

**PROGRAM MANAGER RMA  
U.S. ARMY MATERIEL COMMAND**



*Cooperative Agreement For  
Conservation and Management  
Of Fish and Wildlife Resources  
At Rocky Mountain Arsenal*

**U. S. FISH & WILDLIFE SERVICES  
REGION 6**



COOPERATIVE AGREEMENT  
FOR THE CONSERVATION AND MANAGEMENT OF FISH AND  
WILDLIFE RESOURCES AT  
ROCKY MOUNTAIN ARSENAL

I. Background

Rocky Mountain Arsenal (RMA) is a 27 square mile former chemical weapons and pesticide manufacturing facility approximately 10 miles northeast of downtown Denver, Colorado. The U.S. Army established RMA in 1942 as part of the mobilization effort for World War II. The Army conducted chemical and incendiary weapons manufacturing and disposal operations on RMA from 1943 until 1984. Several leaseholders, primarily Shell Oil Company, undertook chemical and pesticide manufacturing from 1947 to 1982. As a result of these operations, significant areas of RMA are chemically polluted.

Listed on the National Priorities List (NPL), RMA is currently being cleaned up under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Cleanup operations began in 1979 with the construction of three groundwater filtration systems. The Army initiated a Remedial Investigation/Feasibility Study (RI/FS) program in 1984 to determine the appropriate remedy for the cleanup of RMA. The final remedy will be determined in accordance with the National Contingency Plan regulations which implement CERCLA and SARA.

The Army established the Program Manager for Rocky Mountain Arsenal Contamination Cleanup (PMRMA) in 1985 as the single manager for the cleanup effort. Fifteen Interim Response Actions (IRAs) were initiated in 1987 in order to commence remediation on the highest priority sites. Three IRAs have been completed and four are currently under construction. The RI/FS will be completed in 1992, and a Record of Decision (ROD) which selects the remedy is expected in early 1993. In November 1988, the Secretary of the Army placed RMA on inactive status and announced that the sole mission of RMA was contamination cleanup.

Since the initiation of the cleanup program, the numbers and diversity of RMA wildlife have increased dramatically. Bald eagles, an endangered species, began wintering in significant numbers at RMA in 1986. There are over 5,000 acres of prairie dog towns and abundant lagomorphs (rabbits and hares). More than 250 mule and white-tail deer inhabit RMA. In all, 131 species which potentially occur on or near RMA have been classified as being important. (See Appendix D, List of Important Species Potentially Occurring On or Near RMA).

In response to the challenge of managing a large-scale environmental cleanup while maintaining sensitivity towards natural resources, PMRMA, the U.S. Fish and Wildlife Service (Service) and other agencies, have entered into a series of agreements designed to effectively manage and promote wildlife resources at RMA. (See Paragraph VI., Associated Agreements). Additionally, PMRMA has devoted significant contractor and installation equipment and manpower toward environmental sampling and assessment, surface water management, habitat enhancement, weed and pest control, and security.

## II. Purpose

A. This Cooperative Agreement for the Conservation and Management of Fish and Wildlife Resources at Rocky Mountain Arsenal (Conservation Agreement) establishes the Rocky Mountain Arsenal Field Office (RMA-FOFW) of the U.S. Fish and Wildlife Service. The Conservation Agreement defines the roles and responsibilities of PMRMA and the Service in managing wildlife throughout the entire area of RMA.

B. RMA-FOFW will be designed to centrally manage wildlife resources at RMA during the cleanup process. With PMRMA approval of Service plans, RMA-FOFW will be responsible for wildlife enhancement and planning (including mitigation), technical input on contaminant issues relevant to fish and wildlife management, fisheries assistance, public affairs relating to wildlife, law enforcement assistance, and efforts relating to endangered species, especially the bald eagle. RMA-FOFW will be located at RMA, and will interface directly with PMRMA.

C. The resolution of conflicts will consider that the military mission and highest priority of RMA is the cleanup of the Arsenal. The cleanup of RMA takes precedence over wildlife management, except where mandated by other laws. This Conservation Agreement envisions opportunities to protect and restore natural resources as part of the Army's responsibilities for cleanup activities. It is recognized that the Service has no liability for cleanup activities.

## III. Definitions

### A. Consultation.

In the context of this Conservation Agreement, consultation means informal discussions which will occur between the Army and the Service whenever one party seeks advice, information or exchanges views. As used in this Conservation Agreement, consultation is not to be construed as formal consultation under provisions of Section 7 of the Endangered Species Act (ESA), Title 16, United States Code, Section 1533 et seq.

## B. Cost Documentation

Cost Documentation means all appropriate supporting documentation for costs incurred by the parties while performing the terms of this Conservation Agreement which show the charges claimed as reimbursable costs and the Task to which the charges apply.

## C. Project Officer

Project Officer means the individual appointed by each party to this Conservation Agreement with responsibility for its terms, including the Scope of Work.

## D. Scope of Work

Scope of Work means a document that outlines the work plan for, and the elements of, the wildlife management and conservation efforts to be conducted by the Service at RMA.

## IV. Authority

This Conservation Agreement between PMRMA and Service is authorized by:

- A. Sikes Act, 16 United States Code, Sections 670a-670f,
- B. Endangered Species Act, 16 United States Code, Section 1531 et seq.,
- C. Eagle Protection Act, 16 United States Code, Section 668 et seq.,
- D. Migratory Bird Treaty Act, 16 United States Code, Section 703 et seq.,
- E. Memorandum of Understanding between the Department of the Interior and the Department of Defense for the Conservation and Management of Wildlife Resources on Military Installations, dated April 7, 1978, and
- F. Army Regulation 420-74, Natural Resources--Land, Forest, and Wildlife Management, 25 February 1986.

