speculative observation of no apparent intraspecies decline as a result of the present Fort Carson location. Let us hope that in this case, the lesson from past experience is not doomed to repeat itself.

Allen J. Campbell

Allen J. Campbell
Director

AJC/ks

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Rocky Mountain Region
11177 West Eighth Avenue, Box 25127
Lakewood, Colorado 80225

1590

July 11, 1980



Louis C. Menetrey, Major General, USA
Department of the Army, Headquarters
Fort Carson and 4th Infantry Division (Mech.)
Office of the Commanding General
Fort Carson, Colorado 80913

Dear General Menetrey:

Figure 3-15 of the Draft Environmental Impact Statement for Training Land Acquisition shows there are no National Forest System lands within the boundaries of the two alternative sites.

Thank you for the opportunity to review the draft statement.

Sincerely,

Dan E. Williams
DAN E. WILLIAMS
Director, Recreation and Lands



United States
Department of
Agriculture

Soil
Conservation
Service

P. O. Box 17107
Denver, CO 80217

July 18, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

Thank you for the opportunity to review the Draft Environmental Impact Statement (DEIS) for Training Land Acquisition for Fort Carson, Colorado. The DEIS is being reviewed by our field offices in Pueblo, Rocky Ford, and Trinidad, and by the Soil Conservation Districts at those offices. The districts will comment separately.

Several points need clarification:

1. The maps in the documents have been reduced to the point of being very difficult to read. Some boundary lines are impossible to trace at the scale presented in the documents. Maps with much less detail would be helpful.
2. The fragile nature of the soils and vegetation at both sites is well documented. Given an even disbursement of activity across the landscape, the stability ratings of the vegetative sites would provide a measure of impacts. Due to the fragile nature of the area, however, an analysis of impacts on the existing training area at Fort Carson is needed to provide a basis for comparison. Training impacts would tend to concentrate in areas of cover (Draws and P-J areas) and a comparison of the impacts on similar areas would lend credence to the predictions.
3. The DEIS does not specifically name a person responsible for insuring that the management plan is carried out. A responsible official capable of enforcing training restrictions is needed to regularly inspect the area and to declare that site deterioration is not occurring. Provision should be made in the plan for revising the management plan if impacts become more severe than predicted.

With the exception of the 3 comments above, the assessment portion of the draft is well done.

Again, thank you for the opportunity to review this draft. Please contact me if you and your staff is in further need of the expertise within the Soil Conservation Service.

Sincerely,

Sheldon G. Boone
State Conservationist Acting

The Soil Conservation Service
is an agency of the
Department of Agriculture

SCS-AS-1
10-79

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333

July 14, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Department of the Army
Fort Carson, Colorado 80913

Dear Mr. Halla:

We have reviewed the Draft Environmental Impact Statement (EIS) for Training Land Acquisition, Fort Carson, Colorado. We are responding on behalf of the Public Health Service.

The EIS does not adequately discuss disease vectors. The final EIS should describe vector populations, potential health threats, proposed control methods that may be used, kinds and volumes of pesticides, and application procedures.

It is noted that water supply for the cantonment area, as well as for the field maneuvering area, is still an unresolved issue. The EIS implies this issue would be resolved prior to purchase of the land. However, all further studies should be completed and the water supply issue resolved prior to development of the final EIS. The final EIS should fully discuss proposed water supplies, treatments, and distributions within both the cantonment area and the maneuvering areas.

Thank you for the opportunity of reviewing this EIS. We would appreciate receiving a copy of the final EIS when it becomes available.

Sincerely yours,

Frank S. Lisella, Ph.D.
Chief, Environmental Affairs Group
Environmental Health Services Division
Bureau of State Services

1-5



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGIONAL/AREA OFFICE
EXECUTIVE TOWER - 1405 CURTIS STREET
DENVER, COLORADO 80202
July 23, 1980

REGION VIII

IN REPLY REFER TO:
850Q

Commander
4th Infantry Division (Mechanized)
Attention: AFZC-FE-EQ
Fort Carson, Colorado 80913

Dear Sir:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement for possible acquisition of training land in southeastern Colorado.

Your draft has been reviewed with specific consideration for the areas of responsibility assigned to the Department of Housing and Urban Development (HUD). The review considered the proposals compatibility with local and regional comprehensive planning and impacts on urbanized areas. Within these parameters, this document is adequate for our purposes.

If you have any questions regarding these comments, please contact Mr. Carroll F. Goodwin, Area Environmental Clearance Officer, at FTS 327-3102 in Denver.

Sincerely,

Raymond D. McKinney
Raymond D. McKinney
Director

Program Planning and Evaluation

AREA OFFICE
Denver, Colorado



IN REPLY REFER TO

United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25016 M.S. 415
DENVER FEDERAL CENTER
DENVER, COLORADO 80225
Water Resources Division
Colorado District

August 14, 1980

Lt. Col. Larry A. Blair
Director of Facilities Engineering
Corps of Engineers
AFZC-FE-EQ
Fort Carson, Colorado 80913

Dear Colonel Blair:

Attached as requested are colleague review comments on the draft EIS for training land acquisition, Fort Carson, Colo. Comments were made by the following Water Resources Division, Colorado District employees: Guy Leonard (hydrology section), Doug Cain (water-quality section), and Bill Curtis (sediment section).

Should you have any questions regarding any of the reviewers' comments, please contact Jerry Hughes, USGS, Subdistrict Chief, in Pueblo at (303) 544-5277, ext. 345.

Sincerely yours,

Richard O. Hawkinson

Richard O. Hawkinson
Associate District Chief

cc: w/attachments
Subdistrict Chief, WRD, Pueblo, Colo.

1-7



United States Department of the Interior

GEOLOGICAL SURVEY
Water Resources Division
P. O. Box 1524
Pueblo, Colorado 81002

July 24, 1980

Lt. Col. Larry A. Blair, Corps of Engrs.
Director of Facilities Engineering
AFZC-FE-EQ
Fort Carson, Colorado 80913

Lt. Col. Blair:

As requested, the Draft Environmental Impact Statement (DEIS) for training and land acquisition by Fort Carson has been reviewed focusing on topics related to the quantity aspects of surface and ground water on the two parcels under consideration. My comments are as follows:

Description of Water Resources

The DEIS presents adequate and accurate baseline descriptions of the quantitative aspect of the surface-water resources in the vicinity of the Pinon Canyon and Huerfano River parcels. The descriptions could be enhanced with the inclusion of stream hydrographs during average and dry years.

Additional data should be obtained to expand the baseline description of the quantitative aspect of ground-water resources within the parcels. Measurements should be made of the depth to and yield of wells completed in the bedrock aquifers. The thickness, areal extent, and dependability of the alluvial aquifer, in the parcels, should be more fully described. Some of the information required in such a description can be provided by this office.

Impacts on Water Resources

Impacts of the proposed action on the quantitative aspect of water resources in the vicinity of the parcel have not been completely identified or quantified. The issue of the source of a potable water supply should be resolved.

Limited yield of existing wells in the Dakota Sandstone and limited extent of alluvial aquifers may preclude development of ground water as a dependable and sustaining source of supply. Should the development of a water supply from one of these aquifers appear feasible, assumptions regarding the thickness, extent and hydraulic characteristics of the aquifers would enable estimates of drawdown, radius of cones of depression and size of well field. If the alluvial aquifers are to be considered as potential water source, the impact of pumpage on the timing and quantity of streamflow should be described.

The Pinon Canyon parcel may receive water from the city of Trinidad. The source of the water supply for Trinidad should be described and the impacts of the increased demand on the water supply be identified and described. Construction of a pipeline to convey water from Trinidad could produce additional impacts. These should also be identified and described.

Sincerely,

Guy Leonard, Hydrologist
Assistant Subdistrict Chief



United States Department of the Interior

GEOLOGICAL SURVEY

Water Resources Division
P. O. Box 1524
Pueblo, Colorado 81002

July 28, 1980

Lt. Col. Larry A. Blair, Corps of Engrs.
Director of Facilities Engineering
AFZC-FE-EQ
Fort Carson, Colorado 80913

Lt. Col. Blair:

I have reviewed the Draft Environmental Impact Statement (DEIS) for Training Land Acquisition with particular emphasis on water-quality aspects on the two proposed parcels. The review comments that follow are organized by section in the DEIS, and include general comments about the water-quality data, information, or discussion in the section and specific line by line comments where necessary for the section. Following the section by section review are a few general comments about the overall adequacy of the water quality aspects of the DEIS.

Section 2.7.4: Comparison of Impacts: Hydrology

When reading the DEIS from front to back, this section seems out of place, since the existing hydrologic conditions and expected impacts of acquiring either of the two parcels have not yet been described.

Suggestion: Compare impacts after impacts have been described.

The comparison of increased sedimentation and salinity between the parcels is not quantitative enough to assess the relative impact on the Huerfano, Purgatoire or Arkansas Rivers.

Suggestion: Collection of additional data would allow a more quantitative approach.

Section 3.1.4: Affected Environment, Huerfano River Parcel: Hydrology

The surface-water quality discussion in this section is based exclusively on water-quality samples which were collected at locations outside the parcel boundaries. For example, data in the DEIS for the St. Charles and Huerfano Rivers were based on samples collected near the mouths of these rivers. At this location, both of these streams have been significantly affected by irrigation return flows from acreage irrigated primarily by the Bessemer Ditch. Using this data to draw conclusions about water quality on the parcel may lead to erroneous judgements.

Suggestion: Collection and interpretation of data from appropriate locations would lead to a more valid assessment of existing conditions.

Throughout this section, section 3.2.4 and Appendix E, Colorado water-quality guidelines are referred to as standards. The guidelines only become standards when they are applied to a given stream segment during the stream classification process, which is scheduled to occur for the Arkansas River and tributaries in fall 1980. The actual standards set may not be the same as the guidelines. Also, it appears that the DEIS may be referring to a draft of the guidelines rather than the final copy which became effective in July 1979.

Suggestion: If time permits, wait until after the stream classification process and include the actual stream standards in the final EIS. In any event, assure that the correct water-quality guidelines document is being referenced in the DEIS.

Discussion of surface-water quality in the Apishapa River is not included in the DEIS even though part of the parcel drains to this river.

Suggestion: Include discussion of water quality in the Apishapa River in the final EIS.

In many of the tables and much of the discussion in this section, both the number of samples collected and the stream discharge during sample collection are not included in the DEIS. Without this information, it is difficult to make valid interpretations of water-quality conditions at the sampling sites discussed. This information is especially necessary on streams such as those under consideration because of large variations in water quality between high and low flow situations.

Suggestion: Whenever possible, include stream discharge data with water-quality analyses and use this information as an aid in data interpretation. When presenting or discussing average water-quality data, specify the number of samples on which the average is based.

Although limited data are available on ground-water quality in the parcel, other water-quality data besides those contained in McLaughlin (1966) are available for the Dakota Sandstone and the Cheyenne Sandstone member of the Purgatoire formation. These data, while not necessarily from wells on the parcel, do suggest the possibility that levels of dissolved iron and radium-226 may exceed drinking water standards. This information is available on request. This comment also applies to sec. 3.2.4.

Suggestion: Include this data in the final EIS.

P. 3-25, second paragraph, second line: Quality of water in the Cucharas is marginal for what use?

P. 3-25, fourth paragraph, second line: St. Charles confluence is with Arkansas River, not Huerfano River.

P. 3-27, third paragraph, first line: Sediment yield is a water-quality parameter, not a nonpoint source of pollution. Soil erosion is a nonpoint source of pollution.

P. 3-30, Table 3-10: Where available, include a brief description of water quality in the last column of this table.

Section 3.2.4: Affected Environment, Pinon Canon Parcel: Hydrology

The surface-water quality discussion in this section is based exclusively on water-quality samples which were collected either 12 miles upstream or about 50 miles downstream from the parcel. These data do not provide an adequate or appropriate basis upon which to describe the water quality of the Pinon Canyon Parcel.

Suggestion: If the intent of the DEIS is to describe the existing water-quality conditions on the parcel, collect and interpret data collected on the parcel itself.

No attempt has been made, either in this section or section 3.1.4 to illustrate, develop, or quantify a relationship between dissolved solids or specific conductance and stream discharge for the Purgatoire or Huerfano Rivers. Without this type of relationship it is not possible to even begin an assessment of the possible impacts of the use of either parcel on increased salinity in the two rivers or in the Arkansas River.

Suggestion: Attempt to develop this relationship using whatever data is available. The U.S. Geological Survey has specific conductance data over a range of discharges at all stream gage sites which it operates for at least the last 3 to 5 years.

Section 4.1.4: Environmental Consequences: Huerfano River Parcel: Hydrology

Since expected increases in salinity resulting from use of the parcel have not been documented, it does not seem possible to make the evaluation that increased sediment loading is the most significant potential impact.

Suggestion: Quantify the expected salinity increases in the parcel. If this is not possible, give background information on how it was decided that the most significant potential impact would be increased sediment loading.

The second paragraph on page 4-15 is poorly written, unscientific and contains references to physical impossibilities (bromine and iodine converted to chloride). The fourth paragraph on this page is similarly poor (anaerobic activity requiring DO). The nature of these two important paragraphs calls into question the adequacy of the DEIS as it relates to water-quality impacts.

Suggestion: Rewrite these two paragraphs so that they are scientifically valid, readable, and to the point.

The subsection on Oil Spills and Other Hazardous Toxic Substances seems to gloss over the potential water-pollution hazards from this type of accident, especially since a single, timely, well placed accident (however unlikely) could cause problems of more than a minor nature.

Suggestion: It may be useful in this section to examine what toxic substances are likely to be used on the parcel, and more adequately assess the possibility of both minor and not-so-minor incidents.

It is mentioned that ground-water development could lead to a decrease in head with migration of poorer quality ground water into the aquifers. The possible magnitude of this problem is not addressed, nor is the source or quality of the poorer quality ground water.

Suggestion: Include, if possible information on the possible magnitude of the problem and the source and quality of the poorer quality ground water.

Section 4.2.4: Environmental Consequences: Pinon Canyon Parcel: Hydrology

No comments in addition to those in section 4.1.4.

Appendix E

P. E-16, Table E-2: This table should be updated according to the current State water-quality guidelines.

P. E-17, Table E-3: Include location of sample collection and number of samples in this table.

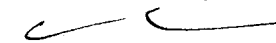
P. E-19, Table E-4: Same comment as Table E-3.

P. E-21, Table E-5: Data is now available at sites on the St. Charles River above and below this outfall for 1979 and 1980.

OVERALL COMMENTS:

Because of a lack of adequate and appropriate water-quality data for the two parcels the DEIS does not appear to provide an acceptable description of the affected environment on the parcels. Without this baseline information the discussion in the DEIS of expected water-quality impacts should either parcel eventually be acquired and used, is not of a quantitative nature. This lack of quantitative information makes the DEIS of little value in assessing the desirability of any proposed action as it relates to potential water-quality impacts.

Sincerely,


Doug Cain
Hydrologist

Glossary

Bed material - The sediment mixture of which the bed is composed. In alluvial streams bed-material particles are likely to be moved at any moment or during some future flow condition.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Gravel - Sediment particle sizes between 2 and 64 millimeters.

Particle size - A linear dimension, usually designated as "diameter," used to characterize the size of a particle. The dimension may be determined by any of several techniques, including sedimentation, sieving, micrometer measurement, or direct measurement.

Sediment - (1) Particles derived from rocks or biological materials that have been transported by a fluid.

(2) Solid material (sludges) suspended in or settled from water.

** Sediment delivery ratio - The ratio of sediment yield to gross erosion expressed in percent.

** Sediment yield.

Silt - Sediment particle sizes between .004 and .062 m.m.

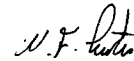
** Stream discharge - The quantity of flow passing a stream transect in a unit of time. (The flow contains both dissolved solids and sediment).

Definitions taken from National handbook of recommended methods for water-data acquisition.

** Should be added.

COMMENT:

If either parcel of land is acquired, it would be in the best interest of the U.S. Army, if both inflow and outflow stream discharge stations were established. These stations would provide factual data on water quality, sediment quantity and chemical composition of the flow.



W. F. Curtis

Enclosures



IN REPLY
REFER TO: CO-922
1793

United States Department of the Interior

OFFICE OF THE SECRETARY

Building 67, Room 688
Denver Federal Center
Denver, Colorado 80225

July 24, 1980

ER 80/518

Major General Louis C. Menetrey
Department of the Army
Fourth Infantry Division (Mechanized) and
Fort Carson
Office of the Commanding General
Attn: AFZC-FE-EQ
Fort Carson, Colorado 80913

Dear General Menetrey:

We have reviewed the draft environmental impact statement for the Acquisition of Training Land for Fort Carson, and provide the consolidated comments of the Interior Department agencies.

Cultural Resources

The Memorandum of Understanding with the Colorado State Historic Preservation Officer (Appendix I-35) covers all the major steps necessary to protect cultural resources. Careful adherence to the provisions of the Memorandum will assure that all pertinent laws and regulations have been followed.

(National Natural Landmarks)

This draft statement is generally adequate in describing the effects of the alternative actions on the Red Rock Canyon potential National Natural Landmark. However, the following points should be considered in the preparation of the final statement.

The document states (p. 3-100) that the Heritage Conservation and Recreation Service has deferred action on designation due to a lack of information and to wait for a decision by the Army. This is not correct. Designation is presently being delayed by a lack of landowner response.



United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 415
DENVER FEDERAL CENTER
DENVER, COLORADO 80225
Water Resources Division
Colorado District

IN REPLY REFER TO:

August 12, 1980

MEMORANDUM

To: District Chief, Water Resources Division, Lakewood, Colorado
From: W. F. Curtis, Hydrologist
Subject: Draft E.I.S. for training land acquisition, C of E

I have reviewed the above E.I.S. in regard to the comments on sediment. Both areas, the Huerfano and Pinyon Canyon, are located in an area of Colorado in which actual sediment data are very sparse or nonexistent. The method used in the report is the Universal Soil Loss Equation. This procedure was developed in the eastern United States for farm plots of 40 to 160 acres. To take this procedure, transport it to the West and apply it to 200,000 acres is stretching its capabilities. This has been tried before, most notably in the Piceance basin, and the resulting tonnage appears to be too large. To try to evaluate the figures given in the report, I used the Colorado Land Use Map Folio - Sediment Field Map - published by the Colorado Land Use Commission, January 1974.

The glossary contained in the E. I. S. does not contain a definition for sediment yield. I am using the one contained in the Colorado Land Use Map Folio; namely, "The average annual amount of sediment from a square mile transported by water from source areas into local water courses. This sediment yield represents an average over a long period such as 25 years or more."

If the sediment yield is taken as the amount transported into the main watercourse of each land parcel, we are talking about the Huerfano and Purgatoire Rivers. From the Sediment Yield Map, the following yields are shown:

Huerfano - 0.1 to 0.2 acre-feet per square mile per year.
Purgatoire - 0.2 to 0.5 acre-feet per square mile per year.

Converting acre-feet to tons using 100 pounds per cubic foot, we obtain:

Huerfano - 218 to 439 tons/mi²/yr
Purgatoire - 439 to 1,089 tons/mi²/yr

There is an additional sediment yield added to this figure for severely eroding stream banks. This added yield is from 1 to 2 acre-feet per stream mile per year. Using the same volume to weight conversion, 1 acre-foot = 2,178 tons.

Huerfano - 8 miles x 1.5 acre-ft. = 12 acre-ft. or 26,136 tons
Purgatoire - 12 miles x 1.5 acre-ft. = 18 acre-ft. or 39,204 tons

By dividing the added tonnage by the area of the land parcels, we obtain:

Huerfano - 26,136 ton ÷ 338 mi² = 77 tons/mi²/yr
Purgatoire - 39,204 ÷ 400 mi² = 98 tons/mi²/yr

Combining both figures to obtain the total sediment yield:

Huerfano - 295 to 811 ton/mi²/yr
Purgatoire - 537 to 1,724 ton/mi²/yr

The figures given in the E.I.S. are:

Huerfano - 1,190 ton/mi²/yr
Purgatoire - 1,540 ton/mi²/yr

Comparing the figures obtained from the Sediment Yield Map and by the Universal Soil Loss Equation, it appears that the figures used in the E.I.S. are on the high side.

Specific comments:

Page 3-27, third paragraph--"Sediment yield...this is not a nonpoint source of pollution."

Page 3-28, Table 3-9

Conversion Factors

* 1 square mile = 259 hectares (approximately) not 259,093
1 ton/mi²/yr = 2.2 x 10⁻³ M³/hectare/year (approximately)
not 2.8 x 10⁻⁶

* These conversion factors are shown on many tables.
Contained in Errata

Page 4-52

The projected percentage increase in sediment yield due to military training is outside my expertise, but does seem to be reasonable.

Page 4-53, Table 4-16

Conversion factors are in error.

Page 7-20 - 7.2 Glossary.

The following definitions should be used instead of the ones given. They are taken from the National Handbook of recommended methods for water-data acquisition. Definitions of "Sediment delivery ratio," "sediment yield" and "stream discharge" should be added to the glossary.

L-12

needs to be carefully planned and sufficient lead time should be allowed to permit documentation of the baseline conditions.

We suggest that any supplementary environmental document for later stages of the project should assess ground-water impacts on the basis of results of the planned aquifer testing and other hydrologic studies.

Nationwide Rivers Inventory

Since the preparation of this draft environmental statement, the Heritage Conservation and Recreation Service has completed Phase I of the Nationwide Rivers Inventory. This is a two-phased screening process to identify the best remaining free-flowing rivers in the nation that may merit protection at the Federal, state, or local level. Phase I of the inventory, focusing on streams or segments still in a relatively natural, undeveloped condition, has been completed nationwide. Phase II, which will consider such positive factors as recreation and wildlife values, is just being initiated in the western regions of the Heritage Conservation and Recreation Service.

Streams in both the Huerfano River and Pinon Canyon parcels were identified in Phase I as meeting the established criteria. The Purgatoire River (from Smith Canyon to Trinchera Creek) and Chacuaco Canyon (from the Purgatoire River to Highway 160) are located in the Pinon Canyon Parcel. In the Huerfano River Parcel, the Huerfano River (from the Huerfano Cucharas Ditch Diversion to Cucharas River) was identified. The environmental statement has recognized the natural values of, and impacts to, these river segments, and the final statement needs only to provide brief recognition that these river segments have been identified by the Nationwide Rivers Inventory.

Wildlife Resources

Impacts to wildlife and the associated habitat would be similar with either the Huerfano or the Pinon Canyon alternatives. Either alternative will result in reduced habitat and population of mule deer, antelope, scaled quail and nongame species of birds and mammals. Mitigation potential for wildlife appears to be greater in the Pinon Canyon alternative due to the diversity of habitat along the Purgatoire River Canyon. Wildlife mitigation measures are not described in sufficient detail in the DEIS to evaluate the effectiveness of the proposed plan. For example, it is stated that areas would be managed for pronghorn or scaled quail, but there is no indication of what management will consist of or what the management goals are.

The wildlife protection area could be expanded under either alternative by including the side canyons in the designated wildlife areas. The canyons have many of the same characteristics as the main canyons and would increase the diversity as well as the size of the wildlife protection area.

Wildlife populations and habitats will be decreased under either of the proposed alternatives. Mitigation measures and management plans for the designated wildlife areas are not adequately described in the document. The wildlife areas should be expanded to include the tributary side canyons as well as the main river canyons.

Specific Comments

Page 1-7, paragraph 1.

The EIS states that the number of vehicles used during a training period is a conservative estimate. A conservative estimate would be the least number likely and would depict the opposite of the worst case situation, necessary for evaluation under CEQ guidelines.

Page 2-13, paragraph 4.

The proposed action (Increased Use) alternative sets training levels at 15 percent above carrying capacity. This use level is against the basic principles of range management and would guarantee continued deterioration of the range. Declining trend would be accelerated during drought years as no deferment is allowed. This is contrary to the prime objective of the Land Use Management Plan as stated in paragraph 4, page 2-13.

Page 2-48, paragraph 3.

The water needs could cause a significant impact on ground water quality and quantity as stated in paragraph 3, page 2-48. These impacts are vaguely mentioned, however, they are significant enough to be fully assessed in the final EIS. Water right acquisition, damages, and litigation costs could be significant and should also be assessed.

Page 3-46.

Which of the population numbers (low, medium, or high) were used for the impacts section? This can make a difference in the outcomes of the economic model used.

Page 3-49, paragraph 4.

A clear distinction between available jobs and employment needs to be made. A job is not available if it is filled by a worker, nor are all available jobs filled. Employment characteristics need to be clearly defined.

Use the state unemployment number to clarify what the percentage point differences are (3.3 percent). The difference between the state unemployment percentage and the individual counties should be in percentage points and not percentages.

Landmark status and acquisition by the Army for training appear to be incompatible. Some of the reasons for this are:

- a) 1/4 mile is not a sufficient buffer zone along the Purgatoire Canyon.
- b) Maneuvers in the pinon-juniper woodland and the other brushy areas would destroy much of the standing vegetation and would eliminate reproduction. Therefore, these community types would be eliminated in a short period of time. This would not only destroy the communities but would eliminate their utility for military maneuvers.
- c) The wildlife habitat and the wildlife would be severely impacted in the pinon-juniper and plains areas. This would also have an effect on the riparian wildlife.
- d) The loss of vegetation would be severe in many cases. This will increase soil erosion by water and wind. The mitigation plans call for reseeding with some non-native species. This would contaminate all of the adjacent plant communities including the canyon itself.

Economics

The Statement traces economic impacts through the use of an economic impact forecast system that is limited in scope and dated in its data base. As stated in the EIS the numbers are not necessarily reliable but could be used for comparison purposes between impacts (the Huerfano River Parcel vs. the Pinon Canyon Parcel). This does not convey the type of information necessary to understand the estimated economic impacts to the region. There is no way to measure net benefits or net costs from this analysis. It leaves the reader no more informed than before reading the statement. If the multipliers used were drawn from the national level then the values could over or underestimate the resulted impacts.

Land Resources

Within the two proposed acquisition areas there is a comparatively small amount of public land administered by BLM. They consist of about 9 isolated tracts and 2,400 acres in the Pinon Canyon parcel, and about 10 isolated tracts and 2,000 acres in the Huerfano River parcel.

If it becomes appropriate to consider authorizing the Army to use these public lands through either rights-of-way under section 507 of the Federal Land Policy and Management Act, cooperative agreement under section 302 of the Act, or withdrawal under section 204 of the Act, we believe the DEIS will provide an acceptable base upon which allowance or non-allowance of the Army's use can be based.

Mineral Resources

We are primarily concerned with potential project conflicts covering mineral resources and development in the two proposed acquisition areas,

which total about 200,000 acres. We note that the Colorado School of Mines Research Institute (CSMRI) conducted a mineral resource evaluation of both parcels under consideration in the DEIS.

Known mineral resources within the Huerfano River and Pinon Canyon parcels appear to be limited to limestone, sand and gravel, and possibly uranium. Extensive limestone deposits are present in both parcels, including 3,912 acres under lease for exploration in the Huerfano River block. Complete evaluation of these deposits is difficult, as noted by CSMRI, because of private mineral and surface ownership. Sand and gravel deposits of limited extent could be used by the Department of the Army for building materials in the cantonment areas, or as surfacing material in motor pool parking lots or on interior roads. The statement indicates that favorable uranium source rocks probably exist within both parcels. Occurrences of subeconomic-grade uranium, discovered in the 1950's, may have greater economic potential now or in the future. Increasing exploration activity ultimately may define these parcels as potential uranium targets. We suggest that subsequent versions of the statement indicate the possible economic impact that withdrawal from uranium exploration and development might have on these parcels and the surrounding communities.

The DEIS failed to recognize the existence of natural gas or petroleum product pipelines in either of the parcels. In Management Unit A of the Pinon Canyon parcel are two parallel, 8-inch natural gas pipelines, owned by Raton Natural Gas Co., which, in the NW corner of sec. 35, T 29 S, R 59 W, become one 10-inch line, owned by Colorado Interstate Gas Co. Subsequent versions of the DEIS should indicate the effects that training and maneuver activities might have on this gas pipeline system.

Significant conflict between known mineral resources and proposed land use is not anticipated in either parcel, except for those lands now under lease for limestone exploration.

Sociology

This statement, if the data are accurate, has properly forecast the micro and macro demographic and social impacts of the proposed project, both in terms of displaced population and population generated.

It has correctly indicated that the micro impacts will be severe, especially to those displaced, and that a vehicle for mitigation exists (PL 91-646). When mitigation is in progress, careful attention should be given to the social and psychological consequences of displacement.

The EIS correctly forecast that the demographic and social impacts, in a macro sense, will not be great.

Water Resources Including Rivers

We concur that surface-water monitoring will be required to determine the effects of the proposed action on the quantity and quality of stream flow within and downstream from the parcel to be acquired. Such a program

Page A-1, paragraph 4.

This paragraph and Table A-1, regarding deferment periods, conflict with Figure 2-6 which states that training will be deferred during April and May. The appendix, however, states that training will occur during April. With the only rest during the growing season being in May, plants will be subject to training impacts from June through August which corresponds with the major growth period of warm season species which dominate both sites. Such a treatment strategy essentially defeats the purpose of deferment or rest as stated in paragraphs 3 and 4, page 2-18.

Table A-11.

Based on BLM employees' observations of revegetation techniques used at Fort Carson, these treatments would have no effect on recovery times as given in Table A-11. Based on our observations and according to Tables 4-2 and 4-15, approximately half of either parcel would receive moderate to extreme disturbance and the most stable sites would require a minimum of 8 to 15 years to recover. In spite of the deferment and range treatments, the proposed action and alternatives cannot logically achieve resource protection goals. The final analysis should address the true situation in a more straightforward manner.

Page A-25.

The discussion of mechanical treatment indicates limitations to where treatments may be applied. Only three of the nine range sites present are amenable to treatment. These three sites constitute only 66.8 percent of the Huerfano parcel and 51.9 percent of the Pinon parcel (Tables 3-3 and 3-14). This leaves major portions of either parcel that will not be rehabilitated even though most of the training will occur within these sites according to paragraph 3, page 4-2. This unmitigated impact is not addressed.

Page C-9, paragraph 3.

This paragraph states that litter cover is assumed to remain constant. This assumption is not correct in that as live vegetative cover is destroyed, the source for litter accumulation is reduced and litter cover would also be reduced. This factor should be included in estimating cover losses.

Page D-17.

The vegetation transects used as discussed in paragraph 2, page D-17, measure aerial plant cover. This data could vary significantly with measurements of basal plant cover. Basal cover would provide far more accurate predictions of watershed and erosion impacts.

Page I-1.

The 15 percent increase in retail sales from 1978 to 1979 in Pueblo County (Table I-6), does not appear to indicate a declining or stagnant economic situation as stated in paragraph 1, page I-1. This statement, plus analyses discussed in comments 11 and 12, would give readers the impression that there is a greater economic benefit under the proposed action when the loss is actually much greater. The economic analysis should reflect the true situation.

The range carrying capacity of the Huerfano River parcel is seriously underrated in paragraph 4, page I-1, as being 50 to 70 acres per animal unit month. The Butler ranch currently supports an animal year on 45 acres. Such a mistake would cause a major underestimation of economic impacts and should be re-evaluated.

We appreciate the opportunity to review this draft EIS.

Sincerely,


John E. Raybourn
Regional Environmental Officer

Enclosures

cc: Director 202B
AM/Royal Gorge RA

Page 3-95.

Indicate that the slow growth of the region (Las Animas and Otero Counties) is also associated with a small net migration to or from the region.

Page 4-3, paragraph 3.

The paragraph states that vegetative cover would be restored to an acceptable level. This level is unclear. Present cover or better must be achieved or downward trend would occur, resulting in continued decreases in range condition. This decline is indicated in paragraphs 1 and 2, page 4-5.

According to Tables 4-2 and 4-15, a loss of greater than 40 percent of the vegetative cover will occur on 48 percent and 53 percent of the Huerfano and Pinon parcels respectively. This will decrease range condition by at least two range condition classes. These are significant decreases over major portions of each parcel. Such significance should be addressed.

Page 4-5, paragraph 4.

This paragraph equates moderate training use to moderate grazing. This is incorrect as proper (moderate) grazing stimulates growth of forage whereas moderate training destroys 0 to 40 percent of the vegetative cover according to Table 4-2. The statement is misleading and understates the relative impact of training.

Page 4-10, paragraph 3.

This paragraph lists blue grama as bunch grass. This is incorrect. It grows as a sod-forming grass in southeastern Colorado. This fact is supported in Harrington's Plants of Colorado, a quoted reference in the EIS.

Page 4-22.

Mitigation procedures. (Item 1a through i) would not accomplish any mitigation or compensation for lost habitat. Many of these studies should have already been conducted to assess the impacts of the project on wildlife in preparation of the DEIS.

(Item 2). The management plan for the wildlife areas should be briefly described. The only way mitigation can be accomplished is to increase the carrying capacity of the wildlife areas. It has not been explained how this will be carried out.

Page 4-23

(Item 3). This is a management tool. It will not mitigate for any lost habitat.

(Item 4). Loss prevention is an appropriate mitigation tool. However, these sensitive areas and species should have already been identified to help in the decision-making process.

(Item 7). This section describes management plans designed to increase the carrying capacity of the habitat and is labeled enhancement. However, it appears that there has not been adequate mitigation of losses, thus, this section would be more appropriately labeled mitigation. There should be no enhancement until there has been adequate mitigation.

Page 4-30.

Air quality impacts from the Huerfano parcel are only assessed for the city of Pueblo on an annual average and are considered insignificant (paragraph 5, page 4-30). Given that training will occur during the windiest period of February and March, air quality would be significantly impacted over that period, particularly to communities east and northeast of the parcel. This situation needs to be addressed.

Page 4-38.

The displacement of people and their characteristics should not be estimates but exact numbers since you know the geographic area you are acquiring.

Page 4-39.

If the economic based computer model has apparent weaknesses then a discussion of alternative models and why they were not used would be appropriate.

Page 4-40-42.

It would be beneficial to the reader if an estimate on local workforce vs. imported workforce would have been made. To estimate impacts on schools, housing, taxes paid, etc., it is also important to know the workforce mix.

Economic gains are assessed to a much greater detail than the losses. This gives the impression of net benefit even though there is actually a net loss of jobs to the area according to paragraph 2, page 4-40, and paragraph 1, page 4-41. Economic losses are underestimated because the agricultural dollar is multiplied to seven times in its impact on the local economy. This constitutes a significant long-term loss that should be assessed. The impact assessment should be more objective and on a worst case basis rather than simply rationalizing the losses.

Page 4-55.

Aquatic ecology. This section describes the affected impacts to the aquatic environment associated with the Pinon Canyon alternative. However, there is no corresponding section for the Huerfano alternative.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

WASHINGTON, D.C. 20591



JUN 24 1980

Commander
4th Infantry Division (Mechanized)
and Fort Carson
Fort Carson, Colorado 80913
ATTN: AFZC-FE-EQ

Dear Sir:

We have reviewed the Draft Environmental Impact Statement on the
acquisition of land for Fort Carson, Colorado, and have no comments.

Sincerely,


JOHN E. WESLER

Director of Environment and Energy

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ROCKY MOUNTAIN REGION
10455 EAST 25TH AVENUE
AURORA, COLORADO 80010



July 21, 1980

Louis C. Menetrey, Major General
Department of the Army
Office of the Commanding General
Fort Carson, Colorado 80913

JUL 24 1980

Dear General Menetrey:

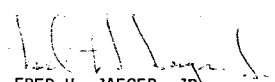
We have reviewed your Draft Environmental Impact Statement (DEIS) for
the proposed acquisition of training land for Fort Carson.

There are two aviation facilities which may be impacted by the Pinon
Canyon parcel: Trinidad Air Route Surveillance Radar (37 32 30 N, 104
00 20W) and Big Canyon Tyron Airport (37 23 37 N, 103 52 45W). The Big
Canyon Tyron Airport is a private airport owned by Mr. R. J. Hill, Model,
Colorado 81059.

Section 4.1.8, "Socioeconomics, land use, and transportation," under
Transportation Impacts, states that "A restricted airspace zone over this
parcel would not be needed..." Definite commitments, to this fact, must
be received from the Department of Army prior to final concurrence by the
Federal Aviation Administration.

Thank you for the opportunity to review the DEIS on your proposed project.

Sincerely,


FRED H. JAEGER, JR.
Chief, Planning and Appraisal Staff

L-17



EL PASO COUNTY

LAND USE DEPARTMENT

27 EAST VERMILIO
COLORADO SPRINGS, COLORADO 80903

August 14, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, CO 80913

Dear Mr. Halla:

After reviewing the Draft Environmental Impact Statement and attending the Public Hearing in Colorado Springs on July 11, 1980, I would like to compliment all who are involved in the production and management of the environmental review process concerning the Fort Carson acquisition efforts.

Much information has been contributed by many concerned individuals and organizations addressing all sides of the issue and I feel it is not necessary to duplicate these comments. I would, however, like to forward favorable comments on the draft E.I.S. on the basis of the obvious positive impact on El Paso County and by addressing the concerns brought out through the review process, a minimized impact to the selected acquisition area.

Sincerely,

FRANK O. BARBER
Environmental Planner

FOB/kj

United States
Environmental Protection
Agency

Region 8
Suite 103
1860 Lincoln St.
Denver, CO. 80295

Colorado, Montana,
North Dakota,
South Dakota,
Utah, Wyoming



AUG 14 1980

REF: 8W-EE

Major General Menetrey
Fort Carson & 4th Infantry Division (mech)
ATTENTION: AFZC-FE-EQ
Mr. Michael E. Halla
Building 304
Fort Carson, Colorado 80913

Dear Major General Menetrey:

We have reviewed the Fort Carson draft environmental impact statement for Training Land Acquisition and have rated it ER-2. This means we have reservations concerning the environmental effects of certain aspects of the proposed action and believe that additional alternatives need to be explored.

We commend the Department of the Army's proposal to implement natural resource management measures as described on pages 2-14 and 2-15. This plan presents what appears to be a very comprehensive program for attempting to maintain the land resource at its most productive level given the nature of the proposed activity. However, we are concerned that the soils and vegetation of both the Huerfano and Pinon Canyon Parcels will be irreparably damaged despite these measures. Chapter 4 of the draft EIS points out that under the Increased Use Scenario the Huerfano Parcel will experience "gradual degradation of the entire land resource" due to the shorter rest recovery period. It also states that the most useful units for training do not respond well to treatment measures and their steeper slopes make them susceptible to accelerated water erosion. Furthermore, it is predicted in the DEIS that full recovery for the majority of impacted lands in both parcels would occur "only in years with adequate and timely precipitation".

Given the fragile nature of both parcel's soils and vegetation we recommend that the Army give further consideration to the Balanced Use Scenario. Since this scenario does not exceed the land's carrying capacity and allows an additional year of recovery time, we believe that the combination of these two factors would aid in maintaining the integrity of the land resource.


Our review of the draft EIS did not reveal whether the Army has assessed the feasibility of providing the required training at a site or sites elsewhere in the United States. Given the acreage limitations of the two sites under consideration (live firing restriction), and the fragile nature of the soils and vegetation of both parcels, the possibility of temporarily relocating units to other bases or locations of greater area and where climate and soil stability are more conducive to revegetation, should be reviewed as an alternative.

In an attachment to this letter we have provided our comments regarding the air quality impacts associated with the proposed action.

Finally, in response to Larry Blairs' letter of June 10, 1980 requesting our assistance as a cooperating agency for the final environmental impact statement, we will be glad to review your analysis and share any environmental data for those areas which pertain to EPA responsibility. However, EPA will not be able to provide technical assistance in analyzing specific issues.

We appreciate the opportunity to comment on this draft EIS. If you have questions concerning our comments please contact Susan Mamich of my staff at 837-4831.

Sincerely yours,


Roger L. Williams
Regional Administrator

Attachment

Comments on Fort Carson Training Land Acquisition

AIR QUALITY

Section 176(c) of the Clean Air Act states that no department of the Federal Government shall approve any activity which does not conform to a plan after it has been approved or promulgated under Section 110. You should determine whether the Training Land Acquisition conforms to the Colorado State Air Quality Implementation Plan (SIP) which has been adopted for the project area.

On April 1, 1980, an advance notice of proposed rulemaking to implement Section 176(c) was published by EPA in the Federal Register. It provided for Federal departments to establish procedures for determining the conformity of their actions with SIP's. Because the rulemaking will take almost a year to complete, interim procedures were required. Each agency should ensure their environmental documentation will meet the procedural requirements of NEPA, sufficient to make the following findings:

1. All necessary state and federal air quality permits have been obtained for the activity. If a state variance has been issued, then it must be in conformity with the requirements of the Clean Air Act;
2. All population projections provided in the supporting data base for the action are consistent with the population projections used in the SIP;
3. The stationary, area and mobile source emission growth rates that are provided in the supporting data base for the action are consistent with the emission growth rates used in the SIP;
4. The increased emissions resulting from the action do not conflict with the emission reduction requirement of the SIP;
5. The increased emissions resulting from the action do not exceed the area's increment for the prevention of significant deterioration of air quality;
6. The increased emissions resulting from the action do not contribute to the violation of any national ambient air quality standard;
7. The action is consistent with all the transportation control measures that are provided for in the SIP; and
8. The action complies with all other special provisions and requirements of the SIP.

Regarding the Fort Carson Training proposal, findings 1, 4, 5 and 6 are applicable:

1. No permits are required for this activity since it is not a stationary source but a nonregulated indirect source.
 4. Although modeling predicts that the significant impact level of 1 ug/m^3 on an annual basis will be exceeded by 0.5 ug/m^3 , while the 24-hour impact of 3.7 ug/m^3 is below the 5 ug/m^3 significance level, these predictions are conservative for the following reasons:
 - a. Emissions factors have not been established for tanks and other military vehicles.
 - b. The dispersion characteristics of the fugitive emissions are not well known.
 - c. The deposition rate of the particulate matter (based on size distribution) was not included.
- To insure no significant impact, a monitoring program should be established to determine the impact on the Pueblo nonattainment area. This monitoring should be site specific and include meteorological monitoring as well. If significant impact is determined, further control would be required at the training site, i.e., road carpet.
5. The impact in all attainment areas will consume PSD increment even though it is not subject to PSD requirements. Any major source locating in the training site's area of impact will be required to assess the consumed PSD increment through modeling or monitoring. BACT should be required to provide for further growth.
 6. See comment 4.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 12 1980

Commander, 4th Infantry Division
(Mechanized) and Fort Carson
ATTN: AFZC-FE-EQ
Fort Carson, Colorado 80913

Dear Sir:

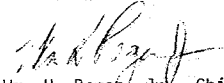
This is in response to your request for comments on the Draft Environmental Impact Statement for Training Land Acquisition.

We have reviewed the statement and determined that the proposed action has no significant radiological health and safety impact, nor will it adversely affect any activities subject to regulation by the Nuclear Regulatory Commission.

Since we made no substantive comments, you need not send us the Final Environmental Statement when issued.

Thank you for providing us with the opportunity to review this Draft Environmental Statement.

Sincerely,


Wm. H. Regan, Jr., Chief
Siting Analysis Branch
Division of Engineering

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

CONFIRMATION OF REQUEST FOR CLEARINGHOUSE REVIEW

Date July 21, 1980 PPACG Identifier 80-112

To Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

From Patricia H. Denham, Environmental Coordinator *Pat*

The PPACG has received your request for Clearinghouse review of your project proposal.

Project Title Draft Environmental Impact Statement, Acquisition of Training Land
for Fort Carson, Colorado, in Huerfano, Las Animas, and Pueblo Counties,
Colorado

Date request received July 1, 1980 Date comments will be forwarded August 14, 1980

Comments have been requested from the following local agencies or jurisdictions:

<u>City of Colorado Springs</u>	<u>Town of Monument</u>
<u>El Paso County</u>	<u>Town of Palmer Lake</u>
<u>City of Fountain</u>	<u>Town of Calhan</u>
<u>City of Manitou Springs</u>	<u>Town of Ramah</u>
<u>Town of Green Mountain Falls</u>	<u>Town of Alma</u>

Your application will be reviewed at the following meeting:

_____ Rural Area Policy Committee _____ Urban Area Policy Committee

Date _____ Time _____ Place _____

Formal action will be taken at the following PPACG Board meeting:

Date 8/13/1980 Time 9:00 a.m. Place PPACG Conference Room

A representative of your office is invited to attend the above meeting(s) to answer questions that might arise about your application.

15190

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

A-95 CLEARINGHOUSE REVIEW

Date: August 13, 1980 PPACG Identifier: 80-112

TO: Mr. Michael Halla

FROM: Patricia A. Denham, Environmental Coordinator *Pat*

PROJECT TITLE: Draft EIS, Acquisition of Training Land

The Pikes Peak Area Council of Governments at its meeting on 8/13/1980 voted to forward the following comment(s) on this proposed project:

☒ Favorable - the project does not appear to conflict with Regional Plans, programs, or objectives.

☐ Unfavorable, for the following reasons: _____

☐ No Comment

☐ No Action, postponed until the next _____ on _____

☒ The following comments were made by the PPACG Board:

See attached memorandum.

Copies of the following are attached: ☒ Local Comments

☒ PPACG Staff Comment

☒ Copy sent to State Clearinghouse on August 14, 1980

Please forward a copy of this form and local comments with your application to the funding agency.

Charles W. Helm
CHAIRMAN

Donald P. Uhl
1st VICE CHAIRMAN

George James
2nd VICE CHAIRMAN

William C. Chulo
SECRETARY

15190
Shirley Wederski
TREASURER

Roland Gow
EXECUTIVE DIRECTOR

L-21

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

A-95 REVIEW SUMMARY

Date: July 21, 1980

TO: Pikes Peak Area Council of Governments

FROM: Patricia H. Denham *Pat*

SUBJECT: A-95 Review, PNR # 80-112

PROJECT TITLE: Draft EIS, Fort Carson Land Acquisition

APPLICANT: Department of the Army, Fort Carson

APPLICANT'S ADDRESS: Fort Carson, Facility Engineers - Building 304

GRANT AMOUNT: Total: N/A

Federal: _____; State: _____; Local: _____

FUNDING AGENCY: N/A

PROJECT DURATION: From N/A to N/A

GEOGRAPHIC AREA COVERED BY THE PROPOSED PROJECT:
Huerfano River located southeast of Pueblo and the Pinon Canyon parcel
located along the Purgatoire River

PROJECT DESCRIPTION: The Department of the Army proposes to acquire land
in Southeastern Colorado for use as a remote military training area by
Fort Carson. The satellite facility would be utilized by the 4th
Infantry Division (Mechanized), currently stationed at Fort Carson, as
well as Army Reserve units routine combat maneuver training.

