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For

Rock Creek Reserve Integrated Natural Resource Management Plan/Environmental Assessment

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Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

MAY 0 5 2000

00-DOE-02379

Dear Community Member:

In May of 1999 the Department of Energy (DOE), Rocky Flats Field Office and the U.S. Fish and Wildlife Service signed an Interagency Agreement regarding management of the Rock Creek Reserve (Reserve). Under this agreement the Reserve, in the northern portion of the Rocky Flats Buffer Zone, will be cooperatively managed by the 2 agencies, while ownership will remain with the DOE. Enclosed are a *Discussion Draft Outline of the Goals and Objectives* for the Rock Creek Reserve Integrated Natural Resources Management Plan (Plan) and a *Discussion Draft of the Table of Contents* for the Plan. The purpose of the Plan is to provide tools and options for the agencies to preserve, protect, and maintain the natural habitats occurring in the Reserve.

It is our intention to work closely with the public to establish the methodologies to be used in managing these precious resources. In the coming weeks, we will be conducting a series of briefings and meetings regarding the enclosed discussion drafts, and we will accept public comments on them through **June 15, 2000**.

The first meeting will be **Thursday, May 18, 2000, at Rocky Flats Environmental Technology Site, Building 60, from 9:30 to 11:30 a.m.** The next briefing on the outline will be a public meeting on **May 25, 2000, at the Arvada City Hall, Anne Campbell Room, from 6:00 to 8:00 p.m.** Then we will give a final briefing at the Rocky Flats Citizens Advisory Board meeting scheduled for **Thursday, June 1, 2000, from 6:00 to 9:30 p.m.**

As we go through this process we will use input from the public to help fill out the sections of the Plan. Once the Plan is in a draft form we will again enter into a series of briefings and public meetings. We will schedule public meetings and briefings on the draft Plan once we can better estimate the schedule.

If you have any questions or need additional information, please contact Mariane Anderson at (303) 966-6088 or mariane.anderson@rfets.gov, or Cliff Franklin at (303) 966-5919 or cliff.franklin@rfets.gov.

Sincerely,

Joseph A. Legare
Assistant Manager
for Environment and Infrastructure

Enclosures (As Stated)

DRAFT
ROCK CREEK RESERVE INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF ENERGY ROCKY FLATS TECHNOLOGY SITE AND U.S. FISH & WILDLIFE SERVICE

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Discussion Draft Goals and Objectives
Rock Creek Reserve Integrated Natural Resources Management Plan Outline
May 2000

Introduction

An Integrated Natural Resources Management Plan (hereinafter referred to as the Plan) for the Rock Creek Reserve portion of the Rocky Flats Environmental Technology Site (hereinafter referred to as Rocky Flats) is being developed as a joint effort between the Department of Energy, Rocky Flats Field Office, and the Department of Interior, U.S. Fish & Wildlife Service, Colorado Fish & Wildlife Assistance Office, Lakewood, CO.

A portion of Rocky Flats, known as the Rock Creek Fish & Wildlife Cooperative Management Area (hereinafter referred to as Rock Creek Reserve), was established in May of 1999 in recognition of the area's biological significance. Although still under ownership of the Department of Energy, Rock Creek Reserve will be co-managed by the U.S. Fish & Wildlife Service as part of a cooperative agreement signed by the two agencies in 1999. The need for an Integrated Natural Resources Management Plan was recognized, and included as a requirement in the cooperative agreement. The Plan will discuss management tools and options specifically for Rock Creek Reserve. However, the management options outlined in the Plan can, and will, if necessary, be used to manage the natural resources for the entire Rocky Flats site after the scheduled clean up is completed and future land ownership/responsibility is determined.

This Plan is being developed as a tool to cooperatively manage natural/cultural resources under the current (and forseeable future) ownership and land use conditions. Any significant changes to the current conditions will be addressed as a supplement to the Plan, or in a separate document if necessary. All management strategies in this Plan will be consistent with the Rocky Flats current mission of site remediation and facilities demolition resulting in closure. The two cooperating agencies agreed to use the Department of Army format for preparing Integrated Natural Resource Management Plans, using the April 1997 guidelines established by the Army.

Development of this Integrated Natural Resources Management Plan is in accordance with the National Environmental Policy Act (NEPA). NEPA analysis of realistic alternatives will be incorporated within the Plan to achieve that goal. The Environmental Assessment will be included as an appendix. Some future natural resource management projects may require additional NEPA review if they do not fall within the scope of significance criteria established in the Environmental Assessment.

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The goals and objectives presented in this outline are a result of discussions that occurred over a several year period concerning the possible management options for the buffer zone. The final decisions will be made after additional public and agency input is solicited and considered. The Plan can be expanded to include the entire buffer zone if required, and the Industrial Area upon demolition and closure.

After additional public and agency input, the following Draft discussion of Goals and Objectives will be evaluated, incorporated into, and form the basis of, the Draft Plan. The Draft Plan will be developed and formatted following the attached Draft Plan Table of Contents. Solicitation of public input will continue as the Plan is developed.

1. Goal

1.1 To cooperatively manage Rock Creek Reserve under federal ownership to restore, preserve, protect and enhance native, sensitive and Threatened & Endangered species in a manner compatible with Rocky Flats' current mission. The mission includes, but is not limited to, clean up of contaminated areas leading to demolition of facilities and closure.

1.2 **Issues:**

1.2.1 Differing public viewpoints on future use. Efforts will be made to obtain and incorporate comments from a diverse cross section of the interested public. These comments will serve as the base for developing management alternatives and recommendations.

1.2.2 Proposed boundary extension of Rock Creek Reserve. The proposed extension would expand the existing area (approx. 800 acres) to over 1700 acres, based on geographical and hydrological features. Other Buffer Zone areas may be suitable for inclusion.

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1.2.3 Responsibilities. The DOE will maintain ownership and ultimate management responsibility for the land, through at least 2006. The USFWS will cooperate with DOE Rocky Flats to develop and implement management recommendations.

1.2.4 Contaminants. Cleanup of adjacent areas to agreed upon levels of contamination will be accomplished as a DOE CERCLA or RCRA compliance responsibility.

2. Objectives

2.1 Promote native species. Restore areas infested with exotic, noxious weeds by removing/suppressing non-native plants to return those areas to a more natural state. Remove non-native fish and restock with natives. Conserve native plant and animal species, with management priorities given to species listed under the Endangered Species Act, candidate/proposed species or State-listed species. The Colorado Natural Heritage Program's Conservation Status Handbook will also serve as a guide for other rare or declining species. Achieve this through:

2.1.1 Reintroductions. Reintroduce species that historically occurred or had the potential to occur, in the area. Possible candidates for reintroduction programs are:

2.1.1.1 Sharp-tailed grouse

2.1.1.2 Iowa darter

2.1.1.3 Northern redbelly dace

2.1.1.4 Common Gallinule

2.1.1.5 Monitoring of reintroduced populations

2.1.2 Native plant and animal species enhancement, with priority given to T&E species. This includes residents and those species that use the area [illegible] for foraging.

2.1.2.1 All [illegible] plover, Peregrine falcon, Burrowing owl, Bald eagle and other raptors, and neotropical migrants

2.1.2.2 Prairie dogs (not currently present in Rock Creek Reserve area; a [illegible] population exists in the southern buffer area)

2.1.2.3 Deer and other ungulates

2.1.2.4 Flora: native plant species, esp. xeric tall grass prairie and tall upland shrubland plant community

2.1.2.5 Amphibians and reptiles

2.1.2.6 Invertebrates

2.1.3 The management [illegible] could include:

2.1.3.1 Prescribed fire

2.1.3.2 Predator/prey relationships

2.1.3.3 Integration of management strategies

2.1.3.4 Selective brush/grazing program

2.1.3.5 Population management. A variety of options may be considered, including but not limited to, removal/relocation, hunting, trapping, birth control, etc.

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2.1.3.6 Use of native species for revegetation

2.1.3.7 Erosion control and wetland enhancement

2.1.3.8 Continuation of existing monitoring programs

2.1.4 Preble's meadow jumping mouse refugium

2.1.4.1 Assist in Recovery Plan currently being prepared for PMJM

2.1.4.2 Continued monitoring and research on-site

2.1.5 Issues

2.1.5.1 Non-DOE activities on adjacent properties may cause impacts to water quality/quantity and PMJM habitat through sedimentation, de-watering, etc.

2.1.5.2 Are ground-disturbing activities on-site and on adjacent properties a source of the noxious weed problem?

2.1.5.3 Compliance with State and Federal weed laws

2.1.5.4 Mineral rights

2.2 Protect cultural/historical resources

2.2.1 Pedestrian surveys completed and documented, no "eligible" sites found. If any sites are found in the future and determined "eligible", they will be managed IAW National Historic Preservation Act.

2.2.2 No Tribal Trust Lands

2.2.3 Lindsay Ranch

2.2.3.1 The Ranch was evaluated and determined "ineligible", but there is considerable public interest in preservation and/or restoration.

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2.2.3.2 Future of the Ranch will be discussed during Rocky Flats closure; use options need to be consistent with the overall management plan.

2.3 Maintain/construct infrastructure for wildlife protection/enhancement

2.3.1 Maintenance and/or closure/removal of existing roads and fences

2.3.2 Evaluate adequacy of existing utilities to support wildlife management needs

2.3.3 **Issues**

2.3.3.1 Ownership of water rights for wildlife use (in-stream flows, PMJM habitat)

2.4 Environmental education/research opportunities:

2.4.1 Guided tours and visits to Rock Creek Reserve

2.4.2 PMJM research conducted in consultation with USFWS

2.4.3 Research on the area's unique habitats- xeric tallgrass prairie and tall upland shrubland community.

2.4.4 Research on noxious weed control

2.5 Address possibility of inclusion into the National Wildlife Refuge System.

2.5.1 Does Rock Creek Reserve meet the USFWS criteria for consideration of inclusion, based on Region 6 Ecosystem Team recommendations?

2.5.2 Passage of a bill would designate Rock Creek Reserve as a NWR regardless of criteria and recommendations.

Issues:

2.5.2.1 Refuge System may not accept contaminated areas, including landfills. The Rock Creek Reserve (including proposed expansion) contains no areas which require further action under current Federal or State of Colorado law.

Discussion of future options

The following are future options and alternatives outside the scope of the currently proposed management plan. Since the scope of the plan is to be limited to current conditions, these should be addressed only briefly. A short discussion of these as non-viable alternatives for the current plan might be appropriate. If the plan is to be updated every five years, these could be addressed in a future update if at that time it is deemed appropriate. If the plan becomes a "phased plan", these options could be addressed in Phase 2, which would most likely be implemented after closure is complete and permanent ownership/land use resolved.

2.6 Environmental education opportunities

2.6.1.1 Re-use of current visitor facility as Interpretive Center

2.6.1.2 Lindsay Ranch options:

2.6.1.2.1 Ranch house restored fully

2.6.1.2.2 Information kiosk and partial restoration

2.6.1.2.3 Leave structures as they are and allow to deteriorate naturally, (i.e. "benign neglect"), with or without information kiosk.

2.6.2 Recreation and public access

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2.6.2.1 Trail along existing roads or geographical features, linking up with county trail system

2.6.2.2 Picnic area

2.6.2.3 Watchable wildlife areas

2.6.3 **Issues**

2.2.2.1 Water/restroom facility availability to recreationists

2.2.2.2 Cost of construction and maintenance of facilities

2.2.2.3 Security

2.2.2.4 Environmental impacts (especially to PMJM) from construction and public use

2.2.2.5 Public concerns over contamination and perception of contamination

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Guidelines to Prepare Integrated Natural Resources Management Plans for Army Installations and Activities

April 1997

Prepared by

U.S. Army Environmental Center
Aberdeen Proving Ground, Maryland 21010

With support from

Horne Engineering Services, Inc.
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PREPARATION GUIDELINES FOR INTEGRATED NATURAL RESOURCES MANAGEMENT PLANS

INTRODUCTION

The purpose of these guidelines is to provide natural resources managers at Army installations with guidance on preparing integrated natural resources management plans (INRMPs) that are consistent with federal laws, Army policy, and natural resources management philosophies.

The INRMP is the installation commander's adaptive plan for managing natural resources to support and be consistent with the military mission while protecting and enhancing those resources for multiple use, sustainable yield, and biological integrity. The purpose of the INRMP is to ensure that natural resource conservation measures and Army activities on mission land are integrated and are consistent with federal stewardship requirements. INRMPs should be written to reflect the scope of the Army's stewardship requirements to sustain native ecological resources on a landscape and watershed scale and to comply with current legal mandates.

These guidelines are intended to support the Army policy of preparing and implementing INRMPs as directed by Army Memorandum (21 March 1997), *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP)*, and to assure that Army stewardship requirements are being addressed and executed on Army installations.

These guidelines consist of four parts. Part I includes a discussion of the compliance requirements, goals, stewardship, National Environmental Policy Act (NEPA) requirements, INRMP preparation process, INRMP preparation principles, and INRMP standardization. Part II contains an annotated outline for each of the major chapters of the INRMP. Part III is a checklist of possible elements that could be included in the INRMP or documents that could be consulted or referenced. Part IV is a list of laws that evoke certain conservation actions.

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PART I - PREPARATION GUIDANCE

1.0 OBJECTIVE

The objective of this document is to provide guidelines for the preparation of integrated natural resources management plans (INRMP) for U.S. Army installations and other lands used for the Army military mission, including those lands used by the State Army National Guards and U.S. Army Reserves. The management of natural resources is a series of processes over a long period and the INRMP provides incremental steps to achieve those long-term goals.

2.0 COMPLIANCE REQUIREMENTS

2.1 Federal Laws and Executive Orders

The preparation of an INRMP will normally encompass compliance with certain laws or executive orders. The following list, although not inclusive, includes most of the legal requirements that an installations would be concerned with. A more comprehensive list is found in Part IV of these guidelines:

- Sikes Act of 1962 (as amended through 1988)
- National Environmental Policy Act of 1969
- Endangered Species Act of 1973
- National Historic Preservation Act of 1966 (as amended through 1992)
- Archeological Resources Protection Act of 1979
- American Indian Religious Freedom Act of 1978
- Native American Graves Protection and Repatriation Act of 1990
- Federal Noxious Weed Act of 1974
- Clean Water Act of 1987
- Clean Air Act (as amended through 1990)
- Federal Insecticide, Fungicide, and Rodenticide Act
- Protection of Wetlands, 1977, Executive Order 11990
- Migratory Bird Treaty Act

2.2 Regulatory Requirements

In order for an INRMP to be valid, it must not only comply with applicable natural resource laws, but with Department of Defense Directives and Instructions, and Army Policies, as well.

Department of Defense Instruction 4715.3, *Environmental Conservation Program*, and Army Regulation 200-3, *Natural Resources - Land, Forest and Wildlife Management* both require military installations to prepare INRMPs. Army Memorandum (21 March 1997), *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP)* requires that all CONUS and certain OCONUS installations having more than 500 acres of mission lands shall have and execute a valid INRMP. Via official memorandum, the MACOM may request that a particular installation be exempted from these requirements. Adequate supporting evidence and reason must be provided with this

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request. This request will be made to HQDA (DAIM-ED-N), which will appropriately concur or non-concur with the request and respond via memorandum to the MACOM.

3.0 GOALS OF INTEGRATED NATURAL RESOURCES PLANNING

- Support the installations operational mission
- Meet stewardship requirements
- Enhance quality of life

4.0 STEWARDSHIP THROUGH ECOSYSTEM MANAGEMENT

Stewardship of natural resources on an ecosystem scale addresses requirements of water quality, soil productivity, biological diversity of native flora and fauna, and compliance concerns. The INRMP must emphasize protection and management of soil and water resources, which will, in turn, support the sustainability of biological resources and of mission activities.

As a minimum, the scope of INRMP implementation should span the entire installation, but the consideration of the effects of that management should extend beyond installation boundaries. For example, downstream water quality must be considered when planning on-post activities.

Ecosystem management provides a means for the Army to both protect biodiversity and to provide high quality military readiness. The INRMP is a mechanism through which Army installations can maintain sustainable land use through ecosystem management.

Ecosystem management must be based on clearly stated goals and objectives, and the INRMP must identify those goals and objectives, means to accomplish them, and methodologies to monitor results against objectives. An INRMP is the mechanism through which both ecosystem management and biodiversity protection will be accomplished on Army installations in the context of accomplishment of the installation's operational mission.

5.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Informed decision-making using the NEPA process must be an integral part of natural resources management on installations. By following the NEPA process, damages to natural resources on Army lands can be minimized or mitigated.

The adoption of a formal INRMP may be considered a major federal action as defined by Section 1508.18 in the Council for Environmental Quality's (CEQ) regulations. Planning documentation should satisfy NEPA requirements. Installations are encouraged to subject draft INRMPs to the scoping process defined within NEPA and AR 200-2. At a minimum, environmental analysis and solicitation of public comments will be completed in accordance with AR 200-2 prior to implementation of an INRMP. The INRMP must be finalized only after

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considering the alternatives, some of which may have been identified during a public participation process.

5.1 Management Alternatives

To assure that the best management strategies are selected for managing the natural resources, several possible management scenarios may need to be considered for each resource area. These alternatives could include different intensities of management, alternative best management practices to accomplish the goal, or even land use changes to accomplish the resource objectives. The NEPA process will allow full consideration of viable alternatives and will assure that critical issues are not overlooked during the decision making process.

5.2 Administrative Record

Maintaining an administrative record of INRMP preparation actions is an essential step required by NEPA. Public participation, coordination and consultation with other agencies, documents consulted, alternatives considered, and decisions made must all be a part of the administrative record. The level of public involvement and the amount of documentation required must be determined by the installation. If it is determined during the environmental review that the impacts of management decisions should be documented in an environmental assessment (EA), the record must document the decision making process that was used in selecting the preferred alternative. The EA should address proposed management actions together with the impacts of those actions on natural resources. Where specific proposed management actions cannot be described, the EA must establish some significance criteria that will guide future prescribed activities. With good NEPA documentation to support natural resources management decisions, the INRMP should serve as an excellent reference for tiering future NEPA documents.

6.0 INRMP PREPARATION PROCESS

The INRMP development process may not be exactly the same at all installations, but the guidance offered here could be considered a reasonable approach to assure that important issues are addressed. The chart in Figure 6-1 provides a suggested schedule for the development of the INRMP and associated NEPA documents. The flow chart in Figure 6-2 describes pictorially how the process should work.

6.1 Funding

The INRMP development, including associated NEPA documentation, should not exceed one year. However, it is important to program funding at least two years in advance. Revisions or updates must be anticipated and programmed into the Environmental Program Requirements (EPR) report no later than Year-4 of the life of the existing plan. Since the EPR report process encourages long term budget planning, it is easy to budget for INRMPs and accompanying NEPA documents at least five years out.

6.2 Decision Making

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It is important that the INRMP preparation process be directly linked with the NEPA documentation. This does not mean that the general public or a environmental organization will dictate the contents of the INRMP. Once the military mission and natural resources objectives have been well identified, outside participation could be very helpful in identifying different alternatives to reach those objectives. The selection of the final preferred alternative is a decision to be made by the Installation Commander and comes at the discretion of the Installation Commander. Appropriate documentation of these efforts becomes the NEPA documentation. An INRMP that is developed following the NEPA process will result in a well informed management program that is realistic and defensible, and will provide the greatest level of assurance of the sustainability of the future military mission. However, since this NEPA process usually requires a higher level of effort, additional costs must be included in the budget.

6.3 Installation Responsibility

It is imperative that installation staff take full responsibility for the INRMP preparation and implementation processes wherever possible. Using external sources to develop the INRMP is discouraged except where the necessary level of expertise does not exist at the installation. If some aspects of INRMP development should be accomplished using outside resources, entities responsible for implementation should maintain a sufficient level of quality control to assure that the plan appropriately address issues and that it is implementable.

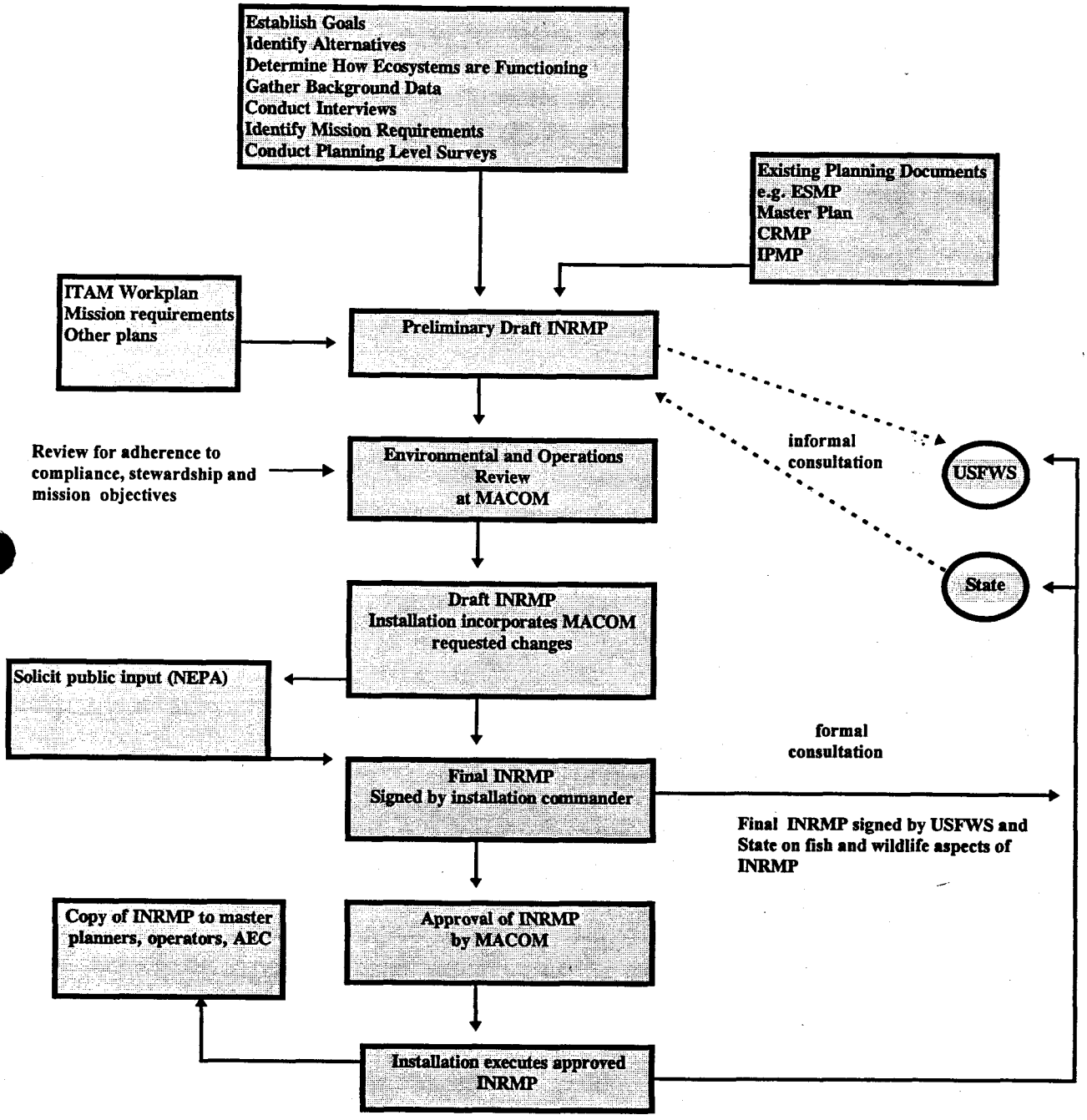
Figure 6-1

Suggested INRMP Development Schedule	
ACTION	**DAY**
Start (Notice to Proceed)	0
Draft Project Management Plan	10
Final Project Management Plan	30
Draft INRMP & Draft DOPAA	90
Draft EA & Final DOPAA	150
Draft Final INRMP	240
Final EA & Draft FNSI	290
Army Signs FNSI	300
30-Day Notice of Availability	300
Army Approves Final INRMP	360

EA - Environmental Assessment
DOPAA - Description of Proposed Actions and Alternatives
FNSI - Finding of No Significant Impact

NOTE: This schedule assumes that an Environmental Impact Statement(EIS) will not be required. If an EIS is required, this schedule will need to be modified and extended accordingly.

INRMP Preparation Process
Figure 6-2



6.4 Installation Interviews

The INRMP preparation process typically starts with interviewing installation personnel within the following offices or directorates:

- Environmental Directorate or equivalent - Fish and wildlife management; forest management; threatened and endangered species management; agricultural and grazing outlease management; pest management; water quality monitoring; cultural resources management; environmental awareness; land management; other.
- Provost Marshal's Office - Natural resources law enforcement; land management security requirements.
- Outdoor Recreation - Natural resources related outdoor recreation activities; check in/check out procedures; hunter safety requirements; harvest data; number and location of hunting areas; other.
- Directorate of Engineering and Housing - Master Planning; future development plans; total installation size; acreage of training areas, impact areas, cantonment areas.
- Directorate of Plans, Training, and Mobilization or mission operations equivalent - Range and Training Land Program (RTLP); type of missions; troop and civilian strength; mission activity schedules; number and type of vehicles and equipment; number, use, and location of ranges, training areas, and impact areas; improvements in natural resources that would benefit or support the military mission, etc.
- Fire Department - Prescribed burn schedules, firebreak maintenance, wildfire response, etc.
- Public Affairs Office - Background information on installation history and military mission.
- Directorate of Safety or equivalent - Land management for ammunition quantity distances; noise buffer requirements.

6.5 Planning Level Surveys

Planning level surveys are those surveys that could make significant contribution to the understanding and management of existing resources. Existing information from surveys of installation resources must be utilized to the extent that they contribute to the preparation of the INRMP. If adequate surveys are missing or incomplete, those deficiencies must be identified within the content of the INRMP and their completion should be scheduled in the INRMP.

As a minimum, the following planning level surveys, and associated maps, should be included:

- Topography
- Wetlands
- Surface waters
- Soils
- Flora
- Vegetative communities
- Threatened and endangered species

- Fauna

Other surveys could include:
- Migratory bird surveys
- Geologic surveys
- Sensitive area surveys
- Cultural resources surveys
- Erosion surveys
- Others important to the installation

6.6 Other Background Materials

During the interviews, other relevant background materials should also be collected or reviewed. These background materials include the following documents:
- Relevant Environmental Assessments/Impact Statements
- Biological opinions
- Previous Natural Resources Management Plan
- Integrated Cultural Resources Management Plan
- Historic Preservation Plan
- Forest Management Plan
- Endangered Species Management Plans
- Agricultural/Grazing Leases and Plans
- Watershed Management Plans/Studies
- Wetlands Management Plan
- Integrated Pest Management Plan
- Installation Master Plan
- Installation Property Utilization Plan
- Installation Training Regulations
- Implementation Plan of the RTLP
- Installation Environmental and Noise Regulations
- Hunting Regulations
- Cooperative Fish and Wildlife Management Plan
- Erosion Management Plan

6.7 Resources Reconnaissance

Following the interviews and the collection of background materials, an installation reconnaissance is conducted to document the following features:
- Special interest areas
- Critical habitat
- General habitat
- Wetlands
- Streams and open water areas

- Commercial and urban forestry resources
- Riparian areas
- Firebreaks
- Agricultural and/or grazing areas
- Hunting and fishing areas
- Training and impact areas
- Firing ranges
- Other mission areas

Natural resources opportunities such as watchable wildlife areas, outdoor recreation opportunities, and public access potential should also be noted. In addition, grounds maintenance, forest management, and agricultural/grazing lease management practices should be documented.

The findings of the interviews and installation reconnaissance, as well as information obtained from the background research are synthesized and incorporated into the INRMP. The INRMP should describe the existing environment, the military mission, training activities, current research/surveys that are being conducted, current installation programs relating to natural resources management, data gaps and future studies necessary to fill those data gaps, consistencies and inconsistencies between the INRMP and other installation plans, measures to overcome any inconsistencies, land use restrictions, suggested management practices, priorities of proposed projects, responsibilities, and resource requirements, including staffing, equipment, and training. A checklist of potential components of an INRMP or information sources can be found in Part III of these guidelines.

6.8 Coordination and Review

The installation is encouraged to work with other organizations, agencies, and individuals both off and on the installation throughout the process of preparing the INRMP. Building partnerships is essential for ecosystem management to function. Informal reviews are encouraged, and formal reviews should be done as needed. These reviews should be consistent with the NEPA process.

It is especially critical that INRMP preparation be coordinated with those individuals responsible for the military mission. Military land planners and users should be part of the preparation team and not just reviewers of drafts. Their involvement should begin early in the planning process and continue throughout the execution phases. It is important that the INRMP be beneficial to the military mission.

Coordination and consultation with the State Historic Preservation Officer, the appropriate State agency, and the U.S. Fish and Wildlife Service (USFWS) is specifically required during preparation of the INRMP. Since these latter two agencies will be signatory to the fish and wildlife aspects of the INRMP, it is important to get their "buy-in" early in the process. They are

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also essential for determining the needs of local ecosystems balanced against the requirements of the installation's military mission.

Meeting with installation neighbors (e.g., National Park Service, U.S. Forest Service, and Native American Tribes) is also necessary in order to determine how installation activities may affect their lands, as well as to discuss management opportunities for shared ecosystems.

Neighboring communities could also contribute to the success of the planning effort. Once the mission and natural resource objectives have been drafted, concerned citizens and groups should be given opportunity to express their interests. This can be done through public notices or meetings, as necessary, during the NEPA process. One-on-one contact with groups with strong interests in installation natural resources is the best way to get productive input. The tactic of waiting until the installation has the plan completely coordinated prior to informal outside review is specifically not recommended.

Some agencies and outside individuals or groups may appropriately review the entire document, while others may only need (or desire) to review portions of the INRMP. These decisions should be made by the installation.

6.9 Approval Process

MACOMs must review the final draft before it is made available for public comment. After changes (if any) that are recommended by the MACOM have been reconciled, and the supporting NEPA documentation supports a finding of no significant impact (FNSI), the Installation Commander signs the FNSI. A Notice of Availability is then published and the INRMP, Environmental Assessment, and FNSI are made available for a thirty-day public comment period.

The Installation Commander then signs the INRMP and it is submitted to the appropriate State agency and the USFWS for concurrence on the fish and wildlife aspects of the INRMP. The concurrence of these agencies can be in the form of affixing signatures of appropriate officials on the "signature" page near the front of the document, or in the form of a signed letter of concurrence from the agency. Any substantive changes requested at this stage must be discussed with the MACOM prior to the agreement with such proposed changes. The signed INRMP is then provided to the MACOM for final approval. Unless MACOMs or HQDA specifically request an extension, approval is automatic after 60 days of receipt by the MACOM.

7.0 INRMP PREPARATION PRINCIPLES

The INRMP must be implementable and should conform to the principles discussed below.

- **Purpose.** The INRMP must meet legal mandates as well as Department of Army policies pertaining to INRMPs. The most important role of the INRMP is to serve as an effective installation tool for managing natural resources consistent with mission requirements. The

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INRMP could be viewed as a "snapshot" of the current situation with a management implementation strategy for at least the next five years.

- **Uniformity.** The INRMPs should maintain enough structural similarity so that reassigned natural resources managers and staff can be familiar with the components and organization of the documents.

- **Coordination.** The process of preparing the INRMP must include coordination with relevant agencies, organizations, and public interest groups, as well as appropriate coordination within installation and Army chains of command. The INRMP should address relationships between other existing environmental programs on the installation, and the appropriate portions of those plans should be incorporated by reference.

- **Automated Data Processing (ADP).** In addition to a hard copy of the INRMP with associated maps and support data, installations are encouraged to build their INRMP within ADP (including Geographic Information Systems) systems if they are organized and equipped to do so.

- **Applicability.** An INRMP is required for all Army lands having significant natural resources management opportunities as identified in current regulation. Included are those lands withdrawn from other federal agencies for military use by Congressional action or otherwise under the long term use of the Army. It also includes lands used by the Army National Guard and Army Reserve components. Some lands, such as impact areas, may not have the level of natural resources management potential as more accessible lands, but these lands should be addressed to whatever level of management is possible.

- **Ecosystem Management.** The INRMP should use an ecosystem management approach to natural resources management. The concept of single species management is no longer an appropriate approach to managing natural resources on Army lands. Each element of the ecosystem must be managed in perspective of its relationship to other parts of the ecosystem so that natural biological integrity is maintained to the extent feasible.

- **Data Collection.** The INRMP can be prepared at any stage of development of the installation's natural resources program. The INRMP should include summaries of data collected, but delaying the preparation of the INRMP to collect more data is usually not recommended.

Data collection systems should be a part of the INRMP, building upon existing data. The INRMP will become more accurate and more valuable as databases are developed. The INRMP should also identify data deficiencies and provide a remedy for such deficiencies through plan implementation.

- **Detail of Plan.** The INRMP should be in enough detail, including referenced material, to provide managers with information necessary to implement all phases of the natural resources management program, even if the manager is new to the installation.

- **Military Mission.** The needs and effects of the installation's military mission in terms of natural resources is a critical component of the INRMP. The INRMP must support military use requirements as well as natural resources needs to ensure the mission can be sustained. To the extent possible, mission activities should be described in enough detail to predict specific impacts on natural resources, as well as to describe appropriate management and remediation measures to be included in the INRMP. Information on the types of military mission activities, troop and civilian strengths, numbers and types of vehicles and equipment that may impact natural resources, and range use should be presented. Information on the natural resources necessary to support the military mission should also be discussed, as well as the impacts that natural resources management may have on the military mission (e.g., certain areas may require special precaution due to the presence of endangered species). At installations where the Integrated Training Area Management (ITAM) program has been implemented, that program must be an integral part of the INRMP to assure direct support to the military mission. However, the INRMP is not a military mission operations document. The action proposed within an INRMP is the management of natural resources, not the fielding of the military mission. Where one exists, the Range and Training Land Program (RTLP) Range Development Plan (RDP) will be used as the source document for identifying the military mission.

- **Compatibility.** Natural resource programs described within the INRMP must be fully compatible with one another. Incompatibilities with other installation programs must be identified, and strategies must be presented to resolve these incompatibilities. This will assure complete integration with the installations master plan, the facilities maintenance plan, integrated pest management plan, cultural resources management plan, endangered species management plan, training and range area management plan, mobilization and deployment plans, and information management systems.

- **Enforcement.** Enforcement of natural resources laws must be included within INRMPs. The emphasis should be toward professional enforcement of these laws.

- **Issues.** Biopolitical issues affecting implementation of INRMP should be identified, and strategies should be outlined for their resolution. Parties involved in these issues may be either internal or external to the installation.

- **Priorities.** Priorities for individual programs within INRMP must be identified.

- **Implementation.** INRMPs must include an implementation strategy that addresses, at a minimum, funding and manpower. Implementation should also identify programs and projects within INRMPs that are required by law and those that are not. The INRMP should identify as many specific projects as possible, as opposed to generic discussions of programs.

Implementation should be specific for the intended life span of the INRMP with the understanding that projects may change through adaptive management and may be affected by funding availability.

- **NEPA.** The NEPA process will be used to make informed decisions with regard to management and protection of installation natural resources. Information obtained during the environmental review process and other sources will be integrated into these plans as appropriate.

- **Public Access.** INRMPs must discuss public access policies, including access for hunting and fishing and other types of outdoor recreation, access for Native Americans to religious sacred sites, and access provisions for handicapped individuals.

8.0 INRMP STANDARDIZATION

INRMPs are organized by standardized chapters to allow users to quickly find items of interest. However, these chapters should not be written as stand-alone entities but should link and interrelate with one another to appropriately address overlapping ecosystem concerns.

8.1 Main Chapters

Main chapters will be numbered consecutively (1, 2, 3 etc.) and use the standard chapter headings within these Guidelines. Installations may not need each chapter heading, but the chapter should be included with a brief statement as to the reason for no content. Installations may determine a need to add a chapter, but additions should be kept to a minimum for consistency. Any additional chapter should be inserted at the most appropriate location. Chapters may have as many unnumbered paragraphs as needed to describe the programs and projects.

8.2 First Echelon Subchapters

First echelon subchapters will be numbered using a period followed by consecutive numbering (1.2, 3.4, etc.). Standard subchapter headings are provided in the Guidelines, but these may be modified if needed. These subchapters may have as many unnumbered paragraphs as needed for descriptions.

8.3 Additional Subchapters

Additional subchapter breakdowns will be identified using standard format (e.g. 3.2.1) with no restrictions on the number or nature of such further divisions of chapter content. Each subchapter will have a heading to be included in the Table of Contents. Subchapters may have as many unnumbered paragraphs as needed.

8.4 Page Numbering

Pages will be consecutively numbered starting with the first page following the Table of Contents. Decimals will not be used unless changes are made which require additional pages.

8.5 References and Appendices

In general, appendices will be used for short, but important, documents and items that are often needed for reference. References should be used for long documents or items seldom needed beyond the descriptions within the INRMP. For example, it might be appropriate to put descriptions of soil types found on an installation in an appendix while the document from which these descriptions were taken would be referenced. An important memorandum might be in an appendix, while an Army policy would be referenced. Local regulations might be included in an appendix, while an AR would more appropriately be referenced.

8.6 Glossary and Index

Neither a glossary nor an index is included within the Guidelines. A glossary may be included if installations believe it useful for persons who will use the INRMP. An index may be included if installations believe it important to locate specific words or terms. It is suggested that this decision be made based on the completeness and detail within the Table of Contents and the clarity of chapter headings to determine chapter contents. Neither of these items should be included unless it is felt that they would be used by persons responsible for implementing the INRMP.

8.7 Number of Copies

A minimum of three copies will be sent to the appropriate MACOM with one of these to be forwarded to the U.S. Army Environmental Center. It is assumed that cosigners (normally the USFWS and the appropriate State agency) will each want at least one copy. Thus, the installation should assume that it will need a minimum of five copies beyond its internal use. The total number of copies will largely be determined by the number of ecosystem partners both off and on the installation. When possible and practicable, a digital copy of the INRMP should also be made available.

PART II - MAJOR CHAPTER OUTLINE

COVER PAGE

The Cover Page should include, as a minimum, the name of the document (Integrated Natural Resources Management Plan), the name of the installation, and the effective dates (a five year period).

SIGNATURE PAGE

This page will include those who approve the INRMP by signature. Normally this will be the installation commander, and the MACOM representative. The director of the appropriate State agency, and the regional director of the USFWS will approve the fish and wildlife aspects of the INRMP. In lieu of signatures from the state agency and the USFWS, concurrence letters from those agencies may be inserted immediately following the signature page.

PREPARER - REVIEWER PAGE

This page identifies those who prepared the INRMP and those who reviewed it. Reviewers should include installation and major command personnel. If the installation believes that agencies external to the installation were instrumental to review (and approval) of the entire plan, they may also be included. Those who only provided incidental technical advice or preparation assistance should be identified in the "Persons Contacted" chapter and not on the "Preparer-Reviewer Page."

PREFACE (Optional)

This would normally be a brief statement regarding the importance of natural resources management to the installation.

TABLE OF CONTENTS

Depending on the desires of the installation, the table of contents (TC) may be extremely detailed to second and third level subchapters, or it may be abbreviated to major chapters and subchapters. If the second option is chosen, it is recommended that a detailed TC be included at the beginning of each major chapter.

EXECUTIVE SUMMARY

The Executive Summary should include those items that executive personnel (installation, MACOM, and outside agencies/organizations) need to know in order to appreciate the importance of the document. This section should rarely exceed three pages in length.

Purpose. Include the statement from the Army Memorandum (21 March 1997), *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and Integrated Natural Resources Management Plan (INRMP)*, that the purpose of the INRMP is to ensure that natural resource conservation measures and Army activities on mission land are integrated and are consistent with federal stewardship requirements.

Environmental Compliance. Briefly describe the major legal requirements pertinent for natural resources management. The list of laws and Executive Orders in Part I, Chapter 2.0, although not all inclusive, may be used as a guide.

Scope. Describe the geographic and programmatic scope of the Plan. Briefly identify ecosystems toward which the Plan will be targeted.

Relationship to the Military Mission. Describe how the Plan will affect the military mission. This should be a very positive statement and should briefly identify:

- what the military activities are
- what natural resources are required to support mission activities
- how mission activities impact natural resources, either directly or indirectly
- the impacts of natural resources, or their management, on the mission

Partnerships. Indicate those who will be significant partners with the installation in implementing the Plan.

Planned Major Initiatives. Indicate, in priority order, the major programs which the Plan identifies as critical during the next five years.

Costs and Benefits. Identify costs in terms of total funds, personnel, installation support, and command support. Identify benefits in terms of the goals identified in Chapter 1-1.

Summary. Provide a concise summary of the effects of the Plan on the installation and its mission.

1.0 GOALS AND POLICIES

This chapter should have an introductory statement regarding the Army's commitment to natural resources management.

1.1 Goals

List general goals of the Plan. These should be specific to the needs of the installation, but should also be a reflection of the objectives addressed in the Army Environmental Strategic Action Plan. These objectives include the sustainability of lands for mission use, protection of natural resource assets, protection of cultural resource assets, provision of recreational opportunities, and multiple use accommodation.

Don't worry about it! Rich Clear

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1.2 Policies

These should be policies established by the installation that will be used to attain each goal identified in Section 1.1. These policies can also serve as a broad checklist to monitor the success of the plan.

1.3 Monitoring Progress

Include an annual monitoring procedure to determine the effectiveness of the INRMP.

2.0 LOCATION AND ACREAGE

2.1 Location

Describe the location of the installation in relation to the part of the state and the proximity to such things as major cities, rivers, and landmarks.

2.2 Acreage and Acquisition

Describe land acquisition, including property ownership, water rights, and the size of parcels obtained to create an historic progression of the total installation size. Note previous land uses. Acquisition information (e.g., how much land, from whom, when) is important to determine the overall effects of Army actions on the land and its natural resources over time.

2.3 Installation History

Briefly describe the history of the installation in terms of mission and major historic events.

2.4 Neighbors

Identify those who border the installation or are regionally significant. Installation activities which may affect these neighbors' lands should be indicated.

2.5 Satellite Installations

Identify other installations or lands directly affected by the INRMP.

3.0 MILITARY MISSION

3.1 Overview

Provide an overview of the military mission, including the types of training, troop data and civilian strengths, numbers and types of equipment which might impact natural resources, range use days, and weapon and munitions production or storage..

3.2 Natural Resources Needed to Support the Military Mission

Describe the natural resources that are necessary to support the military mission. (e.g. vegetation for concealment islands, open areas for testing, and stable soil for maneuvers). At RTLP-participating installations, use the information available as a product of the RTLP planning process described in AR 210-21.

3.3 Effects of the Military Mission on Natural Resources

Describe the nature of the impacts or potential impacts of the current military mission on soil, vegetation, water, and wildlife.

3.4 Effects of Natural Resources or Their Management on the Mission

Discuss the various laws, policies, and regulations regarding protection of various environment elements that affect the mission. Examples of these laws include wetland protection, cultural resources protection, and endangered species protection. In addition, describe natural resources conditions that currently affect the accomplishment of the military mission, or that could potentially impact the mission if they were not adequately addressed (e.g., steep slopes, wet soils, and severe soil erosion).

3.5 Future Military Mission Impacts on Natural Resources

Project changes in the military mission over the next five to ten years and describe the predicted effects of these changes on natural resources. Coordinate with the RTLP process where applicable.

4.0 FACILITIES

4.1 Overview

Describe the overall nature of the installation. Is it a small city, an industrial complex, or a relatively small community? What is the size of the cantonment area? Mention facilities such as airfields and training ranges. This chapter need not be lengthy. Additional discussion could be included in the accompanying NEPA document.

4.2 Transportation System

Describe the road, railroad, air, and waterway system for transportation on the installation. Include roads, trails, and airfields on the range which will be important to the implementation of, or affected by, the INRMP.

4.3 Water Supply

Describe the installation's water quantity needs to support domestic use, irrigation, or wildlife watering. Describe water quality as it affects domestic use, wildlife, or aquatic species. Describe the sources of water for the various uses, and the effects of water withdrawal on aquifers, streams, or other natural resources.

4.4 Projected Changes in Facilities

Describe projected changes of facilities or additional facilities that are planned for construction during the next five to ten years. Indicate any significant impacts or implications these projected changes or additions could have on management of natural resources or on the implementation of the INRMP. The installation's Real Property Master Plan should be consulted to retrieve this information.

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5.0 RESPONSIBLE AND INTERESTED PARTIES

5.1 Installation Organizations

Note that the installation, as a whole, is responsible for implementation of the INRMP. Identify those positions and organizations on the installation important to the success of the INRMP along with their role in implementing the plan. This normally starts with the installation commander.

5.2 Other Defense Organizations

Identify other Defense organizations that will assist with the implementation of the INRMP. These organizations normally include the MACOM, and they may include such organizations as the Army Environmental Center, Corps of Engineers laboratories, Corps of Engineers Districts, or even non-Army agencies within Defense.

5.3 Other Federal Agencies

Identify other federal agencies that contribute to implementation of the INRMP. This will include the USFWS as a signatory partner. It may also include such agencies as the Natural Resources Conservation Service, the U.S. Forest Service, the National Park Service, the Bureau of Land Management, and others.

5.4 State Agencies

Identify state agencies that will have a role in implementing the INRMP. This will include the appropriate State natural resources agency as a signatory partner. It could also include the state soil and water conservation agency.

5.5 Universities

Identify universities involved in the implementation of the INRMP.

5.6 Contractors

Identify the role of contractors in the implementation of the INRMP. If any are already selected or are working on contracts, they may be identified by name.

5.7 Other Interested Parties

Identify conservation groups, clubs, or individuals interested in the development and implementation of the INRMP. This can include national groups such as The Nature Conservancy, Ducks Unlimited, and the Sierra Club. It, more likely, will include state or local groups such as the state affiliate of the National Wildlife Federation or the local rod and gun club. It should include neighboring landowners who have a role in the plan.

5.8 Signatory Agencies

The specific responsibilities of the signatory agencies (generally the USFWS, the appropriate State natural resources agency, and the installation) should be delineated. These responsibilities

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should include such items as access, funding transfers, services provided, research, enforcement, means to update the INRMP, and other items of mutual interest. If a formal agreement exists between parties, this information may be included as an appendices to the plan as a convenient way to specifically identify the special relationships among the three signatory agencies.

6.0 NATURAL RESOURCES AND CLIMATE

This chapter describes the natural resources of the installation as well as the condition and trend of each resource. Existing or needed planning level survey can also be identified for each resource. This chapter will not address the planned management of resources. If desired, this chapter may be abbreviated in the INRMP and discussed more extensively in the supporting NEPA document.

6.1 Setting

Describe the major ecoregion(s) together with component ecosystems, and land uses bordering the installation.

6.2 Topography

Describe the general topographic features of the land, including elevation changes, steepness of slope, watersheds, and any others that may be important to managing natural resources.

6.3 Geology

Describe the geologic makeup of the installation. Items which might be included include structure, stratigraphy, and seismicity.

6.4 Climate

Describe the general weather patterns. Provide information on temperature, precipitation, and wind as well as other variables which might be locally important.

6.5 Petroleum and Minerals

Identify mineral and petroleum resources on the installation and whether or not they have commercial value. Especially note any characteristics of these resources, such as strip mined areas, that could influence the management of natural resources on the installation.

6.6 Soils

Generally describe installation soils and their properties, including erodibility characteristics. Identify prime farmland soils. Detailed characteristics, capabilities, and limitations can be included in an Appendix or referenced. Reference any published soil surveys that may exist. Summarize the status of soil productivity and identify trends in that productivity in recent years. Emphasize the effects of wind and water erosion.

6.7 Water Resources

Describe both surface and ground water resources. Include lakes, ponds, perennial and intermittent streams, wetlands, and floodplains. Summarize the status of water quality and identify the trend of that quality in recent years. Pay particular attention to nonpoint source pollution, especially sedimentation and other pollutants most affected by the INRMP.

6.8 Flora

Describe results of inventories of installation flora which could include Land Condition Trend Analysis (LCTA) surveys, floristic collections, forest inventories, endangered plant surveys, or habitat analyses. Summarize species accounts. Use appendices if needed for specific lists. Indicate succession trends. Refer to vegetation (or habitat) map if one is available. Identify wetlands, critical habitat, globally ranked communities, unique and sensitive habitats, and other areas of special concern. Identify ecosystems to be managed.

6.9 Fauna

Describe results of inventories of installation fauna which could include game census, endangered species surveys, LCTA bird or small mammal surveys, neotropical bird surveys, fish census, or other similar studies or surveys. Summarize species accounts. Use appendices if needed for specific lists. Identify livestock and exotic species on the installation.

6.10 Threatened and Endangered Species

Identify Federally listed endangered, threatened, and candidate floral and faunal species. Identify state endangered and special concern species, as well as species off-site which could potentially be affected. Summarize species accounts. Include the status of consultations with the USFWS.

7.0 LAND USE AND MANAGEMENT UNITS

7.1 Land Uses

Describe the various ways installation lands will be used. If non-Army lands within the confines of the installation boundary will be covered by the INRMP, uses of those lands should also be described. Land uses could include vehicle maneuvers, bivouacking, drop zones, munitions production or storage, buffers, impact areas, timber production, hunting and fishing, grazing, agricultural leasing, and cantonment, to name a few. Several land uses may overlap one another. Describe what each land use means in terms of natural resources management impacts or concerns. Describe the amount of acreage involved with each type of land use. Each of these units should be addressed in a separate sub-chapter (7.1.1, 7.1.2, etc.)

7.2 Management Units

Management units are land or water areas that can be physically identified on the ground and on maps or photography, and can be managed apart from other units. Management units could realistically be divided by fencelines, roads, streams, vegetation changes, soil changes, topographic changes, or by differences in mission related activities. The boundary would define where one type of management would end and another would begin. Examples of land management units would include training areas, munitions storage areas, forest management

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compartments, hunting areas, watersheds, grazing units, agricultural fields, ranges and impact areas, golf courses, and landscaped or other improved grounds. Include any constraints to natural resources management in areas such as training lands, firing ranges, and impact areas. Constraints to natural resources management may include the inaccessibility to areas due to the presence of unexploded ordnance or the occurrence of training. Provide acreage for each individual land management unit, if available. It might be desirable to address management unit information in table format. It is suggested that management unit be graphically displayed on photography or maps and be stored in the GIS database where they could be rapidly and effectively used in future management decisions.

The last sub-chapter should describe a comprehensive land management unit system (e.g., forest compartments, watersheds, or training areas) to be used to implement an ecosystem approach to natural resources management. Identify the means used to denote each type of land management unit (name, number, alpha character), ensure these identifiers are on any maps used, and use the same identifier when referring to them in the narrative.

8.0 NATURAL RESOURCES MANAGEMENT

8.1 Objectives

Explain that this chapter includes all decisions that will be used to manage the installation's natural resources during the next few years. This chapter is the heart of the INRMP and should be specific and detailed to the extent necessary that program and projects can be effectively implemented. If there are data gaps or unresolved concerns, they should be identified in their appropriate location and remediation action planned. Management programs identified in each subchapter must be appropriately integrated with management programs in other subchapters. If past natural resources management history is important to the implementation of the INRMP, identify and explain in the appropriate subchapter anything of managerial significance.

8.2 Forest Management

Include forest management measures that will be implemented to manage the forest ecosystem, with special emphasis on the protection of biodiversity. Recognize the need for forest planning on forests that are not capable of commercial production. Describe forest and forest management relations to the mission. Include requirements for forest inventories and methods for monitoring/regulating harvests and health to maintain sustainability. For installations with a timber management program, include such aspects as harvest, regeneration, disease prevention, and timber stand improvement in terms of forest sustainability. Include, harvest/planting schedules, species, volumes, and other parts of the management program. Describe the effects of pesticides or prescribed fires on other natural resources.

8.3 Agricultural/Grazing Outleases

Describe the agricultural and grazing outleasing program. The effects of farm management practices associated with these outleases, in terms of the total natural resources program and installation ecosystems, should be described. In addition, implementation of best management

practices (e.g., crop rotation, no till agriculture, integrated pest management) should also be discussed. Summarize any conservation plan associated with a particular agricultural outlease.

Describe the installation's grazing management program. If controlled grazing exists on the installation, a grazing management plan must be included or attached. Discuss the type of grazing that occurs (e.g., cattle, sheep), the grazing system employed, the fencing arrangement, the length of the grazing season, the number of animal unit months, emergency drought plans, and special provisions that are outlined in the grazing lease. Discuss how stocking rates, densities, and seasons are determined, and who is responsible for those determinations. Discuss how the grazing program affects other elements of the ecosystem and the military mission. Discuss prescribed fires or other management practices that may be used to manage rangeland resources.

8.4 Habitat Management

Describe habitat improvement projects which might include items such as food, nesting, and cover plantings, prescribed fire, nesting boxes, disking, aquatic weed control, fish structures, pond construction, and so forth. Indicate the locations, scope, and schedule of practice implementation to allow managers the opportunity to allocate personnel and resources for implementation. Specifically include measures taken for endangered species and neotropical migrants. Ensure that other habitat management programs do not conflict with habitat management provisions required within endangered species management plans.

8.5 Game Harvest Management

Describe game population management programs. Include such items as population trends, hunting and fishing regulations, and important considerations for the management of each species or group of species on a sustained use basis with consideration for ecosystem integrity.

8.6 Rare, Threatened, or Endangered Species Management

If the installation has an Endangered Species Management Plan (ESMP), that plan should either be made a component of the INRMP, or the related natural resources management actions described in the ESMP must be fully integrated into the INRMP. In addition to integration of endangered species management into the content of the INRMP, all or parts of the ESMP can be attached or referenced in the INRMP. Any conflicts identified between the INRMP and the ESMP must be resolved prior to INRMP signature.

8.7 Furbearer Management

Describe programs to manage furbearer populations.

8.8 Other Nongame Species Management

Describe population management efforts for nongame species which are not included in the above sections. Programs might include neotropical migrants, amphibians/reptiles, bats, or other species which are emphasized.

8.9 Transplants and Stocks

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Describe projects to reintroduce species to the installation. Describe stocking programs, including both fish and wildlife. Identify the species involved, numbers, sizes, locations, and purposes of stocking and transplanting. Discuss biodiversity aspects of these programs, especially the degree of competition between indigenous and non-indigenous species. The introduction of non-indigenous species must comply with Executive Order 11987.

8.10 Wetlands Management

Describe programs that improve the quality of wetlands or efforts to develop, protect, or enhance wetlands. Include specific areas to be managed, management techniques, and species and habitat types that will benefit from such management. Floodplain and riparian area management should be included in this section.

8.11 Water Quality Management

Describe programs specifically designed to improve the quality of water. Discuss how these programs affect water quality off the installation. Describe the use of Stormwater Pollution Prevention Plans within the natural resources program. Discuss the effects of off-installation activities on installation water quality. Relate to the Water Quality monitoring section in Chapter 9.

8.12 Land Rehabilitation and Maintenance

For both ITAM and non-ITAM participants, describe programs designed to restore and maintain damaged or intensely used lands, including damage by wind and/or water. Include efforts for dust control.

8.13 Soil Resources Management

Describe existing or potential soil erosion concerns and their probable causes. Identify if a soil erosion inventory has been made or should be made. Establish a priority for dealing with soil erosion problems. Be site specific if possible. Discuss proposed treatment measures, including mechanical shaping, vegetating, fertilizing, livestock exclusion or other protection, and re-establishment period. Include recommendations for future uses of the sites. Re-vegetation practices should consist of native species to the extent that those species can adequately address the soil stability objectives.

8.14 Cantonment Area Management

Describe programs to manage cantonment area lands. Include general grounds maintenance, but only to the degree that it is part of natural resources management. Include reduced grounds maintenance programs. Discuss golf course management and its relationship to natural resources and water quality. Specifically discuss implementation of the 26 April 1994 Presidential memorandum on Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds.

8.15 Pest Management

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This chapter should incorporate appropriate methodologies and strategies identified in the installation's Integrated Pest Management Plan (IPMP). Portions of the IPMP can be referenced or attached to the INRMP, but relevant pest management issues must also be fully integrated in the discussion within the appropriate subchapters of the INRMP. DoD Instruction 4150.7 (DoD Pest Management Program) 22 April 1996, and AR 420-76 (Pest Management) are the relevant pest management policy regulations.

include environmental health.