V. Parties

A. Service

U.S. Fish and Wildlife Service  
Rocky Mountain Arsenal Field Office  
Rocky Mountain Arsenal, Bldg. 111  
Commerce City, Colorado 80022-2180  
Telephone: 303-289-0232  
Current Project Officer: Dr. Donald Gober

B. PMRMA

Department of the Army  
The Program Manager for Rocky Mountain Arsenal  
ATTN: AMXRM-RP/Bldg. 111  
Commerce City, Colorado 80022-2180  
Telephone: 301-671-3261  
Current Project Officer: Captain Andrew Kingery

VI. Associated Agreements

A. The following agreements remain in full force and effect and are incorporated herein:

1. (Task 2) Proposed Consent Decree between the United States and Shell Oil Company, filed with the Federal District Court of Colorado on June 7, 1988, including the separately executed Appendix E, the "RI/FS Process Document," dated February 1, 1988.

2. (Task 2) Federal Facility Agreement among the United States Environmental Protection Agency (Region VIII), United States Department of the Army, United States Department of the Interior (Rocky Mountain Region), and the Agency for Toxic Substances and Disease Registry, effective February 17, 1989.

3. Intra-Army Order for Reimbursable Services No. IAR-0889, October 5, 1988, provided by the U.S. Fish and Wildlife Service in support of RMA RI/FS and IRAs:

(a) (Task 2) Representation on the Biota Assessment Working Group Committee.

(b) (Task 2) Technical advice and oversight for the RMA cleanup with regard to natural resource issues. Technical review of RI/FS and IRA documents and input to RMA on any matter involving contaminants and fish and wildlife.

(c) (Task 2) Technical advice and participation in evaluating habitat for determining natural resource damages and remedial action procedures.

4. (Task 5) North/South Runway, Deed of Leasehold and Lesser Interests, Rocky Mountain Arsenal, Colorado No. DACA 45-1-87-6001, dated May 24, 1988, (Lease).

5. (Task 5) Cooperative Agreement Between the U.S. Fish and Wildlife Service and Rocky Mountain Arsenal with Respect to the Rocky Mountain Arsenal Bald Eagle Management Area, dated December 14, 1988 (Management Area).

B. The parties hereby terminate any other agreements executed before December 9, 1983 which provide for management of fish and wildlife at RMA.

## VII. Scope of Work

A. For the periods established in Paragraph VIII.A., Period of Performance, or those periods established by agreements listed in Paragraph VI., Associated Agreements, PMRMA and the Service will contribute joint efforts to implement the conservation and management actions set forth in this Conservation Agreement.

### B. PMRMA

1. PMRMA will provide overall program goals and schedules for the conservation and management actions. PMRMA will approve management plans, obligation and issuance of Army funds, requests for training, installation security and support (including the Facility Engineers), and public affairs activities relating to conservation and management of natural resources at RMA. PMRMA will, at the earliest time practicable, consult with the Service prior to initiating activities which might impact the wildlife resources of the Arsenal, including but not limited to: RI/FS activities, interim response actions, leases, other government uses, and public uses.

2. PMRMA will provide office space for RMA-FOFW. PMRMA will also provide one telephone with long distance capability for use by RMA-FOFW.

3. PMRMA will provide labor and equipment necessary to conduct the conservation and management practices developed as a result of this Conservation Agreement. Such management practices will be determined by consultation between PMRMA and the Service in accordance with Paragraph XI., Special Provisions. Activity budgets established by the agreements listed in Paragraph VI., Associated Agreements, are summarized in Appendix B, Budget FY 1990-1993.

4. PMRMA, in consultation with the Service, will resolve any conflicts between conservation/management activities and other activities, including but not limited to: RI/FS activities, interim response actions, leases, other government uses, and public uses. If funding should be limited, PMRMA, in consultation with the Service, will prioritize the uses of available funds.

### C. Service

1. (Task 1) The Service, in consultation with PMRMA, will develop an overall fisheries and wildlife management plan for RMA designed to preserve, enhance and develop wildlife resources at RMA. The plan will include:

- a. an inventory review of fish and wildlife,
- b. the development and improvement of habitat,
- c. a description of the need and methods for stocking desired species,
- d. a description of the need and methods to control plant and animal species, and
- e. a plan to protect fish and wildlife resources, including endangered and threatened species.

2. (Task 1) The overall plan and the first fiscal year's detailed plan will be developed and approved as soon as is practicable, but not later than September 30, 1989. The estimated budget for FY 1989 is at Appendix C, Budget FY 1989.

3. (Task 1) Thereafter, the Service will develop and submit detailed annual plans, detailed annual budgets, and modifications to the overall plan to PMRMA by 15 February of each year for the succeeding fiscal year. The Service will supplement the management plan with a description of the previous fiscal year's efforts and results.

4. (Task 1) The Service will provide technical review and recommendations concerning the Biota Component of the RMA Comprehensive Monitoring Program (CMP). Additionally, the Service will recommend sampling schemes, priorities for sample of chance, and special sampling programs in support of the CMP.

5. (Task 2) As described in Paragraph VII, Scope of Work, the Service will provide technical review of RI/FS, IRA, and other documents. The Service will prepare recommendations to PMRMA, as requested, to minimize contaminant exposure to fish and wildlife and to mitigate wildlife impacts resulting from cleanup activities.

6. (Task 3) The Service will provide law enforcement assistance to PMRMA for the protection of wildlife resources at RMA. The assistance will consist of annual internal reviews, with recommendations, of the security procedures in effect at RMA as it relates to the protection of wildlife resources. Training for security and other RMA personnel will be provided on an as needed basis. Additionally, the Service will make available law enforcement personnel to assist PMRMA personnel investigate crimes committed against natural resources on RMA. Such personnel must have the commensurate investigative and arrest authority.