See attached summary for more information.

(OVER)

15190

VII. (1)

W. Helm
CHAIRMANDonald P. Uhl
1st VICE CHAIRMANGeorge James
2nd VICE CHAIRMANWilliam C. Chole
SECRETARYShirley Wedarski
TREASURERRoland Gow
EXECUTIVE DIRECTOR

CONSISTENCY WITH ADOPTED PLANS:

Yes	No	Plan	Date Adopted
<input type="checkbox"/>	<input type="checkbox"/>	Transportation Plan - Long Range Element	September 8, 1971
<input type="checkbox"/>	<input type="checkbox"/>	Regional Open Space Plan	December 8, 1971
<input type="checkbox"/>	<input type="checkbox"/>	Transportation Plan - Systems Management Element	February 9, 1977
<input checked="" type="checkbox"/>	<input type="checkbox"/>	"208" Areawide Water Quality Management Plan	October 12, 1977
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Regional Development Framework (Land Use Element)	November 9, 1977
<input type="checkbox"/>	<input type="checkbox"/>	Regional Housing Plan	April 12, 1978
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Air Quality Maintenance Plan for the Colorado Springs Urbanized Area	September 13, 1979
<input checked="" type="checkbox"/>	<input type="checkbox"/>	"208" Water Quality Management Plan Update	August 9, 1978
<input type="checkbox"/>	<input type="checkbox"/>	Region IV Criminal Justice Action Plan	Annually
<input type="checkbox"/>	<input type="checkbox"/>	Areawide Agency on Aging Plan	Annually
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Regional Development Projections	
<input type="checkbox"/>	<input type="checkbox"/>	Other _____	

LOCAL COMMENTS REQUESTED FROM THE FOLLOWING AGENCY(S)/ORGANIZATION(S):
City of Colorado Springs, El Paso County, Monument, Palmer Lake, Calhan,
Ramah, Alma, Fountain, Manitou Springs, and Green Mountain Falls.

STAFF COMMENTS: Staff recommends favorable review, see attached
memo.

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

July 21, 1980

MEMORANDUM

TO: PPACG
FROM: Patricia H. Denham *Pat*
SUBJECT: Fort Carson DEIS

The attached summary provides the reader with the necessary information to become familiar with the project, but without extensive review of the document it is difficult to choose between the two recommended locations.

After attending the public hearing on Friday, July 11, 1980, I obtained additional information that I will share with local governments.

Facts and Benefits

- In 1979, the economic impact from salaries, construction, rentals and maintenance at Fort Carson was estimated at more than \$390 million.
- Participation by Fort Carson personnel in the Combined Federal Campaign Contributions and in area recreational events amounted to more than \$250,000.
- Educational service contracts and tuition assistance amounted to \$217,600.
- These figures do not include the secondary and employment effects generated by Fort Carson.
- Fort Carson, established in 1942, currently has 19,240 assigned military and 2,050 Civil Service employees.
- Fort Carson has had a substantial impact on the local community in such areas as: 55 persons owe their lives to search and rescue missions in 1979; 110 medical evacuation flights through the safety and traffic program; and evacuation of 137 patients to local and statewide medical institutions.
- Fort Carson personnel have provided assistance in other ways, ranging from construction projects, such as little league diamonds; to providing vehicles and personnel for annual Goodwill collection drive; and to providing tents to the Boy Scouts for a survival seminar.

Major Concerns/Economic

- Loss of grazing and agricultural land.
- Limitation of future economic growth in the area to be acquired.
- The Army estimates that 35 people could be directly affected by the acquisition of the Huerfano parcel and 46 by the acquisition of the Pinon parcel.
- An estimated loss of 86 agriculture-related jobs from the Huerfano parcel - offset by an additional 81 jobs gained in the services sector.
- On the Pinon parcel, the agricultural loss could amount to 67, offset by 89 jobs gained in the services sector.
- Revenue losses estimated by the Army from cattle/calf production range from \$.9 million to \$1.97 million in the Huerfano area, and from \$.88 million to \$1.4 million in the Pinon area.
- Lost tax revenues on Huerfano amount to \$121,480, and \$59,232 on the Pinon parcel.
- The most severe impact is anticipated to fall on the Hoehne School District if the Pinon parcel is acquired, resulting in a tax income loss of more than \$31,000 annually.

Major Concerns/Environmental

- Effect on wildlife, plant life, water tables, sedimentation, noise levels and air pollution.
- The DEIS proposes numerous mitigation measures for dealing with these concerns, including deferring training during critical portions of wildlife reproduction seasons and during growing seasons, as well as during drought or excessive moisture conditions; reseeding vegetative cover; providing soil and wildlife protection areas; constructing water diversions and erosion control dams, and sediment interception structures; protecting soil against wind erosion; and establishing monitoring networks for air, water and noise pollution.

Additional Mitigation Measures

- Retire bond debt of Hoehne School District if the Pinon parcel is selected.
- Develop additional mitigation measures if required.
- Follow comprehensive land use program, which recommends dividing the training area into five segments, rotating use to allow the land to rest and recover and deferring training during critical periods of growing and reproductive seasons and during periods of drought or high moisture.

Staff Comments

- Staff recommends favorable review based on the fact that DEIS demonstrates that the Army has considered numerous alternatives which proved infeasible; has carefully analyzed the impact of the proposed land use; and has identified the requisite measures to minimize disruption to the local economy and the environment.

Charles W. Helm
CHAIRMAN

Donald P. Uhl
1st VICE CHAIRMAN

George James
2nd VICE CHAIRMAN

William C. Clulo
SECRETARY

Shirley Wedarski
TREASURER

Roland Gow
EXECUTIVE DIRECTOR

L-23

SUMMARY

The Department of the Army proposes to acquire land in southeastern Colorado for use as a remote military training area by Fort Carson. The satellite facility would be utilized by the 4th Infantry Division (Mechanized), currently stationed at Fort Carson, as well as Army Reserve units for routine combat maneuver training.

Two sites are under consideration for acquisition; the Huerfano River Parcel located southeast of Pueblo and the Pinon Canyon Parcel located along the Purgatoire River between Trinidad and La Junta.

Both the Huerfano River and Pinon Canyon Parcels were originally identified to the Army as being available for purchase by persons reportedly representing all owners of record. These original offers were made in 1977. Since that time, some properties have been sold, some properties within the offered boundary have been identified that were not included by their owners, and the offered boundary has been redefined to natural or man-made features such as roads or canyons. That redefinition has deleted some areas originally offered and incorporated others not originally offered. The result of these ongoing boundary and ownership changes is that the majority of the land under consideration at each site is still believed to be offered for sale. However, a substantial portion of each site is owned by persons who desire to retain their property.

This Draft Environmental Impact Statement (DEIS) was initiated in July 1979 with the publication of a "Notice of Intent" in the Federal Register and the solicitation of public input by means of a letter distributed to individuals, citizen groups and governmental agencies. Additional input was obtained at four public meetings held in August. Originally, one meeting was scheduled for Walsenburg, but meetings in Trinidad, Pueblo and La Junta were added to respond to local interest.

The results of this scoping process indicated that individuals and agencies were generally concerned about the entire spectrum of environmental and social issues. Particular interest existed concerning the following potential impacts:

1. Degradation of vegetation and soil;
2. Economic changes to local economies;
3. The condemnation of privately owned land;
4. Degradation of air quality due to particulates;
5. Increased sound levels;
6. Degradation of water quality due to sedimentation;
7. Reduction of wildlife populations; and
8. Damage to archaeological resources.

These identified areas of concern have been addressed in the DEIS. Ongoing input has been received from numerous concerned individuals and agencies.

The purpose for the acquisition of a satellite training facility is to provide maneuver area for battalion-size units of the 4th Infantry Division and Reserve Units. Such maneuvers are now conducted at Fort Carson, which consists of 137,291 acres. Of that total acreage, only 56,170 acres are available for maneuver training and only 22,000 of those acres are in one contiguous training area.

According to established standards, about 82,000 contiguous acres are required to accomplish the most land-intensive battalion maneuver training event. However, this requirement does not consider whether the land in question can support continual training year after year, without being rested. Land in semi-arid southeastern Colorado cannot accommodate such perpetual use, and land requirements were estimated to be about 200,000 acres to allow for rest and recovery of land on a rotating basis.

The training use that a satellite facility would receive was estimated based on the maximum annual training requirement. This maximum requirement represents ideal conditions of training funds availability and competing commitments of division assets. This maximum training load consists of each of the three brigades in the division traveling to the satellite facility twice year for a 30-day training period, about 20 days of which would involve maneuvers. In addition Reserve units would maneuver at the site for two-week periods during the months of June, July and August. This maximum training projection also included one division size training period every other year.

An austere cantonment facility would be constructed at either site for administrative purposes, but the emphasis would be on training and living in the field.

Live firing of weapons would not be conducted at the satellite facility. Blanks and artillery simulators would be used. Helicopter and high performance aircraft support would be provided at the site.

A number of alternatives to the acquisition of the Huerfano River or Pinon Canyon Parcels were considered, including numerous internal and external training management changes such as training seven days a week or relocating a portion of the units of the division. All of these actions, were deleted from further consideration as not fulfilling the basic goal of providing the required training level.

The only course of action that can reasonably meet the training goal is the acquisition of additional training land. Within this category, 22 potential sites were identified and analyzed for their capability to meet training requirements. Numerous other areas within a one-day travel distance of Fort Carson were not included in the final list of 22 because of unacceptable terrain characteristics. For instance, large areas northeast of Fort Carson as well as the Comanche

National Grasslands near the Pinon Canyon Parcel are sparsely populated, but they are flat and open prairie, providing no terrain relief or vegetative cover, both of which are critical to successful maneuver training. On the other hand, large areas of National Forest properties were discounted because of their extreme terrain relief which prohibits the safe passage of tracked vehicles.

Of the 22 potential sites, only the Huerfano River and Pinon Canyon Parcels are considered reasonable and feasible alternatives. A detailed Land Use and Management Plan (LUMP) was developed for each site to allow assessment of potential impacts. Three varying LUMP scenarios were devised for each parcel; Balanced Use/Protection, Increased Use and Increased Protection. Seven major variables were evaluated for these LUMPs:

Training Intensity
Time of Use - Rotation and Deferment
Boundary
Limited and Restricted Use Areas
Cantonment Location
Road Development
River Crossings

The first two, Training Intensity and Time of Use, are the key variables and are most indicative of potential impacts.

In addition to analysis of these variables, the LUMP incorporates numerous natural resource management measures that would be conducted at either site as part of their routine operation. A responsible land manager would perform the majority of these resource management measures, such as fence construction and implementation of conservation plans for seeding and erosion control. However, some of the measures exceed the average commitment, such as the graveling of all major roads and trails to minimize particulate emissions, the establishment of water, air, sound, vegetation, and wildlife monitoring networks, and plans for an experimental grazing program.

The potential impacts of implementing each scenario at each site were assessed. The difference in impacts between the Huerfano River and Pinon Canyon Parcels were not sufficiently significant for a clear choice at this time. Accordingly, both are still considered equally reasonable and feasible.

However, preliminary conclusions representing a specific proposal for the use and management of either property have been reached. These conclusions will allow reviewers to focus on the impacts associated with the LUMP scenarios. The Increased Use LUMP scenario is proposed for either site with some modification to provide additional vegetative protection. This scenario is proposed based on the level of training it provides. The key elements of the proposed plan are:

1) Training Intensity - The Huerfano River site would allow from 4.1 to 4.8 brigade training periods, depending on the specific training areas used during any given year. The Pinon Canyon site would allow from 4.4 to 4.7 brigade training periods. Training intensities for all scenarios were projected after establishing the carrying capacity of the parcel based on inherent range site stability characteristics and present vegetation conditions.

2) Time of Use - Rotation and Deferment - Each parcel was divided into five Management Units for purposes of training control and rotation. Under this scenario, three of the five units would be in use during any given year. After three years of use, each Management Unit would be rested for two full years. The only activities that would be allowed on a unit being rested are land enhancement measures, experimental grazing, hunting, baseline natural resource studies, or tours by interested individuals or groups.

In addition to complete rest under the rotation plan, Management Units would not be used from 15 December - 15 January and from 1 April - 30 June. This scheduled deferment program includes the month of June, not originally included in the Increased Use scenario, because it is particularly beneficial to grasses.

Finally, training would be deferred on an unscheduled basis whenever excessively wet soil conditions occur to prevent abnormally severe damage to soil and vegetation.

3) Boundary - The preferred boundary is that shown on Figures 2-4 and 2-8, with the notable exception of the Purgatoire River Canyon and the "tail" of the Huerfano River Canyon. These areas are not included because they are not required for training, nor do they contribute notably to the integrity of the training area.

A sixth Management Unit (F), was considered as part of the Increased Use Scenario for the Pinon Canyon Parcel. It is not included in the preferred boundary because of the disadvantages associated with its location across the Purgatoire River from the rest of the parcel. However, if any major changes are required in the preferred boundary as the decision process proceeds, acquisition of Unit F may be reconsidered.

4) Limited and Restricted Use Areas - Several soil protection areas would be established at either site. These areas would coincidentally afford protection to an endangered plant species which could potentially occur.

The portion of the Huerfano and Cucharas Rivers within the main body of the Huerfano River Parcel would be established as a wildlife protection area and would also be considered for nomination as a State Natural Area. If the "tail" of the Huerfano River Canyon is obtained because of land acquisition procedures, the Department of the Army will recommend that it be similarly managed.

If any portion of the Purgatoire River Canyon is obtained by the government because of land acquisition procedures, and is retained, the Department of the Army will recommend that it be managed as a natural area.

5) Cantonment Area - The proposed cantonment area for the Huerfano River Parcel is near the Cedarwood access road; the proposed cantonment area for the Pinon Canyon site is near Thatcher. Both cantonment sites were selected primarily for their proximity to road and railroad facilities. When a brigade moves down to a satellite area, the wheeled vehicles would be conveyed by road and tracked vehicles would be shipped by rail.

6) Road Development - Development of roads for either site would emphasize upgrading and use of existing roads with additional construction to facilitate easy access to all Management Units.

7) River Crossings - A bridge is proposed to cross the Huerfano River east of the cantonment area. The bridge would provide more direct access to Management Units east of the river and would not become a focal point for maneuvers. Crossing of the Huerfano River would occur downstream of the wildlife protection area and on all other drainages, except the St. Charles River, as required. Repetitive use areas would be rippedraped or stabilized.

At the Pinon Canyon Parcel, the Purgatoire River would not be crossed, side canyons would be crossed or traversed as required and repetitive use areas would be rippedraped or stabilized.

The objective of the land use and management planning documented in this DEIS was to provide the most feasible balance between resource utilization for military training and long-term resource conservation. The recommended Increased Use Scenario represents the greatest use within the planning spectrum. However, because of the resource management measures incorporated into the scenario, to include the use of only three-fifths of the site for less than one-half of each year, the impacts of the proposal are considered reasonable when balanced against the training benefits.

The resources that would be affected at either site are basically quite similar with respect to environmental attributes such as soils, vegetation, wildlife, hydrology, sound and air quality. The following impacts would be expected if the Increased Use Scenario is implemented:

GEOLOGY AND MINERALS

Acquisition and use of the Huerfano River Parcel could affect the development of limestone resources in the extreme northwest portion of the parcel. The potential value of the deposits is presently an unresolved issue. However, the State Board of Land Commissioners

has expressed an interest in allowing the limestone development. Mitigation of this potential conflict could be accompanied by not acquiring the four sections involved. That exclusion would affect the training value of Management Unit A, and therefore for purposes of this document the issue will remain unresolved. If the estimated value of the limestone deposits can be obtained and verified during the review of the DEIS, a resolution will be identified in the final EIS.

Soils - The Huerfano River Parcel would experience more soil loss due to wind erosion than the Pinon Canyon Parcel. However, overall impacts to soil and soil loss would be more significant at the Pinon Canyon site.

Vegetation - Impacts on both parcels would be basically the same. Range site stability of the Huerfano River Parcel is 28 percent greater than the Pinon Canyon Parcel but that factor was taken into consideration in establishing training intensity.

Hydrology - Potential water quality impacts due to sedimentation and salinity are more significant at the Pinon Canyon Parcel than at Huerfano River Parcel. More direct training activity would occur within the Huerfano River Parcel because of its location in the central portion of the parcel.

Potential impacts to ground water could be moderate to severe depending on the source of potable water supplies. At this time, the provision of potable water at either site is an unresolved issue. It appears to be a bigger problem at the Huerfano Parcel because the most productive sources are located on the east side of the parcel and the preferred cantonment area is on the west side. A possible source of water closer to the cantonment would be the Huerfano River alluvium.

Two possible sources of potable water have been identified at the Pinon Canyon Parcel, municipal supplies from Trinidad provided by pipeline or, more preferably, development of locally known supplies, by private individuals for purchase on site.

WILDLIFE

Wildlife habits and populations are very similar. The Pinon Canyon Parcel has one additional species, the Turkey, and could be utilized by the State for Bighorn Sheep and Peregrine Falcon Plants.

AQUATIC ECOLOGY

The Huerfano River Parcel has a higher potential for being affected than the Pinon Canyon Parcel. However, the effects at either site would be negligible.

AIR QUALITY

The potential impact on actual pollution levels at either site is virtually identical. However, because of the proximity of the Huerfano River Parcel to the Pueblo particulate non-attainment area, the particulates generated have a greater potential impact at that site.

SOUND

The overall potential noise impact would be less for the Pinon Canyon Parcel than the Huerfano River Parcel because there are fewer persons to be affected. The sound levels would be virtually the same.

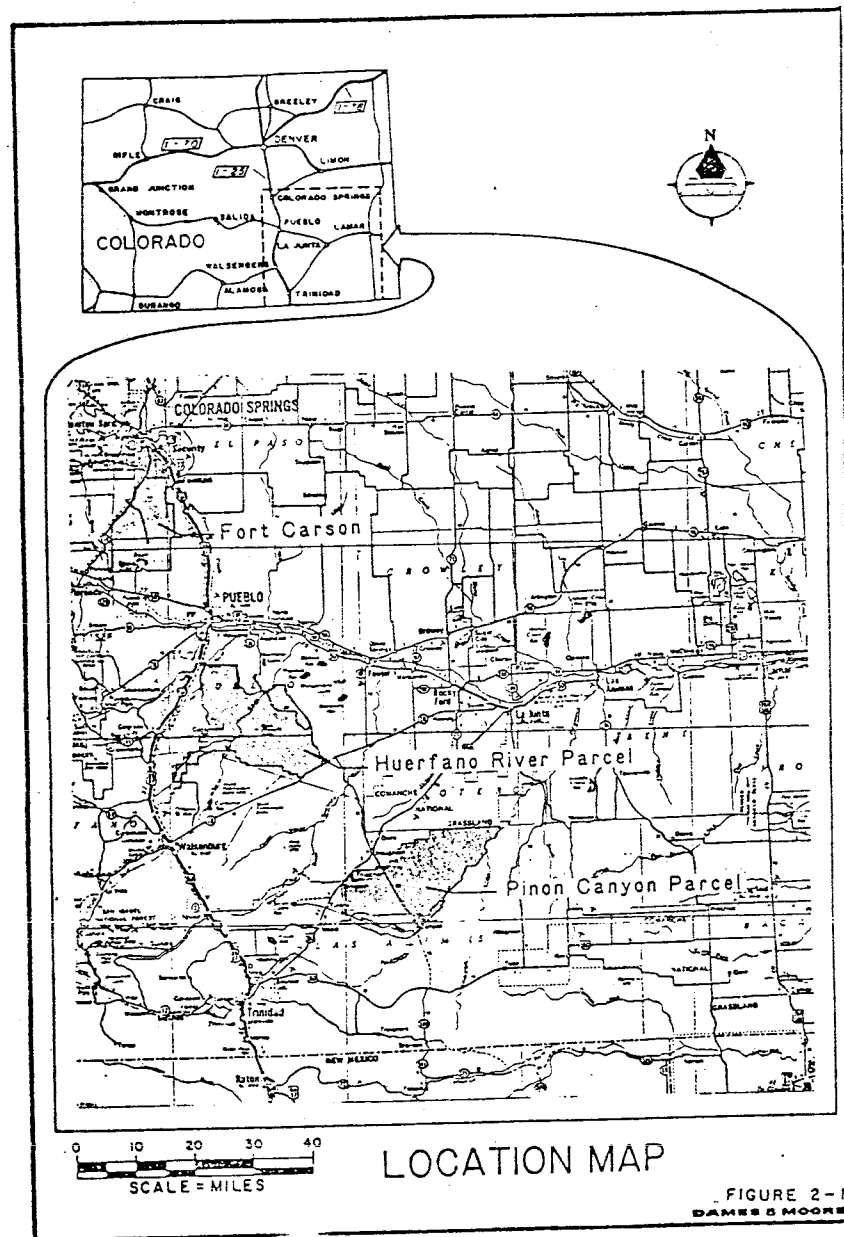
SOCIOECONOMICS

Potential impacts to persons presently residing at either site would be about the same since both support about the same number of people. Although slightly more cattle would be displaced at the Huerfano River Parcel, the local impact would be more significant at the Pinon Canyon Parcel because of the predominantly agricultural economic base as opposed to the industrial base in Pueblo. Potential impacts from the loss of annual tax revenue is also more serious at the Pinon Canyon Parcel. Transportation impacts are potentially more significant at the Pinon site because of additional fuel consumption.

The potential impacts to cultural resources are negligible for both sites since the required surveys and mitigation would be accomplished before any training use.

Acquisition of the Pinon Canyon Parcel would have a potentially severe impact to a portion of an area being studied for possible designation as a National Natural Landmark under the administration of the Department of the Interior. The area near the Purgatoire Canyon is considered to be significant for its canyon geology which is unique in the eastern plains of Colorado. The potential impact would be from off-road vehicle activity within the area and its effect upon the aesthetics of the area as well as increased erosion. The exact significance is difficult to ascertain because the proposed boundary of the area being considered has been modified or described several times and may be subject to further change. The most spectacular portion of the area and almost all of the red rocks is outside the area that would be acquired.

In conclusion, both the Huerfano River and Pinon Canyon Parcels are reasonable and feasible alternatives for resolving the shortfall of maneuver training land for the 4th Infantry Division at Fort Carson, Colorado. The land use and management planning resulted in the preliminary conclusion that the Increased Use Scenario should be proposed because of its level of training and associated impacts.



RECEIVED JUL 2 1980



PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date July 21, 1980 PPACG Identifier 80-112
To Mayor Robert M. Isaac
City of Colorado Springs
P. O. Box 1575
Colorado Springs, Colorado 80901
From Patricia H. Denham, Environmental Coordinator *Pat*
Project Title Draft Environmental Impact Statement, Acquisition of Training Land for
Fort Carson, Colorado, in Huerfano, Las Animas, and Pueblo Counties
Applicant Department of the Army, Fort Carson

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

- ☒ Yes ☐ No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.
☒ Yes ☐ No There is a need for this project.
☒ Yes ☐ No This project is the most effective and efficient way to meet the need.
☐ Yes ☒ No There is evidence that this project duplicates an existing program.
☐ No comments at this time.

Additional comments See attached copy of memorandum dated February 26, 1980
and letter to General Menetrey dated July 11, 1980. City's position has not
changed.

(continue comments on back of this form, if necessary)

Resolution No. 67-80

A RESOLUTION ENDORSING THE
EXPANSION PLANS OF FORT CARSON

WHEREAS, the U.S. Army's and Fort Carson's need for additional maneuver and training land has been demonstrated through in-depth studies; and

WHEREAS, the U.S. Army and Fort Carson have shown a sensitivity to Colorado's environment and will make every effort to protect and preserve that environment; and

WHEREAS, the U.S. Army and Fort Carson have extended every effort to keep the public and governmental officials fully informed of the Fort Carson land acquisition process.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLORADO SPRINGS:

That the City Council lends its support to the expansion plans of Fort Carson.

Dated at Colorado Springs, Colorado this 26th day of February, 1980.

ATTEST:

Robert M. Isaac
Mayor

R. E. Parker
City Clerk

L-28

PLEASE KEEP THE PINK COPY FOR
YOUR RECORDS AND RETURN THE
WHITE AND YELLOW COPIES TO PPACG no later than July 29, 1980

15190

July 11, 1980

Major General Louis C. Menetrey
Commanding General
4th Inf. Div. (M) & Fort Carson
Fort Carson, CO 80913

Dear General Menetrey:

The City of Colorado Springs City Council discussed the land expansion plans of Fort Carson during its informal meeting on July 7, 1980 and fully supports the United States Army in this action. Our reasons are as follows:

The nation's military forces must have adequate space and facilities in which to train if we are to maintain national preparedness. Recent international events have sharply dramatized this need.

We strongly feel that relocating even a part of this installation will be costly to all taxpayers in the United States and create time delays that are unacceptable to our military forces.

The State of Colorado has the needed space for expansion requirements.

Relationships between the civilian and military communities are extremely good and have flourished because of the close cooperation enjoyed. Operations such as the MAST helicopter service has saved numerous lives statewide since it began. Calls for help during severe storms have always been answered. Fort Carson and its people have been and are good neighbors.

The land under Fort Carson's jurisdiction has been used responsibly and we feel that future commanders will continue to be sensitive toward the environment.

Major General Louis C. Menetrey
Page 2
July 11, 1980

The economic impact of Fort Carson's contracts and wages is of great local and statewide importance. We estimate that \$380 million annual contribution to our economy is generated by this establishment. Loss of this income would be severely detrimental to the economy of this community and the State of Colorado.

Sincerely,

Robert M. Isaac
Mayor

nib

RECEIVED AUG 1 1980

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date July 21, 1980 PPACG Identifier 80-112

To Mayor Ed Bryant

City of Fountain

116 South Main

Fountain, Colorado 80817

From Patricia H. Denham, Environmental Coordinator *Pat*

Project Title Draft Environmental Impact Statement, Acquisition of Training Land for Fort Carson, Colorado, in Huerfano, Las Animas, and Pueblo Counties

Applicant Department of the Army, Fort Carson

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

- ☐ Yes ☐ No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.
- ☒ Yes ☐ No There is a need for this project.
- ☐ Yes ☐ No This project is the most effective and efficient way to meet the need.
- ☐ Yes ☐ No There is evidence that this project duplicates an existing program.
- ☐ No comments at this time.

Additional comments _____

Edward J. Bryant
(continue comments on back of this form, if necessary)

PLEASE KEEP THE PINK COPY FOR YOUR RECORDS AND RETURN THE WHITE AND YELLOW COPIES TO PPACG no later than July 29, 1980

15190



August 12, 1980

Commander
Ft. Carson and 4th Infantry Division
ATTENTION: AFZC-FE-EQ
Mr. Michael E. Halla
Building 304
Ft. Carson, CO 80913

Dear Commander:

After a thorough analysis of the Draft Environmental Impact Statement for Training Land Acquisition, Ft. Carson, Colorado by the members of the Pueblo Area Council of Governments and the Commissioners and staffs of the Pueblo Regional Planning Commission and the Human Resources Commission, the following issues were identified as "needing to be addressed" or "requiring further clarification" in the Final Environmental Impact Statement.

We would like to thank you for the assistance provided our Commissions during the EIS process, and we are looking forward to reviewing the Final Environmental Impact Statement.

Sincerely,

Michael Occhiato
Michael Occhiato
Chairman

To

Enclosure

cc: Marvin Read
Gus Sandstrom

pueblo area council of governments

1 CITY HALL PLACE, PUEBLO, COLORADO, 81003, TELEPHONE (303)-545-0561

L-30



PUEBLO REGIONAL PLANNING COMMISSION

ISSUES TO BE ADDRESSED AND CLARIFIED IN THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR TRAINING LAND ACQUISITION, FT. CARSON, COLORADO

NEEDS

Benefits

Within the "Need" section of the DEIS, mention was made of the Ft. Carson Land Use and Requirements Study (LURS). This study analyzed the use of and the need for land to accomplish the training mission of the 4th Infantry Division (Mechanized) at Ft. Carson. As was stated within this section (p. 1-2), "The overall problems of providing and maintaining sizeable land areas for military training activities is inherently complex and sophisticated, and any solution must balance national defense land use needs and land management/environmental protection requirements." To provide a comprehensive picture of the expansion issue and how it relates to the national defense land use needs, an addressing of the benefits in terms of attainment and maintenance of an "effective combat readiness posture" arising from the acquisition of either of these two parcels should be included in the EIS.

LAND USE MANAGEMENT PLAN (LUMP)

LUMP Increased Use Scenario Land Use Management Plan

Of most concern is a clarification of the "Increased Use Scenario Land Use Management Plan" chosen as the preferred course of action. In selecting the Increased Use Scenario, it is stated (p. 2-52) that some modification will be made to this scenario to provide additional mitigation. What these modifications will be were never clearly stated. This scenario (unmodified) as stated on p. 2-24 would set the training intensity at a level 15 percent above the carrying capacity. Carrying capacity is defined (p. 7-21) as "An estimate of land area's ability to support use."

The results of such a Land Use Management Plan are best expressed in the Vegetation Impact Section (p. 4-5, paragraph 2), where the impact of the Increased Use Scenario is discussed. The last sentence of the paragraph states: "due to the shorter rest-recovery period (as compared to the 'Balanced Use' and 'Increased Protection' scenario), gradual degradation of the entire land resource would be expected."

Issues to be Addressed in
Final Impact Statement
Page 2

If the Increased Use Scenario will be the chosen Land Use Management Plan either the modifications to the scenario to mitigate the stated impact should be clearly addressed, or if a gradual planned degradation of this land resource is anticipated, the long-term productivity of the land and the life-cycle of the parcel in terms of the Army's use of the land should be addressed. This is important because any use of this parcel beyond the land's carrying capacity, as defined by the DEIS, would gradually degrade the resource and intensify all impacts over time. All analyses of impacts should then be made using the clarified, preferred Land Use Management Plan.

LUMP Environmental Management

A detailed description of the comprehensive environmental monitoring and management plan for both parcels should be included in a separate section in the Impact Statement. This should include the identification of the responsible environmental management office, collection of baseline environmental data, environmental monitoring networks, alternative environmental management techniques, environmental mitigation measures, and public access to and review of the monitoring information and mitigation measures undertaken. A review body should also be established which would be able to mitigate citizen complaints.

LUMP Division Exercises

A potentially important impact which should be more fully discussed is the Division exercise, one month every two years. It appears that the number of men and machines involved in such an exercise would have a substantial impact on the land resources and a substantial off-site impact in terms of air quality and noise. The impact of this individual occurrence could be potentially more destructive than a number of smaller-size maneuvers.

ALTERNATIVE ACTIONS

No Action Alternative

The Final Environmental Impact Statement should fully address the no action impact. This would include the impact on the existing Fort Carson land resource and the impact on the current Fort Carson troop strength as well as the overall national defense capability.

Also included in this section should be a history of the various military units which have been stationed in Fort Carson and the estimated tenure of the 4th Infantry Division at this post.

Alternatives to the Proposed Action

An additional alternative which should be discussed is the transferring of the 4th Infantry Division (Mechanized) to another military post which has a land resource of sufficient quantity and quality to support the training demand. The 4th Division could then be replaced with another division which would not require as extensive a land resource.

Alternative Sites

During the entire scoping and DEIS process, questions were raised concerning alternative sites both analyzed and not analyzed by the Army. Due to the questions and concerns raised, the final environmental impact statement should include a clearly detailed summary of all alternative sites considered and the reasons for their elimination from further consideration.

HYDROLOGY

Water Quality - Impact on Biota

An impact which is not adequately addressed is the impact of a potential increase in sedimentation and salinity due to erosion on water quality as it would impact the side canyon pools within and outside the wildlife protection area. This is important because these pools are an important source of water for wildlife, and their presence is integral in the creation of these unique canyon habitats. There are species which exist within these areas, such as ferns, which occur nowhere else in the County. There are also populations, such as aspens, which occur here miles away from their more common range. The integrity of these pools is important to the continued vitality of these habitats.

Water Quality - Hazardous Wastes

Within the Aquatic Ecology section of the report, a statement appears concerning water quality conditions (p. 4-55). The statement reads, "Water Quality conditions may also worsen through accidental release of hazardous substances, radiological, acid, alkaline, or toxic wastes." An identification of these hazardous substances and toxic wastes with more detailed explanation of Fort Carson Environmental Program's hazardous/toxic materials management objectives and responsibilities should be included in the final EIS.

Water Quality - Salinity

Brief mention is made in the DEIS of the saline formations on the Huerfano Parcel and the contribution of these formations to the salinity in the Huerfano and Cucharas Rivers. The problem of salinity in the Huerfano and Cucharas and its impact on downstream Arkansas River irrigators should be more comprehensively addressed in the final EIS. This may be accomplished through a comparison of salinity levels of area streams both before and after maneuvers on similar soil formations existing within the Fort Carson reservation. This assessment should include economic considerations to the agricultural industry.

Water Availability

Another very important on and off site impact is the availability of potable water. The Army acknowledges in the DEIS that this point has not been adequately resolved. In an area with finite water resources, the availability of potable water in the quantities required by the Army will impact area water rights and may ultimately impact the location of the contonement area. The location of the contonement area may ultimately impact the access routes to the parcel. The potable water availability question should be resolved before the completion of the Final Environmental Impact Statement.

METEOROLOGY AND AIR QUALITY

Air Quality - Effect on the City of Pueblo

The City of Pueblo is currently designated by the EPA as a non-attainment area for particulates. The Draft Environmental Impact Statement addresses the fact that the City of Pueblo may be impacted by fugitive dust coming from the Huerfano Parcel. The Final Environmental Impact Statement should address the recourse available to the City of Pueblo if particulate emissions from the Huerfano Parcel negatively impact the awarding of an attainment designation.

Air Quality - Total Suspended Particulate Attainment

At the request of the Pueblo Regional Planning Commission and the Pueblo City-County Health Department, the State Air Pollution Control Division has reviewed those sections of the DEIS which specifically deal with air quality, meteorology, or modeling. A copy of the letter which summarizes their findings is attached to these comments.

In analyzing the potential "Effects on the City of Pueblo" of the maneuvers on the Huerfano parcel, the State Air Pollution Control Division made the following findings:

"The Fort Carson DEIS reports a proposed impact on Pueblo of 1.5 ug/m³ annually. Based on modeling experience this figure may be off by as much as a factor of two. A number of variables could cause the impact to vary even greater. No evidence could be found accounting for fallout, or redeposition of dust reentrained by ground vehicles or aircraft. The emissions equation could have erred in the estimation of emissions since it is not clear if the derivation of the equation is applicable to the types of vehicles used in the Army. The assumptions relating to vegetative cover also need to be made clearer."

If some modeling input assumptions are incorrect, then the resulting impacts may be much more than the 1.5 ug/m³.

As suggested in the Air Pollution Control Division's analysis and evaluation of the air quality modeling we request that the Army provide "better justification for emission factors, meteorological inputs, and other relevant data" (see attached letter--"Effects on the City of Pueblo"). If reassessment and justification of these factors indicate modeling adjustments are necessary, we suggest that updated modeling results be included in the final EIS.

Additionally, we suggest that the final EIS include a technical assessment of the impact of the expansion on the ability of the Pueblo area to meet 24 hour total suspended particulate standards.

Air Quality - Convoy Movements

One of the most obvious impacts of the expansion to either the Huerfano or Pinon Canyon Parcels will be the convoy movement through Pueblo and the resulting potential for air polluting emissions. Military vehicles are designed to utilize low-grade fuel and to function with a minimum of sophisticated maintenance. This results in highly visible gaseous vehicle emissions, particularly during start-up and acceleration. While this may not effect Pueblo's compliance with auto related pollutant standards in the near future, it will likely create clouds of obnoxious fumes along the I-25/U.S. 50 highway corridor. Vehicular activities in the land parcels themselves will raise particulate levels but it remains unclear how much this will affect TSP levels in the Pueblo urban area. The final statement should address measures which the Army would take to minimize the black smoke nuisance from convoys.

SOUND

Noise Profiles

The residents within the Pueblo Region are currently impacted by noise emanating from the firing ranges at Fort Carson. As was requested by the Pueblo Regional Planning Commission during the scoping process, diagrams should be included in the final report which profile the emanation of the sound generated both on the new site, and along all potential roadway, air, and rail transportation corridors. The Huerfano parcel is bordered by three population centers: Colorado City-Rye on the southwest, Pueblo on the northwest, and the St. Charles and Vineland Mesas on the north. It is important that the noise impact on these centers be thoroughly evaluated.

Aircraft Noise Levels

Projected levels of activity by helicopters, planes, and jets are going to impact heavily on residential areas lying within likely flight patterns. While it is true that this activity can be directed away from the actual Pueblo urban area, residents of rural areas will notice a dramatic increase in air activity and noise levels, particularly considering the lower levels of background noise in rural areas. An additional factor

to consider is that many training exercises will be taking place at night, requiring air support and resulting in much more noticeable noise levels. It should also be noted that increased military air operations will place an additional workload on air traffic control facilities located at Pueblo Memorial Airport. This issue should be more fully addressed in the final EIS.

SOCIOECONOMIC, LAND USE, AND TRANSPORTATION

Social - Impact

A recent attitude survey entitled Pueblo: The Quality of Life, Cornelius G. Hughes, Ph.D., Department of Sociology, University of Southern Colorado, found a strong desire by the residents of Pueblo to improve their City's attractiveness. Although the survey dealt mainly with physical attractiveness, attractiveness can also be measured by the quality of air, level of noise, and transportation congestion. All of these could be potential impacts associated with Fort Carson's expansion into Pueblo County. A statement concerning the impact of the increased military presence in the Pueblo region and the psychological impact on the area population should be included in the final EIS.

Social - Displacement and/or Relocation

The estimated number of people to be displaced and/or relocated by the proposed expansion is between 35 and 75. The final EIS should include a more detailed discussion of the land acquisition and relocation assistance process including the cost of acquisition and relocation. The statement should also identify any local, multi-county or State agencies who will be asked to assist in the relocation process, and the cost to these agencies to provide these services.

Social - Health Aspects

The Draft EIS does not address the health impacts of the proposed acquisition. The final DEIS should contain a section which would identify any public health impacts which might be attributable to potential environmental quality degradation resulting from the proposed expansion. This should include both water and air quality degradation.

Land Use - Urban Development

Urban development within Pueblo County is occurring south and eastwardly in the St. Charles and Vineland Mesa areas. The final EIS should address both the impact of the acquisition of the Huerfano Parcel on this growth and the impact on the potential use of this parcel by the Army if the urbanization continues.

Land Use - Facilities Design

A more detailed description of the proposed bridge across the Huerfano River should be included. Information should include the location of the structure, design, and construction methods used in erecting the bridge and the impact of the bridge on the proposed wildlife area.

Land Use - Location of the Contonement

Within the section on Ground Water Hydrology (p. 3-29), the location of an alternative contonement area is mentioned as a site "approximately 12 miles east of the present (preferred) contonement." The final EIS should provide site requirements of a contonement area, a list of all possible contonement sites within the Huerfano parcel, a prioritization of the sites, and alternative transportation routes to each of these sites.

Transportation - Impact on Transportation Network

Some of the most visible and potentially harmful impacts on the Pueblo Urban area itself will result from the projected periodic movement of large-scale military vehicular convoys along Interstate 25 (I-25) and potentially along U.S. 50-B. It may be argued that these vehicles represent a miniscule portion of the average daily traffic (ADT) volume of approximately 15-40,000 on I-25 and 10-30,000 on U.S. 50-B. However, these long columns of large slow-moving military vehicles will have an impact on auto traffic far beyond their actual numbers. In effect, one lane of traffic out of two directional lanes will be removed from usage by auto traffic during the convoy's movement through the Pueblo area. A convoy could potentially take as long as 8 hours to pass a given point. Even more hazardous will be the weaving of higher speed autos into and out of the convoy while attempting to utilize entrance and exit ramps on I-25.

Several specific trouble spots appear evident. I-25 was constructed prior to the implementation of National right-of-way and design standards for interstate highways. Within the Pueblo urban area I-25 is characterized by relatively sharp curves, dips, short ingress and egress areas, and inadequate roadside shoulder areas. Imposition of some 800 large vehicles into this system within a convoy framework could damage already hazardous driving conditions. The intersection of U.S. 50 and I-25 offers a particularly dangerous area, since all southbound I-25 traffic must exit on an elevated ramp to head east on U.S. 50; similarly, all westbound traffic on U.S. 50 must exit on a single-lane facility onto northbound I-25. Accidents, particularly involving heavy or poorly-loaded vehicles, are certainly not an uncommon occurrence on these exit ramps. U.S. 50 itself, which could be used as an alternative access route to the Huerfano Parcel, offers high-volume, at-grade intersections at Bonforte Boulevard, Norwood Avenue, Troy Avenue, and Baxter Road (SH 233). These signalized intersections will serve to disrupt carefully timed convoy movements unless cross-street traffic is blocked for a considerable period of time.

All in all, imposition of these proposed convoy movements on the Pueblo area transportation network could serve to aggravate hazardous safety conditions in certain specific areas, although the transportation network does have the capacity to serve projected increases in traffic volumes. The final Environmental Impact Statement should address in more detail the preferred and all alternative transportation routes to either parcel, all potential locations of traffic conflicts along these corridors, and a plan which would detail procedures to be taken to mitigate these safety hazards.

Transportation - Safety Concerns

The movement of large numbers of vehicles via convoy along the Interstate, through the Pueblo Metropolitan Area, and along County roads could create traffic safety problems. The final EIS should include a discussion of the steps which will be taken to notify and coordinate vehicular movement with the State and local public safety officials; the type, method, and frequency of public notices, and media coverage to alert the public to convoy movements; and the steps which will be taken to mitigate any major disruption in the normal traffic flow.

Economic - Analysis

The Economic impact of the expansion into either the Huerfano or Pinon Canyon Parcels is vague and incomplete. An easily understandable, comprehensive, economic impact analysis should be included in the final EIS. The analysis should include a discussion of all reasonable losses and potential benefits to the local, regional, State, and National economies resulting from the acquisition. This should include losses and benefits to both the public and private sections during both the acquisition/construction phase and the ongoing operational phase.

Economic - Tax Base Impacts

Additional clarification should be made of the figures which represent tax loss to local government. An individual breakdown by taxing jurisdiction of the loss and the amount of total revenue this loss represents should be included. The DEIS is unclear as to whether the \$112,500 annual loss to the tax base (p. 4-42) represents the loss to Pueblo County Government alone or whether it is especially important because of the recent removal from the tax rolls of the parcels required for the Pueblo Reservoir and the Department of Transportation Test Center.

Economic - Cost

A more detailed breakdown of the cost to local governmental jurisdictions resulting from the proposed acquisition should be included. The DEIS (p. 4-52) states that "Added cost to the region would be for public services, police, and fire protection, and a reduction in property tax revenue due to the development of this parcel." This list should be clarified.

Economic - Environmental Mitigation Costs

No mention is made in the DEIS of the added cost to both the local public and private sectors to mitigate possible environmental quality impacts arising from Army generated activity occurring on the parcel. This is especially important if local businesses are required to undertake additional measures to gain attainment status for particulate matter.

Economic - Tourism

In view of the cultural and scenic natural resources existing on both the Huerfano and Pinon Canyon sites, the final EIS should contain an analysis of the tourism potential of these two sites.

Economic - Contract Bidding

The final EIS should include a discussion of the bidding process for contracts which would be available to local businesses.

Cost Analysis

The final EIS should contain a cost analysis which would include both the initial acquisition cost of the land and the cost of operation and maintenance, including the cost of environmental management.

This life cycle costing should be completed for the preferred parcels, the alternative sites, and for Fort Carson.

CULTURAL RESOURCES/NATURAL SCENIC RESOURCES

The Huerfano and Pinon Canyon sites contain a diversity of cultural and natural scenic resources. The DEIS specifically states that the "variety and extent of cultural resources already identified in the Huerfano River Parcel indicate that further study is necessary." The final EIS should include a clarification of the scope of this further study and what impact if any this study will have on the acquisition of this project.



July 31, 1980

Mr. Thomas Looby,
Acting Director
Pueblo Regional Planning Commission
1 City Hall Place
Pueblo, Colorado 81003

Dear Mr. Looby:

The Planning and Analysis Section of the Air Pollution Control Division has reviewed the Fort Carson Land Acquisition DEIS as requested. We have confined our analysis to those sections specifically dealing with air quality, meteorology or modeling. This letter summarizes the findings we were able to draw.

Section 2.7.6 Air Quality

In determining the air quality impacts in the Huerfano River Parcel, the report proposes an air quality impact on the City of Pueblo of 1.5 ug/m³ annually. It is generally accepted that dispersion modeling is accurate within a factor of two. This means that the air quality impact on Pueblo could be as low as 0.75 ug/m³ or as high as 3.0 ug/m³. The report correctly notes that increases below 1.0 ug/m³ are insignificant. However, "just 0.5 ug/m³ above the level of insignificance" can also be interpreted as 50% greater than the minimum significant level.

Section 3.1.6 Meteorology and Air Quality

Because of a lack of data in the Huerfano River Parcel site, meteorological data from the Pueblo airport was used as a model input. Temperature, humidity, and precipitation data would not vary considerably between Pueblo and the Huerfano site and could be directly applied in the modeling. However, because Pueblo is directly influenced by the Arkansas River drainage basin and the Huerfano site by the Huerfano River drainage basin, wind data may be significantly different between the two regions. Therefore, while the modeling results may be the best presently available, there is a possibility that they may not be fully valid.

On page 3-43, the report makes reference to "designated" and "non-designated" areas. To the best knowledge of the Division such a classification scheme is archaic and is not being utilized. Areas are designated for criteria pollutants as either attainment, nonattainment or unclassified. Additionally, the State has a categorization system for the prevention of significant deterioration (PSD) for SO₂ and the EPA has a separate system for PSD classification.