Describe programs to control noxious or undesirable plants, animals, or forest diseases. Discuss the role of herbicides and their effects on ecosystem health in general. Specifically discuss compliance with the 26 April 1994 Presidential Memorandum which requires pollution prevention by reducing fertilizer and herbicide use, recycling green waste, and minimizing runoff. Include pesticide reporting requirements as well as applicator training/certification requirements. Cross reference to other sections of the INRMP where the overall Integrated Pest Management Plan may be discussed.

8.16 Fire Management

Describe programs to reduce the incidence of, or to suppress, wildfires. Include the different degrees of protection for specific areas, identify responsibilities (reporting, suppression, firebreak maintenance, etc.), and discuss the effects of wildfires on natural resources.

Describe the installations prescribed fire management program. Discuss the use of this program to reduce fuel loading and potential wildfires. Also discuss the use of prescribed fire for habitat improvement, grazing management, and open space creation for military training scenarios. Identify the areas to be burned, the objectives of the burn, the rotation schedule, and the season of burns. There must be a detailed management plan for each prescribed burn. These plans should be a part of the INRMP or adequately referenced.

8.17 Special Interest Area Protection

Describe provisions to protect special areas such as critical habitat, wetlands, highly erodible lands, important wildlife habitat, rare or unusual plant communities, prime farmland, stream corridors, and buffers around sensitive physical features and habitat types. Be specific as to restrictions, treatments, and timing of treatments. Ensure that requirements to protect endangered species are here, and that other features within the INRMP do not contradict these compliance requirements.

8.18 Training Requirements Integration (TRI)

At ITAM participating installations, describe the TRI program and its role in minimizing damage to natural resources from military mission activities. Include trainer agreed upon regulations and restrictions, training area rotations, and provisions for environmental considerations during mission siting.

9.0 INVENTORYING AND MONITORING

9.1 Objectives

Indicate objectives of this chapter specific to the installation.

9.2 General

Inventorying is done for the purpose of ascertaining the relative abundance and distribution of various natural resources for the purpose of structuring a management program that will affect these resources.

Monitoring of natural resources is done at established intervals to detect trends or responses to management activities.

Unless the inventorying or monitoring methodology is experimentally controlled, the results will only provide general information and cannot necessarily be used to determine causality.

Explain the purposes/goals of inventory and monitoring in terms of their use for adaptive management. Within each of these sections, explain what inventory or monitoring data are available, and what more may be needed for Plan implementation.

9.3 Flora Inventory and Monitoring

Noxious Weeds

Describe the collection of baseline data and the means used to monitor significant changes in flora. Databases involved might include forest inventory, LCTA, vegetation mapping, satellite imagery and aerial photographs, endangered plant surveys, habitat surveys, range quality determination, and other indicators of ecosystem integrity. Specifically include measures to monitor changes in the capability of the land to support the military mission.

9.4 Fauna Inventory and Monitoring

Describe the collection of baseline data and the means used to monitor significant changes in fauna on the installation. Databases involved might include game and non-game surveys, endangered species surveys and monitoring, livestock monitoring, LCTA animal surveys, and other indicators of ecosystem integrity.

9.5 Water Quality Monitoring

Describe systems used to monitor water quality as it relates to land use and management.

9.6 Soil Resources Inventory and Monitoring

Describe whether existing soil inventories are current, complete, and provide utility in making management decisions. Identify if existing inventories need to be upgraded or if other new inventories are needed. Current published soil surveys and soil erosion surveys are essential for implementation of an INRMP. Soil erosion should be monitored on a regular basis, and especially following damaging events such as high winds, heavy rains, or excess trafficking.

9.7 Data Storage, Retrieval, and Analysis

Describe the means to store, analyze, and use the data collected. This might include GIS or standard database management computer software and hardware.

9.8 Five Year Plans

Summarize and schedule the inventory and monitoring projects to be accomplished in the next five years.

10.0 RESEARCH AND SPECIAL PROJECTS

10.1 Objectives

Identify chapter objectives specific to the installation.

10.2 Research Mechanisms

Describe means used to accomplish any projects that are planned or needed to help the installation implement the INRMP. These might include research done in-house, through universities, by Corps of Engineers laboratories, by non-governmental organizations such as The Nature Conservancy, or by Intergovernmental Personnel Act (IPA) employees.

10.3 Planned Research/Special Projects

Describe research/special projects needed and planned during the next five to ten years. Prioritize them and indicate the planned mechanism for accomplishment.

11.0 ENFORCEMENT

11.1 Objectives

Identify chapter objectives specific to the installation.

11.2 History and Authority

Describe the organizational history of the natural resources law enforcement program. Include sources of authority. Describe current organization and manpower. Describe efforts to attain or maintain professional natural resources law enforcement status.

11.3 Jurisdiction

Describe the jurisdiction (exclusive, concurrent, and/or proprietary) of each part of the installation with regard to enforcement of natural resources laws.

11.4 Enforcement Activities

Describe the emphasis and activities of the enforcement program and its relationship to the installation natural resources program.

11.5 Training

Identify training to ensure enforcement officers maintain levels of competency normally required by professional natural resources enforcement agencies.

12.0 ENVIRONMENTAL AWARENESS

12.1 Objectives

Identify chapter objectives specific to the installation.

12.2 Military Personnel Awareness

Describe the Environmental Awareness program in terms of educational materials that are used to instill a conservation ethic in military personnel. Materials used on various Army installations include posters, videotapes, stickers, maps, field handbooks, reference or soldiers' field cards, and similar items. Identify those involved and the process for awareness transfer.

12.3 Public Awareness

Use individual subchapters to describe conservation education, environmental awareness, public relations, and other programs designed to inform the public or military users of the value of natural resources conservation and ways they can help with the program. Include such methods as personal communications, public forums, newspapers, television, radio, prepared talks, special events, conservation education centers, nature trails, and professional talks.

13.0 OUTDOOR RECREATION

13.1 Objectives

Identify chapter objectives specific to the installation.

13.2 Military Mission Considerations

Describe the relationship between opportunities for outdoor recreation and military mission activities. Describe use of impact areas for recreation.

13.3 Public Access

Describe installation policies regarding public access, including access for the handicapped, for natural resources based recreation. Also address access required by the American Indian Religious Freedom Act of 1978.

13.4 Hunting, Fishing, and Trapping Programs

Describe hunting, fishing, and trapping programs and the associated fee assessment and collection methods. Include description of systems used to allow access to range areas, current and potential use of the programs, and specific projects used to improve these programs. Discuss the relationship between these programs and the wildlife population management programs discussed in Chapter 8.

13.5 Other Natural Resources Oriented Outdoor Recreation

Describe outdoor recreation programs that specifically relate to natural resources, exclusive of hunting, fishing, or trapping. These programs might include float trips, gold panning, nature study, hiking, skiing, or camping. Note relationships between these programs and natural resources management to ensure sustainability and protection of ecosystems.

13.6 Recreation and Ecosystem Management

Discuss the relationships between recreation activities and the maintenance of functional ecosystems.

13.7 Safety and Security

Discuss both safety and security issues that could affect accessibility of the installation for natural resources-related outdoor recreation.

14.0 CULTURAL RESOURCES PROTECTION

14.1 Objectives

Identify chapter objectives specific to the installation.

14.2 Cultural and Historic Resources

Briefly describe the cultural and historic resources on the installation in sufficient detail so that major concerns and potential conflicts between military mission, natural resources management, and cultural/historic resources are addressed.

14.3 Natural Resources Management Implications

Describe the relationship between natural resources management and the development and/or implementation of the Integrated Cultural Resources Management Plan and similar documents. Include the role of natural resources enforcement personnel. Include specific steps to ensure that implementation of the INRMP is consistent with cultural resources management.

Ensure that installation procedures to accomplish consultation requirements under Section 106 of the National Historic Preservation Act are accomplished with any pertinent action (specifically identified) within the INRMP. Do the same for compliance with the Archeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, and EO 13007 (Indian Sacred Sites).

Data recovered from archeological and historic sites investigations may be useful for determining the effects of native activities on natural resources or as a basis for determining trends in biodiversity. If sacred sites are identified on the installation, it is critical that any proposed modifications of terrain or plant species composition be considered in light of consultation with affected tribes.

15.0 NATIONAL ENVIRONMENTAL POLICY ACT

15.1 Objectives

Identify chapter objectives specific to the installation. NEPA documentation will be done in accordance with guidance in AR 200-2.

15.2 NEPA Responsibilities and Implementation

Identify the office responsible for implementation of NEPA at the installation. Briefly discuss NEPA specific to the installation, including process details, references to procedures and regulations, and the role of the proponent in NEPA preparation.

15.3 NEPA and Natural Resources Management

Describe the use of NEPA in the evaluation of environmental impacts and alternative actions for the management of natural resources. Describe the NEPA documentation that accompanies the INRMP. Briefly note the steps taken to achieve this documentation, such as scoping and coordination. Include the role of natural resources personnel, especially with regard to individual site development plans that affect natural resources. Include plans for mitigation and enforcement of mitigation. Note that specific natural resource projects done in the future may require additional NEPA review if they do not fall within the scope of significance criteria established in the NEPA document for the INRMP.

16.0 BIOPOLITICAL ISSUE RESOLUTION

Use subchapters to describe each significant biopolitical issue (both internal and external) that directly impacts the implementation of the INRMP. Include issues that are significant even if they are not based on fact. Be as specific as possible with regard to which programs are affected and the extent affected. Include strategies to resolve these issues. Such discussions of strategy do not have to include discussions of tactics which would reduce their effectiveness if made public.

17.0 IMPLEMENTATION

17.1 Organization, Roles, and Responsibilities

Describe the organization necessary to implement the INRMP. Include any relationships among organizations (internal and external) that must be built. Identify the roles and responsibilities of individuals, directorates, etc. within the organization to fully implement the INRMP.

17.2 Manpower

Identify the manpower required to implement the INRMP. Describe the sources of that manpower (internal and external). Include personnel training required.

17.3 Project/Programs Priorities

List each project/program identified within the INRMP which is proposed for accomplishment during the next five years. Prioritize these projects by categories such as High Priority, Important, and Less Important. Include projects/programs required for compliance as High Priority. Other projects/programs that are very meaningful to the installation might also be in the High Priority category. This category might include programs designed to directly benefit the military mission and those which significantly improve the installation quality of life. Generally, lesser important projects are those which would be the first cut or included on an "if

funding available" basis. Timelines for implementation of each project or program should be specified.

This information could effectively be presented in a table. Each project or program could be referenced back to the appropriate sub-chapter where it was discussed.

17.4 Implementation Funding Options

Describe sources of funding for INRMP implementation. Explain how high priority items will be put into funding channels. Specifically include INRMP implementation funding requirements in the EPR Report. Estimate the total cost of implementing the INRMP by project, by environmental category, and by year.

17.5 Command Support

Describe the role of command support to the implementation of the INRMP. Specifically identify actions needed to implement the Plan.

REFERENCES

List documents cited in the INRMP using conventional scientific methodology.

PERSONS CONTACTED

List persons who provided information used in the preparation of the INRMP. Such listing does not imply endorsement of the INRMP.

APPENDICES

Liberal use should be made of figures and tables throughout the text if they provide useful guidance for INRMP implementation. If they are not appropriate to be included within the text, they should be included as appendices.

Appendix A: Figures

Appendix B: Lists

PART III - INRMP PREPARATION CHECKLIST

This checklist is intended as a reminder of resource materials that could be used as references during the development of the INRMP or of elements that could be incorporated into the INRMP. This list is not inclusive, nor may every element listed here be applicable for every installation.

1.0 GENERAL

Installation's organizational structure
Satellite installations
Responsibilities of each branch within the environmental directorate
Number and type of staff within the environmental directorate
Environmental directorate staff training needs
Current partners (e.g., universities, other federal/state agencies) working with the installation
Neighbors surrounding the installation
Surveys or assessments currently being conducted
Surveys or assessments needed
Geographic Information System (GIS) capabilities
Software and data management
Microcomputer systems
History of natural resources management at the installation
- Forest management
- Fish and wildlife management
- Land management

Structure of Integrated Training Area Management (ITAM) program
Installation's ITAM workplan
Copies of related Environmental Assessments/Environmental Impact Statements
Copies of relevant maps (e.g., soil surveys, wetlands, training areas, watersheds)

2.0 MILITARY MISSION

Overview of military mission
Number, type, and location of training, testing, storage, and impact areas
Number, type, and location of firing ranges
Type of military activities within each area
Copies of maps depicting training, testing, storage, and impact areas
Copies of maps depicting firing ranges
Copies of current and future training schedules (if available)
Number of units and troops that train on the installation
Number and type of vehicles and equipment
Type of munitions or ordnance used
Projected changes in the military mission
Copy of Range Development Plan (RDP)
Copies of guidance for petroleum, oil, lubricants (POL) and antifreeze disposal

3.0 LAND MANAGEMENT

Published soil survey
Soil erodibility
Locations most susceptible to soil erosion
Copies of erosion control plan
Possible Land Rehabilitation and Maintenance (LRAM) projects (e.g., training area rehabilitation, road drainage correction, establishing dedicated river crossings, hardened sites)
Training Requirements Integration (TRI)
- Training area rotation
- Mission siting
- Training restrictions

Number and location of agricultural/grazing leases
Provisions of lease agreements
Copies of agricultural/grazing leases
Water quality monitoring (surface water and groundwater)
Stormwater management requirements
Copies of Stormwater Management Plans
Special Area Protection
- Special status plant species
- Waters of the United States (including wetlands)
- Riparian communities
- Other communities

Land use restrictions (e.g., streamside forested buffers)
Copies of Installation Master Plan/Property Utilization Plan

4.0 VEGETATION MANAGEMENT

Land Condition Trend Analysis (LCTA)
Range condition surveys
Floral surveys
Wetlands surveys
Use/need for aerial photographs/satellite imagery
Photo points
Vegetative mapping efforts
Fire Management
- Firebreaks (location and maintenance)
- Prescribed fire (location of burn sites, burn schedules)
- Wildfire suppression
- Wildfire impacts on natural resources

5.0 FISH AND WILDLIFE MANAGEMENT

Faunal inventory and monitoring
- Game species
- Nongame species
- Threatened and endangered species
- Fish species
- Neotropical birds
- Livestock (if applicable)

6.0 RARE, THREATENED, AND ENDANGERED SPECIES

Copy of Endangered Species Management Plan
Endangered species act consultation
Effects of installation activities on endangered species
Endangered species activities
- Preactivity surveys
- Abundance and distribution studies
- Predator and prey population studies
- Incidental take record keeping

Inventorying and monitoring
Copies of biological assessments
Copies of biological opinions
- Permitted number of "takes"
- Conditions for "harassment" (e.g., harassment from training is inadvertent)
- Necessary reasonable and prudent measures

7.0 PEST MANAGEMENT

Responsibility of noxious animal control
Noxious Plant Control
- Noxious plants present on the installation
- Noxious plant control methods
- Responsibility for noxious plant control

Animal Control
- Domestic pets
- Insects and rodents
- Predators and related pests
- Feral animals
- Stray cattle

8.0 ENVIRONMENTAL AWARENESS

Copies of installation environmental regulations
Copies of installation training regulations
Handbooks
Posters

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Field Cards
Earth Day activities
Installation newspaper
Other

9.0 OUTDOOR RECREATION

Hunting
- Game harvest strategies
- Population trends of game species
- Maintenance of harvest data
- Hunting seasons (bow, rifle, shotgun, blackpowder)
- Bag limits
- Check in/check out procedures
- Hunter safety requirements
- Number and location of hunting areas (map of hunting areas)
- Restrictions in various hunting areas
- Hunting permit fees
- Other fees (e.g., access fee)
- Enforcement

Fishing
- Type of fish species present on the installation
- Type of fish species stocked/provided by the state, USFWS , or commercial hatcheries
- Location/map of fishing areas
- Water release schedules (if applicable)
- Fishing permit fees
- Other fees (e.g., access fee)
- Check in/check out procedures

Other Natural Resources Related Activities
- Hiking
- Camping
- Biking
- Boating
- Other

10.0 CULTURAL RESOURCES MANAGEMENT

Cultural resources surveys completed
Future cultural resources surveys scheduled
Historic building surveys completed
Future historic building surveys scheduled
Number of historic/cultural sites on the National Register of Historic Places
Number of sites eligible for the National Register of Historic Places
Copies of historic preservation plans (HPPs)
Copies of cultural resources management plans (CRMPs)

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PART IV - LAWS WHICH EVOKE CONSERVATION ACTIONS

	Influence	
	High	**Medium**
Abandoned Shipwreck Act of 1987 [43 USC 2101]		X
American Indian Religious Freedom Act of 1978, as amended [42 USC 1996] [PL 95-341]		X
Anadromous Fish Conservation Act (1965) [16 USC 757]		X
Antiquities Act of 1906 [16 USC 431] [PL 59-209]		X
Archaeological and Historic Resources Management [DoDD 4710-1]	X	
Archaeological and Historic Data Preservation Act of 1974 [16 USC 469]		X
Archaeological Resources Protection Act of 1979 [16 USC 470] [PL 96-095]	X	
Bald Eagle Protection Act of 1940 [16 USC 668]		X
Clean Air Act (CAA) (1955) [42 USC 7401]		X
Clean Water Act (CWA) (1972) [33 USC 1251] [PL 92-500]	X	
Coastal Zone Management Act of 1972 [16 USC 1451] [PL 92-583]		X
Conservation and Rehabilitation Program on Military and Public Lands (PL 93-452)		X
Conservation Programs on Military Reservations (Sikes Act) [16 USC 670] [PL 86-797]	X	
Curation of Federally Owned and Administered Archaeological Collections [36 CFR § 79]	X	
Determination of Eligibility for Inclusion in the National Register of Historic Places [36 CFR § 63]	X	
Emergency Wetlands Resources Act of 1986 [16 USC 3901]		X
Endangered Species Act (ESA) [PL 93-205]	X	
Environmental Protection and Enhancement: Subpart H Historic Preservation [32 CFR § 650]		X
Erosion Protection Act [33 USC 426]		X
Estuary Protection Act of 1968 [16 USC 1221]		X
Farmland Protection Policy Act of 1981 [7 USC 4201] [PL 97-098]		X
Federal Cave Resources Protection Act of 1988		X
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended [7 USC 136]	X	
Federal Land Policy and Management Act of 1976 [43 USC 1701]		X
Federal Noxious Weed Act of 1974, as amended [7 USC 2801]	X	
Fish and Wildlife Conservation Act of 1980 [16 USC 2901] [PL 96-366]		X
Fish and Wildlife Coordination Act of 1934 [16 USC 661]		X
Food, Agricultural, Conservation and Trade Act of 1990 (Pesticide Reporting) [7 USC 136I]		X
Historic Preservation Certificates [36 CFR § 67]		X
Historic Sites Act of 1935 [16 USC 461] [PL 74-292]		X
Historic Preservation [AR 420-40]	X	
Hunting, Fishing and Trapping on Military Lands		X
Indian Sacred Sites [EO 13007]	X	
Lacey Act of 1900		X
Marine Mammal Protection Act of 1972 [16 USC 1361] [PL 92-522]		X
Migratory Bird Treaty Act (1918) [16 USC 703] [PL 65-186]	X	
Multiple-Use Sustained Yield Act of 1960 [16 USC 528]		X
National Environmental Policy Act of 1969 (NEPA) [42 USC 4321] [PL 91-190]	X	
National Historic Landmarks Program [36 CFR § 65]		X
National Historic Preservation Act of 1966, as amended [16 USC 470] [PL 89-665]	X	
National Register of Historic Places [36 CFR § 60]	X	
Native American Graves Protection and Repatriation Act of 1990 [25 USC 3001] [PL 101-601]	X	
Native American Graves Protection and Repatriation Act Regulations	X	
North American Wetlands Conservation Act [16 USC 4401]	X	
Outdoor Recreation on Federal Lands		X
Outleasing for Grazing and Agriculture on Military Lands [10 USC 2667]	X	
Preservation of American Antiquities [43 CFR § 3]		X
Protection and Enhancement of the Cultural Environment [EO 11593]	X	
Protection and Enhancement of Environmental Quality [EO 11514]		X
Protection of Archaeological Resources: Uniform Regulations [32 CFR § 229]	X	
Protection of Historic and Cultural Properties [36 CFR § 800]	X	
Protection of Wetlands [EO 11990]	X	
Recreational Fisheries [EO 12962]	X	

Religious Freedom Restoration Act		X
Rivers and Harbors Act of 1899 [33 USC 401]		X
Safe Drinking Water Act of 1974, as amended [42 USC 300] [PL 93-523]		X
Salmon and Steelhead Conservation and Enhancement Act of 1980		X
The Secretary of Interior's Standards for Historic Preservation Projects[36 CFR § 68]	X	
Soil and Water Resources Conservation Act of 1977 [16 USC 2001]		X
Taylor Grazing Act (1934) [43 USC 315] [PL 73-482]		X
Timber Sales on Military Lands [10 USC 2665]	X	
Waiver of Federal Agency Responsibility under Section 110 of the National Historic Preservation Act [36 CFR § 78]		X
Water Resources Planning Act [42 USC 1962]		X
Watershed Protection and Flood Prevention Act [16 USC 1001] [33 USC 701]		X
Wild and Scenic Rivers Act of 1968 [16 USC 1271] [PL 90-542]		X
Environmental Effects Abroad of Major Federal Actions		X
Exotic Organisms [EO 11987]	X	
Floodplain Management [EO 11988]		X
Intergovernmental Coordination Act (1968) [42 USC 4231] [PL 90-577]		X
Protection of Wetlands [EO 11990]	X	
Use of Off-Road Vehicles on Public Lands		X

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Black and Veatch Waste Science, Inc. Pueblo Depot Activity RCRA Facility Investigation Report/Draft & Final). May 6, 1994. Purpose of this report was to investigate the extent of contamination at nine SWMU sites identified under the CDOH permit. This report was used to document existing conditions for the Wastewater Treatment Plant, Building 547, surface drainage, hydrology and well data.

Bureau of Land Management. Surface Management/Mineral Management Status 1:100,000-scale Metric Topographic Map of Pueblo, Colorado. 30X60 minute quadrangle. 1981. Used to prepare the Site Context figure.

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City of Pueblo, Department of Planning and Development. City of Pueblo Data Book. Various dates. Historical data on employment composition in Pueblo County.

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Colorado Office of Planning and Budgeting, Pueblo Metropolitan Statistical Area, March 20, 1994. Data on the Pueblo economy.

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The Denver Post, Mustard-gas incineration pushed at Pueblo depot, March 9, 1994.

Department of the Army. Chemical Stockpile Disposal Program, Final Programmatic Environmental Impact Statement. January, 1988. Prepared for the Department of the Army,

November 1984. This document addresses the potential environmental impacts associated with the destruction of lethal chemical agents stored at 8 sites throughout the continental U.S., of which PUDA is one. We used this document for descriptions of existing conditions at PUDA.

Department of Defense, Office of the Secretary, 32 CFR Parts 90 and 91, Federal Register, Vol 59, No. 66, Rules and Regulations, Revitalizing Base Closure Communities and Community Assistance, April 6, 1994. This outlines the rules for implementation of the so-called "Pryor Amendment" which allows transfer of surplus military facilities for economic development purposes.

Department of Planning and Development, House Bill 94-1265, Concerning the Creation of the Pueblo Depot Activity Development Authority, 1994. This is the legislation that established the Development Authority.

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Harrington, Lisa, Distribution, pages 47-52, Public Warehousing: The Original Third Party, February 1993.

Holmes and Narven, inc. Water Distribution Study for Pueblo Army Depot Activity Chemical Demilitarization Support Activities. May, 1992. Purpose of this study was to investigate, determine and recommend if the existing wells and permits have sufficient

volume of water to sustain CHEMDEMIL demands and to develop a preliminary plan showing necessary improvements. This study was used to report on the anticipated impact CHEMDEMIL would make on the existing water resource and distribution system.

Inland Pacific Engineering Company. Installation Environmental Assessment, Tooele Army Depot, Pueblo Depot Activity, Pueblo, Colorado. The purpose of this document is to identify all facets of PUDA that have environmental significance, to identify on-base activities and to ensure that the potential impacts of these activities on resources both on and off the base are evaluated. We used this document as a source for documentation of existing conditions.

JAYCOR/SYTEX. Facility Property Inventory of Pueblo Depot Activity (complete reference unavailable). This inventory looked at a representative sample of 90 buildings on the installation and identified and described buildings with reuse potential. The objective of the inventory was to determine the overall condition of structures, and which structures offer the greatest reuse potential. The report informed our understanding of historic use of buildings and to some extent condition. It was also used to document infrastructure conditions and capacity.

Office of Economic Adjustment, Office of Assistant Secretary of Defense, Economic Security. Civilian Reuse of Former Military Bases. September 1993. Provided a listing of past reuse efforts with contact person. Was the basis for telephone survey of facilities similar to Pueblo.

PDA Realignment Schedule. Consists of a series of maps indicating those segments of utility systems and infrastructure to be closed. This information helped to delineate those systems that will remain in service and be available for reuse and those that will not.

Pickering Environmental Consultants, Inc. Final Asbestos Survey Report. December, 1990. Purpose of this report was to survey and investigate buildings for levels of asbestos contamination and recommend remedial actions. This report was used to document potential remedial costs. Building footprints were also used to verify physical characteristics.

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The Office of State Planning and Budgeting. Issue Brief, What Can Colorado Expect from a North American Free Trade Agreement?. August 1, 1991.

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U.S. Army Corps of Engineers, Omaha District. Final Environmental Impact Statement for Realignment of Pueblo Depot Activity, Colorado. Prepared for Department of the Army, August 1991. This FEIS describes the realignment of PUDA and, in compliance with NEPA, includes a discussion of alternatives and impacts. It was helpful for adding to our understanding existing conditions at the time of this document.

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U.S. Fish and Wildlife Service. National Wetlands Inventory Maps, North Avondale and Devine Quads. July, 1977. Used to prepare the Ecological Resources Map and locate wetlands.

U.S. Soil Conservation Service. Soil Survey of Pueblo Area, Colorado. June, 1979. Used to prepare soils map.

Watts, Kenneth R. and Roderick F. Ortiz. Geohydrology and Ground Water Quality at the Pueblo Depot Activity Landfill Near Pueblo, Colorado. U.S. Geological Survey, Water-Resources Investigations Report 89-4143, Denver, Colorado, 1990. This report describes the geohydrologic system and chemical characteristics of ground water at PUDA landfill and describes the potential effects of the landfill on ground water quality. It helped give us a basic understanding of the contamination at the landfill.

_____. Final Project Ownership Map, U.S. Army Depot Activity, Pueblo, Colorado. Sheet 1 of 1. June, 1947. Used to confirm final boundary location.

DOE F 1325.8

United States Government **Department of Energy**

memorandum

Rocky Flats Field Office

DATE: SEP 20 2000

REPLY TO ATTN OF: AMEI:AI:JER:00-03446

SUBJECT: Rock Creek Reserve Integrated Natural Resources Management Plan Environmental Assessment

TO: Clifford M. Franklin, National Environmental Policy Act Document Manager, RFFO

This memorandum directs the preparation of a concise National Environmental Policy Act (NEPA) Environmental Assessment (EA) for the proposed Rock Creek Reserve Integrated Natural Resources Management Plan (Plan).

You have been selected to be the NEPA Document Manager for the preparation of NEPA documents for the attached "Environmental Assessment Determination". Maintain coordination with the designated field representative assigned by the U.S. Fish and Wildlife Service, which is party to the agreement establishing the joint management responsibilities of the Rock Creek Reserve. The authorship of the Plan is to be a joint composition with lead responsibilities remaining with the Department of Energy.

Should you have any questions or require assistance, please contact me at extension 2025 or Joe Rau, the Rocky Flats Field Office NEPA Compliance Officer, at extension 7410.

Barbara A. Mazurowski

Barbara A. Mazurowski
Manager

Attachment

cc w/attach:
C. Borgstrum, EH-42, DOE HQ
J. Legare, AMEI, RFFO
J. Rampe, DAMEI, RFFO
C. Franklin, AMEI, RFFO
J. Rau, ELD, RFFO
S. Bell, OCC, RFFO
K. Turner, K-H

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DOE NEPA REGULATIONS SUBPART D
ENVIRONMENTAL ASSESSMENT DETERMINATION

Rock Creek Reserve
Integrated Natural Resources Management Plan

Based upon the description of the management plan contained in the attached Interagency Agreement (DE-A134-99 RF 01776) between DOE-RFFO and the U.S. Fish & Wildlife Service, I have determined that the proposed action fits the description of an action requiring the preparation of an environmental assessment as defined in 40 CFR 1508.9. Therefore, I approve the preparation of an environmental assessment of the proposed action.

Date: 9-19-00

Signature: Barbara A. Mazurowski
Barbara A. Mazurowski
Title: Manager, Rocky Flats Field Office

Project Sponsor:
I concur with the recommendation to prepare an environmental assessment.

Date: 9-13-00

Signature: Joseph A. Legare
Joseph A. Legare
Title: Assistant Manager
Environment and Infrastructure

I have reviewed the attached project description and recommend an environmental assessment as the appropriate level of NEPA documentation.

Date: 8/31/00

Signature: Joseph E. Rau
Joseph E. Rau
Title: NEPA Compliance Officer

Regulatory citation that applies:

_____ This EA is listed in 10 CFR 1021, Appendix C to Subpart D.

_X_ This EA is not listed in 10 CFR 1021, Appendix C to Subpart D.

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INTERAGENCY AGREEMENT
Number DE-AI34-99 RF 01776
between the
U.S. FISH WILDLIFE SERVICE
and the
U.S. DEPARTMENT OF ENERGY
ROCKY FLATS FIELD OFFICE

For
THE ROCK CREEK FISH AND WILDLIFE COOPERATIVE MANAGEMENT AREA
AT THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

PART A. INTRODUCTION

I. PURPOSE

This Interagency Agreement (IA) between the U.S. Fish and Wildlife Service, Department of the Interior (the Service) and the U.S. Department of Energy, Rocky Flats Field Office (RFFO), is hereby entered into under the authority of the Economy Act, 31 U.S.C. section 1535. This IA identifies technical services to be provided by the Service for the purpose of conserving, protecting, developing, and managing the habitat on that approximately 800 acre portion of the Rocky Flats Environmental Technology Site's (Site's) Buffer Zone designated by RFFO as the Rock Creek Reserve, by establishing the Rock Creek Fish and Wildlife Management Area. Among other values, the Rock Creek Reserve is a unique riparian area, is inhabited by the threatened Preble's Meadow Jumping Mouse, and contains expanses of xeric tall grass prairie, which has been nearly extirpated along the Front Range.

The accomplishment of the Site's mission involving the management of nuclear materials, including health and safety and security, conducted pursuant to the authority of the Atomic Energy Act, as amended, 42 U.S.C. section 2011, *et seq.* (AEA) is the primary purpose for which RFFO exercises its custody and control of the Site. The Service and RFFO acknowledge that this AEA mission has priority with respect to decisions and actions concerning fish and wildlife cooperative management taken pursuant to this IA. They further acknowledge that the Service is charged with an independent, non-delegable statutory duty with respect to the Endangered Species Act, 16 U.S.C. section 1531, *et seq.* (ESA) for all federally listed species at the Site. This IA anticipates additional opportunities to protect, enhance, and restore fish and wildlife resources as part of the responsibilities of RFFO.

II. BACKGROUND

The Site is located in Northern Jefferson County, approximately 15 miles northwest of downtown Denver. From its construction in the early 1950's, the original 2,520 acre Sire developed into an industrial complex consisting of approximately 700 facilities which were used as manufacturing, chemical processing, laboratory, support, research and development, and administrative facilities. The main production and support facilities were located near the center of the Site, commonly referred to as the Industrial Area, occupying about 385 acres. From1972 through 1976, a surrounding 3,930 acres was acquired (including the approximately 800 acres comprising the Rock Creek Reserve

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area) to function as a Buffer Zone. In certain instances, the acquisition was of the surface estate interest only. Non-Federal land adjacent to the Buffer Zone is still utilized primarily for agricultural, quarrying, and open space purposes. Since the Site was constructed, surrounding multi-use development has grown closer, and the Denver area population has increased to the point where currently about 2.5 million people live within a fifty mile radius of the Site.

The Site was listed as a National Priorities List (NPL) Site, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. section 9601, *et seq.*, in September 1989. The Buffer Zone, including the Rock Creek Reserve Area, has subsequently been investigated for hazardous substance contamination. This investigation has shown that the Rock Creek Reserve Area and surrounding Buffer Zone is not contaminated by hazardous substances. It is RFFO's intention to pursue an NPL Site partial delisting for these portions of the Site. Pursuant to CERCLA, 42 U.S.C. section 9620, a federal facility interagency agreement, known as the Rocky Flats Cleanup Agreement (RFCA) was entered into on July 19, 1996 by RFFO, the U.S. Environmental Protection Agency, Region VIII (EPA) and the Colorado Department of Public Health and Environment (CDPHE). RFCA established a cleanup and closure target of 2015. Shortly thereafter, the Department of Energy's ten-year planning initiative began and cleanup plans for closure were further refined. Since cleanup for closure will now be completed within the relative near term, there is a great deal of interest in the physical condition of the Site after completion of activities required pursuant to RFCA (end state) and in future alternative uses after the end state is reached.

Discussions with stakeholders on future use began in early 1994. These discussions led to formation of the Rocky Flats Future Site Use Working Group (FSUWG). The FSUWG spent approximately a year gathering data from the Site and the stakeholder community and preparing recommendations for DOE. The FSUWG made formal recommendations to DOE in a July 1995 report. Consistent with the recommendations of the FSUWG, RFCA has a Vision statement and Preamble that foresee open space in the Buffer Zone and light industrial uses in the Industrial Area as potential alternative uses of the Site after the end state is reached.

On May 13, 1998, the Preble's Meadow Jumping Mouse (mouse) was listed as a threatened species pursuant to the Endangered Species Act, 16 U.S.C. section 1531, *et seq.* (ESA). Because the Site contains known and potential habitat for the mouse, the Service, RFFO, EPA, CDPHE and the Colorado Department of Natural Resources entered into a Memorandum of Agreement for Cooperation of Endangered Species Act Compliance with Activities at the Rocky Flats Environmental Technology Site, effective February 26, 1999.

Section 3153 of Public Law 104-201, The National Defense Authorization Act for Fiscal Year 1997 (NDAA), required RFFO to develop future use plans for the Site, covering the period of 50 years beyond 1997. RFFO prepared "The Rocky Flats Environmental Technology Site Future Use Stakeholder Involvement Process" (Process Document) in September 1998, in response to this requirement. The Process Document was submitted to Congress in October 1998. The Process Document recognizes RFFO's obligation to

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consult with the Rocky Flats Citizen's Advisory Board, affected local governments, including any local future use redevelopment authorities, and appropriate State agencies (Stakeholders) as required by the NDAA.

Section III of the Process Document summarizes the Buffer Zone status as follows: "Since the cessation of nuclear weapons production in 1992, Stakeholder interest in the cleanup, closure and future uses of the Site has been high. Based on current community consensus, Open Space of some form is the likely ...[use for the Buffer Zone after the Site's end state is reached]. Consistent with the RFCA and all stakeholder recommendations to date, the community is still seeking consensus on the range of specific open space options." This IA will help to preserve the valuable ecological resources of the Rock Creek Reserve area through the wildlife and habitat management expertise of the Service, thus protecting and enhancing the range of options.

In light of the above, this IA is designed to recognize the consensus that the Buffer Zone should be preserved for open space uses, by establishing the Rock Creek Fish and Wildlife Cooperative Management Area for the Rock Creek Reserve Area of the Buffer Zone. It also designed to recognize that RFFO needs information and assistance that can be provided through the expertise of the Service, in order to continue the Site's future use consultative process. Finally, it is designed to further a coordinated approach toward fulfilling RFFO's compliance obligations under diverse legal requirements.

PART B. ACCESS TO THE ROCK CREEK RESERVE.

I. <u>DESCRIPTION</u>

The RFFO, acting as the federal agency with jurisdiction, custody and control over the Site, hereby grants to the Service access to and use of the Site area designated as the Rock Creek Reserve. The Rock Creek Reserve encompasses an area of approximately 800 acres lying within Jefferson and Boulder Counties, State of Colorado, as described in the Exhibit dated May 11, 1999 attached hereto.

II. <u>USE OF THE PROPERTY</u>

The Service's use of the property shall be to cooperatively manage the Rock Creek Fish and Wildlife Cooperative Management Area and to conduct the activities described in the Statement of Work Part of this IA. It is the understanding of both RFFO and the Service (the Parties) that RFFO requires that the use of the property must be consistent with RFFO's continuing need for the Rock Creek Reserve area to function as a safety and security buffer for RFFO's ongoing activities involving the management of nuclear materials on the Site pursuant to its authority under the AEA. The parties believe this use for AEA purposes can be achieved in a manner consistent with the fish and wildlife cooperative management objectives of this IA. Should the Service determine that any use or action may adversely affect a listed species or otherwise violate the ESA, the Service will immediately advise RFFO and attempt to address the issue in a prompt and cooperative manner. To ensure that this requirement is met the Service agrees to manage the Rock Creek Fish and Wildlife Cooperative Management Area consistent with the

RFETS "Natural Resources Management Policy," Rev. 0, 9/30/98, (NRMP), Attachment 1 hereto. Future management of the Rock Creek Reserve will be in accordance with an Integrated Natural Resources Management Plan prepared by the Service, which shall be subject to approval by RFFO, which when so approved shall supersede the NRMP.

III. ACCESS TO THE PROPERTY

The Service is hereby granted access to the designated Rock Creek Reserve area, established as the Rock Creek Fish and Wildlife Cooperative Management Area of the Buffer Zone. In accordance with a Plan for Coordinated Access to be prepared by the Service in consultation with and approved by RFFO, the Service shall provide for appropriate access to the Rock Creek Reserve by coordination with the RFFO Technical Representative identified in this IA. The Plan for Coordinated Access shall identify and provide for access of those employees, contractors or subcontractors of RFFO or others entering under the AEA authority of RFFO for RFFO approved purposes. The Plan for Coordinated Access will, among other things, ensure that the Technical Representatives are informed of ongoing activities and will minimize potential conflicts regarding access for implementation of this IA and other RFFO approved purposes. RFFO shall provide appropriate training and access badges to allow the Service's staff or representatives assigned to perform the IA activities unescorted access to the Rock Creek Fish and Wildlife Cooperative Management Area.

IV. ENVIRONMENTAL RESPONSIBILITIES

The authority granted to the Service in this IA is limited to the cooperative management with the RFFO of natural resources pursuant to the NRMP and the Integrated Natural Resources Management Plan to be prepared by the Service and approved by the RFFO. Nothing herein shall be construed as authorizing the Service to manage or conduct any operations within the Site's Buffer Zone, including the Rock Creek Cooperative Fish and Wildlife Management Area, with respect to any hazardous substances or other contamination present at the time this agreement becomes effective, or otherwise related to RFFO activities or activities of third parties not under the direction or control of the Service. RFFO acknowledges that it shall have exclusive responsibility for any subsequent releases of hazardous substances originating from such contamination, whether or not such releases result from actions of the Service or others under the Service's authority for the purposes of implementing this IA. RFFO expressly recognizes that it shall maintain exclusive federal responsibility for all costs associated with any investigation of Site conditions and any cleanup, removal or remedial action or other compliance, closure, maintenance, restoration, or cleanup related activity required by federal, state or local laws or regulations which arise as a result of releases of hazardous substances (hazardous substances, for the purposes of this IA shall include, but not be limited to, nuclear material under RFFO's AEA authority, any hazardous or toxic substance, material or waste, or oil products or their derivatives) which is existing on the Rock Creek Fish and Wildlife Cooperative Management Area, on the effective date of the IA or otherwise resulting from Site activities, including the activities of RFFO employees, contractors, subcontractors or others entering under the AEA authority for RFFO approved purposes. The Service recognizes that it may be asked by RFFO to

contribute a portion of the costs associated with hazardous substance removal or remedial action required by applicable federal, state or local laws or regulation, which may arise solely as a result of the Service's activities, or the activities of others under the direction of the Service, in the Rock Creek Fish and Wildlife Cooperative Management Area. In such event, the parties agree to negotiate in good faith to determine whether the Service will contribute a share of such costs or to otherwise resolve the issue.

V. PERMITS AND LICENSES

The Service will abide by all federal, state and local laws and regulations applicable to the occupancy and operation of the Rock Creek Fish and Wildlife Cooperative Management Area, as appropriate. The Service will ensure that all operations conducted by it or by those present under the Service's authority are protective of the environment, associated natural and cultural resources, and of human health and safety. Each party will identify to the other any licenses, permits, certifications or authorizations that it determines to be required in order to comply with this paragraph. The parties shall work cooperatively with the permitting authority to decide the appropriate action to take.

PART C. STATEMENT OF WORK

I. PARTIES' TECHNICAL REPRESENTATIVES

The Parties designate the following Technical Representatives for the purposes of administering and implementing this IA. Any notices or reports or other documents to be furnished by each Party to the other pursuant to this IA shall be sent by first class mail to the named Technical Representative herein. Any other means of transmittal may be used if the receiving representative acknowledges receipt in writing.

a. The Service:

U.S. Fish and Wildlife Service
Colorado Fish and Wildlife Assistance Office
755 Parfet St., Room 496
Lakewood, CO 80215
Project Officer: Bruce Rosenlund, Project Leader
Colorado Fish and Wildlife Assistance Office
Telephone: 303-275-2393

b. RFFO:

U.S. Department of Energy
Rocky Flats Filed Office
P.O. Box 928
Golden, CO 80402
Program Officer: John Rampe, Deputy Assistant Manager
Environment and Infrastructure
Telephone: 303-966-6246

The RFFO Technical Representative will provide technical direction to the Service regarding the activities conducted under this IA that do not change the scope, schedule or cost of those activities. A Party may name a new Technical Representative at any time upon 10 days written notice to the other Party's Technical Representative.

II. ASSOCIATED AGREEMENTS

The Memorandum of Agreement for Cooperation of Endangered Species Act Compliance with Activities at the Rocky Flats Environmental Technology Site, effective February 26, 1999 (MOA) between the Parties and other signatories, remains in full force and effect. Funding under this IA shall not be used by the Service to provide funding to any third party to perform activities under the MOA without express written authorization of RFFO.

III. ACTIVITIES TO BE PERFORMED

The parties shall cooperate in implementing the Site's NRMP and the succeeding Integrated Natural Resources Management Plan in the Rock Creek Fish and Wildlife Cooperative Management Area. The Service shall propose changes that may be recommended based upon its performance of the IA, for inclusion in revisions to the NRMP prior to completion of the Integrated Natural Resources Management Plan.

The Service will, consistent with Service Policy and within limitations of funds and personnel, provide management services and other assistance within the scope of work agreed to on an annual basis under Part D of this IA for the following purposes:

1. Ongoing ecological management of the Rock Creek Fish and Wildlife Cooperative Management Area.

2. Review for adequacy existing Site plans related to the Rock Creek Reserve and the Buffer Zone.

3. Prepare and update the Coordinated Access Plan for the Service's representatives.

4. Cooperate with the Site to maintain and enhance mouse populations including habitat maintenance.

5. Provide vegetation management assistance to maintain biodiversity and minimize incursion of exotic weed species.

6. Maintain and enhance the wildlife and habitat values in the Rock Creek Reserve for native species.

7. Evaluate the ecological resources and values of the Rock Creek Reserve, with a goal of formulating recommendations regarding the long term federal management of the Rock Creek Reserve as a protected area after RFFO's custody, control and

stewardship terminate, including but not limited to inclusion of the Rock Creek Reserve into the National Wildlife Refuge System.

8. Assist RFFO in a consultative process with the general public, stakeholders, and other agencies regarding the preservation of the Rock Creek Reserve under federal management in the future. The consultative process will include sharing of information, discussions and consideration of comments provided by the general public, stakeholders, and other agencies during consultation.

9. Consult with RFFO regarding the ecological management of the Buffer Zone in general and its relationship to the ecological management of the Rock Creek Fish and Wildlife Cooperative Management Area.

Parts of the information or studies resulting from these activities may be applicable for use by RFFO to meet its consultation obligations under section 7 of the ESA. It shall be the responsibility of RFFO to conduct any analysis required pursuant to the National Environmental Policy Act, 42 U.S.C. section 4321, *et seq.* (NEPA) for any proposed action that may result from implementation of this IA. The foregoing activities to be conducted by the Service will assist RFFO in meeting its NEPA obligations.

IV. DELIVERABLES

The Parties agree that the following deliverables will be due on the dates indicated.

1. Plan for Coordinated Access, including Training Requirements for Service representatives. July 1, 1999.

2. Complete review and provide written comments on current management policies, plans and practices applicable to or affecting the Rock Creek Fish and Wildlife Cooperative Management Area. January 4, 2000.

3. Provide written recommendations for changes and implementation strategies for the future Integrated Natural Resources Management Plan for the Rock Creek Fish and Wildlife Cooperative Management Area. January 4, 2000.

4. Report on the nature and extent of information concerning biota, habitat values, and other relevant criteria necessary for further consideration pursuant to the Service's planning and evaluation process for inclusion in the National Wildlife Refuge System. The report is also to include any other recommendations the Service may have with respect to possible alternative uses of the Rock Creek Reserve. January 4, 2000.

PART D. ADMINSTRATIVE

I. ESTIMATED FUNDING AMOUNT FOR PERIOD OF PERFORMANCE

This IA shall be for the period May 17, 1999, through September 30, 2006. The performance period may be extended or shortened by mutual written agreement of the parties. Funding will be provided on an annual basis prior to the beginning of each performance period. Annual performance periods shall begin on May 17 and end on May 16 each year, except the last period, which shall end on September 30, 2006. Estimated performance period annual program budgets (not including the Service's overhead charges) necessary to implement this IA are as follows:

Period Beginning	1999	2000	2001	2002
Labor + Benefits	$74,432	$78,005	$81,125	$84,370
Materials, Supplies and Travel	$20,000	$20,000	$20,000	$20,000

Period Beginning	2003	2004	2005	2006
Labor + Benefits	$87,745	$91,255	$94,905	$49,351
Materials, Supplies and Travel	$20,000	$20,000	$20,000	$10,000

II. FINANCIAL ADMINISTRATION

On the effective date of this agreement, or as soon as possible thereafter, RFFO shall issue the Service a Department of Energy Funds-Out Interagency Agreement with appropriate funding and administrative General Provisions/Requirements acceptable to RFFO and the Service, incorporating this IA as the statement of work. The Parties may revise or amend this IA at any time. Revisions or amendments shall be in writing signed by the Parties.

The Parties' Technical Representatives shall meet at least annually to review progress and to identify and reach agreement on specific future Deliverables that are expected to result for each of the Activities to be Performed. Such annual agreements shall ensure that these Deliverables are to be performed within the funding amounts identified in this IA. The Funds-Out Interagency Agreement will be modified to authorize the funding to implement the annual agreement.

Any permit and/or license fees attributable to the Service's activities in Rock Creek Fish and Wildlife Cooperative Management Area shall be reimbursed if incurred by the Service within the estimated funding amounts agreed to in this IA.

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III. REMOVAL OF PROPERTY UPON TERMINATION

Following a termination of this IA the Service shall remove from the Rock Creek Fish and Wildlife Cooperative Management Area any personal property and equipment installed by the Service or its representatives, that it can reasonably remove. The method of removal of structures, whether real or personal property, is subject to RFFO approval which will not be unreasonably withheld.

If either Party terminates the IA the Service shall remove any personal property and equipment from the Rock Creek Fish and Wildlife Cooperative Management Area by the effective date of the termination.

In the event of a change in mission at the Site, which might require termination of access, RFFO shall endeavor to provide notice of the anticipated change to the Service at the earliest practicable point. Following a termination by RFFO under this authority the Service shall have 180 days to remove any personal property and equipment from the Rock Creek Fish and Wildlife Cooperative Management Area.

The Service is responsible for the disposition of any personal property and equipment removed under this section.

IV. APPROVAL OF MANAGEMENT PLANS

To ensure that the terms and conditions of this IA will be met by the Service, the Service agrees to involve RFFO early in the development of all plans and policies specific to the Rock Creek Fish and Wildlife Cooperative Management Area. RFFO expressly reserves the rights of approval over any management plan or policy developed by the Service regarding the management of the Rock Creek Fish and Wildlife Cooperative Management Area. No Service management plan or policy, nor any change to approved Service plans or policies, shall be effective until RFFO has issued written approval. Such approval shall not be unreasonably withheld. Present and future uses of the Rock Creek Fish and Wildlife Cooperative Management Area under this IA shall be consistent with the RFFO approved Integrated Natural Resources Management Plan.

V. REASSIGNMENT

Neither this IA, nor any interest herein nor claim thereunder may be assigned nor transferred by the Service except as expressly authorized in writing by RFFO.

VI. EFFECTIVE DATE

The effective date of this IA shall be the date on which the last Party signs this IA. This IA shall remain in effect for all Parties, subject to the Modification and Revisions and Termination sections herein.

Ralph O. Morgenweck

Ralph O. Morganweck, Regional Director, Region 6
U.S. Fish and Wildlife Service

5-17-99
Date

Jessie Roberson

Jessie M. Roberson, Manager,
Rocky Flats Field Office, U.S. Department of Energy

May 17, 1999
Date

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PUBLIC INVOLVEMENT PLAN

Rock Creek Reserve Integrated Natural Resources Management Plan

Issue:
Under the 1999 Interagency Agreement between the Rocky Flats Field Office (RFFO) and the Fish and Wildlife Service (FWS), the FWS has prepared an Annual Report dated February 15, 2000. The report includes recommendations for the ecological management of the Rock Creek Reserve (RCR). Public involvement in addressing these recommendations is desirable and will serve to form the basis for any National Environmental Policy Act (NEPA) analysis determined to be required.

Objectives:

- Increase public awareness of the Interagency Agreement and the recommendations included in the FWS 2000 Annual Report.
- Solicit input from the general public regarding issues and concerns surrounding ecological management of the RCR.
- Encourage involvement of the affiliated public and our regulators in drafting the Rock Creek Reserve Integrated Natural Resources Management Plan (RCR Plan).
- Describe the process through which the public will participate in the development of the Plan.
- Approve and implement the resulting Plan.

Strategy:
Develop a list of stakeholders most likely to become heavily involved in drafting the plan. Encourage familiarity with the issue by providing copies of the FWS Annual Report to the affiliated public (including the key stakeholders on the list) and our regulators. Keep RFFO management and Headquarters informed about issues and progress throughout the public development process. Notify the general and affiliated public and regulators about the beginning and structure of the public process and how to become involved. Make the report available on the internet, through the Reading Rooms, and by request. Conduct a series of meetings (an interactive dialogue) to develop the draft plan, obtaining technical input from the affiliated stakeholders and issues and concerns from the general public for consideration by the agencies. Issue draft plan for public comment and conduct informational sessions as well as public comment meetings. Make the draft plan available on the internet, through the Reading Rooms, and by request. Revise plan to incorporate public comments and issues and implement plan.

Tools:
Use standard communications and meeting protocols to support process.

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- **PUBLIC INVOLVEMENT SCHEDULE**

Rock Creek Reserve Expansion

ACTIVITY	LEAD	TARGET DATE
Write cover letter for agreement	Anderson	March 10
Obtain/reproduce 100 copies of agreement	Franklin	March 9
Develop key stakeholder list	Anderson	March 9
Mail Agreement and cover letter to stakeholders	Anderson / Franklin	March 24
Develop draft outline of RCR Integrated Natural Resources Management Plan (Plan), outline will also serve as the basis for scoping under NEPA	Robin	April 21
Schedule Management Briefing on Plan outline	Frankin	April 28
Offer briefings to CAB, Coalition, and Stewardship Working Group at regularly scheduled meetings	Anderson	April 19
Mail outline and list of upcoming meetings to stakeholders	Mariane	April 25
Post Outline and Letter on Website	Mariane/ Liz	April 27
Offer one-on-one briefings to cities, counties, regulators, Governor's office, and congressionals as requested	*Anderson Rampe*	
Schedule focus group sessions to develop draft plan	Mariane	May 12
Assemble first draft plan	Robin, Bruce, Cliff	July 1
Issue draft plan for public comment	Anderson	July 1
Schedule briefings to CAB, Coalition, and Stewardship Working Group at regularly scheduled meetings	Anderson	June 15
Schedule a public meeting strictly for the purpose of obtaining comments from the unaffiliated public	Anderson	June 15
Issue community advisory listing all dates and times of public briefings	Anderson	June 15
Offer one-on-one briefings to cities, counties, regulators, Governor's office, and congressionals	*Anderson Rampe*	
Address public comments and issues in response to comment document	Robin, Bruce, Cliff	
Make necessary revisions to Plan	Robin, Bruce, Cliff	
Brief Manager on RCR Management Plan	Rampe et al	
Issue Community Advisory regarding plan content and availability	Anderson	December 31

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Date: 15 May, 2000

To: Joe Legare, John Rampe, Gail Hill, Joe Rau

Subject: Rock Creek Reserve Integrated Management Plan and EA

Attached is a list of Actions specified in the RFFO Order 451.1 concerning NEPA activities. Also attached is a timeline showing the estimated periods necessary for ensuring the Plan and EA are completed prior to the 31 December 2000 date specified in the FWS workplan.