7. (Task 4) The Service, in consultation with PMRMA, will provide public relations support in the area of wildlife issues. The Service will propose, as part of the detailed annual plan, community relations activities necessary to educate and inform the public. These activities might include, but are not limited to, the Science in School Program, and visits by naturalists, public interest groups and public officials. Additionally, the Service can allow qualified scientists to carry out Service approved ecological or environmental research programs approved by the PMRMA.

8. (Task 1) This Conservation Agreement establishes, in accordance with Army Regulation 420-74, the Natural Resources Conservation Committee (NRCC). Its members will be PMRMA, the Service, the U.S. Environmental Protection Agency, Shell Oil Company, and other interested organizations. In accordance with Army Regulation 420-74, Army representatives will include the RMA Commander, Facilities Engineer, Environmental Coordinator, and an attorney. PMRMA will chair the NRCC. The NRCC will serve as an information sharing body. The Service will inform the NRCC of the status and future activities of the various wildlife efforts at RMA. PMRMA will prepare minutes of each meeting and provide them to the members.

9. (Task 1) The Service will provide a representative to the RMA Commander's weekly coordination meeting. This will allow the Service to coordinate wildlife activities with on-going activities at RMA to avoid conflict to the maximum extent practicable.



## VIII. Period of Performance

A. This Conservation Agreement will be effective from the date it is approved until the On-Post Record of Decision for RMA is approved, or September 30, 1993, whichever is earlier.

B. This Conservation Agreement is subject to the provision of Paragraph XIII., Termination.

## IX. Financial Administration

### A. Funding between the Service and PMRMA

1. The budget for this Conservation Agreement is outlined Appendix B, Budget FY 1990-1993, and Appendix C, Budget FY 1989. The funds provided to the Service will be allocated toward the tasks developed in accordance with Paragraph VII., Scope of Work.

2. This Conservation Agreement establishes a single source for funds obligated in accordance with the agreements listed in Paragraph VI., Associated Agreements. Commencing in 1990, the funding arrangement made in this Conservation Agreement, as outlined in Appendix B, replaces the funding arrangements made in earlier agreements between the Service and PMRMA listed below:

a. (Task 2) \$50,000 per year allocated in the proposed Modified Consent Decree, the RI/FS Process Document and the Federal Facility Agreement. (See Paragraph VI., Associated Agreements), and

b. (Task 5) \$19,486 per year allocated in the Bald Eagle Management Area Agreement. (See Paragraph VI.E., Associated Agreements, RMA Bald Eagle Management Area).

3. Funds obligated by PMRMA to the Service and not expected to be committed by the Service by September 30 of each fiscal year will be identified in writing by the Service to PMRMA by August 15 of that year. PMRMA will adjust its obligation accordingly.

4. The maximum budget available for activities designated in accordance with this Conservation Agreement is outlined in Appendices B and C, subject to modifications proposed under Paragraph VI.C.(3), Scope of Work, Service, and Paragraph XII., Modifications.

## B. Payments

1. Allowable and allocable costs under this Conservation Agreement will include all direct and indirect costs incurred by the Service for work completed within the scope of this Conservation Agreement. PMRMA and the Service will be responsible to maintain a detailed record of costs incurred. Separate balances will be maintained for work performed which is related to agreements listed in Paragraph VI., Associated Agreements. Payment requests will be submitted for approval through the appropriate party's finance office.

2. The Service will bill PMRMA quarterly and PMRMA will pay quarterly for the Services incurred costs up to the annual limits described in Appendices B and C.

3. The Service and PMRMA will provide each other with cost documentation which show an annual reconciliation of costs and expenditures incurred by the Army and the Service. Such documentation for a fiscal year will be provided 45 days after the close of that fiscal year.

4. The Service will, with 30 days written notice, provide project data to PMRMA.

## X. Deliverables

The Service will provide the following reports in accordance with this Conservation Agreement to PMRMA:

- A. Five year Overall Management Plan
- B. Annual Work Plans and Projected Budgets
- C. Results of Previous Year's Efforts
- D. Mitigation Plans, as applicable.

## XI. Special Provisions

### A. Disputes

If consultation, as defined in Paragraph III.A., Definitions, occurs between the Army and the Service without resolution, and a may-affect situation still exists, formal Endangered Species Act consultation may be initiated under Section 7 of the ESA.

## B. Property

Property acquired by the Service from Army funding through this Conservation Agreement shall be used exclusively for efforts at RMA.

## C. Project Officers.

1. Each party will appoint a Project Officer who will be responsible to oversee the work performed under this Conservation Agreement. Project Officers will have authority to agree to and approve technical changes within the Scope of Work, except that changes may not be made in those agreements incorporated by reference unless made in accordance with those agreements.

2. Changes which would alter the stated objectives of this Conservation Agreement or attempt to increase budget requirements will be made in accordance with Paragraph XII., Modifications.

## D. Novation and Change of Name Agreements.

Federal Acquisition Regulation (FAR) Subpart 42.12 is hereby incorporated.

## XII. Modifications

A. Modifications to the agreement which are beyond this Conservation Agreement's technical scope, or increase/decrease the cost of work, will be made in writing and signed by the parties prior to being incorporated. Correspondence provided by the parties will be considered part of this Conservation Agreement when countersigned by the receiver and returned to the sending party.

B. Mitigation Plans prepared and approved as provided by this Conservation Agreement will be incorporated into this agreement as Appendices.

## C. Additional Parties

Other organizations involved in the on-going litigation at RMA can become parties to this Conservation Agreement.

## XIII. Termination

A. Each party may terminate its participation in this Conservation Agreement at any time by giving at least 90 days written notice to the other party.