AUG - 1980

Mr. Thomas Looby
July 31, 1980
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The priority designation system for criteria pollutants is also no longer used. The references being made note that the Pueblo area is non-attainment for particulates and attainment for SO₂, CO, NO_x, HC and O_x.

Finally, it should be noted that Colorado ambient air quality standards are the same as Federal standards. This means that the primary annual standard of 45 ug/m³ and the primary 24-hour standard of 150 ug/m³ shown in this section are both in error.

Appendix G - Emission Inventory

The DEIS provides an equation to be used in calculating emissions from vehicle movement. It is highly likely that this equation was developed for use with wheeled vehicles. Therefore, it may not be applicable to tracked vehicles such as tanks. After calculating emissions, there was an additional 35% reduction applied to account for vegetative cover. It is unclear if the equation took any accounting of vegetative cover in its deviation. In any case, the 35% figure has not been referenced.

In assessing the impact of aircraft emissions, only engine generated pollutants were considered. It is likely that hovering, take-off, and landing of helicopters will produce major amounts of particulates emanating from ground sources.

With regard to the worst case 24-hour particulate concentration from training area ABC, the model accuracy can once again only be correct within a factor of two. However, the estimates provided are likely to approximate worst case conditions.

Section 4.1.6 Meteorology and Air Quality

The majority of this section simply summarizes the work that has been previously referenced. The Division does feel that the monitoring program being proposed is essential and should be instituted. It appears that the four hi-vols would be sufficient but because of the size of the parcel there should be two meteorological stations - one in the north half of parcel A and one in the southeast half of parcel C.

Effects on the City of Pueblo

The Fort Carson DEIS reports a proposed impact on Pueblo of 1.5 ug/m³ annually. Based on modeling experience this figure may be off by as much as a factor of two. A number of variables could cause the impact to vary even greater. No evidence could be found accounting for fallout, or redeposition of dust reentrained by ground vehicles or aircraft. The emissions equation could have erred in the estimation of emissions since it is not clear if the derivation of the equation is applicable to the types of vehicles used in the army. The

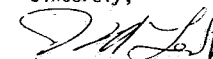
Mr. Thomas Looby
July 31, 1980
3

assumptions relating to vegetative cover also need to be made clearer. In this regard, it would not be unreasonable to ask the army to perform a re-analysis, or re-modeling, providing better justification for emission factors, meteorological inputs, and other relevant data.

No analysis of vehicular traffic on public rights-of-way was undertaken by the Air Pollution Control Division. This was because no such data was considered in the DEIS. However, extensive convoys could have impacts on the levels of TSP, CO, NO_x, HC, and O₃ in Pueblo.

We hope the Division has been of help in this matter. Please contact us if you have any further questions.

Sincerely,



James M. Lents, Ph.D., Director
Air Pollution Control Division

RH:pm

cc: Dr. Robert Arnott
Jerry Korrell
Dave Ross
Ray Mohr
John Clouse
Wayne May

STATE OF COLORADO

EXECUTIVE CHAMBERS

136 State Capitol
Denver, Colorado 80203
Phone (303) 829-2471



Richard D. Lamm,
Governor

August 29, 1980

Major General Louis C. Menetrey
Commander, Headquarters
Fort Carson, Colorado 80913

Dear General Menetrey:

Since 1972, the State of Colorado has been aware of Fort Carson's need to acquire additional training land. The State level review of Fort Carson's Draft Environmental Impact Statement (DEIS) on the acquisition of alternative sites in southeastern Colorado has concluded, and I am hereby transmitting my position to the Department of the Army. In addition to the DEIS on Fort Carson's expansion, the State level review included a thorough assessment of the preliminary draft environmental statement for the continuing operation of Fort Carson. Based on this review, I concur in the need for a combat maneuver training site on either of the two parcels. I support the expansion acquisition on national defense grounds and to avoid future economic disruptions and losses to the Colorado economy should a nearby training site not be provided. While I understand that the Department of the Army's environmental impact statements are not designed to be integrally related, the expansion needs for training purposes do materially relate to the possibility of a reduced mission at Fort Carson. A final State position on the continuing operation's DEIS will be formulated at a later date.

While there has been considerable public speculation about future troop levels at Fort Carson, the continuing operation DEIS is specific in stating that, if additional land cannot be acquired, "the training mission as established, in the preferred operational alternative, may be in jeopardy. The proposed mission alternative, if supported by State action, will continue and expand the economic benefits the State receives from Fort Carson."

While either of the proposed sites will meet Fort Carson's training needs, both sites present conditions requiring additional mitigation measures to protect natural areas and wildlife and to offset losses to local economies. I want to congratulate you on the quality of the land analysis presented in the expansion DEIS. Below are outlined additional

Major General Louis C. Menetrey

-2-

August 29, 1980

and optional actions I desire to have incorporated into the final EIS, the site management and/or your internal acquisition strategy with Congress. Most State reviewers acknowledge major issues involved in the acquisition to be (1) the protection of the Purgatoire Canyon resources and (2) the Huerfano site presenting a sizeable challenge to the Department of the Army to prevent additional dust problems for Pueblo. My staff has presented a number of mitigating measures for your consideration.

GENERAL ITEMS

1. Air quality monitoring, water quality monitoring, and land recovery programs should begin immediately once a site is selected, to determine impacts from base line data and to adjust mitigation efforts and management programs. State and local agencies should be invited to participate in a formal structure to input into these processes. Several State agencies are seriously concerned about the actual recovery time of the vegetation after training use. While the DEIS has explained the interruption of training during drought conditions, acts of nature such as grasshopper infestation have not been covered. The State desires to be a full partner in evaluating actual conditions that will occur on the site.
2. The DEIS does not adequately address the possible impacts on area water rights of downstream users that would be impacted by erosion control dams and diversion structures.
3. State agencies desire to have the one-fourth mile canyon and wildlife buffers extended to one-half mile. Can the training mission and land recovery program accommodate this change?
4. Strict enforcement of closures of the wildlife protection areas on both sites is necessary to maintain wildlife populations.
5. Side canyons on both sites should be included as wildlife protection areas.
6. The Department of the Army (DOA) should request a Congressional appropriation to compensate local jurisdiction tax-base losses for outstanding school bonds. This is particularly necessary since DOA does not have a payment-in-lieu-of tax system as do the Departments of Interior and Agriculture.
7. Fort Carson is requested to tailor a portion of its purchase program to businesses in areas adversely affected by the acquisition. This can help offset the loss to the agricultural economy.

PINON CANON SITE

If this site is selected, the State recommends the following actions:

1. Move the eastern boundary further west to include the side canyons of Red Rock, Lockwood, and Bent, and provide a one-half mile buffer from the rims of the resulting boundary.

L-37

August 29, 1980

2. Perform field inventories by a qualified botanist to identify any populations of Haplopappus Fremontii Monocephalus, a species of plant which occurred on the 1976 proposed federally endangered species list. If populations are found, provide for their protection.
3. Obtain adequate field data on plant and animal species which occur on the parcel to make more precise judgments on protection and management.
4. The Department of the Army should support the Purgatoire Canyon and its side canyon's nomination as a National Natural Landmark.
5. The entire Purgatoire Canyon should be acquired and managed for wild-life and natural areas protection.
6. Chacuaco Creek should be included in the list of permanent aquatic habitats.

HUERFANO RIVER SITE

1. Air quality impacts on Pueblo are a major concern for this site. The land acquisition DEIS showed a potential impact of 1.5 micrograms per cubic meter of dust annually in Pueblo. This does not constitute a significant impact but requires significant attention. The accuracy of the air model used is only correct up to ± 2.0 . This means that the air quality impact on Pueblo could be as low as 0.75 or as high as 3.0 micrograms per cubic meter of dust.

The Army is requested to implement such mitigation measures as necessary to reduce emission level to Pueblo to below a significant level. The following measures are recommended in addition to those planned:

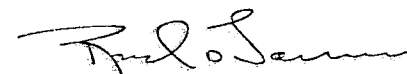
- A. Pave high activity areas such as the rail-loading areas and road receiving high level of average daily traffic.
- B. Stabilize major unpaved road by using acceptable chemical sprays or road carpet like that developed by Monsanto. This can reduce dust by up to 50 percent.
- C. Reduce vehicle speeds to 20 mph wherever feasible.
- D. Establish on-site air quality monitoring immediately, and use meteorological data to sample dust patterns, wind patterns, and their directive speed.
2. To prevent dust from use areas from settling into the canyons, a one-half mile buffer area is desired.
3. The Army is requested to support and sign an agreement with the Department of Natural Resources for the registry and designation of the natural areas proposed by the Colorado natural areas program on April 10, 1980, and as appears on pages 3-56 in the DEIS.

August 29, 1980

4. Perform on-site surveys within the parcel for the Arkansas River Darter and the Arkansas River Speckled Chub.
5. Perform field inventories by a qualified botanist to identify any populations of Haplopappus Fremontii Monocephalus. If populations are found, provide for their protection.
6. Obtain adequate field data on plant and animal species which occur on the parcels to make more precise judgments on protection and management.

We look forward to working with you in your efforts to accommodate these requests.

Sincerely,



Richard D. Lamm
Governor

STATE OF KANSAS



OFFICE OF THE GOVERNOR

State Capitol
Topeka 66612

John Carlin Governor

August 27, 1980

Mr. Donald Safford
Facility Engineers, Building 304
Fort Carson, Colorado 80913

Dear Mr. Safford:

This letter is to reaffirm my staff member's call last week about the expansion project at Fort Carson.

We in Kansas are obviously concerned about the quality of water that flows from Colorado to Kansas and other downstream states. In order that we may do a better job of monitoring the expansion project I would ask that you communicate any future milestones and/or significant information to John Dewey of the Kansas Water Resources Board, 503 Kansas Avenue, Topeka, Kansas 66603. I have asked Mr. Dewey to monitor the project.

Further, I understand a question was posed at your public hearings concerning whether the water quality questions in the draft EIS were satisfactorily addressed. I would be most interested in your response to that question, and I would ask that you communicate your answer on that question to Don Smith of my staff.

I will appreciate your assistance in these matters.

Sincerely,

A handwritten signature in cursive script that reads "John Carlin".
JOHN CARLIN
Governor

JC:DCS:ko

NON-GOVERNMENT AGENCIES



ACADEMY FORD, Inc.

175 North Academy P.O. Box 9248
COLORADO SPRINGS, COLORADO 80932

Telephone (303) 597-2200

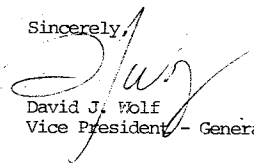
August 13, 1987

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, CO 80913

Dear Mr. Halla:

Academy Ford, Inc. supports the acquisition of land for military training at Fort Carson. The Army must have this additional area in which to conduct extensive troop training necessary to assure strength and readiness.

Sincerely,


David J. Wolf
Vice President - General Manager

DJW:kg



A. P. GREEN REFRACTORIES CO.

MEXICO, MISSOURI 65265 U.S.A. PHONE: 314 473-3626 CABLE ADDRESS: "GREENCO"

August 11, 1980

Commander
Fort Carson and 4th Infantry Division (MECH)
ATTENTION: AFZC-FE-EQ
Mr. Michael E. Halla
Building 304
Fort Carson, Colorado 80913

Dear Sir:

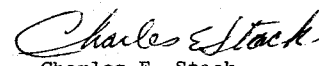
The A. P. Green Refractories Co. has mineral holdings on property adjacent to the Huerfano River Parcel under consideration for acquisition. The clay deposits are located south of the river in Section 11 and Section 1, T25S, R65W. The deposits were located and acquired principally for the production of refractories and clay products at our Pueblo Plant.

We currently have right-of-way agreements over properties proposed in the Huerfano River Parcel and have plans to transport the clay from these deposits northward across the Huerfano River to Pueblo as needed. Without this route available for transportation, it would be necessary to haul via Walsenburg. This would add considerable mileage and cost to the haulage of our clay reserves and may prevent the utilization of these resources by making them uneconomical.

This is presented now at the request for public comment, asking that provisions be included in the acquisition and usage plan for easements to allow A. P. Green Refractories and possible other mineral holders to utilize a valuable mineral resource without substantially or prohibitively increased costs.

Your consideration to this matter will be appreciated.

Sincerely yours,


Charles E. Stack
Chief Geologist

CES/mb

Subsidiary of United States Gypsum Company

PIKES PEAK CHAPTER

ASSOCIATION OF THE UNITED STATES ARMY

P. O. BOX 2442 COLORADO SPRINGS, COLORADO

August 13, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

As an individual and then again as President of the Pikes Peak Chapter of AUSA, I would like to go on record with your office as 100% supporting the program of acquisition of additional land for Fort Carson's training area.

While there has been much protest expressed in the news media against such a move, we feel this is undeserved and not at all in keeping with the American ideals.

If this country is to have any degree of security maybe all of us must make some sacrifice in providing for a strong defense program which can only be obtained if our men are adequately and well trained. It is obvious that this cannot be accomplished without a training area.

If there is anything that we can do to further your efforts, please let us hear from you.

Sincerely,

Joseph Reich
Joseph Reich, President
Pikes Peak Chapter, AUSA

jr/nlb

**The
Arkansas Valley
Audubon Society**
P.O. Box 1566 5200 W. 11th St.
Pueblo, Colorado 81002



COMMITTEE:
CHAIRMAN:
ADDRESS:

August 15, 1980

Commander
Fort Carson and 4th Infantry Division (Mech)
ATTENTION: AFZC-FE-FQ
Mr. Michael E. Halla
Building 304
Fort Carson, Colorado 80913

Sir:

The Arkansas Valley Audubon Society wishes to go on record protesting the expansion of Fort Carson to either the Huerfano River district, or the Pinon Canyon area, based on the Environmental Impact Statement, and its Appendices, as now proposed. Nor does the Society consider another Statement feasible. The areas considered are thinly-soiled dryland, once torn by tank exercise not to be recovered within a generation, and water is at a premium. The salinity content in run-off from desert-type cloudbursts would foul drainage. As rangeland the districts have for years returned a profitable cattle business; taxes are considerable. Both of these would be lost. The environmental interest of Audubon are well-known and the Arkansas Valley Society is unalterably opposed to destruction inevitable to terrain and wildlife which, admitted in the current Statement, would be no less than wanton.

Sincerely,

Sterner Remple
Sterner Remple, President

L-41

"TO CONTRIBUTE ITS FULL RESOURCES AND CAPABILITIES

TO ADVANCING THE SECURITY OF THE UNITED STATES."



PIKES PEAK CHAPTER

ASSOCIATION OF THE UNITED STATES ARMY

P. O. BOX 2442 COLORADO SPRINGS, COLORADO

11 August 1980

Mr. Michael E. Hella
Environmental Program Director
Facility Engineers- Building 304
Fort Carson, CO 80913

Dear Mr. Hella:

President Joseph A. Reich, Sr. of the Pikes Peak Chapter, AUSA has asked that I forward to you the enclosed material supporting the proposed expansion of Fort Carson training areas. The enclosed 15 petitions were received by the AUSA which has taken a strong stand in support of the Fort Carson proposal. Signatures on the petitions are expressions of support from the individual signers and not necessarily the firm or organization which may be listed on the petition as identification. Some organizations are unable, because of their bylaws or governing rules, to take a position as a group but their members or employees are free to do so. A lso enclosed is a copy of a letter received by the AUSA from the Pikes Peak Chapter of the Retired Officers Association which pledges the support of the majority of its membership. As you can see from the list of addressees, the letter was given wide distribution.

Speaking for myself as an individual and an officer of the AUSA, I heartily concur that Fort Carson is in desperate need of the additional training area if it is to properly train for its national security missions. Having served in an armored infantry battalion, I am well aware of the space requirements to adequately prepare an armored unit for its role on the modern battlefield. As a trainer of soldiers in the past, I have always felt that sweat shed in the training areas will help prevent the shedding of blood on the battlefield. You have my sincere support in your efforts to attain the acreage needed to prepare our soldiers for their important missions.

I trust that the enclosed material will be useful to you for whatever use that you care to make of it.

Sincerely,

Robert W. Leonard
Robert W. Leonard
Secretary

We, the undersigned recognize that the expansion of Fort Carson is vital to our nation's defense and wholeheartedly support access of additional training land.

Name of company/organization OSCAR WATSON ADV SPEC
Address 2180 LARK DRIVE. COLO SPRS. COLO 80909
Phone 684-6423



"TO CONTRIBUTE ITS FULL RESOURCES AND CAPABILITIES

TO ADVANCING THE SECURITY OF THE UNITED STATES."

Sinton Dairy

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

John W. Gray

Paul B. Stealy

Larry L. Leonard

David M. Gray

Charlie Wilkins

Sha B. Wood

~~David M. Gray~~

Irene Hendricks

James T. Keane

Menda Dickham

Kathy McDaniel

Larry Summers

Barbara Spinner

Zandra Albee

Rachel Westfall

Louisa Hall

Margaret J. Nease

Patricia Haff

John E. Keating

J. R. Kuttum

Opal Reed

Marvin Brown

Peter S. Russell

Dave W. Henderson

Robert Emms

Brian R. Riggall

Dale Bessie

Den Osbourn

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Lana Walker

Victor Wright

~~David M. Gray~~

Ernest J. Strick

BROOKHARTS

Department Store

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Charles C. Brown	4450 WINDING CR. CSC. 80917
Edw W. Webb	1120 North Field Rd. Colo Springs 80919
Rob Webb	2613 Wren Dr. CSB. 80907
Karen A. Harman	1011 Parkview Blvd
Tracy S. Wynn	3280 So. Academy #254
Don Fulkner	1627 Vasequez Cir.
John H. Hill	571 Dexter
Ray J. Saut	2462 Cold Creek Drive
Debbie Thyma Kovalik	519 CRYSTAL HILLS BLVD. 80829
Greg Olyegor	CAHILLAN Colo.
Paul Andron	5145 W. Hwy 17 Colo Sprs
Pauline	Rt 2 Box 21 Rocky Ford, Colo 81067
Lou Shaw	638 Glen Eyrie Cr. 80904
Samuel R. R. R.	5260 WHIMSICAL DR. CSB. 80917.
Larry Mitchell	1865 OLD RANCH RD. COLO. SPRS 80908

Employees of
Equitable Life Assurance
Society of the United States

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Victor R. Jackson	Line R. Cu
Wm. Miller	Cheryl Thant
Joe J. Wiesner	Elaine Perry
Jennie Adams	Judy Larsen
Violet Heath	Rita Sintas
Benny Johnson	Beatrice Madison
Simon K. Kowidz	Vicki J. Strong
Sharon Benton	Cecilia Benavidez
Richard Lane	Bernadette Valdez
Bob D.	Marlene Romero
Paul Antagon MD.	Phyllis Withers
Jeff Green	Sandra Cook
John	Debra S. Penhays
Lee Lawrence	James N. Spindler

Name of company/organization System 2000 Corp

Phone 473-9860

Broad A. Buechel
 James Blommon (Name of the
 party) who was attorney
 for the said Lewis & Clark
 P. S. Cox
 James D. Jones
 Howard K. Clark
 Donald Spring
 Conyng Name
 (Name of the party)
 and C. Taylor
 (Name of the party)

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Marion E. McLaughlin.

Norothy L. H. Koon

B. V. K. L.

RR Heinz

Now Service

Wm. M. Lusk

Enclosure

727

[Signature]

John Smith

John Carlson

Leaves & Russell

7888. Howard

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Howard Kaiser
 Egle Edmear
 Terry C. Spaw
 Bert P. Wyckoff
 D. J. Davis
 Peter A. Carls
 Clark L. Nelson
 William H. Calvert
 Richard R. Edger
 Joyce A. Stemm
 Jean H. King
 Pauline Carries

Employees of Central Office of Colorado Springs

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Wesley Stair
 John M. Sofford
 Carolyn F. Servidio
 Kenneth R. Wiesenfluh
 Dwayne Larsen
 Gloria A. Rothrock
 Elizabeth A. Siller
 Eugene Stan-Kan
 Betty Radney
 Pat A. Crisman
 Claudette Bennett
 Debbie LaMere
 Janice K. Dold
 Ellen Daudon
 Lyle D. Robb
 Charles A. Longton
 Dan J. Ramey
 Jack P. Miller
 J. E. Richardson
 Mary Clark
 William R. Goble
 Howard Parks
 Judy Smith
 Marty J. Smith
 Betty Ross
 Kay May
 K. R. Luman
 Belita Dahl

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Luck McKenry

Roberta Dambert

Sharon Lightfoot

Ann Truitt

Carol Zeltman

Marquet Johnson

Margaret Brighton

J. W. Watson

Dayna Ballard

Ann E. Vries

Julia D. Moore

Gen. B. Loffel

Arnie M. Watten

Santha Hurdell

Sam H. Heberer

David Pruitt

Dale Ramsey

Carlene J. Cook

Angela D. Montgomery

John John

Joseph M. Becko

Edward W. Hunsbald

Martha A. Redford

Mary V. Campbell

Sam P. Wrede

Kent D. Boyd

Jack R. Anderson

Brenda J. Lewis

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Rev Ann Brown

C E Remberg

Betty Randall

Carl Toth

Mimi Cavanaugh

Janetta M. Dalmis

Mary Jones

Frank Hawtorn

Carl R. R. R.

Julie C. Taylor

Stephen Q. R. R.

members
UFW Post 6461

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Bernard H. Hines 419 Marion Dr. Security, Co. 80911
Darryl E. Smith 96 KATHI C/A SECURITY CO
Elihu W. Seward Chancellor 904 Pk Fountain
Walter Lee Simpson 419 Linda Vista, Fountain
Martin K. Canage 426 Linda Vista Dr. Fountain CO 80817
Billy D. Parris 1010 DE LA VISTA PL Security 80911
Key R. Loral 212 Morningstar Dr, Security, CO 80911

~~_____~~
~~_____~~

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Ed Polman 319 W. Ohio Fountain CO
William B. Smith Sr 520 Crest Fountain CO
Nate L. Lue 346 Rosewood, Fountain CO
Birba J. Long 404 Marion Dr. 80911
Charles R. Moughy D-3 Riverside plch Fountain 80817
James A. Jones 3116 E. Bijou St. CO 80909
Oliver D. Dorsch 984 Chapman^{ap} #1 Co. B. 80916
John Menden
James D. Toy 116 N 13th St Colo Spgs CO

HEYSE SHEET METAL

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

W. Heyse Jr.	B.E. Filbertson Jr.
Thomas M. Dilley	John S. Stewart
R.C. Babbington	Alfred Jensen
A.T. Harn	Donald M. Paul
Jack B. Dunsen	Donald Hartung
Deborah A. Zehalt	Joseph B. Hughes
Doris M. Pittenger	LeRoy L. Latham
A.M. Gill	Michael E. Lyons
David C. Anderson	Ron Jorden
Michael M. Janelle	Robert F. Harrison
Luther A. Jr.	William J. Baum
James H. Brown	David J. Cook
Clarence Coulson	H.B. Sheldahl
Franciscombe	Kathy Meyer

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

Edward Bonch	Wadland Park Colo.
Alfred Bowers	1118 Chambers Dr. COLO SPRS.
Wm. M. Sussengut	3607 Winston Park Colo Springs
Ralph Aboulman	5750 Eggar Ct Peyton Co 80831
Allen J. Hesselbusch	1510 S Cascade CS 80906
John J. Warr	11325 RAYONA Rd C.S. 80908
Shirley K. O'Connell	25 E. Semanlyne Ave # 207 80906
William L. Swearingen	425 Washington #1 80929
Donald W. Heyse	1030 E Jackson 80907
Phyllis A. Gross	216 Crystal Hills Blvd ^{Manitou} 80829
Bernard E. Miller	5102 Talley Rd 102 B Colo Sp.
Raymond J. Palmer	1140 Cree Dr. C/S 80915
Jack J. Smith	3214 N CHESTNUT 80915
Abraham Heyse	802 So Wadsworth

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

<u>Paul R. Muroste</u>	<u>2633 Aero Pueblo 81004</u>
<u>Mike Galach</u>	<u>2134 Chambers Ave 80909</u>
<u>Patric A. Lord</u>	<u>915 Cheyenne Blvd</u>
<u>Donald L. Whittier</u>	<u>22437 Bennett</u>
<u>Larry L. Threlk</u>	<u>217 Sumac Dr. SECURITY</u>
<u>Kenneth D. Kline</u>	<u>3609 Leeds Ln</u>
<u>Raymond H. Bane</u>	<u>212 E. San Juan</u>
<u>Glenn W. Tracy</u>	<u>553 Ponderosa Dr</u>

PETITION

We, the undersigned, recognize that the expansion of Fort Carson's requirements for training areas is vital to our nation's defense and wholeheartedly support acquisition of additional training areas in the Huerfano River or Pinon Canon parcels.

<u>Carl B. Spence</u>	<u>8 Lake Ave. Colo. Springs</u>
<u>Angelo W. Christopher</u>	<u>203 Whit House Dr. Colo. Spr</u>
<u>E.C. Haggerty</u>	<u>720 Castle Road - Colo. Spr</u>
<u>Paul D. Cannell</u>	<u>14247 Cascade Ave Colo Spring</u>
<u>Raymond S. Schmitt</u>	<u>460 Sutherland Pl. Colo. Spr</u>
<u>Arthur L. Canham</u>	<u>345 Buckeye Dr. Colo. Spr</u>
<u>Regina L. Linn</u>	<u>1606 RIDGEWAY</u>
<u>Adrian K. Wallace</u>	<u>4350 CREEK VIEW RD</u>
<u>Thomas E. Walker</u>	<u>U.S.S. John Hancock DD981</u>
<u>Clarence J. Quinn</u>	<u>1528 Mesa Ave 80906</u>
<u>Paulo Schmeckeb</u>	<u>816 no. Foots 80909</u>
<u>Lynn Gaulton</u>	<u>Box 204/Woodland Park CO 80903</u>
<u>Cheryl A. Hunt</u>	<u>2818 Airport Rd. CO 80903</u>

Name	Address	Phone No.	Company
Jack D. Smith	3450 E. Highway	479-2111	Miller-Hunter
Andie O'Brien	3240 S. Portland Hwy 228	320-6800	" "
Robert L. Webb	2917 W. Highway	" "	" "
Jack D. Smith	2003 W. Highway	4636-2404	" "
Raymond R. Ralston	1330 Bates Dr.	471-4705	Crissey-Foster-Lumber
Ray D. Crocker	515 Fourth St. Rm 134	4259	Crissey-Foster-Lumber
Michael G. Witting	9 Beverly Pl.	#3 471-3881	Crissey-Foster-Lumber
David Delaney	2910 Sage #15	473-9403	" "
James R. Robison	2416 Luanhol Dr.	392-3235	Crissey-Foster-Lumber
Charles G. Rayton	3404 E. Pike St.	634-7780	Crissey-Foster-Lumber
Don Messman	723 Sunset	635-7532	Crissey-Foster-Lumber
Marion David Bell	1022 E. Highway	684-2471	Crissey-Foster-Lumber
Marion David Bell	1022 E. Highway	684-2471	Crissey-Foster-Lumber
Marion David Bell	1022 E. Highway	684-2471	Crissey-Foster-Lumber
Elton Ottamer	7915 B. Road	495-2507	Crissey-Foster-Lumber
Marvin G. Ginn	1711 G	633-5936	Crissey-Foster-Lumber
Don J. Smith	3294 Teasdale	597-2211	" "
Thibb Roof	3520 CRIDEWELL Ln	591-9196	" "
James D. Daily	Box 85 B. PEYTON	683-2779	" "

Name	Address	Phone No.	Company
DAN YOUNG	1650 N. MURRAY BLVD	597-0792	CRISSEY FOWLER LBR
Dora Bidwick	1650 N MURRAY BLVD #201	597-0792	CRISSEY FOWLER LBR
DOROTHY J. VICTOR	3463 AMADOR CIR.	598-0319	" " "
Bernice Terry	2615 Verde Dr.	471-1150	" " "
Marlene Peach	11415 Burgess Ln	495-4579	Crissey Fowler Lbr
Robert E. Wiegman	1429 Alamo Ave	473-2416	Crissey Fowler Lbr Co
Ed. Brown	2021 S. 1st Ave	636-2639	" "
Francis C. Friedman	4115 Palau Park Blvd	596-4891	Crissey Fowler Lbr Co
Ray W. Dabbin	2111 W. Platte	473-2411	" " " "
Heidi Ann	2429 Garden Way	599-1634	" " " "
Tom R. Peach	215 So. Paloma Hwy	632-0370	" " " "
Annetha C. Brock	26 Cherry Mtn. Blvd.	632-7713	" " " "
W. L. Berglund	1821 So. Cascade	632-9438	" " " "
Wayne Light	1206 Cambridge	598-1418	" " " "
Pat Stroup	1416 10th St	634-0966	" " " "
Randy L. Jensen	610 Hudson Rd	632-1443	" " " "
William Philbrick	1126 E. Madison	632-1921	" " " "
Robert Brown	3802 Hwy 100 N. W. 1st	591-2825	" " "
Tom R. Peach	11415 Burgess Lane	495-4579	Crissey Fowler Lbr Co
Wallace Chiles	1423 Keith Dr	597-1950	Crissey Fowler Lbr Co

P E T I T I O N

Organization SSGT Janis m. Selix

military order of Purple Heart

Please return to:
Pikes Peak Chapter
Association of US Army
PO Box 2442
Colorado Springs, COL 80901

RECOGNIZING THE IMPORTANCE OF FULLY TRAINED, COMBAT READY TROOPS TO THE SECURITY OF THE UNITED STATES OF AMERICA; RECOGNIZING THE IMPORTANCE OF ADEQUATE TRAINING AREAS FOR THE FOURTH INFANTRY DIVISION TO MAINTAIN ITS COMBAT READINESS AND DISCHARGE ITS NATIONAL DEFENSE MISSION; AND RECOGNIZING THE IMPORTANCE OF FORT CARSON TO THE SOUTHERN COLORADO REGION, THEREFORE, WE THE UNDERSIGNED FULLY SUPPORT THE U.S. ARMY'S REQUIREMENTS FOR ADDITIONAL TRAINING AREAS AS SPECIFIED IN THE FORT CARSON LAND ACQUISITION PROGRAM.

William J. McArthur 30711 101 Jasper Dr. Security CO
Laurance L. Doolley 2314 East Pintado Colorado Springs CO 80909
Robert R. Richard WILLIAM R. RICHARDSON
Wesley M. D. Colo Spg. Co 80901 William R. Richard
1218 E. Polaris Drive Colo Spg

Bent-Prowers Cattle and Horse Growers Association

Organized 1870

Box 118

Wiley, Colorado 81092

OFFICERS:

E. L. Mathew, President
La Junta, Colorado 81030

Dr. James McMillin, Vice President
Lamar, Colorado 81052

Carwin Brown, Second Vice President
Springfield, Colorado 81073

Rebecca Larrew, Secretary-Treasurer
Wiley, Colorado 81092

Col. Earl Burley
Public Affairs Officer
Ft. Carson, Colo.

July 23, 1980

B4J

Dear Col. Burley:

The Bent-Prowers Cattle and Horse Growers Association would like to take this opportunity to go on your records as opposing any expansion by Fort Carson in the Pinon Canyon and Huerfano River parcels as proposed. Our organization is well over 100 years old and at present represents over 300 farmers, ranchers and businesses in a five county area in Southeast Colorado, including Otero, Kiowa, Baca, Bent and Prowers counties.

It is the considered opinion of these members and their Board of Directors that acquisition of these lands would be detrimental to the ecology and the economy of Southeast Colorado as a whole.

At the annual meeting of Bent-Prowers Cattle & Horse Growers Assn. held in Feb. 1980, in Lamar, the following resolution was passed.

WHEREAS, different Government entities keep trying to acquire more privately owned land for public use, and

WHEREAS, when private land is taken for Government purposes it comes off the local tax rolls,

THEREFORE, be it resolved, that the Bent-Prowers Cattle and Horse Growers Association go on record as being opposed to any more acquisition of private land by any government agency.

As a member of the Colorado Cattlemen's Association, Bent-Prowers endorsed a resolution passed by the CCA in 1979 specifically stating the CCA's opposition to any expansion by Fort Carson.

Thank you for your time.

Respectively,

Rebecca S. Larrew

Rebecca S. Larrew
Secretary - Treasurer

L-53



Colorado Springs Chamber of Commerce
P.O. DRAWER B • COLORADO SPRINGS, COLORADO 80901 • (303) 635-1551

August 1, 1980

Mike Halla
Department of the Army
AFZC-FE-EQ
Building 304 DFAE
Fort Carson, CO 80913

Dear Mike:

The enclosed letters have been submitted to us by a wide range of member businesses. We have retained a list of these businesses to call on for future public hearing comments.

I do expect to receive more which I will forward to you.

Sincerely yours,

Wanda
Wanda L. Reaves,
Director
Governmental Affairs

WR/mej



Brookside Realty

118 EAST BROOKSIDE • COLORADO SPRINGS, CO 80906 • (303) 632-7591



7/18/80

Mr. Reaves,

In my humble opinion
we most definitely need to bring
our Defense program up to snuff.
The expansion of Camp Carson is
only one step in the right direction,
but a step that certainly needs to
be taken.

I can't recall a whole lot
east of Pueblo that would be of
much good for anything else -
Take 50 acres to pasture one cow -

Sincerely,

Jane Mock

CF&I STEEL CORPORATION

A subsidiary of Crane Co

P. O. Box 316, Pueblo, Colo. 81002

D. R. LUSTER

Vice President-Engineering

August 15, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

CF&I has carefully reviewed the Draft Environmental Impact Statement for Training Land Acquisition for Fort Carson, Colorado.

We fully recognize the need for Fort Carson to expand and support the training land acquisition program.

However, as you are aware, Pueblo is currently classified as a "non-attainment" area for particulate and, although this classification has been appealed and the Colorado Air Pollution Control Commission has recommended that the classification be changed to "unclassifiable," all indications are that the EPA will not act favorably on the state's recommendations.

Based on modeling and our experience with fugitive dust, it is clear to us that Fort Carson's maneuvers will occasionally impact the Hi Vol samplers in Pueblo. Although this prairie dust creates no real health or welfare problem, it appears doubtful to us that the EPA will reorient their enforcement activities to recognize this fact within the next few years.

In view of the above, and assuming that our perceptions are correct, we would recommend putting as much distance between the Fort Carson expansion and Pueblo as is practical. Therefore, if the use of the CF&I property which we discussed on August 14 is inappropriate for training, then CF&I would recommend that the Pinon site be chosen.

We are pleased to have this opportunity to express our opinions and appreciated having you and Col. Safford visit us on August 14.

Very truly yours,



DRL/cg



COLORADO
HISTORICAL
SOCIETY

Bloom House, Baca House, and Pioneer Museum P. O. Box 472 Trinidad, Colorado 81082

July 2, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Ft. Carson, CO 80913

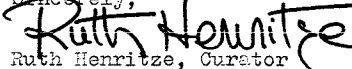
Dear Mr. Halla:

After reviewing the cultural resource section of the DEIS for the Ft. Carson Military expansion into the Pinon Canyon region, I find the proposed impact and mitigation results incomplete and unsatisfactory.

How can you determine the impact on cultural resources or propose a responsible mitigation and management plan when Dames and Moore failed to collect all available information or initiate even the most cursory study of the impact area? They not only failed to exhaustively research the literature, but also failed to contact local professionals concerned with the cultural resources of the area.

An accurate picture of impact on the cultural resources can only be accomplished through intensive evaluation prior to the publication of the impact statement and military use.

Sincerely,



Ruth Henritze, Curator

cc: Governor Richard Lamm
Senator Ken Clark
Representative Ray Kogovsek
Representative Phillip Nassari

1-5

(303) 633-5596

P.O. BOX 402



DESIGN/BUILDER

C. C. I. BUILDERS, INC.

COLORADO SPRINGS, CO. 80901

July 9, 1980

Ms. Wanda Reaves
Colorado Springs Chamber of Commerce
P.O. Drawer B
Colorado Springs, Colorado 80901


Dear Wanda,

I favor the considered expansion to Fort Carson. In this time of National and international unrest in our country, it is imperative that we maintain a strong and effective defense posture. We have been compromising our defense position to dangerous proportions and must change our direction.

The expansion should be implemented to provide additional training for our troops enabling emergency mobilization in a more efficient manner if the need arises.

Colorado Springs could suffer a dramatic economic setback if Fort Carson were to reduce the training and number of troops. This economic setback could be devastating to the local business community in general. Thank you for your efforts on this subject.

Sincerely,


Robert D. Tamm

COME SEE US AT 1586 SOUTH 21ST ST.



July 10, 1980

Colorado Springs Chamber of Commerce
P. O. Drawer B
Colorado Springs, CO 80901

RE: Fort Carson Land Acquisition

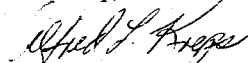
Dear Sir:

The importance of the retention and enlargement of Fort Carson to the stability of Colorado Springs and El Paso County is undefinable.

Economically the loss of this fine facility would reduce payroll thereby causing significant strain upon existing small businesses to the ultimate probability of many of them closing shop. The result of closed shops is further depletion in payroll, additional unemployment and greater demands upon unemployment and welfare payments. Total effect would include pressure, if not depression, on the Real Estate Market. All of these negative results of the loss of this job market would effect taxes paid by the remaining taxpayers.

Politically the Fort Carson base is essential to the welfare of every citizen in the United States. In this time of world tension with the forward if not totally brash approach by Communist led governments, it is imperative that our Country be at a strong state of readiness.

Sincerely,


Alfred L. Kreps
Vice President

ALK:clg



CRISSEY FOWLER LUMBER

July 10, 1980

Colorado Springs Chamber of Commerce
P.O. Drawer B
Colorado Springs, CO 80901

Attention: Wanda Reaves, Director of Governmental Affairs

Gentlemen:

We certainly do support the need for Ft. Carson to acquire additional training land. This fine installation and it's personnel have been so favorably integrated into our community, their urgent needs should be given every consideration.

Economic benefits from Ft. Carson activities are important. Even more important is the absolute necessity of National Defense. The negative responses to expansion plans are perhaps well intentioned, but the actual environmental impact on most areas being considered has been blown completely out of proportion. Those speaking out against this well-planned expansion must be very much misinformed particularly in not understanding or accepting the positive needs of a strong defense and troop readiness.

Very truly yours,

Kenneth C. Brosh

KCB:cs

Hart's
diamond jewelers

Executive Offices
24 South Tejon Street
Telephone (303) 475-2944
Colorado Springs, Colorado 80903

July 10, 1980

Wanda Reaves
Director of Governmental
Affaires
Colorado Springs Chamber
of Commerce
P.O. Drawer "B"
Colorado Springs, CO 80901

Dear Ms. Reaves,

We at Hart's Diamond Jewelers applaud the Chamber of Commerce for giving there all in support of the expansion program of Fort Carson. Being a business, centered in Colorado Springs, we realize the important economic impact that the Fort has on El Paso, and to the lesser extent Pueblo counties. Besides being economically beneficial, we realize that it is very important that our troops have ample room to train so that our nation is assured of its security. This is especially important at a time of political unrest in our world. For these reasons, Hart's Jewelers is in full support of the Army's decision to expand the Fort.

Sincerely,

Jerry Strauss, president
Hart's Diamond Jewelers, Inc.

js:IS



July 10, 1980

Ms. Wanda Reeves
Director of Governmental Affairs
Colorado Springs Chamber of Commerce
P.O. Drawer B
Colorado Springs, Colorado 80901

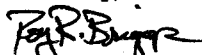
Dear Ms. Reeves;

We at Interwest Communications Corporation sincerely recognize and support Fort Carson's need for additional training land.

We do need the economic benefits derived from having Fort Carson in our community. Since the need for additional training land is needed to assure troop strength from being reduced, the land should be acquired.

At a time when troop readiness is a vital necessity, the citizens of Colorado Springs and surrounding counties should fully support this critical issue.

Cordially,


Roy R. Briggs
Vice President

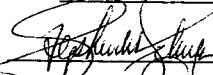
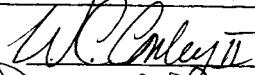




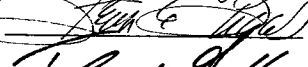
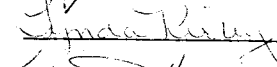
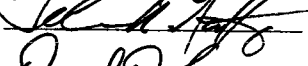
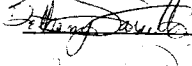
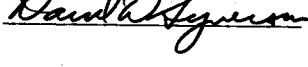
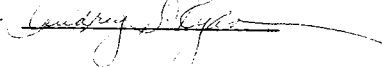
RB:bj

We, the undersigned recognize that the expansion of Fort Carson is vital to our nation's defense and wholeheartedly support access of additional training land.

Name of company/organization THE SCHUCK CORPORATION

Address 2 E. Pikes Peak Ave., Colorado Springs, CO 80903

Phone (303) 475-2222

INVESTMENT
BUILDERS
CORPORATION

July 10, 1980

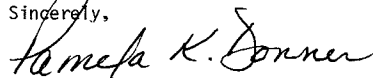
Chamber of Commerce
Wanda Reaves
Director of Governmental Affairs
P.O. Drawer B
Colorado Springs, Colorado 80901

Dear Wanda:

I am writing this letter on behalf of the Pikes Peak Apartment Association in reference to the memo from William B. Tutt, Chairman, Military Affairs Committee.

We will be unable to have a representative attend the public hearing scheduled for July 11, 1980. However, please note that this organization realizes the importance of the military in our community. We feel that the local economic benefits as well as the need for a strong national defense make the proposed Fort Carson expansion a must!

Sincerely,



Pamela K. Donner, Vice President
Investment Builders Corporation
Treasurer, Pikes Peak Apt. Assoc.

PKD/lv

1401 Potter Drive
Colorado Springs, CO 80909
Telephone 303 596-6506

KAMAN SCIENCES CORPORATION
1500 GARDEN OF THE GODS ROAD
COLORADO SPRINGS, COLORADO 80907

ALBERT P. BRIDGES
PRESIDENT

July 9, 1980

Colorado Springs
Chamber of Commerce
P. O. Drawer B
Colorado Springs, Colorado 80901

Attention: Ms. Wanda Reaves
Director of Governmental Affairs

Gentlemen:

As I will not be able to attend the Public Hearing session scheduled for Friday, July 11, 1980, on the Draft Environmental Impact Statement for the Ft. Carson expansion, I thought I would drop you a line and pass on my views.

From my understanding of the issues, I believe that the national interest from a readiness viewpoint far outweighs any inconvenience or potential land damage that may be done. I therefore support very strongly the expansion of Ft. Carson in either of the proposed locations.

Most of the opposition to Ft. Carson's expansion appears to revolve around environmental damage to the potential sites. I believe a well-managed program by Ft. Carson will do less damage to the land than leaving it completely unmanaged as it is today. (I am not saying the local ranchers do not manage their ranches well; I am saying they do not have the resources to environmentally manage large tracts of land.)

Thank you for presenting my views concerning this issue.

Sincerely,


A. P. Bridges

eg

L-59

KKTV-11

Capitol of Colorado Corporation

P.O. Box 2110
Colorado Springs, Colorado 80901
Telephone 303/634-2844

George W. Jeffrey
Vice President and General Manager

July 10, 1980

Colorado Springs Chamber of Commerce
P. O. Drawer B
Colorado Springs, Colorado 80901

Attention: Wanda Reaves
Director of Governmental Affairs

Gentlemen:

Since I'll be out of the city on July 11, I feel it appropriate that I go on record in favor of the land acquisition program presently underway for additional training land for Fort Carson.

It would be most short sighted for the people of Colorado Springs to reject this project, for whatever reason, at a time when training of combat-ready troops is of vital importance to our already weakened military posture. Add to that the importance of the military-generated dollars that are made available to us all in this trading area and the full impact can be seen clearly.

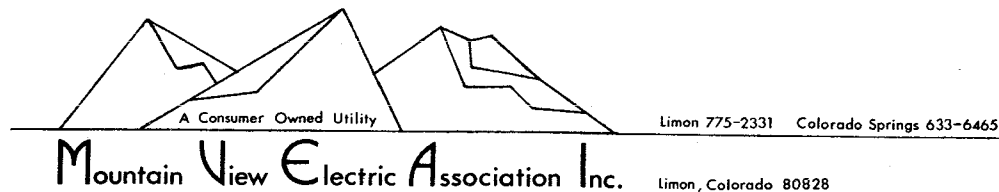
I trust you will have great numbers of articulate spokesmen at the July 11 meeting.

Sincerely,



GWJ:cr

Affiliated with CBS Television Network



July 9, 1980

Colorado Springs Chamber of Commerce
P.O. Drawer B
Colorado Springs, CO 80901

Attention Wanda Reaves, Director of Governmental Affairs

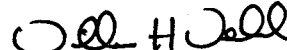
Dear Ms. Reaves:

We are aware that public hearings are to be held in the near future concerning acquisition of additional training land for Fort Carson.

This organization strongly supports the land acquisition effort in the interest of retaining a full troop complement at Fort Carson. This course of action will not only continue important economic benefits to the area business community, but would also appear to enhance our military defense posture in a most efficient and economical manner.

Sincerely,

MOUNTAIN VIEW ELECTRIC ASSOCIATION, INC.



Wilbur H. Welch
General Manager



July 9, 1980

Colorado Springs Chamber of Commerce
Attn/ Wanda Reaves,
Director of Governmental Affairs
P. O. Drawer B
Colorado Springs, Colo. 80901

Dear Mrs. Reaves,

I may be out of town and unable to attend the hearing of the Draft Environmental Impact group in Colorado Springs on July 11. If I return in time, I shall plan to attend the hearing. However, I did want to send this letter to express my support of the effort of Fort Carson to acquire land necessary for proper training of our troops in this time when troop readiness is so important.

As a citizen of Colorado Springs, I am also aware of the tremendous benefit the Fort Carson payroll brings to our community.

Cordially yours,


L. S. Oliver

LSO:mws



O'BRIEN printing

LETTERPRESS • OFFSET • TYPESETTING • STATIONERY
634-1509 • 1006 North 19th Street • Colorado Springs, Colorado 80904

July 9, 1980

Wanda Reaves
Director of Governmental Affairs

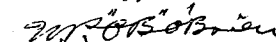
Dear Wanda:

I am W.P. O'Brien, president of O'Brien Typesetting and Printing, Inc. I have been in business at 1006 North 19th Street since 1947.