Cliff

Rock Creek Reserve Integrated Natural Resource Management Plan and EA Development

Action	Responsibility of:	Action completed
1. Recommends EA or EIS to Manager	NEPA Compliance Officer	
2. Determines whether EA or EIS is appropriate level of NEPA review	Manager	
3. Designates DOE NEPA Document Manager	Manager	
4. Notifies EH-42, CDPHE of determination to prepare an EA	NEPA Compliance Officer	
5. Notifies EH-42 who the NEPA Document Manager is.	NEPA Compliance Officer	
6. Prepare a Public involvement process for Scoping meetings	Closure Project Communications	4-24-00
7. Conduct Public Scoping meetings	NEPA Document Manager	5-18-00 5-25-00 6-01-00
8. Prepare Draft Integrated Natural Resource Management Plan and Draft EA	NEPA Document Manager US Fish & Wildlife Service	
9. Ensure Draft Plan and Draft EA is reviewed by OCC, and Technical Staff	NEPA Document Manager	
10. Ensure suggested changes are made to Draft Plan and Draft EA	NEPA Document Manager	
11. Notifies EH-42 of EA transmittal to State, local governments, and general public	NEPA Compliance Officer	
12. Transmits Draft Plan and Draft EA to State, local governments, and general public	Closure Project Communications	
13. Prepare and schedule a public involvement process for public meetings	Closure Project Communications	
14. Conduct Public meetings	NEPA Document Manager	
15. Collect Stakeholder comments during 30 day review period	NEPA Document Manager	
16. Ensure comments are addressed and necessary changes made to documents	NEPA Document Manager	
17. Ensure Final Plan, Final EA, MAP(if applicable) and FONSI are reviewed by OCC, Technical Staff, and Line Managers	NEPA Document Manager	
18. Recommends to Manager on approval of EA	NEPA Compliance Officer	
19. Approval/disapproval of Final EA, FONSI	Manager	
20. Distributes Final Plan, EA, FONSI to Stakeholders	Closure Project Communications	
21. Provides Final EA, FONSI to EH-42	NEPA Compliance Officer	
22. Closes File on NEPA process	NEPA Document Manager	

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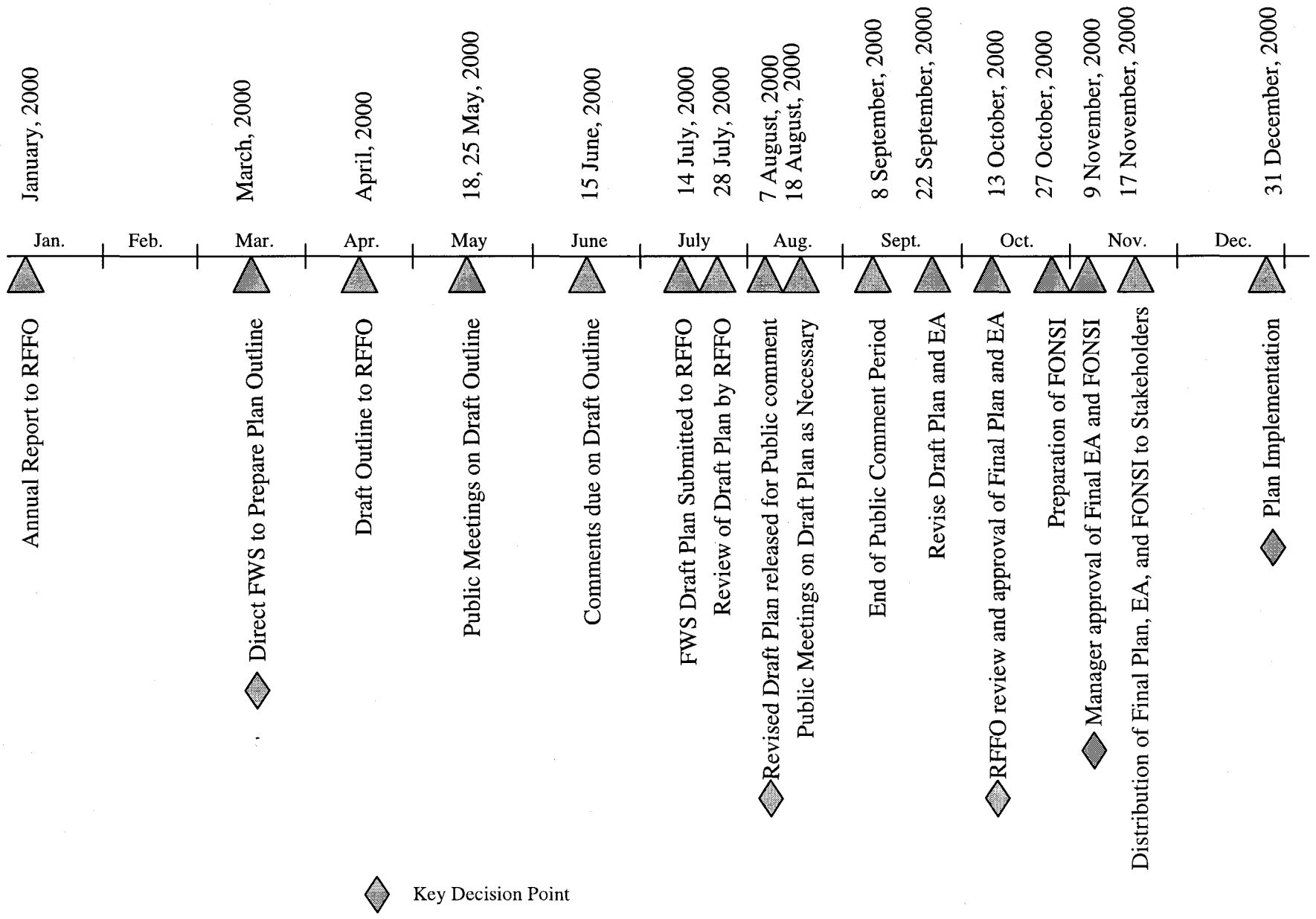
Timeline for RCR Plan and EA Development



U. S. Department of Energy
Rocky Flats Field Office

ORDER
RFFO O 451.1

DATED
04/17/00

SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM

1. PURPOSE. This Rocky Flats Field Office (RFFO) Order implements Department of Energy (DOE) Order 451.1A, National Environmental Policy Act (NEPA) Compliance Program, of 6/5/97. This order enables compliance with and supplements DOE O 451.1A. In order to implement the requirements of DOE O 451.1A, the following objectives have been established for RFFO:

   a. Ensure consideration of environmental factors along with other program considerations, and compliance with Council of Environmental Quality (CEQ) Regulations and the DOE NEPA Regulations (10 CFR 1021) in the decision making process.

   b. Ensure procedures are in place to provide coordination of contractor activities and the DOE NEPA compliance process.

   c. Establish contractor responsibilities that are consistent with DOE O 451.1A.

2. CANCELLATION. None.

3. SCOPE. The provisions of this order apply to all RFFO employees.

4. REFERENCES.

   a. DOE Order 451.1A, NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM, of 06/05/97, which establishes internal DOE responsibilities and procedures to implement the NEPA of 1969.

   b. 42 U.S.C. 4321 *et seq.*, National Environmental Policy Act, of 01/1/70, which establishes broad national environmental policy.

   c. 10 CFR 1021, DOE NEPA Regulations, which establish departmental requirements for implementing the procedural provisions of the NEPA pursuant to the CEQ Regulations.

   d. 40 CFR Parts 1500-1508, Council on Environmental Quality (CEQ) Regulations, as amended 07/01/86, which establish requirements for implementing the procedural provisions of the NEPA.

   e. "Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements," 05/93, which provides guidance from the DOE Office of NEPA Oversight on preparing environmental assessments (EA) and Environmental Impact Statements (EIS).

DISTRIBUTION
All RFFO Organizational Elements

INITIATED BY:
Assistant Manager for
Environment and Infrastructure

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f. Secretarial Policy on the NEPA, of 06/13/94, memorandum from S-1 to Secretarial Officers and Heads of Field Elements, which establishes new policy to streamline the NEPA process, reduce time and costs, and make the process more useful to decision makers.

5. Definitions. See DOE O 451.1A and 10 CFR 1021, DOE NEPA Regulations.

6. RESPONSIBILITIES AND AUTHORITIES.

a. Manager, RFFO.

(1) Designates a NEPA Compliance Officer (NCO) and informs the Office of NEPA Policy and Assistance (EH-42) of any changes in the designation.

(2) Designates a DOE NEPA Document Manager (NDM) for each EIS and EA.

(3) Makes the services of the Office of Chief Counsel (OCC) available to the NCO and NDM to ensure compliance with regulations and guidance.

(4) Ensures that all proposed Site projects are evaluated in a manner that meets the requirements and spirit of the NEPA by establishing NEPA compliance program that requires the early use of NEPA in project and program planning in consideration of environmental factors along with other relevant information.

(5) Requests, as necessary, variances from DOE NEPA Regulations if actions meet the criteria of urgency or emergency (10 CFR 1021.343(a), of timing requirements (10 CFR 1021.343(b)), or for other reasons (10 CFR 1021.343(c)).

(6) Ensures that NEPA values are incorporated into Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) documents to the extent practicable.

(3) Determines whether a proposed action is an interim action clearly allowable under 10 CFR 1021, or for actions not clearly allowable under the regulations, provides the Assistant Secretary for Environment, Safety, and Health (EH-1) with a recommendation for a determination whether the proposed action may proceed.

(8) Obtains concurrence of DOE counsel in the legal adequacy of an environmental assessment before it is approved and in any finding of no significant impact before it is issued.

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(9) Approves final EA, Finding of No Significant Impacts (FONSI), Mitigation Action Plans (MAP) (if applicable), and Site Wide Environmental Impact Statement (SWEIS) supplemental analysis. Provides a copy of those documents to the EH-42, the responsible DOE Program Secretarial Officer (PSO), and the Colorado Department of Health and Environment (CDPHE), except where documentation requirements have been waived by regulation or DOE guidance.

(10) Determines that an EA is the appropriate level of NEPA review or that an EIS is appropriate or required. Also determines whether DOE shall be a lead or cooperating agency when another agency is involved.

(11) Determines, based on an EA, that the impacts of a proposed action are significant and that an EIS is required, or issues a FONSI as appropriate.

(12) Adopts another agency's EA, if appropriate.

(13) When required by the Regulations, prepare a supplement analysis and with the concurrence of DOE counsel, determine whether a supplemental or new environmental impact statement is required for the proposed action, or whether no further documentation is required.

(14) Ensures NEPA milestones are incorporated into program planning and as a part of the project management system under DOE Order 4700.1, or any equivalent to the order.

(15) Ensures that NEPA compliance status information is incorporated into internal budget review documents.

(16) Ensures that the following plans, procedures, and documents are prepared by RFFO and submitted as appropriate:

(a) MAP, prior to issuing a FONSI, when a commitment to mitigate is essential to render the impacts of a proposed action not significant in an EA.

(b) Annual reporting of progress made in implementing, and the effectiveness of any commitment for environmental impact mitigation that is essential to render impacts of a proposed action not significant.

(c) EIS implementation plans submitted to the appropriate Secretarial Officer for approval.

(d) Annual NEPA planning summary submitted to EH-1 by January 31 of each year and made available to the public.

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(e) Internal scoping procedures, a quality assurance plan, and a public participation plan, for RFFO.

(17) Requests from the EH-1 delegation of approval or adoption authority for a specific EIS when appropriate to expedite the review and approval process.

b. Office of Chief Counsel (OCC).

(1) Provides legal advice regarding the level of NEPA review required for a proposed action and the adequacy of NEPA documents.

(2) Serves as liaison between the RFFO and General Counsel at Headquarters for applying and interpreting the NEPA.

(3) Reviews NEPA requirements and documents for adequacy against regulations and guidance.

(4) Provides assistance in the conduct of NEPA related hearings.

(5) Provides legal assistance to the Manager, RFFO, Assistant Managers and Direct Reports, the NDM, and the NCO in preparing NEPA guidance.

c. Director of Closure Project Communications .

(1) Assists the NDM and/or the NCO in developing appropriate public involvement for projects, as required by the NEPA process and the procedural steps in this order.

(2) Reviews and comments on the public involvement plans as requested by the NDM and/or NCO.

(3) Supports the NCO and/or NDM by integrating NEPA public participation activities with Site public participation activities.

(4) Provides public information cadres to support the NDM and/or NCO as requested.

d. Director of Contracts Management Division.

(1) Ensures that future contracts for preparing an EA or an EIS contain incentives to encourage superior performance in their quality and timeliness.

(2) Includes in new contracts and grants a provision that the awardee may not undertake on RFFO's behalf an action that is subject to NEPA until RFFO has notified the awardee that RFFO has satisfied applicable NEPA requirements.

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e. NEPA Compliance Officer.

(1) For actions specifically listed in Appendix A or B to Subpart D of 10 CFR 1021, DOE Regulations, makes categorical exclusion determinations and approves and issues any required associated floodplain and wetland documents.

(2) Notifies EH-42, the appropriate PSO, and the Colorado Department of Public Health and Environment (CDPHE) within two weeks after the Manager, RFFO, makes the determination to prepare an EA. Notifies EH-42 whom the NDM is for each document. Notifies EH-42, the PSO, and CDPHE of the determination to prepare an EIS.

(3) Recommends to the Manager, RFFO, whether an EA or EIS is appropriate or required.

(4) Reviews NEPA documents and other related documents for compliance with CEQ Regulations, DOE NEPA Regulations, and other DOE NEPA procedures and guidance. If requested, reviews CERCLA documents to ensure that NEPA values are incorporated to the extent practicable.

(5) Notifies EH-42 of a transmittal of an EA to host states, host tribes and, when applicable, potentially affected tribes and states, members of the public, other federal agencies, and local governments for review of the document prior to approval.

(6) Provides five copies and one electronic file of the following within two weeks of their availability to EH-42:

(a) an approved EA and FONSI

(b) a proposed FONSI required under the CEQ regulations;

(c) an EIS implementation plan;

(d) an approved draft or final EIS;

(e) a Record of Decision;

(f) a MAP corresponding annual mitigation report; or

(g) an EIS supplemental analysis.

(7) Develops procedures and maintains records of all NEPA determinations, approvals, and final documents and ensures that record keeping requirements for NEPA documents are met.

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(8) Develops, revises (as needed), and implements NEPA procedures and makes suggestions on program improvements, as appropriate, based on lessons learned reports and input from the NDM.

(9) Directs tracking and reports annually to the Manager, RFFO, of the progress and the effectiveness of any commitments for environmental impact mitigation that are essential to render impacts of a proposed action not significant.

(10) Serves as liaison between the RFFO and EH-42 on issues related to applying and interpreting the NEPA policy, regulations, guidelines and orders.

(11) Disseminates NEPA guidance materials and related information to RFFO personnel.

(12) Ensures that RFFO has a quality NEPA compliance program through the expansion of the RFFO Quality Assurance Plan, as needed, and elaboration of general actions that will be accomplished to meet the element requirements (e.g., internal reviews, performance criteria, standards, contracting, procedures, training, records management).

(13) Submits an annual NEPA planning summary to EH-1 by January 31 of each year, and makes summaries available to the public.

(14) Reviews and comments on strategy and management plans for EA and EIS.

f. NEPA Document Manager (NDM).

(1) Serves as the contact for the assigned project. Ensures NEPA requirements are fulfilled and all appropriate reviews, approvals, and communications are completed before the assigned project is initiated.

(2) Manages the NEPA document preparation processes and keeps it on schedule. This includes developing EA/EIS strategy and management plan, as appropriate, the budget and schedule for completing the NEPA review and documentation; tracking the cost and schedule; directing and monitoring the progress of NEPA documents; conducting early internal scoping; leading meetings; and establishing the NEPA document review team.

(3) Prepares and implements the appropriate level of public involvement for an EA and an EIS with support from the NCO and public information cadre. Encourages and facilitates public participation throughout the NEPA process. Provides an opportunity for interested parties to review an EA (concurrent with CDPHE review) prior to DOE approval. Ensures all other public involvement commitments needed for the project are completed.

(4) Reports to EH-42 on lessons learned after completing an EIS or EA. Also, evaluates the contractor's performance for timeliness, quality, cost-effectiveness, responsiveness, and application of requirements and guidance and provides this information to the NCO.

(5) For an EIS, prepares an implementation plan and solicits comments from EH-42 and the Office of Assistant General Counsel for Environment.

(6) Ensures that state and public comments are addressed in NEPA documents.

(7) Directs the preparation of a MAP when a commitment to mitigate is essential to render the impacts of a proposed action not significant.

APPROVED BY
PAUL GOLAN
ACTING MANAGER

Incoming Controlled Correspondence Ticket -- CCTS

Control Number: CTRL00-02590 **File Code:** 5476
Task: FYI **Priority:** Normal
Task Assignment:
Ref. Number:
Date Revised From:

Comments:
(For handwritten use only)

Joe
Looks like good comments
MG

Don't think so!

Revision Reason:

Action Assignment

Responsible: **Organization:** AMEI
Division:
Direct Report:
Division Secretary:
Additional Notifications: Paul Golan, Dero Sargent, Lisa Peckham, John Rampe, Ken Brakken
Status: Initial Assignment
Comments: H/C of memo to P. Golan.
Referred By: CCDM **on** 06/15/2000 02:06:59 PM
RESPONSE READERS
Add response readers to the ticket:

Document Information

Addressee: Joseph Legare **CC:** Shaun Deeney, Scott Hoover, Ken Brakken
From: Dave Weber **Title:** Habitat Biologist
Agency: Division of Wildlife
Document Subject: U. S. Fish & Wildlife Service 1999 Anual Report, Discussion Draft Outline - Goals & Objectives for Rocky Creek Reserve, Discussion Draft - Table of Contents for Management Plan.
Received Date: 06/15/2000 **Document Date:** 06/13/2000

06/15/2000

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STATE OF COLORADO
Bill Owens, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

John W. Mumma, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

For Wildlife-
For People

June 13, 2000

Joseph Legare
Department of Energy
Rocky Flats Field Office
P. O. Box 928
Golden, CO 80402-0928

RE: U. S. Fish & Wildlife Service 1999 Annual Report
Discussion Draft Outline – Goals & Objectives for Rock Creek Reserve
Discussion Draft – Table of Contents for Management Plan

Dear Mr. Legare:

Thanks for the opportunity to comment on these three documents. They all appear to be quite complete, clear, and well written and we only have a few comments below. As always, we certainly support the goal of preserving the high quality wildlife habitats in the Rocky Flats Buffer Zone.

U. S. Fish & Wildlife Service 1999 Annual Report

Page 4 – Second Paragraph – With regard to the possible placement of native fishes in Buffer Zone lakes, the term "reintroduction" is used. I think it is fairly unlikely that these species of fish historically occurred at this location and suggest that the term introduction would be more accurate. We have no objection to the use of these waters for this purpose, and in fact believe it to be an excellent use of these man-made lakes.

Map Following Page 7 – Proposed Rock Creek Reserve Boundary – This proposed boundary does a fairly good job of including high quality habitats on the north side of the buffer zone, for the moment leaving out some of the Walnut Creek area for clean-up reasons. However, the southern portion of the buffer zone is not included and does contain excellent grassland, riparian, and wetland habitats. We suggest consideration of including this area as well.

Discussion Draft Outline – Goals & Objectives for Rock Creek Reserve

Page 2 – Goal 1.1 – This statement focuses on species only. Because of the unusual nature of some of the wildlife habitats (especially grasslands and seep wetlands), we suggest also

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DEPARTMENT OF NATURAL RESOURCES, Greg Walcher, Executive Director
WILDLIFE COMMISSION, Bernard L. Black, Jr., Chairman • Rick Enstrom, Vice-Chairman • Philip James, Secretary
Members, Tom Burke • Mark LeValley • Marianna Raftopoulos • Robert Shoemaker • Olive Valdez
Ex-Officio Members, Greg Walcher and Don Ament

listing habitats for management/enhancement as well as species.

Page 2 – Goal 1.2.2 – This is an excellent statement. As mentioned above, much more of the Buffer Zone is important to wildlife than the currently included parcel.

Page 3 – Objective 2.1 – The discussion of dealing with noxious weeds is excellent – this i8s a very serious threat.

Page 3 – Objective 2.1 – Suggest also adding a statement here about preserving the hydrologic conditions which support many of the habitats present – especially the groundwater situation which maintains the springs and seeps.

Page 3 – Item 2.1.1.1 – It would be more accurate to call them plains sharp-tailed grouse.

Page 8 – Item 2.6.2.1 – We suggest extreme care in developing trail systems in the area, especially if they link up with other trails. The impacts on wildlife by human presence as encouraged by trails are not well understood and we suggest caution in considering any trail development.

Page 8 – Issues 2.6.3 – Suggest adding potential impacts of hike/bike trails on wildlife as an issue.

Discussion Draft – Table of Contents for Management Plan

As an outline, it looks fine. No other comment

I hope this information is helpful – please let me know if you have any questions.

Sincerely,

Dave Weber
Habitat Biologist

cc: Shaun Deeney, Scott Hoover, - CDOW
Ken Brakken, DOE

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This page of this document contains personal and confidential information and can be located in the CERCLA AR upon request

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This page of this document contains personal and confidential information and can be located in the CERLA AR upon request

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Meeting Summary

Meeting: RCR Intergrated Natural Resources Management Plan Scoping
Date/Time: May 25, 2000/6:00 to 8:00 p.m.
Location: Arvada City Hall
Attendees: Steve Blazek, DOE-GFO; Carol Lyons, City of Arvada; John Marler, RFCLOG; Steve Tarlton, CDPHE; Mary Harlow, City of Westminster; Pamela J. Timmerman, USGAO; Bruce Rosenlund, USFWS; Robin Romero, USFWS; Ken McDermond, USFWS; Jeffrey Poaker, DOE-GFO

John Rampe opened the meeting with a welcome and short introduction to our purpose of developing a joint natural resources management plan for the Rock Creek Reserve with the U. S. Fish and Wildlife Service.

Cliff Franklin then gave a short presentation of background information about the interagency agreement and the designation of the Rock Creek Reserve by the Secretary of Energy.

The final presentation was given by Robin Romero of USFWS who went through the draft outline and table of contents for the plan. The following questions were addressed during the public discussion.

- Who will make the decision regarding expansion of the RCR or whether there will be additional further formal designations of land?
- How will the decision to expand or not expand the RCR be made?
- How does the NREL proposal to use Rocky Flats Buffer Zone land affect this decision process?
- Will the NREL proposal be one of the alternatives in this decision?
- If the decision is to expand the, would this decision document cover future expansions as well?
- How many alternatives will be contemplated under the EA process?
- What were the decision criteria for determining the expansion boundaries on the map?
- What about using the landfill pond for re-introducing native species, does this affect the capping of the landfill?
- Is the block in the west (on the map) an area which is not permitted for mining?
- Would any actions taken under this plan preclude and future use?
- Keep in mind affects on neighbors before introducing any species.
- How many people could safely use that site over time without damaging the ecology?
- If there is a parcel of land you do not want to include in the refuge or reserve, is that property then open for sale or whatever?
- Are any of the areas in the proposed reserve candidates for grading for water control?

- How will the program be funded? Is there a budget for the management plan?
- Have you been in contact with Udall and/or Allard to coordinate efforts?
- Were the State and EPA involved in developing the Interagency Agreement with the FWS? Was there consultation with the regulators prior to the designation of RCR?

Meeting Summary

Meeting: RCR Integrated Natural Resources Management Plan Scoping
Date/Time: May 18, 2000 / 9:30 – 11:30 a.m.
Location: Rocky Flats Visitors Center
Attendees: Jeb Love, CDPHE; Maureen Jordan, NREL; Ken Korkia, CAB; Steve Tarlton, CDPHE; Hank Stovall, City of Broomfield; Kathy Schnoor, City of Broomfield; Shirley Garcia, City of Broomfield; Doug Young, Udall's Office; Polly Stevens, USFWS; Steve Schiesswhol, RFFO; Matt Jones, City of Boulder Open Space; John Rampe, RFFO; Jeanna Blatt, RFFO; Robin Romero, USFWS; Mariane Anderson, RFFO; Frank Kunze, Jeffco Open Space; Cliff Franklin, RFFO; Bruce Rosenlund, USFWS

John Rampe opened the meeting with a welcome and introduction to our purpose of developing a joint natural resources management plan for the Rock Creek Reserve with the U.S. Fish and Wildlife Service.

Cliff Franklin then gave a background presentation detailing how we got to the point at which we now find ourselves. He described the Interagency Agreement between RFFO and USFWS and the designation, by the Secretary of Energy, of the Rock Creek Reserve. He spoke about the elements of the agreement and the Annual Report submitted by USFWS including a number of recommendations for the management of the Reserve.

The recommendation that received the most attention was the one to designate some or all of Rocky Flats as a Wild Life Refuge. Bruce Rosenlund fielded numerous questions regarding criteria and process for designating a parcel of land as a Refuge. It was pointed out that while the term "refuge" has a specific legal meaning, the word "reserve" is simply used by the DOE and USFWS to describe the land surrounding Rock Creek and described in the agreement. Questions were asked about contamination levels, animal species, and re-introduction of native species to the area. Doug Young noted that there were very few stakeholders present at the meeting and since this process could end up defining the future Site use, as a Refuge, we need to do more outreach and better notification of the public.

Robin Romero then took the group through the outline and the goals and objectives section of the plan. The following are the questions asked by the public at the meeting.

- What are the criteria for recommending designation as a Wildlife Refuge?
- Are the criteria written and did Rock Creek Reserve (RCR) meet the criteria?
- Does the work "reserve" have a specific legal meaning?
- Since NREL is contiguous to the Site, can its unused property be included in a preserve?

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- Does NREL want the reserve land for its own use?
- What are the ramifications of mineral and water rights ownership, and have we begun to explore who owns the rights?
- Would mining be allowed if the designation of a Refuge is made?
- Do we need legislation to designate the RCR a Refuge or can we simply treat the area as a Reserve/Refuge?
- Since some Broomfield water supply ditches are included in the expansion area, how will the water supply be affected?
- What sorts of restrictions and requirements would be typical for waterways upstream from a Refuge?
- What downstream (Great Western Reservoir) implications would there be from stocking the old landfill pond with native, non-game species?
- Is there a vision for what kind of recreational uses will be allowed at the Site?
- Does USFWS have a preference for use of prescribed fire as a management tool?
- Can USFWS characterize the weed problem?
- Are hunting and trapping going to be allowed under the management plan?
- Are there funds available to preserve the Lindsay Ranch?
- Would the area have to be de-listed as a Superfund Site to become a Refuge?
- Does the USFWS recovery plan for the PMJM include land reconfiguration, erosion control, vegetation management, etc?
- Has sampling been done to determine the levels of contamination in the RCR?
- Scoping implies a NEPA decision. Is this going to be an EA?
- What is the list of decisions to be covered in this document/process?
- Will there be a provision in the plan to include the rest of the Site?
- Will the plan go over the specifics of areas to be expanded?
- What is USFWS criteria for determining allowable levels of contamination in designation of a Wildlife Refuge?
- Is the USFWS willing to accept the level of cleanup agreed to by the Site and the regulators?
- Is there any habitat on the Site where surrounding communities could bring unwanted Prairie Dogs?
- After closure, where will water to sustain PMJM habitat come from?
- The community would be very interested in the unresolved issues section of the plan and there is concern that not enough affected people are involved in the process.

This page of this document contains personal and confidential information and can be located in the CERCLA AR upon request

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15 JUN 00 9:40

STATE OF COLORADO
Bill Owens, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

John W. Mumma, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

For Wildlife-
For People

June 13, 2000

Joseph Legare
Department of Energy
Rocky Flats Field Office
P. O. Box 928
Golden, CO 80402-0928

RE: U. S. Fish & Wildlife Service 1999 Annual Report
Discussion Draft Outline – Goals & Objectives for Rock Creek Reserve
Discussion Draft – Table of Contents for Management Plan

Dear Mr. Legare:

Thanks for the opportunity to comment on these three documents. They all appear to be quite complete, clear, and well written and we only have a few comments below. As always, we certainly support the goal of preserving the high quality wildlife habitats in the Rocky Flats Buffer Zone.

U. S. Fish & Wildlife Service 1999 Annual Report

Page 4 – Second Paragraph – With regard to the possible placement of native fishes in Buffer Zone lakes, the term "reintroduction" is used. I think it is fairly unlikely that these species of fish historically occurred at this location and suggest that the term introduction would be more accurate. We have no objection to the use of these waters for this purpose, and in fact believe it to be an excellent use of these man-made lakes.

Map Following Page 7 – Proposed Rock Creek Reserve Boundary – This proposed boundary does a fairly good job of including high quality habitats on the north side of the buffer zone, for the moment leaving out some of the Walnut Creek area for clean-up reasons. However, the southern portion of the buffer zone is not included and does contain excellent grassland, riparian, and wetland habitats. We suggest consideration of including this area as well.

Discussion Draft Outline – Goals & Objectives for Rock Creek Reserve

Page 2 – Goal 1.1 – This statement focuses on species only. Because of the unusual nature of some of the wildlife habitats (especially grasslands and seep wetlands), we suggest also

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DEPARTMENT OF NATURAL RESOURCES, Greg Walcher, Executive Director
WILDLIFE COMMISSION, Bernard L. Black, Jr., Chairman • Rick Enstrom, Vice-Chairman • Philip James, Secretary
Members, Tom Burke • Mark LeValley • Marianna Raftopoulos • Robert Shoemaker • Olive Valdez
Ex-Officio Members, Greg Walcher and Don Ament

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listing habitats for management/enhancement as well as species.

Page 2 – Goal 1.2.2 – This is an excellent statement. As mentioned above, much more of the Buffer Zone is important to wildlife than the currently included parcel.

Page 3 – Objective 2.1 – The discussion of dealing with noxious weeds is excellent – this i8s a very serious threat.

Page 3 – Objective 2.1 – Suggest also adding a statement here about preserving the hydrologic conditions which support many of the habitats present – especially the groundwater situation which maintains the springs and seeps.

Page 3 – Item 2.1.1.1 – It would be more accurate to call them plains sharp-tailed grouse.

Page 8 – Item 2.6.2.1 – We suggest extreme care in developing trail systems in the area, especially if they link up with other trails. The impacts on wildlife by human presence as encouraged by trails are not well understood and we suggest caution in considering any trail development.

Page 8 – Issues 2.6.3 – Suggest adding potential impacts of hike/bike trails on wildlife as an issue.

Discussion Draft – Table of Contents for Management Plan

As an outline, it looks fine. No other comment

I hope this information is helpful – please let me know if you have any questions.

Sincerely,

Dave Weber

Dave Weber
Habitat Biologist

cc: Shaun Deeney, Scott Hoover, - CDOW
Ken Brakken, DOE

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AGENDA
ROCKY FLATS CITIZENS ADVISORY BOARD
Work Session
June 1, 2000
6 – 9:30 p.m.

College Hill Library (Front Range Community College)
3705 West 112th Avenue, Westminster

6:00 WELCOME / INTRODUCTIONS / GROUNDRULES

6:05 Public Comment Period – *10 minutes*

6:15 Regulator Update – *15 minutes*
- EPA – Tim Rehder
- Soil Action Levels Review Update

6:30 CAB 2001 Work Plan Prioritization – *30 minutes*
- CAB members will solicit ideas from audience participants on ideas they feel are important for the Board to address as part of its work for 2001. These issues will be combined with ones solicited from surveys sent out by the Board in advance of the meeting. All the recommended issues will be written on large sheets of paper that will be hung about the room. All those in attendance at the meeting will be given a number of adhesive colored dots they can use to vote for activities or issues they feel are most important for the Board to address.

7:00 Future Site Use Proposals – *1 hour 15 minutes*
- Congressman Udall's Open Space Bill – Doug Young
- Senator Allard's National Wildlife Refuge Bill – Janice Sinden

Doug and Janice will discuss the two bills. Following their presentations, members of the Board will discuss the merits of the two bills. Members of the audience will be invited to join in the discussion following initial comments by the Board.

8:15 BREAK

8:25 Presentation on the Rock Creek Reserve Natural Resources Management Plan (DOE-RFFO) – *40 minutes*

9:05 Discuss Agenda for Upcoming Board Retreat

9:25 Review Meeting and Set Agenda for Next Meeting
- Conversation with New DOE Site Manager Barbara Mazurowski
- Approval of CAB 2001 Work Plan and Budget
- Site Update on Waste and Materials Shipments

9:30 Meeting Adjourns

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Anna Martinez 06/02/2000 09:13 AM

To: Robin Romero/amppi/rffo@RFFO, Cliff Franklin/amgo/rffo@RFFO, Patricia Powell/amppi/rffo@RFFO
cc:
Subject: RFCAB Weekly Update 6/5 - 6/9

Highlights from CAB meeting Thursday, June 1.

Tricia Powell - sent these for your review re RF Historical Project. Do you think there should be a DOE presence at these meetings for oversight????

---------- Forwarded by Anna Martinez/CED/rffo on 06/02/2000 09:11 AM

From: erogers@rfcab.org on 06/02/2000 09:10 AM

To: Anna Martinez/CED/rffo@RFFO, MBartleson@ci.broomfield.co.us@SMTP@rffo, kossack@netcom.com@SMTP@rffo, taylorbc@stripe.colorado.edu@SMTP@rffo, dabelson@rfclog.org@SMTP@rffo, efdemayo@juno.com@SMTP@rffo, Fred.Butterfield@EM.DOE.GOV@SMTP@rffo, shilohco@aol.com@SMTP@rffo, Jeremy Karpatkin/CED/rffo@RFFO, kinsinger@interfold.com@SMTP@rffo, jdowney@compuserve.com@SMTP@rffo, leroymoore@earthlink.net@SMTP@rffo, clyons@ci.arvada.co.us@SMTP@rffo, Mariane Anderson/CED/rffo@RFFO, mharlow@ci.westminster.co.us@SMTP@rffo, mmattson@earthlink.net@SMTP@rffo, NNEELAN@co.jefferson.co.us@SMTP@rffo, rbetts@csn.net@SMTP@rffo, sburke@us.ibm.com@SMTP@rffo, Steve.Tarlton@state.co.us@SMTP@rffo, rehder.timothy@epamail.epa.gov@SMTP@rffo, tpgallegos@csu.org@SMTP@rffo, t_marshall2@earthlink.net@SMTP@rffo, vholm@aol.com@SMTP@rffo, cfdco@co.boulder.co.us@SMTP@rffo, Edd Kray/SiteReps/rffo@RFFO, fremdlieb@aol.com@SMTP@rffo, jeffrey.eggleston@valleylab.com@SMTP@rffo, kschnoor@ci.broomfield.co.us@SMTP@rffo, masdeva@aol.com@SMTP@rffo, martha.crosland@em.doe.gov@SMTP@rffo, michael.purkey@em.doe.gov@SMTP@rffo, muellera@ci.boulder.co.us@SMTP@rffo, naomi.wiegler@em.doe.gov@SMTP@rffo, jeffh@townofsuperior.com@SMTP@rffo
cc: kkorkia@rfcab.org@SMTP@rffo, debt@rfcab.org@SMTP@rffo
Subject: RFCAB Weekly Update 6/5 - 6/9

FROM THE STAFF...
ROCKY FLATS CITIZENS ADVISORY BOARD WEEKLY UPDATE
6/5/00 - 6/9/00

THIS WEEK'S EVENTS:
Monday 6/5
8 - 11 a.m. Rocky Flats Coalition of Local Governments Board Meeting, Jefferson County Airport Terminal Building, Mount Evans Room, 11755 Airport Way, Broomfield

4:30 - 6:30 p.m. Actinide Migration Evaluation Stakeholder Meeting, Red Rocks on the Ridge Arvada Campus, Room 7134, 5420 Miller Street, Arvada

Tuesday 6/6: No meetings scheduled

Wednesday 6/7:

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3 - 5 p.m. ComRad Oversight Panel, Arvada City Hall, 8101 Ralston Road, Arvada

6 - 8 p.m. Remediation Technologies Committee, College Hill Library, Front Range Community College, 3705 West 112th Avenue, Westminster

Thursday 6/8
10 a.m. - noon
SSAB Stewardship Seminar Steering Committee, CAB office, 9035 North Wadsworth Parkway, Suite 2250, Westminster

4 - 6 p.m. Soil Action Level Oversight Panel, Broomfield Senior Center, Lakeshore Room, 280 Lamar Street, Broomfield

Friday 6/9: No meetings scheduled

BOARD MEETING HIGHLIGHTS (6/1/00):

Regulator Update - EPA.
Tim Rehder with the EPA updated the Board on regulatory issues at Rocky Flats. The issues he covered included the finalization of the Rocky Flats NPDES permit; performance of the solar ponds groundwater treatment system; RFCA Principal's meeting (specifically discussions about RFCA milestones and the earned value system, plans for 903 pad remediation, interim record of decision, stakeholder involvement in RSAL review, and regulatory flexibility efforts); and the development of calibration standards for the Shonka radiation survey instrument. The agencies have endorsed a public process for an RSAL review that is open to all interested parties. There would be some general public meetings, as well as a smaller, dedicated study group looking at the issues. DOE will be sending out further information about their plans later this month.

CAB 2001 Work Plan Prioritization.
Next, the Board spent some time gathering input on its work plan for the next year. Recent surveys sent to Board members, agency personnel and members of the public asked for issues the Board should address next year. These issues were noted on flipchart pages before the meeting and displayed in the meeting room. Members of the audience were given an opportunity to add issues to the flipcharts. Next, everyone was asked to prioritize the work plan issues using stickers. Those issues given the highest priority were soil action levels; cleanup of the 903 pad; natural resources management issues; stewardship; and water issues. Other issues that will be listed in work plan include tracking of cleanup progress and waste shipments; closure of the Protected Area; the new Kaiser-Hill baseline; and the Interim Record of Decision. Staff will compile the results of the voting and develop a draft work plan. The Board will finalize the work plan and the associated budget at its July 6 meeting.

Future Site Use Proposals.
The Board was then joined by Doug Young of Congressman Mark Udall's office and Janice Sinden of Senator Wayne Allard's office for a discussion of legislation developed by each office. Doug Young spoke first about Congressman Udall's Open Space Act, which was introduced in the House of Representatives last June. Since the original bill was introduced, several changes have been made and a revised bill is now being circulated. This bill would permanently designate the entire Rocky Flats buffer zone as open space upon completion of cleanup. The bill also lays out a public process

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for making land management recommendations. Janice then described Senator Allard's proposed legislation, which would instead designate Rocky Flats as a National Wildlife Refuge under the jurisdiction of the Department of Interior. This bill has not yet been introduced, but has been circulated in the Rocky Flats community for comment. Under both bills, the Rocky Flats site would remain under federal ownership and liability in perpetuity. Both pieces of draft legislation also call for the public to be involved in land use and land management decisions. Both bills are also very explicit that they should not affect the level of cleanup required under existing regulations. The speakers reported that Rep. Udall and Sen. Allard have directed their staffs to work together to develop joint legislation for submittal to Congress. They also urged the Board and other members of the public to submit comments on this issue so that they have a better sense of what the community would like to see. The Board decided to form a small subcommittee to develop comments on the two drafts. They asked other Board members to submit comments via e-mail and will bring a draft set of comments to the next meeting.

Presentation on the Rock Creek Reserve Natural Resources Management Plan. After the break, representatives from DOE and the U.S. Fish and Wildlife Service gave a presentation on the status of the Rock Creek Reserve. This area is currently an 800-acre parcel of land in the Rocky Flats buffer zone jointly managed by DOE and the U.S. Fish and Wildlife Service (USFWS). As part of the Interagency Agreement between DOE and the USFWS that created the Rock Creek Reserve in May of 1999, the USFWS was tasked with providing recommendations for future management of the area as input into an Integrated Natural Resources Management Plan for the Reserve. Among the objectives suggested by the USFWS for the Management Plan are consideration of an expansion of Reserve boundaries; promotion of native species; protection of cultural and historical resources; environmental education and research opportunities; and addressing the possibility of designating the area as a National Wildlife Refuge. DOE will consider these recommendations as it guides the development of the Management Plan. DOE is currently in the process of educating the community on the issues and getting feedback on how to proceed. The public has an opportunity to influence the first draft of the Management Plan if comments are provided by June 15, 2000. Once developed, there will also be a public comment period on the draft Plan prior to it becoming final. As with the Udall/Allard bills, the Board decided to develop comments on this Plan through a small subcommittee and use of e-mail.

Board Retreat and Next Meeting Agenda.
At the end of the meeting, the Board discussed its upcoming retreat. The agenda will include development of the Board's draft work plan for 2001 and a conversation about Board operations, including the Board's decision-making processes. The July Board meeting agenda will include approval of the 2001 work plan and budget; consideration of any comments developed by the subcommittees looking at the Udall and Allard bills and the Rock Creek Reserve; a site update on waste and nuclear materials shipments; and perhaps a conversation with the new DOE Rocky Flats manager.

SUMMARY - RFCAB and ROCKY FLATS MEETINGS:

Rocky Flats Historical Project Group Meeting, May 24
(meeting attended and summary written by Bryan Taylor) The RFHP is a new

group seeking to organize efforts to develop various projects that preserve the Rocky Flats story for the benefit of future generations. This was the group's first formal meeting. Participants were invited based on their previously expressed interest in this topic, and included representatives from local governments, the Rocky Flats Homesteaders, the State Attorney General's office, DOE, Kaiser-Hill, the CAB, and academe. Membership in this group is not closed, and interested individuals are encouraged to participate.

A White Paper circulated prior to the meeting proposed the following goals for this group:

* Identifying and preserving key site artifacts
* Identifying plant workers willing to participate in an oral history project
* Creation of a video documentary on site history
* Development of a memorial and/or related museum
* Solicitation of participation from stakeholders in developing programming for these venues
* Developing plans for funding and start-up

Following self-introduction from the participants, discussion at the meeting included:

* A review of "time-driven" priorities for heritage preservation at the site (e.g., oral histories from aging workers). Additionally, a cycle of 50th-anniversary commemorations will commence for the site, beginning in May 2001.
* Difficulty in locating compatible funding sources. Many institutions (such as the US Parks Service) are supportive of this goal, but do not have compatible missions or jurisdictions. DOE and Kaiser-Hill, alternately, have prioritized cleanup in site funding. K-H Communications will receive minimal funding to produce programming for 50th anniversary events, and DOE may also have some funding available.
* The possibility of federal funding derived from recently proposed legislation (i.e., the Allard and Udall bills) that mentions historic preservation at Rocky Flats. The State AG Office has issued favorable comment on this prospect. The SAGO representative at the meeting noted the potential functional overlap between a site museum, and institutional control efforts concerned with documentation that services long-term stewardship.
* Review of official efforts to date to document sites, artifacts, and industrial processes (e.g., to satisfy federal requirements for Rocky Flats' inclusion on the National Register of Historic Places)
* Recent academic histories of Rocky Flats
* Overview of related Cold War and Nuclear-Historical sites in the U.S.

Sufficient interest was expressed by the participants to continue meeting as a group. Short-term goals include widening stakeholder participation, forming a steering committee and defining its mission, and making progress on the urgent issue of funding.

ROCKY FLATS CITIZENS ADVISORY BOARD

-- JUNE WORK SESSION --

Page	Title
(back of cover)	AGENDA
1 – 2	Memo from Doug Young discussing proposed legislation
3 – 10	Draft – Congressman Udall's Rocky Flats Open Space Act
11 – 26	Draft – Senator Allard's Rocky Flats National Wildlife Refuge Act
27 – 32	Letter from Colorado Attorney General Ken Salazar Commenting on proposed legislation, and response from Mark Udall
33 – 34	Memo from Doug Young – comparison of the two bills
35 – 49	Draft – Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment
Consent Agenda: **	
50 – 53	Approval of May work session minutes

***** Decision must be made by Board - please review *****

PLEASE BRING PACKAGE TO MEETING -
THIS WILL BE YOUR ONLY COPY

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AGENDA
ROCKY FLATS CITIZENS ADVISORY BOARD
Work Session

June 1, 2000
6 – 9:30 p.m.

College Hill Library (Front Range Community College)
3705 West 112th Avenue, Westminster

6:00 WELCOME / INTRODUCTIONS / GROUNDRULES

6:05 Public Comment Period – *10 minutes*

6:15 Regulator Update – *15 minutes*
- EPA – Tim Rehder
- Soil Action Levels Review Update

6:30 CAB 2001 Work Plan Prioritization – *30 minutes*
- CAB members will solicit ideas from audience participants on ideas they feel are important for the Board to address as part of its work for 2001. These issues will be combined with ones solicited from surveys sent out by the Board in advance of the meeting. All the recommended issues will be written on large sheets of paper that will be hung about the room. All those in attendance at the meeting will be given a number of adhesive colored dots they can use to vote for activities or issues they feel are most important for the Board to address.

7:00 Future Site Use Proposals – *1 hour 15 minutes*
- Congressman Udall's Open Space Bill – Doug Young
- Senator Allard's National Wildlife Refuge Bill – Janice Sinden

Doug and Janice will discuss the two bills. Following their presentations, members of the Board will discuss the merits of the two bills. Members of the audience will be invited to join in the discussion following initial comments by the Board.

8:15 BREAK

8:25 Presentation on the Rock Creek Reserve Natural Resources Management Plan (DOE-RFFO) – *40 minutes*

9:05 Discuss Agenda for Upcoming Board Retreat

9:25 Review Meeting and Set Agenda for Next Meeting
- Conversation with New DOE Site Manager Barbara Mazurowski
- Approval of CAB 2001 Work Plan and Budget
- Site Update on Waste and Materials Shipments

9:30 Meeting Adjourns

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MARK UDALL
2ND DISTRICT, COLORADO

128 CANNON HOB
WASHINGTON, D.C. 20515
(202) 225-2161
(202) 226-7840 (FAX)

1333 WEST 120TH AVENUE
SUITE 210
WESTMINSTER, CO 80234
(303) 457-4500
(303) 457-4504 (FAX)

Congress of the United States
House of Representatives
Washington, DC 20515-0602

COMMITTEE ON RESOURCES
SUBCOMMITTEE ON NATIONAL PARKS AND PUBLIC LANDS
SUBCOMMITTEE ON FORESTS AND FOREST HEALTH

COMMITTEE ON SCIENCE
SUBCOMMITTEE ON SPACE AND AERONAUTICS
SUBCOMMITTEE ON TECHNOLOGY

COMMITTEE ON SMALL BUSINESS

MEMORANDUM

To: Rocky Flats Community

From: Doug Young, Senior Policy Advisor
Stan Sloss, Senior Legislative Counsel

Date: May 8, 2000

Re: **Latest Staff Revision of H.R. 2179—Congressman Udall's Rocky Flats Open Space Act**

Following the comments we received on the various staff revisions and at the direction of Congressman Udall, we have drafted the attached revision of H.R. 2179, the Congressman's bill to protect the Rocky Flats buffer zone as open space and to more formally include local involvement in land management at the site.

The Congressman is poised to reintroduce this version in the near future. Here are the significant changes to the bill that are being proposed (all page and line numbers refer to the attached revision):

- The DOE is required to develop an open space management plan for the buffer zone; however, that plan can be revised based on the input from the public involvement process (page 4, lines 1-6; page 5, lines 16-17 and line 23-25; page 6, lines 1-6).

- As in previous revisions, this revision proposes replacing the "Rocky Flats Open Space Advisory Council" with a public involvement process that directly involves the Rocky Flats Coalition of Local Governments and other interested entities to make recommendations on how the Rocky Flats is managed as open space (page 4, lines 7-29; page 5, lines 1-27). In addition, provisions have been added to deal with the possibility that the Rocky Flats Coalition of Local Governments disbands (page 4, lines 13-16). And, a provision has been added outlining how any future changes to the open space management are to occur (page 6, lines 4-6).

- As in previous revisions, this revision makes the open space designation permanent and ensures that any future owner—federal or otherwise—manages it as such (page 2, lines 27-28; page 3, lines 1-2).

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- This revision clarifies that the Lindsay Ranch should be managed as if it were on the National Registry of Historic Places to provide more definition on how to deal with these facilities (page 3, lines 3-7).

- This revision contains language that allows for some small portion of the buffer zone to be available for a regional transportation corridor when certain specified conditions are met. This addition was made at the request of the RFCLOG (page 3, lines 8-25).

- Finally, provisions are proposed to allow for the construction and maintenance of any long-term containment facilities (page 7, lines 1-4), and more specificity regarding cleanup levels in that the site should be cleaned up to protect public health both on- and off-site (page 6, lines 25-28).

Overall, the process as outlined in this revision would proceed as follows:

Upon enactment of the bill:

- All lands would remain in federal ownership
- The buffer zone would be managed as open space
- The DOE would be required to develop an open space management plan for the buffer zone
- The public involvement process on land management would be initiated

Two years after enactment (or sooner):

- The public involvement process would conclude with land use recommendations
- The DOE issues a report on land use recommendations
- The open space land management plan would be revised, as needed, based on the recommendations in the report
- Any other recommendations would be implemented (including who is to manage the open space)

Following the issuance of the Final On-site Record of Decision for cleanup (and beyond):

- Implementation of any land use recommendations from the public involvement process as they relate to the industrial area
- Any revisions to the open space management plan for the buffer zone and the industrial area would be developed as needed in consultation with the entities in the public involvement process
- Operation and maintenance of any ongoing containment or cleanup facilities

MD

106th CONGRESS **H.R.** _____
2nd Session

IN THE HOUSE OF REPRESENTATIVES

Mr. Udall of Colorado introduced the following bill; which was referred to the Committee on _____

A BILL

To provide for the management as open space of certain lands at the Rocky Flats Environmental Technology Site, Colorado, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Rocky Flats Open Space Act".

SEC. 2. FINDINGS AND PURPOSE.

(a) FINDINGS.--Congress finds the following:

(1) The Federal Government, through the Atomic Energy Commission, acquired the Rocky Flats site in 1951 and began operations there in 1952. Since 1992, the mission of the Rocky Flats site has changed from the production of nuclear weapons components to managing wastes and materials and cleaning up and converting the site to beneficial uses in a manner that is safe, environmentally and socially responsible, physically secure, and cost-effective.

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(2) The buffer zone has generally remained undisturbed since the acquisition of the Rocky Flats site. The buffer zone possesses an impressive diversity of plant and animal species and provides important wildlife habitat for a number of threatened and endangered species.

(3) The State of Colorado is experiencing increasing growth and development, especially in the metropolitan Denver Front Range area in the vicinity of the Rocky Flats site. This growth and development reduces the amount of open space and thereby diminishes for many metropolitan Denver communities the vistas of the striking Front Range mountain backdrop.

(4) Some areas of the buffer zone may contain contamination and may require further cleanup. The national interest requires that the ongoing cleanup and closure of the entire Rocky Flats site be completed without unnecessary delay and that the site thereafter be retained by the United States and managed so as to preserve its value for open space and wildlife habitat.

(b) PURPOSE.--The purpose of this Act is to provide for the management of the buffer zone at the Rocky Flats site as open space and to establish a process for determining and implementing appropriate policies for the management of the Rocky Flats site after the ongoing cleanup and closure is completed.

SEC. 3. FUTURE OWNERSHIP AND MANAGEMENT.

(a) FEDERAL OWNERSHIP.--Unless Congress provides otherwise in an Act enacted after the date of the enactment of this Act, all right, title, and interest of the United States, held on or acquired after the date of the enactment of this Act, to lands within the boundaries of the Rocky Flats site shall be retained by the United States.

(b) OPEN SPACE MANAGEMENT OF BUFFER ZONE.--(1) Except as provided in paragraphs (2) and (3), the buffer zone shall be permanently managed as open space

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by the Secretary of Energy or any other entity that may be responsible for the long-term oversight and management of the Rocky Flats site.

(2) The structures that comprise the former Lindsay Ranch homestead site within the Rock Creek Reserve area of the buffer zone shall remain and shall be permanently preserved, managed and maintained in accordance with the National Registry of Historic Places and by the accepted recommendations, if any, of the public involvement process as outlined in Section 4.

(3) (A) Upon submission of an application meeting all of the conditions in paragraph (B), the Secretary is authorized to make available lands within a portion of the eastern and southeastern boundary of the buffer zone for the sole purpose of a regional transportation corridor as depicted on the map entitled Potential Regional Transportation Corridor. Availability of lands for such purposes may be by easement or sale to an appropriate entity or entities.

(B) An application for lands under this paragraph can be submitted by any one or more local governmental member of the Rocky Flats Coalition of Local Governments and shall include documentation showing that all of the following conditions are met:

(i) the transportation project is consistent with the open space goals of this Act;

(ii) the transportation project has the unanimous approval of the member jurisdictions which comprise the Rocky Flats Coalition of Local Governments; and

(iii) the transportation project is included in the Regional Transportation Plan of the Denver metropolitan area's designated Metropolitan Planning Organization under 49 U.S.C. 5303 et seq.

(c) MANAGEMENT OF INDUSTRIAL AREA.–Subsection (b) shall not be construed to affect the management of the industrial area or to preclude the management of the industrial area as open space following the issuance of the final record of decision for the on-site cleanup and closure of the Rocky Flats site.

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(d) OPEN SPACE MANAGEMENT PLAN.—No later than 60 days following enactment of this Act, the Secretary shall propose and seek public comment on a draft interim open space management plan for the buffer zone consistent with the requirements of this Act and any other applicable requirements. After receiving and considering comments, but no sooner than 90 days after enactment of this Act, the Secretary shall adopt a final interim open space management plan.

SEC. 4. ROCKY FLATS OPEN SPACE MANAGEMENT.

(a) PUBLIC INVOLVEMENT PROCESS--(1) Upon enactment of this Act, the Secretary of Energy, jointly with the Rocky Flats Coalition of Local Governments, shall establish a process for involvement of the public, the local communities and appropriate state and federal government agencies to identify options and develop recommendations as outlined in subsection (b).

(2) In the event that the Rocky Flats Coalition of Local Governments disbands, the DOE shall continue with the public involvement process as outlined in this section and shall provide an opportunity for direct involvement by the entities comprising the Coalition.

(3) The public involvement process shall include the opportunity for direct involvement by representatives of entities not presently members of the Coalition including, but not limited to, the offices of the Governor and Attorney General of the State of Colorado, the cities in Colorado of Thornton, Northglenn, Golden, Louisville and Lafayette, and the Rocky Flats Citizens Advisory Board.

(b) OBJECTIVES.-- The options and recommendations for long-term oversight and management of the Rocky Flats site to be developed through the public involvement process in subparagraph (a) shall include, but need not be limited to:

(1) the identification of Federal, State, and local agencies and other entities that could effectively manage the buffer zone to protect its wildlife, wildlife habitat, and open space resources;

(2) the identification of, with respect to the various portions of the buffer zone, the management policies that would be most appropriate,

consistent with the protection of the wildlife, wildlife habitat, open space resources, and the Lindsay Ranch;

(3) recommendations regarding the management of the buffer zone, including the appropriate entity or entities to carry out the management, the appropriate management policies, any appropriate implementing legislation, and any other recommendations the participants consider appropriate;

(4) the identification of which lands, if any, within the area identified in the map entitled Potential Regional Transportation Corridor should be made available for regional transportation purposes pursuant to section 3 (b)(3); and

(5) make any recommendations regarding the management of the industrial area that the participants consider appropriate.

(c) REPORT.-- No later than 2 years after enactment of this Act, the Secretary shall submit a report to the Governor of the State of Colorado and the Congress, and shall make the report available to the Rocky Flats Citizens Advisory Board and other interested members of the public. The report shall contain the final interim open space management plan referred to in section 3(d) and identifications and recommendations under subsection (b) of this section and any comments and supplementary materials that were submitted by participants in the public involvement process.

(d) IMPLEMENTATION .-- (1) Subject to section 5 and any other provision of applicable Federal law, the Secretary may, after the submission of the report under subsection (c), revise the final interim open space management plan referred to in section 3(d) in accordance with the identifications and recommendations in that report. If any identifications and recommendations of the report are applicable to the industrial area, the Secretary may adjust the management of the industrial area in accordance with such identifications and recommendations.

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(2) Effective one year after the submission of the report under subsection (c), the final interim open space management plan and any revisions thereto shall be in effect as the open space management plan for the buffer zone.

(3) After the effective date in paragraph (2), any changes to the open space management plan shall be developed in consultation with the entities identified under the public involvement process in this section.

SEC. 5. CONTINUATION OF ENVIRONMENTAL CLEANUP AND CLOSURE.

(a) ONGOING CLEANUP AND CLOSURE.--The Secretary shall continue to carry out to completion the cleanup and closure activities at the Rocky Flats site, including any such actions within the buffer zone that are necessary under applicable requirements of Federal or State laws and regulations. Nothing in this Act, and no actions taken under this Act, shall be construed to restrict the Secretary from employing new cleanup technologies that may become available.

(b) RULES OF CONSTRUCTION.--(1) Nothing in this Act, and no action taken under this Act, shall relieve the Secretary or any other person from any obligation or other liability with respect to the Rocky Flats site under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.), the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.), the Colorado Hazardous Waste Act (Colo. Rev. Stat. 25-15-301 et seq.), or any other applicable Federal or State law or regulation.

(2) This Act shall not be construed to restrict or lessen the degree of cleanup at the Rocky Flats site, including the buffer zone, required under the 1996 Rocky Flats Cleanup Agreement or any other applicable requirements.

(3) The level of cleanup at the Rocky Flats site shall not be affected by the requirements of this Act for open space management. The Secretary is required to conduct cleanup and closure of Rocky Flats that is fully protective of human health and the environment for both any on-site future uses and off-site communities.

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(4) Nothing in this Act, and no actions taken under this Act, shall affect any long-term obligation of the United States for funding, construction, or operation and maintenance of any necessary and appropriate intercept and treatment facilities or other measures to control contamination.

SEC. 6. DEFINITIONS.

For purposes of this Act:

(1) The term "Rocky Flats" or "Rocky Flats site" means the Rocky Flats Environmental Technology Site, Colorado.

(2) The term "Rocky Flats map" means the map of the Rocky Flats site titled "Rocky Flats Environmental Technology Site, Colorado" and dated June 1999.

(3) The term "open space" means an area free of new structures that is managed for its open space characteristics and for its wildlife, wildlife habitat, and potential recreational opportunities.

(4) The term "buffer zone" means the land within the Rocky Flats site between the industrial area and the boundary of Federal land at the Rocky Flats site, comprising approximately 6,000 acres, as generally depicted on the Rocky Flats map.

(5) The term "industrial area" means the facilities and structures on the Rocky Flats site that comprise the former nuclear weapons production activities, comprising approximately 385 acres, as generally depicted on the Rocky Flats map.

(6) The term "cleanup and closure" means the remedial actions and decommissioning activities being undertaken at the Rocky Flats site by the Department of Energy under the 1996 Rocky Flats Cleanup Agreement, the closure plans and baselines, and any other relevant documents.