B. Funds obligated by the terminating party to the non-terminating party prior to termination of this Conservation Agreement will be assured by the terminating party. The non-terminating party will have no liability to assure funds which were obligated by that party to the terminating party prior to termination.

XIV. Effective Date

This Conservation Agreement becomes effective upon execution.

By Rocky Mountain Arsenal

By the U.S. Fish and Wildlife Service

\_\_\_\_\_  
WALLACE N. QUINTRELL, U.S. Army  
Colonel, Ordnance Corps  
Program Manager  
Rocky Mountain Arsenal

\_\_\_\_\_  
GALEN BUTERBAUGH  
Regional Director  
Region 6  
U.S. Fish and Wildlife Service

\_\_\_\_\_  
Date

3/23/89  
Date

## Appendix A

### U.S. Fish and Wildlife Service Organization

#### I. Rocky Mountain Region

- A. Regional Director, Region 6
- B. Deputy Regional Director
- C. Assistant Regional Director, Fish and Wildlife Enhancement
- D. Deputy Assistant Regional Director, Fish and Wildlife Enhancement.

#### II. Fish and Wildlife Enhancement, RMA-FOFW, RMA Coordinator

- A. Contaminants
- B. Wildlife Management
- C. Fisheries Management
- D. Public Affairs
- E. Law Enforcement

Appendix B

Budget FY 1990-FY 1993

|   | FY90      | FY91      | FY92      | FY93      |
|---|-----------|-----------|-----------|-----------|
| I. Previous Agreements:                   |           |           |           |           |
| a. Proposed Consent Decree<br>(Task 2)    | \$50,000  | \$50,000  | \$50,000  | \$50,000  |
| b. Bald Eagle Management<br>Area (Task 5) | \$19,486  | \$19,486  | \$19,486  | \$19,486  |
| II. This Agreement:                       |           |           |           |           |
| a. Operations and Planning<br>(Task 1)    | \$218,314 | \$218,314 | \$218,314 | \$218,314 |
| b. Law Enforcement<br>(Task 3)            | \$15,500  | \$15,500  | \$15,500  | \$15,500  |
| c. Public Affairs<br>(Task 4)             | \$12,200  | \$12,200  | \$12,200  | \$12,200  |
| III. Total:                               | \$315,500 | \$315,500 | \$315,500 | \$315,500 |

NOTE: Task 5 will be funded through the North/South Runway, Deed of Leasehold and Lesser Interests, Rocky Mountain Arsenal, Colorado No. DACA 45-1-87-6001, dated May 24, 1988. (See Paragraph VI.A.3., Associated Agreements.) Funds from the Lease will be used exclusively for Task 5. Tasks 1-4 will be funded through the Defense Environmental Restoration Account.

APPENDIX C

Budget FY 1989

|  |          |
|--|----------|
| A. Operations and Planning<br>(Task 1) | \$72,100 |
| B. Law Enforcement<br>(Task 3)         | \$0      |
| C. Public Affairs<br>(Task 4)          | \$0      |
| Total:                                 | \$72,100 |

NOTE: Task 1 will be funded through the Defense Environmental Restoration Account.

APPENDIX D

List of Important Species Potentially Occurring On or Near RMA (Page 1 of 4)

| Common Name                    | Scientific Name                      | Status  |                  | Observed on RMA |
|--------------------------------|--------------------------------------|---------|------------------|-----------------|
|                                |                                      | Federal | State            |                 |
| <u>MAMMALS</u>                 |                                      |         |                  |                 |
| Black-footed ferret            | <u>Mustela nigripes</u>              | E       | E                |                 |
| Swift fox                      | <u>Vulpes velox</u>                  | C       |                  | X               |
| Opposum                        | <u>Didelphis virginiana</u>          |         |                  | SE              |
| Little brown bat               | <u>Myotis lucifugus</u>              |         | SP               |                 |
| Big brown bat                  | <u>Eptesicus fuscus</u>              |         | SP               |                 |
| Desert cottontail              | <u>Sylvilagus audubonii</u>          |         | SD, G            | X               |
| Eastern cottontail             | <u>Sylvilagus floridanus</u>         |         | SN, G            | X               |
| White-tailed jackrabbit        | <u>Lepus townsendii</u>              |         | SD, G            | X               |
| Black-tailed jackrabbit        | <u>Lepus californicus</u>            |         | SN, G            | X               |
| Thirteen-lined ground squirrel | <u>Spermophilus tridecemlineatus</u> |         | SD               | X               |
| Spotted ground squirrel        | <u>Spermophilus spilosoma</u>        |         | SD               |                 |
| Rock squirrel                  | <u>Spermophilus variegatus</u>       |         | SE               |                 |
| Black-tailed prairie dog       | <u>Cynomys ludovicianus</u>          |         | SE, SP,<br>SI, G | X               |
| Fox squirrel                   | <u>Sciurus niger</u>                 |         | SP, SN, G        | X               |
| Northern pocket gopher         | <u>Thomomys talpoides</u>            |         | SD, SI           |                 |
| Olive-backed pocket mouse      | <u>Perognathus fasciatus</u>         |         | SD               |                 |
| Silky pocket mouse             | <u>Perognathus flavus</u>            |         | SD               | X               |
| Raccoon                        | <u>Procyon lotor</u>                 |         | SP, SE           | X               |
| Mink                           | <u>Mustela vison</u>                 |         | SE               |                 |
| Spotted skunk                  | <u>Spilogale putorius</u>            |         | SE               |                 |
| Striped skunk                  | <u>Mephitis mephitis</u>             |         | SE, SP           |                 |
| Bobcat                         | <u>Felis rufus</u>                   |         | SE               |                 |
| Coyote                         | <u>Canis latrans</u>                 |         | G                | X               |
| Red fox                        | <u>Vulpes vulpes</u>                 |         | G                | X               |
| Gray fox                       | <u>Urocyon cinereoargenteus</u>      |         | G                | X               |
| Badger                         | <u>Taxidea taxus</u>                 |         | G                | X               |
| Muskrat                        | <u>Ondatra zibethicus</u>            |         | G                | X               |
| Mule deer                      | <u>Odocoileus hemionus</u>           |         | G                | X               |
| White-tailed deer              | <u>Odocoileus virginianus</u>        |         | G                | X               |
| Pronghorn                      | <u>Antilocapra americana</u>         |         | G                |                 |
| <u>BIRDS</u>                   |                                      |         |                  |                 |
| Bald eagle                     | <u>Haliaeetus leucocephalus</u>      | E       | E                | X               |
| Peregrine falcon               | <u>Falco peregrinus</u>              | E       | E                | X               |
| Whooping crane                 | <u>Grus americana</u>                | E       | E                |                 |
| Least tern                     | <u>Sterna antillarum</u>             | E       | E                |                 |
| Piping plover                  | <u>Charadrius melodus</u>            | E       | E                |                 |
| Ferruginous hawk               | <u>Buteo regalis</u>                 | C       | SD               | X               |