I think that about 90% of our economy is depending on Military support. I think it is imperative to keep geared to support most of the military demands, especially on the land issue.

I will not be able to attend the July 11 meeting, so I want it known that I am in favor of Fort Carson acquiring the necessary land needed.

Yours truly,



W. Pat O'Brien

July 9, 1980
2513 Bennett Avenue
Colorado Springs,
Colorado 80909

Colorado Springs Chamber of Commerce
P. O. Drawer B
Colorado Springs, Colorado 80901

Attention: Wanda Reaves
Director of Governmental Affairs

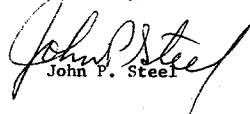
To Whom It May Concern:

As a taxpayer, a citizen of Colorado Springs since 1957 and as most people, I am a Patriotic American and I would like to go on record as being very much infavor of the "Expansion of Ft. Carson". This expansion to be either by the acquisition of land in El Paso County or other parts of Colorado, as may be negotiated. Ft. Carson is a very welcome asset, not only to Colorado Springs, but to the entire state of Colorado. It is a welcome asset to the United States as a whole, because the troops must have an area in which to maneuver and train. The longer we "drag our feet" and continue to have meeting after meeting "rehashing" the needed expansion, the longer it will be until we have the type of military preparedness which is necessary to keep America strong.

I am not a "Novice" when it comes to possible damage to the Buffalo and Gramma grass and other vegetation. Many of my years have been spent farming and ranching and as a graduate of an Agricultural College, I am familiar with the native grasses. It is my opinion that the training will do less damage than the presence of horses and more than would be inflicted by cows.

Let us stop all the talking and near hysteria and get started on something that will in the end benefit not only Colorado Springs, but Pueblo and the surrounding towns, Colorado and the United States as a whole. Quit bickering and help keep America strong. Do what is necessary to get this program "off high center" and get the "deal closed" for the acquisition of Ft. Carson Land.

Sincerely,


John P. Steel

COLORADO SPRINGS
Walker Electronics Inc.

2838 N. PROSPECT, COLORADO SPRINGS, COLORADO 80907
PHONE - (303) 636-1661

WHOLESALE DISTRIBUTORS
ELECTRONIC PARTS, SUPPLIES & EQUIPMENT

July 9, 1980

Colorado Springs Chamber of Commerce
P.O. Drawer B
Colorado Springs, CO 80901

Gentlemen:


In response to your memorandum of July 3, 1980, SUBJECT: Fort Carson Land Acquisition, our company would like to lend our support to the proposition of securing additional training land for Fort Carson.

The importance of troop readiness is of utmost concern to the entire country considering the current world situation. In addition, the economic ramifications of the possible loss of troops, if not the post itself, would affect the entire economic future of El Paso County.

We earnestly request that the Environmental Impact Statement be acted upon positively, and that additional land, as required, be secured.

Thank you for this opportunity to express the thoughts of our company.

Very Truly Yours,


Don T. Billings
President

DTB/dr



OWEN FARICY MOTOR COMPANY

P.O. Box 1415, 1133 Motor City Drive
Colorado Springs, Colorado 80901

Phone 303-636-1333

August 11, 1980



GUY MARTIN BUICK GMC

1313 MOTOR CITY DRIVE
COLORADO SPRINGS, COLORADO 80906

August 15, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Co. 80913

Dear Mr. Halla:

As a businessman in Colorado Springs, I want to convey to you the importance of military personnel to our business. A significant percentage of our four million dollars in sales last year was due to those people stationed at Fort Carson.

Any policy or decision effecting the size and importance of Fort Carson such as the land acquisition question will have a substantial affect on me and twenty-five other people (and their families) who work here.

I know there are many, many more businesses in Colorado Springs who will feel the adverse effects if the land acquisition issue fails.

Please consider what I have mentioned when you present the pros and cons of the acquisition to those with the power to decide.

Sincerely,

MICHAEL FARICY

mof:vs

Michael E. Halla

Environmental Program Director

Facility Engineers - Building 304

Fort Carson, Co. 80913

I would like to state that Guy Martin Buick is very decidedly in favor of the land acquisition for Fort Carson, directly to the south of the existing training area. We believe that the United States is very weak in its support of modern weaponry and in the training of our armed forces in their usage.

Therefore, we do want Fort Carson to grow and to be maintained at the highest level of readiness. Fort Carson is a very important part of our business - we would say well over 50%, and we will support them in every manner possible.

Sincerely,

James J. Reilly
General Manager

jjr/jwh

If you can't deal with Owen Faricy - You can't deal anywhere



August 14, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Sir:

We at Phil Long Ford would like to lend our support to the Fort Carson expansion program.

We feel very strongly about this country being strong. In order to do this everyone in this country must make a commitment of some sort. Also, the economic benefits to this community will be immediate and long lasting.

We need a sound economic base in order for this great community to continue to grow.

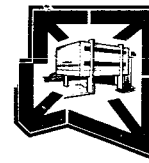
Regards,

Jay Cimino
Jay Cimino
General Manager

JC/jf



P.O. Box 40 1212 Motor City Drive
Colorado Springs, CO 80901



The
PUEBLO
Chamber of Commerce

302 N. Santa Fe • P.O. Box 697 • Pueblo, Colo. 81002 • 542-1704

August 13, 1980

Mr. Michael E. Halla
Environmental Program Director
Facilities Engineers -- Building 304
Ft. Carson, CO 80913

Dear Mike:

The attached statement was adopted by the Pueblo Chamber of Commerce Board of Directors at its regular meeting August 12 and we wish to have it entered in the official DEIS records and testimony concerning the Ft. Carson land acquisition program.

Sincerely,

Jada M. McGuire
Jada M. McGuire
Executive Vice President

cag

Attachment





302 N. Santa Fe P.O. Box 697 Pueblo, Colorado 81002 (303) 542-1704

POSITION STATEMENT

The City of Pueblo and especially the business community have been historically highly supportive of area military installations and efforts on the part of the United States Government to strengthen such facilities. Local community leaders and members of Pueblo's Congressional delegation were influential in their support of the creation of Camp(Fort) Carson, Pueblo Army Depot (Pueblo Depot Activity) and the Pueblo Army Air Base.

Of these three installations, the Air Base has long since been closed. Further, the Pueblo Depot Activity has been reduced from a maximum employment of approximately 6,000 to its current level of 860. This has had an extremely adverse effect on the total employment in the Pueblo area, pushing the unemployment rate to almost 8% for nearly two years.

Ft. Carson, on the other hand, continues to be a strong and vital factor in the region's economy however, communities other than Pueblo are receiving an overwhelming share of such benefits.

The contention that additional land is required for combat maneuver training must be and is accepted as a real need with high priority for the defense of our Nation. This position was adopted by the Board of Directors of the Pueblo Chamber of Commerce in August 1979 -- thereby becoming the first organization to publicly support Ft. Carson's expansion program. Also in early 1980, the Pueblo Chamber of Commerce was represented before a committee of the Colorado State Senate and supported the expansion.

With the issuance of the Draft Environmental Impact Statement, a special task force was appointed by the Pueblo Chamber President to study the DEIS thoroughly and report their conclusions to the Board of Directors. This was done at a special meeting on July 31, 1980.

It is the opinion of the Board of Directors of the Pueblo Chamber of Commerce that specific and significant concerns must now be raised in connection with the contents of the DEIS. These are as follows:

1. Pueblo's air quality is currently classified as non-attainment by the EPA because of excessive particulates. This problem is caused principally by fugitive dust blown from the surrounding fields and prairies and is virtually uncontrollable. Because a non-attainment classification can have disastrous consequences on Pueblo's future economic well-being and growth, grave concern must be expressed regarding additional potential air quality deterioration resulting from heavy equipment maneuvering in close proximity to this city.
2. Substantial economic loss (as well as reduced tax base) could result in the reduction of cattle grazing and related agricultural industries in this area. No significant off-setting economic benefits have been proposed in connection with the expansion program.

Position Statement

Page 2

3. Questions have been raised regarding the clear delineation of water rights, both inside and outside the "take area". In our semi-arid climate, water rights are important to our very existence and must be jealously protected.
4. A potential negative impact on our region's quality of life is apparent in the DEIS. Factors affecting this would certainly include potential increase in airborne particulates as stated above. In addition, increased military traffic and highway deterioration could affect the general population adversely.
5. Strong sympathy must be expressed for those citizens faced with the prospect of being moved involuntarily from their homes and land. A serious question must be expressed concerning how extensive all potential sites have been explored that might lessen problems for land owners as well as surrounding communities.

Recognizing that the Final Environmental Impact Statement may alleviate or correct many of the concerns expressed above, the Pueblo Chamber of Commerce Board of Directors has elected to defer further comment on the expansion program until the Final EIS is published.

Adopted August 12, 1980, AD.

Pueblo Chamber of Commerce
Board of Directors

Jerry L. Lindberg, President

Alex Clark, III, Secretary-Treasurer

cag
8/12/80

165



4 August 1980

Major Gen. Louis C. Menetrey
Commanding General
Ft. Carson 4th Infantry Division (Mech)
Ft. Carson, CO 80913

Dear General Menetrey,

The Colorado Retired Officers Council passed the enclosed resolution at its summer meeting July 12, 1980 at Denver, Colorado.

I am forwarding this resolution to you for your information with a request that a copy be forwarded and included in the Draft Environmental Impact statement.

On behalf of our Council, we wish to convey our support for your Division and units at Ft. Carson, Colorado to successfully expand your training areas in order to maintain top combat efficiency.

Sincerely,

Paul Peak
Capt., USCG (Ret)
Chairman

Enc



RESOLUTION

The officers of the Colorado Retired Officers Council and the Presidents of the six Colorado Chapters of The Retired Officers Association representing 2,696 members, in meeting assembled Saturday, July 12, 1980, in Denver, Colorado, adopted the following resolution:

WHEREAS, the 4th Infantry Division (Mechanized), Fort Carson, Colorado is a major component of the conventional military deterrent of the United States and must be prepared for immediate deployment worldwide and particularly to Europe; and,

WHEREAS, the land available for the training of the 4th Infantry Division and other regular and reserve component units has become inadequate due to the development of more sophisticated complex weapons and equipment as well as increasing environmental safeguards and requirements, and

WHEREAS, studies of the environmental impact of both the expanded land area and continued operations within the existing site of Fort Carson are really concerned with long range protection of the land, and,

WHEREAS, the continued stationing of the units now at Fort Carson is clearly in the best interests of the State of Colorado and our Nation,

NOW, THEREFORE, BE IT RESOLVED that this council supports the expansion of training areas for Fort Carson,

BE IT FURTHER RESOLVED THAT THIS COUNCIL calls upon those representatives who attend and take part in the Public hearings on the Fort Carson Expansion to keep the economic, environmental, and national defense considerations paramount and,

BE IT ALSO RESOLVED THAT THIS COUNCIL calls on the Congress and the Department of Defense to continue the present mission assignment of the units now stationed at Fort Carson, Colorado.

**SOUTH PUEBLO COUNTY
SOIL CONSERVATION DISTRICT**

PUEBLO, COLORADO 81004
4770 Waterbarrel Rd. S.

August 15, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla,

We have reviewed the Draft Environmental Impact Statement for Training Land Acquisition. We are concerned about several items and apparent inconsistencies in the Statement. The statement points out that vegetative cover would be reduced, resulting in increased wind and water erosion. This would increase the amount of sediment and salinity carried by the streams. The statement also points out that the sandstone breaks and limestone breaks areas would receive the heaviest use, although they do not respond well to treatment measures, and their steeper slopes make them more susceptible to accelerated water erosion.

The statement establishes a level of use which the preparers think the country might be able to stand (Balanced Use/Protection Scenario); then proceeds to recommend heavier use (Increased Use Scenario).

The fact the report does make clear is that seeding is very seldom successful in either of the proposed areas because of unfavorable rainfall patterns.

Soil Conservation Districts have been trying to improve range condition and reduce erosion for nearly forty years.

We believe use by tracked vehicles, at the rate proposed in either the increased use or the balanced use/protection scenario would result in a declining range condition and increased erosion. We are opposed to expansion of Ft. Carson onto either the Huerfano or Pinon Canyon parcels.

Sincerely,

Dale Allee

Dale Allee
President

Timpas Soil Conservation Dist.
Calista Graves, Pres.
Star Rt. Box 46
Model, Colorado 81059

Aug. 14, 1980

Michael Halla
Hdqtrs, Fort Carson
Hdqtrs, 4th Infantry Dev. (Mechanized)
Ft. Carson, Colorado 80913

Dear Mike:

Attached are comments on the DEIS statement that the Timpas Soil Conservation District has prepared.

Sincerely,

Calista
Calista Graves, Pres.

TIMPAS SOIL CONSERVATION DISTRICT

Manzanola, Colorado

COMMENTS ON THE DEIS STATEMENT
FOR TRAINING LAND ACQUISITION

The DEIS Statement concerning land acquisition for Fort Carson is composed of improper data, specifically in the areas of salinity and vegetation. In collecting data for the report Dames & Moore have elected to disregard vital information presented to them during hearings held throughout Southern Colorado.

The Timpas Soil Conservation District disagrees with the DEIS statement concerning vegetation and salinity. These two management plans need to be studied for the economic impact they will impose on an area far removed from either training site. The Lower Arkansas Valley Farmers from Las Animas, Colorado to the Kansas line, must be made aware of the salinity problem that can develop as a result of military maneuvers. Because this is one of the most serious problem areas for salinity in the U.S., the increase salinity that may be caused by training operations could cause serious economic impacts within the area. No environmental impact statement is complete if it ignores problems of this potential magnitude. If this situation is allowed to develop, the extent of financial losses the downstream farmland will endure as a result of increased salinity are impossible to estimate at this time.

A leading expert on water quality repeatedly warned Dames & Moore of the salinity problem involved in both Huerfano River Parcel and Pinon Canyon Parcel areas. As a result of this testimony, Dames & Moore should have addressed salinity more thoroughly in the DEIS. Factual information concerning the environmental aspect of salinity has not been presented. Dames & Moore do not understand salinity, and have not counseled with knowledgeable people in this field. We assume they preferred to ignore this data because it would damage the type of report they felt must be presented.

To demonstrate salinity is not understood, refer to page 4-15 of the DEIS, second paragraph; "Also, this would be dependent upon total dissolved constituents in the surface water, after carbonates have been converted to oxides, organics oxidized, and bromine and iodine converted to chloride..."

- Fact: 1). Carbonates will not be present in quantity.
2). Organics have little affect on salinity.
3). Bromine and iodine are elements and cannot possibly be converted to chloride by any means.

Again in the same paragraph, "However, the proposed mitigation measures for runoff, erosion, and sediment control in the vicinity of alkaline soils in the parcel, as addressed in the LUMP, would provide some control of salinity at its source. Sedimentation ponds could be engineered and designed to limit TDS effluent limitations to Federal EPA standards, as proposed for coal mining operations."

- Fact: 1). We believe there are no EPA standards as such, but instead policy to prevent such increases.
2). Sedimentation ponds will only settle out mud while allowing the salt to proceed downstream.

In the DEIS, Fort Carson has not adequately addressed the economics and cost of controlling the salinity problem. They must do this in order to justify their projected cost of the land in question. As a Soil Conservation District, we recommend they implement a proven effective acceptable plan to control salinity, including a detailed monitoring system which would assure salinity can be controlled, before a training site is acquired. To protect the vast amount of farmland involved, the Army must demonstrate that it understands salinity and can produce effective control measures.

Another problem of concern is the proposed use and revegetation plan presented in the DEIS. The DEIS outlines plans to perform military maneuvers on the land for three years, followed by two years of deferment for revegetation purposes. From past seeding trial experience, and using the best known seeding methods, we have been unable to predictably reestablish native vegetation within two years.

**TURKEY CREEK
SOIL CONSERVATION DISTRICT**
307 W. 19th
PUEBLO, COLORADO 81003

Even if predictable revegetation could be assured the cost is prohibitive for reestablishing large acreages of rangeland. Using actual cost data obtained from the Colorado State Highway Department and the USDA Soil Conservation Service we estimate the cost for reestablishing grass on these fragile lands to be upward of \$600.00 per acre.

The proposed methods for reseeding the fragile lands of the Pinon Canyon parcel are totally unacceptable. We want the DEIS changed to show critical area seeding plans on all disturbed areas and a breakdown of costs per acre and total cost per year. We also want proposals to show built-in watchdog safeguards to assure that revegetation plans are implemented.

Respectfully,



Calista Graves, President

Timpas SCD

August 15, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

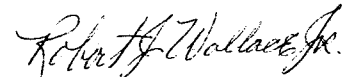
The Draft Environmental Impact Statement for training land acquisition is well done, for the most part. We agree with the following items which are stated in the DEIS:

1. Vegetative cover would be reduced
2. Wind and water erosion would increase
3. Sediment and salinity carried by the streams would increase.
4. The sandstone and limestone breaks areas would receive the heaviest use, but would not respond well to treatment measures

One very important item that the statement does not make clear is that grass seeding is seldom successful in either of the proposed sites. Rainfall patterns are such that rain does not fall when needed or it comes too fast and much of it runs off.

Prior to commencement of training on either site, a detailed and precise range inventory should be developed as a basis for comparison in future years. Annually, personnel of the Fort Carson Environmental Staff with assistance of federal and state agencies and soil conservation districts should review the past usage of the parcel and determine what action would be necessary to prevent or repair damage to the land. This review should be accomplished prior to September 1 annually so that land treatment measures could be enacted prior to the winter months.

Sincerely,



Robert J. Wallace, Jr.
President

WILLIAM H. GILL POST 9891

VETERANS OF FOREIGN WARS

OF

THE UNITED STATES

AUG 18 1990

RESOLUTION

WHEREAS, the 4th Infantry Division (mechanized), Fort Carson, Colorado, is a significant and integral part of the defense of the United States, and

WHEREAS, the 4th Division must have additional land in order to maintain its mission of military readiness, and

WHEREAS, two parcels of land of sufficient size and topography in southern Colorado have been identified as suitable for military training in a draft environmental impact study;

NOW, THEREFORE, BE IT RESOLVED BY THE MEMBERS OF THE WILLIAM H. GILL POST 9891 VETERANS OF FOREIGN WARS OF THE UNITED STATES, that it hereby declares its support of the expansion of Fort Carson, Colorado, to the most acceptable of the two sites currently under study, and recommends the immediate acquisition of such additional parcel of land in order to provide a needed training area for Fort Carson military units.

ADOPTED by the members of Post 9891 this 6th day of August, 1980, in Colorado Springs, Colorado.

By: *Michael J. Ingelido*
Major General Michael J.
Ingelido, USAF (Ret)

PRIVATE CITIZENS

J. D. ACKERMAN
502 BEAR PAW LANE, NORTH
COLORADO SPRINGS, COLORADO 80906

Recy 3/80

My Gentleman Member,
Honorable Sir:

Please look with compassion
upon the literary and
suggestive efforts of this
lowly and humble servant
and consider that they
are motivated by a
sincere respect for and
devotion to our great
Army, organization and
those who are serving in
it, many of whom are
serving far beyond the
call of duty.

As all appreciated
your audience and your
consideration

Your Humble and Obedient Servant

J. D. Ackerman

THE FORT CARSON "EXPANSION" SITUATION

"AN INTERESTED CITIZEN AND TAXPAYER"

I have great respect for the military and for Fort Carson. I served in World War I and World War II with twenty-five years in the organized reserve in between. I re-enlisted at Fort Carson in 1943.

To my mind this situation is the least understood and the most poorly handled matter that Colorado Springs and Fort Carson have ever faced. The true problem is misunderstood and many of the proponents do not even know or understand the question.

Recently at a Fort Carson briefing the annual million dollar training exercise to Fort Irwin, California, was mentioned briefly. The true mission of the Fort Irwin exercise as a necessary and vital maneuver was glossed over, as was the fact that the trip is never made more often than once each year and never with the entire division.

The present use of Fort Carson was explained, and at the conclusion we were told by the Commanding General that there remained around 60,000 acres for training of troops, and that this area was sufficiently large for the normal training of the present Fort Carson complement.

First of all, if Fort Carson should be alerted for combat, its troops would not be deployed in El Paso County. They would move from here by their static equipment, by train or by air. The once a year trip to Fort Irwin provides a vital training function in the movement of the troops, and at Fort Irwin, the further opportunity for tactical training with other Divisions not possible here. Under no circumstances should this maneuver be discontinued.

Other exercises, such as the movement of small numbers of troops overland to Fort Lewis, Washington, using their organic transportation, is also considered a vital training exercise. Such activities certainly have a place in the training of a modern mechanized division.

To discard this vital training function and substitute a barren 200,000 acre tract at an approximate distance of 100 miles and a probable cost of \$25 million for land purchase alone would be absolutely absurd from a tactical or a practical standpoint.

From an economic standpoint, it would take 200,000 acres of Colorado land off the local tax rolls, dislodge many people from their homes and ranches at a time when it would be impossible for them to similarly establish themselves elsewhere.

The probable \$25 million initial basic cost, without necessary improvements and expensive additions, would burden the taxpayer with the principal cost, and in addition, an annual minimum cost of \$2,500,000 for all time.

All this as against a possible annual cost of \$1,000,000 for a trip to Fort Irwin. It is easy to talk in numbers of men and acres and forget the taxpayer who must respond with millions of dollars.

Our local economy would receive no increased benefit.

Fort Carson has been popular with the commands serving here. Several post commanding officers thought highly of it, and urged local civilians to work towards increasing the size of the then camp to 200,000 acres, which size was then recognized by the Army as necessary for a Division Post. They suggested that as a Division Post it would be more permanent. Not one of the former commanding officers ever suggested abandoning the annual Fort Irwin training maneuver. Naturally, Vietnam postponed many of them.

The attempt was made to acquire more land and the post's size was more than doubled. It failed to acquire the necessary 200,000 acres. This is now considered almost an impossibility and wholly unacceptable from a cost standpoint.

Fort Carson has functioned since 1942, almost 38 years, with a complement of more than its originally designated strength. Now is the first time overstaffing has been mentioned as an argument. The question of its being too small for its present strength does not hold water.

If the Army chose to reduce the present strength by 3,500 men, there would still remain more men than the post was originally designed for. And we wouldn't be spending a probable \$25,000,000 with \$2,500,000 annual interest, and our local economy would go along just the same as when the post had fewer men.

Now as to the condition of the land under military use. We now have on full time duty at Fort Carson, a Major, whose responsibility is to see that the native growth of soil coverage is not abused or unduly disturbed. This now seems to be of greater importance than the tactical training of men who must anticipate possible combat where their lives are involved.

I have ranched in El Paso County for nearly forty years on land near to and similar to that of Fort Carson. I have stocked my ranch fully and husbanded that land well. It is in better condition today than when I originally acquired it in 1937 and 1940. In years of drought, I had the choice of moving my cattle off the ranch or over-grazing the pasture. Moving was not always possible and, to a degree, I was forced to over-graze my land. But I permitted the land to recover when weather conditions became more favorable. As stated, it is in better condition today than when I acquired it. I did not have a full time ecologist on my payroll.

In my opinion, Fort Carson land and vegetation today, after nearly forty years of use, are in better condition than when they were in private hands.

The wise thing to do now is to continue at Fort Carson as we are, taking advantage of the very vital maneuver trips to Fort Irwin.

Did it ever occur to anyone that if the projected 200,000 acres were acquired, the Army could still take a Brigade from Fort Carson or reduce its strength at any time? Troops are not a permanent fixture.

IN CONCLUSION

We have been told that 200,000 acres is the size required by the Army for a Division post. Fort Carson presently has 137,400 in the base, probably more than twice the size it was when originally formed. There has been some talk that three Brigades, as now comprise the Fourth Infantry Division, are too many for Fort Carson's present size, at least to satisfy the environmentalists.

Tactically, the soldiers of the Fourth Infantry Division are now being well and fully trained, with the exception of the maneuver exercise to Fort Irwin, California. This provides a necessary troop movement by train, in preparation for a tactical exposure, and, in addition, training with other divisions.

My present information is that there are now in existence in our Army at least two divisions with only two Brigades each. In order to meet the 200,000 acre Army Division pattern, Fort Carson would need to acquire 62,600 additional acres, not 100 miles away, but adjoining and contiguous to the present reservation here in El Paso County. Acquiring additional land has been tried and has failed twice. The land is simply not available. The cost of such acquirement here would run into millions of dollars. That cost would be borne by the taxpayers and that land would come off the tax rolls of El Paso County.

If the Army is bent on reducing the complement of Fort Carson as recently suggested by its Commanding General, then let us sensibly accept and recommend the loss of one Brigade. On the other hand, if we are to believe the Secretary of the Army, there is no intention of reducing the number of troops assigned to our great mountain post.

Even if the Commanding General of Fort Carson is correct, the Brigade reduction would be far more sensible, far more practical, and far less expensive than the acquiring of 200,000 acres of barren land 100 miles away from Fort Carson -- land which is fragile, land which won't sustain live firing, land with no improvements, land which the American taxpayer is not ready to support.

This community has before survived the movement of troops. That loss is now being grossly exaggerated. During Fort Carson's history, there have been many times when fewer soldiers were on base. We have always survived.

UNIVERSITY OF COLORADO

College of Arts and Sciences
BOULDER, COLORADO 80309

Department of Integrated Studies
Ketchum 128

10 August 1980

Mr. Michael E. Halla
Building 304
Fort Carson, Colorado 80913

Attention: AFZC-FC-EQ

Dear Mike:

Per your request, I have perused the Draft Environmental Impact Statement, "Training Land Acquisition for Fort Carson, Colorado." I have read in detail only those sections that deal with vegetation and with terrestrial wildlife, areas in which I have some experience.

I can only say that I find those sections, both in the narrative and in the appendices, inadequate. The information on plant ecology suffers from woefully insufficient sampling effort. It appears to me that 12 transects, 100 m x 5 cm. were run on each of the parcels. This represents something like one ten billionth of the area involved. That is insufficient even if one could--by some rational means--really choose "typical areas of soils and vegetation." How does one know what "typical" means, given so little quantification?

A similar inadequacy of field effort affects the sections on terrestrial wildlife. Except for big game mammals and raptorial birds, there are no quantitative data, and only those for raptors seem to have been gathered specifically for this study. The lists (Tables F-1, F-2) of species to be expected in the areas seem to be complete, although no information is presented on even casual attempts to confirm those lists in the field.

Ascribing to Armstrong (1972) the expected occurrence of Eutamias quadrimaculatus on the Pinyon Canyon parcel is an error that he does not appreciate; that chipmunk occurs only in the Central Sierras of California and adjacent Nevada. Similarly, the hooded skunk does not occur north of Catron County, in southwestern New Mexico. By themselves, these errors are, of course, trivial. So is the fact that three of seven scientific names of birds on p. 3-32 are misspelled. However, the errors may be symptomatic of a more serious and pervasive lack of concern with the terrestrial wildlife resources of the parcels.

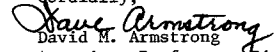
To hope to evaluate this resource without field data is vain. But even the use of the literature is inadequate. For example, using only summary literature published in the last decade, ignoring the primary literature and the historical references, one could readily tabulate the ecological distribution of terrestrial vertebrates on the two parcels. This would

Armstrong/Halla, p. 2

have been a useful exercise. For one thing, it would have shown that the ecosystems of the area are remarkably rich in wildlife species. For another, it would have shown that the several ecosystems ("habitat-types," "range sites") of the parcels support quite distinctive faunas.

A management plan that does not use all available information and that does not place it in an ecosystem context cannot recognize the richness and uniqueness of the resource. It is not a management plan at all. It is a program for wanton destruction of an irreplaceable piece of Colorado's natural heritage.

Cordially,


David M. Armstrong
Associate Professor--Biological Science
Museum Associate Curator--Higher Vertebrates
Chairman, Colorado Natural Areas Council

xc: Dr. Carse Pustmueller
Mr. John Torres
Mr. Lou Vincent
Hon. Ray Kovgosek
Major General Louis C. Menetrey

1321 W. Abriendo
Pueblo, Colo. 81004
August 4, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla

This letter constitutes my comments on the Draft EIS. This letter does not contain all of my possible comments. There are far too many errors, omissions, and contradictions for one person to mention. I doubt that I have found all of them anyway, even though many hours have been spent studying the document. The majority of my comments are those I mentioned during the public meeting in Pueblo on July 7. Some of these comments are still in the form of unanswered questions.

1. Although three different scenarios of use are presented, it is repeatedly stated that the Increased Use Scenario is the one intended to be used. This scenario was not, however, consistently used in the evaluation of impact. Either the Increased Use Scenario should alone be used in evaluating impact, or all three scenarios should be used in three separate evaluations. Any other course of action would be deceitful. The second sentence of the Abstract is not really true.

2. How can the provision for a potable water supply be an unresolved issue, as is stated to be the case, and these expansion plans have any basis in reality? Use of any water source will have some impact. Until that source is chosen, or alternate sources are selected for study, no real evaluation of impact can be done. Since there could be an impact on the water table or on the availability of water for downstream agriculture, this matter is one of the serious omissions in the Draft EIS.

3. Another serious omission is the matter of salinity of the rivers. The study made by Don Miles should have been used. It is still not clear to me whether this omission was a calculated matter of choice or whether it was necessitated by the lack of expertise in the preparers of the EIS. The chemical impossibility of the phrase "bromine and iodine converted to chloride" does not indicate a high level of expertise.

4. Why are the Water Erosion Losses ratings on Table 3-4, p. 3-11, used as absolutes? These are based on calculated values (Table C-5, p. C-17) using the USL Equation, which, as stated on p. C-13, was being "used to supply comparisons of soils", and not to give reliable absolute results. And why was this equation used at all, since it does not apply to the land on either expansion site?

5. What will happen to the Pronghorns? Although canyon dwellers are commented about, no mention is made of the fate of these prairie animals.

6. The bird survey is quite inadequate. There are both qualitative and quantitative omissions. The reason is quite clear. The survey was

done by helicopter. In recent months, on the Huerfano site, I have noticed that those big green helicopters cause a considerable decrease in apparent bird population. Many birds are either scared off or driven into hiding. Any many nesting areas are not visible from the air.

7. How can Impact on Land Disturbed even be predicted, as it is on p. 4-6? On the same page is the statement: "... little documentation exists concerning the effects of mechanical injury to plant cover and especially to the impact of vehicular traffic."

8. Why, since final calculated values of dust pollution on pp. G-28 and G-29 are expressed in micrograms per cubic meter, was there a change of units of measurement for pp. G-30 and G-31? Anyone not noticing this change might be misled to conclude that the results are comparable in size. Actually, the result of p. G-30 is 1000 times as large as that on p. G-28 since the value on p. G-30 is expressed in milligrams per cubic meter.

9. On p. 4-37 the equivalence of 25 ft and 191 meters is given. Since 25 ft = 7.62 m, and 191 m = 626.6 ft, which value, if either, is correct? Also, why isn't it pointed out that a convoy of the kind discussed at the bottom of the same page would take 8.5 hours to pass a given point? This is as good an example as any of the scattering of related information in various sections of both volumes of the EIS and the omission of any clear statement of what the impact actually would be. Certainly some of the preparers of the EIS could have made the same calculations I did. The results should have been reported. A complete, honest EIS would do so.

10. Why was the Balanced Use/Protection Scenario used in predicting the net loss of jobs which would result from the expansion since the Increased Use Scenario is the one intended for use? This is just one example, but a very important one, of the kind of thing mentioned in Item 1.

11. Why was the "multiplier effect" (p. 4-41) used to support the claim for positive economic impact but ignored in the assessment of negative economic impact?

12. What is meant by "added tax revenues on the anticipated increased property values" (p. 4-42)? The people bordering the expansion sites feel certain that their property values would decrease because of the dust and the noise. Unless I have incorrectly interpreted the meaning of the quoted phrase, the conclusion of p. 4-42 is false.

13. Why does the Table on p. A-21 contradict what is said about it in the Summary on p. A-28? Since it is impossible for me to determine which of these is correct, no evaluation of accuracy can be made.

14. How are the Tables on pp. C-10 and C-11 to be interpreted? And which Scenario was used in arriving at these values, whatever they mean? My academic background should allow me easily to interpret such Tables, but these two Tables convey no meaning to me. The meaning should be explained if these are to be contained in the final EIS.

15. The statement about the availability of the land, p. 1, para. 3, is false and should be re-written to tell the truth in the final EIS.

16. Does Section 7) , p. 2-15, mean that the September survey of vegetation could come after some use of the land had already occurred? And wouldn't complete honesty dictate that the phrase "following a full rotational cycle" be explained? The information that the phrase really means "after five years of use" does not occur until later in the EIS. This section seems to indicate that the first survey of damage could occur after great damage had already been done. Also, the September survey could well be of limited accuracy. The vegetation on the sites varies enormously from year to year, depending upon the amount and the timing of rainfall. The surveys made by Dames and Moore suffer from this defect, since they were made in abnormally good years. There are years when the grasses never turn green.

17. The bridge mentioned in River Crossings, p. 2-22, would be a giant and would cost millions. It would also interfere with an area which is supposed to be protected. In recent weeks you have told some people that the bridge would not actually be built. What is the truth? Also, since a river crossing along a [not really] gravel road is mentioned, I doubt that you or Dames and Moore know about the quicksand there or that when that crossing seems quite solid under foot, it can fail to support the weight of a truck.

18. Note the Ground Water paragraphs, p. 2-48. The second paragraph says "Data indicate...". There are no such data in the Draft EIS.

This is the conclusion of my comments. You should note that Items 1-14, inclusive, are a sampling of things from both volumes of the Draft EIS. Items 15-18, inclusive, are an ordered series of comments, starting with Chap. 1 and continuing part way through Chap. 2. This series could continue since my study of the EIS has produced marginal notes every few pages. Most of these matters have been covered by others who are contributing information.

My aim in this is that the final EIS be as complete and honest as it should be. Such an EIS may well indicate that neither expansion site is suitable for the expansion of Fort Carson.

Sincerely yours,

John E. Armstrong
John E. Armstrong

Charles R. Baldwin

2860 South Circle Drive
Suite 441, Janitell One
Colorado Springs, Colorado 80906
(303) 576-1085

June 23, 1980

Mr. Michael E. Halla
Environmental Program Director
Bldg. 304
Fort Carson, Colo. 80913

Dear Mr. Halla,

As personal representative of Mr. and Mrs. Owen G. Baldwin, who are owners of a sizable portion of the Pinon Canyon parcel, I wish to go on record with a major concern at this time.

Each map you send out shows the border of the offered boundary and the border of the preferred boundary and I will not bother to discuss the offered or what this is intended to mean.

My concern is the army's preferred boundary, which clearly cuts the Baldwin property up and leaves parcels that are virtually useless in a ranching operation or for any other use.

Surely with all your expertise and consulting firms, you would have realized by now that no rancher is going to allow the army to cut up his ranch by sale or condemnation into useless pieces, without one hell of a fight.

Therefore, I strongly suggest you review these boundaries before they are submitted for final approval which leaves the owners with no option but to use the courts as their defence against this.

Thanking you, I remain,

Respectfully,

Charles R. Baldwin
Charles R. Baldwin

cc. Louis C. Menetrey
Major General USArmy
Fort Carson, Colo.

Mr. Owen G. Baldwin

Mr. Alex S. Keller, Attorney At Law

1-75

Subject: Fort Carson Training
Land Acquisition Impact
Statement

Richard G. Beidleman
Department of Biology
Colorado College
Colorado Springs, Colorado 80903
(Ph.D., Ecology; Professor of
Biology)

Beidleman - 2

The purpose of an environmental impact statement is to provide accurate and comprehensive information upon which optimum decisions can be made affecting the health, safety, and welfare of the public and the country, where federal funds are involved.

On the surface the Fort Carson Training Land Acquisition Impact Statement is impressive, accurate, scientific, objective, and comprehensive. Indeed, in some respects it appears so comprehensive that making any judgment on its findings becomes difficult if not bewildering.

The following statement focuses especially on the following aspects of concern, as presented in the impact statement:

1. Degredation of vegetation and soil
2. Degredation of air quality due to particulates
3. Degredation of water quality due to sedimentation
4. Reduction of wildlife populations

With respect to the wildlife assessment, there is an impressive checklist for each parcel. However, it appears that in few if any instances was any field work carried out to determine if indeed any of these species occurred on either parcel, or what the species status might actually be. In other words, in environmental-impact-statement parlance, the list was "pot boiled," rather than being based upon any quality or quantity of field work. The best management decisions cannot be based upon pot-boiled lists. If the time that was spent on searching the literature and drawing up the interesting animal lists had been put into actual field work, a more helpful picture of the wildlife situation on each parcel would be available, and better decisions relative to wildlife could be made. After all, in the impact statement one of the writers did bemoan the fact that no wildlife inventory information was available for Fort Carson before impact.

Speaking of lists, there is in the appendix an impressive list of plant species "occurring on the Huerfano River Parcel which are reportedly used by mule deer and their amount of use" (Table F-3, p. F-30). One would presume that mule deer on the Huerfano are using these plant species there to the extent which is indicated in this table. But the reality of the matter is quite different. The publication from which the table was modified, "Foods of the Rocky Mountain Mule Deer" by Roland C. Kufeld et al, a U. S. Forest Service publication, in fact deals with the food habits of mule deer in the entire state of Colorado....except for the southeastern quarter which includes the two parcels. To suggest that mule deer on the Huerfano are moderately to heavily subsisting on aspen doesn't fit in with the almost negligible number of aspen reported in one side canyon of that parcel. An objective scientist can only conclude that this table was included to impress the reader with the potential for mule deer management and hunting opportunities on the property, as a fringe benefit to the army occupying the parcel in question. There can be no other relevance to this table from the scientific standpoint, and especially with respect to the amount of plant use by mule deer in the specific area:

Other wildlife entries cause one to scratch one's head. For example (4-20) "The disturbance and subsequent recovery efforts would lead to an increase in small mammal populations. This in turn would create a larger food supply for predators. Thus, the parcel may support higher populations of Coyotes, Swift Fox, and some raptors..."

And keeping in mind territorial behavior of mammals, the following is ecologically interesting, as well as painting a rosy wildlife future: "Inaccessible canyon areas...would be expected to increase in habitat productivity. Accordingly, displaced species from training areas would, to some extent, migrate to these areas and occupy the available territories. To "migrate" means to go from one area to another with an intent to return, which seems wrong in this instance. And one wonders what territories might be available? But to continue: "Existing populations (e.g. Mule Deer and Bobcat, Mountain Lion and raptors) could increase, especially predator species that would have the added advantage of frequenting the impacted areas where small mammals are expected to increase." Certainly the cost-benefit ratio here appears to favor the wildlife. Yet on page 4-21 the mountain lion and a raptor don't fit the scenario: "...certain sensitive species such as the Mountain Lion and the Ferruginous Hawk could interpret the unpredictable disturbances as an intolerable threat and permanently abandon the area."

In some minds,

the wildlife situation on the parcels is perhaps not all that significant. But the Impact Statement does focus in on some real problems: (re the fauna)

"Habitat degradation"

"Maneuver activity disturbance"

"A mechanized military training exercise by its very nature is incompatible with wildlife, thus certain adverse impacts are unavoidable."

"It has been estimated that in a single year 25 percent to 75 percent of ground cover vegetation could be lost in portions of the important habitat areas... It is anticipated that the two to three year recovery periods specified in the LUMP would not provide sufficient time for shrub recovery for wildlife as food and cover."

If reviewers do conclude that wildlife is important, then indeed for these two parcels "mechanized military training exercise... is incompatible."

Degradation of Vegetation: The vegetation here, though sparse, is indeed of importance, not only to wildlife but to protection of the fragile soil. And the Impact Statement "tells it as it is," if one can locate the appropriate quotes:

"Areas of the parcel where training would be concentrated could experience significant plant ground cover losses... These areas offer preferred training features..."

"Vehicle activity would result in reduced vegetative cover... The loss of vegetative cover on soils of the parcel would expose the soil surfaces to the erosive forces of both wind and water."

"Vegetative ground cover losses in these high impact areas could be as great as 75 percent in areas where wheeled vehicles pass over the same path of low stability ground at least three times in a single year." How many times a wheeled vehicle pass over "the same path" in a single year? The statement does go on to say "However, this high percentage of ground cover loss is expected to be primarily limited to bivouac sites..."

re Increased Use scenario, "full recovery in the majority of impacted lands (those with severe impacts resulting in partial vegetative cover reduction) would occur only in years with adequate and timely precipitation or intensive reseeding."

On the entire Huerfano site, under Increased Protection 27% of vegetation would experience severe or extreme impact; under Balanced Use/Protection, 40% would experience severe or extreme impact; under Increased Use, 48% would experience severe or extreme impact.

On Huerfano military operations sites, under Increased Protection 35% of vegetation would experience severe or extreme impact; under Balanced Use/Protection 45% would experience severe or extreme impact; while under Increased Use 55% would experience severe or extreme impact. Note: "Severe" represents a reduction greater than 40%; "Extreme" represents a reduction greater than 80%.

"Because tree and shrub areas would be focal points for maneuver activities, most new growth would probably be affected and possibly terminated. Older trees and shrubs may experience loss of productivity, because increased erosion may result in long-term losses of available nutrient reserves."

Among woody plants experiencing extreme mechanical injury in less than three-year period are:

- Pinyon Pine
- Singleseed Juniper
- Cholla
- Four-winged Saltbush
- Severe mechanical injury:
- Winterfat

Bunch grasses (blue grama). Note: "In a semi-arid climate a minimum of three years would be needed for the replacement for a bunch grass." And three years is probably a gross understatement on these parcels.

"Generally only vegetative cover...is destroyed by maximum traffic disturbance..."

In summary re vegetation, the statements above corroborate deleterious impact on the vegetation of both parcels (though most quotes deal with the Huerfano parcel). However, knowing both the southeastern Colorado countryside, its vegetation, soils and climate, and knowing the level of vegetational impact at Fort Carson, with better vegetative cover and more moderate soils and climate, I must say that the statements relative to impact on vegetation don't come anywhere close to what will be the reality of the situation if either parcel is used by the army:

Re Soils and Erosion (air quality, water quality, soil): Again, some quotations from the impact statement bear testimony, as one remembers the relationship between vegetative cover and erosion.

"On a cumulative basis, vegetation constitutes a major factor for soil stability and is integral to limiting erosion and sedimentation. Accordingly, in areas where more than 75 percent of the ground cover vegetation is lost, topsoil--and it is in minimum quantity and quality here to begin with--would also be severely disturbed. The potential for increased sedimentation would therefore be greater."

"Degradation of the topsoil and reduction of ground cover vegetation by vehicular traffic would be the principal causes of increased erosion."

"...training activities would result in scattered areas with moderate to extreme impact and large areas with slight or negligible impact. Areas of moderate to extreme impact would increase according to the number of exercises conducted during a given rotation period."

"In general, soil-range units in moderately and steeply sloping areas would experience the highest water erosion losses. This includes most of the mapping units considered useful for military training and therefore likely to receive the highest proportion of severe and extreme impacts."

"Pulverization of the usual protective cover occurring during dry conditions would be an unavoidable impact."

Natural residual rock cover and associated soil surface areas "(which are the most useful for training) do not respond well to treatment measures...and their steeper slopes make them susceptible to accelerated water erosion."

"Thatcher and Tyrone would receive increase of particulate concentrations of 19% each."

Not to mention this strange military land-use recommendation: "...areas of high intensity use which experience serious reductions in vegetative cover would either be protected with gravel, hay or other cover to allow continued use"--what kind of continued use?--"or the vegetative cover would be restored to an acceptable level with mitigation measures during enforced non-use."

Mitigation is an important aspect of an environmental impact statement, after the problems have been delineated. Unless one is really familiar with this southeastern Colorado environment--and qualifications of the impact statement writers suggest that most of them probably are not--the proposed LUMP will be harder to deliver than to promise. Here is a region with one of the most severe wind erosion ratings for the entire United States; in this general area was home base for the great dust bowl of the "dirty thirties." Here is the countryside constituting the historical "Great American Desert." Here (along the Huerfano) was the bread basket--and a bountiful irrigated one--for the gold camps west of Denver in the latter 1850's and '60's, only to be turned into a desert by poor land management. Here impact from the Santa Fe Trail wagon wheels can still be discerned almost a century after the last wagon rolled across! This is land with less precipitation than Tucson in the Sonoran Desert, and drifting sand from row-crop fields which has to be cleared from roads with road graders. Here is country with climatic bust and boom, cyclic drought and cloudburst. Reclamation is easier to talk about than to accomplish; and reclamation efforts at Fort

Carson to date certainly offer little optimistic suggestion that the southeastern LUMP will achieve anything better! Nor has the general stewardship of the land at Fort Carson been especially commendable. But to be fair, the Army is not in the land conservation business.



Pinyon-Juniper Woodland Impact Area,
Fort Carson. 1973.



Reclamation Project, southern Fort
Carson land 1977

4-6 "....little documentation exists concerning the effect of mechanical injury to plant cover and especially to the impact of vehicular traffic."

NOTE SO. Much has been coming out recently, for example, documenting the impact of off-road vehicles on soil, plants and animals. To cite a few: (and in general these vehicles don't carry the weight of army ones)

Berry, K., ed. 1978. Proc. of the symposium on the physical, biological, and recreational impacts of off-road vehicles on the California desert. So. Calif. Acad. Scis., Spec. Pub. In press.

Bury, R. B., R. A. Luckenbach, and S. D. Busack. 1977. The effects of off-road vehicles on vertebrates in the California desert. Wildlife Res. Repts., No. 8, U. S. Fish and Wildlife Service, Washington, D.C. 23 pp.

Busack, S. D., and R. B. Bury. 1974. Some effects of off-road vehicles and sheep grazing on lizard populations in the Mojave Desert. Biol. Conserv. 6: 179-183.

Davidson, E. and M. Fox. 1974. Effects of off-road motorcycle activity on Mojave Desert vegetation and soil. Madrono 22: 381-390.

Duck, T. A. 1978. The effects of off-road vehicles on vegetation in Dove Springs Canyon: in K. Berry, ed. Proc. of the Symposium on the physical, biological, and recreational impacts of off-road vehicles on the California desert. So. Calif. Acad. Scis., Spec. Publ. In press.