(7) The term "Secretary" means the Secretary of Energy.

(8) The terms "Rocky Flats Coalition of Local Governments" and "Coalition" mean the cities in Colorado of Arvada, Boulder, Broomfiled,

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1 Superior and Westminster and the counties in Colorado of Boulder and
2 Jefferson which established a coalition to address issues related to Rocky
3 Flats by the Intergovernmental Agreement finalized and signed on February
4 16, 1999.

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106TH CONGRESS
2D SESSION

S. _____

IN THE SENATE OF THE UNITED STATES

Mr. ALLARD introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To transfer administrative jurisdiction over Rocky Flats Environmental Technology Site, Colorado, a defense nuclear facility, from the Secretary of Energy to the Secretary of the Interior, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Rocky Flats National Wildlife Refuge Act of 2000".

SEC. 2. DEFINITIONS.

In this Act:

(1) COALITION.—The term "Coalition" means the Rocky Flats Coalition of Local Governments es-

1 tablished by the Intergovernmental Agreement,
2 dated February 16, 1999, among—
3 (A) the city of Arvada, Colorado;
4 (B) the city of Boulder, Colorado;
5 (C) the city of Broomfield, Colorado;
6 (D) the city of Westminister, Colorado;
7 (E) the town of Superior, Colorado;
8 (F) Boulder County, Colorado; and
9 (G) Jefferson County, Colorado.
10 (2) HAZARDOUS SUBSTANCE.—The term "haz-
11 ardous substance" has the meaning given the term
12 under section 101 of the Comprehensive Environ-
13 mental Response, Compensation, and Liability Act
14 of 1980 (42 U.S.C. 9601).
15 (3) POLLUTANT OR CONTAMINANT.—The term
16 "pollutant or contaminant" has the meaning given
17 the term under section 101 of the Comprehensive
18 Environmental Response, Compensation, and Liabil-
19 ity Act of 1980 (42 U.S.C. 9601).
20 (4) REFUGE.—The term "refuge" means the
21 Rocky Flats National Wildlife Refuge established
22 under section 4(a).
23 (5) RESPONSE ACTION.—The term "response
24 action" has the meaning given the term "response"
25 under section 101 of the Comprehensive Environ-

1 mental Response, Compensation, and Liability Act
2 of 1980 (42 U.S.C. 9601).
3 (6) RFCA.—The term "RFCA" means the
4 Rocky Flats Cleanup Agreement, an intergovern-
5 mental agreement, dated July 19, 1996, among—
6 (A) the Department of Energy;
7 (B) the Environmental Protection Agency;
8 and
9 (C) the Department of Public Health and
10 Environment of the State of Colorado.
11 (7) ROCKY FLATS.—The term "Rocky Flats"
12 means the Rocky Flats Environmental Technology
13 Site, Colorado, a defense nuclear facility, as depicted
14 on the map entitled "Rocky Flats Environmental
15 Technology Site", dated July 19, 1999.
16 (8) SECRETARY.—The term "Secretary" means
17 the Secretary of Energy.
18 **SEC. 3. TRANSFER OF MANAGEMENT RESPONSIBILITIES**
19 **AND JURISDICTION OVER ROCKY FLATS.**
20 (a) IN GENERAL.—
21 (1) MEMORANDUM OF UNDERSTANDING.—Not
22 later than October 1, 2007, the Secretary and the
23 Secretary of the Interior shall enter into a memo-
24 randum of understanding under which the Secretary

1 shall transfer to the Secretary of the Interior admin-
2 istrative jurisdiction over Rocky Flats.
3 (2) EXCLUSIONS.—The transfer under para-
4 graph (1) shall not include any property or facility—
5 (A) over which the Secretary retains juris-
6 diction, authority, and control under subsection
7 (b)(1); or
8 (B) that is designated for disposal under
9 section 5.
10 (3) CONDITION.—The transfer under paragraph
11 (1) shall occur on receipt by the Secretary of certifi-
12 cation from the Administrator of the Environmental
13 Protection Agency that any response action or other
14 action required to be carried out at Rocky Flats has
15 been completed, excluding any operation or mainte-
16 nance associated with the action.
17 (4) COST; IMPROVEMENTS.—The transfer
18 shall—
19 (A) be completed without cost to the Sec-
20 retary of the Interior; and
21 (B) include such improvements on the
22 property as the Secretary of the Interior may
23 request in writing for refuge management pur-
24 poses.

1 (b) PROPERTY AND FACILITIES EXCLUDED FROM
2 TRANSFERS.—
3 (1) IN GENERAL.—The Secretary shall retain
4 jurisdiction, authority, and control over all real prop-
5 erty at Rocky Flats that is to be used for—
6 (A) water treatment;
7 (B) the treatment, storage, or disposal of
8 a hazardous substance, pollutant, or contami-
9 nant; or
10 (C) any other purpose related to a re-
11 sponse action or any other action that is re-
12 quired to be carried out at Rocky Flats.
13 (2) CONSULTATION.—The Secretary shall con-
14 sult with the Secretary of the Interior on the identi-
15 fication and management of all real property re-
16 tained under this subsection to ensure, to the max-
17 imum extent practicable, that any activity carried
18 out on the property is consistent with—
19 (A) the purposes for which the refuge is
20 established under section 4(b); and
21 (B) paragraph (1).
22 (3) ACCESS.—As a condition of the transfer
23 under subsection (a), the Secretary shall be accorded
24 all easements and access as may be reasonably re-

1 quired to carry out any obligation or address any
2 other liability described in subsection (c)(4).
3 (c) ADMINISTRATION.—
4 (1) IN GENERAL.—On completion of the trans-
5 fer under subsection (a), the Secretary of the Inte-
6 rior shall administer Rocky Flats subject to—
7 (A) any response action at Rocky Flats
8 carried out by or under the authority of the
9 Secretary under the Comprehensive Environ-
10 mental Response, Compensation, and Liability
11 Act of 1980 (42 U.S.C. 9601 et seq.);
12 (B) any other action required under any
13 other law to be carried out by or under the au-
14 thority of the Secretary;
15 (C) the Endangered Species Act of 1973
16 (16 U.S.C. 1531 et seq.);
17 (D) the Migratory Bird Treaty Act (16
18 U.S.C. 703 et seq.);
19 (E) the Bald Eagle Protection Act (16
20 U.S.C. 668 et seq.);
21 (F) the Federal Noxious Weed Act (7
22 U.S.C. 2801 et seq.); and
23 (G) any other applicable provision of law.
24 (2) CONFLICT.—In the case of any conflict be-
25 tween management of the property by the Secretary

1 of the Interior and the conduct of any response ac-
2 tion or other action described in subparagraph (A)
3 or (B) of paragraph (1), the response action or other
4 action shall take priority.
5 (3) CONTINUING ACTIONS.—Except as provided
6 in paragraph (1), nothing in this subsection affects
7 any response action or other action initiated at
8 Rocky Flats on or before the date of the transfer
9 under subsection (a).
10 (4) LIABILITY.—The Secretary shall retain any
11 obligation or other liability for land transferred
12 under subsection (a) under the Comprehensive Envi-
13 ronmental Response, Compensation, and Liability
14 Act of 1980 (42 U.S.C. 9601 et seq.).
15 (d) DEGREE OF CLEANUP.—Nothing in this Act re-
16 stricts or otherwise affects any degree of cleanup required
17 to be carried out at Rocky Flats under—
18 (1) the Comprehensive Environmental Re-
19 sponse, Compensation, and Liability Act of 1980 (42
20 U.S.C. 9601 et seq.);
21 (2) any provision of the RFCA, including—
22 (A) the substance or performance of a cor-
23 rective action decision, record of decision, or
24 any other study or assessment conducted under
25 the RFCA;

1 (B) the contents and conclusions of a cor-
2 rective action decision, record of decision, or
3 any other study or assessment conducted under
4 the RFCA; or
5 (C) the selection and implementation of 1
6 or more response actions and any action re-
7 quired under any other law at Rocky Flats or
8 the surrounding area; or
9 (3) any other applicable provision of law.
10 (e) PAYMENT OF RESPONSE ACTION COSTS.—Noth-
11 ing in this Act affects the obligation of a Federal depart-
12 ment or agency that had or has operations at Rocky Flats
13 resulting in the release or threatened release of a haz-
14 ardous substance, pollutant, or contaminant to pay the
15 cost of response actions carried out to abate the release
16 of, or clean up, the hazardous substance, pollutant, or con-
17 taminant.
18 (f) CONSULTATION.—In carrying out a response ac-
19 tion at Rocky Flats, the Secretary shall consult with the
20 Secretary of the Interior to ensure that the response ac-
21 tion is carried out in a manner that, to the maximum ex-
22 tent practicable, furthers the purposes described in section
23 4(b).
24 **SEC. 4. ROCKY FLATS NATIONAL WILDLIFE REFUGE.**
25 (a) ESTABLISHMENT.—

1 (1) IN GENERAL.—Not later than 30 days after
2 the transfer of jurisdiction under section 3(a)(1), the
3 Secretary shall establish at Rocky Flats a national
4 wildlife refuge to be known as the "Rocky Flats Na-
5 tional Wildlife Refuge".
6 (2) COMPOSITION.—The refuge shall consist of
7 the real property transferred under section 3(a)(1).
8 (3) NOTICE.—The Secretary of the Interior
9 shall publish in the Federal Register a notice of the
10 establishment of the refuge.
11 (b) PURPOSES OF REFUGE.—The purposes referred
12 to in subsection (a)(1) are—
13 (1) to conserve and enhance populations of fish,
14 wildlife, and plants in the refuge, including—
15 (A) populations of waterfowl, raptors, pas-
16 serines, and marsh and water birds; and
17 (B) the natural diversity of fish, wildlife,
18 and plants (including associated habitats);
19 (2) to conserve species that are listed as threat-
20 ened species or endangered species under the En-
21 dangered Species Act of 1973 (16 U.S.C. 1531 et
22 seq.) (including species that are candidates for list-
23 ing under that Act);
24 (3) to provide maximum fish- and wildlife-ori-
25 ented public uses at levels compatible with the con-

1 servation and enhancement of wildlife and wildlife
2 habitat;
3 (4) to provide opportunities for compatible sci-
4 entific research;
5 (5) to provide opportunities for compatible envi-
6 ronmental and land use education;
7 (6) to protect and enhance the quality of aquat-
8 ic habitat within the refuge; and
9 (7) to meet international treaty obligations of
10 the United States with respect to fish and wildlife
11 and associated habitats.
12 (c) ADMINISTRATION.—
13 (1) IN GENERAL.—The Secretary of the Inte-
14 rior shall manage the refuge in accordance with—
15 (A) the National Wildlife Refuge System
16 Administration Act of 1966 (16 U.S.C. 668dd
17 et seq.); and
18 (B) other applicable law.
19 (2) PUBLIC INVOLVEMENT.—
20 (A) IN GENERAL.—
21 (i) ESTABLISHMENT OF PROCESS.—
22 Not later than 90 days after the date of
23 enactment of this Act, in developing plans
24 for the management of fish and wildlife at
25 and public use of the refuge, the Secretary,

1 the Secretary of the Interior, the Coalition,
2 and the Governor of the State of Colorado,
3 in consultation with other interested Fed-
4 eral agencies, shall establish a process for
5 involvement of the public and local commu-
6 nities to carry out subparagraph (B).
7 (ii) DISSOLUTION OF COALITION.—If
8 the Coalition dissolves before the date
9 specified in clause (i), a designated elected
10 individual from the entities comprising the
11 Coalition shall represent the Coalition in
12 carrying out that clause.
13 (B) PURPOSES.—The public involvement
14 process developed under clause (i) shall identify
15 options and recommendations for the long-term
16 management of the refuge, including—
17 (i) the identification of the manage-
18 ment policies that would be most appro-
19 priate, in accordance with section 4(b);
20 (ii) recommendations regarding the
21 transfer, conveyance, sale, purchase, or
22 lease of property authorized under sub-
23 sections (b) and (c) of section 5;

1 (iii) recommendations regarding pri-
2 vate property and mineral rights ownership
3 on Rocky Flats;
4 (iv) recommendations regarding the
5 identification of any land the area depicted
6 on the map as the "Potential Regional
7 Transportation Corridor", that could be
8 made available for regional transportation
9 purposes; and
10 (v) recommendations regarding the
11 feasibility of locating, and potential loca-
12 tions for, a visitor and education center
13 and a Rocky Flats museum at the refuge.
14 (C) REPORT.—Not later than 2 years after
15 the date of enactment of this Act, the Secretary
16 and the Secretary of Interior, in coordination
17 with the Coalition and the Governor of the
18 State of Colorado, shall submit to Congress a
19 report that contains the identification and rec-
20 ommendations described in subparagraph (B).
21 (d) LIMITATIONS.—
22 (1) PROHIBITION AGAINST ANNEXATION.—Not-
23 withstanding section 5(a)(2) of the National Wildlife
24 Refuge System Administration Act of 1966 (16
25 U.S.C. 668dd(a)(2)), the Secretary of the Interior

1 shall not allow the annexation of land within the ref-
2 uge by any unit of local government.
3 (2) PROHIBITION AGAINST THROUGH ROADS.—
4 No public road shall be constructed through the ref-
5 uge, except to administer or improve the refuge in
6 accordance with a recommendation of the report
7 under subsection (c)(2)(C).
8 (3) LINDSAY RANCH.—The structures that
9 comprise the former Lindsay Ranch homestead site
10 in the Rock Creek Reserve area of the buffer zone
11 as depicted on the map shall be permanently pre-
12 served and maintained in accordance with the Na-
13 tional Historic Preservation Act (16 U.S.C. 470 et
14 seq.).
15 (4) PROHIBITION AGAINST CONSTRUCTION.—
16 No permanent construction shall be permitted at the
17 refuge, except for—
18 (A) the construction of trails for non-mo-
19 torized use; and
20 (B) other construction necessary to carry
21 out section 3(c), subsection (b), and the rec-
22 ommendations of the report under subsection
23 (c)(2)(C).
24 (e) RESPONSE ACTION.—Any response action or
25 other action required to be carried out at Rocky Flats

1 shall attain a degree of cleanup of hazardous substances,
2 pollutants, and contaminants for which the response ac-
3 tion or other action was initiated that, at a minimum—
4 (1) is sufficient to fully meet the purposes de-
5 scribed in section 4(b); and
6 (2) permit safe access to all real property com-
7 prising the refuge by refuge personnel, wildlife re-
8 searchers, and visitors.

9 **SEC. 5. DISPOSAL OF CERTAIN REAL PROPERTY AT ROCKY**
10 **FLATS FOR COMMERCIAL, HIGHWAY, OR**
11 **OTHER PUBLIC USE.**

12 (a) FEDERAL OWNERSHIP.—Except as provided by
13 subsection (b), all right, title, and interest of the United
14 States, held or acquired after the date of enactment of
15 this Act, in and to land within the boundaries of Rocky
16 Flats shall be retained by the United States for the refuge.
17 (b) DISPOSAL OF REAL PROPERTY.—The Secretary
18 may transfer, convey, sell, purchase, or lease a parcel of
19 real property at Rocky Flats only—
20 (1) to improve Rocky Flats in accordance with
21 the recommendations of the report under section
22 4(c)(2)(C);
23 (2) to improve property at Rocky Flats to carry
24 out this Act more effectively;

1 (3) to provide for the improvement of public
2 roads or the development of alternative means of
3 transportation in the refuge in accordance with this
4 Act; or
5 (4) to purchase any private property or private
6 mineral right at Rocky Flats.
7 (c) LEASE.—
8 (1) IN GENERAL.—The Secretary of Interior
9 may lease not to exceed 100 acres at the refuge in
10 the area depicted on the map as the former Rocky
11 Flats buffer zone site to carry out projects of the
12 National Renewable Energy Laboratory.
13 (2) CONDITION FOR LEASE.—Any lease under
14 paragraph (1) shall be offered and entered into in
15 accordance with subsections (b) and (c)(2)(C) of sec-
16 tion 4.
17 (d) PROCEEDS OF SALES OR LEASES.—Any amounts
18 realized by the United States on a sale or lease of property
19 under this section shall be—
20 (1) made available to the Director of the United
21 States Fish and Wildlife Service; and
22 (2) used, to the extent authorized, to supple-
23 ment the funds otherwise made available for a vis-
24 itor and education center and a Rocky Flats histor-
25 ical museum at the refuge.

1 (e) DISPOSAL.—Any disposal of real property under
2 this section shall be carried out in accordance with—
3 (1) section 120(h) of the Comprehensive Envi-
4 ronmental Response, Compensation, and Liability
5 Act of 1980 (42 U.S.C. 9620(h)); and
6 (2) any other applicable provision of law.

ATTORNEY GENERAL OF COLORADO

Ken Salazar

May 12, 2000

Senator A. Wayne Allard
United States Senate
513 Hart Senate Office Building
Washington, D.C. 20510

Representative Mark Udall
U.S. House of Representatives
128 Cannon
Washington, D.C. 20515

RE: Rocky Flats legislation: Preserving A Treasure Of National Significance

Dear Senator Allard and Representative Udall:

I am writing to comment on your proposed Rocky Flats legislation and to express my appreciation for your mutual efforts to address the long-term management of Rocky Flats. I also offer some specific recommendations for your consideration in order to avoid future extensive litigation over natural resource damages.

I have reviewed both the "Rocky Flats National Wildlife Act of 2000" and the "Rocky Flats Open Space Act." While these draft legislative proposals differ somewhat in their particulars, they both share the main goals of ensuring a protective cleanup at Rocky Flats and preserving an area that is rich in ecological, scenic, and historic significance.

The legislation can also address another important issue: providing an alternative to potentially prolonged and expensive litigation over the state's claims for natural resource damages at the Rocky Flats site. This should, and can, be done without impairing our primary focus on cleaning up Rocky Flats promptly and safely, in a manner that ensures protection of human health and the environment. Absent resolution of the natural resource damage claims in legislation, as Attorney General I will do everything I can to vigorously pursue these claims at the appropriate time against the Department of Energy and other responsible parties for the damages to the state's natural resources caused by fifty years of nuclear weapons production at Rocky Flats. These damages may include damages to wildlife, air, water, and groundwater.

Specifically, I ask that you consider the following in your legislation:

The creation of a mitigation fund that could be used to compensate for natural resource damages that the State of Colorado and the United States have incurred due to the contamination from the Rocky Flats Site.

Authorization to use moneys from the mitigation fund to support environmental restoration and preservation projects, including:

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(a) Purchasing the privately-held mineral rights at Rocky Flats. The future of Rocky Flats cannot be adequately determined until this issue is resolved.

(b) With the appropriate participation of local governments, purchasing appropriate lands in the vicinity of Rocky Flats to complement existing locally-based open space initiatives and to preserve and enhance the biological, scenic, and natural resource values of the Rocky Flats Site.

The central focus of both your bills is to preserve the more than 6,000 acres of undeveloped land at Rocky Flats. If we build on this foundation of the Rocky Flats site, and look beyond the fences that surround Rocky Flats, we can create an integrated preserve of truly national significance, and simultaneously resolve the natural resource damages issue. By combining state, federal and local resources, we can bequeath to our descendants a crown jewel of open space, rich with ecological and historical significance, that will be treasured for decades to come.

Over the last year, I began a dialogue on this concept with local elected officials from the communities surrounding Rocky Flats, the Department of Energy, and the Governor's office. I suggested that with appropriate support from the state and federal governments, the local community could lead a process for deciding which of the areas surrounding Rocky Flats were appropriate for preservation, and which should be made available for development. This concept could easily be incorporated into your draft legislation.

Development pressures in the northwest Denver metropolitan area are increasing. If we are to realize this vision of a crown jewel of protected land, we will need to identify and begin the acquisition of the appropriate privately held parcels soon. This can realistically only be done with a combination of federal, state and local resources.

Federal support for such a project is appropriate for a number of reasons.

First, federal contributions to preserving habitat contiguous to Rocky Flats could be considered as an offset against the ultimate determination of the value of natural resource damage claims against the Department of Energy arising from the contamination caused by the Rocky Flats Plant. The pending legislation could be a vehicle for establishing a "mitigation fund" that could be used as such an offset. If the State's natural resource damage claims are not addressed in this legislation, I believe there will be no alternative for Colorado but to file suit on behalf of the State of Colorado for recovery of those damages.

Second, the land outside the fences of Rocky Flats has substantial ecological significance on its own. The Natural Heritage Program has designated two Conservation Sites west of Rocky Flats.

Third, we need to preserve the area surrounding Rocky Flats (particularly to the west) to preserve the wide diversity of plant and animal life on Rocky Flats that makes it so worthy of preservation in the first place.

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And fourth, in addition to preserving and enhancing the biological resources at Rocky Flats, preserving lands to the west of the site will significantly enhance the scenic value of the area.

Local governments, particularly Jefferson County and the City of Boulder, have already preserved some of the land near Rocky Flats. By suggesting that we integrate your proposals to preserve land at Rocky Flats with these existing efforts, and build on both of them to create a larger contiguous preserve, I do not mean to imply that the entire area should necessarily be under federal ownership and management. Areas such as the Golden Gate National Recreation Area and Cape Cod National Seashore demonstrate the viability of mixed public ownership and management patterns in preserving large areas of land near major population centers. In any event, decisions about public ownership and management policies should only be made with the input of the affected entities, particularly the local governments.

I also support the concept of establishing a historical museum at Rocky Flats. The Cold War was one of the defining events of the twentieth century. Rocky Flats played a significant role in producing this nation's nuclear arsenal, and in that respect, contributed to the fall of communism in the former Soviet Union. Rocky Flats has also played a significant role in revealing the consequences of putting a federal agency above the law. Developing the nuclear weapons arsenal has extracted a huge toll on weapons complex workers and on the environment. Energy Secretary Bill Richardson has recently proposed to pay up to $500 million in compensation for illnesses that its worker safety and health practices may have caused. The Department of Energy estimates that it has contaminated over 1.7 trillion gallons of groundwater (approximately four times the total daily water consumption of the United States), and over 40 million cubic meters of soil will require remediation. DOE recently revised its estimate of the cost of cleaning up its contaminated facilities, soil, and groundwater to between $186 and $230 billion. And that staggering figure will not buy clean soil and groundwater at many sites. The use of these lands and waters will need to be restricted for centuries, if not millennia because there simply is no technology to abate the radioactive hazard at these sites.

Much of this environmental contamination could have been prevented if DOE had been subject to the same environmental laws that applied to private industry, states, and local governments. Revelations about worker health and safety at the DOE site in Paducah, Kentucky and other sites in the past year provide additional reminders why we should not return to the era of self-regulation. A "Cold War Museum" at Rocky Flats would not only be a fitting tribute to the men and women who helped keep our nation strong, but also would be a potent reminder of the need for independent oversight of DOE and other federal agencies. In addition, it would be an effective institutional control in its own right, serving to remind subsequent generations that portions of the Rocky Flats site itself remain contaminated.

Again, I thank the two of you for your leadership on this issue, and I encourage you to work together to pass legislation that supports the goals described above.

Sincerely,

KEN SALAZAR
Colorado Attorney General

cc: Governor Bill Owens
Senator Ben Campbell
Greg Stevinson
Troy Eid, Governor's Chief Legal Counsel
John Swartout, Governor's Office of Policy and Initiatives
Alan Salazar, Office of Congressman Mark Udall
Pete Jacobson, Office of Senator Wayne Allard
David Abelson, RFCLOG
Hon. Tom Brunner, Mayor Pro-Tem of Broomfield
Hank Stovall, Broomfield City Council
Mike Bartleson, City of Broomfield
Tim Holeman
Robert G. Card, Kaiser-Hill
Hon. William R. Toor, Mayor of Boulder
Jim Crain, City of Boulder
Mike Weil, City of Boulder
Amy Mueller, City of Boulder
Hon. Lisa Morzel, Boulder City Council
Ron Stewart, Chair, Boulder County Commissioners
Paul Danish, Boulder County Commissioner
Jana Mendez, Boulder County Commissioner
Carolyn Dulchinos, Boulder County Commissioners
Hon. Nancy Heil, Mayor of Westminster
Sam Dixion, Westminster City Council
Mary Harlow, City of Westminster
Herb Atchison, City of Westminster
Hon. Ken Fellman, Mayor of Arvada
Hon. Lorraine Anderson, Arvada City Council
Carol Lyons, City of Arvada
Pat Holloway, Chair, Jefferson County Commissioners
Michelle Lawrence, Jefferson County Commissioner
Richard Sheehan, Jefferson County Commissioner
Nanette Neelan, Staff, Jefferson County Commissioners
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Carol Johnson, City of Golden
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MARK UDALL
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Congress of the United States
House of Representatives
Washington, DC 20515-0602

COMMITTEE ON RESOURCES
SUBCOMMITTEE ON NATIONAL PARKS AND PUBLIC LANDS
SUBCOMMITTEE ON FORESTS AND FOREST HEALTH

COMMITTEE ON SCIENCE
SUBCOMMITTEE ON SPACE AND AERONAUTICS
SUBCOMMITTEE ON TECHNOLOGY

COMMITTEE ON SMALL BUSINESS

May 17, 2000

The Honorable Ken Salazar
Attorney General
State of Colorado
State Services Building
1525 Sherman Street, 5th Floor
Denver, CO 80203

Dear Ken:

Thank you for your letter to Senator Allard and me related to our respective proposals for legislation to preserve the wildlife and open space resources at Rocky Flats. You raise some important issues that should be considered in connection with development of any federal legislation related to the site, and I will give them serious attention.

As you know, since I introduced the Rocky Flats Open Space Act last June I have sought to work with you and other interested parties – including the public – to develop a bill that would be widely supported. I am particularly interested in working with Senator Allard to develop a common bill that we could then introduce simultaneously in the House and Senate.

I have suggested to both Senator Allard and his chief of staff that our respective staffs should begin meeting to try to develop such common legislative proposal. They both expressed an interest in doing so.

I think that this joint process would be an appropriate way to address the matters discussed in your letter, and could enable us to avoid the confusion that could arise if we were to confine ourselves to individual attempts to respond to the points you have made and any other issues that may arise.

In the meantime, I would welcome any draft language you may wish to propose regarding the issues outlined in your letter or any other aspects of this legislation, and I would be glad to share such proposals with Senator Allard so that we can coordinate on ways to address your issues. Of course, I would be willing to similarly share suggestions that may be advanced by anyone else.

PRINTED ON RECYCLED PAPER

Thanks again for contacting me about this important matter. I would be very interested in your reactions to the idea of working with Senator Allard to develop shared legislation, and look forward to receiving any specific suggestions you may have for legislation to address the important points raised in your letter.

Warm regards,

Mark Udall

Mark Udall

Cc: The Honorable Wayne Allard
Colorado Congressional Delegation
Rocky Flats Coalition of Local Governments
Rocky Flats Citizens Advisory Board
U.S. Department of Energy, Rocky Flats
Colorado Department of Public Health and Environment
U.S. Environmental Protection Agency

From: "Young, Doug" <Doug.Young@mail.house.gov>
To: Erin Rogers <erogers@rfcab.org>
Subject: RE: Update on Open Space bill
Date: Tue, 25 Apr 2000 19:04:37 -0400

Since he introduced the Rocky Flats Open Space Act (H.R. 2179) last June--a bill to preserve the open space and wildlife habitat of the 6,000 acre buffer zone around the Rocky Flats site and to more formally involve the public and the local communities in land use decisions at this site--Congressman Mark Udall has met with the Rocky Flats Coalition of Local Governments to address issues and revise the bill. He also convened a hearing on December 14, 1999, to take public comment on the bill.

On March 9th of this year, Congressman Udall sent a letter to Senator Wayne Allard indicating that he and his staff have been working on revisions to the bill based on the input received. He also enclosed a revised bill incorporating these revisions. He also indicated that he was ready to reintroduce this revised bill. With these revisions, the bill would do the following things:
(1) it would keep the land in federal ownership;
(2) it would direct that the buffer zone be managed as open space;
(3) it would require DOE to develop a land management plan for the site;
(4) it would create a public process to determine how and by whom the open space should be managed;
(5) it would not affect the industrial area of the site (where production activities occurred) as this area requires extensive cleanup (although future open space management of the industrial area is not precluded);
(6) it would preserve the Lindsay Ranch facilities in the buffer zone;
(7) it would authorize the DOE to provide some land along the edge of the buffer zone for a regional transportation corridor (provided certain conditions are met)
(8) it would require that the open space land use cannot be used as the sole criterion to establish appropriate cleanup levels for the site;
(9) it would not affect the ongoing cleanup activities and the requirements necessary to ensure a thorough cleanup and closure by the year 2006;
(10) it would allow DOE to construct any necessary long-term contamination intercept and treatment facilities.

Senator Allard has floated a proposal to designate the Rocky Flats site as a National Wildlife Refuge. Here is a synopsis of the similarities and difference between the Udall and Allard approaches:

Similarities

* Both provide permanent federal ownership of the whole site
* Both preserve the open space/wildlife habitat characteristics of the site
* Both have provisions related to ongoing cleanup
* Both have provisions requiring DOE to continue to cleanup the site under existing laws and requirements
* Both require DOE to maintain and operate any necessary pollution containment and treatment facilities
* Both have provisions for a public process to spell out the details of land use and management (Udall's bill in regards to open space (which does not preclude turning the site into a wildlife refuge in the future if that's what the locals want); Allard's bill in regards to the refuge management itself)
* Both protect the Lindsay Ranch structures
* Both provide for the allowance for a regional transportation corridor

Differences

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* Udall's open space provisions apply to the buffer zone and excludes the industrial area (although the bill does not preclude open space for the industrial area in the future)
* Allard's bill applies to the whole site (buffer zone and industrial area) (although his bill does provide for disposing of property presently a part of the site)

* Udall's bill allows for the public and the local communities to decide the ultimate open space land use
* Allard's bill establishes now that it will be a wildlife refuge

* Udall's bill asks the public and the local communities whether the land should be transferred to another governmental entity to manage (including a state or local governmental entity)
* Allard's bill formally transfers the whole site to the U.S. Fish and Wildlife Service (excepting certain property to DOE related to cleanup)

* Udall's bill requires the DOE to develop a land management plan for the whole site
* Allard's bill does not contain a similar provision

* Udall's bill does not contain management proscriptions related to a wildlife refuge
* Allard's bill includes a list of specific federal wildlife statutes that must be complied with due to the refuge designation

* Udall's bill does not transfer any of the buffer zone to the National Renewable Energy Laboratory
* Allard's bill transfers 100 acres to NREL's Wind Technology Site

* Udall's bill does not contain any provision prohibiting annexation by a local government
* Allard's bill contains such a provision

* Udall's bill does not allow for the construction of new structures (other than those needed for pollution containment and treatment)
* Allard's bill allows for the construction of new facilities related to the operation of the wildlife refuge-including a visitors center and museum

* Udall's bill does not provide for the transference of any property (other than for the allowance of a transportation corridor)
* Allard's bill allows for the disposition of Rocky Flats property in addition to a transportation corridor

* Udall's bill does not contain provisions related to mineral rights or other leases
* Allard's bill mentions mineral rights and provides for potential leases

* Udall's bill requires that the open space land use shall not drive cleanup
* Allard's bill requires that the cleanup be in compliance with environmental laws

* Udall's bill does not contain provisions for access roads (other than a regional transportation corridor)
* Allard's bill allows for the establishment of access roads for refuge management

Congressman Udall has expressed an interest in working with Senator Allard on this. Specifically, Congressman Udall would prefer that the two offices work together to reconcile these two bills so that both Udall and Allard can introduce the same bill in both the House and the Senate. We are waiting to see what Senator Allard's next steps may be and if he is also interested in working together to come up with one bill. We are also waiting to see what the public and the local governments think of the Allard proposal.

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Department of Energy

ROCKY FLATS FIELD OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

MAY 0 5 2000

00-DOE-02379

Dear Community Member:

In May of 1999 the Department of Energy (DOE), Rocky Flats Field Office and the U.S. Fish and Wildlife Service signed an Interagency Agreement regarding management of the Rock Creek Reserve (Reserve). Under this agreement the Reserve, in the northern portion of the Rocky Flats Buffer Zone, will be cooperatively managed by the 2 agencies, while ownership will remain with the DOE. Enclosed are a *Discussion Draft Outline of the Goals and Objectives* for the Rock Creek Reserve Integrated Natural Resources Management Plan (Plan) and a *Discussion Draft of the Table of Contents* for the Plan. The purpose of the Plan is to provide tools and options for the agencies to preserve, protect, and maintain the natural habitats occurring in the Reserve.

It is our intention to work closely with the public to establish the methodologies to be used in managing these precious resources. In the coming weeks, we will be conducting a series of briefings and meetings regarding the enclosed discussion drafts, and we will accept public comments on them through **June 15, 2000**.

The first meeting will be **Thursday, May 18, 2000, at Rocky Flats Environmental Technology Site, Building 60, from 9:30 to 11:30 a.m.** The next briefing on the outline will be a public meeting on **May 25, 2000, at the Arvada City Hall, Anne Campbell Room, from 6:00 to 8:00 p.m.** Then we will give a final briefing at the Rocky Flats Citizens Advisory Board meeting scheduled for **Thursday, June 1, 2000, from 6:00 to 9:30 p.m.**

As we go through this process we will use input from the public to help fill out the sections of the Plan. Once the Plan is in a draft form we will again enter into a series of briefings and public meetings. We will schedule public meetings and briefings on the draft Plan once we can better estimate the schedule.

If you have any questions or need additional information, please contact Mariane Anderson at (303) 966-6088 or mariane.anderson@rfets.gov, or Cliff Franklin at (303) 966-5919 or cliff.franklin@rfets.gov.

Sincerely,

Joseph A. Legare
Assistant Manager
for Environment and Infrastructure

Enclosures (As Stated)

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DRAFT
ROCK CREEK RESERVE INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF ENERGY ROCKY FLATS TECHNOLOGY SITE AND U.S. FISH & WILDLIFE SERVICE

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Discussion Draft Goals and Objectives
Rock Creek Reserve Integrated Natural Resources Management Plan Outline
May 2000

Introduction

An Integrated Natural Resources Management Plan (hereinafter referred to as the Plan) for the Rock Creek Reserve portion of the Rocky Flats Environmental Technology Site (hereinafter referred to as Rocky Flats) is being developed as a joint effort between the Department of Energy, Rocky Flats Field Office, and the Department of Interior, U.S. Fish & Wildlife Service, Colorado Fish & Wildlife Assistance Office, Lakewood, CO.

A portion of Rocky Flats, known as the Rock Creek Fish & Wildlife Cooperative Management Area (hereinafter referred to as Rock Creek Reserve), was established in May of 1999 in recognition of the area's biological significance. Although still under ownership of the Department of Energy, Rock Creek Reserve will be co-managed by the U.S. Fish & Wildlife Service as part of a cooperative agreement signed by the two agencies in 1999. The need for an Integrated Natural Resources Management Plan was recognized, and included as a requirement in the cooperative agreement. The Plan will discuss management tools and options specifically for Rock Creek Reserve. However, the management options outlined in the Plan can, and will, if necessary, be used to manage the natural resources for the entire Rocky Flats site after the scheduled clean up is completed and future land ownership/responsibility is determined.

This Plan is being developed as a tool to cooperatively manage natural/cultural resources under the current (and forseeable future) ownership and land use conditions. Any significant changes to the current conditions will be addressed as a supplement to the Plan, or in a separate document if necessary. All management strategies in this Plan will be consistent with the Rocky Flats current mission of site remediation and facilities demolition resulting in closure. The two cooperating agencies agreed to use the Department of Army format for preparing Integrated Natural Resource Management Plans, using the April 1997 guidelines established by the Army.

Development of this Integrated Natural Resources Management Plan is in accordance with the National Environmental Policy Act (NEPA). NEPA analysis of realistic alternatives will be incorporated within the Plan to achieve that goal. The Environmental Assessment will be included as an appendix. Some future natural resource management projects may require additional NEPA review if they do not fall within the scope of significance criteria established in the Environmental Assessment.

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The goals and objectives presented in this outline are a result of discussions that occurred over a several year period concerning the possible management options for the buffer zone. The final decisions will be made after additional public and agency input is solicited and considered. The Plan can be expanded to include the entire buffer zone if required, and the Industrial Area upon demolition and closure.

After additional public and agency input, the following Draft discussion of Goals and Objectives will be evaluated, incorporated into, and form the basis of, the Draft Plan. The Draft Plan will be developed and formatted following the attached Draft Plan Table of Contents. Solicitation of public input will continue as the Plan is developed.

1. Goal

1.1 To cooperatively manage Rock Creek Reserve under federal ownership to restore, preserve, protect and enhance native, sensitive and Threatened & Endangered species in a manner compatible with Rocky Flats' current mission. The mission includes, but is not limited to, clean up of contaminated areas leading to demolition of facilities and closure.

1.2 **Issues:**

1.2.1 Differing public viewpoints on future use. Efforts will be made to obtain and incorporate comments from a diverse cross section of the interested public. These comments will serve as the base for developing management alternatives and recommendations.

1.2.2 Proposed boundary extension of Rock Creek Reserve. The proposed extension would expand the existing area (approx. 800 acres) to over 1700 acres, based on geographical and hydrological features. Other Buffer Zone areas may be suitable for inclusion.

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1.2.3 Responsibilities. The DOE will maintain ownership and ultimate management responsibility for the land, through at least 2006. The USFWS will cooperate with DOE Rocky Flats to develop and implement management recommendations.

1.2.4 Contaminants. Cleanup of adjacent areas to agreed upon levels of contamination will be accomplished as a DOE CERCLA or RCRA compliance responsibility.

2. Objectives

2.1 Promote native species. Restore areas infested with exotic, noxious weeds by removing/suppressing non-native plants to return those areas to a more natural state. Remove non-native fish and restock with natives. Conserve native plant and animal species, with management priorities given to species listed under the Endangered Species Act, candidate/proposed species or State-listed species. The Colorado Natural Heritage Program's Conservation Status Handbook will also serve as a guide for other rare or declining species. Achieve this through:

2.1.1 Reintroductions. Reintroduce species that historically occurred or had the potential to occur, in the area. Possible candidates for reintroduction programs are:

2.1.1.1 Sharp-tailed grouse

2.1.1.2 Iowa darter

2.1.1.3 Northern redbelly dace

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2.1.1.4 Common shiner

2.1.1.5 Monitoring of reintroduced populations

2.1.2 Native plant and animal species enhancement, with priority given to T&E species. This includes residents and those species that use the area intermittently for foraging.

2.1.2.1 Avifauna: Mountain plover, Peregrine falcon, Burrowing owl, Bald eagle and other raptors, and neotropical migrants

2.1.2.2 Prairie dogs (not currently present in Rock Creek Reserve area; a small population exists in the southern buffer area)

2.1.2.3 Deer and other ungulates

2.1.2.4 Flora: native plant species, esp. xeric tall grass prairie and tall upland shrubland plant community

2.1.2.5 Amphibians and reptiles

2.1.2.6 Invertebrates

2.1.3 The management processes could include:

2.1.3.1 Prescribed fire

2.1.3.2 Predator/Prey relationships

2.1.3.3 Integrated Pest Management strategies

2.1.3.4 Selective browsing/grazing program

2.1.3.5 Population management. A variety of options may be considered, including but not limited to, removal/relocation, hunting/trapping, birth control, etc.

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2.1.3.6 Use of native species for revegetation

2.1.3.7 Erosion control and wetland enhancement

2.1.3.8 Continuation of existing monitoring programs

2.1.4 Preble's meadow jumping mouse refugium

2.1.4.1 Assist in Recovery Plan currently being prepared for PMJM

2.1.4.2 Continued monitoring and research on-site

2.1.5 Issues

2.1.5.1 Non-DOE activities on adjacent properties may cause impacts to water quality/quantity and PMJM habitat through sedimentation, de-watering, etc.

2.1.5.2 Are ground-disturbing activities on-site and on adjacent properties a source of the noxious weed problem?

2.1.5.3 Compliance with State and Federal weed laws

2.1.5.4 Mineral rights

2.2 Protect cultural/historical resources

2.2.1 Pedestrian surveys completed and documented, no "eligible" sites found. If any sites are found in the future and determined "eligible", they will be managed IAW National Historic Preservation Act.

2.2.2 No Tribal Trust Lands

2.2.3 Lindsay Ranch

2.2.3.1 The Ranch was evaluated and determined "ineligible", but there is considerable public interest in preservation and/or restoration.

2.2.3.2 Future of the Ranch will be discussed during Rocky Flats closure; use options need to be consistent with the overall management plan.

2.3 Maintain/construct infrastructure for wildlife protection/enhancement

2.3.1 Maintenance and/or closure/removal of existing roads and fences

2.3.2 Evaluate adequacy of existing utilities to support wildlife management needs

2.3.3 **Issues**

2.3.3.1 Ownership of water rights for wildlife use (in-stream flows, PMJM habitat)

2.4 Environmental education/research opportunities:

2.4.1 Guided tours and visits to Rock Creek Reserve

2.4.2 PMJM research conducted in consultation with USFWS

2.4.3 Research on the area's unique habitats- xeric tallgrass prairie and tall upland shrubland community.

2.4.4 Research on noxious weed control

2.5 Address possibility of inclusion into the National Wildlife Refuge System.

2.5.1 Does Rock Creek Reserve meet the USFWS criteria for consideration of inclusion, based on Region 6 Ecosystem Team recommendations?

2.5.2 Passage of a bill would designate Rock Creek Reserve as a NWR regardless of criteria and recommendations.

Issues:

2.5.2.1 Refuge System may not accept contaminated areas, including landfills. The Rock Creek Reserve (including proposed expansion) contains no areas which require further action under current Federal or State of Colorado law.

Discussion of future options

The following are future options and alternatives outside the scope of the currently proposed management plan. Since the scope of the plan is to be limited to current conditions, these should be addressed only briefly. A short discussion of these as non-viable alternatives for the current plan might be appropriate. If the plan is to be updated every five years, these could be addressed in a future update if at that time it is deemed appropriate. If the plan becomes a "phased plan", these options could be addressed in Phase 2, which would most likely be implemented after closure is complete and permanent ownership/land use resolved.

2.6 Environmental education opportunities

2.6.1.1 Re-use of current visitor facility as Interpretive Center

2.6.1.2 Lindsay Ranch options:

2.6.1.2.1 Ranch house restored fully

2.6.1.2.2 Information kiosk and partial restoration

2.6.1.2.3 Leave structures as they are and allow to deteriorate naturally, (i.e. "benign neglect"), with or without information kiosk.

2.6.2 Recreation and public access

2.6.2.1 Trail along existing roads or geographical features, linking up with county trail system

2.6.2.2 Picnic area

2.6.2.3 Watchable wildlife areas

2.6.3 **Issues**

2.2.2.1 Water/restroom facility availability to recreationists

2.2.2.2 Cost of construction and maintenance of facilities

2.2.2.3 Security

2.2.2.4 Environmental impacts (especially to PMJM) from construction and public use

2.2.2.5 Public concerns over contamination and perception of contamination

ROCKY FLATS CITIZENS ADVISORY BOARD
MINUTES OF WORK SESSION
May 4, 2000
6 – 9:30 p.m.
College Hill Library, Front Range Community College
3705 West 112th Avenue, Westminster, Colorado

FACILITATOR: Reed Hodgin

Gerald DePoorter, the Board's chair, called the meeting to order at 6:05 p.m.

BOARD / EX-OFFICIO MEMBERS PRESENT: Ray Betts, Shawn Burke, Eugene DeMayo, Jerry DePoorter, Joe Downey, Jeff Eggleston, Tom Gallegos, Mary Harlow, Victor Holm, Jim Kinsinger, Bill Kossack, Tom Marshall, Mary Mattson, LeRoy Moore, Markuené Sumler, Bryan Taylor / Steve Gunderson, Jeremy Karpatkin, John Rampe, Tim Rehder

BOARD / EX-OFFICIO MEMBERS ABSENT: None

PUBLIC / OBSERVERS PRESENT: Roman Kohler (citizen); John Marler (RFCOLG); Paul Hartmann (DOE-RFFO); Louise Janson (citizen); Don Owen (DNFSB); Ann Lockhart (CDPHE); Bill Shearer (SeaCrest Group); Russell McCallister (DOE-RFFO); Kathy Wahlberg (CDPHE); Ken Korkia (CAB staff); Erin Rogers (CAB staff); Deb Thompson (CAB staff)

ANNOUNCEMENTS: Jerry DePoorter announced that two Board members, Bruce Dahm and David Navarro, had recently submitted their resignations from the Board. Shawn Burke also announced that he would be leaving the Board to pursue a new career in another country. Shawn will attend the June Board meeting and then will leave for his new post with the Peace Corps in mid-June. Ken Korkia announced the site will host an availability session for the public to discuss the air monitoring results from the prescribed test burn in the Buffer Zone, which was performed on April 6. The availability session will be held from 6 to 8 p.m. on Wednesday, May 10, at Red Rocks on the Ridge Arvada Campus.

PUBLIC COMMENT PERIOD: No comments were received.

PRESENTATION AND DISCUSSION ON WORKER HEALTH AND SAFETY ISSUES: Mark Spears, vice president with Kaiser-Hill, attended the Board meeting to give a briefing on the process involved with ensuring safety at the site for workers involved in the Closure Project. He started by stressing that both safety and production go hand-in-hand. Commercial plants with the safest operations also have the highest productivity. Safety requires an attention to detail, understanding of the work being done, and a commitment to quality and compliance. If the work is not done safely, then the work can't be done properly, and risk reduction will not be achieved. Kaiser-Hill's contract has significant penalties for safety, environmental, and safeguards and security lapses. The company has a responsibility to provide a safe work environmental for all its employees.

Mark presented a list of the top ten accidents on the site since Kaiser-Hill took over in 1995. Some of those accidents were weather-related due to severe ice, snow and wind storms. The most serious injury was to an employee who suffered a brain contusion due to falling on ice during high winds. The only significant radiological exposure was in 1999, when an employee doing work on a glovebox cut himself with a portable band saw, and the wound was contaminated.

The company uses a number of mechanisms to help manage safety. First, each worker on a job has the authority to stop work if they are concerned about safety. Kaiser-Hill has established an Integrated Work Control Program, which helps to identify the hazards, plan safety requirements, train, give feedback, and apply Integrated Safety Management Principles. Weekly meetings are held with the group managers, and each day before work starts there is a work group meeting. There is also a Joint Company Union Safety Committee, and an extensive union grievance procedure. DOE, the Defense Nuclear Facilities Safety Board, EPA, and CDPHE all provide additional oversight of safety issues and perform audits of the processes. Finally, Kaiser-Hill tracks and analyzes trends to identify areas that need more attention. Kaiser-Hill follows two health indicators to measure safety performance:

Total Recordable Case (TRC) Rate, or injuries per 200,000 man hours; and Lost Workday Case (LWDC) Rate, or lost workdays due to injuries per 200,000 man hours. These are standard indicators defined by OSHA. Mark presented some graphics that showed the TRC Rate during Kaiser-Hill's tenure has been reduced slowly over time, and stayed beneath the construction industry rate of 8.8. The LWDC Rate during the same time period has also gone down, and is close to Kaiser-Hill's goal. Radiological violations since November of 1995 have been reduced significantly. However, one area that Kaiser-Hill needs to improve is in the area of Operational Safety Requirements and Technical Safety Requirements Violations.

Radiological infractions (involving nuclear materials) and Authorization Basis Violations (a combination of Operational Safety Requirement and Technical Safety Requirement violations) serve as leading indicators to help assess behavior and take steps to prevent accidents before they occur. They track behaviors and trends, focusing on compliance with DOE procedures and standards, and help to serve as an early warning system for behaviors or lapses that could result in an actual injury. Mark noted that improvements in safety are always warranted. Kaiser-Hill has is concerned because the rate of safety improvement is slow, and repetitive work can lead to inattention to detail. They are considering potential initiatives, such as incentives to work crews for safety performance, and penalizing supervisors for unsafe operating conditions.

REGULATOR UPDATE – COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT: Steve Gunderson with CDPHE gave his quarterly update on Rocky Flats issues.

- **Reorganization.** Kaiser-Hill has reorganized its work force into six major projects: individual Closure Projects for Buildings 707, 371, 771, and 776/777; Materials Stewardship and Offsite Shipment; and Remediation, Industrial Building D&D, and Site Services. The reorganization has resulted in a temporary slowdown in closure activities.
- **2006 Baseline.** Kaiser-Hill is redoing its 2006 Site Closure Baseline to comply with the Closure Contract Scope of Work. The new baseline should be delivered to DOE by June 30.
- **Material Access Areas (MAAs) Closure.** The site is accelerating efforts to close all MAAs (other than 371) as soon as possible, possibly by the end of the calendar year. Current plans are to close the Protected Area by the end of 2002.
- **Building 776.** Closure plans are being revamped, and currently include plans to clean the building of large volumes of contaminated equipment before glovebox size reduction resumes. A robotics size-reduction system is planned for installation later this year.
- **Building 771.** A rebaseline is in the works. Current plans are to divide the building into two sections, one of which is more contaminated than the other. Kaiser-Hill hopes to drain all liquids by year-end. The less contaminated section of the building will be worked on first. Kaiser-Hill hopes to get approval to conduct plasma-cutting size reduction; mockup testing of this system is being conducted offsite.
- **Building 707.** Regulators have received the first three sections of a preliminary draft DOP and have commented.
- **Building 371.** Some funding for 371 has been diverted to 707 to accelerate closure of the MAA in 707. A draft DOP for 371 should be received by mid-summer.
- **Soil Action Levels.** RFCA parties have identified the key issues requiring discussion and decision. That includes review of a dose-based versus risk-based approach, selecting a regulatory approach, land use scenarios, the use of a prairie grass fire in calculations, use of ALARA, and review of RAC modifications to RESRAD. Current plans are to have facilitated work group meetings, which will be open to the public. RFCA principals will meet in mid-May to discuss this issue.
- **903 Pad.** EPA and DOE are continuing their discussions over the option of EPA performing the 903 Pad remediation. The 903 Pad Area Characterization Report has been revised in response to comments.
- **Industrial Area Sampling and Analysis Plan (SAP).** The DQO and Plan outline have been developed and reviewed by the agencies. The SAP should be completed by September 30.
- **Solar Ponds Treatment System.** Because of spring precipitation, volumes of groundwater behind the treatment system barrier have reached levels that allow water to enter the treatment cell. Nitrate concentrations from the treated effluent have not yet been reported. The site is considering installation of a small well to pump groundwater into the treatment cell during periods of low flow.
- **Characterization of Under-Building Contamination.** A SAP for the deployment of a new technology to characterize under-building contamination has been compiled. This technology is being developed at Sandia. Contamination under 886 and the 123 slab will be investigated this summer.
- **NPDES Permit.** Public comment closed April 6. Written comments were received from DOE and the City of Broomfield.

- **WIPP Shipments.** TRU waste shipments from Rocky Flats resumed in March. DOE hopes to increase the number of shipments to three per week in the next couple of months.

PUBLIC COMMENT PERIOD: No comments were received.

UPDATE AND DISCUSSION ON DEVELOPMENT OF THE "REGULATORY PATH TO CLOSURE:" Dave Shelton with Kaiser-Hill gave a brief presentation on the Integrating IROD Strategy. An IROD (Interim Final Record of Decision) is a regulatory decision document that integrates necessary response actions to achieve the final site condition, or final Record of Decision. The document provides the framework and strategy to achieve the final Record of Decision, and combines all accelerated actions into one document. The document describes everything that needs to be achieved in order to close the site. A graphic was also supplied to Board members, which puts the Integrating IROD Strategy into a matrix. The graphic helps to provide an integrated decision-making process, a comprehensive evaluation of alternatives and impacts of various decisions, describes the sequence of when decisions must be made, focuses on what needs to be accomplished, and helps to plan for funding in outyears. The matrix separates the key projects and activities, the regulatory decisions, and key studies that all need to happen during the process of site closure. Then each item is broken down by the timeframe for those projects and decisions. The Site plans to have the Interim Final ROD (IROD) prepared by 2003. The next steps include designing a public process for the IROD, continuing to brief interested parties on the strategy, and to create a draft table of contents for the IROD. The Board's Remediation Technologies Committee received a briefing on this same subject at its meeting on May 1, and will monitor and work closely with the site on this project.

STEWARDSHIP DIALOGUE DEVELOPMENT WITH THE COALITION OF LOCAL GOVERNMENTS: On April 26, at a joint CAB/Coalition meeting, the Rocky Flats Stewardship Working Group reviewed and approved a draft work plan for the Working Group. The draft work plan has two objectives. The first, Task A, is to give the group an opportunity to understand and address current and near-term decisions and assumptions. Task B will be to investigate the stewardship implications of various potential end-state scenarios to help assess long-term implications of cleanup remedies. The group will focus on the current and near-term decisions during its first few meetings, then Task B will be the major focus once that is complete. A final decision on the elements of this work plan will be made at the next meeting of the group, to be held May 18th.

After discussing CAB member concerns expressed through a memo developed following the April Board meeting, Coalition members were willing to accept the Board's suggestion that the constitution of Working Group membership be revisited after six months. For now, the Working Group will have seven members from the Coalition and seven members from CAB. Meetings will be advertised and the public will be encouraged to attend and participate in the meetings; however, members of the public in attendance will not have decision-making authority within the Working Group or be considered members of the group. What time to hold meetings continues to be an issue. Coalition members did not agree to meet at 6 p.m. on a permanent basis. They agreed to hold meetings for three months – through the July meeting – at 6 p.m. After that time, the group will revisit the issue and determine whether there is enough public involvement to continue holding the meetings in the evening. CAB members feel it is important to hold the meetings in the evening, both to make it easier for Board member participation, and because that is the only way to get public involvement. Board members felt it would be important to make every effort through outreach to get the public involved over the next few months in order to demonstrate an interest and commitment.

Members of the CAB who are also members of the Working Group will continue to report back to CAB on their activities. Gerald DePoorter and Tom Marshall are co-chairs of the Board's Stewardship Committee, which has oversight over general stewardship issues, which includes monitoring the activities of the Working Group. There was a brief discussion of one Board member's memo, which stated a point of view about the frustrations of establishing the Stewardship Working Group. However, Board members did agree to continue forward with the process already established and wait to see how things work out.

REMEDIATION TECHNOLOGIES COMMITTEE: A group of members who agreed to participate on a new committee met in late April. The official name of the committee was decided on: the Remediation Technologies Committee. Co-chairs were also selected: Bill Kossack and Markuené Sumler. A schedule for future meetings was developed. The meetings are scheduled for May 8th, May 22nd, and June 7th. All meetings will be held from 6 to 8 p.m. The next two meetings will be held at College Hill Library. Activities to be addressed include a discussion about when decisions need to be made on remediation strategies, the nature of the problem – such as contamination

at remedy locations, how RFCA approaches the selection of remedies, what possible remedies exist, and the success of any potential remedies.

CAB VIDEO: A draft script of the video was provided to CAB a couple of weeks ago, and some comments were received from Board members. The committee working on the Board's video met to review those comments and prepare a revised draft. Jeanna Blatt, DOE-Communications, was at the Board meeting to shoot footage for that video. Jeanna will produce the video. The next draft of the script will go out on May 5th to everyone. A final draft will be prepared around mid-May. Then the script will be given to Jeanna, and she will put the images together; that should take around six weeks. The video should be available by mid-June.

EXECUTIVE SESSION: Based on a recommendation from the Personnel Committee, the Board unanimously agreed to hire Susan Wilds to fill the vacant position of Program Specialist. Susan has a Bachelor of Science degree from Colorado State University, with a double major in Chemistry and Environmental Health Sciences. She most recently worked in a temporary internship position with the National Renewable Energy Laboratory in Golden, working on the Chemical Management System. Susan has also worked for and served as a volunteer for a local non-profit organization.

NEXT MEETING:

Date: June 1, 6 - 9:30 p.m.

Location: College Hill Library, 3705 West 112th Avenue, Westminster

Agenda: *Discussion on Rocky Flats open space and wildlife refuge proposals by members of Congress; briefing on Rock Creek Reserve Integrated Natural Resources Management Plan; input to Board's 2001 work plan*

ACTION ITEM SUMMARY: **ASSIGNED TO:**

1) None

MEETING ADJOURNED AT 9:35 P.M. *

(* Taped transcript of full meeting is available in CAB office.)