List of Important Species Potentially Occurring On or Near RMA (Page 2 of 4)

| Common Name                 | Scientific Name                                  | Status  |        | Observed on RMA |
|-----------------------------|--|---------|--------|-----------------|
|                             |  | Federal | State  |                 |
| Swainson's hawk             | <u>Buteo swainsoni</u>                           | C       |        | X               |
| Western snowy plover        | <u>Charadrius alexandrinus</u><br><u>nivosus</u> | C       | SD     |                 |
| Mountain plover             | <u>Charadrius montanus</u>                       | C       | SD     |                 |
| Yellow-billed cockoo        | <u>Coccyzus americanus</u>                       | C       | SD     |                 |
| Long-billed curlew          | <u>Numenius americanus</u>                       | C       | SD     |                 |
| Golden eagle                | <u>Aquila chrysaetos</u>                         | H       |        | X               |
| Prairie falcon              | <u>Falco mexicanus</u>                           | H       | SD     | X               |
| Osprey                      | <u>Pandion haliaetus</u>                         | H       | SD     | X               |
| Northern goshawk            | <u>Accipiter gentilis</u>                        | H       | SE     | X               |
| Cooper's hawk               | <u>Accipiter cooperii</u>                        | H       |        | X               |
| Merlin                      | <u>Falco columbarius</u>                         | H       |        |                 |
| Burrowing owl               | <u>Athene cunicularia</u>                        | H       | SI     | X               |
| Eastern screech owl         | <u>Otus asio</u>                                 | H       |        |                 |
| Upland sandpiper            | <u>Bartramia longicauda</u>                      |         | SD     | X               |
| American bittern            | <u>Botaurus lentiginosus</u>                     |         | SD     |                 |
| Brown-headed cowbird        | <u>Molothrus ater</u>                            |         | SN     | X               |
| Eared grebe                 | <u>Podiceps nigricollis</u>                      |         | SD, SI | X               |
| European starling           | <u>Sturnus vulgaris</u>                          |         | SN     | X               |
| American white pelican      | <u>Pelecanus erythrorhynchos</u>                 |         | SE, SI | X               |
| Chihuahuan raven            | <u>Corvus cryptoleucus</u>                       |         | SD     |                 |
| Mountain bluebird           | <u>Sialia currucoides</u>                        |         | SD     | X               |
| Western grebe               | <u>Aechmophorus occidentalis</u>                 |         | SD, SI | X               |
| American dipper             | <u>Cinclus mexicanus</u>                         |         | SI     |                 |
| Loggerhead shrike           | <u>Lanius ludovicianus</u>                       |         | SD     | X               |
| Great blue heron            | <u>Ardea herodias</u>                            |         | SE, SI | X               |
| Forster's tern              | <u>Sterna forsteri</u>                           |         | SI     | X               |
| Fox sparrow                 | <u>Passerella iliaca</u>                         |         | SD, SI | X               |
| Common nighthawk            | <u>Chordeiles minor</u>                          |         | SD, SI | X               |
| Yellow warbler              | <u>Dendroica petechia</u>                        |         | SD     | X               |
| American avocet             | <u>Recurvirostra americana</u>                   |         | SC     | X               |
| Solitary vireo              | <u>Vireo solitarius</u>                          |         | SD     | X               |
| Black-throated gray warbler | <u>Dendroica nigrescens</u>                      |         | SI     |                 |
| MacGillivray's warbler      | <u>Oporornis tolmiei</u>                         |         | SI     | X               |
| Virginia's warbler          | <u>Vermivora virginiae</u>                       |         | SI     |                 |
| Common poorwill             | <u>Phalaenoptilus nuttallii</u>                  |         | SD, SI |                 |
| Common yellowthroat         | <u>Geothlypis trichas</u>                        |         | SD     | X               |
| Savannah sparrow            | <u>Passerculus sandwichensis</u>                 |         | SD     | X               |
| McCown's longspur           | <u>Calcarius mccownii</u>                        |         | SI     | X               |
| Snowy egret                 | <u>Egretta thula</u>                             |         | SD     |                 |