Geological Society of America, Committee on Environment and Public Policy. 1977. Impacts and management of off-road vehicles. Geol. Soc. America. 8 pp.

Hicks, D., A. Sanders and A. Cooperrider. 1976. Impacts of Barstow-Las Vegas motorcycle race on wildlife habitat. Bureau of Land Management. Unpubl. Rept. 46 pp.

Keefe, J., and K. Berry. 1973. Effects of off-road vehicles on desert shrubs at Dove Springs Canyon. In K. Berry, ed. Preliminary studies on the effects of off-road vehicles on the northwestern Mojave Desert: a collection of papers. Privately published. Ridgecrest, Calif.

Luckenbach, R. A. 1975. What the ORV's are doing to the desert. Fremontia 2: 3-11.

Stebbins, R. C. 1974. Off-road vehicles and the fragile desert. Amer. Biol. Teacher 36: 203-208, 294-304.

Snyder, C. T., D. G. Frickel, R. E. Hadley and R. F. Miller. 1976. Effects of off-road vehicle use on the hydrology and landscape of arid environments in central and southern California. U. S. Geol. Survey Water-Resources Investigations 76-99. 45 pp.

(impact of vehicular traffic bibliography, continued)

Webb, R. H. 1978. The effects of off-road vehicles on desert soil in Dove Springs Canyon. In K. Berry, ed. Proc. of the Symposium on the physical, biological, and recreational impacts of off-road vehicles on the California desert. So. Calif. Acad. Scis., Spec. Publ. In press.

Webb, Robert H., H. C. Ragland, William H. Godwin, and Dennis Jenkins. 1978. Environmental effects of soil property changes with off-road vehicle use. Environmental Management 2(3): 219-233.

Webb, Robert H. 1977. Soil erodibility and erosion control recommendations, final report on Hollister Hills State Vehicular Recreation Area. Unpublished report to the Resources Division, Calif. Dept. of Parks and Recreation. 17 pp.

Wilshire, H. G. and J. K. Nakata. 1976. Off-road vehicle effects on California's Mojave Desert. Calif. Geology 29: 123-132.

Wilshire, H. G. 1976. Erosional consequences of off-road vehicle recreation in California. Geol. Soc. Amer., Abs. Prog. 8(6): 1171-1172.

Wilshire, H. G. 1978. Erosion of off-road vehicle sites in southern California. In: K. Berry, ed. Proc. of the symposium on the physical, biological, and recreational impacts of off-road vehicles on the California desert. So. Calif. Acad. Scis., Spec. Publ. In Press.

and the new and comprehensive:

Sheridan, David. 1979. Off-Road Vehicles on the Public Land. Council on Environmental Quality, Washington.

Note: Although these publications do not deal specifically with the subject of army vehicles in southeastern Colorado, they deal with, in many cases, off-road vehicles in semi-arid and arid situations not dissimilar from the situation in southeastern Colorado. The statement "little documentation exists" is simply a manifestation of the inadequacy of the preparation of the environmental impact statement in this important respect.

summary: The Environmental Impact Statement bears out--though somewhat in obscurity--that there will be degradation of vegetation and soil, of air quality due to particulates and degradation of water quality due to sedimentation; not to mention reduction of wildlife populations. And there seems little documentation or past record to suggest that mitigation will be successful. Furthermore, there appears little reason to believe that the defense of the United States will be in jeopardy if in this instance one option of an environmental impact statement is exercised, namely to do nothing.

Big Canyon Grazing Association
Box 636
Walsh, Colorado 81090
July 20, 1980

Commander
4th Infantry Division and Fort Carson
ATTENTION: AFZC-PE-EQ
(Mr. Michael E. Halla)
Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

Page 1

This is to inform you that the BIG CANYON GRAZING ASSOCIATION is not for sale. We are against the Fort Carson Land Acquisition plan being considered to expand into the Pinon Canyon Area. The cost to the taxpayers of the United States would be absolutely prohibitive considering the fact this land is not suitable for the purpose of tank and heavy equipment maneuvers.

What a sad travesty of justice it would be if the Army attempts to use this area for tank maneuvers, only to have to admit the fact that this area cannot tolerate such maneuvers and that they have destroyed the ecology of this natural and untamed countryside.

The following facts are apparent in the consideration of the acquisition of this Pinon Canyon area:

1. The Army already owns other land that would be suitable for tank and heavy equipment maneuvers.
2. The land of the Pinon Canyon area is too fragile and dry for tank and heavy equipment maneuvers. The fragile ground cover would be destroyed, perhaps forever. The area is too dry and fragile to readily grow ground cover.
3. Indian and Pioneer artifacts which abound the area would lose their natural and untamed setting; unusual and outstanding terrain and the wildlife which abound in it would be lost forever to posterity.

Other facts which should be considered that show the acquisition of this land by the Army would be prohibitive to the taxpayers of this country are as follows:

1. The land is not suitable and is too dry and fragile for tank and heavy equipment maneuvers.
2. Water is scarce and would have to be purchased and piped in, with the resulting heavy cost of piping it across many miles to the area.
3. Expensive fence barricades would have to be constructed around the miles of outer extremity of the area - a real undertaking when you consider the barricading of the rocky canyon cliff areas.

Mr. & Mrs. Lynn S. Bitzer
L-79

Big Canyon Grazing Association
Box 636
Walsh, Colorado 81090
July 20, 1980

Commander
4th Infantry Division and Fort Carson
ATTENTION: AFZC-FE-EQ
(Mr. Michael e. Halla)
Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla: Page 2 - Continued

4. Facilities for training, housing and care of men and personnel of the Army would have to be constructed. If land areas already owned by the Army were used, such facilities would already be available.
5. Moving convoys of personnel from Fort Carson to the Pinon Canyon area would be costly, also.

The loss of patriotic, down-to-earth, hard-working farm and ranch families from the area would truly be a sad loss for the community and would create serious economic losses in the form of loss of producers, taxpayers, and voting citizens.

The presence of the Army training maneuvers would create increased air, water, and noise pollution, and congestion of the highways with Army personnel and convoys.

We are against the expansion of the Army into the Pinon Canyon area.

Sincerely yours,

Mrs. & Mrs. Lynn S. Bitner, Sr.
Mr. & Mrs. Lynn S. Bitner, Sr.

Big Canyon Grazing Association

Mrs. & Mrs. Lynn S. Bitner, Sr.

Box 636
Walsh, Colorado 81090
July 20, 1980

Commander
4th Infantry Division and Fort Carson
ATTENTION: AFZC-FE-EQ
(Mr. Michael E. Halla)
Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

The following is a copy of the testimony I gave at the Fort Carson Land Acquisition Hearing held at Trinidad, Colorado, on July 9, 1980.

"Officers, Ladies and Gentlemen: As ranchers considering this situation, the thought comes to our minds of what the grinding treads of giant Army tanks would do to the volcanic, sifty-ash type soil of the Pinon Canyon area compared to the revolving wheels of a big cattle truck which occasionally travels the area to load or unload cattle."

"We ranchers watch the progress and approach of such a cattle truck for miles as the revolving truck wheels spin the volcanic type soil into giant dust clouds behind the truck. The treads of the giant Army tanks would grind the soil into such a dirt storm that Colorado would have our own erupting Mt. Saint Helens, which instead of being a volcanic eruption would be a dirt eruption, a dirt storm that would rise up and cover everything surrounding it!"

"The grinding treads of the giant Army tanks would tear up and destroy the fragile ground cover. The ground cover could not be so easily replaced that plowing and reseeding the area would solve the problem. The ground of the Pinon Canyon area is so fragile and dry, it would not readily grow ground cover."

The Pinon Canyon area is not suitable for a tank battalion battleground and the fragile soil would not tolerate such maneuvers without destroying the ecology of the area."

Evelyn L. Bitner
EVELYN L. BITNER
(Mrs. Lynn S. Bitner)
Big Canyon Grazing Association

00-1

Box 636
Walsh, Colorado 81090
July 20, 1980

Commander
4th Infantry Division and Fort Carson
ATTENTION: AFZC-FE-EQ
(Mr. Michael E. Halla)
Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla: RE: Testimony - Colorado Springs Hearing

The following is a copy of the testimony that was given for me at the Fort Carson Land Acquisition Hearing held at Colorado Springs, Colorado, on July 11, 1980.

"As ranchers considering this situation, the thought comes to our minds of what the grinding treads of giant Army tanks would do to the volcanic, sifty-ash type soil of the Pinon Canyon area compared to the revolving wheels of a big cattle truck which occasionally travels the area to load or unload cattle."

"We ranchers watch the progress and approach of such a cattle truck for miles as the revolving truck wheels spin the volcanic type soil into giant dust clouds behind the truck. The treads of the giant Army tanks would grind the soil into such a dirt storm that Colorado would have our own erupting Mt. Saint Helens, which instead of being a volcanic eruption would be a dirt eruption, a dirt storm that would rise up and cover everything surrounding it!"

"The grinding treads of the giant Army tanks would tear up and destroy the fragile ground cover. The ground cover could not be so easily replaced that plowing and reseeding the area would solve the problem. The ground of the two proposed sites is so fragile and dry, it would not readily grow ground cover."

"We are against the expansion of the Army into either of the two proposed sites. The area is not suitable for a tank battalion battleground, and the fragile soil would not tolerate such maneuvers without destroying the ecology of the area."

Evelyn L. Bitner
EVELYN L. BITNER & FAMILY

Big Canyon Grazing Association

8/14/80

Dear Mr. Halla,

In regard to Pinon Canyon.
Lower two panels of land 1/4 to 1/2 mile
from your land.

Would it still be possible for
me to have access to my property?

I realize the army has to have
more room and they will do every
thing possible to improve the environmental
conditions.

Now who will benefit from
expansion, Denver, Colorado Springs,
Pueblo, or Trinidad?

So far only two places have enjoyed
the biggest share of the government benefit.
They are Denver and Colorado Springs.

Have you thought of offering people
land equal to or better than what
they have?

At least they could continue
their life style this way. Perhaps
more money goes down the drain than
this might amount to.

It is true I would like to
see the expansion kept in the state.
But no matter what happens it might
be better if the people of that
area get a little more than

1-81



UNIVERSITY OF SOUTHERN COLORADO

FORMERLY

SOUTHERN COLORADO STATE COLLEGE

303 549-2452

PUEBLO, COLORADO 81001

DIVISION OF BEHAVIORAL & SOCIAL SCIENCES
DEPARTMENT OF: Anthropology

July 16, 1980

Michael E. Halla, Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

This letter is concerned with the Draft Environmental Impact Statement for Acquisition of Training Land for Fort Carson, Colorado in Huerfano, Las Animas, and Pueblo Counties, Colorado. I am familiar with the general area of southeastern Colorado considered in the plans and am specifically familiar with some of the specific locales mentioned in the report, particularly in regard to cultural resources. I am a Professor of Anthropology at the University of Southern Colorado and the majority of my professional career has been spent in cultural resource management related activities, particularly in Colorado.

The Draft Environmental Impact Statement does not adequately address the impacts of the proposed acquisitions on cultural resources. No contracted field reconnaissance has been conducted to identify resources which are in the proposed areas to be impacted and no mitigation plans for the resources have been made. A "Memorandum of Understanding" between the State Historic Preservation Officer and the Department of the Army has been made (Appendix I35-39) and establishes a process for administration and management of cultural resources which will be implemented following parcel selection and purchase of lands. Cultural resources, therefore, are not among the criteria considered in the process of selection of feasible lands for acquisition.

Cultural resources will be very heavily impacted by the two proposed land acquisitions, in my opinion. This can be, I believe, taken care of by adequate and systematic cultural resource surveys in the areas. These surveys should be conducted prior to land purchases, not subsequent to them, if the purpose of an environmental impact statement is to provide prior knowledge of impacts as part of the selection and decision making process.

a couple of pea holes in a snow bank.

This is the way I feel about it. Be damned if you do and be damned if you don't

*Yours truly
Marvin Butler*

*1540 Grant #9
DENVER 80203*

Michael E. Halla
Page 2

The cultural resources which can be anticipated to be subjected to impacts in the two areas should include very significant and concentrated remains of prehistoric occupations which are not as well represented in most other locales in the general area. The environmental attributes which have been selected by the Department of the Army as important in their selections of the two parcels, are in many respects attributes which were used in prehistoric site selection strategies or have contributed to preservations of prehistoric sites. The Huerfano River and Pinon Canon parcels are two of originally 22 parcels considered by the Department. The other 20 parcels were not feasible because of diverse reasons, which included being too rugged, too arid, too cold, lacking in topographic diversity and places of concealment (with attendant associated environments), too close to population centers, and other variables. These conditions, or lack of conditions, will be found, I believe, to be related to the high frequency and preservation of prehistoric sites in the two parcels which are being considered for land acquisitions.


The two land parcels are located in areas which can be considered ecotonal in natural and cultural environmental relationships. Locations which are ecotonal, or at edges, have variabilities related to two or more environmental and cultural relationships. These can be roughly summarized as being the mountain, plains and southwestern relationships which meet in these areas. These relationships have been recognized in both prehistoric and historic aboriginal relationships. For example, mixed economies of hunting, gathering, and food production were practiced in the areas which would not have been possible in adjacent areas. The adjacent areas were too cold, too dry, etc., for these diverse economic activities.

The impacts to the cultural resources by the training activities will not be random, or occasional, but will be concentrated. The greatest concentration of cultural resources will be where the impacts will be concentrated. Similarly the greatest concentration of impacts to wild life, water quality, and other important environmental attributes will be in the same areas where the Army's impacts will be greatest. These are in the areas of concealment, the stream valleys and canyons. These two parcels were selected, in large part according to Appendix A, because they contain a quantity of these places of concealment. Interestingly, one of the areas selected as a suitable cantonment site in the Huerfano River parcel is Little Joe Canyon with which I have some personal familiarity. In the past I visited Little Joe Canyon and identified, without doing an intentional or systematic survey, five archaeological sites of which at least two warrant consideration for nomination to the National Register of Historic Places. It is probable that a more

Michael E. Halla
Page 3

concerted effort in the canyon would result in the discovery of many other potentially significant sites and that the canyon should be considered as eligible for nomination as an historic district. Similar considerations may result from concerted surveys of other areas within the two land parcels.

Sincerely yours,


William G. Buckles
Professor of Anthropology
University of Southern Colorado

WGB/nb

Copy: Marge Patterson

KIKA DE LA GARZA
15TH DISTRICT, TEXAS

Congress of the United States
House of Representatives
Washington, D.C. 20515

June 25, 1980

30 June 1980

Lieutenant Colonel Donald B. Safford
United States Army
DFAE, Environmental Office
Land Acquisition Committee
Fort Carson, Colorado 80913

Dear Colonel Safford:

I have received the Draft Environmental Impact Statement from my congressman, the Honorable Eligio (Kika) de la Garza, and not from you, as you promised in your letter of February 19th, 1980. Nor am I on the DEIS mailing list, as you assured me I would be. Let me assure you that I am interested in the Army's proposed acquisition.

I feel strongly that every consideration should be given to acquiring land for Army training maneuvers that is not being used for cattle ranching or other production. It is inconceivable to me that 200,000 acres of land being used for food purposes would be converted to military maneuver training when less fertile land would serve the purpose as well, although it may necessitate traveling a few miles further.

I realize the importance of quality training and sustaining the ultimate level of readiness for our forces, but I fail to see where the quality of land would substantially affect the training effort. In the material I did receive, someone made the statement that it would be "inconvenient to purchase a parcel of land beyond a one-day march from Fort Carson." You also state that military use of the Pinon Canyon Parcel would have a less negative effect than use of the Huerfano Parcel. Accordingly, I would suggest the choice of the Pinon Canyon Parcel, as it would be less destructive of good land and the difference in distance is not that great.

Thank you for your letter and the material you did send me concerning acquisition of these parcels of land. I shall expect more in the future.

Sincerely yours,

Bonnie Campbell
Mrs. Byron Campbell

Encl.

cc: Senator Lloyd M. Bentsen
Senator John Tower
Congressman Eligio (Kika) de la Garza

Commanding General
Fourth Infantry Division
Fort Carson

ATTENTION: AFZC-FE-EQ
Fort Carson, CO 80913

Dear Sir

With regard to the Draft Environmental Impact Statement for the possible acquisition of land for Fort Carson, I would like to submit the attached public comment from Mrs Byron Campbell, of Raymondville, Texas. Mrs Campbell has already been in direct contact with you about this so I am certain her interest in this is one with which you are already long since familiar.

Your keeping me periodically updated as to the action taken in this area will be greatly appreciated provided it is commensurate with existing policies. I will look forward to hearing from you and with my thanks for your counsel, I am

Sincerely

E. de la Garza
E (Kika) de la Garza, M C

gap

L-84

Mrs. Byron Campbell
795 W. Rocky
Raymondville, Texas 78580

Page 2
June 25, 1980

June 25, 1980

Congressman Kika de la Garza
Congress of the United States
House of Representatives
Washington, D. C. 20515

Dear Congressman de la Garza:

I received the Environmental Impact Statement for Training for Land Acquisition. I do not feel the statement adequately answers the ranchers protest in that area.

It is my understanding that good, fertile usable land for ranching is being considered by the Army for acquisition and permanent use as a maneuver training area — namely two tracts of more than 200,000 acres each, referred to by the Army as the "Huerfano Parcel" and the "Pinon Canyon Parcel", both being located in Southeast Colorado, and within a day's drive of Fort Carson. While I am totally convinced that there is a need for the best military training facilities we can provide, I am equally certain that we should choose for such purposes land which is least suitable for higher and better uses, and in particular, food production. In view of increasing world dependence on the United States for food production, and especially our own increasing needs, with natural population increase and the importation of thousands of aliens from the Far East and our own sister countries in the Americas, we cannot afford to remove arable land from production unless it is a matter of the greatest urgency.

After a careful review of the recent Draft Environmental Impact Statement for Training Land Acquisition, sponsored by Fort Carson and the Omaha District of Engineers, which considered the parcels noted above from the viewpoint of acquisition by the Army as maneuver areas, I am very dubious that either parcel should be selected for Army use; but if one must be selected, it should certainly be that parcel least suited for other uses — the Pinon Canyon Parcel.

My opinion is based on the results of the study itself. These results include degradation of vegetation and soil quality, an adverse economic impact on the local community, a serious deterioration of air quality due to increase in particulates, greatly increased noise pollution, and substantial lowering of water quality due to great increases in sedimentation of rivers, streams and ponds. Augmenting these environmental problems are a sharp reduction in an already sparse wildlife population, and damage to archeological resources. The study deals with none of these problems satisfactorily, and it certainly provides no rationale for acquisition of land from the private sector when one considers the superabundance of federally-held land in the western states.

Newsweek and other sources indicate that the Federal Government owns more than 700 million acres in the western states, to include more than 87% of Nevada, more than two-thirds of Idaho and Utah, and from 25 to 60% of all other states west of the great plains. With respect to the state of immediate concern, Colorado, the Federal Government owns at least 36% of total acreage; surely, it can find 200,000 acres from such bounty without invading the private sector.

Even now, the Army itself owns more than 642,000 acres composing Fort Irwin, California, and has this year used that area to train a large segment of Fort Carson's military forces. It is difficult to imagine why, in a period of the most serious energy difficulties, and with a balance of payments problem due largely to energy importation, the Army needs to consume even more energy in an increased maneuver area. Our economic and industrial survival depends on a more efficient use of energy resources, of using less to do more. It strains rational thought to conceive of how the Army can justify planning and implementation of increased energy consumption.

Even the Army's own declaration as to its intended use is illogical: it intends to use the additional land for no more than 90 days a year; it promises to conduct no actual weapons firing on the new acquisition; it will not build permanent facilities. Based on historical precedent, the opposite is predictably true in every case: the Army will create a dust bowl through carelessness and lack of concern for environmental measures; it will submit an annual budgetary plea for permanent improvements; logic makes it clear that the Army must fire its weapons on the new proposed acquisitions, as population encroachment and public complaint makes the firing areas at Fort Carson unusable. In actuality, if the Army intends to keep its promises as to use, then it can hardly justify any acquisition at all; there is a logical explanation only in terms of intent to breach each promise.

In summary, it is my considered opinion that based on the Draft Environmental Impact Statement, the Army should not be permitted to acquire private land at all; and if the Army should establish some necessity which it certainly has not done, then its acquisition should be limited to that land least suited for more beneficial use, clearly the Pinon Canyon Parcel.

Thank you for your interest and assistance.

Sincerely yours,

Byron Campbell
Mrs. Byron Campbell

DEPARTMENT OF THE ARMY

c/o LTC DON STAFFORD
FORT CARSON, COLORADO

7/22/80

DEAR SIR:

Please reconsider expanding Fort Carson.
The delicate environment in Pueblo and
Huerfano Counties cannot withstand army
tank maneuvers.

Sincerely,

Michael D. Caudill

MICHAEL D. CAUDILL
1644 RACE STREET
DENVER, COLORADO 80206

700 Cheyenne Blvd.
Colorado Springs, Colo. 80906
August 5, 1980

Mr. Michael Halla
Environmental Program Director
Building 304
Ft. Carson, Colo. 80913

Dear Mr. Halla:

I am a Republican Committee woman in Precinct 89 and firmly believe in the defense of my country, having lost a husband as well as range land property during World War II.

If Ft. Carson needs to expand, the question is ... to where shall it expand? Many knowledgeable individuals feel a Mechanized unit should not have been established on soil as fragile as that of Ft. Carson and at an altitude of approximately 6200 feet. Certainly our legislators should not be allowed to perpetuate such an error.

The land in the Pinon Canyon and Huerfano River areas is extremely fragile and if the plant community is disturbed the wind and water erosion will be devastating to the land carrying dust particles that could affect the health of individuals as well as crops and Pueblo's economy. When the top soil is disturbed there is always the possibility of bringing anthrax spore to the surface. This spore is the hardest of all bacterial life to destroy and may survive in the soil for many decades and still be capable of infecting animals and humans.

Those who live in and around the proposed expansion sites are concerned about the degradation of water quality due to sedimentation and salinity. The latter could pollute the Arkansas river rendering it useless for irrigation. If the Army moves into this area where will it get its water? Someone's water supply will have to be sacrificed. No one who lives in or near the proposed land acquisition areas has as much water as needed, much less an extra supply.

Colorado Springs and environs has its mountains. The area south of Pueblo has its canyons filled with beauty, wild life and archeological resources. The wild turkey found in the area is an endangered species. These values must not be sacrificed at any cost. The Army has millions of acres

of land at its disposal. Why does it press for expansion into this area which would be so destructive to the environment as well as the economy!

If our legislators and Army personnel are so concerned about our military strength they should be equally concerned about food to feed the Army. If Ft. Carson expands into the proposed areas the economic base will change from agriculture to one dealing with the federal government, cattle production will be grossly reduced, land devaluated, tax monies lost, families uprooted and displaced to be relocated in a strange environment. The cattlemen and people in the near-by villages, have a way of life all their own and it is a good life. It is not compatible with the military life of Colorado Springs. Adam Smith in his Wealth of Nations says the first duty of government is to protect its citizens from force. People in the Huerfano and/or Pinon Canyon area must not be forced to give up their land or life style.

Because some group of people did not plan ahead Ft. Carson may need more land but it appears that the real reason for the big push to acquire land at one of the two proposed sites is to increase the Ft. Carson pay roll with no thought of adverse effects on Southern Colorado counties. The government already owns 35 per cent of the land in Colorado and with government ownership goes government control with little thought of environmental detriment.

The Army can make all kinds of promises but promises are made to be broken. Moreover, no one can control climate changes, no one can control long periods of drought, no one can control human nature especially among the young and restless military recruits. I urge the Congressional delegates to consider this matter ever so carefully. It might be wiser to reconsider than regret. No one knows more about the land than those who live on and from the land.

I have not begun to scratch the surface when it comes to the many reasons for opposing the Ft. Carson expansion into the Pinon Canyon - Huerfano River areas but I hope this will register an urgent protest by a very large group of people who share my views.

Sincerely,

Eleanor B. Colvin
Eleanor B. Colvin

To the Fort Carson Expansion DEIS Hearings

Maridith Dressler
Box 468 La Veta C.O.
81055
August 15, 1980

Dear Gentelpersons

I found the DEIS statement for the Fort Carson expansion to be unsatisfactory for many reasons. First of all I noticed that the salinity (alkalinity) problem was almost totally ignored. Second on the maps provided in figures 3-3 and 3-4 I noticed that the land is not eroded by wind is eroded by water. This land is very delicately balanced. To start tearing apart this land by driving heavy machinery over it, in the quantities and weights mentioned, will cause extreme damage. Loss of the protective vegetative cover could cause "Dust Bowl" like conditions and extreme air pollution. The rationalization that this destruction will be under careful controls seems to me very superficial considering the severe delicateness of this land. How can it be expected that any species of animal life would survive this destruction much less the endangered species listed in the DEIS? The maneuvers might not directly destroy the animals but if the land is torn apart, polluted, noisy, and generally man occupied, what is left to support the animals survival?

Other issues I would like to mention is that War and preparing for war is morally wrong. Preparing for war saps resources. Could be used for the betterment of the human condition. The New Internationalist Publication states "The money required to provide adequate food, water, education, health, and housing for everyone in the world has been estimated at seventeen billion dollars a year. It is a huge sum of money ... about as much as the world spends on arms every two weeks!" I know this problem has a lot to do with large corporate investments in weapons manufacturing. It is ridiculous for us to allow this insanity to progress any further. I feel the lack of faith on the part of our supposedly Christian government has resulted in a completely insane paranoid attitude towards weapons and war. I don't care to suffer the consequences of any type of nuclear war and I don't want to inflict this atrocity on any other nation no matter what the situation. The average American has very little return on the tax money used to build weapons and promote war. There are a few greedy people who have much to gain by promoting paranoid war consciences.

I cannot consent to the Fort Carson expansion for the reasons explained above. In the future do not hire employees directly to write up an DEIS statement. They can hardly be expected to remain unbiased considering they might possibly bite the hand that feeds them.

thankyou Maridith Dressler

Maridith Dressler

July 5, 1980

Dear Sir:

Before too long, a decision has to be made on whether to let Fort Carson have the land to expand their training facilities. I really can't understand why anyone would hesitate to say yes to letting Fort Carson have the land. If Fort Carson doesn't get the land, the base could be closed; that is when Colorado will be hurting. I have driven out to those places and I've never seen any wildlife except rattlesnakes.

Our service men need room to train, if the enemy would hit the United States and our men aren't trained like they should be - what good is the land with its productive prairies, the wildlife you never see much of, and the archaeological sites. If the enemy takes over because our men haven't had the room to train, as they should, what good is the land.

I don't know about the rest of you, but I want my kids and grandchildren to grow up in a free America as we have. With "Cals" help

I say let's stand up as Americans and be counted. Let Fort Carson have the land to help make our military strong, and where our children will live free in this great country of ours. Anyone that doesn't like America is free to leave. Because we don't need them. I just wanted to express my opinions and beliefs concerning this matter.

Sincerely,

Mrs Ray (Virginia)
Ray, La Grange (Ret.)
La Grange

320 West Santa Fe
Fort Collins, Colorado 81039

P.S.

Maybe this letter won't count for much since I am just a wife of a retired service man. But the Army was good to us. And I just had to get it off my chest. Because people have to wake up before it's too late.

Thank You

1644 Race St.
Denver Co 80206
July 7, 1980

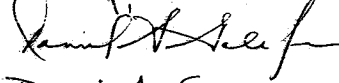
LTC Don Stafford
Dept. of the Army
Ft. Carson, Colorado

Dear Sir:

As a landowner in Huerfano County familiar with the delicate ecology of this area, the proposed Ft. Carson expansion into the Huerfano River and Pinon Canyon parcels is unacceptable.

Military training of any type, and particularly tank training, would have an obvious and profoundly negative impact on the ecological balance of this region as well as adversely affecting the quality of life for area residents and property owners.

This proposal should be rejected flat out.

Sincerely,

Daniel A. Gale, Jr.

cc: Rep. Ray Kogutsek
Rep. Patricia Schroeder
Sen. William Armstrong
Sen. Gary Hart

Commander
Fort Carson and 4th Infantry Division (Mech)
ATTENTION: AFZC-FE-EQ
Mr. Michael E. Halla
Building 304
Fort Carson, Colorado 80913

August 7, 1980.

Mr. Halla,

I am strongly opposed to the proposed expansion of Fort Carson into Pueblo, Huerfano, and Las Animas counties. Being a property owner in Huerfano county, I can attest to the land's fragile ecosystem. It would be irreparably damaged should the U.S. Army commence troop training and tank maneuvering on the proposed site. Economic gain to nearby populations is highly doubtful, and the displacement of land-owners on the considered parcel is reprehensible. It is my hope that the U.S. Army will utilize all available information, including public opposition of this acquisition, and sensibly withdraw from consideration this parcel as a viable option. To the fullest extent and to the best of my ability I will continue to protest this proposed acquisition and occupation by the U.S. Army.

Sincerely,

Jane W. Gale

Jane W. Gale

12 August 1980

Dear General Menetrey, Mr. Halla et al:

Re your letter of 30 July 1980: It has become obvious despite the best efforts of concerned citizens who presented informed and irrefutable evidence in opposition to the Fort Carson land acquisition in southeastern Colorado, that military authorities and their civilian counterparts continue to labor under misconceptions. Therefore, I will clarify some of those areas for you.

Area #1 - Live firing at either site is of no immediate concern. There is little doubt that the Army's mission in either of these areas can change at the Army's whim, and neither commercial air corridors nor existing live firing ranges at Fort Carson will prevent the Army from using either site as it deems necessary.

Area #2 - The "absurd rumors" concerning storage and/or detonation of nuclear weapons or the storage of hazardous waste materials at either site were of such insignificant importance at the public hearings that mention of these rumors does, indeed, seem on your part like tilting at windmills.

Area #3 - We who oppose your blatant attempt to destroy land that you do not value except for your own purpose and which you can in no manner restore to its natural state are firmly convinced that your mission is doomed if it is contingent upon a one day motor march of Fort Carson. Please read, or re-read, the Army, February, 1980, published by the Association of the United States Army. The article (p. 30), "The National Training Center: The Next Thing to the Ultimate Realism" should serve to refresh your memory that a National Training Center is being established in California (Fort Irwin) and will be operational in 1982. The information from this publication, "...a professional journal devoted to the advancement of the military arts and sciences and representing the interests of the U.S. Army" will forthwith be disseminated to citizens in Pueblo, Huerfano and Las Animas counties.

U.S. Representative Ray Kogovsek, Colo., stated during the August 7th meeting of the Southern Colorado Economic Development District in Pueblo, "The acquisition will hamper traffic on the interstate, pour diesel exhaust into our air and further the fugitive dust problem which has brought the Environmental Protection Agency and its non-attainment ruling to our door, preventing new industry from locating here. And, expansion will erode fragile land and increase the salinity of water going down-stream, creating a serious adverse effect on farming down the Arkansas Valley. Army training on either proposed site will put an end to cattle grazing in that area - an industry much stronger in Southern Colorado than the Army's statement assesses."

(2)

12 August 1960

As the wife of a U.S. Army officer retired in 1978, I have for many years championed the role and activities of the U.S. Army as it defends our democracy and the citizens of this country. For this reason and for the fact of having experienced moments of unmitigated pride because of my association with the U.S. Army, I must now say that I am ashamed of and for all individuals connected with the Fort Carson Land Acquisition Program who ill-advisedly favor the military occupation and destruction of land that will in a short time be rendered unfit for the Army's mission.

Sincerely,

Margaret A. Gale

Margaret A. Gale
(Mrs. Daniel A. Gale)

2105 Comanche Road
Pueblo, Colorado 81001

cc: Governor Richard Lamm
U.S. Senator Gary Hart
U.S. Senator William Armstrong
U.S. Representative Ray Kogovsek
Mr. Jada M. McGuire, Exec. Vice President, Pueblo Chamber of Commerce

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS
P.O. BOX 835 - WICHITA, KANSAS 67201

NO RESPONSE
I. about July 27, '80
Halla
Stefford
Mottrey:
Cedar Crest, Colo.
Ft. Carson

Hi! Been looking forward to seeing you Helicopter people down again. It was 61° here at opening time 6:30 this morn. It is still ranging up to Mid. & Lower 90°'s, to about 2:30 PM. to 4:30 then begins to decline.

Been so warm just couldn't seem to get back in gear on my writing you folks on more input on the Huerfano Site area. Personally, just speaking for me, myself, alone I'll feel as in other comments I've written; I would be for, or at least neutral on the Ft. Carson expansion,

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS
P.O. BOX 835 - WICHITA, KANSAS 67201

but feel that ^{it} would be best for the Ft. expansion to amount to many things --- As have already commented on some ~~ones~~ ^{ones}. Now the Red Top Rd. which I had a dominant role in for about 50 day periods of 6 years of my life -- I'd definitely like to see stay open to my ^{other} use indefinitely. I have ~~that~~ from the ^{the} corner about 5 miles north of Red Top Hq's. it might be fine to run it ^(the Rd.) more or less straight toward Pueblo from there ... Probably crossing at same point on the Huerfano River.

Then if ^{Ft.} Larson would keep west of road, say at least $\frac{1}{2}$ mile that way it would allow homes & small places along Red Top Rd in future. Since "Hwy's" are happy ways."

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS
P.O. BOX 835 - WICHITA, KANSAS 67201

^{III}
Then as I see ^{it} alot of the more hill land of Red Top & Butler ranches could be ideal for Ft. expansion -- It would seem that a 2-3 miles with thru there would be logical for train use, tho it would change it some from memories of beauty spots of the past. I would think ^{it} feel that the Ft. would automatically preserve much of the beauty spots anyway.

Then speaking of the things that immediately surround my heart & mind & younger-day fling -- "Cedar Crest" I'd hope that that would be given to aid, work with, & steady my great spirited beginning to encourage making it possible for homes here & about Cedar Crest.

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS

P.O. BOX 835 - WICHITA, KANSAS 67201

IV

"Cedar Crest" has proved up in so many ways to me, ^{in trade} as a tremendous place for retirement & older folks to live & think & realize so much about God's nature of things, & life, & growth and possibilities, & different elements & running grass, hay, & grains thru cattle & livestock to make best use of it, to bring a life source to people to live & go forward from; as a basic thing. As for my idea, I once spoke to Bob Johnston briefly of making a road just north of "Myers Canyon" area as a dividing line & edge of basic Ft. Carson. It would be a natural & a most beautiful drive or loop-Rd. for tourist & Cedar Crest residents of the future. There is already a ranch type existing route & Fed Rd. there.

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS

P.O. BOX 835 - WICHITA, KANSAS 67201

I can so remember when I first started "Cedar Crest" I had a fine talk or two with the Mauro girls & their brother Frank ^{& the senior Mr. Mauro} who run the Walsenburg Creamery & guess the Mauro's still own. Anyway both the sisters went to College ^{in Fair Hall & St. Benedict} in my home town area of Atchison, Kansas. In one of our talks I spoke of Atchison as being surrounded by small farmers & homes & people - I said bluntly, possibly even a little rudely said when you drive out of Walsenburg you are sure enough out of town & square out in space... they must have spoke to higher up as only shortly the land was leveled for irrigation on the Carpentino's east of town on Colo. # 10 Hwy. They were & are a fine family.

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS
P.O. BOX 835 — WICHITA, KANSAS 67201

^{VI}
Since my early begining of Cedar
Crest -- I seemed to be somewhat in
clash with the immediate ranchers,
mostly the Knowltons & some so, with
E. Buscher -- naturally guess!! No harsh
-ness meant. Just a thing of early history
& probably politics & like. However the
Knowltons still hold a Pond of mine that
cost me \$500.00 -- three ranchmanship &
rude plain, take over.. which is on a
100 foot strip of land along my north
boarder which has hurt me very
much in my early start. But God
has helped me much for my great
patience -- which even included 25
day stay at Colo. State Hospital & a
round of another \$500.00 lawyer
fee to Mr. Angelo Mosco - Walsenburg
to free me in my difficulty.

For these Godly reasons I ask

WANT LIST

For ROLAND-SPEH LEATHER CO., INC.

134 N. ST. FRANCIS
P.O. BOX 835 — WICHITA, KANSAS 67201

^{VII}
Ft. Carson people to be understanding
of my huge & great sacrifices & wisdom
of seeing thru hurtful much... in
God's true light.

Sincerely,
Wm. P. "Bill" Gerardy

6/13/80

MICHAEL E. HALLA
FORT CARSON, Colo. - 80913

BLDG 304

DEAR SIR: -

AFTER DIGESTING THE DEIS, IN MY OWN SMALL WAY AND ACUMILATING THIS DATA PLUS THE SILLY SELFISH THOUGHTS OF THE MANY LAND OWNERS OR THE NEIGHBORING LAND OWNERS OF THE PINON CANYON PARCEL I AM ~~THOU~~ CONVINCED THAT THE ARMY NEEDS EXACTLY WHAT THEY WANT.

MOST OF THE PEOPLE IN THIS AREA, THAT I HAVE CONTACTED, WERE OPPOSED, BUT HAVE BEEN CHANGING THEIR THOUGHTS AFTER THEY LISTEN TO THE BENEFITS THAT THIS POOR AREA COULD REAP.

FORT CARSON CAN REALLY TAKE PRIDE IN THE FACT THAT THEY WERE THE FIRST GOVERNMENT ENTITY TO MAKE COLO. SPRINGS WHAT IT IS TODAY BY BRINGING ^{AND BILLIONS} BILLIONS OF DOLLARS TO THE AREA PLUS HAVING A LOT TO DO IN BRINGING THE AIR ACADEMY AND NORAD ALSO TO THE AREA THEREBY MORE BILLIONS AND BILLIONS.

I HAVE SEVEN GENERATIONS IN LAS ANIMAS COUNTY AND SURELY WOULD LIKE TO SEE THIS AREA IMPROVE SO YOU ARE DEFINATELY WELCOME. IT WILL BE A BLESSING. SOMETHING SHOULD HAPPEN BEFORE I DIE. -

I HAVE BEEN READING SOME REMARKS IN THE NEWSPAPERS AS "WE DO NOT WANT THE DUST BOWLS OF THE 30'S WHO CAUSED THESE IF IT WASN'T THE LANDOWNERS AS THE GOVERNMENT PAID THEM TO PHOW ANY HILL OR DALE AND THEY DID "PHOW" AND NOW THEY ARE TRYING TO BLAME YOU. SURELY YOU REALLY ARE GOING TO TAKE CARE OF THE LAND. I HAVE NOT HEARD OF TOO MANY COMPLAINTS FROM THE PEOPLE OF COLO. SPRINGS.

BY THE WAY THE TOTAL TAXES THAT COME TO

LAS ANIMAS COUNTY FROM THE PINON PARCEL IS INCLUDING ACREAGE, IMPROVEMENTS AND PERSONAL PROPERTY IS \$48,475.33 - (ALSO SOME OWNERS TAXES)

THE TAXES ARE AS FOLLOWS: -

ROBT. HILL 5,530.72 ACRES - TAX \$2,286.84

JOHN GYURMAN \$507.46 ACRES - TAX \$1,212.26

BEN GUTIERREZ 15,209.33 ACRES - TAX \$3,763.15

ALSO I READ ABOUT THE ACCUSATIONS OF NOT BEING ABLE TO GO AND SEE THE PINON CANYON BY THE AREA RESIDENTS. (ISNT IT TOO BAD).

HOW WOULD THEY LIKE IT IF THEY WERE RESIDENTS OF TRINIDAD, WHO PAY MOST OF THE TAXES FOR THE COUNTY ROADS, AND WHEN YOU TRY TO GO ON THE COUNTY ROADS THERE IS ALWAYS A COWBOY INTERCEPTING YOU AND TELLING YOU TO GET "OUT".

I PAY \$2,970.69 IN TAXES AND IT IS DIVID-
ED AS FOLLOWS: -

SCHOOL DIST - ^{49.80}~~15.96~~ MILLS PER 1000

25.96 COUNTY PER 1000

23.84 CITY

SO THE COUNTY GETS MORE THAN THE CITY FROM THE CITY AND THE CITY DOES NOT GET ANY THING FROM THEM - ((HOW ROTTEN.))

I CAN GO ON AND ON BUT I THINK THAT ENOUGH HAS BEEN SAID.

IS THERE ANY WAY THAT YOU CAN SUGGEST THAT WILL HELP YOU TO LOCATE HERE?

Truly Yours
M. A. Briggs
333 W. MAIN ST.
TRINIDAD, Colo - 81084



Fox River Ranch

Location: Three miles east of US 350,
equidistant from
Thatcher and Delhi,
Colorado USA

Business Address: Larry Grimes
P.O. Box 20132
San Diego, Calif. 92120
(714) 755-7713

Avondale, Colorado
6 August, 1980

June 26, 1980

Mr. Michael Halla
Environmental Program Director
Department of the Army
Headquarters, 4th Infantry Division (Mechanized)
Office of the Commanding General
Fort Carson, Colorado 80913

Dear Mr. Halla;

I enjoyed talking with you on Tuesday, June 24th, concerning the Fort Carson land acquisition.

I have received and reviewed the Draft Environmental Impact Statement. I've found the reports both comprehensive and informative.

I am certain that Fort Carson will take good care of the area of land acquired, as has our own Camp Pendleton in California.

However, as I communicated on November 6, 1979, expansion into the Las Animas Area would be in conflict with my best interests as a landholder and person.

For this reason, I officially request that if the Pinion Area is acquired, my property be acquired by the Department of the Army at reasonable compensation.

Attached is a copy of my earlier communications.

Respectfully,

Larry D. Grimes

Dear Sir:

In regard to your letter of 30 July, 1980 stating that written inquiries would be accepted.

I would appreciate your standing on water in the Huerfano area. If I read your literature properly, I gather that you will lay claim on the water in that area. I am sure that you are aware that the Huerfano Cucheras Water Co. and Huerfano Reservoir are in this area.

Does this mean that you intend to acquire this water for your use? Many farms lying outside the site itself depend upon this water for irrigation.

Sincerely,

M.H. Gwartney
38554 Bush Road
Avondale, Colo. 81022

16 July 1980

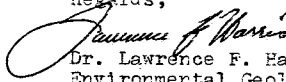
Mr. Michael E. Halla
Environmental Program Director
Facility Engineers--Building 304
Ft. Carson, Colorado 80913

Dear Mr. Halla,

When I attended both the Walsenburg and Colorado Springs Public Hearings on the Expansion of Ft. Carson, the army representatives there commented that all material mailed to the above address before August 21, 1980, would be placed in the public record, which would then go on to the congressional committee deciding on the appropriate action with regards to the Ft. Carson Expansion issue.

With this in mind, I would like the enclosed document, my statement on Ft. Carson Expansion, placed into that public record, so that it can be used for the purpose described above. Thank you very much.

Regards,


Dr. Lawrence F. Harris
Environmental Geologist

enc: 5 page statement re: expansion of Ft. Carson

RE: Ft. Carson Expansion in the Elberta, Las Animas, and Pueblo Counties.

I am Dr. Larry Harris, P.O. Box 142, La Veta, Colorado 81055. I am a geologist endowed with a bachelor's degree from the University of Colorado in Boulder, and a doctorate (Ph.D.) from the Johns Hopkins University in Baltimore, Maryland. I am qualified to write an environmental impact statement as required by law.

Our military was created by constitutional law to protect the land and the people of the United States of America. In the case of Ft. Carson expansion, the military appears to be working against its constitutional goals--there will be an adverse impact on the land, the creatures that live upon it, and the American Citizens that live around it. In order to understand the impact of what the army has in mind, allow me to enlighten you on the scope of the proposed military operation.

At the estimated cost of \$40 million to the taxpayers, the army wishes to establish another fort nearly twice the size of the present Ft. Carson. The reason for this (and they state this themselves in the Draft Environmental Impact Statement, hereafter referred to as DEIS) is that they have used the present Ft. Carson to the point where it has already suffered substantial and permanent environmental damage. They state that they want to reduce present maneuvers on Ft. Carson by 20% by transferring these activities to the lands that they seek to acquire. Note that they are requesting a base twice the size of the present one for what they indicate will suffer impact from 1/5 of the present Ft. Carson maneuvers.

The army plans to conduct training maneuvers under realistic battle conditions. This will first entail the construction of the following structures (from the DEIS):

headquarters, senior troop headquarters, dispensary, site security headquarters, secured storage area, fire station, supply storage warehouse, cold storage, supply storage, site maintenance facility, 3-bay maintenance shop, signal generator maintenance shop, gas station with capacity of 42,000 gals diesel, 21,000 gals, motor, 21,000 gals aviation fuel, troop services (barber shop, laundry, small PX, PX snack bar), four battalion-size dining facilities @ 11,325 sq. ft., 33 troop latrine/showers @ 1800 sq. ft., battalion maintenance area including wash areas for tanks, grease racks, 28 concrete pads for maintenance tents and 327 concrete pads for battalion HQ's administration and supply plus troop living facilities. In addition, numerous facilities are anticipated for supporting training units including drilled wells, a chlorination plant, a water treatment plant, water maintenance and storage tank, water distribution system, sewage treatment plant, sewage collection system, primary electric line, electric distribution system, electric substation, exterior lighting and gravel for motor pools. A most conservative estimate of the square footage of these structures is 180,000 square feet, as figures are not given for some of the structures in the DEIS.

This construction would take place over a two-year period and would be done almost completely by companies and labor out of Pueblo and Colorado Springs as these are the only markets that can supply services of this magnitude. Thus, Local residents will not see much of this money, if any at all. Upon completion, 35 people would be employed to run and maintain the army facility of which 22 people would be army personnel, leaving only 13 jobs to locals.

Battlefield maneuvers will consist of three phases (Page A-1 DEIS):

1. The brigade at a time for one month, six times per year. Each brigade consists of 5500 men, with 826 wheeled vehicles and 432 tracked vehicles.
2. In addition, for the three summer months of each year, one reserve unit per month will utilize the land, with each reserve unit consisting of 5500 men, 750 wheeled vehicles, and 370 tracked vehicles.
3. Large-scale exercises will be held once every two years, consisting of 15,000 troops, 750 wheeled vehicles and 370 tracked vehicles.