RESPECTFULLY SUBMITTED:

Mary Harlow

Mary Harlow, Secretary
Rocky Flats Citizens Advisory Board

From: Marcia Murdock/RFFO1/USDOE@EXCHANGE on 05/19/2000 09:24 AM

To: Cliff Franklin/amgo/rffo@RFFO, Bruce Rosenlund <bruce_rosenlund@FWS.gov>@SMTP@rffo

cc: Stephen Nesta/RFFO1/USDOE@EXCHANGE

Subject: Draft Goals and Objectives for Rock Creek Reserve Management Plan

Cliff and Bruce,

The Rocky Flats onsite Ecology staff have some questions and comments on the plan outline that was provided to us. We were unfortunately too busy with the start of our field season to attend the May 18 meeting, but each of us will be forwarding comments.

My informal comments below are not in any particular order, but occurred as I reviewed the discussion of the Goals and Objectives.

- Will the Colorado Division of Wildlife have the opportunity to be involved in this process in tl future? At one point in the document in-stream flow water rights is mentioned; CDOW was working with DOE at one point a few years ago to try to find a way to file on these water rights. Dave Weber w involved in this. He might have some useful information that could help on this question. Water rights will be one of the larger challenges if an ambitious program is planned for ultimate abandonment of mc of the Site's ponds.
- In the second paragraph there is a discussion of the cooperative agreement for management of the Rock Creek Reserve. There are already DOE/K-H management programs in place -- that presently include Rock Creek -- that address weed control, vegetation and wildlife monitoring, revegetation, and other aspects of natural resource management. How will this plan mesh with the existing plan Will USFWS plans and monitoring supersede the existing plans, or will DOE management continu until such time as USFWS actually takes over management? How will USFWS coordinate with th DOE contractor which is presently charged with designing and implementing the management actions for the entire Site?
- There are a large number of vegetation monitoring transects and plots throughout the Site, how wil this plan protect those locations from encroachment, research impacts, and management impacts?
- How will this management plan allow wildlife monitoring transects to remain unimpacted? If ther will be a significant presence of other researchers, public visitors, etc., it may become necessary to coordinate these activities against regularly scheduled surveys to avoid unplanned impacts to surve areas while these surveys are in progress.
- Kaiser-Hill ecologists are very familiar with Rock Creek and the Site in general. They can provide considerable insight, and have access to nine years worth of ecological monitoring data (from pres programs as well as past characterizations) that may help USFWS personnel avoid redundancy anc duplicated effort during design of monitoring and research plans, and objectives for USFWS' management and research programs. One example of redundancy that has already occurred was when USFWS ecologists conducted gill netting in the Lindsay and Landfill ponds because they we unaware of preexisting data. The fish populations were already known from previous studies and long-term observation, so Site ecologists already knew what was likely to be present when the small-fish trapping effort was reinitiated two years ago. Because of this knowledge, gill netting in these, and other ponds was judged unlikely to be productive of new data, and minnow trapping wa done instead. Previous evaluations have trapped and netted all ponds.
- It should also be noted that until cleanup and closure are complete, several ponds are still designat as individual hazardous substance sites (IHSSs), and personnel who work in these waters, by Site safety procedures, need a minimum level of OSHA hazardous waste training (the Landfill Pond is

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one of these areas). Onsite personnel can help USFWS personnel identify such areas and avoid entering into potentially hazardous areas.

- If the present Ecological Monitoring Program performed under DOE auspices is to be successful ir achieving its goals, it will be necessary for the personnel from the two organizations to carefully coordinate actions and activities to ensure quality data for both purposes.
- There are a large number of special-concern species already documented on the Site, and any management plan should consider all of these. Site ecologists can help USFWS personnel by identifying these species and their areas of occurrence.
- There actually are a few prairie dogs that have reinhabited the Site since the plague epizootic, and they are continuing to reoccupy old colony areas, albeit at a slow rate of recovery. A specific prair dog management plan should be considered a necessary part of any long range management plan fc the Site.
- The use of native species for revegetation has been in progress for several years, and Site ecologist have identified seed mixtures and planting techniques that work well for local conditions. This might be useful information for the USFWS personnel involved in this project.
- How will new USFWS monitoring programs be coordinated with existing programs?
- It should be noted that restoration of the Lindsay ranch buildings will be very expensive, particular the old house. It is in extremely poor repair.
- It should be considered that the Rock Creek drainage is the most important mule deer fawning area on the Site, and dung the period from late May through early July is a sensitive one to the health of the herd on the Site. This area is, of course, also well populated with Preble's meadow jumping mice. To reduce unnecessary impacts to this sensitive area, USFWS should consider allowing only tours that are under the control of a guide, keeping trails restricted to uplands (perhaps where existing roads are), and restricting tours such that they are not too intrusive during the fawning and neotropical bird breeding season.
- I, personally, would have trouble supporting unlimited "recreational" public use in this sensitive habitat area because a heavy level of intrusion would be detrimental to both the habitat quality and the sensitive species living there. This is not an official position, only a personal/professional one.

I appreciate the opportunity to comment on this plan.

Marcia Murdock

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City of Boulder Open Space

Open Space/Real Estate Department
P.O. Box 791, Boulder, CO 80306; 303-441-3440
http://www.ci.boulder.co.us/openspace

June 16, 2000

Cliff Franklin
Department of Energy
Rocky Flats Field Office
PO Box 928
Golden, CO 80402-0928

Re: Rock Creek Reserve Integrated Natural Resources Management Plan Discussion Draft Comments

Thanks for the opportunity to comment on the Discussion Draft Outline of Goals and Objectives and Discussion Draft of the Table of Comments of the Rock Creek Reserve Integrated Natural Resources Management Plan. Early comment opportunities are much appreciated and make the process more constructive. We look forward to working with the Department of Energy, U.S. Fish and Wildlife Service and neighboring land owners in shaping the area's natural lands management.

We support the plan's direction, particularly we support your work in maintaining and restoring native species and preserving an important area on Colorado's Front Range. One general recommendation is to further expand the Proposed Reserve area on the western boundary. This would include southern portions of Section 4 and Section 9 in which the surface rights are owned by the Department of Energy. The Section 4 area contains exceptional tallgrass prairie (ESCO, 1999) and part of the Rock Creek drainage which supports the Preble's meadow jumping mouse.

Listed below are more detailed comments and recommendations about the Discussion Draft Goals and Objectives document. We do not have any comments on the Outline.

Discussion Draft Goals and Objectives

Page 2, 1.1 – Add *and plant communities* after "sensitive and Threatened & Endangered species."

Page 3, 1.2.3 – A description of the process to be used to determine who will manage the area after 2006 is not included. If there is a process, please describe it. If there is no established process, that should be noted.

Page 4, 2.1.2.1 Avifauna: add *grassland species* after "neo-tropical migrants." Recent research indicates the only bird species group in a steeper decline than neo-tropical migrants are grassland birds.

Page 4, 2.1.2. 4 Flora: Thank you for including xeric tallgrass prairie as native plant community of concern. The Natural Heritage Program inventoried significant species and natural communities on the Ranson-Edwards Jefferson County Open Space in 1998. This property is about one mile from the western edge of the expanded Reserve. A big bluestem-prairie dropseed plant community was documented which "...is imperiled throughout its global range and within the state." Dwarf lead plant was also documented in the Heritage Program report. The Data Report – Rocky Flats Bluestem Grassland Study 1999 by ESCO Associates Inc. further describes the tallgrass and its rarity.

Page 4, 2.1.2.6 Invertebrates: The Natural Heritage Program report also inventoried butterfly species. The report states: "Several imperiled butterfly species were documented...including the Ottoe skipper, Aragos skipper, and the regal fritillary." All three butterflies are listed as globally rare using the Natural Heritage program ranks. Both skippers rely on big bluestem tallgrass as a host plant and therefor may be present in the Reserve.

Page 4, 2.1.2.5:Amphibians and reptiles: The 1998 Natural Heritage Program inventory of the Ranson–Edwards property documented northern leopard frog.

Page 6, 3.3.1: Clarify intent by adding *and restoration* after closure/removal.

Page 7, 2.5.2.1: The text states that contaminated areas, including landfills, may not be accepted into the refuge system. Precedence for accepting contaminated areas has been established at the Rocky Mountain Arsenal Wildlife Refuge. Because of this the landfill area should be included in the Rock Creek Reserve.

Page 7, 2.6: Environmental Education opportunities: It would be appropriate to include scenic value as a public use. The area is enjoyed by thousands on a daily basis as they use neighboring roads or look towards the mountains from Denver.

Page7, 2.6.2: Change "Public access" to *Public visitation.* This is a more accurate description of the activity.

Thanks again for the opportunity to participate in this planning effort. Please contact me or Matt Jones of my staff if you have any questions or comments.

Sincerely,

James C. Crain
Director

cc: Ron Secrist
Amy Mueller
Mike Weil

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From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/20/2000 10:42 AM

To: Cliff Franklin/amgo/rffo@RFFO
cc:
Subject: Comments on INRMP/EA Outline

Cliff,

I have reviewed the INRMP/EA Outline very thoroughly, but haven't the time right now to review the Goa and Objectives document similarly. My comments are below and in the attached file.

My concerns are in three areas. I think:

* There should be multipurpose trails (pedestrian, equestrian, etc) trails in the Rock Creek Reserve th connect to trails coming west from Standley Lake and to trails in the adjacent Boulder Open Space. Soft surface trails that are simply designated corridors for travel would work fine.
* There should be a prescribed process and criteria for adding to the Rock Creek Reserve establishe in this initial plan, so that lands along the western boundary and the Woman Creek drainage can be readily added as soon as they meet the criteria.
* There were serious omissions and organizational problems with the outline as presented. I have revised it to add parallel construction, combine similar topics, add missing considerations such as cultural resources and socioeconomics sections in Section 3.0, eliminate single subheadings in a section, etc. The results of my revision are attached.

I hope you will review the attached file thoroughly, as a great deal of thought and experience are behind the suggested revisions I have made. I would be interested in talking with you about these suggestions and the overall process being followed in developing the INRMP/EA.

Thanks for the opportunity to review this.

D. Jean Tate, Ph.D.
Enviro-Support, Inc.
303-403-4748

[redacted] [redacted]

D. Jean Tate.vcf inrmp&ea_REV.doc

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DRAFT
ROCK CREEK RESERVE
INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN (INRMP) AND ENVIRONMENTAL ASSESSMENT (EA)

U.S. DEPARTMENT OF ENERGY ROCKY FLATS TECHNOLOGY SITE AND U.S. FISH & WILDLIFESERVICE

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2.2.1 Facility History

2.2.2 Historic Mission Of The Department Of Energy At Rocky Flat

2.2.3 Current Mission

2.3 LAND USE AND MANAGEMENT UNITS

2.3.1 Land Use

2.3.2 Management Units

2.3.2.1 Rock Creek Reserve

2.3.2.2 Remaining Buffer Area

2.3.2.3 Industrial Area

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3.1 TOPOGRAPHY, PHYSIOGRAPHY, GEOLOGY, AND SOIL
3.1.1 Topography and Physiology
3.1.2 Geology
3.1.2.1 Hydrogeology
3.1.2.2 Minerals
3.1.3 Soil
3.2 WATER RESOURCES
3.2.1 Surface Water
3.2.2 Groundwater
3.2.3 Water Quality
3.3 CLIMATE AND AIR QUALITY
3.3.1 Climate
3.3.1.1 Precipitation
3.3.1.2 Temperature
3.3.1.3 Winds and Severe Weather
3.3.2 Air Quality
3.4 FLORA
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3.4.4 Wetlands
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3.5.1 Mammals
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3.5.5 Other Faunal Species
3.5.6 Special Status Fauna
3.5.6.1 Mammals
3.5.6.2 Birds
3.5.6.3 Fish
3.5.6.4 Amphibians
3.5.6.5 Invertebrates
3.6 CULTURAL RESOURCES
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3.7.1 Infrastructure
3.7.2 Land Ownership/Management
3.7.3 Land Use
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4.0 INTEGRATED NATURAL RESOURCES MANAGEMENT—PROPOSED ACTION AND ALTERNATIVES

4.1 SOILS INVENTORY, MONITORING, AND MANAGEMENT
4.1.1 Soils Inventory and Monitoring
4.1.1.1 Proposed Action
4.1.1.2 Other Management Options
4.1.2 Soils Management
4.1.2.1 Proposed Action
4.1.2.2 Other Management Options
4.2 WATER INVENTORY, MONITORING, AND MANAGEMENT
4.2.1 Water Resource Inventory, Monitoring, and Management
4.2.1.1 Water Resource Inventory and Monitoring
Surface Water
Proposed Action
Other Management Options
Groundwater
Proposed Action

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Other Management Options
4.2.1.2 Water Resource Management
Proposed Action
Other Management Options
4.2.2 Water Quality Inventory, Monitoring, and Management
4.2.2.1 Water Quality Inventory and Monitoring
Surface Water
Proposed Action
Other Management Options
Groundwater
Proposed Action
Other Management Options
4.2.2.2 Water Quality Management
Proposed Action
Other Management Options
4.3 CLIMATE AND AIR QUALITY INVENTORY, MONITORING, AND MANAGEMENT
4.3.1 Climate Inventory and Monitoring
4.3.1.1 Precipitation
Proposed Action
Other Management Options
4.3.1.2 Temperature
Proposed Action
Other Management Options
4.3.1.3 Wind
Proposed Action
Other Management Options
4.3.2 Air Quality Inventory, Monitoring, and Management
4.3.2.1 Air Quality Monitoring
Proposed Action
Other Management Options
4.3.2.2 Air Quality Management
Proposed Action
Other Management Options
4.4 FLORAL INVENTORY, MONITORING, AND MANAGEMENT
4.4.1 Floral Inventory and Monitoring
4.4.1.1 Process
Proposed Action
Other Management Options
4.4.1.2 Floral Inventory
Proposed Action
Other Management Options
4.4.1.3 Rare or Endangered Plant Monitoring
Proposed Action
Other Management Options
4.4.1.4 Wetlands Inventory and Monitoring
Proposed Action
Other Management Options
4.4.2 Floral Management
4.4.2.1 Plant Communities (including riparian, xeric tall prairie grassland, tall upland shrubland)
Proposed Action
Other Management Options
4.4.2.2 Rare or Endangered Plants
Proposed Action
Other Management Options
4.4.2.3 Wetlands
Proposed Action
Other Management Options
4.5 FAUNAL INVENTORY, MONITORING, AND MANAGEMENT
4.5.1 Faunal Inventory and Monitoring
4.5.1.1 Species Resident or Transient on Site (including mammals, birds, fish, reptiles, amphibians, and invertebrates)
Proposed Action

Other Management Options
4.5.1.2 Federal- or State-listed Threatened or Endangered Species (including Prebles meadow jumping mouse)
Proposed Action
Other Management Options
4.5.2 Faunal Management
4.5.2.1 Game Species
Wildlife
Proposed Action
Other Management Options
Fish
Proposed Action
Other Management Options
4.5.2.2 Nongame Species
Mammals
Proposed Action
Other Management Options
Birds
Proposed Action
Other Management Options
Reptiles and Amphibians
Proposed Action
Other Management Options
Invertebrates
Proposed Action
Other Management Options
4.5.2.3 Endangered, Threatened, and Other Species of Special Concern
Proposed Action
Other Management Options
4.5.2.4 Habitat Management
Strategy and Goals
Wildlife Water Devices
Proposed Action
Other Management Options
Undesirable Vegetation Removal
Proposed Action
Other Management Options
Prescribed Burning
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Other Management Options
Revegetation
Proposed Action
Other Management Options
Endangered Species Habitat (including Prebles meadow jumping mouse)
Proposed Action
Other Management Options
4.6 CULTURAL RESOURCE INVENTORY, MONITORING, AND MANAGEMENT
4.6.1 Cultural Resource Inventory and Monitoring (including Lindsay Ranch)
4.6.1.1 Proposed Action
4.6.1.2 Other Management Options
4.6.2 Cultural Resource Management
4.6.2.1 Proposed Action
4.6.2.2 Other Management Options
4.7 LAND MAINTENANCE
4.7.1 Rehabilitation
4.7.1.1 Proposed Action
4.7.2.2 Other Management Options
4.7.2 Pest Management
4.7.2.1 Animal Pests
Proposed Action
Other Management Options
4.7.2.2 Plant Pests

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Proposed Action
Other Management Options
4.7.3 Fire Management
4.7.3.1 Proposed Action
4.7.3.2 Other Management Options
4.8 SOCIOECONOMIC RESOURCES
4.8.1 Enforcement
4.8.1.1 Proposed Action
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4.8.2 Public Education
4.8.2.1 Proposed Action
4.8.2.2 Other Management Options
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Other Management Options
4.8.3.2 Public Access
Areas Where Allowed
Proposed Action
Other Management Options
Developed Trails and Facilities
Proposed Action
Other Management Options
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5.1 TOGOGRAPHY, AND PHYSIOGRAPHY, GEOLOGY, AND SOILS
5.1.1 Proposed Action
5.1.2 Other Options
5.2 WATER RESOURCES
5.2.1 Proposed Action
5.2.2 Other Options
5.3 CLIMATE AND AIR QUALITY
5.3.1 Proposed Action
5.3.2 Other Options
5.4 FLORA
5.4.1 Proposed Action
5.4.2 Other Options
5.5 FAUNA
5.5.1 Proposed Action
5.5.2 Other Options
5.6 CULTURAL RESOURCES
5.6.1 Proposed Action
5.6.2 Other Options
5.7 LAND MAINTENANCE
5.7.1 Proposed Action
5.7.2 Other Options
5.8 SOCIOECONOMICS
5.8.1 Plan Enforcement
5.8.1.1 Proposed Action
5.8.1.1 Other Options
5.8.2 Public Education
5.8.2.1 Proposed Action
5.8.2.1 Other Options
5.8.3 Public Use
5.8.3.1 Proposed Action
5.8.3.1 Other Options
5.8.4 Socioeconomic Implications

6.0 OTHER CONSIDERATIONS

6.1 POTENTIAL MITIGATION MEASURES

6.1.1 Geology, Togography, And Physiography, And Soils .....
6.1.2 Water Resources .....
6.1.3 Climate And Air Quality .....
6.1.4 Flora .....
6.1.5 Fauna .....
6.1.6 Cultural Resources .....
6.1.7 Land Maintenance .....
6.1.8 Socioeconomics .....
6.2 ENVIRONMENTAL JUSTICE .....
6.3 IRREVERSIBLE, IRRETRIEVABLE COMMITMENT OF RESOURCES .....
6.4 CUMULATIVE IMPACTS .....

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7.1 FINDINGS .....
7.2 UNRESOLVED ISSUES .....
7.2.1 Future Land Ownership and Public Use .....
7.2.2 Exotic Species Control Using Restricted Options .....
7.2.3 Mineral Rights/Water Rights Issues .....
7.2.4 Pending Legislation .....

8.0 REFERENCES .....

9.0 PERSONS CONTACTED .....

10.0 PLAN PREPARERS .....

ACRONYMS

APPENDICES

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2000608

WESTMINSTER

00 JUN -6 PM 1:57

CCDM

June 5, 2000

Joseph A. Legare
Assistant Manager for Environment and Infrastructure
Rocky Flats Field Office
P.O. Box 928
Golden, Colorado 80402-0928

Public Works
and Utilities

4800 West 92nd Avenue
Westminster, Colorado
80030

FAX 303 650-1643

Dear Mr. Legare:

Thank you for the opportunity to review the Discussion Draft Outline of the Goals and Objective for the Rock Creek Reserve Integrated Natural Resources Management Plan (Plan) and the Discussion Draft of the Table of Contents for the Plan. The City of Westminster appreciates the Department of Energy and U.S. Fish & Wildlife commitment to solicit public input as the Management Plan is developed.

The Management document indicates that Fish & Wildlife is able on its own to obtain a refuge designation from Congress for a portion of the site or the entire site. Westminster urges the Department of Energy and U.S. Fish & Wildlife to work with, and seek input from, both Senator Allard's and Congressman Udall's Denver staff on the Rock Creek Reserve Management Plan as well as any decisions related to establishing a wildlife refuge at Rocky Flats.

Introducing one Bill to Congress to establish a Refuge rather than two Bills would reduce the confusion of having both these Bills for consideration in House and congressional committees on the same topic. This could result in delaying timely congressional action on a Rocky Flats Refuge Bill.

The proposed expansion of the Rock Creek Reserve from 852 acres to 1,793 acres at this point in time, raises questions as to the purpose of this extension, and the assumptions that were made in determining the new proposed boundaries of the Reserve. The southern buffer zone, which includes the Woman Creek drainage, should also be included in this extension. Please provide the City with information as to how the extension was determined and why the southern buffer zone area was excluded. Parceling of the Site is not supported.

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The introduction to the Management document states that DOE and Fish & Wildlife havē agreed to use the Department of Army format for preparing Integrated Natural Resource Management Plans using the April 1997 guidelines established by the Army. After having reviewed this document, it appears that the draft outline covers all the sections outlined in the Army document. However, there are some items that the City would like to see expanded, separated and or added to.

Specific Comments

Section 14.0 Unresolved Issues. Mineral rights/water rights are lumped together as one section. Because of the importance of both these issues it would seem appropriate to separate them out and to include a Section 8.5, which would discuss surface water ownership, right of ways, ditches, etc., in both the Woman Creek and Walnut Creek drainage. (This comment is in anticipation of the entire site being named as a wildlife refuge.) Any modifications or changes in these drainages would require consultation with the City of Westminster Water Resources engineers.

Section 2. Objectives, 2.1, Remove non-native fish and restock with natives. The landfill pond waters was listed as an area for reintroduction of these species. This pond ties into the Walnut Creek drainage, which then flows into Big Dry Creek. There is a high probability that these fish could migrate into Big Dry Creek and impact the local governments that have wastewater treatment plants discharge outfalls located on Big Dry Creek. The City of Westminster requests that it be notified and allowed to comment on any reintroduction of fish species at Rocky Flats before it occurs.

2.1.1 Reintroductions. This Section states the intent of Fish & Wildlife to reintroduce species that historically occurred or had the potential to occur in the area. Off site impacts must be considered and the surrounding communities consulted and allowed to provide input on proposed specie reintroductions.

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2.1.2 Native plant and animal species enhancement, with priority given to threatened and endangered species. Prairie dogs, although native to the area, cause soil disturbances and are sources of bubonic plague. Carrying capacity of the Site to support additional species must also be considered. Impacts of threatened and endangered species to surrounding residential communities must be considered in any species enhancement decisions.

2.3. Maintaintenance and/or closure/removal of existing roads and fences. This section should contain a caveat that there will be controlled public access to all site drainages and streams.

2.3.3.1. An additional issue for this section should be added to discuss runoff control during major storm events.

2.6.3. All issues discussed in this section should only be decided with consultation from the affected communities and citizens.

In reading the 1999 Annual Report and Deliverables Interagency Agreement Between U.S. Fish & Wildlife Service and the Rocky Flats Field Office there is a section listed with missing documents. Has Fish & Wildlife been able to obtain copies of these important documents that will be used in their Management Plan for the Reserve?

Please provide the City with a copy of the 1990 CSU Deer Study, the 1997 Pu Intake by Mule Deer at Rocky Flats and the 1978 Summer Foods of Coyotes at Rocky Flats.

Once again, thank you for the opportunity to comment on this important document.

Sincerely

Mary Harlow

Mary Harlow
Rocky Flats Coordinator
City of Westminster

~~6777 W. 88th~~
4800 W. 92nd
80030

cc: Ron Hellbusch, Director Public Works and Utilities

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From: R[redacted]> on 06/09/2000 10:23 PM

To: Cliff Franklin/amgo/rffo@RFFO, Mariane Anderson/CED/rffo@RFFO
cc:
Subject: Rock Creek Comments

The following are comments to the Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment.
1.Goal
1.2 Issues:
1.2.2. I recommend the extension boundaries should follow geological or natural contour formations. The will provide manageable boundaries that are easily recognized.
2. Objective
2.1.1 Reintroduction
Any species of Prairie dogs are not to be considered for reintroduction.

2.1.2 Native Plant and animal species enhancement.
2.1.2.2 Prairie dogs are not to be considered for enhancement.
2.1.3 The Management Processes
2.1.3.5 Population management
XX The Reserve shall not be a candidate relocation site for Prairie dogs collected for relocation from neighboring communities. (The Reserve can not be opened as a dumping site for stray animals)

Sincerely
Roman Kohler
[redacted]

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JOE S. DOWNEY RG, FGSA

[redacted]

June 6, 2000

Mr Cliff Franklin
Rocky Flats Field Office
Dept of Energy
P.O. Box 928
Golden CO 80402-0928

RE: Comments – Natural Resources Management Plan - Rock Creek Reserve

I would like to suggest that the DOE consider placing multipurpose trails along existing roads or old trails to connect county horse trails both east and west of Rocky Flats and thru the Lindsay Ranch site. The Lindsay Ranch site could be adapted to serve as a stopping point for horse watering. The old ranch house could be partially restored and an information Kiosk built. This would make maximum public use of this part of Rocky Flats possible with minimum problems for wildlife management in the reserve. I am sure the Jefferson County Horse Council would be happy to help with providing the expertise for the planning of equine trails if needed.

I support the expansion of the Rock Creek Reserve as shown on your planning map to the 1700 plus acres.

Sincerely,

Yours

Joe S. Downey

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Cliff Franklin
06/08/2000 10:49 AM

To: "D. Jean Tate" <jeantate@enviro-support.com>
cc:
Subject: Re: Proposals for Future Use of RFETS

I will send the map and two formats today. We have directed the Plan toward the Rock Creek Reserve because it is the only area "currently" designated as the Reserve. The map I will include shows the current boundary and the proposed boundary expansion. We have limited the area of inclusion and proposed expansion to areas where it is generally agreed that contamination does not occur. Although we feel that most of the remainder of the buffer zone could be included, there is general concern among some segments of the public and local governments. Until those concerns are satisfactorily addressed we feel it is better to avoid those conflicts at this time. In addition, on the west side, we have avoided several areas that have active mining permits in existence. Within the next 5-6 years these issues will all have to be addressed, either through Congressional action or through the continuing collaborative involvement of the private citizens, special groups, and the local governments. It is expected that most aspects of this plan will be applicable for the entire buffer zone when the decision is made to include all of it in open space status, or wildlife refuge, if that becomes the decision of the public.

If you have any other questions, please ask. I will get the information in the mail for your review.

Cliff

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/08/2000 10:38 AM

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/08/2000 10:38 AM

To: Cliff Franklin/amgo/rffo@RFFO
cc:
Subject: Re: Proposals for Future Use of RFETS

Cliff,

I have nothing written at all, and would appreciate receiving any text and maps you can provide. I would also be interested in knowing the rationale for restricting the current plan to Rock Creek and not also including Woman Creek and the western uplands (i.e., an open space U open to the east and avoiding the industrial area and probably Walnut Creek seems most reasonable to me).

Jean
Jean Tate
[redacted]

----- Original Message -----
From: <Cliff.Franklin@rfets.gov>
To: "D. Jean Tate" <jeantate@enviro-support.com>

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Sent: Thursday, June 08, 2000 7:25 AM
Subject: Re: Proposals for Future Use of RFETS

> Thanks for your interest in the Management plan for the Rock Creek Reserve. I'm
> not clear if you have obtained the Table of Contents or the Goals and Objectives
> outline for the Management Plan or not. Those are the items that were mailed
> out and made available at the three public scoping meetings. If you don't have
> them let me know and I will send them out to you. At this time they are the
> only items that have been prepared. We are asking for comments on them prior to
> preparing a Draft Integrated Natural Resource Management Plan for the Rock Creek
> Wildlife Reserve. Based on comments from the public, we hope to have a Draft
> plan completed around the end of July, 2000. At that time the Draft Plan will
> be distributed to the public for comments. We hope to have the Final plan
> completed by December 31, 2000.
>
> It should be noted that this plan is directed primarily to the Rock Creek
> Reserve with applicability to a proposed expansion of the Reserve and at some
> point, perhaps to the entire buffer Zone. We would like comments on the
> subjects in those two formats, expressing support for the items in there,
> disagreement with the items, or if there are some missing, please suggest those
> additions. Also if you have any strong feelings on any of the topics, we would
> like to know them.
>
> Pleae let me know if you have the two formats: Table of Contents, and Goals and
> Objectives outline. I look forward to hearing from you.
>
>
>
>
>
> From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/06/2000 10:58 AM
>
> To: Cliff Franklin/amgo/rffo@RFFO
> cc:
> Subject: Proposals for Future Use of RFETS
>
> Dear Cliff,
>
> I represent a homeowners association just south of SH72 and near RFETS, am on
> the Board of the Jefferson County Horsemen's Council, and have worked as a
> consultant at the Flats in years past.

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I am most interested in future uses of
the site, particularly those associated with open space, multipurpose
trails,
and connections with adjacent trail systems for equestrian and other use. To
make substantive comments on the current proposals for use of RFETS, I need
additional information. What can you send me that will fully elucidate
current
proposals?

My mailing address is:

D. Jean Tate
[redacted]

You can also contact me via the above email address or by phone
[redacted]
I will try to get comments in to you by June 15, but am somewhat dependent
on my
receipt of your information packet.

Thanks!

Jean(See attached file: D. Jean Tate.vcf)

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From: Jody Nelson/RFFO1/USDOE@EXCHANGE on 05/30/2000 07:37 AM

To: Bruce Rosenlund <bruce_rosenlund@FWS.gov>@SMTP@rffo, Cliff Franklin/amgo/rffo@RFFO

cc: Stephen Nesta/RFFO1/USDOE@EXCHANGE

Subject: Comments on USFWS Rock Creek Reserved Integrated Natural Resources Management Plan

Comments on USFWS Rock Creek Reserved Integrated Natural Resources Management Plan
From Jody K. Nelson, 64 Garden Center #213, Broomfield, CO 80020
(I have attached the electronic file at the end of the text also)

1. Under Goal 1.1, one concern I have is that the statement concerns itself with the restoration, preservation, protection, and enhancement of native, sensitive, and T&E **species** only. It is a species specific management approach. There is no mention of plant communities or an overall ecosystem approach. An overriding goal f the management of the ecological resources for the Rocky Flats Environmental Technology Site (Site) should an ecosystem management approach. Attention needs to be given to both individual species and plant communities. It should **not** be a species specific approach only or where priorities are only given to individua species first. Many of the rare and unique resources at the Site are not only individual species such as the Preble's mouse or the proposed species the USFWS may introduce, but the plant communities (i.e. xeric tallgrass prairie, tall upland shrubland, Great Plains riparian woodland, needle and threadgrass prairie, seep wetlands) themselves that are comprised of many species. If management for individual species is done at the expense of these communities then I do not support the USFWS approach to management of the ecological resources at the Site. I recommend that Goal 1.1 be revised to read, "...to restore, preserve, protect, and enhance native, sensitive, and Threatened and Endangered species **and communities** in a manner ..."

   If the USFWS cannot or will not employ an ecosystem management approach to their management of the ecological resources at the Site, then I would encourage the DOE to consider entering into an interagency agreement with the US Forest Service, Arapahoe/Roosevelt District, for management of the Site's ecological resources. The Site could be managed as national grassland, perhaps as part of the Pawnee National Grasslan The US Forest Service approach would be more of an ecosystem management and multi-use approach that would better preserve the resources of the Site.

2. Concerning Issues 1.2.2, I encourage the enlargement of the boundaries of the Rock Creek Reserve to include the entire BZ if possible or at least the majority of the xeric tallgrass prairie if that is not feasible. The entire Site needs preservation, not just the Rock Creek drainage. The opportunity exists to preserve a large tract of land that contains a high diversity of the region's rapidly disappearing flora and fauna. Habitat fragmentation a major concern for many species that are currently declining. The Site is a large area, that combined with the surrounding Open Space lands provides a fairly large, contiguous area that is important for the continued long-term existence of many declining species.

3. Concerning Objectives 2.1, again the goals mentioned are species specific. I recommend incorporating the community aspect of the ecosystems to the goals and objectives. It is mentioned that the USFWS will use the Colorado Natural Heritage Programs Conservation Status Handbook for guidance concerning rare and declini species. This handbook (database) also lists the rare and imperiled plant communities found in Colorado as well. The plant communities on Site need protection also, but must be managed appropriately to sustain them the long-term.

4. Concerning Objectives 2.1.3.8 and 2.1.4.2, it is mentioned that they support the continuation of existing monitoring programs.
   a. This is encouraging. The current monitoring program and ecologists have accumulated an incredible wea of information and knowledge about the ecological resources at the Site. Additionally, the current ecologists have the knowledge of past resource management across the Site that is essential for designing and locating potential future studies. I would hope that the USFWS would take advantage of that knowledge and include the current ecologists in discussions about projects and proposals.

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From: Thomas Ryon/RFFO1/USDOE@EXCHANGE on 05/22/2000 03:27 PM

To: Cliff Franklin/amgo/rffo@RFFO, Bruce Rosenlund <bruce_rosenlund@fws.gov>@SMTP@rffo
cc: Stephen Nesta/RFFO1/USDOE@EXCHANGE
Subject: Comments on USFWS Manage Plan for Rock Creek

I have some comments on the USFWS Rock Creek Management Plan, but am unable to attend any of the meetings.

Comment 1:
Kaiser-Hill currently has an Ecology Program for the monitoring and management of the buffer zone through the clean-up in 2006. USFWS says, in their introduction, that they will coordinate ("co-manage" with DOE in their management of Rock Creek and possibly the entire buffer zone. It would be unfortunate if the USFWS did not co-manage Rock Creek with the cooperation of the Kaiser-Hill ecolog group. The reason this would be unfortunate, particularly if their management plan would expand to the entire buffer zone, because the Ecology Group contains a wealth of site-specific ecological information and has a perspective on long-term monitoring and management of the buffer zone. In addition, the Kaiser-Hill Ecology group has a long history of planning and conducting monitoring and management projects at a DOE complex. If USFWS chooses not to coordinate with the Kaiser-Hill Ecology group, the will find themselves years behind in terms of site ecology knowledge (every site is different) and operational knowledge vital to the success of their program.

Comment 2:
The USFWS says they will manage for native, sensitive and T&E species. There are many natural resources at Rocky Flats such as native plant communities that are not protected by the heavy environmental statues as some individual species are. Yet it is the combination of the plant communitie that provide the habitat for many imperiled species including the Preble's jumping mouse.

I would hope that the USFWS will manage the Rock Creek Reserve from an ecosystem management prospective and not let the heavy drivers for individual T&E species take precedence to sound wildland management. For example, it would be short-sighted to let non-native plant species propagate in order protect an individual protected species. I hope the USFWS will take a long-term view in making daily decisions about Rock Creek management.

Comment 3: Under population management of Preble's mice it is stated that the current monitoring will continue. Who will do this monitoring through 2006? Who will do this monitoring after 2006? Will other current ecological monitoring continue?

Comment 4: Research - If research by outside organizations and institutions is going to be allowed in Rock Creek, there needs to be coordination with the current monitoring program and site-specific management history. Researchers need to be appraised of the ecological conditions of their study sites (e.g., this plot was sprayed with herbicide in 1997) so that their study results can be interpreted in light o the correct historic land use.

Comment 5: Numerous observations at the site, such as elk, black bear, and mountain lion, indicate tha Rocky Flats is connected to the foothills ecosystem and is part of a larger system that provides habitat t wide-ranging species. It is likely that Coal Creek and the adjacent open space to the south provide the movement corridor and make the link to Rocky Flats. It is my hope that the USFWS will work with adjacent landlords to insure the continued existence of this important corridor and prevent Rocky Flats from becoming isolated from the foothills and surrounding open space.

Thomas Ryon, Wildlife Biologist
Exponent Environmental
Kaiser-Hill Ecology Group
Rocky Flats Environmental Technology Site

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From: Marcia Murdock/RFFO1/USDOE@EXCHANGE on 05/19/2000 09:24 AM

To: Cliff Franklin/amgo/rffo@RFFO, Bruce Rosenlund <bruce_rosenlund@FWS.gov>@SMTP@rffo

cc: Stephen Nesta/RFFO1/USDOE@EXCHANGE

Subject: Draft Goals and Objectives for Rock Creek Reserve Management Plan

Cliff and Bruce,

The Rocky Flats onsite Ecology staff have some questions and comments on the plan outline that was provided to us. We were unfortunately too busy with the start of our field season to attend the May 18 meeting, but each of us will be forwarding comments.

My informal comments below are not in any particular order, but occurred as I reviewed the discussion of the Goals and Objectives.

- Will the Colorado Division of Wildlife have the opportunity to be involved in this process in tl future? At one point in the document in-stream flow water rights is mentioned; CDOW was working with DOE at one point a few years ago to try to find a way to file on these water rights. Dave Weber w involved in this. He might have some useful information that could help on this question. Water rights will be one of the larger challenges if an ambitious program is planned for ultimate abandonment of mc of the Site's ponds.
- In the second paragraph there is a discussion of the cooperative agreement for management of the Rock Creek Reserve. There are already DOE/K-H management programs in place -- that presently include Rock Creek -- that address weed control, vegetation and wildlife monitoring, revegetation, and other aspects of natural resource management. How will this plan mesh with the existing plan Will USFWS plans and monitoring supersede the existing plans, or will DOE management continu until such time as USFWS actually takes over management? How will USFWS coordinate with th DOE contractor which is presently charged with designing and implementing the management actions for the entire Site?
- There are a large number of vegetation monitoring transects and plots throughout the Site, how wil this plan protect those locations from encroachment, research impacts, and management impacts?
- How will this management plan allow wildlife monitoring transects to remain unimpacted? If ther will be a significant presence of other researchers, public visitors, etc., it may become necessary to coordinate these activities against regularly scheduled surveys to avoid unplanned impacts to surve areas while these surveys are in progress.
- Kaiser-Hill ecologists are very familiar with Rock Creek and the Site in general. They can provide considerable insight, and have access to nine years worth of ecological monitoring data (from pres programs as well as past characterizations) that may help USFWS personnel avoid redundancy anc duplicated effort during design of monitoring and research plans, and objectives for USFWS' management and research programs. One example of redundancy that has already occurred was when USFWS ecologists conducted gill netting in the Lindsay and Landfill ponds because they we unaware of preexisting data. The fish populations were already known from previous studies and long-term observation, so Site ecologists already knew what was likely to be present when the small-fish trapping effort was reinitiated two years ago. Because of this knowledge, gill netting in these, and other ponds was judged unlikely to be productive of new data, and minnow trapping wa done instead. Previous evaluations have trapped and netted all ponds.
- It should also be noted that until cleanup and closure are complete, several ponds are still designat as individual hazardous substance sites (IHSSs), and personnel who work in these waters, by Site safety procedures, need a minimum level of OSHA hazardous waste training (the Landfill Pond is

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one of these areas). Onsite personnel can help USFWS personnel identify such areas and avoid entering into potentially hazardous areas.

- If the present Ecological Monitoring Program performed under DOE auspices is to be successful ir achieving its goals, it will be necessary for the personnel from the two organizations to carefully coordinate actions and activities to ensure quality data for both purposes.
- There are a large number of special-concern species already documented on the Site, and any management plan should consider all of these. Site ecologists can help USFWS personnel by identifying these species and their areas of occurrence.
- There actually are a few prairie dogs that have reinhabited the Site since the plague epizootic, and they are continuing to reoccupy old colony areas, albeit at a slow rate of recovery. A specific prair dog management plan should be considered a necessary part of any long range management plan fc the Site.
- The use of native species for revegetation has been in progress for several years, and Site ecologist have identified seed mixtures and planting techniques that work well for local conditions. This might be useful information for the USFWS personnel involved in this project.
- How will new USFWS monitoring programs be coordinated with existing programs?
- It should be noted that restoration of the Lindsay ranch buildings will be very expensive, particular the old house. It is in extremely poor repair.
- It should be considered that the Rock Creek drainage is the most important mule deer fawning area on the Site, and dung the period from late May through early July is a sensitive one to the health of the herd on the Site. This area is, of course, also well populated with Preble's meadow jumping mice. To reduce unnecessary impacts to this sensitive area, USFWS should consider allowing only tours that are under the control of a guide, keeping trails restricted to uplands (perhaps where existing roads are), and restricting tours such that they are not too intrusive during the fawning and neotropical bird breeding season.
- I, personally, would have trouble supporting unlimited "recreational" public use in this sensitive habitat area because a heavy level of intrusion would be detrimental to both the habitat quality and the sensitive species living there. This is not an official position, only a personal/professional one.

I appreciate the opportunity to comment on this plan.

Marcia Murdock

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Department of Energy

ROCKY FLATS FIELD OFFICE
10808 HIGHWAY 93, UNIT A
GOLDEN, COLORADO 80403-8200

DEC 5 2000

00-DOE-04170

Dear Stakeholder:

As requested by the Rocky Flats Coalition of Local Governments, we are extending the public comment period on the Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment. The public comment period will run from December 4, 2000, to January 31, 2001.

If you have any questions regarding the comment period, please call Mariane Anderson at (303) 966-6088.

Sincerely,

Joseph A. Legare
Assistant Manager
for Environment and Infrastructure

cc:
C. Franklin, AI, RFFO

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Department of Energy

ROCKY FLATS FIELD OFFICE
10808 HIGHWAY 93, UNIT A
GOLDEN, COLORADO 80403-8200

DEC 04 2000

00-DOE-04008

Dear Stakeholder:

Enclosed for your review and comment is the Draft Rock Creek Reserve Integrated Natural Resources Management Plan (Plan) and Environmental Assessment (EA). This Plan/EA was developed in accordance with the National Environmental Policy Act (NEPA) and includes analysis of reasonable alternatives. As you may know, under the Memorandum Of Understanding entered into at the time the Secretary of Energy designated the Rock Creek Reserve, the U.S. Fish and Wildlife Service is developing this Plan in cooperation with the Department of Energy. We have prepared this draft Plan with proposed actions that are based on the natural resources management principles and practices employed by the U.S. Fish and Wildlife Service at their management areas in other locations. Additionally, we have attempted to address the issues and concerns we heard at our NEPA scoping sessions for this Plan.

The public comment period for this document ends 45 days from the date of this letter. Your written comments should be directed to:

Mr. Cliff Franklin
US Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, Colorado 80403-8200.

You may also e-mail Mr. Franklin at: cliff.franklin@rf.doe.gov. Additionally, the draft Plan is posted on the Rocky Flats website at www.rfets.gov and reference copies of the draft Plan can be found at each of the Rocky Flats Reading Rooms.

You are invited to attend the following public information meeting to discuss the draft Plan:

Tuesday, December 19, 2000, 6:00 – 8:00 p.m.
Front Range Community College, College Hill Library
3705 West 112th Avenue, Westminster
Contact: Mariane Anderson, 303-966-6088

We thank each of you for your interest and involvement in developing this Plan that will set forth the strategies and methods for managing this beautiful and rare natural resource.

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Should you have any questions regarding the comment period or need the location of the Reading Rooms, please contact Mariane Anderson at 303-966-6088 or mariane.anderson@rf.doe.gov.

Sincerely,

Joseph A. Legare
Assistant Manager
for Environment and Infrastructure

Enclosure

INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN and *ENVIRONMENTAL ASSESSMENT* for ROCK CREEK RESERVE

2000-2006

DRAFT

DOE/EA – 1358

Department of Energy Rocky Flats Environmental Technology Site and The U.S. Fish & Wildlife Service

December 2000

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PREFACE

This Integrated Natural Resources Management Plan for Rock Creek Reserve (Plan) combines U.S. Fish and Wildlife Service (USFWS or Service) goals and management philosophies with those of the Department of Energy (DOE) in management of the natural resources of the Rock Creek Reserve, located within the Rocky Flats Environmental Technology Site's (Rocky Flats or Site) Buffer Zone. The Buffer Zone has been described as a "crown jewel" for its importance as an area relatively unimpacted by agricultural use and development for many decades, and as an important link in the region's efforts to maintain an open space corridor in a rapidly developing area (Fig. 1). A federally-listed, threatened species, the Preble's meadow jumping mouse, resides in all three drainages located on the Site, including Rock Creek.

Implementation of this Plan will not impact the cleanup and closure of Rocky Flats. All other agreements, plans, and policies dealing with cleanup, and existing easements take precedence over this Plan. No funds from cleanup are used for preparation or implementation of this Plan, except where already designated for Buffer Zone activities. Although the term "reserve" carries no legal designations or requirements, it does connote an intention of plant and wildlife-based land use. This may or may not carry over into the final decision for use of Rocky Flats. The Plan will maintain the integrity of this "crown jewel" for the use(s) that will ultimately be decided. Finally, while this Plan is intended specifically to address the management needs of Rock Creek Reserve, both DOE and the Service believe that the actions described herein will have applicability to other undisturbed areas of the Rocky Flats buffer zone.

DRAFT

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EXECUTIVE REPORT

Summary

The Plan outlines many of the steps proposed during the next five years to provide for the stewardship of the natural resources of the Rock Creek Fish and Wildlife Cooperative Management Area (Rock Creek Reserve). The Plan proposes the continuation of current management programs and policies for the Buffer Zone (which include the Rock Creek Reserve), and differs from these programs mainly with the inclusion of these proposed actions:

- expansion of the Rock Creek Reserve from 800 acres to 1700 acres;
- development of an access and recreation study for Rock Creek Reserve;
- development of a contaminants study for Rock Creek Reserve;
- assessment and determination of feasibility to stabilize all, or part of, the Lindsay Ranch;
- within the site-wide annual noxious weed management plan, provide increased emphasis on the Reserve for noxious weed management, including increased biological controls;
- monitoring of water quality and quantity for Rock Creek; including determination of current and minimum in-stream flows; and
- introductions of sensitive, native faunal species (and removal of non-natives) and federally-listed plant species (in accordance with approved recovery plans) into Rock Creek Reserve.

The Plan does not preclude or compromise the accomplishment of the Site's current cleanup and closure mission, or any future considerations for the Site. The Plan has been developed through cooperation with the appropriate regulatory agencies and the public.

Purpose

The Plan guides implementation of the 1998 Natural Resources Management Policy (NRMP) for Rocky Flats from 2001 through 2006 (or until closure) for the land and natural resources of the Rock Creek Reserve and helps ensure compliance with environmental laws and regulations. The Plan helps provide the continued protection and conservation of the area's unique natural resources.

Scope

Rock Creek Reserve (Fig. 2), was established in May of 1999 in recognition of the area's biological significance. Although still under ownership of the DOE, Rock Creek Reserve will be co-managed with the Service as part of a cooperative agreement signed by these two agencies in 1999. The need for an integrated natural resources management plan was recognized and included as a requirement in the cooperative agreement. The Plan discusses management tools and options specifically for Rock Creek Reserve. The management options outlined in the Plan could be used (in conjunction with other, resource-

specific management plans) to help manage the natural resources for other portions of, or the entire Site after the scheduled clean up is complete and if future land ownership/uses are compatible. The Plan is not intended to be a re-use plan, or any kind of decision document for the use of Rocky Flats after closure. Those issues will be addressed through other public participation processes.

The Plan is developed as a tool to cooperatively manage natural and cultural resources under the current federal ownership and land use conditions. Any significant changes to the current conditions will be addressed as a supplement to the Plan or in a separate document if necessary. All management strategies in this Plan will be consistent with the Rocky Flats current mission of facilities demolition and site remediation resulting in closure.

The Plan utilizes basic criteria for protecting and enhancing natural resources using watershed, landscape, and ecosystem perspectives, consistent with the current Rocky Flats mission and Service goals. Provisions of the Plan apply to all management entities at Rocky Flats. For the purposes of this document those entities are currently the DOE (including its contractors) and the Service. The Plan provides the management goals and guidance for Rock Creek Reserve for future specific natural resource management plans, such as noxious weed management plans, cultural resource management plans, etc.

Because of policies or projects defined as federal undertakings, the Plan was developed in accordance with the National Environmental Policy Act (NEPA). NEPA requires public involvement and consideration of reasonable alternatives and environmental impacts of the alternatives of federal actions, including the proposed action. NEPA analysis of reasonable alternatives (including no action) is incorporated within the Plan to achieve that goal. Some future natural resource management projects may require additional NEPA analysis if they do not fall within the scope of significance criteria established in this Plan/Environmental Assessment.

The goals, objectives and management principles presented in the plan are a result of discussions that occurred over several years concerning the possible management options for the buffer zone, and subsequent public and agency meetings and mailings. This process is documented in the administrative record for development of the Plan and is available upon request at the Rocky Flats Environmental Technology Site.

Environmental Compliance

The Plan helps DOE and the Service to comply with federal and State laws, most notably laws associated with environmental documentation, wetlands, endangered species, water quality, and wildlife management in general.

The Plan has the signatory approval of the Service. This signature approval includes agreement that the Plan complies with the Endangered Species Act of 1973. The Service's review of the Plan constitutes informal consultation with regard to the Endangered Species Act. The Plan assumes compliance with applicable laws and regulations, including:

National Environmental Policy Act of 1969
National Historic Preservation Act of 1966 (as amended through 1992)
Archaeological Resources Protection Act of 1979
American Indian Religious Freedom Act of 1978
Native American Graves Protection and Repatriation Act of 1990
Federal Noxious Weed Act of 1974
Clean Water Act of 1978
Clean Air Act (as amended through 1990)
Federal Insecticide, Fungicide and Rodenticide Act
Federal Land Policy and Management Act 1979
Protection of Wetlands: Amends Executive Order 11990
Migratory Bird Treaty Act
Executive Order 13112, Invasive Species, 1999

Other natural resources management regulations and legislation relevant to this Plan are listed below.

Public Law 85-624- Fish and Wildlife Coordination Act
Public Law 89-669- Fish and Wildlife Conservation Act
Public Law 86-70- Bald Eagle Protection Act, as amended
Public Law 93-366- Non-game Act
Public Law 92-522- Federal Water Pollution Control Act Amendments of 1972
Public Law 90-583- Noxious Plant Control Act
Title 16 U.S. Code 590 - Soil Conservation
Title 16 U.S. Code 1271- National Trails System Act of 1968
Executive Order 11991- Protection and Enhancement of Environmental Quality
Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations
Executive Order 11990 – Protection of Wetlands
Executive Order 11988 – Floodplain Management

Relationship to the Rocky Flats Mission

From 1952 to 1992, the mission of the Rocky Flats Plant was to produce nuclear weapons components from plutonium, uranium, beryllium and stainless steel. Among other things, the Plant produced plutonium triggers for nuclear warheads and recycled old triggers. Manufacturing work was conducted in the approximately 400-acre Industrial Area. The Industrial Area is surrounded by an approximately 6,000-acre Buffer Zone. The Buffer Zone has been left largely undisturbed over the years, resulting in preservation of flora and fauna, including a federally-listed threatened species, the Preble's meadow jumping mouse. The Rock Creek Reserve is located in the northern part of the Buffer Zone and is essentially uncontaminated. In 1992, the weapons production mission was curtailed and the mission transitioned to material stabilization and clean-up with the end of the Cold War.

The current mission of the Rocky Flats Technology Site is cleanup and closure. At closure, all nuclear materials and wastes will have been removed from the Site, all buildings will have been demolished, and any remaining contamination will have been remediated per the requirements of RFCA. Current plans call for this mission to be completed late in 2006.

The Plan does not evaluate Rocky Flats' current clean-up and closure mission, nor does it replace or regulate any requirement for environmental documentation of the current clean-up and closure mission at Rocky Flats.

Existing Natural Resources Management Policy

The Plan implements and is consistent with the 1998 NRMP, which establishes natural resource policies for numerous issues important to the management of the Rocky Flats Buffer Zone. The policies set forth in the NRMP serve to guide selection and funding of Buffer Zone management activities while the Site is being cleaned up under the Rocky Flats Cleanup Agreement (RFCA). The NRMP was developed to reach a milestone under RFCA, and is designed to guide natural resource policy decisions in accordance with closure activities. The Site revises the document as necessary. The Site will discuss any proposed revisions in a public meeting process to provide opportunities for comments.

The open space cleanup objective expressed in the RFCA Vision serves as the foundation for the resource management policies enumerated in the NRMP. This vision anticipates that the Site will be cleaned up so that it can be used as open space or converted to other appropriate uses consistent with community preferences. DOE will manage resources during cleanup in order to preserve currently available options for Buffer Zone use, so that these options can be considered during post-closure resource management discussions.

Partnerships

This document was prepared in partnership and cooperation by the DOE and the Service. These agencies are cooperating in accordance with the Interagency Agreement (Appendix 1) implemented in 1999 upon establishment of the Rock Creek Reserve. Responsibilities are outlined in Section B, Part IV of the Interagency Agreement. The Colorado Division of Wildlife (DOW) and stakeholders provided recommendations and technical expertise for this Plan. Some of the stakeholders and their roles include:

- **Natural Resource Trustees** - CERCLA section 104(b)(2) provides for government agencies to represent the citizens of the United States in protecting natural resources from releases of contaminants. Natural Resource Trustees at the Site include, at the federal level: the Secretary of Energy, Secretary of the Interior, and at the State level: the Deputy Director of the Colorado Department of Natural Resources, the Executive Director of Colorado Department of Public Health and Environment, and the Attorney General of the State of Colorado.
- **Rocky Flats Coalition of Local Governments** - formed in 1999 upon the sunset of the Rocky Flats Local Impacts Initiative, is made up of representatives of the cities and counties contiguous to Rocky Flats. The member governments are City of Arvada, City of Broomfield, City of Westminster, City of Boulder, Town of Superior, Jefferson County and Boulder County. The Coalition holds monthly

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meetings, open to the general public, to explore and discuss Rocky Flats cleanup, closure, and stewardship issues from a local government standpoint.

- **Rocky Flats Local Impacts Initiative** - operated from1991 through March 1999 and funded by DOE, this organization represented and served as a focal point for the views and concerns of about 60 organizations, including businesses and environmental, academic and citizen groups. It also advised DOE on the impact of workforce restructuring on local communities and managed several DOE-funded programs to help mitigate the impact of downsizing on these communities.
- **Rocky Flats Citizens Advisory Board** - this board was formed in 1993 to provide informed, community-based recommendations to EPA, the State, and DOE on the cleanup of Rocky Flats. The board consists of up to 30 volunteers, including local citizens, businesspersons, Rocky Flats workforce personnel, representatives of local governments, regulators, academia, and public interest and environmental organizations.
- **County governments** - Rocky Flats is located almost entirely within Jefferson County (39 acres are within Boulder County), along the foothills of the Rocky Mountains. Jefferson County has participated for many years on committees concerning land use planning, and planning and zoning for adjacent mining operations. Boulder County, which borders the Site on the north, has also taken increased interest in cleanup and closure, weed control, and land use planning.
- **Local Communities** - because they are located near Rocky Flats and could be affected by its cleanup and closure activities, cities such as Arvada, Broomfield and Westminster provide input to regulators, DOE, and the contractor on cleanup and closure issues. The Cities of Broomfield, Westminster, Arvada and Boulder (as well as Jefferson and Boulder Counties) own open-space lands near Rocky Flats. Land use planning coordination and cooperation among local open space owners is essential.
- **Environmental/ activist groups** - organized citizen groups, such as Rocky Mountain Peace and Justice Center and the Sierra Club, have been involved in Rocky Flats issues for years, from conducting antinuclear protests during the Site's production years to taking stands on current cleanup and closure issues.
- **Community groups** - these groups, including the North Jeffco Area Group and Boulder County Open Space have stressed the importance of keeping Rocky Flats as open space to preserve an important corridor from the foothills to Standley Lake.
- **Citizens** – individuals from all walks of life have actively participated in the numerous public processes conducted by the Site and have provided input and feedback on a myriad of Site issues.