List of Important Species Potentially Occurring On or Near RMA (Page 3 of 4)

| Common Name             | Scientific Name                      | Status  |       | Observed on RMA |
|-------------------------|--------------------------------------|---------|-------|-----------------|
|                         |                                      | Federal | State |                 |
| Black tern              | <u>Chlidonias niger</u>              |         | SI    | X               |
| Lewis' woodpecker       | <u>Melanerpes lewis</u>              |         | SD    |                 |
| Yellow-headed blackbird | <u>Xanthocephalus xanthocephalus</u> |         | SD    | X               |
| Brant                   | <u>Branta bernicla</u>               |         | G     |                 |
| Canada goose            | <u>Branta canadensis</u>             |         | G     | X               |
| White-fronted goose     | <u>Anser alibifrons</u>              |         | G     |                 |
| Greater Snow goose      | <u>Chen caerulescens</u>             |         | G     | X               |
| Ross's goose            | <u>Chen rossii</u>                   |         | G     |                 |
| Mallard                 | <u>Anas platyrhynchos</u>            |         | G     | X               |
| Mexican duck            | <u>Anas diazi</u>                    |         | G     |                 |
| Black duck              | <u>Anas rubripes</u>                 |         | G     |                 |
| Mottled duck            | <u>Anas fulvigula</u>                |         | G     |                 |
| Gadwall                 | <u>Anas strepera</u>                 |         | G     | X               |
| Northern Pintail        | <u>Anas acuta</u>                    |         | G     | X               |
| Green-winged teal       | <u>Anas crecca</u>                   |         | G     | X               |
| Blue-winged teal        | <u>Anas discors</u>                  |         | G     | X               |
| Cinnamon teal           | <u>Anas cyanoptera</u>               |         | G     | X               |
| American wigeon         | <u>Anas americana</u>                |         | G     | X               |
| Northern shoveler       | <u>Anas clypeata</u>                 |         | G     | X               |
| Wood duck               | <u>Aix sponsa</u>                    |         | G     | x               |
| Redhead                 | <u>Aythya americana</u>              |         | G     | X               |
| Ring-necked duck        | <u>Aythya collaris</u>               |         | G     | X               |
| Canvasback              | <u>Aythya valisineria</u>            |         | G     | X               |
| Greater scaup           | <u>Aythya marila</u>                 |         | G     |                 |
| Lesser scaup            | <u>Aythya affinis</u>                |         | G     | X               |
| Common goldeneye        | <u>Bucephala clangula</u>            |         | G     | X               |
| Barrow's goldeneye      | <u>Bucephala islandica</u>           |         | G     | X               |
| Bufflehead              | <u>Bucephala albeola</u>             |         | G     |                 |
| Oldsquaw                | <u>Clengula hyemalis</u>             |         | G     |                 |
| Common eider            | <u>Somateria mollissima</u>          |         | G     |                 |
| White-winged scoter     | <u>Melanitta fusca</u>               |         | G     |                 |
| Surf scoter             | <u>Melanitta perspicillata</u>       |         | G     |                 |
| Black scoter            | <u>Melanitta nigra</u>               |         | G     |                 |
| Ruddy duck              | <u>Oxyura jamaicensis</u>            |         | G     | X               |
| American coot           | <u>Fulica americana</u>              |         | G     | X               |
| Ring-necked pheasant    | <u>Phasianus colchicus</u>           |         | G     | X               |
| Chucker                 | <u>Alectoris chukar</u>              |         | G     | X               |
| Northern bobwhite       | <u>Colinus virginianus</u>           |         | G     | X               |
| Scaled quail            | <u>Callipepla squamata</u>           |         | G     |                 |
| Mourning dove           | <u>Zenaida macroura</u>              |         | G     | X               |

List of Important Species Potentially Occurring On or Near RMA (Page 4 of 4)

| Common Name           | Scientific Name                | Status  |       | Observed<br>on RMA |
|-----------------------|--------------------------------|---------|-------|--------------------|
|                       |                                | Federal | State |                    |
| <u>REPTILES</u>       |                                |         |       |                    |
| Milk snake            | <u>Lampropeltis triangulum</u> |         | SE    |                    |
| <u>AMPHIBIANS</u>     |                                |         |       |                    |
| Bullfrog              | <u>Rana catesbeiana</u>        |         | SN    | X                  |
| Northern leopard frog | <u>Rana pipiens</u>            |         | SD    | X                  |
| <u>FISH</u>           |                                |         |       |                    |
| Rainbow trout         | <u>Salmo gairdneri</u>         |         | G     | X                  |
| Northern pike         | <u>Esox lucius</u>             |         | G     | X                  |
| Carp                  | <u>Cyprinus carpio</u>         |         | G     | X                  |
| Channel catfish       | <u>Ictalurus punctatus</u>     |         | G     | X                  |
| Black bullhead        | <u>Ictalurus melas</u>         |         | G     | x                  |
| Largemouth bass       | <u>Micropterus salmoides</u>   |         | G     | X                  |
| Green sunfish         | <u>Lepomis cyanellus</u>       |         | G     | X                  |
| Pumpkinseed           | <u>Lepomis gibbosus</u>        |         | G     | X                  |
| Northern bluegill     | <u>Lepomis macrochirus</u>     |         | G     | X                  |
| Black crappie         | <u>Pomoxis nigromaculatus</u>  |         | G     | X                  |
| Red-ear sunfish       | <u>Lepomis miggolophys</u>     |         | G     | X                  |
| Yellow perch          | <u>Perca flavescens</u>        |         | G     | X                  |
| <u>INVERTEBRATES</u>  |                                |         |       |                    |
| Grasshopper           | <u>Melanoplus sanguinipes</u>  |         |       | X                  |
| Earthworm             | <u>Apporectadea spp.</u>       |         |       | X                  |
| Aquatic Snails        | <u>Physella spp.</u>           |         |       | X                  |
|                       | <u>Gyraulus parvus</u>         |         |       | X                  |
|                       | <u>Lymnaea spp</u>             |         |       | X                  |

## Legend

E = Endangered

C = Candidate species

S = Species of Special Concern

    E = Educational, scientific, or recreational value

    P = Pest, nuisance, or health hazard

    D = small or declining populations

    I = Indicator, ecologically sensitive species

    N = Increasing, may negatively impact other species

G = Game species

H = High Federal interest

Sources: Fairbanks, R.L. and J. Kolmer, 1976.