In summary:

6 brigades totalling	33,000 personnel,	4956 wheeled,	2592 tracked
3 reserve units	16,500 "	2250 "	1110 "
* biannual exercise	7,500	375	185
	57,000	7581	3887

Thus, in one year, there will be 57,000 soldiers, 7581 wheeled vehicles and 3887 tracked vehicles (a total of 11,648 vehicles) utilizing the land! (Huerfano County alone has about 6,000 citizens).

Wheeled vehicles for these maneuvers would range from 2,350 lbs to 39,798 lbs, eighteen types in all including utility trucks, dump trucks, tank fuel trucks and a troop transport. Tracked vehicle types included in these maneuvers range from 16,000 lbs to 110,000 lbs including 59 tanks, 180 troop carriers, howitzers, 31mm mortars, 20mm vulcan cannons, dozers, backhoes, recovery vehicles, 16 different types.

Along with these exercises there will be accompanying air cover and air transport. The U.S. Air Force will supply tactical support; two F-111's will fly down from Buckley Air Force Base near Denver 100 times a year and make three to five tactical passes over a 35-minute period at routine altitudes over the combat zones of two hundred feet. In addition, (Page G-24) helicopters will fly 744 hours per brigade training period. Fuel requirements per brigade (30day) period will be 65,000 gallons diesel, 26,000 gals gasoline, 21,000 gals. aircraft fuel with 1,460 tons of coal burned per year to heat tents. Air pollution resulting from this energy consumption by men and machines (including wind erosion) is 13,109 tons of particulate matter, 601 tons carbon monoxide, 35 tons of sulphur dioxide, and 61 tons of nitrogen oxides.

How will this military activity effect us, the residents of Huerfano, Las Animas, and Pueblo Counties?

1. There will be an increase in local crime: The presence of a military base is both directly and indirectly responsible for a substantial increase in serious crimes such as murder and rape. In addition, heavy drug trafficking is well-known around military bases. We cite the well-known effect of Ft. Carson on the unusually high crime rate in Colorado Springs.

2. Transportation impact on the area would be very noticeable. The motor convoys coming down from Ft. Carson would consist of 826 vehicles with 492 average feet between each pair of vehicles. Thus, each convoy coming down Interstate 25 would be about 76 miles long! In addition, there would be two, 800 car trains utilized to bring the tracked vehicles to the training area from Ft. Carson. The increase in local traffic and military base activity will put a greater strain on our roads and our public services and will pollute our environment. We will need more policemen and jails for the cities, and require more frequent repair of our roads. In the face of this additional burden to the taxpayer, we find that we will not receive any benefits from the army whatsoever to offset these expenses! Cattlemen will lose rangeland, ranchhands will lose jobs, school districts will lose tax revenues. Should the army acquire this land, the state of

Colorado will lose from one to two million dollars in cattle production, and tax income in Pueblo County will be reduced by 1,012,000 per year, in Los Animas County a loss of 7500 will be sustained, and Huerfano County will lose 11100 in tax revenue per year. We will also lose the potential increase in taxes that the land would provide in the future, as citizens continued to use and produce on the land (there would be an increase in the productivity of the land as each county continued to grow in population). In essence, the proposed base, for all practical purposes, forever prevents private citizens from owning, living, working, and crossing-over this land at a time when the population of the United States continues to increase, and the need for land is now greater than ever before.

The consumption of fuels by the military machines will comprise a huge and irretrievable loss of resources at a time of so-called energy crisis. The summer tourist trade along the front range will suffer because of the convoys on the highways, and helicopter squadrons hedge-hopping back and forth from Ft. Carson, the hundreds of simulated artillery blasts day and night, and the sounds and smells of army maneuvers, will pollute and adversely effect our environment.

3. The use of nuclear and chemical weapons on this base is a distinct possibility, perhaps inevitable. If there ever was a course to the perpetual existence of mankind, it is the deadliness of the by-products of all nuclear devices. There were four major storms that came in from the northeast this winter, which would bring in the pollutants generated by base activity, directly upon us for days at a time.

4. Damage to the ecosystem. The DEIS lists 24 pages of animals and birds that are found on these two parcels of land. Pronghorn antelope, mule deer, white-tailed deer, mountain lion, bobcat, fox, the black-footed ferret, an endangered species, the bald eagle and peregrine falcon (both on the endangered species list), 29 species of sparrow, 22 species of swans, geese and ducks potentially occurring, seven species of hawk, along with the golden eagle, quail and pheasant, sandhill crane, and wild turkey. There are sandpipers, doves, gulls, terns, four species of owl, flickers, swallows, woodpeckers and over a hundred other types of birds. These birds vanish in the face of campers and hunting seasons. Will they come back after hundreds of helicopters criss-cross their nesting grounds for days at a time and jet fighters thunder through their nesting and feeding areas at an altitude of 200 feet at 300 miles an hour, while 57,000 men and 11,648 vehicles track through their living environments?

In the streams there are brown trout, brook trout, perch and crappie, bluegill, and bass. These animals shy from lone hunters and pick-up trucks, let alone battalions of soldiers, tanks and cannons. How could these creatures possibly survive this environment? In truth, they cannot!

5. The presence of the fort in these fragile lands will result in the actual destruction of the landsurface, not only within the base, but downstream and downwind as well. Dan Mc Carr, geologist, testified during the August 15 public hearing that he was well-acquainted with the terrain under consideration and stated that it would be irreparably damaged by track vehicles. His conclusions concur with my own experience in regions on similar topography and geology having less than 15" precipitation per year. I would like to point out that my thesis research (Thesis, Ph.D.: 1972, the Role of Climate in the Morphology and Evolution of Mancos Shale Slopes on the Colorado Plateau, the Johns Hopkins Univ.) qualifies me to comment as an expert witness on this topic. The areas under consideration by the army sustain 12 inches of precipitation per year, making them extremely susceptible to permanent erosional damage, much

greater damage than that which is indicated in the biased DEIS, which also encourages still greater use than that requested by the army!

Required environmental impact studies indicate that salinities and sedimentation in ground and surface waters will greatly increase and seriously affect water-quality downstream. Donald Miles, Irrigation Engineer of the Co-operative Extension Service, testified on August 15 that irrigation water in the lower Arkansas River is already 2-5 times as salty as the Colorado River, and is doing millions of dollars damage to the irrigated land. Erosion resulting from army use on either of the two parcels of land (both are tributaries to the Arkansas), would result in still greater salinities and land damage, at an even greater expense to the residents of the region. It is important to note that the Arkansas River is the major source of agricultural food production in this region, that it is truly an essential resource. It is astounding to me that the army persists in seeking land for a purpose which is so clearly detrimental to the economy and environmental quality in the southeastern portion of Colorado, adversely affecting those living immediately within the area and those living as far away as Kansas and Oklahoma. Surely, there is another area, much farther removed in another state that would be better suited to the needs of all parties involved in this issue.

Considering the present nature of world warfare, the base is not even necessary. If we are the peaceful nation that we claim we are, we would not be massing our army to attack foreign nations on their soil, for we already have an elaborate system of push-button devices which protect our country by deterring our enemies with total annihilation. We certainly don't want a military base which is unnecessary, which will cost us far more than what we will receive in return by reducing the amount of land the public can use, pollute our environment with dangerous by-products, and introduce more crime into our living environment. The area in which we live here on the Front Range is the only one left which remains virtually unspoiled.

We have retained legal counsel. They have called to our attention that there are violations of the NEPA (National Environmental Policy Act) in the army's environmental impact draft:

1. The statement is clearly biased in favor of the army's operation. A non-biased EIS is required by law.
2. A detailed explanation must be included, telling in great detail why all other alternatives are inferior. We believe that there are other areas within the conterminous United States, much more removed from public use, that should be under consideration.
3. No cost-benefit analysis has been provided as required by NEPA. A proper cost-benefit analysis must be provided using the proper formulas.
4. The DEIS states that the endangered species and wildlife can be protected. In truth, this is virtually impossible.
5. The damage to this land surface is misrepresented and clearly underestimated, another indication of bias, or improper evaluation.
6. The archaeological survey is incomplete.
7. The army is required to contact all government agencies that have any pertinent knowledge of the areas under consideration. They have not completed this requirement.
8. The control of the disease Anthrax, has not been considered. Information presented at the public hearings indicates that it should be thoroughly studied.
9. The removal of existing gravesites has not been considered.
10. The impact of army vehicles on the Interstate and nearby highways has not been considered in the impact statement.

Any facet of a vague or improperly-executed environmental impact statement is grounds for a law suit. The County Environmental Alliance, of which I am a representative, is dedicated to the protection of the citizens and the environment in Huerfano County, Colorado, and will use whatever legal means necessary to stop this travesty against the citizens of this area.

The DEIS suggests that the nation's priority is national defense, and I agree, and I add that at present, there are two parcels of the nation of over 300 square miles each right here in Colorado that need defending in the worst way, not from some foreign aggressor, but from the United States Army itself!

Dr. Lawrence F. Harris
Environmental Geologist
Huerfano County Environmental Alliance

I want it placed in the public record that I have offered to assist the army in locating another training site that would be agreeable to the residents of southern and southeastern Colorado, and the army itself.

Aug 14, 1980
Colo. Spgs., Colo
409 N. Cascade 80903

Sir,

I would like to state some views on
Ft. Carson expansion.

Due to the noise, dust, land damage
and pollution from the vehicles and extra
traffic on the highways, plus the addition-
al water supplies and without the con-
sent of the land owners giving up their
land I can not approve expansion.

There must be somewhere in the
United States where land is available
that is not in this scenic, tourist, mountain
area. Seams most anywhere else would be
more suitable.

I can not approve of taking agriculture

land from food production or land
from private ownership without the
consent of the owner.

I would suggest considering a site
or sites outside of Colorado.

Sincerely,

Barton Hibbard

OPINION BALLOT

If you agree or disagree with the information presented with the enclosed Memorandum, please indicate your intention below and return to Bob Hill, Jr., at 36086 Highway 350, Model, Colorado 81059.

I agree _____

I do not agree because of _____

It is the general opinion of the ranchers involved, that if the Pinon Canyon Site is selected for Army expansion, my memorandum is chosen as our course of action. Further more, I would appreciate a reply and would kindly request the opportunity to have this memorandum included in its entirety in the new revised environmental impact statement.

Bob Hill Jr.

MEMORANDUM

ARMY EXPANSION INTO PINON CANYON

AN ANALYSIS

BY BOB HILL, JR.

PREAMBLE

We know the army does not seek to acquire the land comprising Pinon Canyon for purposes of grazing cattle, but rather they seek this acquisition for purposes of national defense. Since the land sought to be acquired is to be used for purposes of national defense it shall benefit each and every American citizen comprising our wonderful country and it is for that reason that the ranchers owning the land comprising the Pinon Canyon site need to be adequately compensated. In analysing what proper compensation would be it is necessary to put the proposed land acquisition by the army into its proper perspective category from a market price standpoint and then develop a plan of payment such that the ranchers giving up their land to protect our great country will be adequately compensated while at the same time providing benefit to all parties concerned.

ANALYSIS OF MARKET PRICE

When one gathers reliable statistics, such as the author has done, the following is noted:

1. Grazing land on a national average sells at One Hundred Thirty Seven Dollars (\$137.00) per acre.
2. Land of all types sold within the United States during a recent fiscal period for which statistics are available sold for Six Hundred Dollars (\$600.00) per acre.

When analysing the statistics related to land sales within the United States one has to conclude that the ranchers involved as the owners of the land attempting to be acquired by the army have held this land for many years from one generation to another generation within each of their respective families and therefore, when analysing what a just compensation would be for the taking of their land one must take into account the future earning capacity and family occupational stability that the ranchers are being deprived of by the giving up of their land. Upon reflection on these factors the national average for land sales as above quoted at Six Hundred Dollars (\$600.00) per acre must certainly be the fairest price to

compensate the ranchers involved in a fashion that can be considered just and in harmony with the tenets and principles espoused by our great Country.

THE PLAN

Since we have approximately three hundred thousand acres of land involved in the matter under discussion by this Memorandum we should ask Congress for One Hundred Eighty Million Dollars (\$180,000,000.00) for utilization in the acquisition of the land involved. This sum will purchase three hundred thousand acres of land comprising the Pinon Canyon site at Six Hundred Dollars (\$600.00) per acre and will justly compensate those ranchers whose land is to be taken for purposes of the army expansion program. It would be further proposed that the One Hundred Eighty Million Dollars (\$180,000,000.00), authorized by Congress, be paid out to each respective rancher over a period of fifteen years at the rate of Forty Dollars (\$40.00) per acre per year. Since most of the land involved in the proposed acquisition has a very low tax basis thus, under normal circumstances subjecting each ranch owner to prohibitive capital gain taxes, it is proposed that Congress provide an exception to the application of Internal Revenue Code Section 1250 Capital Gains and exempt this entire transaction from tax impact under the Internal Revenue Code of 1954 as amended. In applying the Six Hundred Dollar (\$600.00) an acre price to an actual situation the following example is presented:

Typical acreage	5,000
Price per acre	\$ 600.00
Total per rancher	\$ 3,000,000.00

The total acquisition price of Three Million Dollars (\$3,000,000.00) shall be payable at the rate of Two Hundred Thousand Dollars (\$200,000.00) per year for fifteen years. The proper utilization of the One Hundred Eighty Million Dollars (\$180,000,000.00) can provide substantial economic benefit to Las Animas County, Colorado as well as the surrounding counties in Colorado and to that end it is proposed that the United States Treasury pursuant to Congressional approval deposit the One Hundred Eighty Million Dollars (\$180,000,000.00) in the three local banks in Trinidad, Colorado, namely the Trinidad National, the First National Bank and Trinidad Industrial Bank. For purposes of illustration each of these respective banks would initially receive the sum of Sixty Million Dollars (\$60,000,000.00) apiece to hold on deposit for purposes of amortizing the One Hundred Eighty Million Dollar (\$180,000,000.00) acquisition over a fifteen year period of time. By allow-

ing each respective bank to have on deposit these sums of money each of the banks will be able to expand their loan portfolios to substantially create an economic boom to the residents of South and Southeastern Colorado thus compensating those individual residents for any negative impact created by the army expansion, if any. The monies held on deposit by each respective bank would be paid out proportionately at the rate of Twelve Million Dollars (\$12,000,000.00) per year over a fifteen year period of time.

UTILIZATION OF THE ARMY RELIEF FUND

In an attempt to provide economic benefit to its fullest extent, it is proposed that the interest earned by the acquisition funds deposited in local banks as stated in the paragraph above be directed to the Army Relief Fund. In return for the acquisition of each ranchers respective land at Six Hundred Dollars (\$600.00) per acre payable over fifteen years without the incurrance of tax the ranchers involved will agree to let the land acquisition monies on deposit at the above-stated local banks draw interest and will assign that interest income to the Army Relief Fund after deducting the current years land payment to the ranchers. If we assume an adequate rate of return for the monies held on deposit at the local banks to be ten percent (10%) per annum, we can readily see at the end of one year Eighteen Million Dollars (\$18,000,000.00) will be earned by the funds on deposit from which Twelve Million Dollars (\$12,000,000.00) will be used in making that respective years land acquisition payment and the balance of Six Million Dollars (\$6,000,000.00) will be diverted to the Army Relief Fund pursuant to proper assignment which can be utilized for the benefit of those respective army members families that qualify for such fund. It is apparent that the interest earned over the fifteen year period of time required for the pay-out shall entirely retire the obligation to the respective ranchers without the invasion of the principal initially deposited with the local banks at the commencement of the acquisition.

CONCLUSION

It is submitted that Colorado Springs and the El Paso County area as well as the entire State of Colorado will retain all of the economic benefits to which it has been privy to as a result of the presence of the army and in addition the growth of Southern Colorado will be greatly enhanced by the deposit of One Hundred Eighty Million Dollars (\$180,000,000.00) in its local banks and the

Trinidad to Pueblo, Colorado area will enjoy the front range growth experienced by Denver and Colorado Springs. If the above plan is followed and authorized by Congress, indirect benefits will be derived on the local level one of which will be directed to the school bond issue within the impact area which will occur as the result of the sale of State lands to the army if in fact those lands are to be included in the army expansion program.

From time to time as our past history indicates, Congress has risen the occasion of authorizing matters of vital need. The matter of the armies acquisition of ranch owners land for purposes of national defense is a matter of vital need. The plan proposed within this Memorandum has been approved by all of the ranchers involved that have been contacted by the author which would constitute a majority of all the ranch owners of the land affected. Furthermore, the author has contacted appropriate representatives of the army who also approve the plan proposed herein. It should be noted that Senator Gary Hart has requested One Hundred Forty Million Dollars (\$140,000,000.00) for improvements at Fort Carson except that it is the opinion of the army that an additional three hundred thousand acres would be an improvement to Fort Carson and better serve the national security objectives of our great Country. The plan formulated herein had as its purpose just compensation for everyone without discrimination while attaining national security goals.

Respectfully submitted,
PINON CANYON COMMITTEE

Bob Hill Jr.
Bob Hill, Jr. - Chairman

36086 Hwy 350
Model, Colo. 81059
July 18, 1980

Major General
Louis C. Menetrey,

General, it is very unfair to leave us ranchers hanging by a rope, by not coming out and saying which site is to be selected, or if any site will be selected!!

This army expansion business has been terribly costly to my family, I've lost a ranch sale of 3,200 acres of land that would have eventually grossed us \$300.00 an acre; this was all unimproved land.

The monies to be borrowed was approved by Federal Land Bank in Pueblo, Colorado, and waiting for seller and buyer to close the transaction, but due to army expansion interest, I lost

L-103

that sale until a site for Army Expansion is to be - or not to be.

For 21 years I have been working for someone else & finally, last year for myself, after the price came up on cattle in 1978, I was able to move my family on to my own ranch and build a home for my wife & children. Up to this time we put money into our ranch and lived in someone else's house. I had most of my cattle paid for and could see that for once in our lives that I could sell half of my ranch & my debts would be paid & I, along with my family, could enjoy the rest of my ranch with monies coming in, plus the interest for the next 15 years. Due to Army Expansion interest, and being put on the preferred list, we find ourselves unable to function normally, because our hands are tied. The loss of the sale of 2,200 acres cost my family \$293,250.10

plus a \$40,000. Cow & calf sale for 50 pair. The increased interest rates on money borrowed surpassed \$20,000. The position of having to sell my parents home for \$60,000. to the prospective buyers of the 2,200 acres of land was caused by Army Expansion interests. This caused us due grief to a man 87 years old & his wife of 73. They will never get over that! my prospective buyers, Bert & Ruby Noney, along with their relatives, Philip and Louise Thomas from Colorado Springs, Colo. had purchased 220 acres from me previously to retire and build homes & this also was delayed by Army Expansion. I just think of the money in interest at the banks these people have lost. Of course, there is no return to just let land sit idle!

This land acquisition program is eating up our equity. Our creditors are reluctant to lend money because they are also nervous about price

per acre and would not take a chance on maybe's.

The people who depend on borrowed money are hurting, we are finding our selves trapped by the Army's interest. Our land has been put on the market by a speculator who's contract has expired. Most ranchers support my plan that has been sent to you in an earlier writing - if this site is chosen.

"For Heaven's sake please commit your self so we can get on with our lives!! We don't even know where we are headed at this writing!"

Our ranch is in more trouble than it ever has been due to Army interests & I doubt if we can ever overcome the losses we have had to stand - hell we can't even sell our land as no one wants to buy land

the army has expressed an interest in.

Respectfully yours,
Bob Hill Jr.

P.S.

Please put this in the record being sent to Congress on Army Expansion as we have up until July 19 or Aug. 15 to reply in writing.

Who will stand our losses, the government - I doubt it - if we were to sue for inverse condemnation it would probably cost us a fortune and the government would holler scam!

Copy - sent to Governor of Colo.

1603 Arizona Ave.
Trinidad, Colorado 81082
August 14, 1980

Department of the Army
Land Acquisition Committee
DFAE Building 304
Fort Carson, Colorado 80913

Gentlemen:

I am just writing this letter in regard to the proposed Fort Carson expansion into southern Colorado. I am against this proposed army expansion into this area because of the fragility of the land and because of the loss of grazing and agricultural land should the expansion be carried out.

I think all available productive land should be preserved. Unless this is done we, too, may face a severe food crisis in the not too distant future.

I have other reasons for my opposition to the plan - such as the blowing dust which would come about and which would have an adverse

effect in this area and surrounding areas. Should the expansion take place a once productive area would be turned into a dust bowl.

I have heard that there are abandoned army sites elsewhere that could be used thus the damage to the land wouldn't be as great as developing a completely new training site.

Others with whom I have talked are also against the expansion.

Many articles have appeared in our local paper (The Chronicle News) in regard to the expansion. I am enclosing a few of these.

Respectfully yours,
Kirstine Fos

P.S. Longago I used to live in the Model area. Also as you know, our Congressman, Ray Rogooske, is opposed to the Fort Carson expansion into southern Colorado.

JOHN LIECHTY
425 S Weber
Colorado Springs, Colo. 80903

Gentlemen:

I want you to hear why I am opposed to the expansion of Fort Carson. Glen Cornel is a friend who I deeply respect as a man and as a rancher-farmer. When he says that the expansion and activities of Fort Carson pose a threat to the well being of the land, there seems to me no reason to disbelieve him. Out in the field I hear the blasts of your artillery and am periodically intruded upon by your helicopters. My inclination is that you should play your games elsewhere, or come see me. I could get you an honest job somewhere.

Perhaps our definitions of what is detrimental to the land differ enough that offering my own is in order. It hurts me to see any evidences of land modification at the hands of mankind, which do not seem to show the least speck of love or respect or common sense. It hurts me to see a plastic bag on the ground or another new road cutting across more land. We act like greed-dominated pimps with the Earth, allowing her abuse for a few dollars in our pocket. Your military base means thousands of acres of fenced off land & hundreds of signs that say 'Keep out'. Your military base means housing developments that stick out scabily on the land, not being built in love and concern, but in haste and quantity. It means K-rations that stream all over creation, noise, and erosion.

I am concerned and feel that you should be too about the increasing push of government into our daily lives. By 'our' I refer to us, the public, who as you may recall from grade school government class, are in effect the government and determine the way this country is run. It amazes me that the government, twice defeated in its attempt to corner more

land, is once more obliquing to public opinion, feeling perhaps that since 1975 we have changed our attitude and would love to see the military give 200,000 acres of land to play games on at our expense. Let's face it; the government is more involved in making people believe they want what it wants, than trying to know what people really do want.

This is why decent, logical individuals are asked to finance a nuclear arsenal. Because they allegedly want one. Why? To stay safe of course. Did it ever occur to you in the military that the 'defense' you live at such exorbitant rates, fiscal, cultural, and spiritual, does not make ~~me~~ feel any safer. Playing around with tanks, guns, and bombs may be your idea of security, but it is not mine. Making me finance your sport is the ultimate insult.

You will say that I ignore the benefits of your expansion, concentrating solely on negative side effects. I will say that you are quite correct since there are no benefits from your expansion that I can see. What about national security, or the event of war? you already have been briefed on how secure it feels to live inside a nuclear arsenal. I would not participate in a war if there were one. I am quite prepared to die for what I believe in, so don't draw conclusions about my courage or lack of it. I can hear you asking 'But what if everyone had that attitude, what if we all refused to participate in a war?' That would certainly be drastic, wouldn't it. There might be peace.

I'm closing, let me say how discouraging it is to share your lack on the expansion trail again. You've got all the time and money in the world at your disposal. For us it's like holding back a constantly surging river with sand bags. Our energy will run out; yours just keeps coming. Please consider.

Sincerely,
John Liechty

10 Scotland Road
Pueblo, Colorado 81001
July 24, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

I recognize that you have received a great many comments with regard to the draft Environmental Impact Statement regarding Fort Carson's expansion into Southern Colorado. I am not certain what the outcome of these comments may be.

It seems to me that in complying with the legal requirements of the EIS, a document has been produced which emphasizes the negative aspects of Fort Carson's expansion. Nowhere are the benefits, whatever they may be, enumerated.

In view of the above, I have recommended to the Pueblo Area Planning Commission, and strongly recommend to you, that the Army consider preparing a balanced, objective report to the citizens of Pueblo County outlining, in as balanced a manner as possible, the pros and cons of the proposed expansion as it may impact the residents of Pueblo.

I am writing this directly to you since I am uncertain whether the recommendation which was approved by the Environmental Policy Advisory Committee of the Pueblo Planning Commission will be transmitted to you in a timely manner. A favorable reaction to this recommendation would be appreciated.

Very truly yours,

D. R. Luster
D. R. Luster

DRL/cg

Burton W. Marston
Major, USAR, -Ret.
370 No. 9th St.,
Laramie, Wyo. 82070

A3 August, 1980

AUG 18 1980

Louis C. Menetray, Major General USA
Hq. Fort Carson and Hq. 4th Inf. Div.
Fort Carson, Colo. 80913

Dear General:

This is in regard to the Fort Carson Land Acquisition Program, concerning which your office had held several public meetings during the past July. I regret that I was not able to attend any of these hearings.

I received your letter of 30 July and was glad to note your corrections of certain misconceptions and incorrect rumors that prevailed concerning the land acquisitions program, which I was glad to see corrected although I was not personally concerned.

I have received copies of the Draft Environmental Statements and the corrected maps which your office has sent and have given these some study.

While I am not personally familiar with the specific areas proposed for acquisition for training and maneuver purposes I have a general knowledge of them from traveling nearby and having flown over them in plane, in years past. As I have previously written your office, I do feel the areas and their terrain would be very suitable for the training purposes for which they are desired. Your very extended and detailed studies have been very commendable helps in giving information about them.

Under the present defense and the severe handicaps we are suffering due to lack of manpower, adequate facilities and lack of equipment and training for the same, the addition of these training areas would be of great benefit to the Fort Carson Training Center.

I sincerely hope and trust your efforts and proposals will be successful and will result in reaching the desired goals.

Sincerely yours,

Burton W. Marston
Burton W. Marston, Major, USAR-Ret.
Veteran of both W.W. I and II
Past Pres. Wyo. ROA

Copy to David Barkley,
Wyo. ROA Dept. Secy.

Fowler, CO.
July 15, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers-Building 304
Fort Carson, Colorado 80913

Dear Sir:

Enclosed are my comments on the Impact Statement which Ralph Knowlton read for me at the Colorado Springs hearing.

If you don't mind I would like answers to some questions. If blue grama grass is hard to re-establish by seeding, how do you intend to keep enough ground cover to prevent erosion? The summary page of impacts shows only 3 positive, the rest negative. How can this mean the land is feasible unless you just don't care what the results are? What is the use of spending money for an impact study if you just go ahead and do what you want anyway? Have you personally visited the parcels of land to see how the dust rises

when the soil is disturbed?

If you go ahead with this land acquisition and take the land away from the ranchers, go to the expense of setting everything up then the dust is too much for the men and equipments what happens then?

How do you intend to control the salinity problem?

This summer is an example of how dry it can be here. I've had only 1 inch of moisture since the latter part of May. This land can withstand this and come back again without mechanical disturbance but that would be a different story. Water is at a premium at times like this too.

This land is grassland for grazing livestock, some years good and others not so good. Attempts to use it for anything like military training will lead to disaster.

Sincerely,
Nadine Martin
Rt. 1 Box 216
Fowler, CO. 81039

COMMENTS FOR HEARINGS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

I live on the Red Top Ranch which is part of the Huerfano River Parcel. It's a beautiful ranch and I sure hate to see it or any other ranches involved in this land acquisition torn up. It seems like we'd be defeating the purpose if we tear up productive lands in an effort to train to defend it. Why not let this land produce food for the soldiers to eat and do training on land where food can't be grown.

Page A-33 of the Appendices of the Environmental Impact Statement tells why this land won't work for training heavy mechanized equipment. I don't see how the Army can say both parcels are feasible. Does "the grass is susceptible to off-road traffic" mean heavy tanks and wheeled vehicles can be run over the land without damaging the grass severely? Does "the soils are susceptible to erosion" mean that when the ground cover is gone there won't be serious erosion by wind and water? Does "blue grama grass is hard to re-establish by seeding" mean that pitting, chiseling, and seeding is going to bring back the ground cover?

I question a few things in the section on dust emissions. In the appendices beginning on page G-20 it indicates the amount of dust raised by vehicles was figured on the assumption they will be traveling 15m.p.h. on road and 10 m.p.h. off road. Does our Army really travel this slow? Also I don't see how they can stay on roads 60% of the time unless they have an awful lot of roads and where there are graveled roads there certainly won't be any grass. They are also figuring on having 35% ground cover which is wishful thinking. I believe the dust emission figures are probably much lower than they would actually be.

Another thing that puzzled me was where it tells about emissions from space heating, G-21 of the Appendices, it says the buildings would be heated only half of the heating season because most of the training would be done in the summer. Other places it talks about letting the land rest during the growing season.

A spokesman for the Army stated on KAVI Radio that "The Army doesn't want a pig-in-a-poke, dust will ruin our equipment." Better open the poke and take a good look at that pig because running vehicles over that land will certainly create dust and lots of it.

8 August 1980
Wien, Osterreich -

Michael -

I generally like your DEIS - I've just received it and have only a few notes:

Page 3-23: Pollution effects -

I'm not certain if the dilution effects are significant. Runoff-producing storms could actually strip concentrated salts out of the soils - Also - my plots sometimes showed dilution and sometimes not -

Page 3-29: chemical data (P3) - Please check the HSSR reports from Grand Junction, DOE for some chemical data - I sent you those reports - (in red covers) -

Page 2-42, item 2.7.1: Geology/Minerals - In spite of what CSM says, and I'm aware of some interesting geochem results ~~in both parcels~~ in both parcels, the DOE (in press) does not include either area in a "favorable" ~~category~~ category for uranium - I find the Apishapa arch an uplift interesting & there are several copper occurrences on its axis, but nothing significant - But there are some interesting places east of the Piñon Canyon Parcel -

Page 3-40: Rainfall extremes -

Snipes et al (1974) published some rainfall maxima for the '65 flood which was greater than your figures - unfortunately, I'm 10000 miles from my references - but take a look -



Cooperative Extension Service

Post Office Box 190
Rocky Ford, Colorado
81067

August 14, 1980

Extension Irrigation Office
411 North Tenth
(303) 254-7609

Mr. Michael E. Halla
Environmental Programs Director
Facility Engineers - Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

It appears to me that the Draft Environmental Impact Statement for Training Land Acquisition is extremely inadequate on the subject of salinity. Irrigation water in the Lower Arkansas Valley of Colorado is already far more saline than that used on any comparable area in the United States. Water supplies for 200,000 acres in the area are from two to five times as saline as the Colorado River water used in the Imperial Valley of California. The Federal Government has seen fit to initiate a multi-billion dollar program to try to reduce salinity levels on the Colorado. Surely the Federal Government has demonstrated a level of concern over salinity which is much greater than that shown in the DEIS.

I consider the DEIS treatment of salinity to be inadequate in four ways. First, the wording of discussions on salinity indicate a lacking of understanding of the subject. Second, the DEIS seems to assume that proposed ineffective practices would actually control salinity. Third, the DEIS does not make any determination of the effect of the proposed installations on the salinity of the Arkansas River and the downstream agricultural and municipal supplies. Fourth, no attempt has been made to evaluate economic and social impact of water quality changes on the residents of the Lower Arkansas Valley of Colorado.

Much of the inadequacy of the DEIS treatment of salinity is illustrated by various statements in the second paragraph on page 4-15. The first sentence states "Salinity levels in the surface waters in the Huerfano River Parcel are anticipated to locally increase due to increased sediment loading under reduced cover conditions ..." This statement as well as others in the report seem to imply that any increases would have a local effect rather than a major effect in an important agricultural area.

The third sentence in the same paragraph states "Also, this (salinity increase resulting from training activities) would be dependent upon the total

Colorado State University and U.S. Department of Agriculture Cooperating

Also - here's some extra information (about 120 million ft³) - ^{Belmont} ^{Calvin} ^{Smith} Jos. Clair (1956?) published some figures on the helium reserves in Model Area ^{proposed} sites - from the Permian Nippawalla Group - Just below the Blaine gypsum as I recall ~~about 100 ft~~ This could be Radiogenic helium from uranium deposited in a sabka - plain environment (similar copper-uranium deposits have been found below the Blaine in Texas). Check the "Cretaceous Texas Copper deposits" - So, although the Pangeone and Morrison may not have uranium - perhaps the Permian does - may be

Another one - About 2 years ago, I found an old paper on "White Muscle disease" in cattle & the U.S. distribution of selenium - published in 1947 - in a Vet. med. Journal. The area of the Colorado Plains covered by the "Colorado" Group - KCCG + Knebana + K Pierre Shale had very high selenium in plants (> 50 ppm as I recall) According to this study, and confirmed by geochemical sampling by the HSSR program (See Shannon, 1979?) and the other 11,500 HSSR surveys in that area, enough heavy metals are present to make me wonder about downstream health effects (EPA standard is 10 ppb) - I think some ~~more~~ work should be directed in that direction - Especially K. Knebana and Pierre -

enc. mailing list - but change the address to:
DAN W. McCARRA 42585
International Atomic Energy Agency
P.O. Box 200
1400 Vienna, Austria -

L-111

Mr. Michael E. Halla
August 14, 1980
Page 2

dissolved constituents in the surface waters, after carbonates have been converted to oxides, organics oxidized, and bromine and iodine converted to chloride." This entire statement is complete chemical nonsense. It and many other statements in the report appear to indicate a lack of understanding of salinity on the part of those who prepared the document.

The next two sentences state "Salinity levels would therefore not vary directly as the estimated increases in potential sedimentation in the watersheds. Because of this fact, coupled with the ephemeral character of most streams and the lack of water quality data for them, it would be difficult to assess impact levels." This statement, when taken with several others in the report, seems to imply that because it is difficult to assess the magnitude of the impact on salinity, it is justifiable to give little notice to it and treat it as if it were unimportant. Enough evidence is present to indicate that there is the potential for major increases in salinity contributions to the Arkansas River, therefore indicating the need for thorough study and evaluation.

The paragraph continues "However, the proposed mitigation measures for runoff, erosion, and sediment control in the vicinity of alkaline soils in the parcel; as addressed in the LUMP, would provide some control of salinity at its source." This may be true to a very limited extent, but my judgment of the proposed practices is that they would be very inadequate and would succeed only in avoiding a "worst case" situation.

The last sentence in the paragraph states that "Sedimentation ponds could be engineered and designed to limit TDS effluent limitations to Federal EPA standards, as proposed for coal mining operations." I don't know what "standards" the statement refers to, but I do know that sediment ponds will not reduce salinity levels in runoff waters. The salinity hazard exists because the soils in the area were developed from saline marine deposits which overlay impermeable materials. During wet periods moisture from precipitation infiltrates into the soil but any excess can't drain out because of the impermeable material below. It dissolves salts in the saline subsoil with much of it returning to the soil surface by capillarity. The moisture evaporates leaving the salts as deposits on surface soil particles. If these soil particles are loosened, they will go into temporary suspension in thunderstorm runoff. The salts are dissolved and will remain in the runoff water even if the soil settles out in sedimentation ponds.

The DEIS fails to provide any plan for preventing a major downstream salinity impact. Therefore, the report should live up to its name and thoroughly evaluate the environmental impacts and their economic and social consequences.

Sincerely yours,

Don Miles

Donald L. Miles
Extension Irrigation Engineer

DLM/jh

Michael E. Halla
Environmental Program Director
Building 804
Fort Carson Colo. 80916

Michael E. Halla

I have received and read the (DEIS) report by James & Murrie, directed by Michael E. Halla of Fort Carson. The report on both the Pinon Canyon and Huerfano Canyon Parcels of land. These parcels both being considered for expansion by Fort Carson as a training for the army. I being well acquainted with both areas revealed in the report, find the (DEIS) report very incomplete, it is very unreliable survey for either that tax paying citizen or the Army to base any decision on whether to use or not to use this land for training ground. I personally know that the land of either site is unsuitable for use as the Army plans to use it. The report is very sketchy on soil reports, historical resources, Indian ruins, vegetation, possible saline damage and etc. I personally feel in all fairness to the residents of Southern Colo. the tax paying citizens of the United States and the U.S. Army this (DEIS) report should not be used in any final decision either pro or con. Find enclosed a list of topics for discussion in opposition to Fort Carson expansion into Southern Colo.

Howard W. Munsell

Howard W. Munsell
551 box 211
Fowler
Colo. 81039

Topics for discussion on U.S. Army proposed expansion

1. Disruption of lifestyle of existing people in the area of expansion.
2. Loss of production of livestock.
3. Loss of existing taxes and / or method of distribution.
4. Destruction of vegetation and topsoil.
5. Devaluation of surrounding land for resale.
6. Dust and noise pollution from increased traffic.
7. Increase in water runoff creating soil erosion.
8. Increase in salt content in downstream water sheds.
9. Cost analysis public dollars spent on this project.
10. Cost of new training site VS using existing facilities.
11. Increased road, rail and air traffic in southern Colo.
12. Harassment from low flying military aircraft.
13. Increased danger to small and private aircraft in the area.
14. Danger to cultural resources historical and prehistorical.
15. Inaccessibility of public to view Indian ruins.
16. Disruption of existing nesting and breeding grounds of wildlife and domestic livestock.
17. Increase of predator population within military reservation.
18. Noise pollution created by training exercises.
19. Vibrational disturbances created by training exercises.
20. Danger of changing weather patterns.
21. Places of entering and exiting to each site.
22. Relocating existing ranchers.
23. No benefit economically or otherwise to southern Colo.
24. Increased tax burden to remaining residents.
25. Loss of jobs and cash flow in and surrounding area.
26. The Federal Government does need to own more than 36% of the state of Colo.

3-29-80

Fort Carson Plans.

We are for the expansion, because it is needed by the Govt. are they would not ask for it, if a lot of people would stop & think who the Govt. is they don't think it is them, But someone else, I don't know why Uncle Sam has to beg for land from Pueblo & our southern neighbors, just pass both expansions of proposed land & go across La Veta Pass & set all the land they want from Fort Garland to near N.M. & probably a lot cheaper than this land. So if Pueblo-Walsenburg & Trinidad do not want to prosper, let someone else get the benefit, as you cannot argue with ^{Hardy} ~~Disputing~~ Hardy.

Thanking you
Mr & Mrs H. B. Nicholas
2522 Jones
Pueblo
Colo. 81002

HORSESHOE MOUNTAIN RANCH

MODEL COLD
R. 204-000

DEL NORTE, COLO. 81132
R. THATCHER 81059

BERT & RUBY NOVEY
PHONE 667-3165

846-6293

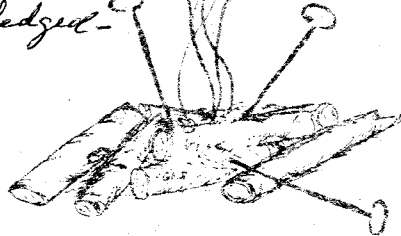
Aug. 13, 1980

Commander G. Carson
Attn Mr. Michael E. Hella
Bldg 304
Ft. Carson Colo. 80913

Near Mr. Hella -

This is for DEIS - Concerning our land - 8-15-80
on the Pinon Canyon site -

Aug 8, 1980, Practically the entire group of land owners
met and spent all afternoon discussing our families,
our land our concern for future of our families and
the land we love - as we have tried to tell you.
We know the land cannot survive your mechanized
army and very little troop maneuvers. Although
we feel our opinion will have very little or no
determining factor in your acquisition, our knowledge
of this grass land should have been respected or at
least acknowledged.



(N)

(N)

(N)

HORSESHOE MOUNTAIN RANCH

MODEL COLD

DEL NORTE, COLO. 81132

R. THATCHER 81059

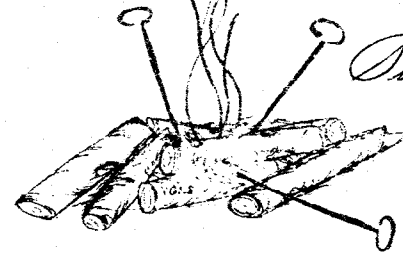
BERT & RUBY NOVEY

PHONE 667-3165

846-6293

And if you do take our land, and in most
cases, causing a traumatic change in our lives,
and the future of many people. We are determined
to at least get a fair and equitable price for our
losses, or many of us would prefer and feel
justified in having proper authorities replace us on
land of equal value, although we could never
be replaced with the backing, heritage and birthright
of this land that we are a part of.

Since our lives and all plans for the future
are in your hands. We do not believe you
are justified in withholding the decision of your
choice of the two parcels of land in question.



Sincerely
Bert Novey

(N)



AREA CODE 303
868-2234 or 868-2291

Robert G. Parsons
M. Bernard Parsons

POSTOFFICE BOX 143
WESTON, COLORADO 81091

July 16, 1980

Maj. Gen. Louis C. Menetrey
Department of the Army
Office of the Commanding General
Fort Carson, Colorado 80913

Sir:

This letter is written to support the U. S. Army Fort Carson Expansion to the Pinon Canyon site in Las Animas County, Colorado. Trinidad and Las Animas County have not enjoyed the economic growth experienced in northern Colorado. We continue to rely largely on coal mining, a fluctuating industry; much welfare; and a low producing, depressed agricultural industry. The appearance of Trinidad and La Junta as the central commercial and business areas reflects this low economic and cultural level. We are very proud, yet we must be realistic and support economic changes that will bring greater resources to our area which over the long run will make a better life economically and culturally for the majority.

The agricultural way of life is great for some of the few owners of the Pinon Canyon opposing this expansion. Their employees are not as fortunate, either in pay or job satisfaction. Many land owners in this site are in favor of the expansion. Their voices are muted in the storm of hostile comments from the anti Army group. My concern is: can a vociferous minority thwart the opportunities of their neighbors and the rest of our region. I hope you and our representatives in Congress understand my community's needs and fund the acquisition and development of the Pinon Canyon site.

Enclosed is a sheet of additional facts and figures I and a group are circulating along with the copy of a resolution hundreds of taxpayers, voters, and business people have signed.

The U. S. Army Fort Carson Expansion is welcome in Las Animas County, Colorado.

Sincerely yours,

Bernard Parsons
Bernard Parsons

BP/s

Encl. 2

REGISTERED AND COMMERCIAL HEREFORDS
REGISTERED QUARTER HORSES — HUNTING BY RESERVATION

FORT CARSON EXPANSION RESOLUTION

June, 1980

WE, the undersigned, support the expansion of Fort Carson to the Pinon Canyon Site in Las Animas County, Colorado. We wish to promulgate the best interest of our community in the United States Congress in obtaining this expansion.

1. We in Las Animas County cannot afford to lose this economic opportunity.
2. We strongly encourage Congress to press for immediate planning and funding for a by-pass and substantial upgrade of Colorado State Highway 350 to service the present and increased traffic.
3. We urge Congress to include a line item in enabling legislation to insure the Hoehne School District is reimbursed for losses in tax income.
4. We support any efforts to expand our airport facilities and upgrade them for local and Army use.
5. We request Congress fund ample money to cover the fair market value for the purchase of the ranch land and assets plus adequate relocation money for those landowners and businessmen affected.
6. We pledge our positive attitude and support to overcome problems not addressed at this time to generate viable economic advancement in Las Animas County.

NAME	ADDRESS	CITY	STATE	COUNTY	VOTING IN
1.					
2.					
3.					
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L-115

The purchase of 257,236 acres 20 miles east of Trinidad for the Ft. Carson expansion or training site is in Las Animas County's best interest. This area is 8.37% of Las Animas County land area, yet represents only 1.8% of the total County tax revenue -- a very small amount.

The initial increase in employment resulting from this expansion for our County is 1.7%. Those relocated are 0.2% of County population. Consider the difference in base salaries between agricultural workers and U.S. GS-8 to GS-13 rated personnel.

All daily Army expenditures for fuel, food, and other delivered items are estimated at a total of \$750,000 annually. No guarantees are made to give Las Animas County this total economic handle since all purchases will be made on a competitive bid basis. Las Animas County should not lose this opportunity to bid for local businessmen and women. In the best agricultural years, this same gross income possibly could be generated by ranchers. Of course unless a complete examination of the ranchers' records of expenses for that area would take place, conjecture on how much they could spend in this County is completely unreliable. With most ranchers spending at least 50% of their gross income for financing, it leaves them very little to spend for fuel, salaries, etc. La Junta and Otero County may receive more of this balance than realized, being the region's central livestock market.

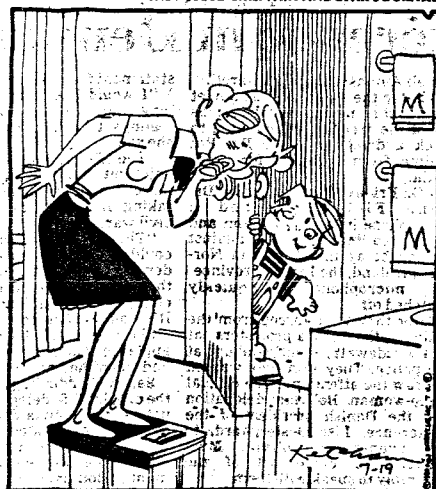
During the Army Site construction period, Las Animas County and surrounding regions will enjoy a direct economic value of \$2.2 million per year for each of the two to three years of construction. Nearly \$30 million or more will be spent on these 257,236 acres in capital improvements. It is estimated some 536 employees will be needed per year during construction. If local firms obtain some of the construction work, the impact will be far greater. Read these figures over again!

The Hoehne School Bond indebtedness attributable to this acreage should be retired by a special line item included in the Congressional Bill to acquire the site. Other items addressed and not addressed in the Draft Environmental Impact Statement for Training Acquisition may appear in the Congressional Bill. For example, Senators and Congressman for Colorado should consider some improvements to the Las Animas County Airport. They must be reminded that the main access route to the Pinon Canyon site must be improved and a by-pass constructed in or near Trinidad. State Highway people need some powerful motivation to move these projects ahead as they have been formally requested for years. Additional water may need to be acquired for the Trinidad Lake along with enlarged treatment facilities if water is to be supplied by the City of Trinidad.

Assuming the Army will care for the land at the Pinon Canyon Site as they care for Fort Carson, it will be in better condition than cattle ranching could leave it. With the proposed protection of the rough canyon areas and the Red Rocks Canyon, the ecological environment should greatly improve and return to normal. Whether the Red Rocks and Purgatoire areas will ever be designated as a Natural National Landmark is a question unanswerable at this time.