Planned Initiatives

The Plan includes a description of ongoing and planned natural resources programs and projects for Rock Creek Reserve. The most significant proposals within this Plan include:

- expanding Rock Creek Reserve from 800 acres to 1700 acres;
- developing an access and recreation study;
- introducing sensitive native fish and wildlife species, or listed plant species in accordance with approved recovery plans;
- determing current and minimum in-stream flows required for support of sensitive species on Rock Creek;

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- conducting contaminants sampling and analysis to support requirements for a possible National Wildlife Refuge designation;
- studying the feasibility of stabilizing the Lindsay Ranch;
- conserving threatened, endangered and sensitive species;
- monitoring flora, fauna, air, and water quality;
- protecting unique natural resources areas;
- enhancing the existing vegetation management program through practices such as prescribed burning to protect native plants, and provide improved wildlife habitat;
- managing habitat for all species of wildlife;
- managing endangered species and their habitats to ensure compliance with the Endangered Species Act;
- preventing soil erosion to protect habitats, wetlands, and water quality;
- providing input and support for an effective, integrated noxious weed management program;
- protecting and conserving wetlands;
- continuing current public education opportunities through guided tours;
- protecting potential cultural resources while conducting natural resources management; and
- using the National Environmental Policy Act (NEPA) process to conserve natural resources.

Monitoring Plan Implementation

The success of the Plan's implementation will be evaluated through continuing monitoring programs. Additional monitoring is proposed within the Plan for those actions that are not covered in the existing monitoring program.

Costs and Benefits

- **Costs:** Costs for preparation and coordination of the Plan are described in the 1999 Interagency Agreement with the Service (Appendix 1). An annual work plan identifying funding requirements for implementation of the Plan will be submitted through the normal budget process.

- **Rocky Flats Mission Benefits:** Implementation of the Plan will help maintain the quality of lands comprising Rock Creek Reserve. Public trust and cooperation will be enhanced through Rocky Flats' commitment to environmental stewardship and through the Plan's public participation process.

- **Environmental Benefits:** The Plan provides the basis for the conservation and protection of the Rock Creek Reserve. It will help reduce vegetation loss and prevent soil erosion. It will help with the continuation of threatened & endangered species through habitat conservation and enhance native ecosystems through introductions of sensitive native species. This plan supports native species, and manages the removal/suppression of non-native species. It will provide biodiversity conservation.

- **Other Benefits:** Quality of life for the Rocky Flats surrounding community will be improved through the preservation of unique ecological resources for current and future generations. The ecological resources will be conserved for the future ownership and use of the site.

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1.0 GOALS AND THE NEPA PROCESS

This chapter discusses DOE's and the Service's goals for managing Rock Creek Reserve's natural resources and integration of NEPA documentation.

1.1 The Rocky Flats Environmental Technology Site's Mission and Vision

The current mission of the Rocky Flats Technology Site is cleanup and closure. At closure, all nuclear materials and wastes will have been removed from the Site, all buildings will have been demolished, and any remaining contamination will have been remediated per the requirements of RFCA. Current plans call for this mission to be completed late in 2006.

The open space cleanup objective expressed in the RFCA Vision (RFCA, Appendix 9) serves as the foundation for the resource management policies enumerated in the 1998 NRMP. This vision anticipates that the Site will be cleaned up so that it can be used as open space or converted to other appropriate uses consistent with community preferences. DOE will manage resources during cleanup in order to preserve currently available options for Buffer Zone use, so that these options can be considered during post-closure resource management discussions.

1.2 Rock Creek Reserve Natural Resources Purpose and Goals

The purpose for the establishment of Rock Creek Reserve was to create an avenue for agency cooperation in the management of ecologically important natural resource assets which are not expected to be affected by the cleanup activities and restrictions imposed on much of the remainder of the Rocky Flats Site. The Interagency Agreement at Appendix 1 further defines this purpose.

General Rock Creek Reserve natural resources management goals:

Goal 1. To cooperatively manage Rock Creek Reserve under DOE ownership to conserve, protect and enhance native ecosystems, plant communities, and wildlife species in a manner compatible with Rocky Flats' cleanup mission, including future public use parameters and existing real property interests.

Goal 2. Ensure the management of Rock Creek Reserve is compatible with the RFCA, the 1998 NRMP and all federal and State laws regulating the cleanup of Rocky Flats.

Goal 3. Cooperate with the Colorado Division of Wildlife to study and implement introductions of sensitive species.

Goal 4. Inventory, monitor, and manage soils, water, air, vegetation, and wildlife on Rock Creek Reserve with a consideration for biological diversity.

Goal 5. Ensure the management of Rock Creek Reserve is consistent with the protection of cultural and historic resources.

Goal 6. Implement this Plan within the framework of the Interagency Agreement developed between the DOE and the Service.

Goal 7. Protect and manage threatened and endangered species and critical habitat in accordance with the Endangered Species Act (ESA), NEPA, USFWS regulations and agreements, and other applicable laws or guidance. Consider species listed by the State of Colorado in the Plan.

1.3 Plan and NEPA Integration

This Plan incorporates NEPA analysis and serves as an Environmental Assessment. This section describes the integration of the Plan with its NEPA documentation. The Plan incorporates by reference the 1999 Rocky Flats Environmental Technology Site Vegetation Management Plan Environmental Assessment, in accordance with 40 CFR Section 1502.21 (CEQ NEPA Implementing Regulations), to "*cut down on bulk without impeding agency and public review of the action*". Impacts from vegetation management practices are analyzed within that document, and it provides the impact analysis for many of the actions addressed within this Plan. Nothing in this Plan is to be interpreted as a diminishment of the policies, programs and projects as outlined in that Environmental Assessment.

1.3.1 Purpose, Need, and Rationale

The purpose of the Environmental Assessment is to identify and evaluate environmental consequences of implementing certain proposed actions in the Plan that have not undergone previous NEPA analysis, and to summarize concisely those that have. The NEPA determination will be summarized in a Decision Document as an appendix (Appendix 2, to be inserted upon approval). This integration satisfies the requirements of NEPA.

A discussion of alternatives is found within each section in Chapter 4 (Proposed Actions and Alternatives) and summarized in Chapter 5 (Environmental Consequences). Each management program is discussed under the contexts of selected management options, and other (not selected) management options, including the "no action" alternative when applicable. After five years the Plan will be reviewed and updated as necessary.

1.3.2 Summary Description of the Proposed Action and Alternatives

Management options that are consistent with existing policies, agreements and restrictions, and which still meet the goals of this Plan, were proposed. Alternatives that were not considered in alternative analyses

sections include those which could compromise Rocky Flats' cleanup and closure mission. Therefore, options such as unrestricted public access and recreation, which would inhibit the Site from performing its mission, will not be considered until closure is complete. Provisions are found within the Plan to address this issue for future consideration.

Proposed Action

DOE proposes to fully implement the Plan, during 2001-2006 or until closure, in cooperation with the Service, to conserve, protect, and enhance native ecosystems, and threatened or endangered, sensitive, and native species. The Plan presents information on the management of natural resources on Rock Creek Reserve. It also describes the setting, defines land management units, and describes how the unit designated as Rock Creek Reserve will be managed to sustain ecological functions, to protect and enhance federally-listed and other non-game species, and support possible future uses. Major emphasis is placed on management practices to preserve the unique native plant communities, threatened and endangered species, and to minimize invasive species and restore the native plant and fish communities.

One of the proposed actions that bears discussion in this section is to expand the boundaries of Rock Creek Reserve to include most of the Rock Creek watershed and additional areas of tall grass prairie. The watershed encompasses approximately 1500 acres, most of which occur on the Site. The proposed expansion would increase the total acreage of Rock Creek Reserve from 800 acres to 1700 acres (Fig. 2). The Service recommended and supports this proposed action. The proposed management options in this Plan will not change with the implementation of the boundary expansion. The expansion area does not include any known contaminated areas or eligible archaeological or historic sites. The expanded area does include additional easements and a few structures, including a never-used landfill with a small support facility. The expansion would provide a more definable unit (watershed) for an ecosystem management approach.

Options Considered But Not Selected

Individual project options create numerous combinations, each of which could be an alternative to the proposed action. Various laws, compliance documents, DOE regulations, funding, etc. prohibit the implementation of many of these possibilities. For example, building erosion control structures in endangered species habitat may not be a viable option due to public law and DOE policy. On the other hand, selecting management techniques for preventing and controlling erosion is an option, and there are many choices for accomplishing this.

The "options considered but not selected" will be discussed as alternative actions following each management section. Environmental Assessments do not focus on alternatives analyses as much as Environmental Impact Statements do; thus, discussions will often be general and brief.

No Action

The "no action" alternative would be to manage natural resources on Rock Creek Reserve as they are managed currently, without the additional guidance and options outlined in this Plan, and without the

cooperative management with the Service. Compliance with laws and current management plans would ensure implementation of some programs but would ignore other options presented within this Plan. The "no action" alternative describes the current (baseline) conditions against which the proposed action and alternatives are compared.

When "No Action" is the Preferred Action

Rocky Flats currently manages its Buffer Zone natural resources, including the Rock Creek Reserve area, under existing management plans. The preferred action is sometimes the *continuance* of the current management practice (i.e., no change to the current action), or "no action" and is designated as such throughout the Plan under the heading ***Preferred Action: No Action***. Often, the current practices are adequate to meet the goals of this Plan. These actions are referred to in the Plan as "preferred", since "proposed" connotes a change. For example, in much of the inventory and monitoring section the no action alternative is the preferred action because of the completeness of those current programs.

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2.0 Background

This section provides background information for Rock Creek Reserve only.

2.1 Setting and Facilities

More information about the existing facilities and future of the facilities for the Site can be found in the 1998 Natural Resources Management Policy and the 2006 Closure Project Baseline. This section discusses Rock Creek Reserve only.

2.1.1 Location

Rock Creek Reserve is located on the northern edge of the Rocky Flats alluvial mesa (Fig 1). Near the line separating Boulder and Jefferson counties, the reserve is approximately two to three miles east of the foothills and on the far, western edge of the Great Plains. Rock Creek Reserve is bounded on the north by State Road 128, on the west by private land, other buffer zone area, and the DOE wind energy test site. State Road 93 is in close proximity to the western boundary. The south and east portions are bordered by other portions of Rocky Flats and Indiana Street.

On a larger scale, Rock Creek Reserve is located in Jefferson County, Colorado (with 39 acres in Boulder County), 16 miles northwest of downtown Denver. Adjacent to the foothills of the Rocky Mountains, the Rock Creek Reserve is part of the 6266-acre Rocky Flats Environmental Technology Site, in close proximity to the large and rapidly growing Denver metropolitan area. Several million people now live within a 50-mile radius of the Site. Growth trends project a 20 percent population increase within the next 20 years. Considerable development is now occurring in the vicinity of Rocky Flats.

Rock Creek/Rocky Flats is west of Interstate 25 and north of Interstate 70, the major north-south and east-west connectors across Colorado. Roads near the Site include State Highway 93 to the west, State Highway 128 to the north, Indiana Street on the east, and State Highway 72 to the south. No roads exist along the immediate southern and western boundary, and no public access roads traverse the Site. The Site is about 45 miles from Denver International Airport and about five miles from the Jefferson County Airport, which serves private and some commercial aircraft.

2.1.2 Rock Creek Reserve Acquisition and Acreage

Rock Creek Reserve was created in 1999 through a designation by Secretary of Energy Bill Richardson , and enactment of a cooperative agreement between DOE and the Service for management of Rock Creek Reserve's ecologically important resources. Approximately 800 acres of the northern Buffer Zone was designated as Rock Creek Reserve. One of the proposed actions is the expansion of the reserve to approximately 1700 acres. This alternative is discussed in Section 4.7.3.1.

Most of the Rock Creek Reserve was part of several livestock ranches (the Lindsay Ranch and other agricultural ownerships) before the property was purchased by DOE in 1974 through 1976.

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2.1.3. Mineral Rights

When the federal government bought the lands comprising Rocky Flats, the purchases did not include additional mineral rights. A mining permit, called the Bluestone Permit, was granted by the Colorado Division of Mining and Geology, and a zoning variance was passed by the Jefferson County Commissioners in 1995 that included part to the Rock Creek Reserve. The portion of the Bluestone permit lying within Rock Creek Reserve is located in the northwest, and includes approximately 250 acres, of which about 20 acres are permitted for mining and about 230 acres of the permitted area are designated as non-mining buffer. Mining operations have not yet begun in this area.

2.1.4. Rock Creek Reserve Neighbors

***Cities and Open Lands*:**

Rock Creek Reserve is located near the cities of Arvada, Louisville, Westminster, Broomfield, Superior, and Boulder, as well as unincorporated portions of Jefferson and Boulder Counties (Fig. 1). Land around the Site primarily consists of ranchland, preserved open space, mining areas, and low-density residential areas and businesses. However, this rural pattern is beginning to change due to spreading development.

The towns of Superior and Broomfield have already experienced extensive development northeast of the Site. There is potential for similar development south of the Site within Vauxmont, an approved 18,000-acre industrial, office, commercial and residential community. State-owned lands southwest of the Site are used for grazing, mining, and potential environmental purposes. Along Highway 93, an area of land approximately 1,200 feet wide adjacent to the Site's western boundary is zoned industrial for eventual development.

Preserved open space is the primary existing and proposed use of the lands north, west and east of the Site. The City of Boulder recently purchased the Van Fleet and Jewel Mountain properties west of Highway 93.

There are two reservoirs just downstream and east of the Site. Standley Lake serves as the drinking water supply for the Cities of Westminster, Northglenn and Thornton. To protect water quality at Standley Lake, a reservoir was constructed downstream on Woman Creek, just off-site, but upstream of Standley Lake. Great Western Reservoir previously served as a drinking water supply for the City of Broomfield. A diversion ditch routes water leaving the Site via Walnut Creek around Great Western Reservoir. Rocky Flats Lake (Smart Reservoir) is located on land adjacent to the southeast corner of the Site. It is generally believed by Site hydrologists, that Antelope Springs flows are partially a result of leakage from Rocky Flats Lake.

***Rocky Flats Environmental Technology Site*:**

1. Industrial Area

Encompassing approximately 400 acres, the Industrial Area is located in the center of Rocky Flats. The Industrial Area has more than 400 structures including manufacturing, chemical processing, laboratory and support facilities. The acreage of the Industrial Area includes the Protected Area.

2. Protected Area

Also located in the center of the Site, the Protected Area consists of 96 acres in the northern portion of the Industrial Area. The Protected Area contains the complex of former plutonium production or support buildings. This area is subject to stringent security requirements and other protection measures.

3. Buffer Zone

Rock Creek Reserve is located in the Rock Creek drainage area of the 5,870-acre Buffer Zone. The Buffer Zone surrounds the industrial area and protects it from potential encroachment by development. The Buffer Zone helps maintain distance to off-site residents in the case of accidental releases of hazardous or radioactive materials. Largely retained as open space, the Buffer Zone contains very few facilities, except for support facilities such as retention ponds, monitoring stations, sanitary landfills and dirt roads used for access and fire breaks. The entire Buffer Zone is fenced and access is regulated at the east and west entry gates.

The 280-acre DOE National Renewable Energy Laboratory (NREL) Wind Site is located in the northwest corner of the Buffer Zone, immediately adjacent to Rock Creek Reserve, on lands transferred from DOE/Rocky Flats Field Office custodianship to DOE/NREL.

2.1.5 Facilities

Rock Creek Reserve is located on a mostly unimproved area of Rocky Flats.

Structures

The Lindsay Ranch house, barn, some fencing, and an old manmade stock watering pond exist on the site. These structures have not been in use and are in various stages of disrepair. In the proposed boundary expansion, a landfill with small support building, constructed in the mid 1990s and never put into use, is located on the south boundary of the Rock Creek Reserve.

Easements

Rock Creek Reserve has outstanding easements for a U.S. West fiber optic line, a Coors Energy gas pipeline and Public Service has gas line and high voltage transmission line easements. The Upper Church and McKay ditches also flow through a portion of Rock Creek Reserve in the proposed boundary expansion.

Transportation System

Rock Creek Reserve is currently accessed primarily through the Site's west gate along State Highway 93, which is in close proximity to the western part of the reserve. Several unpaved access roads traverse the reserve.

Water

Rock Creek Reserve depends entirely on groundwater seeps, springs and surface water runoff to feed the streams. Local surface water is generated as storm runoff, snowmelt and discharge from springs into the stream channel of Rock Creek.

Currently, there is no water rights ownership within Rock Creek Reserve. Water rights are held both upstream (groundwater) and downstream (groundwater and surface water) of Rock Creek Reserve.

Storm Water Drainage System

Storm water on Rock Creek Reserve is not collected or treated. Storm water flows via over-ground flow through natural drainages and streams, washes, etc., to deposit in river drainages.

2.1.6 Projected Changes in Facilities

There are no projected changes in DOE facilities for Rock Creek Reserve over the course of the 5-year period for which this Plan is intended. The change in facilities (including removal) for the remainder of Rocky Flats is described in the 2006 Closure Project Baseline.

2.1.7 Type and Extent of Contamination on Rock Creek Reserve

Characteristic of this part of Colorado, Rock Creek Reserve has low levels of radionuclides due to naturally occurring uranium in the Colorado Rocky Mountains and due to fallout from past atmospheric testing of nuclear weapons (fallout radionuclides). A 1995 report entitled "Geochemical Characterization of Background Surface Soils" (Executive Summary at Appendix 3), confirms the validity of the Rock Creek area as background for naturally occurring radionuclides. This report provides information on the background levels for naturally occurring metals and radionuclides and supporting parameters, as well as for fallout radionuclides.

Two fires in the industrial area, as well as dispersal from leaking drums stored on the 903 pad, have deposited radionuclides in some portions of the Buffer Zone. In general, most of the Buffer Zone is not contaminated with radionuclides or hazardous wastes. This is especially true of Rock Creek Reserve, which is located both upwind and upgradient of the Industrial Area.

2.2 LAND USE AND MANAGEMENT UNITS

2.2.1 Land Use

The acreage in Rock Creek Reserve, along with most of the remaining Buffer Zone surrounding the Industrial Area, has been utilized as a buffer area since it was acquired. The area is relatively undisturbed compared to areas east and northeast of Rocky Flats. Rock Creek Reserve is traversed by maintained dirt or gravel roads. Environmental remediation has disturbed less than 50 acres of the Buffer Zone, none of which has occurred in Rock Creek Reserve. Approximately 700 acres of the Site, with about 250 acres of that total in the Rock Creek Reserve, are under existing mining permits for minerals such as sand, gravel

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and clay (see Section 2.1.3). Land use on Rock Creek Reserve will not change during the time period this Plan covers.

2.2.2 Management Units

2.2.2.1 Rock Creek Reserve and Proposed Expansion

The established 800-acre Rock Creek Reserve is separated as a management unit for the purposes of this Plan because of the increased cooperative management with the Service in this particular area. The Service currently cooperates with Rocky Flats as a reviewer and in a consultation capacity when required. Rock Creek Reserve differs from the rest of the Site, however, in that the Service takes on a more proactive role in determining natural resource management priorities, policies and management recommendations. Expansion of Rock Creek Reserve to 1700 acres is proposed (Fig. 2). The Service recommends this expansion to provide a more comprehensive inclusion of the Rock Creek watershed, which is approximately 1500 acres. Land management units are generally viewed and treated at a watershed level in contemporary management practices. A portion of the headwaters of the Rock Creek watershed occur off the Site to the west on privately owned land and could not be included. This off-site area land is currently used for surface mining and used by the National Wind Energy Test Site.

The expansion would not impact any of the general management options listed in Chapter 4 of this Plan. The expansion does not include any known contaminated areas or eligible cultural sites. The expansion would include more of the xeric tallgrass prairie and Preble's meadow jumping mouse protection areas into one, more definable, management unit (watershed) than is currently described.

2.2.2.2 Remaining Buffer Zone

The remainder of the Buffer Zone will continue to be managed as currently outlined in existing management plans, policies and strategies. Many of these plans are updated annually. Buffer Zone drainages (Walnut Creek and Woman Creek), have been altered. No land use changes in the remaining Buffer Zone are anticipated over the course of this Plan.

2.2.2.3 Industrial Area

The Industrial Area, approximately 400 acres in the middle of the Site that comprise the nuclear weapons production plant, is where most of the closure and clean-up activities will occur. The cleanup and closure of the Industrial Area is driven primarily by the Rocky Flats Cleanup Agreement. Land use in the Industrial Area will not change significantly over the course of this Plan, but may change following closure.

3.0 AFFECTED ENVIRONMENT

Much of the background information presented in this Chapter is taken from the 1998 Natural Resource Management Policy, 1997 Ecological Resource Management Plan for the Rocky Flats Environmental Technology Site, 1994 Rocky Flats Environmental Technology Site Environmental Report, 1994 Rocky Flats Plant Wetlands Mapping and Resource Study, and the 1992 Baseline Biological Characterization of the Terrestrial and Aquatic Habitats at Rocky Flats Plant. More detailed discussions of many topics discussed below are found in the above-mentioned reports, and in the Rocky Flats Cleanup Agreement.

As discussed in the preface, it is often impossible to discuss the affected environment of Rock Creek Reserve without discussing the background and environment of the region as a whole. The affected environment includes not only the remainder of Rocky Flats, but also the area extending from Standley Lake on the east to the foothills of the Rocky Mountains to the west. When appropriate, affected environment for the region and its relationship to Rock Creek Reserve will be discussed.

3.1 TOPOGRAPHY, PHYSIOGRAPHY, GEOLOGY AND SOILS

3.1.1 Topography and Physiography

The environment at Rocky Flats is influenced by the Site's proximity to the Front Range of the Rocky Mountains and its location on a broad, eastward sloping plain of coalescing alluvial fans. As shown on U.S. Geological Survey maps, the Front Range trends north-south at elevations of about 9,800 feet above sea level, with elevations increasing to 13,000 feet along the Continental Divide about 16 miles west of Rocky Flats. The elevation of Rocky Flats varies from approximately 6200 feet at the western boundary to approximately 5650 feet at the southeastern corner. This suggests a gently sloping landscape. However, the Rock Creek Reserve, with a stream channel ranging from 6220 feet in the west to 5710 feet in the eastern portion, has slopes in the Rock Creek drainage that are the steepest of the three drainages located at the Site. Differences in the eroded depth of the three stream channels at the Site has resulted in formation of different soil-forming materials in Rock Creek than in Woman and Walnut Creeks, which have similar soils. Rock Creek's steeper ravines have a southwest-to-northeast orientation, while the other two creeks have wider valleys that trend west to east. This difference in aspect and slope can influence soil moisture, and thereby the habitat for plant community formation. Minor rock outcrops occur largely in the Rock Creek section of the site. Scattered Ponderosa Pines are located on these outcrops.

3.1.2 Geology

Rock Creek Reserve is located just east of the Front Range in the Denver Basin – an asymmetrical, north-south trending syncline with a steeply dipping western limb and a shallowly dipping eastern limb. The Denver Basin contains more than 9,840 feet of Pennsylvanian to Cretaceous sedimentary deposits. Geologic units at the Site, including Rock Creek Reserve, consist of unconsolidated surficial material and bedrock. Cretaceous deposits of the Arapahoe Formation, Laramie Formation, and Fox Hills Sandstone are unconformably overlain by Quaternary alluvial gravels, colluvial deposits, and artificial fill. Fox Hills and Laramie Formation sandstones form a prominent hogback that strikes north-northwest from Leyden

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Gulch north to the town of Marshall. Immediately west of Rocky Flats where the hogback is not visible, these sandstones are exposed in clay and gravel pits excavated through the Quaternary gravels. Soils are from several series, derived from surficial geologic formations.

3.1.2.1 Hydrogeology

The uppermost aquifer at the Site is comprised of the Rocky Flats Alluvium, valley fill alluvium, colluvium, bedrock sandstones, and weathered claystones of the Arapahoe and Laramie Formations. In general, groundwater in the uppermost aquifer occurs under unconfined conditions. Sitewide groundwater flow moves from the higher elevations in the west toward the lower drainages in the east. Sources of groundwater recharge to the uppermost aquifer include infiltration of precipitation, snowmelt, and surface water in ditches, streams and ponds. Discharge occurs through evapotranspiration from plants and as seeps when the table intersects the ground surface or surface water features such as streams, ditches, ponds or stream-eroded valleys. Groundwater levels at the Site rise annually in response to spring recharge and decline the remainder of the year as less precipitation occurs.

3.1.3 Soils

Soils at Rocky Flats are chiefly moderate to deep, well-drained clay, cobbly clay, and sandy loams, with moderate to low permeability. Soil types for the entire Site, including Rock Creek Reserve are shown in Fig. 3. Bottomland (floodplain and low terraces) soils are largely stratified loamy alluvium, made up of mesic Ustic Torrifluvents from the Haverson series. The Haverson series is well drained and commonly found on slopes of 0 to 9 percent. Soils of the terraces and upper hillsides, where gravel and cobble are common, are represented by combinations of the Denver and Kutch series. Both of these soils are well drained, deep (Denver) to moderately deep (Kutch), and are found on moderately steep slopes, 0 to 15 percent and 5 to 25 percent for Denver and Kutch, respectively. These mesic Torrertic Argiustolls are sandy loam formed from Rocky Flats Alluvium. Lower hillsides and areas toward the eastern boundary of the Site have soils from the Standley, Nunn, and Valmont series, which are largely mesic Ardic Argiustolls. These soils that vary in slope are deep and well drained. The slope for Standley, Nunn, and Valmont series are 0 to 60, 0 to 25 and 0 to 3 percent, respectively.

More information on the geology, hydrogeology, and soils of Rock Creek Reserve can be found in the 1991 Baseline Study for Rocky Flats and the 1995 Seepage Characterization Work Plan for the Rocky Flats Environmental Technology Site (EG&G, Rocky Flats Inc).

3.2 WATER RESOURCES

3.2.1 Surface Water/ Wetlands

Surface water flows from the Site via five streams which pass through or are adjacent to the Site. Three of these streams, North Walnut Creek, South Walnut Creek, and Woman Creek, contain detention ponds to protect neighboring cities' water supplies. Those creeks are part of the Big Dry Creek watershed. Rock Creek flows in a more northerly direction into Coal Creek off-site, and ultimately to the South Platte. The Industrial Area is located between two stream-cut valleys: North Walnut Creek and Woman Creek. This section focuses on the Rock Creek drainage.

Surface water originates from two main sources on Rock Creek Reserve. The most important sources for the formation and maintenance of the aquatic ecosystem are groundwater discharges that form springs and seeps in numerous places along Rock Creek. These seeps and springs are perennial discharges that augment stream flow and provide stable habitats for aquatic organisms and plant communities that require additional water resources. Surface water runoff also contributes water to the ecosystem; but, in the semiarid climate of the Front Range, precipitation is sparse, and the hot dry winds can evaporate water at the soil surface. The presence of perennial marshland and riparian communities greatly increases the plant and animal diversity of Rock Creek Reserve.

Section 404 of the Clean Water Act delegates jurisdictional authority over wetlands to the U.S. Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA). The EPA is the lead agency, however, at CERCLA sites such as Rocky Flats. The Corps of Engineers and the EPA jointly define wetlands as "*...areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas*".

Wetlands on Rock Creek Reserve and the rest of the Site are not rare or unique, but the large amount of seep/spring related wetlands in the Buffer Zone are rare along the Front Range of Colorado. These wetlands serve valuable and important functions, as do wetlands everywhere. They perform the role of a water purification system by retaining nutrients, sediments, and metals. They also provide forage, cover, and nesting habitat, which is very important in maintaining wildlife values. Figure 4 shows the location of Site (including Rock Creek Reserve) wetlands.

The 6,266-acre Site has approximately 1,100 wetlands covering approximately 191 acres that were identified and mapped in the 1994 Rocky Flats Plant Wetlands Mapping and Resource Study, U.S. Army Corps of Engineers. These wetlands include riparian (streamside) habitat, ponds, seeps, and hillside wetlands. Riparian areas are well known for the diversity of plant and animal communities they support. The Site Great Plains Riparian Woodland complex encompasses three vegetation community types, and provides important habitat for numerous songbird species, deer, and raptors, in addition to supporting the greatest number of the federally-listed, threatened Preble's meadow jumping mouse at the Site. The sustained quantity and timing of streamflows is required to support the riparian communities.

The 1994 Wetlands Mapping and Resource Study identified 25.4 acres of stream wetlands, and 32.2 acres of slope (seep) wetlands for a total of 57.6 acres of wetlands for Rock Creek and its subdrainages. Rock Creek was identified in that study as a high quality wetland based on the biodiversity of the wetlands. The largest, best watered, and most diverse of the slope wetlands are located in the Rock Creek and Woman Creek watersheds according to the study. The only manmade drainage feature on Rock Creek within the Reserve is the Lindsay Pond, used as a stock-watering pond prior to 1974, by the Lindsay Ranch. Other wetlands on Rock Creek Reserve are primarily associated with seeps along the northern slopes.

3.2.2 Groundwater

Groundwater at Rocky Flats, including Rock Creek Reserve, is relatively small in volume and slow to move, hence, slow to move off the Site. Rock Creek Reserve is unaffected by groundwater contamination,

which moves in a southeasterly direction from the Industrial Area. The closest groundwater contamination plume to Rock Creek Reserve is the Property Utilization & Disposal plume, from a previous sanitary landfill, located south of Rock Creek Reserve. This plume, contaminated with volatile organic compounds (mainly solvents), migrates south and east, away from Rock Creek Reserve.

There are a number of small near-surface groundwater reservoirs, which feed important ecological features, such as upland wetlands. Upland wetlands include primarily wet meadow/marsh ecotone and the tall and short marshes. Groundwater seeps support the tall upland shrubland in Rock Creek Reserve.

3.2.3 Water Quality

The groundwater and surface water quality in Rock Creek Reserve is considered good. Sampling outlined in Section 4.2 may determine if there are any impacts to Rock Creek affecting groundwater and/or surface water quality.

3.3 CLIMATE AND AIR QUALITY

3.3.1 Climate

Typical of the Rocky Mountain Front Range, the climate at Rocky Flats is continental and semiarid. A climate is termed "continental" when the most profound influences on temperatures are determined by the air masses that form over the interior of the continents, in this case, North America. Frigid air masses that form over the Northwest Territories and central Canada, Alaska, and Siberia in winter occasionally affect eastern Colorado. During the summer months, very warm air masses form over the deserts and high plateaus of the southwestern United States. These air masses account for the hottest days along the Front Range. Continentality accounts for the large seasonal temperature variations and, in part, for the occasionally large temperature changes over short periods of time experienced at Rocky Flats.

In addition to the continental climate, the Site's sloping geographical location and its proximity to a major mountain range permit dramatic changes in temperature and rapidly changing weather conditions. The location of Rocky Flats can also work to moderate the otherwise continental climate. Air masses approaching from the west and descending the eastern slope of the Continental Divide are warmed and dried out upon reaching the foothills and adjacent plains. These situations result from a strong pressure differential that develops across the Continental Divide, between low pressure over the plains and high pressure building over the Great Basin.

Large centers of high pressure build over the Great Basin and central Rockies and frequently dominate weather along the Front Range with dry and sunny periods, especially in autumn and mid-winter. On average, the number of days with fair and dry conditions at Rocky Flats generally exceeds the number of days with inclement weather. It is not uncommon to see a month of dry and mostly clear days when large areas of high pressure build over the intermountain region.

3.3.1.1 Precipitation and humidity

The lower elevations of the Front Range, including Rocky Flats, are considered semiarid because of the relatively small amount of precipitation received. A semiarid climate has a precipitation range of 10 to 20 inches per year and/or an amount exceeded by potential evaporation and transpiration. Rocky Flats receives approximately 15 inches of precipitation each year. Of this amount, 70 percent usually falls in April through September. Thunderstorms occur about 40 days each year, mostly in summer. The average seasonal snowfall is about 65 inches. Great distances from a major water source and shadowing and downsloping from the Rocky Mountains are the primary reasons for the semiarid climate of the Front Range. Severe drought conditions will develop occasionally along the Front Range during unusually prolonged dry periods. These conditions often lead to wildfires in the prairies, which sometimes affect the Buffer Zone, including Rock Creek Reserve and other surrounding areas

The average relative humidity in mid-afternoon is about 40 percent. Humidity is higher at night, and the average at dawn is about 60 percent.

3.3.1.2 Temperature

Temperatures in the region are moderate with hot and cold extremes usually of short duration. The thin atmosphere at the relatively high elevation of Rocky Flats allows large diurnal temperature variations, with strong daytime warming and nighttime cooling. The historic temperature extremes have ranged from 29 degrees below zero (all temperatures are expressed in degrees Farenheit) in February 1989 to 102 degrees in July 1971. January, the coldest month, has an average daily minimum temperature of 18 degrees. Average daily temperatures in winter range from 20 to 45 degrees. July, the hottest month, has an average daily maximum temperature of 85 degrees. Average daily temperatures in summer range from 55 to 85 degrees, though short periods may be much hotter. The temperature range affects the plant growing season, the number of consecutive days when minimum daily temperatures exceed the freezing point from spring until fall. At Rock Creek Reserve the growing season can be expected to continue from mid-May to the end of September during 50 percent of the years.

3.3.1.3 Winds

The combination of clear skies, light winds and sloping terrain causes locally produced winds to form and flow along sloping terrain. Daytime heating causes upslope breezes to form either southeasterly winds which flow up the Rocky Flats slope, or northeasterly winds which flow up the South Platte River Valley. Winds reverse at night with a shallow northwest wind draining down the Rocky Flats slope.

During winter and early spring, downslope winds, known as chinooks, often produce strong westerly winds and large and rapid temperature increases. On occasion, chinooks can be damaging and dangerous but generally are just a temporary nuisance. Wind gusts will typically exceed 70 miles per hour a few times in a normal year. Peak gusts have been measured over 100 miles per hour.

3.3.2 Air Quality

National Ambient Air Quality Standards have been established to protect public health and the environment for six "criteria" pollutants: carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone,

particulate matter less than 10 microns in size (PM-10), and lead. Total suspended particulate (TSP) matter is also designated as a criteria pollutant by the State of Colorado. This Plan is primarily concerned with PM-10 and TSP emissions since they are the pollutants likely to be generated from management practices on Rock Creek Reserve.

Rock Creek Reserve is located within the boundary of the Denver Metropolitan Area for air quality planning purposes. This region is classified as "non attainment" for carbon monoxide, ozone, and PM-10, which means that the ambient air quality in the area does not meet National Ambient Air Quality Standards. Regulatory requirements may control the timing of certain natural resources management activities, such as prescribed burning, which requires a permit from the State. This helps to avoid contributing to the non-attainment of the Metro area and violating the Site's air quality permit.

Concentrations of TSP and PM-10 are determined by five air monitoring stations at the site boundary and are operated by the Colorado Department of Public Health and Environment. These stations monitor PM-10 and TSP as well as other criteria pollutants. Two of these stations are located just off-site at the northeast and southeast site boundary along Indiana Street. These sampling locations are downwind of Rock Creek Reserve and are thus representative of Site impacts. All criteria air pollutants are emitted from the Site in quantities less than the State of Colorado reporting thresholds under baseline conditions.

3.4 FLORA

The following sections present species information that has been observed the past nine years during monitoring and other routine activities within the Rock Creek drainage basin.

The distribution and composition of vegetation in the region has been affected by a series of natural and human-caused disturbances, including intense grazing until the land was acquired by DOE in 1974, natural fire suppression, and adjacent ground disturbing activities. Large areas of mesic grassland have been invaded by diffuse knapweed and dalmatian toadflax over the past ten years (1999 Annual Vegetation Report for the Rocky Flats Environmental Technology Site). Other native grassland areas and riparian areas have been invaded by several species of exotic plants.

3.4.1 Vegetation Types

The uniqueness and diversity of the plant communities of Rock Creek Reserve are indicative of the entire Site, and have been documented by a number of studies. The topography and close proximity of the Site to the mountains has resulted in an interesting mixture of prairie and foothills plant communities at the Site. Federal threatened or endangered plant species are not known to occur on Rock Creek Reserve, or anywhere else at the Site. Plant communities range from xeric (dry) grassland communities to more hydric (wet) communities such as wet meadows and marshes.

Rocky Flats prairie habitat includes:

- xeric tallgrass prairie (most of which occurs on Rock Creek Reserve);
- xeric needle-and-thread grass prairie;
- mesic mixed grassland;

- reclaimed mixed grassland;
- xeric mixed grassland;
- shortgrass prairie;
- grassland composed of annual plants and forbs;
- wet meadow-marsh ecotone;
- short marsh and tall marsh;
- both short and tall upland shrublands (most of which occur on Rock Creek Reserve);
- Savannah shrublands;
- several types of riparian (stream bank) shrublands.
- riparian woodland, ponderosa pine woodland; and
- mudflats.

Figure 5 shows the various vegetation types and distribution for the entire Rocky Flats site. Rock Creek Reserve (current) and Rock Creek Reserve expansion (proposed) are demarcated on the map.

3.4.2 Floral Inventory

In developing the Rock Creek Reserve plant species list, only those plants that were identified to species (415 species), and confirmed against the Site's reference herbarium, are included in the species list in the 1999 Vegetation Report for the Rocky Flats Environmental Technology Site. This list is based on the 800 acre boundary for the Reserve, and will be updated to include the expansion. By growth form, there are 86 grass species, 283 forbs, 2 vines, 5 cacti, 22 shrubs, and 17 tree species. Of the species recorded in Rock Creek Reserve, 81% (337) are native to the area. Species found in Rock Creek Reserve are listed in Appendix 4.

The Colorado Natural Heritage Program (CNHP) assessed the Buffer Zone for its ecological value (The Natural Heritage Resources of the Rocky Flats Environmental Technology Site and Their Conservation, Phase II: The Buffer Zone [CHNP Research Report No. 53, 1996]). The CNHP is a research entity of the Nature Conservancy housed at Colorado State University's College of Natural Resources. Natural Heritage programs across the country are part of an international network of conservation data centers. The CNHP study concluded the Site contains highly significant natural elements important for the protection of Colorado's natural diversity and encourages DOE to take actions to protect and appropriately manage the Site.

3.4.3 Plant Communities

The CNHP identified the plant communities of greatest ecological significance on Rock Creek Reserve, and the entire Site, as the xeric tallgrass prairie, the Great Plains riparian community, the tall upland shrubland community, and wetlands. Distributions of these and other plant communities are shown in Fig 5.

Xeric tallgrass prairie. The CNHP classifies the xeric tallgrass prairie plant community at the Site as very rare. Most of the remaining xeric tallgrass prairie in Colorado is found in Boulder and Jefferson counties in small, dispersed parcels. The CNHP report on Site natural heritage resources identifies the Site macrosite as the largest known remnant of xeric tallgrass prairie in Colorado, and probably the largest remaining parcel in all of North America. Macrosites provide boundaries for large, landscape level

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conservation planning, which includes areas adjacent to Rock Creek Reserve. A community comprised of big bluestem, little bluestem, mountain muhly, Fendler sandwort, and Porter's aster, less than 20 occurrences of the xeric tallgrass prairie are known worldwide. Approximately 1,800 acres of this xeric tallgrass prairie unit is within Rocky Flats' boundaries. About 56% of the site's xeric tallgrass prairie falls within the Rock Creek Reserve proposed expansion.

Great Plains riparian community. Identified by CNHP as Great Plains Riparian Woodland, this community is classified as rare and declining. It is characterized by a diverse mixture of plains cottonwood, peach-leaved willow, and coyote willow. Examples of this community are found in the Rock Creek, Walnut Creek, Woman Creek, and Smart Ditch drainages. The only significant occurrence of this community at Rocky Flats is in the Rock Creek Reserve.

Riparian shrubland. Another unusual shrub community is the Riparian Shrubland, one of two types often found in association with the Great Plains Riparian Woodland community at the Site. These communities are dominated by leadplant and provide important habitat for many of the bird and mammal species found here, including the Preble's meadow jumping mouse. These habitats support a prey base for many Site birds of prey, such as prairie falcons, great horned owls, screech owls, and red-tailed hawks.

Tall upland shrubland. The tall upland shrubland community is found on north-facing slopes primarily in the Rock Creek drainage. This community commonly occurs just above wetlands and seeps. The dominant tall shrubs are Hawthorne and choke cherry, which are associated with other shrubs and plants common in the foothills to the west of the Site. Rock Creek Reserve harbors 94% of the tall upland shrubland plant community at Rocky Flats. Although the tall upland shrubland represents less than 1 % of the total area of the Site, it contains 55 % of the Site flora species. In 1996, 333 species of vascular plants were recorded there. The herbaceous understory contains a number of species that are restricted to the cool, shaded microhabitat provided by the canopy. Many of these native species are predominant in the understory of the largest patches of tall upland shrubland on the Site. Their presence may indicate that these patches were affected less by past cattle grazing, or that they have returned to a more native state since the cessation of grazing. These native species include Fendler waterleaf, spreading sweetroot, anise root, carrionflower greenbriar, fragile fern, Colorado violet, Rydberg's violet, and northern bedstraw. Other studies reveal that the tall upland shrubland contains one of the highest species richness of birds on the Site and is very important as bird and other wildlife habitat, providing food, thermal and hiding cover, nesting locations, and deer fawning areas.

The tall upland shrubland was identified by the CNHP as a potentially unique shrubland community, possibly not occurring anywhere else. This community is used by many animals and birds throughout the year for cover and is used during the spring by mule deer as fawning areas. Several rare bird species, such as loggerhead shrike and black-crowned night heron, also inhabit this community during the breeding season. It is within this community that the globally rare (CNHP designation) hops blue butterfly has been observed.

Other. Although some of the plant communities, such as the mesic mixed grasslands of the eastern portion of the Site (and Rock Creek Reserve) are not rare, they add important buffer areas and habitat elements to the Site ecosystem. The grasses in this community are turf-like, with different species (western wheatgrass, Kentucky bluegrass, blue grama, green needlegrass and Canada bluegrass)

intermingling in a nearly continuous ground cover. The mesic grasslands on the south-facing hillsides provide important forage for mule deer in the winter. Large tracts of grasslands provide essential habitat to prairie species. Mesic mixed grasslands cover approximately 55 percent of the entire Site, mostly in the Walnut Creek and Woman Creek watersheds. Mule deer are very dependent on these grasslands at certain times of the year, many raptor species depend on open grasslands for foraging areas, several species of prairie birds rely on these grasslands as nesting and foraging habitat, and several species of reptiles require this habitat as well.

3.4.4 Noxious Weeds

Noxious weed invasions are considered the foremost threat to the native plant communities of Rock Creek Reserve by the CNHP, Service and DOE. These weeds inhabit the understory of the tall upland shrubland, the riparian woodland, and have invaded the prairie grasslands. Control of noxious weeds is arguably the most important component of any natural resources management program for the Rock Creek Reserve. The native fauna, from the large herbivores to the invertebrates that depend on these plant communities, are directly affected by impacts to these areas. Predators that depend on these herbivores are indirectly affected by these adverse impacts.

Ten years ago, there was little diffuse knapweed in the Buffer Zone; now, this Colorado-listed noxious weed inhabits more than 60 percent of the Buffer Zone. Noxious weeds are defined by the State as exotic, aggressive plants that invade native habitat and cause adverse economic or environmental impacts. Typically, these exotic plants are resistant to the native plant predators and tolerant of or resistant to grazing. These weeds can displace native plant species by taking nutrients, water, light, and space from native vegetation. Invasion of these aggressive, damaging plants poses a serious threat to Rock Creek Reserve and remaining Buffer Zone plants and animals that depend on native plants.

Several species of noxious weeds are found in Rock Creek Reserve, as representative of the rest of the Buffer Zone. The presence of these weeds is a regional and sometimes national problem. Several species of these weeds are found across the entire region and are spreading rapidly, especially in disturbed areas. These weeds are highly aggressive and are contributing to the degradation and loss of native species richness and composition in the plant communities. Weed species on Rock Creek Reserve and the rest of the site and region include diffuse knapweed, musk thistle, dalmation toadlfax, Canada thistle, and St. Johnswort. Diffuse knapweed, an aggressive tumbleweed, is currently given highest control priority. Canada thistle is common throughout most of the wetlands, musk thistle is sparse but widespread across mesic grasslands, and dalmation toadflax is common in xeric grasslands and other areas.

The three most abundant noxious weeds on the Site as identified in the 1999 Vegetation Report were dalmatian toadflax, infesting 2,507 acres (Fig. 6), diffuse knapweed infesting 2,295 acres (Fig 7) and musk thistle, infesting 1,353 acres (Fig 8).

3.4.5 Sensitive, Threatened and Endangered Species

In addition to those sensitive plant communities already discussed in this section, a list of plant species and communities and wildlife species found on Rock Creek Reserve defined as "sensitive" by the CNHP, or listed as threatened or endangered by the State or federal government is found in Appendix 7. CNHP rankings and a definition of those rankings are included. This list shows sensitive species found on the

rest of the Site also, since most of these species are found regionally or are highly mobile (faunal species) and migrate across the Site as well as off the Site.

No federally-listed plant species have been documented on Rock Creek Reserve. Several listed species have the *potential* to occur on Rock Creek Reserve (i.e., suitable habitat occurs and the species are found elsewhere in the region), including Ute Ladies' Tresses Orchid and Colorado Butterfly Weed.

3.5 FAUNA

Rock Creek Reserve's significant wildlife diversity is directly related to the habitat diversity in the region. The wildlife species richness list for the Rock Creek drainage (Appendix 5), was derived from compiling a species list from all ecological surveys, including fortuitous sightings, from 1991 through 1999. From all years and all studies, 171 wildlife species have been recorded in Rock Creek. Several of these records may have been only single observations. Broken down by general taxa, there are 28 mammal species, 134 bird species, 6 herptile (reptile and amphibian) species and 3 fish species. The information for this section was collected from the 1999 Rocky Flats Environmental Technology Site Annual Wildlife Report. A list of fauna species found for the entire Site can be found in the 1992 Baseline Characterization of Terrestrial and Aquatic Habitats at Rocky Flats Plant.

No federally-listed, threatened or endangered fish, reptile, amphibian or invertebrate species are known to occur on Rock Creek Reserve, or the rest of the Site.

3.5.1 Mammals

The most abundant and conspicuous large mammals on Rock Creek Reserve include mule deer, several white tail deer, and Rocky Mountain elk. The coyote is the most common predator, with other carnivores including black bear, bobcat, gray fox, long-tailed weasel, mink, mountain lion and raccoon. Many small mammals are recorded (mice, shrews, voles and woodrats), most notably the federally-listed, threatened Preble's meadow jumping mouse. The black-tailed prairie dog does not occur currently on Rock Creek Reserve, but is found in small numbers at three former colony sites elsewhere at Rocky Flats. These populations are rebounding from a plague die-off that affected the populations several years ago. The bushy-tailed woodrat was recorded on the Site, but not on Rock Creek Reserve, for the first time in 1999.

3.5.2 Birds

The species richness list at Appendix 5 documents 134 species of birds from Rock Creek Reserve. The rare and varied habitat associations of Rock Creek Reserve support ground nesting grassland species, such as vesper sparrow, grasshopper sparrow, horned lark and western meadowlark.

Rock Creek Reserve's most common raptors are the red-tailed hawk and great horned owl. Less abundant raptors are attracted by the mosaic of trees for nesting and open habitat for hunting. These include American kestrel, Swainson's and ferruginous hawks (considered declining species by the Colorado Division of Wildlife), and the long-eared owl.

The orange-crowned warbler, great egret, and black vulture were recorded on the Site, but not in Rock Creek, for the first time in 1999.

3.5.3 Fish

Three species of fish are known to occur in Rock Creek and Lindsay Pond. These are the fathead minnow, largemouth bass, and stoneroller. The minnow and stoneroller are native to the area.

3.5.4 Reptiles and Amphibians

As is typical for the region, reptiles and amphibians are not well represented at the Site. Reptiles are found typically in the grasslands. The most abundant amphibian at the Site is the boreal chorus frog. The northern leopard frog is less common and requires perennial water, and can be found in the seeps of the tall upland shrubland, Great Plains riparian, and the ponds.

Six species of amphibians and reptiles are documented in the 1999 Wildlife Report to occur on Rock Creek Reserve. These are:

- Boreal chorus frog
- Northern leopard frog
- Tiger salamander
- Bull snake
- Prairie rattlesnake
- Western painted turtle

3.5.5 Invertebrates

Sampling of arthropods was conducted as part of the 1992 Baseline survey for the Site. Sampling was broken down into plant community sampling units. The following are the results taken from the important plant communities on Rock Creek Reserve. Percentages are expressed as percentage of the total sampled. It is expected, however, that most invertebrates found in any area of Rocky Flats would likely be found to some extent in all the others. The following are quantified as percentages of the total for all arthropods observed or collected.

Xeric tallgrass prairie – Terrestrial arthropod taxa in the xeric mixed grasslands community showed the lowest diversity compared to all communities. This results from the drier environment found in the xeric zone. The numbers of orders and families in the xeric zone were lower than site-wide community averages for arthropods. The most abundant insect families collected were Cicadellidae (leafhoppers, 19 %) and Formicidae (ants, 15 %). These two insect families include species specifically adapted to the drier habitats found in the xeric zone. Leafhoppers are generally plant-specific feeders and, therefore, have specialized relationships with plants found in this community. Arachnida (spiders, 12 %) were also well represented.

Tall upland shrubland – The diversity of arthropod taxa, both orders and families, was average for the tall upland shrubland when compared to all communities. Once again, the leafhopper family was the most

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abundant (15 %), followed by spiders (10 %). This community has several plant species that are dependent on the bees, wasps and butterflies for pollination. The fruiting shrubs, such as chokecherry, wild plum and hawthorn, must be pollinated to produce fruit and viable seeds. The reproduction of these species depends on both the pollinators and the species that eat their fruits and scatter seeds.

Rare and imperiled invertebrates as defined by the CNHP have been observed on Rock Creek Reserve. Two species of Lepidoptera have been observed, the Arogos skipper and the Hops blue butterfly. The Hops blue larvae feed on the hops found growing in the tall upland shrubland.

Riparian woodland and shrubland – The riparian woodland had the greatest diversity of arthropod taxa and the largest number of families. This community complex also produced the largest total number of individuals. Once again the most abundant family was the leafhoppers (43 %). Hollows in the rotted heartwood of several old cottonwood trees provided hive sites for honeybee colonies.

The bottomland shrubland is dominated by leadplant with some shrubby willows intermixed. Taxon richness was average for terrestrial arthropods, as was the number of orders. The number of individuals was relatively low indicating a low abundance of arthropods. Leafhoppers led the pack again, accounting for 37 % of all arthropods collected.

Benthic macroinvertebrates were also sampled across the entire Site. Benthic macroinvertebrates, mostly larval stages of insects, are important members of the aquatic community because they have many functional roles. These species have relatively long life cycles (6 months to two years) and are a major food source for fish. Adult stages of aquatic insects are terrestrial. There were 155 taxa of benthic macroinvertebrates collected at the Site, including Rock Creek. The most abundant orders were Diptera (flies, 76 taxa), Trichoptera (caddis flies, 16 taxa), Coleoptera (beetles, 16 taxa) and Ephemeroptera (mayflies, 11 taxa). Several of these taxa are found only in clean water. The presence of so many taxa of caddis flies is a good water quality indicator, and can be used in the future as a baseline for water quality sampling on Rock Creek Reserve.

3.5.6 Sensitive, Threatened and Endangered Species

A list of wildlife species and plant communities found on Rock Creek Reserve defined as "sensitive" by the CNHP, or listed as threatened or endangered by the State or federal government is found in Appendix 7. CNHP rankings and a definition of those rankings are included. This list shows sensitive species found on the rest of the Site also, since most of these species are highly mobile and migrate across the Site as well as off the Site. These include the northern leopard frog, ferruginous hawk, black-crowned night heron, grasshopper sparrow and the loggerhead shrike. Only those listed "threatened or endangered" by the federal government are described in this section.

No federally-listed, threatened or endangered fish, reptile, amphibian, or invertebrate species are known to occur on Rock Creek Reserve, or the rest of the Site.

Preble's Meadow Jumping Mouse

Rock Creek Reserve, along with all other main drainages that cross Rocky Flats, contains populations of, and habitat for, a resident federal threatened species, *Zapus hudsonius preblei*, the Preble's meadow

jumping mouse (Fig. 9). The mouse was listed as a threatened species on May 13, 1998 (63 FR 26517). No other federally listed mammals have been identified on Rock Creek Reserve. Preble's meadow jumping mouse, a member of the jumping mouse family Zapodidae, is a federally-listed, threatened subspecies. This mouse is a small mouse of about 3.5 inches body length with a disproportionately long tail of 5.8 inches. The pelage is olive yellow on the back and white underneath with no dark dividing band. Approximately 70 individuals have been documented for the Rock Creek drainage. Preble's occurs in habitat adjacent to streams and waterways along the Front Range of Colorado and southeastern Wyoming. The species' habitat is the riparian zone, primarily defined by the 100-year floodplain, and adjacent uplands extending out about 100 meters (Environmental Assessment for a Proposed 4(D) Rule on the Prebles's Meadow Jumping Mouse, USFWS).

The Site has prepared and implemented a Protection Policy for the Preble's meadow jumping mouse. The Preble's Protection Policy (Appendix 6) and other protection policies, plans, and procedures will be evaluated to determine whether implementation may need to be improved, and whether modifications are needed in light of new information, developments, or related conservation efforts, including off-site studies and identified data gaps.

Bald Eagle

The bald eagle was federally-listed endangered in most states but was reclassified as threatened because of significant increases in the number of breeding pairs (USFWS, 1995). The USFWS has considered de-listing the Bald Eagle, and data are currently being collected to analyze this decision. No breeding pairs of eagles nest on Rock Creek Reserve, although they have been observed traversing the Reserve.

Bald eagles generally nest near water in forest stands that contain a mixture of tall, old, and dead or dying trees. An active nest is located to the east of the Site near Standley Lake. In winter bald eagles may expand their home range in search of food or migrate to areas where food is available. Bald eagles are known to congregate at reservoirs, lakes, or rivers. Availability of roosting habitat is an important component of the eagle winter ecology. Roosting habitat consists of trees that extend above the forest canopy and provide a protected microclimate for resting eagles. Eagles feed primarily on fish and waterbirds but also on small mammals and mammal carcasses. Some eagle populations are migratory, whereas others remain near their breeding areas year-round.

American Peregrine Falcon

In 1995 Peregrine falcons were proposed for removal from the list of endangered and threatened wildlife. Peregrine falcons were subsequently de-listed in 1998. Peregrine falcons have been observed traversing and resting on Rock Creek Reserve.

3.6 CULTURAL RESOURCES

A cultural resource is any locality or object exhibiting evidence of prior human behavior. Cultural resources generally comprise specific locations at which one or more activities occurred in the past, and which were visibly modified in the process (e.g., through the building of structures or other non-portable features; modifications of the ground surface such as wagon ruts; or abandonment of portable items such

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as tools or refuse, i.e., artifacts). Cultural resources consist of prehistoric and historic buildings, sites, structures, districts, objects or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources may be any age, although generally they must be more than 50 years old to be considered for protection under existing cultural resource laws.

3.6.1 Archeological Resources

Surveys to locate cultural resources have been conducted over the entire acreage of the Site Buffer Zone. Two archeological surveys were conducted, one in 1989 (An Archaeological and Historical Survey of Selected Parcels Within the Department of Energy, Rocky Flats Plant, Northern Jefferson County, Colorado, Burney & Assoc. Inc, 1989) and in 1991 (Cultural Resources Class III Survey of the Department of Energy Rocky Flats Plant, Northern Jefferson and Boulder Counties, Colorado, Dames and Moore, 1991). While the surveys identified points of local interest in the Buffer Zone, such as Lindsay Ranch in the Rock Creek Reserve, no sites or artifacts eligible for listing on the National Register of Historic Places were found in the Buffer Zone. A total of 35 archeological sites and 29 isolated finds (usually one or two artifacts) have been recorded in the Buffer Zone. Identified archeological sites include stone rings and alignments, the remains of ranch buildings, trash dumps, stock ponds, corrals, irrigation ditches, an orchard, and a railroad grade. Isolated finds include chipped and ground stone artifacts, barbed wire, stone cairns, and pieces of farm equipment. Resources found during these surveys were primarily historic Euroamerican resources; Native American resources are rare at the Site. None of the sites or isolated finds in the Buffer Zone have been determined eligible for listing in the National Register of Historic Places. The Colorado State Historic Preservation Office (SHPO) concurred with the findings, and no special management or protective actions are required for these resources.