Colorado Division of Wildlife, 1981, 1982a, 1982b, 1985.

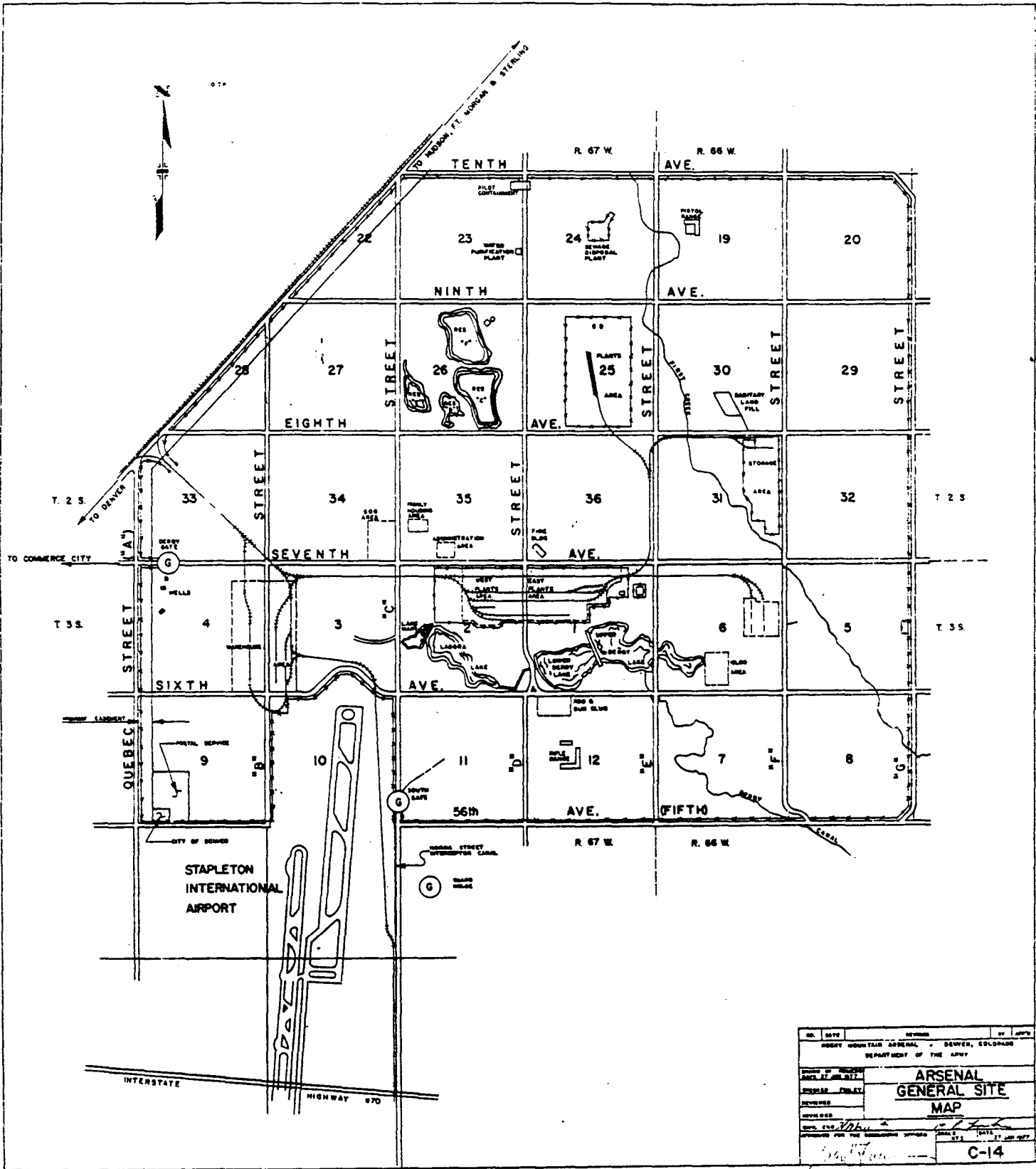
Federal Register, 1985.

Dave Thorne, 1986a.