The Army presently plans to train some 25,000 troops on this land per year. This is analogous to any small industry which hires some 35 people and sells a service or manufactures a product for export. The overriding fact remains that this small industry (training) is backed by the tremendous resources of the United States Government. No limits have been set on the future use of this site. Ft. Carson may someday relocate entirely here. Translate these opportunities Las Animas County residents may enjoy, particularly since for twenty years the County population has decreased, businesses have been closing and leaving, per capita income is very low, and welfare has been one of the larger local payrolls. Don't you think the Army expansion will be beneficial?

DENNIS THE MENACE



"AW, MOM... WHEN I SAID YOU WAS LIKE AN ELEPHANT, I MEANT YOU NEVER FORGET!"

Lost & found

Hamilton, Ohio, police Officer Bill Barnickel surrenders hit hat and a sucker to 11-month-old Thomas "Rick" Strong. The officer found the tot crawling in the middle of a street. The youngster's babysitter was found after a house-to-house search. She thought the youngster was asleep. — AP Laser-photo

Pueblo County is ranked 18th on state income list

Star-Journal, Chieftain Denver Bureau

DENVER — Pueblo County was the 18th highest in the state in individual average gross income reported to the Colorado Department of Revenue for the fiscal year ending June 30, 1979.

A 1979 annual report recently released by the revenue department shows the individual average gross income in Pueblo County to be \$13,176, while its closest neighbor to the north, El Paso County, was \$12,580 — 25th on the list of the state's 63 counties.

According to the report, Pueblo County's overall adjusted gross income — \$615,352 — was eighth highest in the state, and it also was eighth highest in the number of returns submitted for the taxable year — 46,701.

The highest individual gross income reported by a county during this period was Douglas with \$19,990, while the lowest was Conejos with \$7,214.

All 63 counties in order of their individual gross incomes were:

Rank	County	Income
1	Douglas	\$19,990
2	Arapahoe	18,286
3	Jefferson	17,124
4	Pitkin	16,512
5	Hinsdale	15,861
6	Moffat	15,042
7	Boulder	15,022
8	Clear Creek	14,980
9	Lake	14,636
10	Rio Blanco	13,815
11	Adams	13,745
12	Routt	13,658
13	Denver	13,614
14	Park	13,592
15	Garfield	13,509
16	Larimer	13,410
17	Mesa	13,183
18	Pueblo	13,176
19	Weld	13,125
20	Eagle	12,920
21	Summit	12,775
22	Phillips	12,672
23	Logan	12,532
24	Elbert	12,532
25	El Paso	12,580
26	Teller	12,571
27	Chaffee	12,312
28	Jackson	12,226
29	Grand	12,178
30	Montezuma	11,978
31	Kiowa	11,883
32	Morgan	11,891
33	Gilpin	11,572
34	Dolores	11,528
35	Lincoln	11,446
36	Montrose	11,445
37	Sedgewick	11,403
38	Washington	11,376
39	Bent	11,265
40	Fremont	11,227
41	La Plata	11,186
42	La Brea	11,020
43	Alamosa	10,827
44	San Juan	10,828
45	San Miguel	10,722
46	Proctor	10,706
47	Gunnison	10,611
48	Otero	10,601
49	Archuleta	10,376
50	Rio Grande	10,350
51	Kit Carson	10,255
52	Delta	10,156
53	Ourray	10,045
54	Tyuna	10,001
55	Cheyenne	9,982
56	Las Animas	9,668
57	Custer	9,435
58	Crowley	9,087
59	Huerfano	8,778
60	Baca	8,495
61	Saguache	8,232
62	Costilla	8,187
63	Conejos	7,214

Aspen Institute alters schedule at Baca Chamber Music Festival

CRESTONE (C-SJ) — The Aspen Institute for Humanistic Studies at the Baca announces its schedule of performances at the Baca Chamber Music Festival is being changed to permit greater attendance.

The chamber music performances led by Robert Mann, by Beethoven, Brahms, Haydn, and Mozart among others.

Regular performances will be supplemented by two "open rehearsals" each week at which Mann will comment informally on the music being played.

Series passes are available at the Alamosa County Chamber of

Grand champion steer named

A Hereford owned by Pat Field of Parlin was named the grand champion steer at the annual Junior Livestock Sale at Gunnison Friday.

The Hereford brought a price of \$2 per pound, and was purchased by the Cattlemen Inn for \$2,330.

Field, son of Mr. and Mrs. Fred Field, a longtime ranch family, has been a consistent winner in the competition at Gunnison.

Chad Guerrieri's Angus was named reserve champion. It was purchased for \$1.25 per pound by Amax Inc., the developing

molybdenum operator in Gunnison.

The average of 4-H and FFA at Gunnison was compared to last

\$1.30 per pound. The sale of more than \$42,000 FFA branches, steer bringing \$1.

The Trans-C which stretches miles, is the long world in one nation



\$10-\$1

PATRICK J PORGAN
1103 EAST LASSEN AVE
CHICO CA 95926



4-0545068227 08/14/80 ICS IPMMYZZ CSP DVRB
9163459807 MGM TDMT CHICO CA 722 08-14 0625P FST

MICHAEL E HALLA ENVIRONMENTAL PROGRAM
DIRECTOR DEPT OF ARMY
FT CARSON CO 80913

RE: COMMENTS TO THE DRAFT EIS FOR TRAINING LAND ACQUISITION FT CARSON
COLORADO.

DEAR SIR,

BY DIRECTION OF MY CLIENT MR DAVE PERRETT WE WILL KEEP OUR COMMENTS
BRIEF, HOWEVER THE ORAL STATEMENT WE MADE AT THE PUBLIC HEARING
MONDAY JULY 7 1980 ALSO REFLECTS OUR POSITION REGARDING THE PROPOSED
PROJECT.

EVALUATION OF THE DRAFT OF THE DEIS

THE DEIS WHICH THE ARMY BOUGHT AND THE TAXPAYERS PAID FOR IS
DEFICIENT IN SO MANY RESPECTS I.E., MISLEADING DATA, INCOMPLETE
INFORMATION, AND UNRESOLVED ISSUES THAT IT DOES NOT COMPLY WITH THE
NATIONAL ENVIRONMENTAL POLICY ACT. (NEPA) OR THE COUNCIL ON
ENVIRONMENTAL QUALITY GUIDELINES.

THE DEFICIENCIES IN THE DEIS

SECTION 2.2 OF THE DEIS STATES, "FINALLY, IF THE NO ACTION
ALTERNATIVE IS SELECTED, ALL POSITIVE AND NEGATIVE IMPACTS ASSOCIATED
WITH THE ACQUISITION OF ADDITIONAL TRAINING LAND WOULD NOT OCCUR."
THIS STATEMENT IS IN DIRECT CONFLICT WITH THE ARMY'S RECENT STATEMENT
PUBLISHED IN THE COLORADO SPRINGS SUN ON 7-4-80, AND I QUOTE, "A
CONFIDENTIAL ARMY STUDY OF OPERATIONS AT FT CARSON RECOMMENDS THAT
UNLESS THE POST IS ALLOWED TO ACQUIRE ADDITIONAL LAND FOR TRAINING,
IT SHOULD CUT ITS TROOP STRENGTH BY ONE BRIGADE."

ECONOMIC (NO ACTION) IMPACT OF THE PROJECT

THE NEWS ARTICLE STATED THAT IF THE ARMY CUTS ITS MILITARY TROOP
STRENGTH BY ONE BRIGADE IT WOULD HAVE AN IMMEDIATE ECONOMIC LOSS TO
THE LOCAL ECONOMY OF ABOUT \$70,000,000 IN ANNUAL PAYROLL, AND A
POSSIBLE LOSS OF \$150,000,000 IN PROPOSED FUTURE CONSTRUCTION. THIS
INFORMATION WAS RELEASED BY THE ARMY WITHOUT ANY PRIOR NOTIFICATION
TO THE STATE OF COLORADO OR ITS RESIDENTS.

THE STATE'S COMMERCE AND DEVELOPMENT DEPARTMENT HAD REQUESTED
SPECIFIC INFORMATION FROM THE ARMY ON THE SHORT AND LONG TERM
ECONOMIC IMPACT OF THEIR PROPOSAL, INCLUDING THE NO ACTION IMPACT AND

TO REPLY BY MAILGRAM, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL - FREE PHONE NUMBERS

PAGE 2



IT IS THEIR CONTENTION THAT THE ARMY FAILED TO PROVIDE THEM WITH
DETAILED INFORMATION ON THE SUBJECT. FURTHERMORE, THE STATE CLAIMED
THAT THE ARMY'S PROJECT AS PROPOSED IS BAD FOR THE STATE
ECONOMICALLY.

OMMISSION OF CRITICAL ECONOMIC DATA

THE FACT THAT THE ARMY DID NOT ASSESS THE ECONOMIC IMPACTS OF THE NO
ACTION ALTERNATIVE IN SECTION 2.2 OF THE DEIS CONSTITUTES A SERIOUS
SHORT-COMING IN THE REPORT. IT MAKES IT IMPOSSIBLE FOR THE PUBLIC AND
THE DECISION MAKING BODIES TO INTELLIGENTLY ASSESS THE ASSOCIATED
IMPACT OF THE PROJECT IN THE EVENT THAT IT WAS DENIED.

THE ARMY FAILED TO WORK WITH OTHER AGENCIES

THE ARMY HAS STATED ALL ALONG THAT THEY ARE COMMITTED TO AN OPEN AND
HONEST APPROACH TO ITS LAND ACQUISITION. ACCORDING TO STATE AGENCIES
THIS HAS NOT BEEN THE CASE. ACCORDING TO OUR INVESTIGATIONS AND
CONTRARY TO THE ARMY'S OPEN-DOOR POLICY, THESE AGENCIES HAVE BEEN
IGNORED.

A REPORT DID NOT ADDRESS THE POTENTIAL HEALTH RELATED PROBLEMS
ASSOCIATED WITH ANTHRAX, WHICH IN THE HUERFANO AREA HAS THE POTENTIAL
OF BECOMING ENDEMIC. THIS FACTOR IN ITSELF COULD HAVE SIGNIFICANT
ECONOMIC AND HEALTH RELATED EFFECTS.

THE REPORT FAILED TO ASSESS LONG TERM CLIMATIC CYCLES AS IT RELATES
TO THE LONGEVITY OF THE SITE AS A PRODUCTIVE AND VIABLE ECOSYSTEM.
VIOLATION OF FEDERAL AND STATE STANDARDS

THE DEIS STATES IN SECTION 2.7.6 (AIR QUALITY)...IN SUMMARY, FROM AN
AIR QUALITY PERSPECTIVE BOTH PARCELS ARE ABOUT EQUAL. HUERFANO RIVER
PARCEL IMPACT ARE SLIGHTLY MORE SERIOUS BECAUSE OF THE PROXIMITY TO
THE CITY OF PUEBLO. ACCORDING TO THE DEIS SECTION 4.1.6 (METEOROLOGY
AND AIR QUALITY), TABLE 4-7 ILLUSTRATES THAT THE TOTAL PARTICULATE
EMISSIONS ON THE HUERFANO RIVER PARCEL WOULD BE 12,993.5 TONS PER
YEAR. THE TOTAL EMISSIONS FOR THE PUEBLO NON-ATTAINMENT AREA IN 1982
WILL BE RESTRICTED TO 18,384 TONS PER YEAR, ONLY 6000 TONS PER YEAR
MORE THAN THE ESTIMATED 13,000 TONS PER YEAR FROM THE ARMY'S PROPOSED
ACTIVITIES ON SAID PARCEL.
CONCLUSION

ALTHOUGH THE REPORT IS NOT LEGALLY SUFFICIENT THE INFORMATION
THEREIN, CLEARLY STATES, THAT THE TWO PARCELS UNDER CONSIDERATION ARE
OF SUCH A FRAGILE NATURE THAT THEY ARE UNSTABLE AND UNUSEFUL FOR
MECHANIZED TRAINING.

RECOMMENDATIONS

THE PROPOSED PROJECT SHOULD BE ABANDONED FORTHWITH BECAUSE IT HAS
BEEN CLEARLY DEMONSTRATED THAT IT IS NOT SUITABLE FROM A SOCIAL
ECONOMIC AND ENVIRONMENTAL STANDPOINT. WE WOULD LIKE TO THANK YOU FOR

TO REPLY BY MAILGRAM, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL - FREE PHONE NUMBERS

6241 (R1/78)

L-117

PAGE 3



Mailgram®



THIS OPPORTUNITY TO RESPOND TO YOUR DEIS. RESPECTFULLY.

PATRICK J. PORGANS RESEARCH SPECIALIST
RED CAPE ABATEMENT LTD
1103 EAST LASSEN AVE
CHICO CA 95926

18:26 EST

MGMCOMP MGM

7/16, Morrison
Pueblo, Co. 81005
July 8, 1980

Michael E. Halla
Environmental Program Dir.
Facility Engineers -- Bldg. 304
St. Carson, Co. 80913

Dear Michael Halla:

Thank you for having sent the DEIS we had asked for. After reading much of it, we feel the Army should not buy either parcel of land.

We also checked ~~with~~ some of the land involved. In some places the wagon tracks of early settlers 100 years ago are still visible. Land that can't obliterate wagon tracks in 100 years is no land for tracked vehicles and troop maneuvers.

Please register us as opposed to the training land acquisition.

Very truly yours,

Adelyn Raich
Abraham Raich

Robert Raich
Robert Raich

11 July 1980

To Whom It May Concern:

Commander
Fort Carson and 4th Infantry Division (Mech)
ATTENTION: AFZC-FE-EQ
Mr. Michael E. Halla
Building 304
Fort Carson, Co 80913

Re: Major General Louis C. Menetrey, letter AFZC-CG, 30 July 80.

I took my basic training at Ft. Knox Kentucky in World War II. Their vegetation and soil was extremely heavy. We would drive our tanks all morning and then spend the rest of the day cleaning them. The mud could not be washed off it had to be scraped off with sticks, boards or whatever was available. The area in which the tanks were driven resembled a huge hog wallow. That area will never recover or return to it's original state. Our local area and vegetation would suffer even greater damage.

In Germany we left slit trenches in their heavy grass and soil areas with our tank tracks.

In addition Denver and Colorado Springs created and suffer from the "Brown Cloud". Some of the Colorado Springs city fathers and some merchants insisted that the I-25 Interstate be routed through the downtown area for fear that they would lose revenue if it were directed around the city).

We, (in Pueblo), don't have and don't need a "Brown Cloud" from traffic and tracked vehicles and others stirring up the dust in our fragile terrain.

Yours Truly,

Kenneth L. Renoux
Kenneth L. Renoux
23701 Alba Road
Pueblo, Co 81006

P.S. In addition we will not receive any appreciable economic benefit.

We, the undersigned respectfully request that the United States, Department of Army, 4th Infantry Division, select a different access road to the Huerfano Parcel, other than the Cedarwood road.

For some of the undersigned, it is the only public road to the outside world.

This road represents our only means of getting our products to market, which represents the products from approximately 5000 acres of farm land and approximately 40,000 acres of grassland.

Also it is the sole public access to a clay mine in the area.

Several concerned parties own land on both sides of the road, consequently livestock and farm machinery cross the road often.

In accordance with your statements and proposals in 1:4, tables 1-2 and 1-3, the number of vehicles that will be using the road at various times will be considerable, resulting in the road becoming practically useless to the residents in the area.

At a time when agriculture is in its precarious position financially compared to general economy of the country agricultural lending agencies wouldn't look with much favor for loans at land that is blocked by access with the only road being used by the army, consequently cutting the appraised value of the land, so it isn't a worthy asset, thusly putting more hardships on the people already having trouble making a living by their own initiative.

We fail to see the logic of need to use the road when the proposed acquisition would take land that is approximately 2 miles from the Interstate-25 on the northern end with an interchange and road already there.

The Cedarwood and Abbey combined means that approximately 12 miles of road would have to be rebuilt to get to the property, which would be considerably more expense than the two miles at the north end.

Presently the Cedarwood and Abbey roads are regular mail routes and school bus routes that serve the area families, also United Parcel Service services the area along with several oil companies that deliver fuel also.

We respectfully submit this petition and hope you will give it due consideration and act upon it with favor:

Jack T. Sikes *Carl Sikes*
Virginia Carlson
Jessie Carlson
Harold Carlson
Douglas L. Carlson
Sharon K. Carlson *D.L.C. Rye Cole*
Lana Stinchcomb
Louis P. Stinchcomb by L.S.
Hubert Rich
Winnie K. Rich
Ray Sikes
Charlie J. Vodey
Barbara Dodge
Gertrude J. Lumsden
Florence Woodyard
Lail Maunum
M. W. Pander
Marie Pander
Hali Sikes
Tom Sikes
Carl K. Sikes
Mr. H. Spradlin
Wayne Spradlin

~~TOP SECRET~~
1009 MERCURY DRIVE
COLORADO SPRINGS COLO 80906



**Merrill Lynch
Pierce
Fenner & Smith Inc.**

JUNE 16 1980

COL DONALD B SAFFORD
BLDG 304 DFAE
LAND ACQUISITION COMMITTEE
FT CARSON COLO 80913

DEAR SIR:

IN ONE OF YOUR RECENT NEWS RELEASES PERTAINING TO THE FT CARSON EXPANSION YOU EXPRESSED AN INTEREST IN THE NAMES OF PROPERTY OWNERS OF THE LAND IN QUESTION WHO DID NOT WANT TO SELL THEIR LAND TO THE ARMY.

SINCE MY WIFE AND I ARE VERY DEFINITELY IN THAT GROUP, LET ME ADD OUR NAMES TO THE LIST:

OUR NAMES ARE PHILLIP AND LOUISE THOMAS. WE OWN 112 ACRES IN THE PINON CANYON SITE. OUR LAND IS WITHIN YOUR PREFERRED BOUNDARY, BUT NOT WITHIN YOUR OFFERED BOUNDARY. THE LAND IS APPROXIMATELY 2 MILES EAST OF THE SIMPSON RAIL SIDING UP IN THE CEDAR BLUFFS.

WE BOUGHT THE LAND IN 1979 TO BUILD A HOME AND RETIRE. AT THAT TIME YOU WERE STILL WITHIN YOUR OFFERED BOUNDARIES. BUT SHORTLY AFTER WE BOUGHT, YOUR HOUGHTON RAIL SIDING FELL THROUGH AND YOU EXTENDED YOUR BOUNDARIES TO THE SIMPSON SIDING.

PERMIT ME TO INFORM YOU THAT TO THE BEST OF MY KNOWLEDGE, NO OWNER WITHIN THE AREA OF THE PREFERRED BOUNDARY AT SIMPSON IS OFFERING YOU THEIR LAND FOR SALE. THIS EMPHATICALLY INCLUDES MY WIFE AND I. ON THE CONTRARY, WE WILL DO EVERYTHING WITHIN OUR POWER AND ON ADVICE OF LEGAL COUNSEL TO PREVENT THIS CHANGE OF PLANS FROM HOUGHTON TO SIMPSON RAIL SIDING.

WE WANT TO STAND UP AND BE COUNTED.

YOURS TRULY

PHILLIP AND LOUISE THOMAS

L-120

Margaret E. Carlson *Page II*
Edgar L. Carlson
E. M. Carlson
Datum Carlson
Penny L. Carlson
Edward L. Carlson
Helma Mory
ammy Carlson

We would appreciate a written acknowledgment of this request.

Please send to

*9100 Abbey Road
Pueblo, Colo. 81004*

Glasgow Mont.
Aug 12, 1980

Commander
Fort Carson and 4th Inf. Division
Attention: A 7ZC-7E-EQ
Mr. Michael E. Halla
Building 304
Fort Carson Colorado 80913

I would like to sell my interest
if it suits me.

Yours truly
Richie H. Dread
637-3rd Ave. North
Glasgow Mont. 59230

August 8 1980

Jim Warren
5106 McCarthy RD
Avondale CO 81022

Dear Commander,
I live on land bordering land under consideration by the army, part of the Huerfano River parcel.
So I'd like to state my protest as now. I understand I have until the 15th of August.
I've been receiving your letters of information all along and it is appreciated.

First I'd like to state that I was in the 12th Cavalry Armor Division at Ft. Carson from January 5th 1962 to November 18th 1964, and I made all the training maneuvers in the Carolinas, Washington State, and the Mohave Desert in California, and I know just as well as you what track and 6x6 wheel vehicles will do to the land, because I have drove them all and have seen the land turned into powder and dust. I've trained in the areas at Ft. Carson and it will ruin the ground out here just as it has at the sites just south of the fort. I think the Army knows what the results of the effects on the land would be before even before reading an environmental impact statement. I know it's not your decision to pick a parcel of land because you know the effects already. You leave it up to the DEIS and Congress to make the final decision because you wouldn't want the monkey on your back.

I think you have heard most of the protests	Like
Destroying Farm and Ranch land	Depleted Taxes
Blowing dust	Loss of income to small
Wildlife effects	neighboring towns
Indian Artifacts	Loss of Beef production
Noise	Land crossing
Water pollution	

A lot of us that live out here heat our homes with wood from the Red top and Butler Ranches. We use propane as a back up and it costs about 60 cents a gallon right now or about 300. Dollars a tank. A tank will last about two months when it gets real cold. Besides this loss we will be effected by noise and dust. Not to mention hunting season. I wonder if the Geese will feed out here. I wonder if our water well will be effected. I wonder if the antelope will leave. I wonder if Jet aircraft will be flying over our house. I wonder if dust will cover our farm land or pastures. I wonder if some soldiers will stray over onto our land. I wonder if you will ever be using any of our county roads that are bus routes. We need four wheel drives to get our kids to the school bus now sometimes now. I wonder if the money from land taxes being taken away that go to our schools will be made up. I wonder if the jobs and business of farm implements and live stock will be made up for. I wonder if we can still get firewood.

Why does the land have to be one days march from Ft. Carson if your going to train for three or four months at a time what does 4 or 5 days or so make any difference.
What I don't understand is this... How can you still consider the Huerfano River area when it is now under different owners than it was a year or so ago and none of it is for sale? Land out here just next to ours sales from 1 to 3 hundred an acre. Our neighbor sold some of his just recently for 165 dollars an acre, maybe thats why it changed hands.

Thats all
From Jim Warren Jim Warren

Mr. Michael E. Halla
July 2, 1980
Page 2

My third concern involves the nomination of the Red Rocks Canyon and the Purgatoire Canyon as National Natural Landmarks. I am appalled that the nomination has been postponed because of this expansion. The area is a geologic wonder, comparable to the Royal Gorge and Grand Canyon in esthetic and educational value. They are also, again, rich in cultural resources. It is a disservice to the people of southeastern Colorado and Colorado as a whole to postpone this nomination.

It is my hope that these comments will be considered and that questions raised by my criticism will be addressed. It is my ethical responsibility as an archeologist and curator of our cultural heritage to be certain that mitigation is either responsibly implemented or not implemented at all. Our cultural resources are finite and thus exhaustible; therefore, we must approach their termination with caution in respect for future generations.

Sincerely,

Caryl E. Wood

Caryl E. Wood, Archeologist

CEW:ch

cc: Governor Richard Lamm
Senator Gary Clark
Senator William Armstrong
Representative Ray Kogovsek
Representative Ken Clark
Representative Phillip Massari

*La Junta Colo.
401 E 5th #105*

Aug 12 - 80

Mr. Michael Halla -

*In answer to the letter from
Louis C. Mentzky, Major General USA
Concerning the expansion of Fort
Carron in the two parcels in our
Community S. and N. of La Junta.*

*I feel there will be some
hazardous effects that many people
don't realize until the Army takes
over.*

*I am of course that the Army
don't find a place to expand - are
sure there is a need for that. But
this land so fragile - we don't
need a dirt road. I have gone
through that in west Texas.*

*The need of our Air industry here
in this part.*

*So much to hinder and affect
our economy, health and way of
life - just think of what things
before acting*

*I am just an elderly V. & Citizen
that have weathered a few storms
and would like to see our country down
in this part - remain as it is.*

Noda Wilson

11 August, 1980

Commander
Fort Carson and 4th Infantry Division (Mech)
Attention: AFEC-FE-EQ
Mr. Michael E. Halla
Building 304
Ft. Carson, Colorado 80913

Dear Sir:

I believe Fort Carson should be expanded in order to give the 4th Inf. Div. (Mech) and Res Units) the room to train and maneuver properly. I also think that either the Huerfano River or Pinon Canyon sites are feasible.

I was raised on a ranch in that area and spent most of my time riding broncs and herding cattle there. The man that knows that country any better than I do just has to be older than I. On 7 August 1980 I was 70.

April 1942 I was drafted into the Army and spent nearly six years in service, advancing in rank from a private to a 1st Lieutenant. I was two years overseas, and one year in combat. I came home December 1947 and stayed active in Ready Reserve for 17 years, while running a ranch. I'm still here.

The experience I've had makes me realize that it takes a lot of maneuver space for training a whole or complete Infantry Division (Mech.). It is also true that a well trained unit in the right place at the right time is worth all the training. There is no way you could estimate their value.

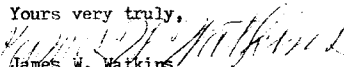
The Indian artifacts and historical sites in that area are few and hardly recognizable. They would not be affected by the area's use as a training site. The Army's use of that land will not affect or move many people, and it will even be a benefit to most of them. Neither the Huerfano River site nor the Pinon Canyon site could run more than 5,000 animal units year round. That is not many in the nation's total beef herd.

The environmental impact would not be near what some environmentalist and other special interest groups say it would. That country has stood a lot in just the last hundred years, and I'm sure it can stand a lot more. It's tougher than a lot of people think.

Most of the rumors of firing live ammunition, nuclear weapons, and storing of hazardous materials, I believe, were started by special interest groups to worry people in that area so they would be against the Fort acquiring this land.

I am in favor of the expansion of Fort Carson.

Yours very truly,


James W. Watkins
21430 Country Road 29-175
La Junta, CO 81050

137 Cornell Circle
Pueblo, Colo. 81005
July 22, 1980

Michael E. Halla
Environmental Program Director
Headquarters, 4th Infantry Div.
Fort Carson, Colo. 80913

Dear Mr. Halla,

I teach mathematics at Pueblo Central High School. As far back as I can remember every spare moment possible has been spent in the mountains, on the plains and prairies, and in the canyons of Colorado.

For over twenty years I have had access to the Butler Ranch and have traveled over virtually every square foot of it at one time or another. I have walked every canyon no matter how large or how small. With the exception of the prehistoric Indians who once lived there, I probably know more about many aspects of this region than any living person.

My original purpose for exploring this region was to locate prehistoric Indian sites. I wanted to study the archaeology of this part of eastern Colorado because it was and still is virtually unknown. I discovered a great number of upland sites, rock shelters, rock rings which could have served some ceremonial purpose, pictographs, and petroglyphs all of which may hold the key to help solve the unknown archaeological mysteries of this part of Colorado. I have also spent considerable time in the Pinon Canyon and side canyons.

I am guiding site recorders who have been certified by the State Archaeologist's office to record these sites.

In recent years I have developed an ecological interest in the environmental structure of the property. A very delicate balance of nature exists here. It is normally very dry and the growth of grass, forbes, trees, and shrubs is very slow. If the land is abused by army equipment and troop use, it will probably never fully recover. The entire area is a natural sanctuary for many types of wildlife and vegetation. Probably the largest and oldest ponderosa pine and Rocky Mountain Juniper in the state of Colorado exist in the canyons of the Butler Ranch. A friend of mine, Jim Daugherty who is a biologist and statewide back packer shares this observation. At least two experts I have guided there have used the expression "misplaced biomes" to explain the existence of some of the things such as the presence of quaking aspen.

With this background I wish to address the DEIS for the proposed Fort Carson expansion into Colorado. On page 3-54, Table 3-12 I am listed as a source for archaeological sites. Prior to April 10, 1980 Ms. E.J. Smith from Dames and Moore visited with me for about one hour seeking information concerning the Butler Ranch. On April 10, 1980 she called me long distance stating that the Army was not satisfied with her report on cultural resources and requested more information about approximate number and location of some archaeological sites. I did not have access to my topographical maps, site location records, and other data during the

telephone interview. She was willing to accept at face value the information I offered. Parts of our conversation were scrambled and confused. Numerous sites in important side canyons such as Bull Canyon, Pine Canyon, Iron Springs Canyon, and numerous other unnamed side canyons and upland areas were omitted. Our conversation ended without discussing the numerous sites which exist in the main Huerfano Canyon and Cucharas Canyon. I can also find other evidence in which James and Moore must have used the same haphazard method to obtain data for the DEIS.

The list of plant species beginning on Page D-2 omits shrubs, vines, and forbes such as choke cherry, wildplum, currant and gooseberry, Virginia creeper, western virgin's bower, sand lilies, sego lilies, death camas, blue flax, arrowhead, poison ivy, blue-eyed grass, and several species of cacti. Many of the species listed above are found in abundance over the entire Butler Ranch. Why did the experts from James and Moore not find them and list them in the DEIS. Some species serve as an important source of food for wildlife found there.

The meaning of "W" in the status column of Table F-1, Page F-2 is not defined. See Page F-14 for the omission. The table is in error several times. The status of the Roadrunner is certainly not "O" There is an abundance of Roadrunners. The names of the Red-Breasted Nuthatch and Bullock Oriole are completely omitted. Hundreds of American Robins winter as well as breed on the ranch.

I know six people including myself have spotted bull and cow elk on the southeastern corner of the ranch, the most recent sighting being June 23, 1980 by two companions and I. The map on Page 3-36 shows the absence of prairies, falcons in the Hog Ranch Canyon and Doyle Arroyo. I can take you to at least two active nests, one so uniquely situated that I was able to photograph four baby falcons without the aid of ropes or a telephoto lens on June 23, 1980. Redtail Hawks also nest in these two canyons.

The statements in the fifth paragraph on Page 4-46 are incorrect. I have excavated numerous sites on the Huerfano parcel and have found no evidence of agricultural cultures. All sites, canyon as well as uplands point to hunting and gathering cultures. I have found fragments of Plainview, Clovis, and Hellgap points which have been uncovered by wind and/or water erosion. These artifacts were found on upland sites on Black Ridge, Turkey Ridge, and the Karrick Pocket. Please don't tell me disturbance of such sites by tracked vehicles is not a critical problem.

The DEIS does not state that dust settling on grasses and forbes will wear down the teeth of breeder cows more rapidly, thus shortening the span of their productive lives.

Horse Pasture Canyon contains several permanent pools of water. The entire length of the canyon is a succession of rock shelter and upland sites. Many species of wildlife live there. This short canyon should and could easily be included in the wildlife protection area. If at all possible the portion of Doyle Arroyo from Dime Spring to near Cottonwood Spring, together with the northern slope of Turkey Ridge extending from Sheep Canyon west to the Cucharas River and to the north bounded by Bull Canyon (this area is called the Rough Pasture), should also be included.

What does the Army plan to do with the Finn Cemetery? Will local people still be permitted to visit the graves to honor their dead.

I respectfully submit the preceding statements for your consideration. If you feel that I can give you any additional information feel free to contact me.

Sincerely yours,

Donald E. Winters
Donald E. Winters



UNIVERSITY OF DENVER

An Independent University

University Park, Denver, Colorado 80208

Department of Anthropology

July 29, 1980

Michael E. Halla
Environmental Program Director
Facility Engineers, Bldg. 304
Ft. Carson, Colorado 80913

Dear Mr. Halla:

The environmental Impact Statement submitted by the U.S. Army for the expansion of Ft. Carson into the Huerfano Canyon or the Pinen Canyon Parcels is a strange, improbable, and naive document.

It may be criticized from many angles. Among them is that it gives only passing mention to a few of the archaeological and historical remains in the areas but gives no indication of the great scientific or historical importance of these localities. Paleontological remains are not mentioned at all. Many of us feel that the keys to the prehistoric and early historic reconstructions of the American Indian Civilizations in this part of the world will be found in these canyon areas.

Nothing is said of the nature of the archaeological remains and that some are unique to this tiny part of North American alone. The richness and abundance of these sites is greatly underplayed. Obvious reports on these materials were not consulted (e.g., those of R.E. Remond from the University of Denver).

Also placing me on the side of strong opposition to the expansion of military interests into these areas has been my experience in attempting to carry out scientific research in the Stone City - Turkey Creek Canyon area of northwestern Pueblo County. An active research program of the University of Denver was brought to a halt by the earlier expansion of Ft. Carson there. We found that permits to do field research were difficult or impossible to get from the Adjutant General's Office. And once a rare permit was granted the harassment of the field parties by helicopter and tank units and other personnel made our work very nearly impossible. I have no reason to suspect that the situation would be different in any other areas acquired by Ft. Carson.

THE UNIVERSITY OF DENVER IS AN AFFIRMATIVE ACTION INSTITUTION

Sincerely,

Arnold M. Withers
Arnold M. Withers



TRINIDAD STATE JUNIOR COLLEGE

TRINIDAD, COLORADO 81082

July 2, 1980

Mr. Michael E. Halla
Environmental Program Director
Facility Engineers-Building 304
Fort Carson, Colorado 80913

Dear Mr. Halla:

I am writing in reference to the Draft Environmental Impact Statement for the Huerfano-Piñon Parcels to be affected by Fort Carson army expansion. As the resident archeologist at Trinidad State Junior College, I have reviewed the cultural resources section prepared by Dames and Moore and find it unacceptable.

In evaluating the archeological historical resources in the Piñon Parcel, Dames and Moore failed to contact me, or to my knowledge, any professional archeologist, historian, or amateur archeologist familiar with the area. Trinidad State Junior College has maintained an archeology department for some 35 years and is the repository for materials collected and excavated in Las Animas county. Dames and Moore's "armchair archeology" methods of collecting information is totally inadequate as a means of determining the real potential impact on our cultural resources. Consequently, if the quantity and quality of sites are not determined prior to use of an area, mitigation becomes haphazard and incompetent. The State Archeologists office, as the source of Dames and Moore's information, is relatively new and does not yet have all sites in the state on file. Prior to the establishment of that office, sites were recorded at the University of Colorado as well as with the local institution. These institutions should have been consulted. The DEIS does not outline accurately the state of archeological resources in the area nor does it address the magnitude of this proposed impact. The difference in terms of cost, time, and quality in mitigating the few sites listed and the thousands present is enormous. Granted, the DEIS states that a survey of the area is needed; however, to fully comprehend this impact, and present an accurate picture of the cultural resources and necessary mitigation to the public, a survey should have been done in incipient stages of planning by the army. The DEIS presents an inaccurate picture of cultural resource impact, which is directly attributable to Dames and Moore's cursory methods of evaluation. The perspective is myopic. If mitigation of these resources is implemented properly, actual military use of the land may be postponed for years. I doubt that proper cultural resource evaluation, mitigation and management can be accomplished with 1% of federal funds.

Secondly, the maps presented in the DEIS are vague and blurred. Patent boundaries were not presented. Attempts to relocate sites based upon the information presented was nearly impossible. Additionally, it is my understanding that the Purgatoire Canyon as well as the Chaquaqua Canyon (which has 1187 documented sites along the Chaquaqua to its confluence with the Purgatoire and up to the Otero County Line) may or may not be included in the Piñon Parcel. Again, proper cultural mitigation can not be accomplished until definite boundaries are set.

L-125

Statement Regarding Fort Carson Land Acquisition

From 1935 to 1949 my interests in the areas of acquisition included studies for proper land use and soil and water conservation techniques. This entailed examinations of the range areas from Timpas to Trinidad, from La Junta south to the Mesa de Maya, including the watersheds of the Huerfano, Apishapa, and Purgatory rivers, and contributing side drainage areas. Establishment of range management plot sites in many locations throughout this broad area. Conclusions reached then evidenced that in other than valleys, arroyos, and juniper break areas, that continuous grazing use was a high risk venture. Other factors such as water quality and depths, distance for livestock to travel to water, complicated the lands economic use. The colloidal soil and topography, contributed to frog strangling run-off during during periods of high intensity rainfall. The vegetative cover was and still is, of sub-desert character. Carrying capacities were very limited, in large areas, from 80 to 100 acres per animal unit year were not uncommon during sparse rainfall years, which still remains as the usual pattern. The records of the Timpas Project, compiled under the supervision and direction of the Soil Conservation Service should now be researched. They will bear out many of the above, and reinforce the need for careful land use, not usually available or affordable from private sources. Surely, it is fragile land and broke many a homesteader. This land requires attention far beyond the capabilities of individual operators. The inability of like lands to support people and pay taxes is of high priority, inevitably causing land mis-use. Mining the soil and destroying grass cover long has been recognized. Drouth, economics of ranching, and lack of other vital natural resources, in such areas automatically produce land mis-use.

An examination of the present lands at Fort Carson reveal that pasture pitting, contour furrowing, water spreading, grass reseeding grazing management, tree plantings, fire control lanes, and a splendid and comprehensive wild life program, is positive proof that good land use can and does occur under Army training methods.

In my considered opinion, a multiple conservation treatment, by water diversions, water spreading structures, retention of run-off by small stock watering dams, grass and grazing management methods simultaneous with military training usages is feasible and not detrimental to the areas requested. In the future such a program

of common sense conservation and controlled exercises will be of great benefit to other adjacent and downstream regions, lessening the heavy siltation of the John Martin Reservoir, a fine asset to all of the Arkansas River Valley. The lands under question in either of the two sites, can, with proper treatment and use, become watershed areas and not as present, shed water flood producers. In time, the application of good conservation methods and the sciences of modern land use methods, will see lasting benefits for all. Whether used for cattle trails later or tank treads now, such a long time program is insurable and compatible, when the Army and agricultural people decide to work with Mother Nature. It is highly probable that after National emergencies have waned, that much of this land may revert back to grazing by lease. In my judgement it will be far more productive than ever before. It is not now improving under the stress of present usage. The evidence and proof of the U.S. Army husbandship of the present land holdings of Fort Carson, reinforce my convictions that the Army not only defends our lands but strengthens it against all that would destroy, either natural or alien. I see no valid reason such can not be accomplished, in time, on either of the two sites they wish to acquire.

Arthur Young
 Arthur Young

Past. President Colorado Association of Soil Districts

" " S.E. Colorado Water Conservation District
 " " Fountain Valley Soil Conservation District

Past Member National Council Soil Conservation Soc. Of America

" " State Board of Agriculture

" " Pike National Forest Advisory Board

Former District Conservationist USDA Soil Conservation Service

APPENDIX M

EXCERPT FROM ANALYSIS OF ALTERNATIVES STUDY (AAS)

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Section IV - Analysis of Feasible Alternatives	M-1
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SECTION IV
Analysis of Feasible Alternatives

4.01 General: The two alternatives analyzed in this section were identified as acceptable non-contiguous sites in Section III. Both are reasonable and feasible alternatives that meet the basic criteria established by this study to satisfy the LURS recognized maneuver land shortfall at Fort Carson.

4.02 Analysis of Criteria:

a. General Site Perspective: The nature of the offer to the Army and other pertinent facts. Real Estate Planning Report, Proposed Maneuver Area Huerfano River Site, Pinon Canyon Site, Fort Carson, Colorado, Omaha District, United State Army Corps of Engineers, 3 July 1980.

b. Description: The location, size and topography of each parcel.

c. Mission Value: The intended military use of each parcel and its relative value in assisting Fort Carson to accomplish its training mission. (Annex B.)

d. Air Space: The impact that air space limitations will have on each parcel to determine what military training can be accomplished. (Annex C.)

e. Electromagnetic Spectrum: The impact of communication and radar at the non-contiguous training site. How military communications and radar adversely impact on civilian communications and vice versa. (Annex D.)

f. Costs: Acquisition, Capital and Operations and Maintenance Costs. (Annex E & G.)

g. Transportation: Transportation to and from each non-contiguous site and required facilities. (Annex F.)

h. Environmental Factors: Environmental Impact Statement for Training Land Acquisition, Fort Carson, Colorado, Environmental Office Directorate of Facilities Engineering, Fort Carson, Colorado, January 1981.

4.03 Huerfano River Site.

a. General Site Perspective: The Huerfano River parcel was officially offered for sale to the U.S. Army in May 1976. The sale proposal was made by the landowners of three major ranches that comprise the majority of the proposed parcel. Subsequent to that time, two of the ranches have been sold to private parties, both of whom have now withdrawn their offer to sell. (Table 3.)

TABLE 3
HUERFANO PARCEL OWNERS

<u>OWNER</u>	<u>ACREAGE</u>	<u>CUMULATIVE SUBTOTAL/%</u>
Butler, Paul (Trust)	81,780	
Red Top Ltd	62,532	
State of Colorado	36,095	
Armstrong, James G. & Bessie M.	18,500	198,907, 89%
Rooke, F.B. & Sons	5,439	
Spurlock, James J.	4,720	
Seal, Emmett & Marjorie K.	3,680	
United States of America	3,200	
Kierce, Rody F.	1,120	217,066, 97%
DeCourcy, Michael & Donald	720	
Fee, Lavern A.	640	
Newkirk, Catherine E.	640	
Wilson, Keith, Jr.	600	
Bucciarelli, Frank	320	
DeLeon, Doroteo, Jr.	320	
Salardino, Steve J. & Ann	320	
Pickerel, Vera E.	320	
Trekell, F.D.	240	
Junta, Rose & Pete	240	
Reno, Bruce Alan & Clifford F.	220	
King, Robert E. & Ruth E.	200	
Pickerel, Nancy M.	160	
Morris, Paul E.	160	
Lowrance, Mila B.	160	
Dickhart, Morris A. & Shirley H.	160	
Shaner, Clifford & Sara B.	160	
Osborn, Marshall K. & Sarah J.	160	
Moschetti, Ann M. et. al.	130	
Adson, Robert F.	120	223,056, 99%
Wigton, Chester M.	80	
Holton, Don B.	80	
Fernandez, Manual G. & Marie B.	80	
Mottaz, Mabel Rollins	80	
Hunter, Doug	80	
Jett, Charles C. & Nancy	70	
Calhoun, Walter E., Jr. & Maurice	40	
Catulli, Rose	40	
Jaber, Paul S.	40	
Jett, Richard James	35	
Stockton, Gladys	30	
Torri, Albert Pete & Frank A.		
Torri, Paul L. & Blagg, Elsie C.	12	223,723, 100%

b. Description:

(1) Location: The Huerfano River parcel is located in a sparsely populated area about 70 road miles from Fort Carson and between 5 and 36 miles south, southeast of Pueblo, Colorado (Figure 2). The majority of the parcel lies within Pueblo County with a small section extending south into Las Animas County and Huerfano County, Colorado.

(2) Size/Shape: The Huerfano site includes about 223,723 acres.* Of this acreage about 184,428 is fee acreage; 36,095 acres are leased from the State of Colorado, and 3,200 acres are leased from the Bureau of Land Management. The shape of the parcel approaches a parallelogram with the longest axis, about 48 km in length, running northwest to southeast. The shortest axis across the parcel runs north to south and is about 24 km.

(3) Topography: The topography of the area varies considerably from open flat plains in the north and east to rolling hills, bluffs and outcrops in the central south and western portions. The Huerfano River Canyon cuts through the area from the southwest to northeast. Elevations in the area trend from nearly 6,000 feet above sea level in the southwest to 4,700 feet in the northeast. Relief is moderate through most of the area with the exception of the Huerfano River Canyon, which has well developed cliff formations exceeding 600 feet. Mesa and bluff formations trend from south to north following the Huerfano River and varying relief from 300 to 500 feet.

The Cucharas Canyon in the southwest and several smaller arroyos, draws and erosion beds extend west and east from the Huerfano River as it flows northeast. Juniper, pinon and cedar trees and shrubs occur along stream beds, erosion areas and on many of the bluffs and ridges. The remaining areas, which constitute the greater part of the offered land, are covered with range grasses.

c. Mission Value: The Huerfano River site can support all tasks required by the Mechanized Infantry/Tank Army Training and Evaluation Programs (ARTEP) except defense of a built-up area and live fire exercises. The number and type of ARTEP events are shown in Annex B, Table I. The Huerfano River site is divided into small areas by the Huerfano River Canyon and other off-limits areas, reducing the number of Battalion Task Force maneuver concepts which can be conducted. This factor is pronounced when units ABC, BCE, ADE, and ABD are in use, which constitutes four of the five training cycle years (Annex B, Map I). Figure 3, Huerfano River Parcel: Go/No Go Overlay, shows area obstacles such as boulder fields, soil erosion, dense vegetation, slopes greater than forty-five degrees, which are impassable to tracked

*Acreage figures reflect the latest information available and show a slight decrease from the data contained in the EIS which are based on the REPR. Minor fluctuations in acreage totals are not unusual when dealing with property of this size due to manual record management procedures existing in the several County Courthouses. Precise figures would be determined at the time of acquisition when title searches would be made.