3.6.2 Historic Resources

A survey of the industrial area was prepared in 1995 and reported in the Cultural Resources Survey Report for the Rocky Flats Environmental Technology Site Industrial Area. The survey report concludes several of the facilities in the industrial area are of historic importance because of the role they played in the Site's contribution to the Cold War. Sixty-four facilities in the industrial area have been included in a historic district on the National Register of Historic Places. A Programmatic Agreement regarding the cleanup and closure activities at the Site between the Advisory Council on Historic Preservation, the SHPO, and DOE governs how Site historic information is being recorded.

3.6.2.1 Lindsay Ranch

The Lindsay Ranch, comprised of an old ranch house, barn, stock pond and fences, was evaluated for eligibility to the Register of National Historic Places and was determined to be ineligible, with SHPO concurrence. Description of the Ranch and results of the evaluation and reasons for ineligibility are documented in the Cultural Resources Class III Survey.

3.7 SOCIOECONOMICS

Prior to the purchase of the land contained within the current Rock Creek Reserve and the proposed Reserve boundary expansion, the primary use of the land was livestock ranching. During the 1800s and the first half of the 1900s the social and economic life of this immediate area depended on the use of this land for grazing. When the U.S. government purchased this land in the 1950s and 1970s it effectively removed the lands within the boundaries of Rocky Flats from agricultural use. In addition, the security and safety aspects of Rocky Flats required termination of incidental use of the land, such as hunting, hiking and horseback riding.

3.7.1 Public Use

Tours of and visits to the Site, including Rock Creek Reserve, are currently arranged and coordinated through the Tours and Visits office in the DOE Office of Communications with significant support from the counterpart contractor organization. Site tours are given on an as needed/as requested basis and often include tours of the Buffer Zone area with its unique natural resources. Types of tours include formal visits by elected officials, DOE officials, and regulatory representatives as well as building or project specific tours for local stakeholders. It is the policy of the Site, in accordance with the DOE Openness Initiative, to accommodate as many requests for Site tours and visits as possible. As DOE continues with cleanup of Rocky Flats, operation of the Tours and Visits function should remain fairly constant. Tours and visits include the Rock Creek Reserve.

3.7.2 Rocky Flats Mission Considerations

The current mission of the Rocky Flats Technology Site is cleanup and closure. At closure, all nuclear materials and wastes will have been removed from the Site, all buildings will have been demolished, and any remaining contamination will have been remediated per the requirements of RFCA. Current plans call for this mission to be completed late in 2006.

Completion of the closure mission is not expected to directly affect Rock Creek Reserve. However, the continued presence of nuclear material throughout much of the closure project will necessitate continued limitations on unrestricted public access to the Site, including Rock Creek Reserve.

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4.0 INTEGRATED NATURAL RESOURCES MANAGEMENT

PROPOSED ACTIONS AND ALTERNATIVES

The first step in biodiversity protection is to keep an inventory. An inventory, as used here, is an itemized list or catalogue of components of an ecosystem. This process has been ongoing for many years on Rock Creek Reserve.

Monitoring tracks trends (or absolute numbers if needed) of individual species or higher associations of species, such as vegetation cover types or plant communities. Monitoring is generally performed on a regular basis and often targets species with high economic or human-use values, sensitive species, and/or indicator species of overall ecosystem health.

DOE inventories and monitors soil, water, and priority plant and animal species and habitats. Both inventory and monitoring data are used to evaluate general and site-specific ecosystem integrity.

This chapter discusses the inventory, monitoring and management options identified for use on Rock Creek Reserve for each natural resource category.

The "no action" alternative would be to manage natural resources on Rock Creek Reserve as they are managed currently. The preferred action is sometimes the continuance of the current management practice, or "no action" and is designated as such throughout this section under the heading Preferred Action: No Action.

4.1 SOILS INVENTORY, MONITORING AND MANAGEMENT

Soils monitoring and management is very closely related to the monitoring and management of vegetation. Soils have been inventoried across Rocky Flats, including Rock Creek Reserve, as part of the Site's existing soil monitoring program. Soils were also mapped by the Natural Resources Conservation Service as part of a soil survey of the Golden, Colorado area (Fig 3).

4.1.1 Soils Inventory and Monitoring

Preferred Action: No Action

Soils have been inventoried, and monitoring will continue as currently accomplished through vegetation management in accordance with the annual Vegetation Management Plan and Environmental Assessment.

Options Considered But Not Selected

A range of options from no monitoring of the existing soils to comprehensive, frequent monitoring would be accomplished under this alternative. Soils could be monitored extensively, but is not currently necessary for the purposes of this Plan. This option is not considered feasible at this time. No legal requirement exists for soil monitoring in Rock Creek Reserve, and currently available data are sufficient to support the objectives of this Plan.

4.1.2 Soils Management

Proposed Action

- Implement the enhanced noxious weed control integrated strategies that prevent soil erosion through enhancement of native vegetation as described in Section 4.4.2.
- Continue to implement the Vegetation Management Plan which identifies watershed improvement strategies and best management plans, such as check dams, revegetation, and reseeding actions, to retard erosion across the entire Site.
- Soil erosion that occurs along roads will be diminished through the continued use of turnouts (shallow trenches) water bars and barriers (e.g. straw bales) to divert the flow from the eroded road edges to the adjacent open areas.
- Cooperate with other agencies for their expertise in erosion control and prevention. Establish cooperative efforts to share expertise through Rock Creek Reserve site visits, evaluation and recommendations.

Options Considered But Not Selected

Construction of erosion control devices, such as earthen berms, or dams, etc. are not considered necessary for Rock Creek and its tributaries. Construction of these devices could also cause negative impacts to the federally-listed threatened Preble's meadow jumping mouse. Impacts could include direct mortality, harassment, and destruction of habitat and mouse hibernation dens.

No Action

No action would consist of the current erosion control methods, without implementing the enhanced weed control strategies, mitigation, and cooperative efforts with other agencies. No action would control soil erosion for an unknown period of time, but would increase soil erosion over the long run through the indirect impacts of severe weed infestations.

4.2 WATER INVENTORY, MONITORING AND MANAGEMENT

4.2.1 Surface Water/ Wetlands Inventory and Monitoring

The 6,266-acre Site has approximately 1,100 wetlands covering approximately 191 acres that were identified and mapped in the 1994 Rocky Flats Plant Wetlands Mapping and Resource Study (Fig. 4).

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Proposed Action

Quantity

- Observe areas where ground water is "daylighting", i.e. pools or seeps, for changes in water levels not associated with climatic conditions.
- Install additional guaging if field observations indicate the need to do so.
- Determine current in-stream flows supporting riparian communities on Rock Creek.
- Determine the minimum in-stream flows necessary to continue supporting these riparian communities.

Quality

- Determine if any undesirable run-off is entering Rock Creek by sampling for water quality parameters indicative of water quality impacts, such as increased siltation and presence of undesirable chemicals.
- Perform additional benthic macroinvertebrate sampling to compare to the 1991 Baseline Characterization study.

Options Considered But Not Selected

Other options considered include a more comprehensive sampling regime for the waters of Rock Creek. The existing data, however, do not suggest that this is necessary. A complete aquatic insect study (including collection of adults) was considered. However, larval forms are considered adequate for sampling on Rock Creek. Past benthic macroinvertebrate sampling has shown an abundance of larvae that require clean water to complete their life cycles. Sampling for pollutants that are not normally associated with the kinds of activities with potential to impact Rock Creek are not being considered at this time. No known contaminated sites occur in Rock Creek Reserve that would warrant increased monitoring of surface water and runoff.

No Action

No action (no monitoring of water quantity and quality) has the potential for damage to wetlands, riparian areas and aquatic fauna through potential contamination and/or siltation going undetected. Decreased amounts of surface water flows to support the riparian communities could also go undetected if monitoring is not done. The sustained quantity and timing of streamflows in riparian ecosystems is essential to support the riparian plant and animal communities.

4.2.2 Surface Water/Wetlands Management

Rock Creek has been identified as a high-quality wetland complex. The primary management concerns are sustaining species diversity, genetic diversity, cover, productivity of the native plant species, and preservation of the animal populations using these areas. Two main concerns with the potential for impacts to surface water and wetlands on the Rock Creek Reserve have been identified: noxious weed spread and control, and adjacent land activities. These have the potential to affect both the quantity and quality of surface water and wetlands. Noxious weed management is discussed in Section 4.4.2.3.

Wetlands are already protected under many existing laws and policies. Section 404 of the CWA, 10 CFR, Part 1022, Compliance with Floodplain/Wetlands Environmental Review Requirements; Executive Order 11990, Protection of Wetlands; and Executive Order 11988, Floodplain Management. The Site has a Site-Wide Wetland Comprehensive Plan (February 1997) and a Wetlands Identification and Protection Procedure (January 3, 1997) that provides instructions for identifying jurisdictional wetlands at the Site and ensuring the protection of these wetlands.

The Site goal for wetlands mitigation, identified in the Memorandum of Agreement (MOA) for the Administration of a Wetland Bank at the Site between DOE RFFO, EPA, the Corps, and the Service, is to achieve no overall net loss of wetland functions and values [e.g., wildlife habitat, critical habitat for endangered species, flood control, water quality improvement, and groundwater recharge], resulting from Site activities. This MOA describes how the Site will account for wetland impacts for a portion of potentially impacted wetlands using a mitigation bank established and maintained by DOE, Rocky Flats Field Office.

Preferred Action: No Action

- Continue with the current actions for surface water/wetlands protection.

Surface water management options for water quality and quantity are not considered necessary at this time for Rock Creek Reserve. It is not considered necessary based on these assumptions:

- The herbicide applications were conducted in accordance with applicable laws, regulations and label instructions and requirements.
- No known contaminated sites occur on Rock Creek Reserve.
- Surface water quality and quantity are not currently being impacted.

If the implementation of the monitoring actions proposed in Section 4.2.1 show any of the above assumptions to be incorrect, mitigation measures will be formulated and implemented if necessary.

Options Considered But Not Selected

Other options, such as enlarging wetlands and increasing surface water flows, are not feasible at this time for the purposes of this Plan, but may be considered as the future re-use and ownership of the Site is discussed and ultimately determined. Current data do not suggest the necessity for any of those options at this time, and they could directly impact Preble's meadow jumping mouse and/or its habitat adversely through construction of diversion structures, dams, and excavations.

4.2.3 Groundwater Inventory and Monitoring

Groundwater on Rock Creek Reserve is currently monitored for water levels in several locations (Fig 10). Groundwater is extensively monitored on the rest of the Site.

Reduction of ground water discharge into surface channels would lead to a significant loss of stream wetlands. Interruption of ground water flow to the seep wetlands by excavation and subsequent filling

should be avoided as should activities that could reduce recharge of the aquifer. Lining of water supply canals, or tighter regulation of flows through the canals, could result in less recharge to shallow aquifers in the Rock Creek drainage.

Proposed Action

Quantity

- Review monitoring data from existing monitoring wells in Rock Creek Reserve to determine water level consistency.
- Measure seep areas to aid in assessing groundwater level changes not associated with climatic conditions.

Quality

- Sample existing groundwater monitoring wells located in Rock Creek Reserve for herbicides and other chemicals.

Options Considered But Not Selected

No contaminated sites have been identified within the boundaries of Rock Creek Reserve that require monitoring. A comprehensive groundwater monitoring program on Rock Creek Reserve would not be justified at this time. Groundwater monitoring options in addition to the proposed action are not considered necessary at this time.

No Action

There is no legal requirement for groundwater monitoring on Rock Creek Reserve. However, the no action alternative could result in negative impacts to groundwater if monitoring is not implemented. Impacts to groundwater would be observed by staff during other field activities, at which time the impacts could already be negatively affecting water quality and/or quantity.

4.2.4 Groundwater Management

Preferred Action: No Action

Groundwater management is not required currently for Rock Creek Reserve. It is not considered necessary based on these assumptions:

- Groundwater quantity is not impaired.
- Groundwater quality is not impaired.
- The herbicide applications were conducted in accordance with applicable laws, regulations and label instructions and requirements.
- No known contaminated sites have been identified on Rock Creek Reserve.

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If the implementation of the monitoring actions proposed in Section 4.2.3 show any of the above assumptions to be incorrect, mitigation measures will be formulated and implemented if necessary.

Options Considered But Not Selected

At this time, other groundwater management options, such as pump and treat systems for contaminants, barrier systems, etc., are not considered necessary, and are not justified for Rock Creek Reserve.

4.3 AIR QUALITY INVENTORY, MONITORING AND MANAGEMENT

This section has combined the Inventory, Monitoring and Management subsections for ease of reading and to simplify the organization of the section.

Site air monitoring activities assist in protecting the public and the environment by detecting and tracking any impact of Site operations on air quality at and near the Site. This includes characterizing any airborne materials that may be introduced and the meteorological conditions that influence their transport and dispersion. Data are used to plan, implement, and assess the effects of Site activities, including operations, construction, and decommissioning; to maintain emergency preparedness; and to demonstrate compliance with relevant regulations.

Preferred Action: No Action

- Air quality inventory, monitoring and management on Rock Creek Reserve are done in accordance with existing Site policy. Fugitive dust (PM-10 and TSP, described in Section 3.3.1.4) is not currently a concern on Rock Creek Reserve. Air quality is also monitored through implementation of the Vegetation Management Plan. Proposed actions within this Plan with the potential to impact air quality were analyzed and documented in the 1998 Vegetation Management Environmental Assessment and Finding of No Significant Impact.

Options Considered But Not Selected

Air quality monitoring is currently done as determined by regulation and other agreement. Increased monitoring would be unnecessary as the current level of monitoring is based on statistical requirements for accuracy. At this time, air quality management options are not applicable. Management of fugitive dust such as dust suppressant on roads and prohibiting traffic are not necessary to control dust since traffic is minimal and fugitive dust is not currently a concern on Rock Creek Reserve.

4.4 BIOLOGICAL RESOURCES INVENTORY, MONITORING AND MANAGEMENT

4.4.1 Floral Inventory and Monitoring

Preferred Action: No Action

- Continue with the current ecological monitoring program as documented in the Annual Vegetation Reports for the Rocky Flats Environmental Technology Site.
- Continue to update the floral inventory (including herbarium mounts) as new species are found during surveys, including site-specific surveys, sensitive plant species surveys, and other projects.
- Continue to maintain the plant species database.

Options Considered But Not Selected

There is no legal requirement to maintain a floral inventory. Thus, the option to do no additional work maintaining and expanding this inventory is viable. At the other extreme, DOE could expend a great deal of effort specifically developing a more complete floral inventory. The current level of inventory adequately supports the overall need for floral inventory and monitoring, as well as the goals of this Plan, making that option unjustifiable and unnecessary.

4.4.1.1 Sensitive, Threatened and Endangered Species Inventory and Monitoring

Sensitive species and plant communities are monitored on an annual basis as part of the ecological monitoring program. Rocky Flats has supported periodic monitoring and surveying for Ute Ladies Tresses Orchid and Colorado Butterfly Weed. Neither of these endangered plants has been found on Site. Intensive surveys were conducted two consecutive years, 1993 and 1994 (Report of Findings, Ute Ladies'-Tresses and Colorado Butterfly Weed Surveys, 1994). Monitoring will continue informally, in conjunction with other, annual surveys.

Proposed Action

There are populations of Ute Ladies Tresses Orchid and Colorado Butterfly Weed in Boulder and Jefferson Counties. Suitable habitat exists on Rock Creek Reserve, especially in the seeps that feed Rock Creek. Noxious weed control efforts may have allowed plants that have gone undetected in the past to have better establishment. Surveys for other species, including candidate species with potential to occur on Rock Creek Reserve, will be conducted as appropriate.

- Conduct formal surveys for Ute Ladies Tresses Orchid and Butterfly Weed in years following enhanced weed control and prescribed burning. Conduct limited burn in wetland areas where thatch has built up in great proportions, inhibiting plant growth. Ute Ladies Tresses Orchid is often discovered after a burn regime.
- Continue informal surveys in subsequent years.
- Prepare annual reports on formal survey results for the Service.

- Continue to monitor areas critical to endangered plant and animal species.
- Survey for state-listed plant species on Rock Creek Reserve to the degree possible with available funding.

Options Considered But Not Selected

The option to do no additional work surveying for Ute ladies' tresses orchid and Colorado butterfly weed is viable. At the other extreme, DOE could expend a great deal of effort and funds specifically surveying for these plants on a yearly basis. Periodic surveys every few years are considered adequate to detect the species' presence, especially since noxious weed control may take several years. Frequent surveying also has the potential to impact sensitive areas from trampling, disturbing wildlife, etc.

No Action

If additional formal surveys are not conducted, presence of Ute ladies' tresses orchid or Colorado butterfly weed would only be detected by a fortuitous sighting. The potential exists for small populations to go undetected. These populations would not add to the recovery and de-listing efforts for the species (since they would be unknown) and could potentially be harmed in the short term by some weed control activities that would take place in potential habitat (especially herbicide applications).

4.4.1.2 Noxious Weeds Inventory and Monitoring

Noxious weeds have been identified and mapped across the entire site, including Rock Creek Reserve (Figs. 6,7,8). Ten years ago, there was little diffuse knapweed in the Buffer Zone; now, this Colorado-listed noxious weed inhabits approximately 2300 acres of the Buffer Zone. The most recent report, the 1999 Annual Vegetation Report, describes dalmation toadflax as currently being the most pervasive noxious weed, infesting over 2500 acres of the Buffer Zone.

The 1999 report also describes the impacts of the 1997 herbicide application on the Site, including some areas of Rock Creek Reserve. The results have so far been favorable, and will be used to refine future management techniques.

Preferred Action: No Action

The current inventory and monitoring programs for noxious weeds provide a comprehensive database for Rock Creek Reserve and the entire Site. The Annual Vegetation Reports are complete and contain maps with the most recent identifications and distributions of noxious weed infestations. Weed infestations in the region with the potential to impact Rock Creek Reserve and the Site are identified through coordination with State and County weed experts.

Options Considered But Not Selected

The current inventory and monitoring process provides an excellent source of information on noxious weeds and is currently a very useful tool for land managers. A more intense inventory and monitoring program would not add to the existing program enough to justify the dedication of resources. At this time, other management options are not applicable.

4.4.2 Floral Management

The Natural Heritage Program, DOE and USFWS have identified the primary threat to all native plant communities on Rocky Flats, including the Rock Creek Reserve, to be the displacement of the native vegetation by noxious, invasive weeds. The management strategies for all the native plant communities therefore focus on management of noxious weeds. Noxious weed control is discussed more thoroughly in Section 4.4.2.3. Existing flora management plans and policies include the 2000 Integrated Weed Control Strategy for the Rocky Flats Environmental Technology Site (Kaiser-Hill), 1998 Vegetation Management Environmental Assessment (Kaiser-Hill) and the 2000 Annual Weed Control Plan for the Rocky Flats Environmental Technology Site (Kaiser-Hill).

4.4.2.1 Plant Communities

Plant communities found on Rock Creek Reserve, the remainder of the Site, and declining across the region, were identified by CNHP as sensitive areas in need of protection. For purposes of this Plan, they are listed here as the xeric tallgrass prairie, tall upland shrubland, and riparian woodland/shrubland.

4.4.2.1.1 Xeric Tallgrass Prairie

Proposed Action

- Increased noxious weed control, especially diffuse knapweed and dalmatian toadflax (see Section 4.4.2.3).
- Continue removal and rehabilitation of unnecessary roads and fences to lessen the genetic and reproductive impacts from fragmentation of the grasslands. Determine if any fences should remain as catchment devices for diffuse knapweed (a tumble weed).
- Implement approved prescribed burning, including vegetation monitoring consistent with the Vegetation Management Environmental Assessment and Section 4.6.2.. The monitoring of fire effects is necessary to evaluate community response and quantify vegetation trends over time. Pre- and post-fire monitoring, particularly in the xeric tallgrass prairie areas, is needed to assess impacts from fire to that plant community. The use of fire to reduce the distribution of the exotic weeds is another product that may be realized from pre- and post-fire research on Rock Creek Reserve.
- Continue to participate in regional approaches to tallgrass prairie conservation.

Options Considered But Not Selected

Considerable resources could be dedicated to a wide range of options. Examples include attempting to eradicate (completely remove) all noxious weeds, closing all roads through the area or seeding and watering on a large scale. The benefits compared to cost of these options are questionable, and probably impossible to achieve in the case of weed eradication, since these weeds occur across the region. Negative environmental impacts could also arise from a weed eradication process, which would probably require large amounts of herbicides. Increased use of herbicides affects non-target plant species and could impact water resources.

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No Action

The no action alternative would consist of the current management, including prescribed burning, for the xeric tallgrass prairie, as outlined in the existing management plans (listed in Section 4.4.2). Although this would adequately manage the prairie in the short term, the benefit from the increased noxious weed control of the proposed action would not be realized, and the grasslands could suffer in the long run.

4.4.2.1.2 Tall Upland Shrubland

Proposed Action

Management of the tall upland shrubland includes:

- Increased noxious weed management (see Section 4.4.2.3).
- Evaluate impacts to the groundwater seeps that are important for the survival of this plant community.
- Remove dead knapweed through use of prescribed fire, described in Section 4.6.3. Build up of brush from dead knapweed was identified by the CHNP as one cause for damage to the tall upland shrubland. High winds blew a great amount of dead knapweed into the tall upland shrubland, and consequent shading damaged some of the plant community. This has already been abated through the current weed control practices. Perform thinning, if necessary, for wildland fuel hazard reduction and also to improve wildlife habitat.
- Implement approved prescribed burning, including vegetation monitoring. The monitoring of fire effects is necessary to evaluate community response and quantify vegetation trends over time. Data collection and analyses will provide an understanding of ways to protect and/or enhance natural ecosystems. Past occurrences of fire in the tall upland shrubland have shown beneficial effects to the plant community. The use of fire to help reduce the distribution of noxious weeds is another beneficial action that may be realized from pre- and post-fire research on Rock Creek Reserve.

Options Considered But Not Selected

Considerable resources could be dedicated to a wide range of options. Examples include attempting to eradicate (completely remove) all noxious weeds that impact the tall upland shrubland, or increasing availability of groundwater upon which the seeps depend through unnatural means. The benefits compared to cost of these options are questionable, and probably impossible to achieve in the case of weed eradication. Negative environmental impacts could also arise from a weed eradication process, which would probably require large amounts of herbicides. Increased use of herbicides affects non-target plant species and could impact water resources.

No Action

The no action alternative would consist of the current management for the tall upland shrubland, as outlined in the existing floral management plans (see Section 4.4.2). Although this would probably adequately manage this rare plant community in the short term, the benefit from the increased noxious weed control efforts outlined in the proposed action would not be realized, and the tall upland shrubland could suffer in the long run.

4.4.2.1.3 Riparian Woodland and Shrubland

Noxious weeds are considered the primary threat also to the riparian plant communities. The riparian woodland had only 73 percent native species as reported in the Terrestrial Vegetation Survey (1993-1995) for the Rocky Flats Environmental Technology Site (Kaiser-Hill). This plant community accounted for the highest number of species (species richness) of the plant communities. This community provides important habitat for the federally-listed, threatened Preble's meadow jumping mouse.

Proposed Action

- Increased noxious weed control efforts, especially Canada thistle.
- Plant cottonwoods or other native vegetation in strategic areas to enhance the benefits the trees provide to the riparian area, including the negative effect that shading would have on diffuse knapweed.
- Evaluate impacts to the surface water flows that are important for the survival of this plant community.

Options Considered But Not Selected

Considerable resources could be dedicated to a wide range of options. Examples include attempting to eradicate (completely remove) all noxious weeds affecting this plant community, or enlarging the riparian corridor through increasing in-stream flows. The benefits compared to cost of these options are questionable, and probably impossible to achieve in the case of weed eradication, and the lack of available water to increase the in-stream flows. Negative environmental impacts could also arise from the eradication process, which would probably require large amounts of herbicides in an aquatic system. Enlarging the existing riparian corridor could have negative impacts on the established vegetation and small mammal communities currently residing there, including the federally-listed, threatened Preble's meadow jumping mouse.

No Action

The no action alternative would consist of the current management for the riparian plant communities, as outlined in the existing floral management plans (see Section 4.4.2). Although this would probably adequately manage these communities, the benefit from the increased noxious weed control of the proposed action would not be realized, and the diversity of the riparian plant communities could suffer.

4.4.2.2 Sensitive, Threatened and Endangered Species

No threatened or endangered plant species as defined by the Endangered Species Act have been identified in surveys conducted on Rock Creek Reserve. Two federally-listed plants that are found in the region and have potential habitat on Rock Creek Reserve, but were not found in surveys are the Ute Ladies Tresses Orchid and the Colorado Butterfly Weed. If these plants are found in future surveys, management strategies will be formulated at that time. The introduction of these threatened or endangered plant species on Rock Creek Reserve will be considered in the development of recovery plans for these species. A draft recovery plan for Ute Ladies' Tresses Orchid is currently under review by the Service. Recovery plans are

developed with public participation, and public concerns are addressed in the process. Sensitive plant communities and species will be managed according to the discussions above.

4.4.2.3 Noxious Weeds

An Integrated Weed Control Strategy is currently applied at the Site including biological controls, mechanical controls, chemical controls, use of weed-free seed and mulch, and prompt revegetation of disturbed sites. The Site also has an annual Integrated Weed Control Plan that addresses weed control methods, target species, and treatment areas to direct weed control efforts each year. Additionally, the Site has worked cooperatively with Jefferson County weed control personnel, and surrounding landowners to participate in regional weed control strategies and implement integrated weed control.

The Site has also developed an annual Vegetation Management Plan. The Vegetation Management Plan was analyzed in an Environmental Assessment in accordance with the National Environmental Policy Act. Vegetation management options and alternatives were analyzed, and the public was actively educated and involved. DOE and USFWS will continue to evaluate a range of options, including prescribed burning and herbicide spraying, and it may be necessary to use an array of techniques for long-term habitat maintenance. DOE and USFWS understand that there are some community concerns regarding controlled burns and herbicide use and will continue to address these in development and implementation of this Plan.

Prescribed burning, described in Section 4.6.2, can help control some weed species while promoting other weed species, depending upon specific conditions in each case that prescribed burning is applied. Prescribed burning, which has recently been approved, will be integrated with other weed control measures as part of an integrated weed control plan. Since Rock Creek Reserve is relatively unimpacted by radionuclide contamination (see Section 2.1.7), limited burns for native vegetation enhancement should be made available as a management option. Prescribed burning will also have a beneficial effect in reducing wildfire potential. A controlled test burn was implemented in May 2000. Data from that burn is being collected and analyzed to help make informed decisions for future burns.

The Site now controls noxious weeds in the Buffer Zone, including Rock Creek Reserve, through aerial and ground application of herbicides as part of an integrated weed management strategy. Data from 1997 herbicide plot applications are showing promising results, with the species richness of the affected plots returning to pre-application numbers by the end of 1999.

Proposed Action

The following management options will be available to land managers of Rock Creek Reserve as part of an overall integrated management strategy for noxious weeds. All options will comply with applicable laws and regulations, especially those that govern use of herbicides, prescribed burning and releases of biological control agents. If any option has the potential to impact any federally-listed threatened or endangered species, consultation on a project-specific basis with USFWS will be done in accordance with Section 7 of the Endangered Species Act.

- As part of the Site Annual Weed Control Plan, develop objectives for control of each noxious weed species with additional emphasis on non-chemical control methods will be developed.
- Use guidance in the most current Annual Vegetation Management Plan to maintain consistency and integrate with weed control efforts across the rest of the Site.
- Continue herbicide applications when necessary and subsequent revegetation to reduce weed densities incorporating strategies outlined in the most recent Bureau of Land Management (BLM) Integrated Pest Management and Pesticide Application Certification Course.
- Continue use of prescribed burns to stimulate native plant growth and reduce litter. If necessary, reseed the burned areas found on steeper slopes with the native plant mix (if applicable) currently used for revegetation at Rocky Flats.
- Use mechanical means and cultural practices as described in the Annual Weed Control Plan. This may include additional options based on research currently conducted by Colorado State University at Fort Carson, Colorado for integrated control of cheatgrass and knapweeds.
- Continue to increase the biological control efforts against Canada thistle, musk thistle, diffuse knapweed and dalmatian toadflax using release strategies proven to increase the chances for establishment and control found in the most current Annual Report for Biocontrol at Fort Carson, Colorado, (Texas Agricultural Experiment Station [TAES]). Obtain as many species as possible from the lists within the Report of insect species approved for release by United States Department of Agriculture's Animal & Plant Health Inspection Service and the Colorado Department of Agriculture.
- Introduce the field bindweed mite for control of field bindweed. The bindweed mite is approved for release by the USDA and CDA, and is proven successful to help with bindweed control in Texas.
- Enter into cooperative agreements with other agencies to redistribute approved biological control agents established on other federal lands in the region.

Options Considered But Not Selected

Other management options include the reliance on any one of the above control measures. In the case of mechanical and chemical controls, the benefits compared to costs are questionable since these are generally short term control measures that must be used in conjunction with other measures to provide long term control. Negative environmental impacts could result from some of them, especially overuse of herbicides. Prescribed burning indirectly controls noxious weeds by promoting native plant vigor and must also be used in conjunction with other control measures. Too much use of prescribed burning can have negative impacts to plants and soil. Grazing/ browsing with goats is an option that has been analyzed and discarded because of the damage goats can do if not intensely managed. The potential exists for goats to transport noxious weeds by seeds and plant parts to uninfested areas. At this time, it is felt the potential negatives to the Site's sensitive plant communities outweigh the potential benefits, especially in the riparian and seep areas.

No Action

The no action alternative would keep the noxious weed management exactly as it exists currently. Although this would provide some noxious weed control, the enhanced efforts of the proposed action would not be implemented, and noxious weeds could increase in the long run. The sensitive and unique plant communities of Rock Creek Reserve would be impacted, thereby impacting all the other elements of the ecosystem that depend on them.

4.4.3 Faunal Inventory and Monitoring

4.4.3.1 Species Resident or Transient on Site (including mammals, birds, fish, reptiles, amphibians and invertebrates)

Preferred Acton: No Action

- Monitoring and inventorying faunal species will continue in accordance with current management plans, including the Ecological Monitoring Program, as documented in the Annual Wildlife Survey Reports. Existing monitoring and inventory meet, and exceed in many cases, the level necessary to make informed management decisions.
- Continue to add to the faunal baseline inventory using observations and data from other field projects.

Options Considered But Not Selected

A higher level of monitoring and inventory is not considered necessary, and would be a costly alternative. Current monitoring programs adequately support the goals of this Plan. Depending on the methods used, there would be the potential for actual harm to a sensitive ecosystem such as that found in Rock Creek. Increased frequency of monitoring would cause trampling in sensitive plant communities and the potential to spread noxious weeds. Harassment of birds during nesting season causing nest abandonment could occur.

4.4.3.2 Sensitive, Threatened and Endangered Species

The Site, due to its geographic position between the Great Plains and the Front Range of the Rocky Mountains, includes a great diversity of terrain and provides a wide variety of wildlife habitats. The wide range of habitats provides year-round and seasonal habitat for a large number of wildlife species, including threatened, endangered, and other special-concern species. To facilitate monitoring the status of sensitive species, DOE maintains a list of such species that have the potential to occur at the Site. The Ecological Resource Management Plan, 1998 NRMP, and current Preble's Protection Policy (Appendix 6) for the Site identify Site management concerns, monitoring approach, and management strategies for threatened and endangered species. Monitoring data are reported in the Annual Wildlife Survey Report for the Site. Sensitive species will be managed according to the discussions above. Only federally-listed threatened or endangered species will be discussed here.

Preferred Action: No Action

Monitoring and inventorying threatened and endangered species, currently only the Preble's meadow jumping mouse, will continue in accordance with current management plans, including the Ecological Monitoring Program and Preble's Protection Policy. Existing monitoring and inventory meet, and exceed in many cases, the level necessary to make informed management decisions.

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Options Considered But Not Selected

A higher level of monitoring and inventory is not considered necessary, and would be a costly alternative. Depending on the methods used, there would be the potential for harassment and harm to threatened and endangered species, currently only Preble's meadow jumping mouse, found in Rock Creek riparian habitat. Increased trapping and handling of mice could increase mortality. Indirect impacts through trampling of habitat and spreading noxious weeds could occur.

4.4.4 Faunal Management

Much of the faunal species management on Rocky Flats is directed towards listed species, primarily due to compliance requirements. Fortunately, measures for listed species also benefit many other species of plants and wildlife on the Site.

Fauna is managed mainly through habitat management. This is accomplished through wetlands management, plant community management, wildland fire management, erosion control, and noxious weed control. Those and other related activities are described in their corresponding sections of the plan.

4.4.4.1 Large Mammals

Large mammals present on the Site, including Rock Creek Reserve, are resident populations of mule deer, white-tailed deer, and occasionally mountain lion, bear and elk. These mammals out-migrate to some extent, and known individuals have often been observed off the Site. The only large predator that is resident is the coyote. Management strategy for deer and elk is a habitat-based approach depending on management of the plant communities these animals depend on. Studies show that coyote use of mule deer for food at Rocky Flats appears to be low during the summer and probably limited to fawns. This low utilization may be the result of availability of other coyote food such as voles (Ribic, 1978). Inventory and monitoring projects for mammals are described in Section 4.4.3.1. Protection and management of threatened and endangered species are important to the management and protection of mammals in general on Rock Creek Reserve.

Preferred Action: No Action

- Use measures established for federally-listed species to also provide protection for other mammals that occur on Rock Creek Reserve.
- Continue policy of coordination with Colorado DOW to control populations of large mammals if necessary.

Options Considered But Not Selected

Rocky Flats is not legally required to specifically manage non-federally-listed species. Thus, programs for mammals in general are not required to be implemented. However, most of Rock Creek Reserve and Site management programs and policies have positive effects for non-federally-listed species, including large mammals. Other management options include intensive management for large mammals through methods such as hunting, trapping, predator control, relocation, and species-level management. Hunting and

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trapping are not applicable at this time for previously discussed mission and security reasons. There is no indication that large mammals require, or will require in the foreseeable future, any kind of intensive management, such as culling.

4.4.4.2 Small Mammals

Proposed Action

- Install bat houses in strategic locations to provide increased roosting areas and shelter for bats.

Options Considered But Not Selected

Intensive management for small mammals through methods such as predator control, trapping and relocation, planting additional food sources, supplying an artificial food source such as cracked corn, and species-level management were considered. These options all have the potential for ecosystem harm and negative impacts on biodiversity through management strategies that fail to consider the ecosystem as a whole. Predator/prey relationships could be upset. Feeding and planting additional food sources have the potential to cause population fluctuations and create imbalances in the native plant communities. Another option for small mammal management that has been suggested is the use of Rocky Flats, including Rock Creek Reserve, as a refuge for displaced, relocated black-tailed prairie dogs. Rocky Flats will continue its policy of not accepting relocated prairie dogs. Both the Service and DOE are concerned about the potential for damage to sensitive grasslands and the introduction of the plague to prairie dogs that currently populate the Site. Prairie dogs do not currently populate Rock Creek Reserve, but the potential exists for them to move into the Reserve naturally. Prairie dogs that naturally migrate to Rock Creek Reserve are not expected to require population control, as these measures have never been necessary in the past, due to a healthy predator/prey balance. A large, sudden influx of prairie dogs through relocations could disrupt the natural predator/prey relationship which exists on Rock Creek Reserve.

No Action

Not installing bat houses would not allow for increased roosting areas and shelter for these sensitive species that occur on Rock Creek Reserve, such as the small-footed myotis.

4.4.4.3 Birds

Proposed Action

- Place bird nesting boxes for species such as blue birds, wood ducks and kestrels, in strategic areas of Rock Creek Reserve. Nesting boxes require regular maintenance, and will not be placed if it is determined that current staffing cannot support this. Boxes would only be placed in areas where they would not cause an increase in predation to sensitive species, or cause territorial impacts to other birds.
- Place raptor poles in strategic areas of Rock Creek Reserve where threatened or endangered species or introduced species will not be impacted by increased predation. Raptor poles strategically placed can help protect birds from electrocutions associated with power lines.

Options Considered But Not Selected

Rocky Flats is not legally required to specifically manage non-federally-listed species. Thus, programs for birds in general are not required to be implemented. Rocky Flats could establish intensive and extensive management strategies for birds, such as planting areas of specific food crops like sunflowers, predator control, constructing ponds for waterfowl, and other species-level management options. These options all have the potential for ecosystem harm and negative impacts on biodiversity through management strategies that fail to consider the native ecosystem as a whole. Rock Creek is not historic waterfowl habitat, and construction of habitat would be an artificial measure that would require increased surface water management to control.

No Action

No action would not allow for increased nesting and roosting areas for birds.

4.4.4.4 Reptiles and Amphibians

Preferred Action: No Action

- Continue the monitoring and management practices already in place for protection of wetlands and grasslands. Implementation of proposed actions for noxious weeds, groundwater and surface water monitoring and management as outlined in their respective sections in this Plan will afford added protection to amphibians and reptiles.

Options Considered But Not Selected

Rocky Flats is not legally required to specifically manage non-federally-listed species. Thus, programs for reptiles and amphibians in general are not required to be implemented. Rocky Flats could establish intensive and extensive management programs for reptile and amphibian species and their habitats through methods such as predator control, enlargement of wetland areas and species-level management. These options all have the potential for ecosystem harm and negative impacts on biodiversity through management strategies that fail to consider the ecosystem as a whole. Rock Creek has not historically had large areas of wetland habitat, and construction of wetland habitat would be an artificial measure that would require increased surface water management to control. Reptiles already benefit from the grassland and other plant community management, and increased management is not necessary.

4.4.4.5 Invertebrates

Preferred Action: No Action

- Continue the monitoring and management practices already in place for protection of plant communities. Implementation of proposed actions for noxious weeds, and sensitive plant community management as outlined in their respective sections in this Plan will afford added protection to invertebrates, and contribute to the maintenance of riparian communities, providing habitat for the hops blue butterfly, Arogos skipper and other sensitive invertebrates.

Options Considered But Not Selected

Rocky Flats is not legally required to specifically manage non-federally-listed species. Thus, programs for invertebrates in general are not required to be implemented. Planting specific host plants for sensitive species such as the hops blue butterfly was considered, or planting flowers preferred by adult lepidopterans in general and host plants for larvae. These measures could impact the sensitive plant communities and would require intense management for noxious weed invasions. Planting flowers and placement of hives to attract bees was considered, but discarded due to intense management requirements and possible negative impacts to sensitive native plant communities.

4.4.4.6 Sensitive, Threatened and Endangered Faunal Species

Threatened and Endangered Species

Management of federally-listed, threatened and endangered species is required by the Endangered Species Act. Rock Creek Reserve currently has one resident federally-listed, threatened species, the Preble's meadow jumping mouse. The Site manages this species in accordance with the 1999 Memorandum of Agreement For Coordination Of Endangered Species Act Compliance With Activities At Rocky Flats Environmental Technology Site Between Department Of Interior Fish and Wildlife Service, Department of Energy, Environmental Protection Agency, Colorado Department of Health and Environment, and Colorado Department of Natural Resources (Appendix 8). The Preble's Meadow Jumping Mouse Protection Policy now in effect is a requirement of this agreement (Appendix 6). The Preble's Protection Policy addresses a range of programs and projects, and all aspects of remedial activities at Rocky Flats.

Preferred Action: No Action

- Continue to implement the existing Protection Policy prepared by the Site for the Preble's meadow jumping mouse, which is listed as a threatened species under the Endangered Species Act. The Preble's Protection Policy (Appendix 6) and other protection policies, plans and procedures are currently being evaluated to determine whether implementation may need to be improved, and whether modifications are needed in light of new information, developments, and related conservation efforts, including off-site studies and identified data gaps.
- Monitor off site research on federally-listed, threatened, endangered, and proposed species and their habitats that occur on the Site and use results of these research projects to improve management programs on Rock Creek Reserve.
- The proposed action listed in Section 4.2.1 to establish minimum in-stream flows for Rock Creek to support riparian habitat will benefit the continued survival of the mouse through the availability of that data as a habitat management tool.
- The proposed actions listed in Section 4.2.2 and 4.2.3 for groundwater and surface water monitoring in Rock Creek will benefit the continued survival of the mouse through the availability of that data as a habitat management tool.

Options Considered But Not Selected

Other management options would include implementing Preble's mouse habitat enhancement projects.

Since the existing habitat adequately supports a viable mouse population (1999 Annual Wildlife Report, Appendix B, Preble's Meadow Jumping Mouse Study), these options are not considered necessary at this time for the Rock Creek Reserve. Projects such as enlarging riparian areas through digging, and extensive vegetation plantings could have negative short-term impacts. Trapping and moving mice from one area to another to produce new populations is an option that could have negative impacts on the individuals being relocated. Habitat enhancement projects could be proposed in the future in accordance with an approved recovery plan for the species. Those projects would be reviewed and coordinated as necessary at that time. Recovery plans are subject to NEPA analysis and undergo public review.

Sensitive Species

Sensitive species are defined as federal or State-listed species and those documented as sensitive by the CNHP. These species along with their CNHP ranking and definitions are listed in Appendix 7. Some sensitive species are proposed within this Plan for introduction to Rock Creek Reserve. Except for federally-listed species (described in Section 4.4.4.6), these species will be managed using the same approach as used for the general floral and faunal management.

Proposed Action

- Coordinate with the Colorado DOW to reintroduce the Plains sharp-tailed grouse and implement monitoring. The grouse is State-listed in Colorado, but is considered abundant in other states, and is not being considered for federal listing.
- Coordinate with the DOW to introduce native, sensitive species of fish, including Iowa darter, northern redbelly dace and common shiner and implement monitoring. The purpose of this action is to establish a fishery representative of this area in its original condition, and to provide a source of these species for reintroductions elsewhere. These species are not State or federally-listed, nor are they being considered for proposal for federal listing.
- Remove the exotic species of fish, such as bass, using established methods currently employed by the Service, from Rock Creek wetlands such as Lindsay Pond.

Options Considered But Not Selected

Rocky Flats is not legally required to specifically manage non-federally-listed species. Thus, programs for sensitive species are not required to be implemented. Most of Rocky Flats' management programs have positive effects for non-federally-listed species due to their emphasis on habitat protection. Rocky Flats could establish intensive and extensive management programs for species of special concern and their habitats. This would however, require species-level management which could conflict with the overall goal of enhancing biodiversity on Rock Creek Reserve. Specific projects for management of introduced species are not being considered that are not already part of the goals of ecosystem level and habitat management as set forth in this Plan.

No Action

The No Action alternative would not support the biodiversity with emphasis on native species goals set forth in Section 1.2 of this Plan. Non-native fish would continue to be the predominate species, and native species would not be introduced, and would not contribute to the native biodiversity goals of Rock Creek

Reserve management.

4.5 CULTURAL RESOURCES INVENTORY, MONITORING AND MANAGEMENT

This section has combined the Inventory, Monitoring and Management subsections for ease of reading and to simplify the organization of the section.

4.5.1 Archaeological Resources Inventory, Monitoring and Management

All known cultural resources at the Site have been evaluated for National Register eligibility. None were determined eligible. The Colorado SHPO has concurred with the findings. No additional evaluation is required, unless previously undiscovered resources are identified, or objects of potential scientific importance are identified. Even though all undisturbed areas within the Site, including Rock Creek Reserve, have been surveyed for cultural resources, the vegetation in some locations precludes a determination that there are absolutely no undiscovered resources.

The Site will monitor surface disturbing activities in the Buffer Zone for occurrences of undiscovered cultural resources. If any suspected cultural resources are discovered, the work will be stopped or rerouted to avoid the area. The suspected cultural resources will be evaluated for significance and managed according to Section 4.10.6 of the Rocky Flats Environmental Site Cultural Resource Management Plan (CRMP). The CRMP incorporates the information from both the archeological and industrial area surveys. The CRMP establishes guidelines regarding how to manage Site cultural resources.

Preferred Action: No Action

- Ground disturbing activities, removal of vegetation in certain areas and new erosion courses have the potential to uncover undiscovered buried deposits. Areas where any of these activities take place will continue to be monitored for cultural resources.
- Federal law prohibits commencement of federal undertakings that could impact cultural resources without undergoing the consultation process as outlined in Section 106 of the National Historic Preservation Act. The no action alternative, which is current policy, would still protect cultural resources as required by law. If any cultural remains are suspected, all activity will cease until the remains have been assessed for cultural significance.

Options Considered But Not Selected

Another option for monitoring and inventorying would be to conduct more in depth surveys than required by law, e.g., subsurface testing (testing below the surface for cultural resources before a project is implemented). This option is not necessary since the CRMP identifies the Buffer Zone as a low-density (low probability) area for cultural resources. These options could actually do harm to subsurface cultural deposits that otherwise may have been left unharmed.

No significant archaeological resources have been identified on Rock Creek Reserve. Therefore, other options for current management do not apply. If significant cultural resources are discovered in the future, mitigation measures may range from simple avoidance of the site, to complete excavation and documentation. Avoidance and protection of sites via barriers, etc. would be the most probable management options.

4.5.2 Historic Resources Inventory, Monitoring and Management

The Lindsay Ranch is considered the only historically relevant structure on Rock Creek Reserve. While it is not listed as eligible for the Register of National Historic Places according to the National Historic Preservation Act, there is community interest in preserving the Lindsay Ranch. Suggestions have been made to reconstruct Lindsay Ranch for use as a visitors' center for Rock Creek Reserve. Since unrestricted public access to Rock Creek Reserve will not be allowed until the completion of the closure mission, the ultimate use of the ranch property cannot be determined until that time. The use of Lindsay Ranch, and public access in general, will need to be consistent with maintaining the ecological resources of Rock Creek Reserve. These issues will also be addressed in the Access and Recreation Study that is one of the proposed actions elsewhere in this Plan (Section 4.7.1). The following is proposed for the interim as other issues regarding public access and the Lindsay Ranch are being resolved.

Proposed Action

- DOE will work with interested stakeholders to determine what stabilization may be needed to prevent further degradation of Lindsay Ranch prior to closure. An assessment of the work needed to stabilize the structures and the hazards and impacts involved will be conducted first. Stabilization techniques may include replacing rotted wooden support features, protective temporary covering for the roof and windows, repairs to cracked cement foundations, removing and saving original features (doors, windows, etc.) for future use, pesticide treatments for wood destroying insects, etc. Such stabilization may be performed if funding can be made available from public and private sources. Stabilization may have short-term impacts resulting from noise and increased traffic. Care will be taken to prevent erosion and sedimentation into the Lindsay Pond. Consultation with the Service will be conducted if any planned activities have the potential to affect Preble's meadow jumping mouse habitat.

Options Considered But Not Selected

Complete restoration of the Ranch in the near term to its original condition was considered, but not selected because of the expense of such an option, and because the ultimate use of this property has not been determined at this time.

No Action

No action could negatively impact the property, especially the ranch house, allowing it to fall into such disrepair that no future rehabilitation would be possible.

4.6 Land and Infrastructure Maintenance

Rocky Flats has its own underground and aboveground utilities systems and supporting facilities. Except

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for unpaved access roads, fences and some utility lines, Rock Creek Reserve infrastructure is largely undeveloped. A landfill that was constructed and never put into use lies within the southern boundary of the Rock Creek Reserve. Existing easements are described in Section 2.1.5.

4.6.1 Fence and Road Maintenance

There are several miles of unpaved roads on Rock Creek Reserve. Rocky Flats maintains unpaved roads in the Buffer Zone both as vehicle access and fire breaks. The Site has closed some roads to travel in order to increase prairie habitat. Also, the Site has reduced the width of road grading to 40 feet and driving vehicles off the road network is controlled to protect prairie habitat.

Proposed Action

- Initiate an Access and Recreation Study to be used as a management tool when recommending public access (roads, trails, etc.) options to the Rock Creek Reserve.
- Continue to implement the existing policy that roads not necessary for access will be removed and rehabilitated through reseeding with the native vegetation found in the immediate area; these areas will be priority areas for noxious weed control.
- Roads, fences and signs that are considered necessary will continue to be maintained. Those considered not necessary will be removed.
- The Site will continue road-grading activities in Rock Creek Reserve to maintain roads and continue control of noxious weeds. The Site will minimize the width of road grading to protect prairie habitat while balancing fire control needs.
- The Site will continue to control off-road vehicle traffic.

Options Considered But Not Selected

All, or most, of the roads and fences could be removed. This would create a lack of access for those doing land rehabilitation measures, monitoring and research, causing severe negative impacts. Another option is that no roads and fences would be removed and rehabilitated, resulting in continued fragmentation of the prairie, and avenues for noxious weeds to invade and spread.

4.6.2 Fire Management Including Prescribed Fire

Wildfires at the Site, including Rock Creek Reserve, have been suppressed for many years. As a result, plant litter (dead plant material) has built up in most areas of the grasslands. This plant litter causes a number of management problems. Plant litter shades and stifles prairie plants when the accumulation builds too high, affecting the viability of such dominant species as big bluestem, little bluestem, mountain muhley, and others. This affects the viability of the xeric tallgrass prairie, mesic grasslands, and even wetlands. The thatch buildup also provides a heavy fuel load that can carry a prairie wildfire at a dangerous rate across open lands.

Grasslands at the Site evolved under conditions where fires periodically swept across the prairie every five to ten years on average. Fire is an important tool in prairie management and maintenance through

removal of thatch and recycling of nutrients. Fires stimulate the growth and vigor of prairie species by releasing nutrients into the soil making them available to plants.

Prescribed Burning

A multi-year burn plan is being developed in accordance with the Vegetation Management Environmental Assessment and Annual Vegetation Management Plan and will be implemented across the Site, including Rock Creek Reserve. The U.S. Forest Service is a cooperating agency implementing prescribed burns, and specific burn plans are developed for each prescribed burn in accordance with U.S. Forest Service requirements.

Prescribed burning (fires set intentionally as part of a fire plan, a specific set of requirements and prescribed weather conditions) can be used to rejuvenate overgrown habitats, reduce fuel loads, and reduce the chance of an uncontrolled wildfire. The greater the fuel load, the hotter the fire, and (1) the greater the potential of environmental damage and (2) the more rapid spread of a wildfire to either the industrial area or neighboring lands.

Neighboring local governments, including Jefferson County and Boulder County, routinely use prescribed burning. Site environmental documents note prescribed burning is recommended for a number of highly beneficial, previously described, purposes. However, many area residents are concerned about the possibility that fires in the Buffer Zone, including Rock Creek Reserve, could spread contamination.

DOE has a limited number of rangeland fire-fighting vehicles, and the current policy is to aggressively suppress unplanned fires using the Rocky Flats Fire Department, and if necessary, support services from local fire districts, under mutual aid agreements. Mutual aid agreements with local fire districts are designed to specifically support the Site during emergencies, not prescribed burns. However, depending on the availability of local departments, these departments may be able to support the Site in conducting prescribed burning. In general, fire suppression equipment would be provided by the agency contracted to conduct the prescribed burn, in accordance with the approved burn plan. The Vegetation Management Environmental Assessment describes the planned use of fire and other management tools. It also describes the alternatives in more detail and the impacts from each alternative. The multi-year fire plan will detail the use of fire on the Site.

Preferred Action: No Action

- Wildfires on Rock Creek Reserve will continue to be suppressed in accordance with existing policy and mutual aid agreements.
- Prescribed burning will be used on Rock Creek Reserve, in accordance with the approved Vegetation Management Plan and Environmental Assessment.
- Data from the 2000 prescribed test burn on the southwestern portion of Rocky Flats will be used to determine potential impacts to human health, identify potential erosion problems, and to identify benefits to the Site plant communities.
- All prescribed burning that could affect Preble's meadow jumping mouse will be done after consultation with the Service determines no adverse effects to the mouse and/or its habitat will occur.

- All prescribed burns will include public notification; the Site will conduct pre-burn environmental sampling and air monitoring during the burns as appropriate to the areas involved.

Options Considered But Not Selected

Options to introduce wild or domestic grazers such as cattle, sheep, bison were considered in an effort to effectively manage prairie plant and weed species. This alternative to prescribed fire would require intensive management including herding, fences, drift fences, electric fences, stock water sources and salt licks. Without this intensive management, damage to riparian areas and Preble's mouse habitat is likely to occur. Without intensive management, these grazers would use and damage riparian vegetation. Rocky Flats is not staff equipped or funded to implement this option. The proposed future uses of Rock Creek Reserve are not compatible with this option.

An option to use goats to control undesirable vegetation and to reduce litter was considered. For example, goats will eat noxious weeds if confined to small areas of noxious weed monocultures, but they will not selectively choose most of these weeds over more desirable native forbs. Goat browsing, like the grazing option described above, requires intensive management, such as herding and fencing. The pervasive weed and litter problem in Rock Creek Reserve is extensive, and not isolated to certain areas. To control undesirable vegetation in Rock Creek Reserve many goats would be required. This option is not consistent with the intended use of the Rock Creek Reserve for native species. Rocky Flats is not staffed, equipped or funded to implement this alternative. The potential for damage to riparian and other sensitive plant communities exists with this option.

4.7 SOCIOECONOMICS

There are no known socioeconomic issues associated with Rock Creek Reserve management for the duration of this Plan. This section describes the public use parameters that will be in effect for the duration of this Plan. Expansion of the Rock Creek Reserve, public use studies, and contaminants studies are presented as proposed actions here based on their relationship to public use. Although this Plan does not contain figures for monetary value for preserving natural resources associated with Rock Creek Reserve, there are studies that attempt to establish those values. There are both tangible and intangible values to surrounding communities for having adjacent, or nearby, open space lands.

4.7.1 Public Use

Notwithstanding necessary restrictions during active closure, it is DOE's desire that as many areas of the site ultimately be made available for public use and public education as possible, consistent with maintaining the ecological resources. DOE has asked that the Service evaluate the amount and type of public access that the land and resources will bear as part of the Service's ongoing cooperative management of Rock Creek Reserve. All reasonable alternatives for public use will be discussed with the local communities and community preferences for public use will be sought prior to opening the Site for public access. Rocky Flats Mission Considerations in relation to public access is discussed in Section 3.7.2.

Proposed Action

- Continue with the existing management policy for public tours and visits for the life of this Plan.
- Analyze public visitation options for post-closure through an Access and Recreation Study. This study will analyze the impacts of recreation (including options for re-use of the Lindsay Ranch) and become the basis for recommendations on public access compatible with the future use of the land.
- Conduct contaminants sampling and analysis to support a potential National Wildlife Refuge designation. This will help comply with Service requirements through incorporation of a Service Level III contaminants study to identify potential contamination in Rock Creek Reserve. This will be prepared in cooperation with the Service's Environmental Contaminants Division. The Service's Level III portion of the study will be accomplished by the Service.
- Expand Rock Creek Reserve to 1700 acres (Fig. 2).

Options Considered But Not Selected

For the intended life of this Plan, there are no other options that are applicable. Continued need for a safety and security buffer zone by Rocky Flats requires continued limitation of public access until nuclear material is removed. In addition, the existence of a federally-listed, threatened species will continue to require protection of the habitat. If conditions warrant, or Congress mandates it, the area could become part of the USFWS Refuge System. If refuge designation occurs, management direction may change to meet the needs of the Refuge System. These options cannot be analyzed at this time since the future use of the Site has not been decided, and current restrictions are in place. Public comments have mainly focused on hiking and horse trails through the site. These will be analyzed in the Access and Recreation Study to be initiated under the Proposed Action.

No Action

No action would not allow for the study and planning of future public access to the Site and contaminants studies. This would not be conducive to good public access management decisions. Not expanding the boundaries of Rock Creek Reserve would not allow for good watershed management techniques since only part of the watershed would be included in the Rock Creek Reserve (see Section 1.3.2 for a more detailed analysis).

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5.0 ENVIRONMENTAL CONSEQUENCES

This Section summarizes the environmental impacts analyzed in the alternatives discussion throughout the Plan. In accordance with 40 CFR, Section 1502.21 of the CEQ NEPA Implementing Regulations, to "*cut down on bulk without impeding agency and public review of the action*", this Plan incorporates by reference the Rocky Flats Environmental Technology Site Vegetation Management Plan Environmental Assessment. Impacts from vegetation management practices are analyzed within that document, and it provides the impact analyses for many of the actions described within this Plan. Nothing in this Plan is to be interpreted as a diminishment of the policies, programs and projects as outlined in that EA.