Morrison-Knudsen Engineers, Inc., 1988

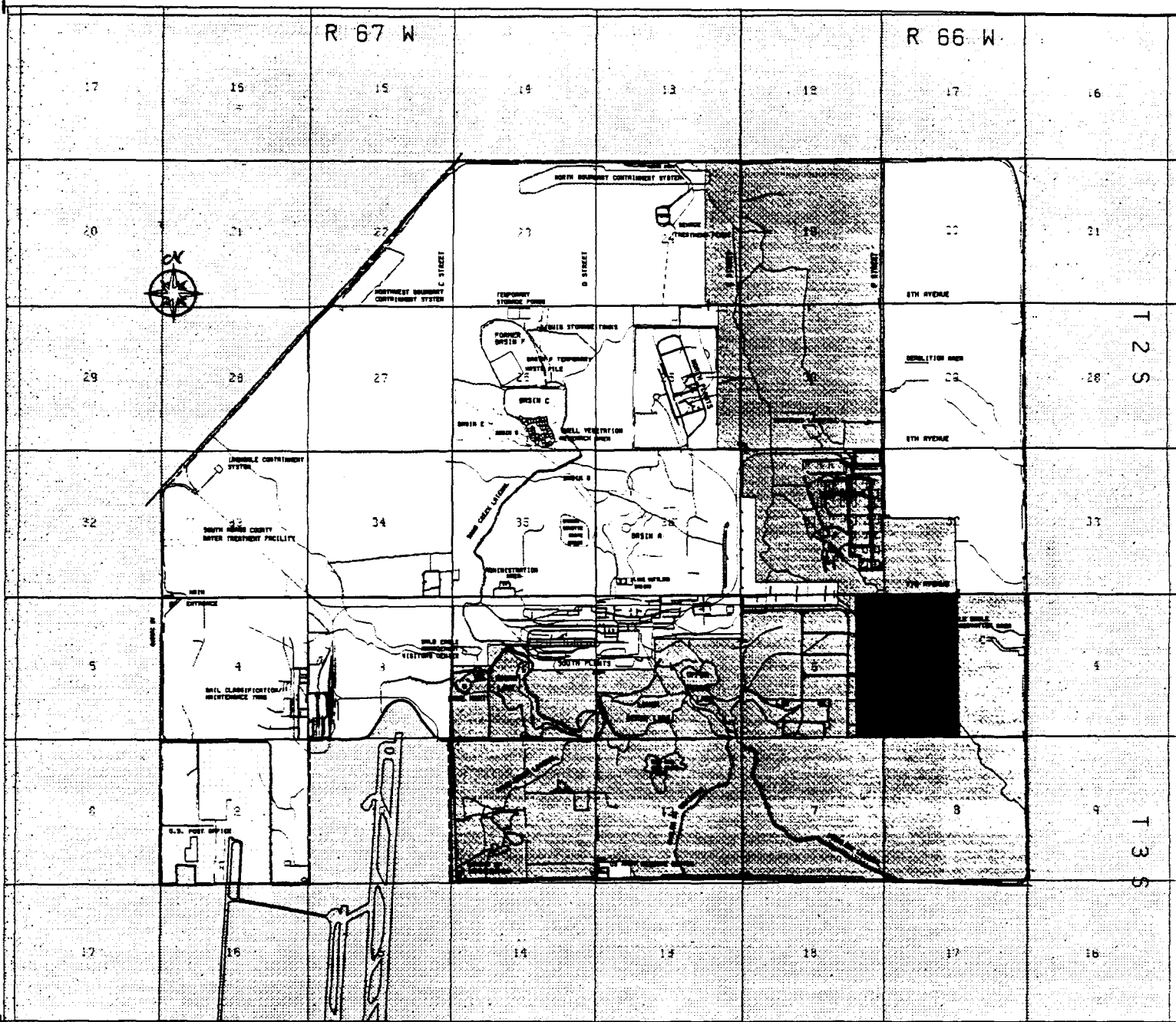
Colorado List of Migratory Birds of High Federal Interest.

APPENDIX G  
INSTALLATION MAPS



|  |                    |                      |
|--|--------------------|----------------------|
| NO. 1075   | REVISED            | BY 1075              |
| MOUNTAIN ARSENAL - DENVER, COLORADO              |                    |                      |
| DEPARTMENT OF THE ARMY                           |                    |                      |
| <b>ARSENAL GENERAL SITE MAP</b>                  |                    |                      |
| DATE: 11/15/57                                   | SCALE: AS SHOWN    | PROJECT: 1075        |
| DESIGNED: [Signature]                            | DRAWN: [Signature] | CHECKED: [Signature] |
| APPROVED FOR THE COMMANDING OFFICER: [Signature] | DATE: 11/15/57     | BY: [Signature]      |
|  |                    | C-14                 |

# ROCKY MOUNTAIN ARSENAL BALD EAGLE MANAGEMENT AREA (BEMA)



Data captured from the 1988 General Site Maps (revised from the U.S. Army Corps of Engineers 1984 Basic Information Maps) include the following:

Data captured from 1988 or 1989 Aerial Photographs include the following:

Additional updates have been made to the roads and airport runways in Section 9.

- |                    |                  |                                |
|--------------------|------------------|--------------------------------|
| — Drainage/Streams | — Railroads      | — Lakes                        |
| — Basins A,C       | — Unpaved Roads  | — Airport Runways              |
| — Basins/Ponds     | — Paved Roads    | — Basin F Outline              |
| — Sites            | — Key Structures | — Basin F temporary waste pile |
|                    |                  | — Basin C vegetation area      |

The section coordinates, RMA boundary, and lease boundaries are also available.

Current BEMA
  Roost Exclusion Area

— BEMA Gates

**ROCKY MOUNTAIN ARSENAL BALD EAGLE MANAGEMENT AREA (BEMA)**  
 Digitized and Plotted at TERRITORY Data Processing Center, Denver, CO.  
 Original Source Documentation provided by DP ASSOCIATES, INC. from  
 Archival Documents located at SAC, Rocky Mountain Arsenal.  
 Plotted with 44 inch, 400 DPI Versatec Color Electrostatic Plotter.  
 July, 1990 Version 0.071800

2000 0 2000 4000 8000

SCALE IN FEET

**DP Associates, Inc.**  
 Territory Computer Services

| SYN   | DESCRIPTION | DATE                        | APPR |
|---|-------------|-----------------------------|------|
| REVISIONS                                     |             |                             |      |
| <b>DEPARTMENT OF THE ARMY</b>                 |             |                             |      |
| <b>ROCKY MOUNTAIN ARSENAL - DENVER, COLO.</b> |             |                             |      |
| DRAWN BY                                      |             | DATE                        |      |
| CHECKED BY                                    |             | REVIEWED                    |      |
| FILE NAME                                     |             | DATE                        |      |
| DP ASSOCIATES, HUNTSVILLE, AL.                |             | TERRITORY, DENVER, COLORADO |      |
| CONTRACTOR                                    |             | SUB CONTRACTOR              |      |
| ROCKY MOUNTAIN ARSENAL                        |             | ENGINEERING OFFICE          |      |
| OUTRIGGER MANAGEMENT CONTRACT                 |             | SH                          | DATE |
|   |             | OF                          |      |