M-4
FIGURE 2

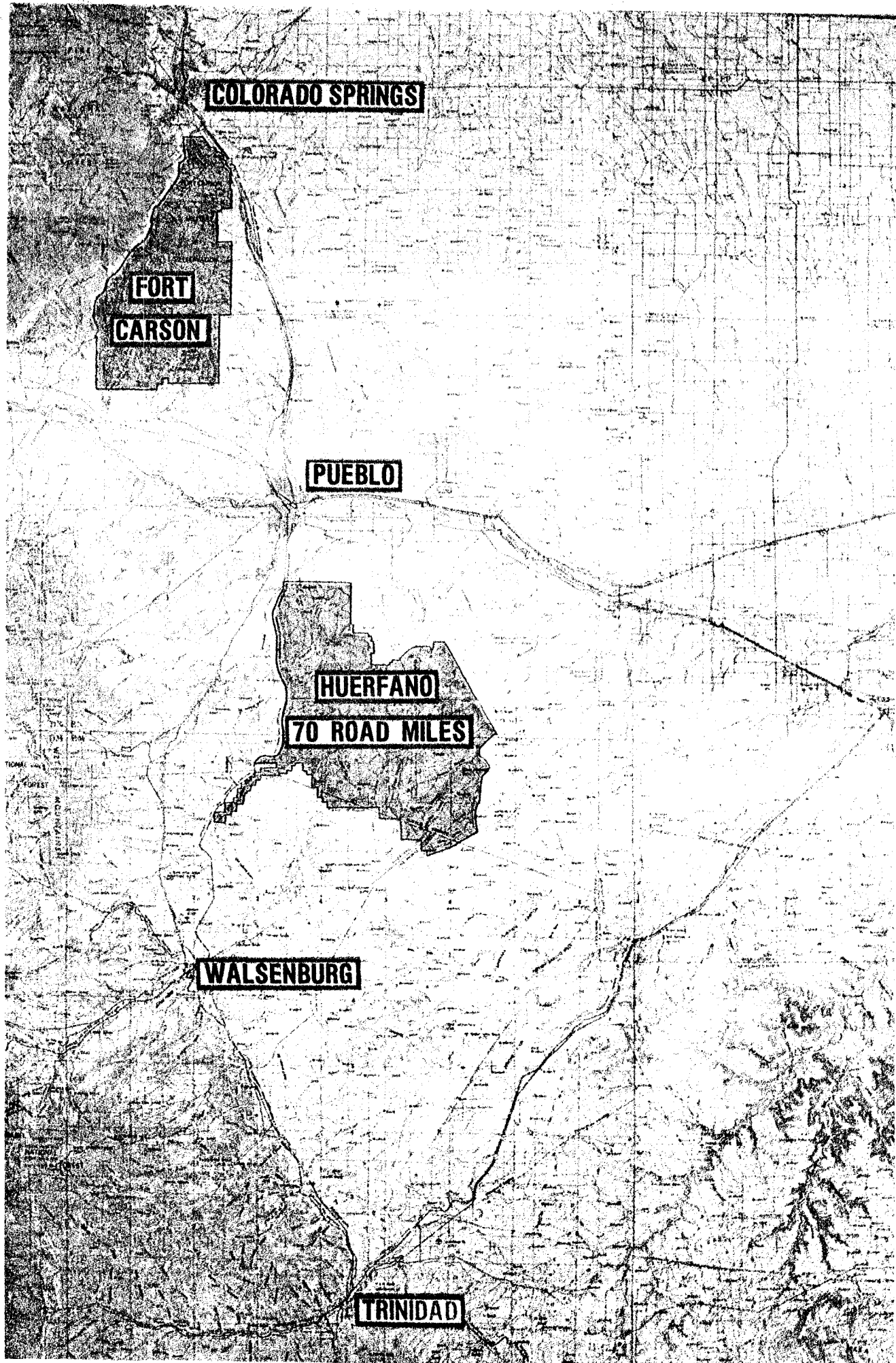
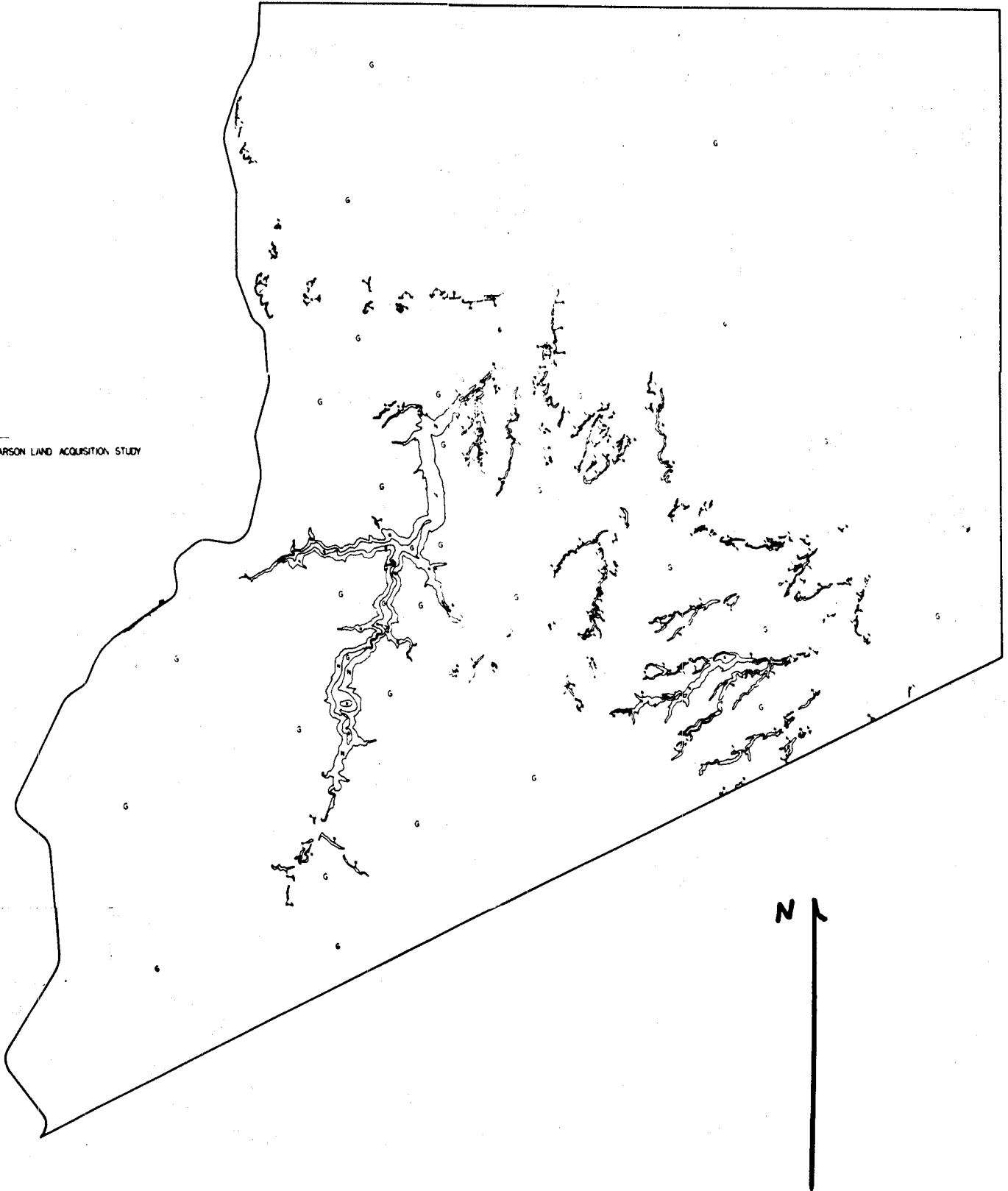


FIGURE 3

HUERFANO RIVER PARCEL:
GO/NO GO OVERLAY

FORT CARSON LAND ACQUISITION STUDY



vehicles. Figure 4, Huerfano River Parcel: Tracked Vehicle Obstacle Overlay, shows linear obstacles such as escarpments, dams and high stream banks which are obstacles to tracked vehicles. Both figures thus visually display the major obstacle caused by the Huerfano River Canyon with the resulting compartmentalization of management unit areas.

d. Air Space: No restricted area is associated with the Huerfano land area. However, the missed approach path of the Pueblo Airport falls within the parcel, necessitating close and continuous air traffic coordination with Pueblo approach control. Three low altitude (below 18,000' MSL) airway routes and several Air Force training routes cross the area. Neither Pueblo control nor Denver control (FAA) have any objections as long as live firing is not conducted and Army aviation uses a VFR Nap-of-the-earth mode (Annex C).

e. Electromagnetic Spectrum. Field measurements conducted at the Cedarwood tower operated by the AT&T showed that third harmonic emissions from AN/MPQ 49 radars (organic to the 4th Division's Air Defense Artillery Battalion) operating at distances of 0.5 and one mile from the Cedarwood tower will cause significant interference to the AT&T system. Therefore, these radars must maintain a separation distance of at least two miles from the tower. No other electromagnetic spectrum interference by current or projected TO&E communications or radar equipment is anticipated at the Huerfano River parcel. (Annex D.)

f. Costs.

(1) Acquisition (para 4.02, a)	\$24,506,902
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(2) Capital

Site Development (Annex E)	55,324,000
Utility Connections (Annex E & G)	2,563,000
Highway Construction (Off-Site) (Annex F)	1,815,000
Rail Construction (Off-Site) (Annex F)	16,000
Baseline Environmental Management (Annex E)	<u>1,651,000</u>

TOTAL CAPITAL COSTS	\$61,369,000
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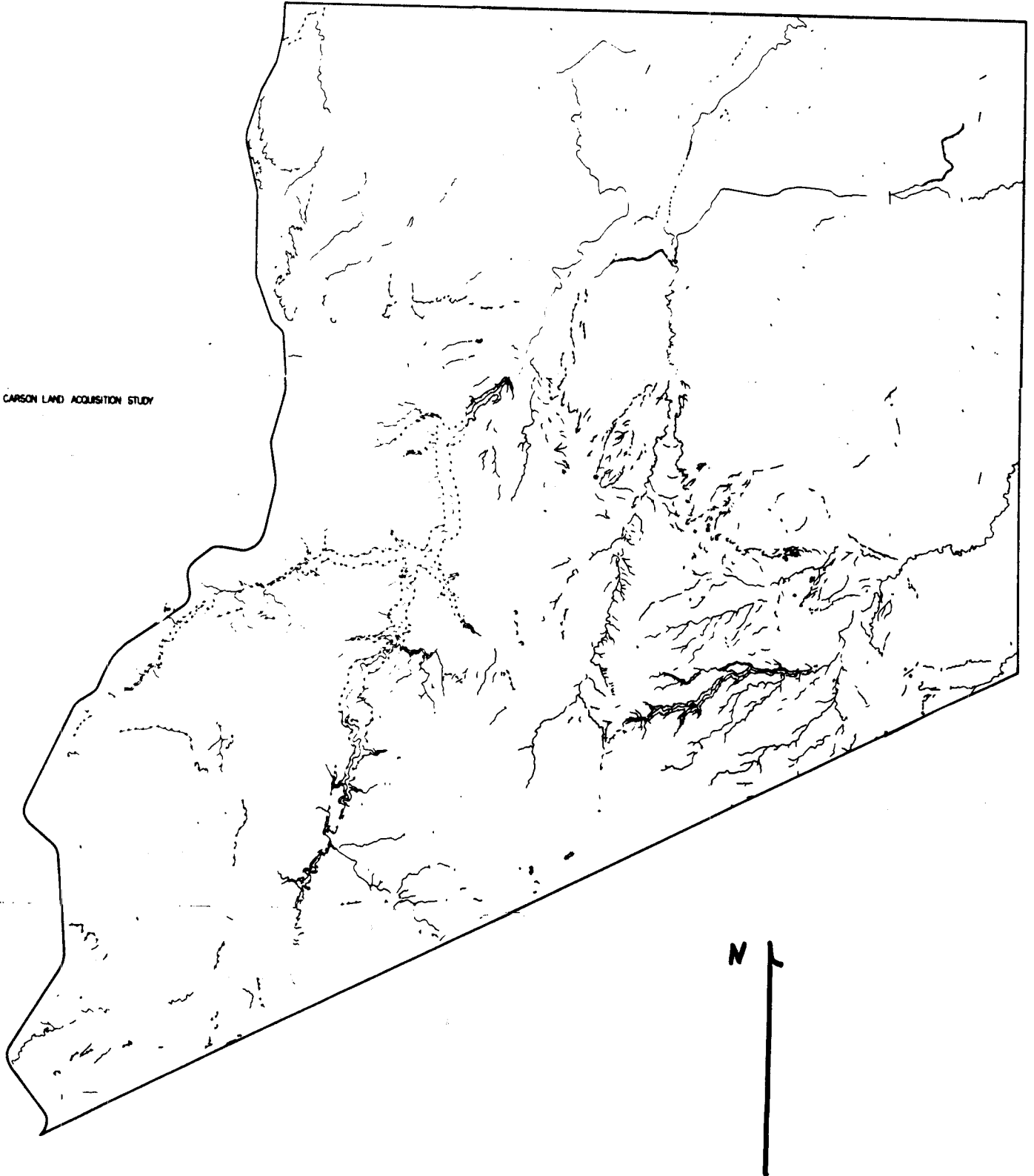
(3) Operations & Maintenance (per annum)

Continuing Environmental Management (Annex G)	350,000
Transportation (Annex F)	715,596
Other (Annex G)	<u>3,778,317</u>

TOTAL O&M COSTS	\$4,843,913
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FIGURE 4
Huerfano River Parcel:
Tracked Vehicle Obstacle
Overlay

FORT CARSON LAND ACQUISITION STUDY



g. Transportation.

(1) Concept. Movement to the Huerfano River site would involve three modes of transportation. All tracked vehicles would move by rail. Wheeled vehicles would move by convoy. Personnel would move by bus (Annex F).

(2) Rail. Cedarwood is the only feasible rail access point to the Huerfano site. The site has two 1,800 foot rail sidings, a crossover track between the two main line tracks, and is in the proximity of the proposed cantonment area. Two 3,000 foot rail spurs, supported by a double, concrete end loading/unloading ramp, off the Colorado Southern rail (east track) siding would be constructed. The existing commercial rail sidings at Cedarwood would operate as loaded and empty storage sites as well as to provide track for the various railcar switching operations.

(3) Road. The preferred road access involves moving south from Fort Carson via Interstate 25 approximately 45 miles to the Stem Beach exit, east approximately 3 miles towards Lime to the site boundary. Using this route, approximately 11 miles of road onsite would be required to reach the proposed cantonment area. Construction would involve improving the Stem Beach Interchange, upgrading 1.5 miles of the existing Lime Road, constructing a 0.5 mile extension of Lime Road, constructing a bridge over the St. Charles River/Greenhorn Creek, and constructing a highway grade crossing with signal over the double railroad tracks at the site boundary.

h. Environmental Factors. (For additional detail use reference at paragraph 4.02, h.)

(1) Air Quality. The major air quality issue at the Huerfano site is its proximity to the City of Pueblo which has been classified as a non-attainment area for particulates. As a result, the State of Colorado is required to submit as part of their State Implementation Plan (SIP), a strategy that will insure that Pueblo comes into compliance with the Federal particulate standard by 1982. That portion of the State Implementation Plan dealing with particulates in Pueblo has not been approved by the EPA. Our worst case modeling of particulate emissions from training at the Huerfano site indicates that the potential impact on the Pueblo area is just over the level of significance as established by the EPA. However, the reliability of modeling results is inherently suspect. Although actual field monitoring of particulate emissions from training at Fort Carson substantiates our conclusions that training at the Huerfano site would not have a significant effect on the ability of Pueblo to achieve attainment, the perception on the part of local citizens and businessmen is that our contribution would prevent the city from complying or require that a significant amount of additional funding be provided to implement more stringent controls within the city. The Colorado Fuel and Iron (CF&I) Steel Plant is especially concerned that our particulate emissions may ultimately result in more stringent controls being imposed on their facility or future additions to their facility.

As a result of local concerns, air quality monitoring at the Huerfano site would receive considerable public attention. If our impact on Pueblo turns out to be as or more significant than that predicted in the EIS, additional control of fugitive emissions would undoubtedly be required. The most logical of available controls would be to reduce emissions from unpaved roads by chemical treatment or the use of "road carpet" materials. It is generally felt that the one time application of road carpets would be less costly than recurring chemical treatment procedures. The estimated cost of this potential requirement based on at least 208 miles of unpaved road at \$15,000 per mile would be more than \$3,600,000. This potential cost is not currently reflected in the costs shown in Section V and Annex E.

(2) Minerals. The acquisition of the four sections of state owned land in the northwest portion of Management Unit A that have significant developable limestone would represent a significant loss of potential economic gain to both the State and the Pueblo region since the royalties on the lease would accrue to the State and some 200 to 300 jobs are projected for the potential limestone operation. On the other hand, if the area is deleted from the parcel, the training potential of the northern portion of Management Unit A is seriously effected.

(3) Vegetation and Soils. The training intensity and time of training have been established based upon the ability of the vegetation and soils to withstand the use over a long term utilizing intense land management procedures

(4) Huerfano River Canyon. A major portion of the Huerfano River Canyon, as well as several of its side canyons cannot be utilized for maneuver training due to their steep canyon walls. However, because of the canyon's position within the parcel it would be necessary to acquire it. As a result, a specific management program for the canyon area would be required and because of the wildlife, cultural resource and low stress recreation potential of the area its continuing management would be a major responsibility. Furthermore, the half-mile buffer zone, (one quarter mile on either side) as well as the position of the canyon represents a significant obstacle to mechanized training.

(5) Socio-economics.

(a) Residential encroachment. Although there are ranch homes located on all sides of the parcel, residential development has begun to occur immediately north of the site. Further development within this area is projected by the Pueblo Regional Planning Commission. Therefore, the proximity of this site to a large urbanized area with projected growth in the direction of the parcel is not a favorable situation. Furthermore, should the option of obtaining potable water by pipeline from the City of Pueblo be exercised, residential development in the near vicinity of the site would undoubtedly be exacerbated. Efforts to obtain protective zoning would be essential.

(b) General controversy. The Huerfano site has stimulated considerable public controversy among local governments, businesses, organizations and individuals. Although quantitative facts cannot be presented in the absence of scientific surveys, it can be said that there is a very vocal minority publically opposed to the Huerfano site with concern also being expressed by the Pueblo Chamber of Commerce, local businesses, government agencies and elected officials.

4.04 Pinon Canyon Site.

a. General Site Perspective. The Pinon Canyon parcel was officially offered for sale to the U.S. Army in April 1976. The sale proposal was made by the Faris Land and Cattle Company, which, at that time, held options for six ranches that comprised the majority of the parcel. Since that time, the options have expired. However, conversations with land-owners indicate that those who own about 85% of the site are willing to sell provided they receive fair and just compensation (Table 4).

b. Description.

(1) Location. The Pinon Canyon parcel is situated in a remote, sparsely populated area about midway between La Junta and Trinidad, Colorado. (Figure 5.) All of the parcel is located in Las Animás County.

(2) Size/shape. The parcel includes about 243,710 acres*. About 211,800 is deeded, 22,820 leased from the State of Colorado and 9,090 is leased from the Bureau of Land Management. The shape of the parcel approaches an elongated, irregular parallelogram with the long axis, about 60 KM in length, running northeast to southwest. The irregular long axis boundaries average 17 KM in width.

(3) Topography. The topography of the area varies considerably from rolling hills in the northwest and northeast to flats in the center trending southwest and an incised river canyon on the east trending northeast. Elevations in the study area range from 5,700 feet above sea level at the northwest boundary to 4,300 feet above sea level in the northeast corner. Topographical relief is extreme along the Purgatoire River Canyon with cliffs exceeding 450 feet in the southeast corner. The Black Hills, located along the Purgatoire, have a relief of 300 feet from the plains on the southwest to 900 feet relief in the northeast. The southeastern third of the parcel consists almost exclusively of relatively flat, open plain covered with native grass. Continuing to the northeast, the plain becomes more rolling as it rises to a 300 foot-high ridge system, which runs generally from northwest to southeast

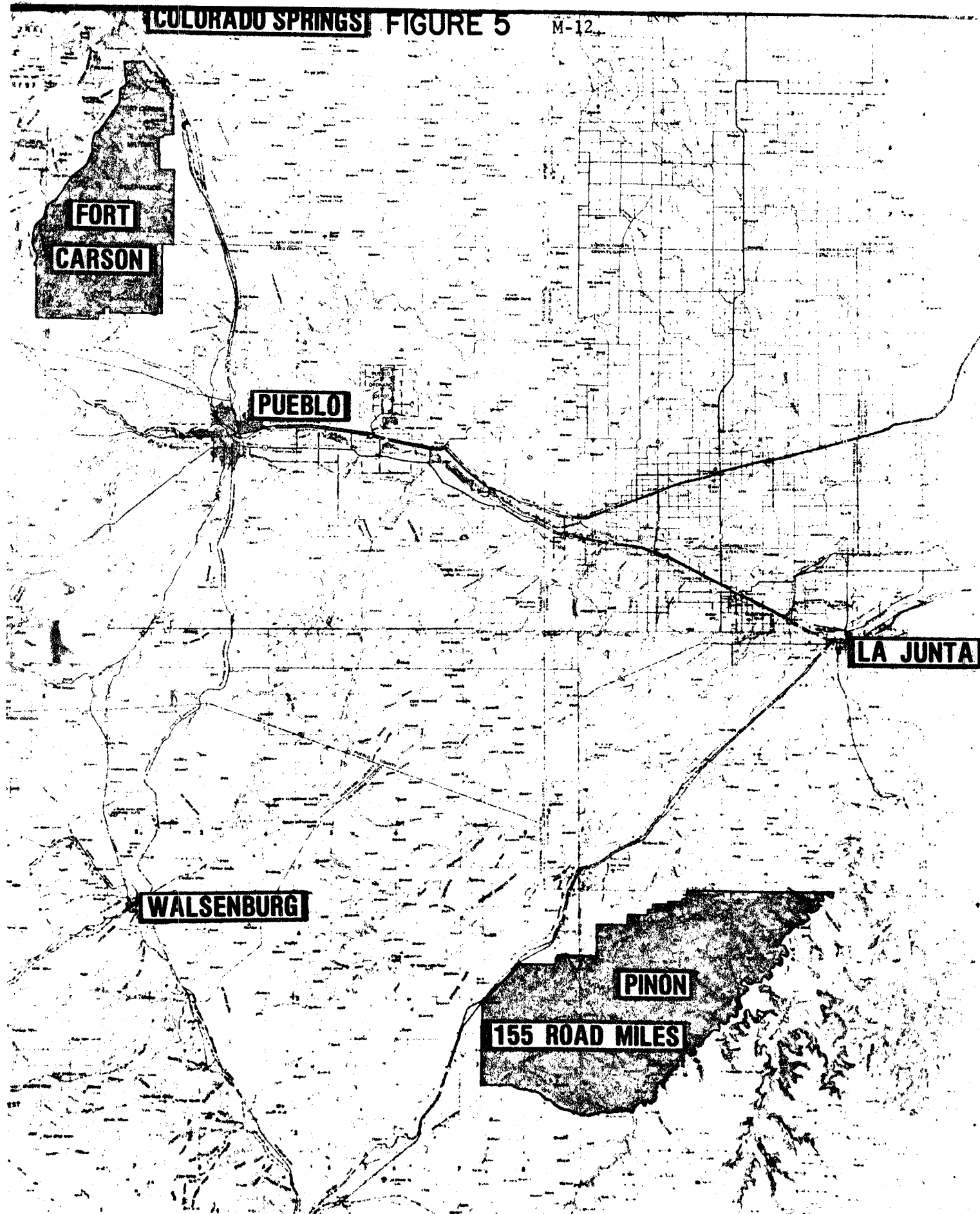
*Acreage figures reflect the latest information available and show a slight decrease from the data contained in the EIS which are based on the REPR. Minor fluctuations in acreage totals are not unusual when dealing with property of this size due to manual record management procedures existing in the several County Courthouses. Precise figures would be determined at the time of acquisition when title searches would be made.

TABLE 4
PINON PARCEL OWNERS

<u>OWNER</u>	<u>ACREAGE</u>	<u>CUMULATIVE SUBTOTAL/%</u>
Big Canyon Grazing	31,820	
Baldwin & Company	29,720	
Wilson, George W.	25,680	
Faris, Joe E.	23,600	
State of Colorado	22,820	
Biernacki, Leroy F. & Edna	18,010	
Oberg, Michael L., Patrick H., & Gary B.	15,440	
Sharp Ranch, Inc.	11,390	178,480, 73%
Stineman, Evan C., Jr. & Eileen	9,940	
United States of America	9,090	
Gutierrez, Alvin	7,560	
Gyurman Land & Cattle	6,380	
Crowder, Jack & Margaret	6,320	217,770, 89%
Hill, Robert J.	4,750	
Mincic, Charles & Mary Ann	4,360	
Thatcher Ranch	2,200	
Mesa De Mayo Ranch	1,990	
Cheyenne Mining	1,840	
Morris, Margaret	1,720	234,630, 96%
Samela, Frank M.	960	
Kitch, James	800	
Moffett, E. Claudette & W. Royce	640	
Hershberger, James W.	640	
Wanbaugh, Lottie	520	
Ervin, Jerry N. & Sally A.	480	
Brownell, William	440	
Brownell, Mattie	400	
Burgerner, Lowell F. & Lois M.	400	
Winkelman, Wayne & Joan	400	
Sundu, James C.	400	
White, Clinton A. & Evelyn V.	400	
Thompson, Wallace C. & Lovilean H.	400	
Schlesinger, Robert A. & Violet M.	400	
Bartelli, Henry L. & Bernadette H.	320	
Brody Estate	320	
Watkins, Blanche	320	
Van Fleet Estate	280	
Long, Dalton	240	
Hohnbaum, George E.	160	
Bailey, Alice	80	
Gilmore, Gloria June	80	243,710, 100%

COLORADO SPRINGS **FIGURE 5**

M-12



into the Black Hills. Although the Black Hills are relatively rugged, there are several passes running southwest to northeast which offer routes through this hill mass. To the northeast of the Black Hills, the terrain again consists of rolling plains, which continue to the northeast boundary of the parcel. Along the northwestern edge of the plain, there is an area of low, rolling hills, which generally parallel the plain to the northeast until they intersect the Black Hills. The southeastern boundary of the site generally follows the Purgatoire River, which flows through a very rugged, deep canyon. Seven dry arroyos begin in the parcel and flow from northwest to southeast into the Purgatoire River. Except for grass, vegetation is absent throughout much of the plain area; however, some cover and concealment are available in the dry washes and arroyos. The rolling hills along the northwest edge of the plain are sparsely covered with trees and shrub as are the Black Hills. The area to the northeast of the Black Hills has more tree and shrub cover than the plain to the southwest.

c. Mission Value. The Pinon Canyon site can support all tasks required by the Mechanized Infantry/Tank Army Training and Evaluation Programs (ARTEP) except defense of a built up area and live fire exercises. The number and type of ARTEP events are shown in Annex B, Table II. The Pinon Canyon Site has useable maneuver area along its long axis bordered on the South by the Purgatoire River. Management Unit boundaries allow for great flexibility and useable area in supporting Battalion Task Force maneuvers. The Black Hills in the North and the Hog Back in the South provide excellent terrain diversity and latitude for realistic battlefield situations (Annex B, Map II). Figure 6, Pinon Canyon Parcel: Go/No Go Overlay, shows area obstacles such as boulder fields, soil erosion, dense vegetation, and slopes greater than forty-five degrees, which are impassable to tracked vehicles. Figure 7, Pinon Canyon Parcel: Tracked Vehicle Obstacle Overlay, shows linear obstacles such as escarpments, dams and high stream banks which are obstacles to tracked vehicles. Both figures thus visually display the significant maneuver area available, diversity of terrain, and the boundary formed by the Purgatoire River Canyon.

d. Air Space: No restricted area is associated with the Pinon Canyon land area. Two low altitude (below 18,000' MSL), three high altitude (above 18,000' MSL) airway routes, and three low altitude Air Force training routes cross the area. This area also touches the southern corner of the MONZA Military Operating area (MOA). The FAA has no objections as long as live firing is not conducted and Army Aviation uses a VFR, Nap-of-the-Earth-Mode (Annex C).

e. Electromagnetic Spectrum. No electromagnetic spectrum interference by current or anticipated TO&E communications or radar equipment is associated with the Pinon Canyon parcel (Annex D).

FIGURE 6

PINON CANYON PARCEL:
GO/NO GO OVERLAY

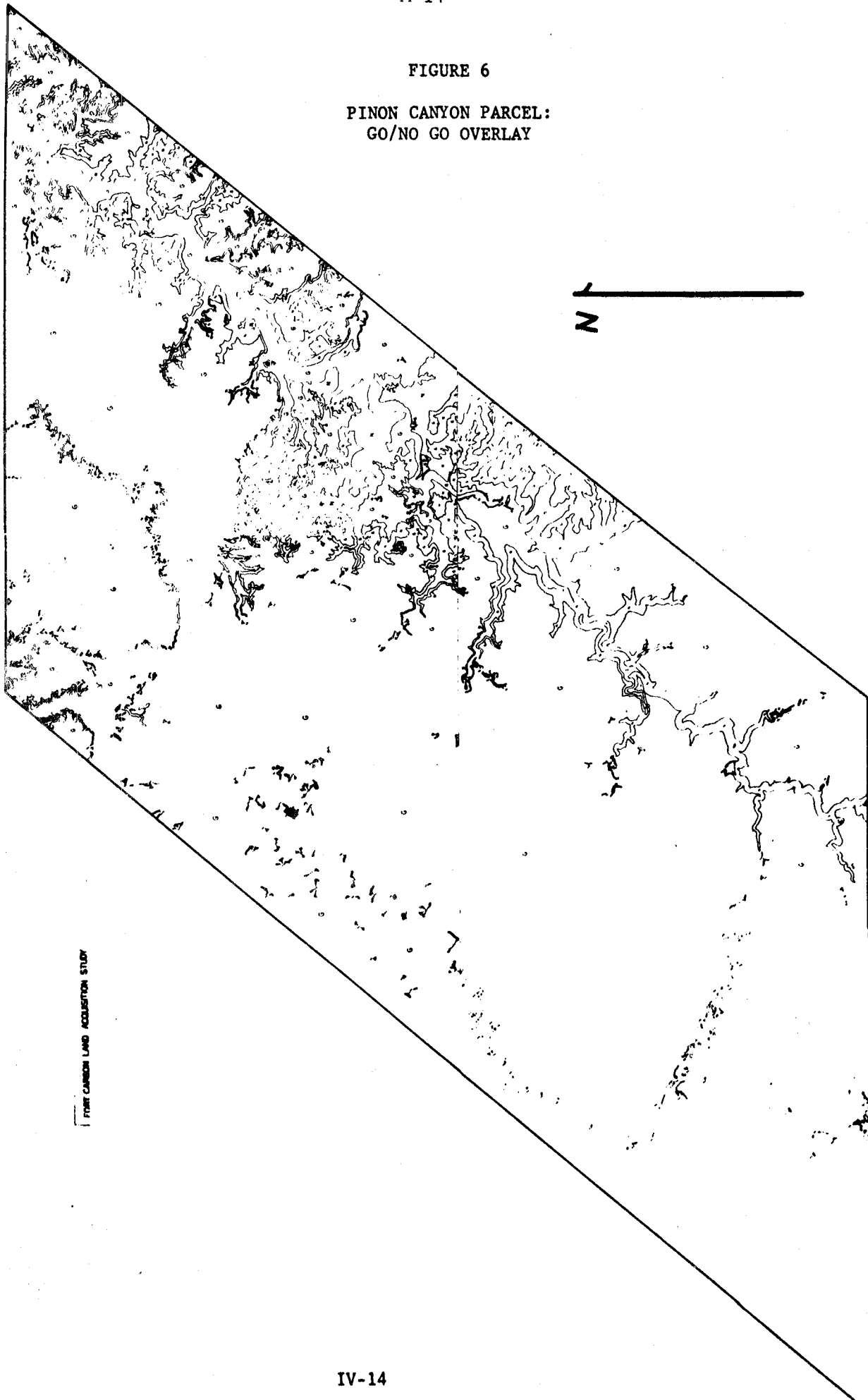
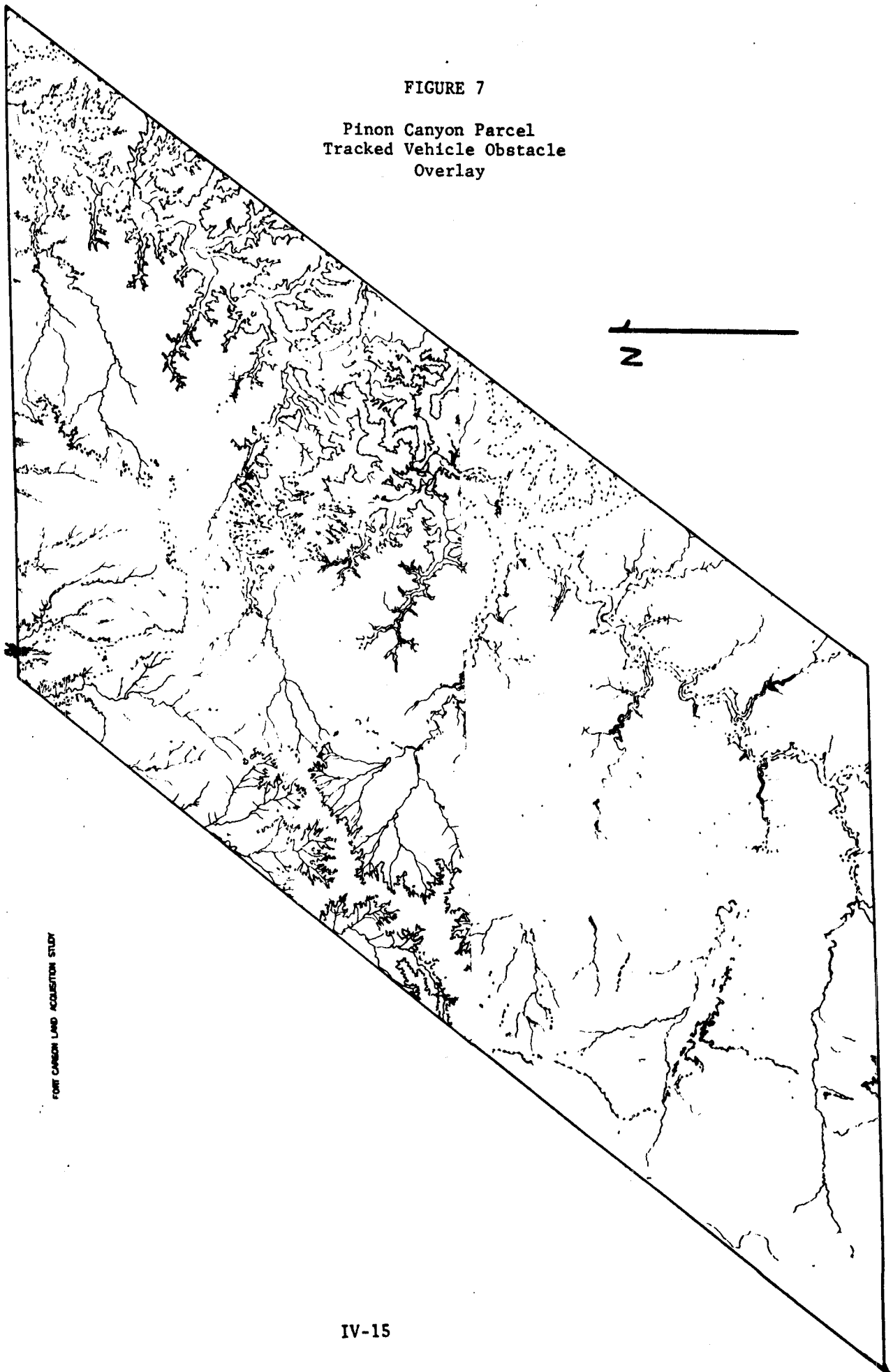


FIGURE 7

Pinon Canyon Parcel
Tracked Vehicle Obstacle
Overlay



f. Cost.

(1) Acquisition (para 4.02, a) \$22,385,048

(2) Capital

Site Development (Annex E)	56,892,000
Utility Connections (Annex E & G)	2,921,000
Highway Construction (Off-Site) (Para 4.04,g)	-0-
Rail Construction (Off-Site) (Annex F)	96,000
Baseline Environmental Management (Annex E)	<u>1,871,000</u>

TOTAL CAPITAL COSTS \$61,780,000

(3) Operations & Maintenance (per annum)

Continuing Environmental Management (Annex G)	380,000
Transportation (para 4.04, 2) (Annex F)	1,344,558*
Other (Annex G)	<u>3,694,897</u>

TOTAL O&M COSTS \$5,419,455

*Would decrease by \$343,050 when Trinidad Bypass is completed.

g. Transportation.

(1) Concept. Initially, movement to the Pinon Canyon site would involve two modes of transportation. All vehicles would move by rail. Personnel would move by bus. When a bypass is constructed by the State of Colorado around the City of Trinidad and Highway 350 is upgraded, wheeled vehicles would move by road. (Annex F.)

(2) Rail. Simpson is the most favorable rail access point to the Pinon Canyon site. Simpson was chosen because of the existing 7,000 foot commercial rail siding and its proximity to the proposed cantonment area. Two 3,000 foot rail spurs would be constructed on the site as close as possible to the cantonment area. These spurs would be connected to the Santa Fe Railroad main line and each spur would be supported by concrete end ramps. The commercial rail siding would function as a loaded and empty storage site and also provide track for the railcars switching operations.

(3) Road. The most logical highway route to the Pinon Canyon site involves moving south from Fort Carson via Interstate 25 approximately 120 miles to Trinidad, then north on U.S. Route 350 approximately 35 miles to Simpson Siding and the site. This route, however, is not viable at this time due to the fact that U.S. Route 350 passes through downtown Trinidad over a very narrow and busy commercial street. In addition, the remainder of highway 350 requires shoulders and bridge and culvert upgrading to withstand the impact of military convoys. The State of Colorado

has plans to build a bypass around Trinidad from Interstate 25 to U.S. Route 350 within the next five years. When that has been accomplished, Defense access highway funds could be used to upgrade highway 350. Upon completion of this construction, wheeled vehicles could shift from rail to highway movement.

h. Environmental Factors. (For additional details see reference at paragraph 4.02, h.)

(1) Vegetation and Soils. As with the Huerfano River site, the training intensity and time have been established based upon the inherent carrying capacity of the soils and vegetation existing at the site.

(2) Purgatoire River Canyon. The main Purgatoire River Canyon cannot be utilized for maneuver training and is not included in the area proposed to be acquired. Approximately a quarter mile buffer including some portions of major side canyons must be set aside from property that we would acquire to protect the canyon environment. The Department of Interior is studying the possible designation of a portion of the main canyon and the Red Rocks side canyon and the Black Hills to the north as a National Natural Landmark due to its unique geology. The acquisition and use of maneuver training of the Red Rock Canyon and Black Hills area could preclude their inclusion in such a landmark but should not effect the potential designation of the canyon area off site.

(3) Socio-economics.

(a) Residential Encroachment. Although there is a very low potential for residential encroachment upon this site due to its remoteness, an area immediately north of the central portion of the site between the boundary and Highway 350 at Houghton has been subdivided into forty acre ranchettes, many of which have been sold. No construction has taken place as of this time and future development is uncertain. The transportation corridor adjoining this area on the site will serve as a buffer zone if some development does occur.

(b) General Controversy. The Pinon Canyon site has stimulated some public controversy among local governments, businesses, organizations and individuals. Although quantitative facts cannot be presented in the absence of scientific surveys, it can be said that although there has been vocal opposition from some public elements there has been an equal or greater amount of public support for the site by the Trinidad Chamber of Commerce, local businesses, government agencies and elected officials. This support has been manifested by a favorable poll of members of the Trinidad Chamber of Commerce, discussions with the Trinidad City Council and Las Animas County Commissioners, speakers at the DEIS Public Hearings, and a petition signed by 608 residents of Trinidad which, in a small community of about 10,000, is statistically significant.

(4) Comanche National Grasslands. A portion of the Comanche National Grasslands adjoins the Pinon Canyon site on the north. The grasslands represent average rangeland. In fact the majority of the grasslands are leased to individuals for grazing. As such they do not represent a landuse conflict.

4.05 Summary. Both the Huerfano River and Pinon Canyon sites continue to be reasonable and feasible alternatives for satisfying the LURS identified shortfall of contiguous maneuver training land, although by varying degrees. A comparison of alternatives is contained in Section V.

SECTION V COMPARISON OF ALTERNATIVES

5.01 General. This section compares both parcels based on the analysis in Section IV.

5.02 General Site Perspective. Both parcels contain the same number of landowners (41). About 85% of the Pinon Canyon site remains offered for sale to the Army. However, two major landowners in the Huerfano River site, comprising about 60% of that parcel, have withdrawn their offers to sell and are strongly opposed to Army acquisition of their land. Although the Federal Government has the power of eminent domain and willingness to sell is therefore not a final determinant in the land acquisition process, it must be considered preferable not to engage in condemnation procedures. The Pinon Canyon site contains less state land (22,820 acres) and more federal land (9,090 acres) than the Huerfano River site (36,095 and 3,200 acres respectively.) The General Site Perspective favors the Pinon Canyon site.

5.03 Description. Both parcels contain the requisite amount of acreage to satisfy the maneuver training land shortfall identified in the LURS. Shape and topography are not a factor with the exception of their impact on Mission Value (para 5.04, below). Both sites are well within a one day motor march. Distance is not a factor with the exception of Transportation Costs (para 5.07, below). Both sites contain only about thirty-five to forty-five permanent residents. However, the Pinon Canyon site is much more remote from population centers than is the Huerfano River site. The northern boundry of the Huerfano River site is only about five miles from the City of Pueblo. In addition, private homes have been constructed on three sides of the parcel with indications that encroachment will be a continuing problem at that location (para 5.09, Environmental Factors, below). The site Description favors the Pinon Canyon Site.

5.04 Mission Value. Both sites can support all tasks required by the Mechanized Infantry/Tank Army Training and Evaluation Programs (ARTEP) except defense of a built-up area and live fire exercises. However, significantly more (83) ARTEP events can be conducted at the Pinon Canyon site than at the Huerfano River site (67). Of more importance, the Pinon Canyon site is better configured to accept mechanized maneuver training than the Huerfano River parcel due to the fact that the Huerfano River Canyon almost bisects that parcel. That canyon, in conjunction with other off limits areas, reduces/constricts the number and quality of Battalion Task Force maneuver concepts to an undesirable degree. From a topographic perspective, the Pinon Canyon site is favored. That site contains the Black Hills in the north and the Hog Back in the south, both of which are significant military terrain features, presenting the trainer with greater latitude for realistic battlefield situations. Finally, obstacles to mechanized maneuver are less restrictive in the Pinon Canyon site. Mission Value strongly favors the Pinon Canyon site.

5.05 Air Space. No restricted area is associated with either site. However, the missed approach path of the Pueblo Airport falls within the Huerfano River parcel, necessitating close and continuous air traffic coordination with Pueblo approach control. Air Space favors the Pinon Canyon Site.

5.06 Electromagnetic Spectrum. No electromagnetic spectrum interference is associated with the Pinon Canyon site. However, the AN/MPQ 49 radars organic to the 4th Division's Air Defense Artillery Battalion would have to remain at least two miles from the AT&T tower located in the north central portion of the Huerfano River Site due to electromagnetic spectrum interference to the AT&T system. Electromagnetic Spectrum favors the Pinon Canyon Site.

5.07 Costs. The following is a comparison of costs associated with both sites under consideration:

<u>CATEGORY</u>	<u>HUERFANO</u>	<u>PINON</u>
Acquisition	\$24,506,902	\$22,385,048
Capital	61,369,000	61,780,000
O&M	4,843,913	5,419,455
Acquisition Favors Pinon by	\$2,121,854	
Capital Favors Huerfano by	411,000	
O&M Favors Huerfano by	575,542	

Almost all of the differential for O&M costs is due to the greater transportation costs associated with movement to the Pinon Canyon site. From an environmental perspective, the additional costs are somewhat mitigated by the fact that vehicular travel to the Pinon Canyon site would be by rail only thus reducing wear and tear on wheeled vehicles. In addition, noise and visual pollution due to convoy operations would be eliminated. Costs favor the Huerfano River site.

5.08 Transportation. Both sites are serviced by adequate rail networks with the capability to accommodate the transportation needs of movement to and from the sites. Some highway construction would have to be completed to provide road access to the Huerfano River site. Although federal highways service the Pinon Canyon site, a by-pass would have to be constructed around the City of Trinidad and Highway 350 would have to be upgraded to provide a road net adequate for military convoys. Both projects are being planned by the State of Colorado. Until those projects are completed, vehicle transportation to the Pinon Canyon site would be by rail only. Transportation favors the Huerfano River site.

5.09 Environmental Factors.

a. Air Quality. Particulate emissions are the only air quality issue of any significance. Although the worst case emissions are virtually the same at both sites, the proximity of the Huerfano River site to the City of Pueblo represents a potentially serious conflict because of the city's non-attainment status relative to the Federal ambient particulate standard. This single problem has been a major influence in the opposition to this site by elected officials, local government agencies, local businesses and individuals. If additional control of fugitive emissions from unpaved roads were to be required, the addition of that capital expenditure to this site would result in it costing in excess of \$3,000,000 more than the Pinon to obtain and bring into operation.

b. Minerals. The existence of commercially developable limestone deposits on the Huerfano site represents the only known conflict between future mineral development and this project.

c. Vegetation and Soils. The training intensity and time of training has been established based upon the inherent carrying capability of the vegetation and soils at each site. However, overall, the Pinon Canyon site is approximately 28% less stable than the Huerfano River site resulting in a larger acreage requirement in order to sustain an equivalent amount of training as the Huerfano River site.

d. Huerfano River Canyon versus Purgatoire River Canyon. The Huerfano River Canyon represents a significant obstacle to training because of its position within the parcel. The Purgatoire River Canyon represents a natural boundary for the parcel and does not interfere with training. The Huerfano River Canyon and the buffer on either side of it would represent a major management responsibility. On the other hand although the Purgatoire River Canyon would not be our management responsibility, future conflicts between our land use and the canyon might arise simply because we do not own it. The long term significance of this possible conflict cannot be determined at this time.

e. Socio-economics.

(1) Residential encroachment. Some residential encroachment already exists at the Huerfano River site and will almost certainly continue and become increasingly important. Although there is a potential for residential encroachment at the Pinon Canyon site there is none currently and it should not be a problem in the foreseeable future.

(2) General controversy. There has been virtually no vocal public support evidenced for the Huerfano River site. On the other hand, considerable support of the Pinon Canyon site has been expressed by elected officials, local government agencies, local businessmen and numerous individuals. In addition, a higher percentage of landowners at the Pinon Canyon site are willing to sell their land than at the Huerfano River site.

f. Environmental Factors Strongly Favor the Pinon Canyon Site.

5.10 Summary. General Site Perspective, Description, Mission Value, Air Space, Electromagnetic Spectrum and Environmental Factors favor the Pinon Canyon site. Costs and Transportation favor the Huerfano River site. The reason that Costs and Transportation favor the Huerfano River site is due to the inescapable fact that the Pinon Canyon site lies eighty-five miles further from Fort Carson. Despite that fact, the overwhelming advantages from a military mechanized maneuver perspective of the Mission Value of the Pinon Canyon site coupled with the environmental difficulties associated with the Huerfano River site lead to the logical conclusion that the Pinon Canyon site is worth the additional cost and should be selected as the best qualified parcel to resolve the LURS identified Fort Carson mechanized maneuver area shortfall.