As discussed in Section 1.3.2 of this document, three alternatives are considered:

- The "**proposed actions**" with implementation of the Plan.
- The "**options considered but not selected**" alternative, which discusses management strategies considered but not selected for inclusion within the Plan.
- The "**no action**" alternative. No action is the continuation of existing management practices.

The preferred action is sometimes not a new proposal, but may be the continuance of a current management practice, or "no action" and is designated as such throughout the Plan under the heading ***Preferred Action: No Action***. For example, in much of the inventory and monitoring section the no action alternative (current monitoring program) is the preferred action.

The proposed action alternatives would not have long-term negative environmental consequences compared to existing conditions. The "options considered but not selected" alternatives could have a wide range of environmental consequences, ranging from positive to negative on various components of the Rock Creek Reserve environment. In some cases, the alternatives differ significantly in their ability to proactively manage natural resources, support the Rocky Flats mission, and comply with environmental laws.

The "options considered but not selected" discussion in this section also includes the "no action" alternative in cases where "no action" is not the preferred alternative. This is done for brevity and to simplify the discussions.

The Plan provides guidelines for managing natural resources, and describes actions designed to maintain and improve Rock Creek Reserve's natural resources. The Plan describes preferred options that allow flexibility in management that will be exercised as more information becomes available.

5.1 Rock Creek Reserve Boundary Expansion

Proposed Action

One of the actions proposed in this Plan is the expansion of the boundaries of Rock Creek Reserve to include most of the Rock Creek watershed. The watershed encompasses approximately 1500 acres, most of which occur on the Site. The proposed boundary expansion would bring the total acreage of Rock Creek Reserve from 800 acres to 1700 acres (Fig. 2). The Service supports this proposed action. The proposed management options in this Plan will not change with the implementation of the boundary expansion. The proposed boundary expansion does not include any known contaminated areas or eligible archaeological or historic sites. The proposed boundary expansion includes additional easements and structures, to include a never-used landfill with pond and support facility. The expansion would provide a more definable unit (watershed) for an ecosystem management approach.

Options Considered But Not Selected

The Rock Creek Reserve proposed boundary expansion could have encompassed a wide range of acres and different boundary configurations. Contaminated areas were not considered for inclusion in Rock Creek Reserve. A watershed approach was desired, and inclusion of as much of the tall grass prairie as practicable. Range managers and wildlife biologists selected the best option based on an ecological approach. Applying management practices to better-defined land management units allows a more unified approach, rather than managing fragments of habitat. The No Action alternative would provide a fragmented approach, since the entire watershed and adjoining sections of tall grass prairie would not be included in Rock Creek Reserve.

5.2 Topography, Physiography, Geology and Soils

Proposed Action

The proposed action includes an existing integrated program for the planning of land maintenance and protection of soils through the management of vegetation. Brief periods of increased erosion could occur during land maintenance and rehabilitation activities (such as prescribed burning), but these would be insignificant compared to the erosion control benefits of enhancing native vegetation. There may be slight increases in erosion during bare ground aspects of rehabilitation of roads and other projects which disturb the soil, but the plan includes provisions to minimize erosion during and following these actions such as soil stabilization using structures and vegetation. The proposed action has evolved over years of active and successful management at Rocky Flats.

Options Considered But Not Selected

Other options could range from intensive erosion control programs that would provide relatively good soils protection to virtually no erosion control or damage prevention. Erosion, however, is not a major issue at this time on Rock Creek Reserve. Options in the Proposed Action will control limited areas of erosion that were identified in the tall upland shrubland areas. Most are aimed more at prevention than

erosion repair. Construction of erosion control dams could have a greater impact than the current erosion. This would also impact a federal threatened species, the Preble's meadow jumping mouse found in Rock Creek riparian areas. Negative effects on Rock Creek Reserve's soils (and associated vegetation) would be greater using other options than under the proposed action.

5.3 Water Resources

Proposed Action

Implementing the monitoring described in the Plan will not have a negative impact on the environment. It could have a very positive impact if potential problems are identified and subsequently mitigated. Monitoring water quantity and quality is not a legal requirement on Rock Creek Reserve, as it is within the other two watersheds that occur on the Site. Exploring the feasibility of obtaining water rights gives land managers a wider array of options for management of water quantity in the future, an option which could become necessary for protection of a federal-listed, threatened species, such as the Preble's meadow jumping mouse.

Options Considered But Not Selected

Other options range from doing nothing to intensive monitoring and testing of the groundwater and surface water of Rock Creek. The No Action alternative could result in negative impacts going undetected, therefore causing harm to the Preble's meadow jumping mouse, and other native animal and plant species. Water rights would not be obtained for Rock Creek, which could severely limit the options for water quantity management in the future.

5.4 Air Quality

Preferred Action: No Action

No negative long-term impacts would occur from implementation of the proposed action. Air quality monitoring and management are currently done as determined by law and specific agreements between Rocky Flats and the regulatory agencies. Monitoring less than the existing level would result in noncompliance with State and federal law. Increased monitoring would be unnecessary as the current level of monitoring is based on statistical requirements for accuracy. Continued reclamation of roads and bare areas will further reduce the likelihood of PM-10 and TSP generation as fugitive dust.

Options Considered But Not Selected

Negative environmental impacts would not result from enhanced air quality projects, such as using dust suppressant (that has been assessed for impacts to vegetation and water) on roads, prohibiting traffic or no implementation of occasional prescribed burns. Prohibiting all traffic is not a viable alternative. Access is necessary for environmental programs and maintenance activities. Traffic is already kept to a minimum and is strictly controlled in the Buffer Zone, including Rock Creek Reserve.

5.5 Biological Resources/ Flora and Fauna

Proposed Action

The proposed action would provide management of faunal and floral resources on Rock Creek Reserve on an integrated basis. The Plan uses an ecosystem management strategy to achieve biological diversity conservation. It emphasizes the use of native species and the monitoring and control of invasive species, as emphasized in the Presidential memorandum to the heads of federal agencies (Office of the President, 1994) and Executive Order 13112, Invasive Species. The Plan incorporates biodiversity principles and analyzes impacts to biodiversity as outlined in the Council on Environmental Quality's 1993 report entitled Incorporating Biodiversity Considerations Into Environmental Impact Analysis Under the National Environmental Policy Act. Implementation of this Plan will have positive effects on the biodiversity of Rock Creek Reserve.

The plan includes specific actions to inventory, monitor, and manage the watershed and semi-arid ecosystem of Rock Creek Reserve, including wildlife habitat, native species introductions, protection of increasingly rare native plant communities, and an integrated approach to noxious weed management. These programs include monitoring a variety of plants and animals, wetlands protection, prairie ecosystem management to maintain and improve wildlife habitat, and means to detect and reduce impacts to surface waters.

This Plan incorporates by reference the Rocky Flats Environmental Technology Site Vegetation Management Plan Environmental Assessment. Impacts from vegetation management practices are analyzed within that document, and it provides the impact analysis for many of the actions analyzed within this Plan. Nothing in this Plan is to be interpreted as a diminishment of the policies, programs and projects as outlined in that EA.

Options Considered But Not Selected

Management options selected within the Plan are the result of years of on-the-ground research, monitoring and management of biological resources in the Rocky Flats Buffer Zone as well as consultations with local, regional, and federal natural resources management professionals. The Plan package represents the best recommendations of Rocky Flats natural resources personnel as well as those of cooperating partner agencies.

Therefore, the other options, as a total package, would likely produce a lesser degree of ecosystem-wide benefits or be detrimental to some biological resources. Below are a few examples of "options considered but not selected" and their likely effects:

- Rock Creek Reserve could be managed with no monitoring of natural resources, which has the potential for ecological harm to the Rock Creek Reserve by allowing potential impacts to go undetected. This would not meet stewardship goals, support biological diversity, or satisfy requirements of threatened and endangered species management.
- Rock Creek Reserve could be managed for production of game species. This could reduce biological diversity, especially those species that require unique habitats.

- Rock Creek Reserve's fish species could be managed for the existing, non-native species which occur there now, with no removal of exotics or introductions of species native to the area. This would not support biodiversity, a primary goal of this Plan.
- Land managers could manage exotic invasive species on Rock Creek Reserve without the benefit of enhanced integrated pest management strategies. This has the potential to reduce biological diversity in the long run and would be detrimental to native species of vegetation through continued reliance on chemical control.
- Expansion of the Rock Creek Reserve boundary could be configured differently, or not changed at all. This would not provide for the ecosystem management unit approach, and would promote management of fragmented habitats.

The "options considered but not selected" alternative would likely produce a less-balanced effect on biological resources than the proposed action. However, the degree of effect would be dependent upon objectives of natural resources management and the degree of implementation applied.

This alternative sometimes would emphasize reaction to problems rather than a proactive approach to natural resources management. This approach would emphasize site-specific responses to environmental compliance. Additional studies, surveys and monitoring of natural resources, and long term programs, would be lower priority. A reaction-to-problems approach would probably achieve compliance with laws and agreements, but it would not provide as many benefits to biological resources. Species level management would promote management of one or a few species, and could cause harm, or neglect of others. Examples include predator control, plantings of specific host plants, and habitat enhancement efforts targeting only limited areas. This could have a negative impact on predator/prey relationships, distribution of native plants and communities and create artificial habitats that would require intensive management to maintain.

The "no action" alternative is preferred in some cases. Where it is not, no action could result in lack of information for good decision making, such as no monitoring for water quantity or quality, or data to help formulate access and recreation plans. No action could lessen biodiversity goals if the reintroduction of native wildlife species is not accomplished. No action would not allow for the enhancement of the biological control of certain noxious weeds, and continue or increase the reliance on herbicide use.

5.6 Cultural Resources

Preferred Action: No Action

The proposed implementation of the Plan is consistent with existing cultural resources protection policy as documented in the CRMP, and as required by law. The Plan includes steps to protect cultural resources that may be discovered on Rock Creek Reserve during implementation of this plan. Ground-disturbing natural resources projects have the potential to uncover sites even in surveyed areas. The review of potential eligible sites by an archaeologist and the NEPA process are used to ensure protection of known and potential cultural resources while implementing the Plan. Study and possible stabilization of all or part of the Lindsay Ranch will not affect cultural or other resources and could preserve a locally

recognized point of interest. Activities undertaken in Preble's meadow jumping mouse habitat will undergo review by the Service, and all other management policies protecting natural resources will be complied with.

Options Considered But Not Selected

DOE must comply with laws and policies related to protection of cultural resources. Other options for monitoring and inventorying would be to conduct more in depth surveys than required by law, e.g., subsurface testing (testing below the surface for buried cultural deposits before a project is implemented). This option is not necessary since the CRMP identifies the Buffer Zone as a low-density (low probability) area for cultural resources. These options could negatively impact subsurface cultural deposits that otherwise may have been left unharmed. Other options would not apply in this case since Rocky Flats has undergone archaeological surveys and historic assessments for the entire Site.

5.7 Land and Infrastructure Maintenance

Preferred Action: No Action

Implementation of the proposed actions would have no long-term negative environmental impacts, and some short-term negative impacts (dust, erosion) could result. Positive impacts would result from the control of noxious weeds, removal of fences and rehabilitation of roads and trails. Working with off-site land managers to cooperate in land maintenance activities would continue to be beneficial. As part of the annual Vegetation Management Plan, prescribed burning and use of herbicides have been environmentally assessed in accordance with NEPA and a Finding of No Significant Impact was published.

Options Considered But Not Selected

Other options such as too widespread or too frequent use of fire, and no use of fire have the potential for negative environmental impacts in both the short term and long term. Cultural sites could be damaged. Special status and other sensitive species could be at risk and erosion could increase from the large areas impacted and/or the frequency of the burning. Increased herbicide use could cause ecological damage through the cumulative effects on non-target species. No use of fire would remove a very important tool proven to benefit prairie species from the land manager's available options.

5.8 Socioeconomics

Proposed Action

Based on the reception of primarily positive comments regarding the formation and expansion of Rock Creek Reserve, it is anticipated that the existence and management of Rock Creek Reserve is socially and economically acceptable to the surrounding communities. Rock Creek Reserve was created as a natural

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protected area to preserve valuable plant communities and wildlife, and although it is not open to unlimited public access, it serves many of the functions similar to surrounding open space areas, such as: viewshed values, buffer between developed areas and protection of environmental features. It has been shown through many public comments on proposed land developments, allocation of taxes for land purchases, and general uses of the open space land for recreation, that the general public places great value on preserving large tracts of land for those purposes.

No negative impacts to the socioeconomics of the area result from this Plan. Public access above the current level is not applicable for Rock Creek Reserve for the life of this Plan. Positive impacts will result from the initiation of an Access and Recreation Study and contaminants studies to ensure the future use of the land and public access will be integrated with environmental goals and consider public health. Expansion of the boundary of Rock Creek Reserve will result in positive impacts as discussed in Section 5.1.

Options Considered But Not Selected

For the intended life of this Plan, there are no other options that are applicable. Continued need for a safety buffer zone by Rocky Flats requires continued limitation of public access until nuclear material is removed. In addition, the existence of a federally-listed, threatened species will continue to require protection of the habitat. If conditions warrant, or Congress mandates it, the area could become part of the USFWS Refuge System. If refuge designation occurs, management direction may change to meet the needs of the Refuge program. These options cannot be analyzed at this time since the future use of the Site has not been decided, and current restrictions are in place. Public comments have mainly focused on hiking and horse trails through the site. These will be analyzed in the study to be initiated under the Proposed Action. "No action" would not allow for the study and planning of future public access to the Site and contaminants studies. This would not be conducive to good public access management decisions. Not expanding the boundaries of Rock Creek Reserve would not allow for good watershed management techniques since only part of the watershed would be included in the Rock Creek Reserve as described in Sections 1.3.2 and 5.1.

5.9 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental impacts of their program, policies, and activities on minority or low-income populations in the surrounding community. This assessment has not identified any adverse or beneficial effects unique to minority or low-income populations in the affected area.

5.10 Irreversible, Irretrievable Commitment of Resources

No irreversible or irretrievable commitment of resources is part of this Plan. The intent of this Plan is to enhance and protect natural resources to the fullest extent possible given Site mission considerations and funding levels.

5.11 Cumulative Impacts

No negative cumulative impacts are anticipated to result from the implementation of this Plan. On the contrary, positive cumulative impacts should result over time. Noxious weed control efforts using increased biological and other non-chemical means should help control weeds with less dependence on herbicides. The spread of increased numbers and species of biological control agents will benefit the entire region. Introductions of native species will help restore the biodiversity of those ecosystems. Preble's meadow jumping mouse continued conservation and habitat enhancement could have positive cumulative impacts by contributing to the recovery efforts which could lead to possible de-listing of the mouse in the future. The management of Rock Creek Reserve's natural resources now will ensure the availability of quality lands for the future ownership of those lands, currently being discussed as open space or National Wildlife Refuge.

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SUMMARY OF IMPACTS
Figure: 11

Section	Negative Impacts	Positive Impacts
Boundary Expansion	None	• Provide a more definable unit (watershed) for an ecosystem management approach.
Topography, Physiographic, Geology, and Soils	• Minimal short-term erosion from road maintenance activities.	• Use of water bars, etc. to control water flows on, or across, roads will reduce associated soil erosion. • Re-seeding with native grass species along roads where maintenance has exposed bare soils will reduce soil erosion. • Implementation of vegetation management (fire, herbicides) as analyzed in the Vegetation Management Environmental Assessment will provide long-term benefits.
Water Resources	• Short-term impacts may occur from vehicle access to monitoring well sites if	• Selected increased monitoring of surface and groundwater will assist in earlier

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	soil erosion occurs or gasoline spills occur and enter the stream channels.	detection of impacts from adjacent activities. • Monitoring of seep and spring flows will assist in early detection of flow reduction which could impact floral and fauna species. • Determination of minimum flows necessary to support the habitat will provide positive affects on habitat management planning activities.
Air Quality	• Soils bared by road maintenance activities could produce short-term impacts from wind erosion until reclamation is completed. • Short-term impacts could occur from prescribed burning activities, however these have been analyzed in the Vegetation Management Environmental Assessment which would apply to the Rock Creek Reserve.	• Reclamation of bare soil areas and implementation of activities analyzed in the Vegetation Management Environmental Assessment (prescribed burning, herbicide application) will provide long-term benefits through maintenance of a robust native vegetation cover.
Biological Resources	• Short-term impacts would occur with the removal of bass from	• Long-term positive effects occur from maintaining a current

	Lindsay Pond, however introduction of native species such as the northern Redbelly Dace will be a positive long-term benefit to the ecosystem.	flora inventory and library so species composition changes can be noted as a reflection of the ecosystem health. • Continuation of periodic specific surveys for Ute Ladies Tresses Orchid and Butterfly Weed will provide a benefit of early detection if they do naturally occur. • Long-term benefits, as analyzed in the Vegetation Management Environmental Assessment, for the native floral & fauna arise from aggressive noxious weed control. • Long and short-term benefits occur from selective use of prescribed burning on the vigor of native plant communities and uncontrolled fire hazard situations. • Removal of unnecessary roads and fences will be a long-term benefit as it lessens the fragmentation of the grasslands. It reduces the amount

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		of bare soils where erosion can occur and noxious weeds become established. • Increased use of approved biological controls on selected weed species in conjunction with other, more short-term control efforts, will have a long-term positive effect on the plant communities. • Installation of bat houses will be a benefit to assist in establishing a stable regional population of bats. • Installation of bird nesting boxes for several species will benefit the region-wide stabilization of those bird populations. • Monitoring and maintenance of water and vegetation resources will provide long-term protection for the federally listed Preble's Meadow Jumping Mouse. • Coordination with the Colorado DOW for introduction of species such as the

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		Plains Sharp-tailed grouse could broaden the existing range of these species and provide greater population stability.
Cultural Resources	• Short-term impacts may occur from stabilization processes involving the Lindsay Ranch(vehicle and foot traffic, construction material storage, etc.)	• A long-term benefit may result from possible stabilization of Lindsay Ranch structures through coordination with interested stakeholders.
Lands & Infrastructure Maintenance	None	• Noxious weed control, road maintenance, fence and road removal will provide positive benefits to the natural resources.
Socioeconomics	None	• Initiation of an Access and Recreation Study, coordinated with local groups and governments, will result in public trail routes and options available on a regional basis to facilitate public use. In addition, it will define access needs for easement holders such as, water ditches and power lines.
Environmental Justice	None	None

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6.0 CONCLUSIONS

The Department of Energy and the U.S. Fish and Wildlife Service should implement an Integrated Natural Resource Management Plan for Rock Creek Reserve located in the Buffer Zone at the Rocky Flats Environmental Technology Site for the period 2001-2006 (or until closure) to manage natural resources, as well as to support the Rocky Flats cleanup and closure mission, and compliance with various environmental laws. Full implementation of the plan will also ensure the continued quality of Rock Creek Reserve's natural resources for the ultimate re-use and land ownership decisions yet to be made.

Implementing the Rock Creek Reserve Integrated Natural Resources Management Plan would not result in detrimental impacts. Minor adverse impacts on wildlife habitat will be mitigated by full implementation of restorative and proactive wildlife management provisions in the Plan. Implementing the Plan would provide beneficial impacts to soil, water, and biological resources, including federally-listed, threatened and endangered species. Implementation would allow the DOE and USFWS to manage the natural resources of Rock Creek Reserve in an effective manner to meet current and future conservation needs.

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APPENDIX 1

INTERAGENCY AGREEMENT
Number DE-AI34-99 RF 01776
between the
U.S. FISH WILDLIFE SERVICE
and the
U.S. DEPARTMENT OF ENERGY
ROCKY FLATS FIELD OFFICE

For
THE ROCK CREEK FISH AND WILDLIFE COOPERATIVE MANAGEMENT AREA
AT THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

PART A. INTRODUCTION

I. PURPOSE

This Interagency Agreement (IA) between the U.S. Fish and Wildlife Service, Department of the Interior (the Service) and the U.S. Department of Energy, Rocky Flats Field Office (RFFO), is hereby entered into under the authority of the Economy Act, 31 U.S.C. section 1535. This IA identifies technical services to be provided by the Service for the purpose of conserving, protecting, developing, and managing the habitat on that approximately 800 acre portion of the Rocky Flats Environmental Technology Site's (Site's) Buffer Zone designated by RFFO as the Rock Creek Reserve, by establishing the Rock Creek Fish and Wildlife Management Area. Among other values, the Rock Creek Reserve is a unique riparian area, is inhabited by the threatened Preble's Meadow Jumping Mouse, and contains expanses of xeric tall grass prairie, which has been nearly extirpated along the Front Range.

The accomplishment of the Site's mission involving the management of nuclear materials, including health and safety and security, conducted pursuant to the authority of the Atomic Energy Act, as amended, 42 U.S.C. section 2011, *et seq.* (AEA) is the primary purpose for which RFFO exercises its custody and control of the Site. The Service and RFFO acknowledge that this AEA mission has priority with respect to decisions and actions concerning fish and wildlife cooperative management taken pursuant to this IA. They further acknowledge that the Service is charged with an independent, non-delegable statutory duty with respect to the Endangered Species Act, 16 U.S.C. section 1531, *et seq.* (ESA) for all federally listed species at the Site. This IA anticipates additional opportunities to protect, enhance, and restore fish and wildlife resources as part of the responsibilities of RFFO.

II. BACKGROUND

The Site is located in Northern Jefferson County, approximately 15 miles northwest of downtown Denver. From its construction in the early 1950's, the original 2,520 acre Sire developed into an industrial complex consisting of approximately 700 facilities which were used as manufacturing, chemical processing, laboratory, support, research and development, and administrative facilities. The main production and support facilities were located near the center of the Site, commonly referred to as the Industrial Area, occupying about 385 acres. From1972 through 1976, a surrounding 3,930 acres was acquired (including the approximately 800 acres comprising the Rock Creek Reserve

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area) to function as a Buffer Zone. In certain instances, the acquisition was of the surface estate interest only. Non-Federal land adjacent to the Buffer Zone is still utilized primarily for agricultural, quarrying, and open space purposes. Since the Site was constructed, surrounding multi-use development has grown closer, and the Denver area population has increased to the point where currently about 2.5 million people live within a fifty mile radius of the Site.

The Site was listed as a National Priorities List (NPL) Site, pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. section 9601, *et seq.*, in September 1989. The Buffer Zone, including the Rock Creek Reserve Area, has subsequently been investigated for hazardous substance contamination. This investigation has shown that the Rock Creek Reserve Area and surrounding Buffer Zone is not contaminated by hazardous substances. It is RFFO's intention to pursue an NPL Site partial delisting for these portions of the Site. Pursuant to CERCLA, 42 U.S.C. section 9620, a federal facility interagency agreement, known as the Rocky Flats Cleanup Agreement (RFCA) was entered into on July 19, 1996 by RFFO, the U.S. Environmental Protection Agency, Region VIII (EPA) and the Colorado Department of Public Health and Environment (CDPHE). RFCA established a cleanup and closure target of 2015. Shortly thereafter, the Department of Energy's ten-year planning initiative began and cleanup plans for closure were further refined. Since cleanup for closure will now be completed within the relative near term, there is a great deal of interest in the physical condition of the Site after completion of activities required pursuant to RFCA (end state) and in future alternative uses after the end state is reached.

Discussions with stakeholders on future use began in early 1994. These discussions led to formation of the Rocky Flats Future Site Use Working Group (FSUWG). The FSUWG spent approximately a year gathering data from the Site and the stakeholder community and preparing recommendations for DOE. The FSUWG made formal recommendations to DOE in a July 1995 report. Consistent with the recommendations of the FSUWG, RFCA has a Vision statement and Preamble that foresee open space in the Buffer Zone and light industrial uses in the Industrial Area as potential alternative uses of the Site after the end state is reached.

On May 13, 1998, the Preble's Meadow Jumping Mouse (mouse) was listed as a threatened species pursuant to the Endangered Species Act, 16 U.S.C. section 1531, *et seq.* (ESA). Because the Site contains known and potential habitat for the mouse, the Service, RFFO, EPA, CDPHE and the Colorado Department of Natural Resources entered into a Memorandum of Agreement for Cooperation of Endangered Species Act Compliance with Activities at the Rocky Flats Environmental Technology Site, effective February 26, 1999.

Section 3153 of Public Law 104-201, The National Defense Authorization Act for Fiscal Year 1997 (NDAA), required RFFO to develop future use plans for the Site, covering the period of 50 years beyond 1997. RFFO prepared "The Rocky Flats Environmental Technology Site Future Use Stakeholder Involvement Process" (Process Document) in September 1998, in response to this requirement. The Process Document was submitted to Congress in October 1998. The Process Document recognizes RFFO's obligation to

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consult with the Rocky Flats Citizen's Advisory Board, affected local governments, including any local future use redevelopment authorities, and appropriate State agencies (Stakeholders) as required by the NDAA.

Section III of the Process Document summarizes the Buffer Zone status as follows: "Since the cessation of nuclear weapons production in 1992, Stakeholder interest in the cleanup, closure and future uses of the Site has been high. Based on current community consensus, Open Space of some form is the likely ...[use for the Buffer Zone after the Site's end state is reached]. Consistent with the RFCA and all stakeholder recommendations to date, the community is still seeking consensus on the range of specific open space options." This IA will help to preserve the valuable ecological resources of the Rock Creek Reserve area through the wildlife and habitat management expertise of the Service, thus protecting and enhancing the range of options.

In light of the above, this IA is designed to recognize the consensus that the Buffer Zone should be preserved for open space uses, by establishing the Rock Creek Fish and Wildlife Cooperative Management Area for the Rock Creek Reserve Area of the Buffer Zone. It also designed to recognize that RFFO needs information and assistance that can be provided through the expertise of the Service, in order to continue the Site's future use consultative process. Finally, it is designed to further a coordinated approach toward fulfilling RFFO's compliance obligations under diverse legal requirements.

PART B. ACCESS TO THE ROCK CREEK RESERVE.

I. <u>DESCRIPTION</u>

The RFFO, acting as the federal agency with jurisdiction, custody and control over the Site, hereby grants to the Service access to and use of the Site area designated as the Rock Creek Reserve. The Rock Creek Reserve encompasses an area of approximately 800 acres lying within Jefferson and Boulder Counties, State of Colorado, as described in the Exhibit dated May 11, 1999 attached hereto.

II. <u>USE OF THE PROPERTY</u>

The Service's use of the property shall be to cooperatively manage the Rock Creek Fish and Wildlife Cooperative Management Area and to conduct the activities described in the Statement of Work Part of this IA. It is the understanding of both RFFO and the Service (the Parties) that RFFO requires that the use of the property must be consistent with RFFO's continuing need for the Rock Creek Reserve area to function as a safety and security buffer for RFFO's ongoing activities involving the management of nuclear materials on the Site pursuant to its authority under the AEA. The parties believe this use for AEA purposes can be achieved in a manner consistent with the fish and wildlife cooperative management objectives of this IA. Should the Service determine that any use or action may adversely affect a listed species or otherwise violate the ESA, the Service will immediately advise RFFO and attempt to address the issue in a prompt and cooperative manner. To ensure that this requirement is met the Service agrees to manage the Rock Creek Fish and Wildlife Cooperative Management Area consistent with the

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RFETS "Natural Resources Management Policy," Rev. 0, 9/30/98, (NRMP), Attachment 1 hereto. Future management of the Rock Creek Reserve will be in accordance with an Integrated Natural Resources Management Plan prepared by the Service, which shall be subject to approval by RFFO, which when so approved shall supersede the NRMP.

III. ACCESS TO THE PROPERTY

The Service is hereby granted access to the designated Rock Creek Reserve area, established as the Rock Creek Fish and Wildlife Cooperative Management Area of the Buffer Zone. In accordance with a Plan for Coordinated Access to be prepared by the Service in consultation with and approved by RFFO, the Service shall provide for appropriate access to the Rock Creek Reserve by coordination with the RFFO Technical Representative identified in this IA. The Plan for Coordinated Access shall identify and provide for access of those employees, contractors or subcontractors of RFFO or others entering under the AEA authority of RFFO for RFFO approved purposes. The Plan for Coordinated Access will, among other things, ensure that the Technical Representatives are informed of ongoing activities and will minimize potential conflicts regarding access for implementation of this IA and other RFFO approved purposes. RFFO shall provide appropriate training and access badges to allow the Service's staff or representatives assigned to perform the IA activities unescorted access to the Rock Creek Fish and Wildlife Cooperative Management Area.

IV. ENVIRONMENTAL RESPONSIBILITIES

The authority granted to the Service in this IA is limited to the cooperative management with the RFFO of natural resources pursuant to the NRMP and the Integrated Natural Resources Management Plan to be prepared by the Service and approved by the RFFO. Nothing herein shall be construed as authorizing the Service to manage or conduct any operations within the Site's Buffer Zone, including the Rock Creek Cooperative Fish and Wildlife Management Area, with respect to any hazardous substances or other contamination present at the time this agreement becomes effective, or otherwise related to RFFO activities or activities of third parties not under the direction or control of the Service. RFFO acknowledges that it shall have exclusive responsibility for any subsequent releases of hazardous substances originating from such contamination, whether or not such releases result from actions of the Service or others under the Service's authority for the purposes of implementing this IA. RFFO expressly recognizes that it shall maintain exclusive federal responsibility for all costs associated with any investigation of Site conditions and any cleanup, removal or remedial action or other compliance, closure, maintenance, restoration, or cleanup related activity required by federal, state or local laws or regulations which arise as a result of releases of hazardous substances (hazardous substances, for the purposes of this IA shall include, but not be limited to, nuclear material under RFFO's AEA authority, any hazardous or toxic substance, material or waste, or oil products or their derivatives) which is existing on the Rock Creek Fish and Wildlife Cooperative Management Area, on the effective date of the IA or otherwise resulting from Site activities, including the activities of RFFO employees, contractors, subcontractors or others entering under the AEA authority for RFFO approved purposes. The Service recognizes that it may be asked by RFFO to

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contribute a portion of the costs associated with hazardous substance removal or remedial action required by applicable federal, state or local laws or regulation, which may arise solely as a result of the Service's activities, or the activities of others under the direction of the Service, in the Rock Creek Fish and Wildlife Cooperative Management Area. In such event, the parties agree to negotiate in good faith to determine whether the Service will contribute a share of such costs or to otherwise resolve the issue.

V. PERMITS AND LICENSES

The Service will abide by all federal, state and local laws and regulations applicable to the occupancy and operation of the Rock Creek Fish and Wildlife Cooperative Management Area, as appropriate. The Service will ensure that all operations conducted by it or by those present under the Service's authority are protective of the environment, associated natural and cultural resources, and of human health and safety. Each party will identify to the other any licenses, permits, certifications or authorizations that it determines to be required in order to comply with this paragraph. The parties shall work cooperatively with the permitting authority to decide the appropriate action to take.

PART C. STATEMENT OF WORK

I. PARTIES' TECHNICAL REPRESENTATIVES

The Parties designate the following Technical Representatives for the purposes of administering and implementing this IA. Any notices or reports or other documents to be furnished by each Party to the other pursuant to this IA shall be sent by first class mail to the named Technical Representative herein. Any other means of transmittal may be used if the receiving representative acknowledges receipt in writing.

a. The Service:

U.S. Fish and Wildlife Service
Colorado Fish and Wildlife Assistance Office
755 Parfet St., Room 496
Lakewood, CO 80215
Project Officer: Bruce Rosenlund, Project Leader
Colorado Fish and Wildlife Assistance Office
Telephone: 303-275-2393

b. RFFO:

U.S. Department of Energy
Rocky Flats Filed Office
P.O. Box 928
Golden, CO 80402
Program Officer: John Rampe, Deputy Assistant Manager
Environment and Infrastructure
Telephone: 303-966-6246

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The RFFO Technical Representative will provide technical direction to the Service regarding the activities conducted under this IA that do not change the scope, schedule or cost of those activities. A Party may name a new Technical Representative at any time upon 10 days written notice to the other Party's Technical Representative.

II. ASSOCIATED AGREEMENTS

The Memorandum of Agreement for Cooperation of Endangered Species Act Compliance with Activities at the Rocky Flats Environmental Technology Site, effective February 26, 1999 (MOA) between the Parties and other signatories, remains in full force and effect. Funding under this IA shall not be used by the Service to provide funding to any third party to perform activities under the MOA without express written authorization of RFFO.

III. ACTIVITIES TO BE PERFORMED

The parties shall cooperate in implementing the Site's NRMP and the succeeding Integrated Natural Resources Management Plan in the Rock Creek Fish and Wildlife Cooperative Management Area. The Service shall propose changes that may be recommended based upon its performance of the IA, for inclusion in revisions to the NRMP prior to completion of the Integrated Natural Resources Management Plan.

The Service will, consistent with Service Policy and within limitations of funds and personnel, provide management services and other assistance within the scope of work agreed to on an annual basis under Part D of this IA for the following purposes:

1. Ongoing ecological management of the Rock Creek Fish and Wildlife Cooperative Management Area.

2. Review for adequacy existing Site plans related to the Rock Creek Reserve and the Buffer Zone.

3. Prepare and update the Coordinated Access Plan for the Service's representatives.

4. Cooperate with the Site to maintain and enhance mouse populations including habitat maintenance.

5. Provide vegetation management assistance to maintain biodiversity and minimize incursion of exotic weed species.

6. Maintain and enhance the wildlife and habitat values in the Rock Creek Reserve for native species.

7. Evaluate the ecological resources and values of the Rock Creek Reserve, with a goal of formulating recommendations regarding the long term federal management of the Rock Creek Reserve as a protected area after RFFO's custody, control and

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stewardship terminate, including but not limited to inclusion of the Rock Creek Reserve into the National Wildlife Refuge System.

8. Assist RFFO in a consultative process with the general public, stakeholders, and other agencies regarding the preservation of the Rock Creek Reserve under federal management in the future. The consultative process will include sharing of information, discussions and consideration of comments provided by the general public, stakeholders, and other agencies during consultation.

9. Consult with RFFO regarding the ecological management of the Buffer Zone in general and its relationship to the ecological management of the Rock Creek Fish and Wildlife Cooperative Management Area.

Parts of the information or studies resulting from these activities may be applicable for use by RFFO to meet its consultation obligations under section 7 of the ESA. It shall be the responsibility of RFFO to conduct any analysis required pursuant to the National Environmental Policy Act, 42 U.S.C. section 4321, *et seq.* (NEPA) for any proposed action that may result from implementation of this IA. The foregoing activities to be conducted by the Service will assist RFFO in meeting its NEPA obligations.

IV. DELIVERABLES

The Parties agree that the following deliverables will be due on the dates indicated.

1. Plan for Coordinated Access, including Training Requirements for Service representatives. July 1, 1999.

2. Complete review and provide written comments on current management policies, plans and practices applicable to or affecting the Rock Creek Fish and Wildlife Cooperative Management Area. January 4, 2000.

3. Provide written recommendations for changes and implementation strategies for the future Integrated Natural Resources Management Plan for the Rock Creek Fish and Wildlife Cooperative Management Area. January 4, 2000.

4. Report on the nature and extent of information concerning biota, habitat values, and other relevant criteria necessary for further consideration pursuant to the Service's planning and evaluation process for inclusion in the National Wildlife Refuge System. The report is also to include any other recommendations the Service may have with respect to possible alternative uses of the Rock Creek Reserve. January 4, 2000.

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PART D. ADMINSTRATIVE

I. ESTIMATED FUNDING AMOUNT FOR PERIOD OF PERFORMANCE

This IA shall be for the period May 17, 1999, through September 30, 2006. The performance period may be extended or shortened by mutual written agreement of the parties. Funding will be provided on an annual basis prior to the beginning of each performance period. Annual performance periods shall begin on May 17 and end on May 16 each year, except the last period, which shall end on September 30, 2006. Estimated performance period annual program budgets (not including the Service's overhead charges) necessary to implement this IA are as follows:

Period Beginning	1999	2000	2001	2002
Labor + Benefits	$74,432	$78,005	$81,125	$84,370
Materials, Supplies and Travel	$20,000	$20,000	$20,000	$20,000

Period Beginning	2003	2004	2005	2006
Labor + Benefits	$87,745	$91,255	$94,905	$49,351
Materials, Supplies and Travel	$20,000	$20,000	$20,000	$10,000

II. FINANCIAL ADMINISTRATION

On the effective date of this agreement, or as soon as possible thereafter, RFFO shall issue the Service a Department of Energy Funds-Out Interagency Agreement with appropriate funding and administrative General Provisions/Requirements acceptable to RFFO and the Service, incorporating this IA as the statement of work. The Parties may revise or amend this IA at any time. Revisions or amendments shall be in writing signed by the Parties.

The Parties' Technical Representatives shall meet at least annually to review progress and to identify and reach agreement on specific future Deliverables that are expected to result for each of the Activities to be Performed. Such annual agreements shall ensure that these Deliverables are to be performed within the funding amounts identified in this IA. The Funds-Out Interagency Agreement will be modified to authorize the funding to implement the annual agreement.

Any permit and/or license fees attributable to the Service's activities in Rock Creek Fish and Wildlife Cooperative Management Area shall be reimbursed if incurred by the Service within the estimated funding amounts agreed to in this IA.

III. REMOVAL OF PROPERTY UPON TERMINATION

Following a termination of this IA the Service shall remove from the Rock Creek Fish and Wildlife Cooperative Management Area any personal property and equipment installed by the Service or its representatives, that it can reasonably remove. The method of removal of structures, whether real or personal property, is subject to RFFO approval which will not be unreasonably withheld.

If either Party terminates the IA the Service shall remove any personal property and equipment from the Rock Creek Fish and Wildlife Cooperative Management Area by the effective date of the termination.

In the event of a change in mission at the Site, which might require termination of access, RFFO shall endeavor to provide notice of the anticipated change to the Service at the earliest practicable point. Following a termination by RFFO under this authority the Service shall have 180 days to remove any personal property and equipment from the Rock Creek Fish and Wildlife Cooperative Management Area.

The Service is responsible for the disposition of any personal property and equipment removed under this section.

IV. APPROVAL OF MANAGEMENT PLANS

To ensure that the terms and conditions of this IA will be met by the Service, the Service agrees to involve RFFO early in the development of all plans and policies specific to the Rock Creek Fish and Wildlife Cooperative Management Area. RFFO expressly reserves the rights of approval over any management plan or policy developed by the Service regarding the management of the Rock Creek Fish and Wildlife Cooperative Management Area. No Service management plan or policy, nor any change to approved Service plans or policies, shall be effective until RFFO has issued written approval. Such approval shall not be unreasonably withheld. Present and future uses of the Rock Creek Fish and Wildlife Cooperative Management Area under this IA shall be consistent with the RFFO approved Integrated Natural Resources Management Plan.

V. REASSIGNMENT

Neither this IA, nor any interest herein nor claim thereunder may be assigned nor transferred by the Service except as expressly authorized in writing by RFFO.

VI. **EFFECTIVE DATE**

The effective date of this IA shall be the date on which the last Party signs this IA. This IA shall remain in effect for all Parties, subject to the Modification and Revisions and Termination sections herein.

Ralph O. Morganweck

Ralph O. Morganweck, Regional Director, Region 6
U.S. Fish and Wildlife Service

5-17-99
Date

Jessie Roberson

Jessie M. Roberson, Manager,
Rocky Flats Field Office, U.S. Department of Energy

May 17, 1999
Date

APPENDIX 2

DECISION DOCUMENT

(To be inserted upon approval)

APPENDIX 3

EXECUTIVE SUMMARY

The Background Soils Characterization Program (BSCP) study followed the Data Quality Objective (DQO) guidelines established by the U.S. Environmental Protection Agency (EPA). A work plan was prepared and approved by the U.S. Department of Energy (DOE), the EPA, and the Colorado Department of Public Health and Environment (CDPHE).

An exploratory data analysis (EDA) performed during the development of the *Background Soils Characterization Plan* (DOE, 1994) indicated that two sampling efforts were appropriate to characterize background surface soils and augment the existing background data set (i.e., Rock Creek) for the chemicals in the vicinity of the Rocky Flats Environmental Technology Site (RFETS). Those sampling efforts were completed as follows:

- Group 1 (Metals, Naturally Occurring Radionuclides, and Organic Compounds): Twenty samples were collected just north of RFETS from soils that are similar in topography, parent material, and historic use to soils on RFETS. These samples were analyzed for naturally occurring radionuclides (uranium and radium isotopes), metals and selected inorganic constituents, semivolatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs).

- Group 2 (Fallout Radionuclides): Fifty samples were collected from remote (offsite) locations along the Colorado Front Range for measuring activities of fallout radionuclides (americium-241, cesium-134, cesium-137, strontium-89+90, and plutonium-239+240) in surface soils.

Summary statistics for metals and certain other inorganic constituents, fallout radionuclides, SVOCs, pesticides, herbicides, PCBs, and selected physical parameters for background surface soils sampled and analyzed in the BSCP study are presented in Tables E-1 through E-3. Summary statistics for the Rock Creek study are presented in Tables E-4 through E-6. Discussion of these results and a comparison of the BSCP data set with the Rock Creek data set (which has been used as the background data set to date), are presented in Section 4.0 of this report. Data from the BSCP and Rock Creek studies were also compared with data from existing regional background studies.

Despite minor differences between the Rock Creek and BSCP data for naturally occurring (i.e., Group 1) analytes, both the Rock Creek and BSCP data sets appear to be subsets of the "true" background population. The BSCP results for Group 1 analytes verify the validity of the Rock Creek data as representative of background conditions for these analytes in surficial soils.

Although the mean and maximum activities for plutonium in Rock Creek samples are slightly higher than those for the BSCP samples, the Rock Creek data are within the

range of a recently completed background study by Colorado State University. When the error terms for the analyses are considered (see Appendix B for data printout), there is little real difference in the values.

Either the Rock Creek or BSCP data may be used for future comparison studies. The BSCP data set may be preferred because of the well-documented work plan, which followed EPA's DQO process, and the exploratory data analysis, which determined the sample size necessary for the chemical characterization of surficial soils.

An additional objective not included in the work-plan development, but considered helpful for present and future remediation projects determined the mass-isotope ratio of plutonium-239/plutonium-240 for 12 remote (i.e., Group 2) samples. These results are included as Appendix A of this report. The average plutonium-240/plutonium-239 ratio for the 12 samples was 0.155 +/- 0.019; the average plutonium-241/plutonium-239 ratio was determined to be 0.0030 +/- 0.0004. These mass-isotope ratios for regional fallout for plutonium can be used in future studies at RFETS, as well as in other regional studies of fallout radionuclides.

Because the plutonium-240/plutonium-239 ratio for fallout (0.155) is significantly different than the that for plutonium processed at RFETS (240/239 ratio = 0.065), determination of the plutonium-240/plutonium-239 atom ratios in soil samples could be used to separate the plutonium into its global fallout component and its RFETS component.

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TABLE E-1

SUMMARY STATISTICS FOR BSCP GROUP 1 ANALYTES: METALS AND NATURALLY OCCURRING RADIONUCLIDES

Analyte	Distribution	Count (n)	% Non-Detect	Min	Max	Mean	Standard Deviation	Tol Fact	99/99 UTL[a]	Units
Aluminum	Normal	20	0	4050	17100	10244	3329	3.8316	22999	mg/kg
Antimony	X	20	96	.19U	0.47	X	X	3.8316	X	mg/kg
Arsenic	Normal	20	0	2.3	9.6	6.09	2	3.8316	13.75	mg/kg
Barium	Normal	20	0	45.7	134	102.4	19.43	3.8316	176	mg/kg
Beryllium	Normal	20	0	0.24	0.9	0.66	0.153	3.8316	1.25	mg/kg
Cadmium	Nonparam	20	39	.295U	2.3	0.714	0.449	3.8316	2.335	mg/kg
Calcium	Normal	20	0	1450	4550	2969	749	3.8316	5839	mg/kg
Cesium	X	20	100	6.05U	7U	X	X	3.8316	X	mg/kg
Chromium	Normal	20	0	5.5	16.9	11.29	2.85	3.8316	22.21	mg/kg
Cobalt	Normal	20	0	3.4	11.2	7.29	1.81	3.8316	14.22	mg/kg
Copper	Nonparam	20	0	5.2	15.85	12.94	2.56	3.8316	22.75	mg/kg
Iron	Normal	20	0	7390	18100	12549	2744	3.8316	23063	mg/kg
Lead	Normal	20	0	8.6	53.3	33.6	10.51	3.8316	73.87	mg/kg
Lithium	Lognormal	20	0	4.8	11.6	7.69	1.93	3.8316	15.08	mg/kg
Magnesium	Lognormal	20	0	1310	2800	1913.1	468.1	3.8316	3707	mg/kg
Manganese	Normal	20	0	129	357	237.3	63.89	3.8316	482.1	mg/kg
Mercury	Lognormal	20	65	.04U	0.12	0.072	0.031	3.8316	0.191	mg/kg
Molybdenum	X	20	91	.29U	0.9U	X	X	3.8316	X	mg/kg
Nickel	Normal	20	0	3.8	14	9.63	2.64	3.8316	19.74	mg/kg
Potassium	Normal	20	0	1110	2830	2061.2	453	3.8316	3797	mg/kg
Selenium	Nonparam	20	39	.29U	1.4	0.634	0.295	3.8316	1.76	mg/kg
Silicon	Normal	20	0	934	1650	1383.5	179	3.8316	2069	mg/kg
Silver	X	20	100	.19U	.22U	X	X	3.8316	X	mg/kg
Sodium	Lognormal	20	0	43.8	105	62.16	14.84	3.8316	119.02	mg/kg
Strontium	Lognormal	20	0	9.6	45.2	28.44	10.25	3.8316	67.92	mg/kg
Thallium	X	14*	100	.385U	.445U	X	X	4.2224	X	mg/kg
Tin	X	20	91	1.35U	2.9	X	X	3.8316	X	mg/kg
Vanadium	Normal	20	0	10.8	45.8	27.85	8.87	3.8316	61.84	mg/kg
Zinc	Normal	20	0	21.1	75.9	49.56	12.1	3.8316	95.92	mg/kg
Radium-226	Lognormal	20	0	0.1	0.805	0.619	0.153	3.8316	1.20	pCi/g
Radium-228	Normal	20	0	0.2	2.3	1.35	0.48	3.8316	3.189	pCi/g
Uranium-233/234	Lognormal	20	0	0.6	3.1	1.097	0.578	3.8316	3.31	pCi/g
Uranium-235	Lognormal	20	0	0.11	0.34	0.0539	0.02	3.8316	0.13	pCi/g
Uranium-238	Lognormal	20	0	0.74	2.6	1.09	0.455	3.8316	2.83	pCi/g

a = All UTLs calculated assuming a normal distribution.
X = Not applicable because > 80% of data were non-detects.
% Non-detects are calculated from all accepted valid data except equipment rinsates.
Min and Max values: lowest/highest detected value or, if no detected values, 1/2 IDL followed by U.
Uranium-238 had 2 outliers removed for calculation of UTL; outliers retained for summary statistics.
* Six thallium samples were rejected during the validation process.

TABLE E-2

SUMMARY STATISTICS FOR BSCP GROUP 1 ANALYTES: SUPPORTING DATA TYPES

Analyte	Distri-bution	Count (n)	% Non-Detect	Min	Max	99/99 UTL	Mean	Standard Deviation	Units
Ammonia	Normal*	20	39	0.5U	7	NC	2.0333	1.8977	mg/kg
Carbonate	Normal*	20	100	5U	5.5U	NC	X	X	mg/kg
Nitrate/Nitrite	Normal*	20	0	2	7	NC	4	1.6859	mg/kg
Oil & Grease	Normal*	20	0	52	130	NC	94.575	19.325	mg/kg
pH	Normal*	20	NA	6	6.8	NC	6.3575	0.2424	pH
Specific Cond.	Normal*	20	NA	0.1	0.53	NC	0.2083	0.0896	mmhos/cm
TOC	Normal*	20	0	4920	17600	NC	16133	2696.9	mg/kg
% Clay	Normal*	20	0	7	36	NC	20.45	8.62	%
% Sand	Normal*	20	0	22	76	NC	43.93	15.27	%
% Silt	Normal*	20	0	18	45.5	NC	35.76	7.52	%
Bulk Density	Normal*	20	0	0.9	1.2	NC	0.923	0.07	g/cm^3

Normal* : Distribution assumed to be normal for summary statistics of supporting data
NC = Not calculated
TOC = Total Organic Carbon
Min and Max Values: lowest/highest value detected if no detached values, 1/2 IDL followed by U.
X = Not applicable because greater than 80% were non-detects.

TABLE E-3

SUMMARY STATISTICS FOR BSCP GROUP 2 ANALYTES: FALLOUT RADIONUCLIDES AND SUPPORTING DATA

Analyte	Distri-bution	Count (n)	% Non-Detect	Min	Max	Tol Fact	99/99 UTL	Mean	S.D.	Units
Fallout Radionuclides										
Americium-241	Nonparam	50	0	0.001	0.025	3.1369	0.037	0.0107	0.006	pCi/g
Cesium-134	Nonparam	50	0	0.05	0.3	3.1369	0.369	0.2	0.056	pCi/g
Cesium-137	Lognormal	50	0	0.3	1.7	3.1369	2.25	0.941	0.372	pCi/g
Plutonium-239/240	Lognormal	50	0	0.017	0.072	3.1369	0.084	0.038	0.014	pCi/g
Strontium-89/90	Lognormal	50	0	0.065	0.64	3.1369	0.708	0.254	0.128	pCi/g
Supporting Data										
% Clay	Normal*	50	0	1	34	X	X	11.58	6.37	%
% Sand	Normal*	50	0	24	78	X	X	53.29	11.97	%
% Silt	Normal*	50	0	20	51	X	X	35.21	7.49	%
Soil density	Normal*	50	0	0.8	1.2	X	X	0.944	0.78	g/cm^3
Total Organic Carbon	Normal*	50	0	1.4	6.05	X	X	3.66	1.24	%

X = Not calculated or not applicable
Normal*: Distribution assumed normal for summary statistics of supporting data
S.D. = standard deviation

TABLE E-4

SUMMARY STATISTICS FOR ROCK CREEK GROUP 1 ANALYTES: METALS AND NATURALLY OCCURRING RADIONUCLIDES

Analyte	Distribution	Count (n)	% Non-Detect	Min	Max	Mean	Standard Deviation	Tol Factor	99/99 UTL[a]	Units
Aluminum	Lognormal	18	0	8550	17950	12993	2251.5	3.9604	21910	mg/kg
Antimony	X	18	100	4.2U	7.3U	X	X	3.9604	X	mg/kg
Arsenic	Normal	18	0	2.1	8.5	5.82	1.81	3.9604	12.86	mg/kg
Barium	Nonparam	18	0	120	470	195	84.58	3.9604	481.1	mg/kg
Beryllium	Lognormal	18	43	0.44	1.1	0.681	0.119	3.9604	1.1523	mg/kg
Cadmium	Nonparam	17	71	0.3U	1.8	0.732	0.434	4.0367	2.45	mg/kg
Calcium	Lognormal	18	0	2260	8810	5068.1	2220.5	3.9604	13862	mg/kg
**Cesium	Lognormal	18	48	.225U	75U	31.29	30.13	3.9604	831.6	mg/kg
Chromium	Normal	18	0	10.5	20.2	15.029	2.476	3.9604	24.85	mg/kg
*Cobalt	Lognormal	18	0	4.4	24	7.778	4.308	3.9604	24.839	mg/kg
Copper	Normal	18	0	7.7	18.45	12.964	3.629	3.9604	27.34	mg/kg
Iron	Lognormal	18	0	10400	24900	15382	3226.6	3.9604	28160	mg/kg
Lead	Lognormal	18	0	29.35	51	37.535	6.024	3.9604	61.392	mg/kg
Lithium	Normal	18	0	7.1	14.95	10.981	2.273	3.9604	19.97	mg/kg
Magnesium	Lognormal	18	0	1440	5195	2853.3	1050	3.9604	7011.6	mg/kg
*Manganese	Lognormal	18	0	188.5	2220	443.6	457.04	4.1233	2328.1	mg/kg
Mercury	X	18	96	0.03U	0.075U	X	X	3.9604	X	mg/kg
Molybdenum	X	18	96	0.7U	2.7	X	X	3.9604	X	mg/kg
Nickel	Normal	18	0	7.8	18.7	12.578	3.588	3.9604	26.8	mg/kg
Potassium	Normal	18	0	1950	4205	2977.9	575.43	3.9604	5157	mg/kg
Selenium	Normal	18	22	0.105U	0.76	0.43	0.196	3.9604	1.21	mg/kg
**Silicon	Nonparam	18	0	54.8	1845	780.96	700.48	3.9604	8180	mg/kg
Silver	X	18	100	0.5U	1.45U	X	X	3.9604	X	mg/kg
Sodium	Lognormal	18	43	56.9	192.5	115.37	33.658	3.9604	248.67	mg/kg
Strontium	Lognormal	18	0	20.9	79.05	35.335	13.821	3.9604	90.072	mg/kg
Thallium	Normal	18	65	0.105U	0.41	0.23	0.084	3.9604	0.563	mg/kg
Tin	X	18	39	10.75U	58.5	32.541	12.936	3.9604	83.79	mg/kg
Vanadium	Normal	18	0	20.95	45.6	31.603	60.49	3.9604	55.56	mg/kg
Zinc	Lognormal	18	0	41.4	70.58	55.818	7.784	3.9604	86.646	mg/kg
Radium-226	Lognormal	10	0	0.75	1.1	0.945	0.128	5.0737	1.5944	pCi/g
Radium-228	Normal	10	0	1.3	2.9	2.177	0.531	5.0737	4.874	pCi/g
Uranium-233/234	Lognormal	16	0	0.91	1.472	1.145	0.156	4.1233	1.7882	pCi/g
Uranium-235	Lognormal	16	0	0.011	0.12	0.053	0.033	4.1233	0.1891	pCi/g
Uranium-238	Lognormal	16	0	0.9	1.521	1.183	0.188	4.1233	1.9582	pCi/g

a = All UTLs are calculated assuming normal distribution.
X = Not applicable because > 80% data were non-detects.
% Non-detects are calculated from all accepted valid data except equipment rinsates.
Min and Max values: highest/lowest detected value or, if no detected values, 1/2 IDL followed by U
IDL = instrument detection limit.
*Manganese contains 2 outliers, cobalt one; outliers included in summary statistics, not included for UTLs.
**Cesium and Silicon exhibit bimodal distributions; Cesium bimodal is due to two different IDLs
All UTLs are calculated assuming normal distribution.

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TABLE E-5

SUMMARY STATISTICS FOR ROCK CREEK: SUPPORTING DATA TYPES

Analyte	Distribution	Count (n)	% Non-Detect	Min	Max	Mean	Standard Deviation	99/99 UTL	Units
Ammonia	Normal*	9	50	0.172U	4.81	1.614	1.56	NC	mg/kg
Carbonate	X	3	100	25U	25U	X	X	X	mg/kg
Nitrate/Nitrite	Normal*	9	0	0.705	4.79	2.319	1.47	NC	mg/kg
Oil & Grease	Normal*	9	10	27U	160	81.7	40.7	NC	mg/kg
pH	Normal*	6	0	6.39	9.1	7.63	0.93	NC	pH
Specific Conductance	Normal*	6	0	11.2	32.75	22.06	9.43	NC	umhos/cm
Total Organic Carbon	Normal*	6	0	9970	19900	15570	3783	NC	mg/kg

X = Not calculated because 100% of data were non-detects.
Normal* = Assumed to be normal distribution for summary statistics of supporting data
NC = Not calculated

TABLE E-6

SUMMARY STATISTICS FOR ROCK CREEK, GROUP 2 ANALYTES: FALLOUT RADIONUCLIDES

Analyte	Distribution	Count (n)	% Non-Detect	Min	Max	Mean	Standard Deviation	Tol Fact	99/99 UTL	Units
Americium-241	Lognormal	14	0	0.0095	0.036	0.02	0.007	4.3372	0.05036	pCi/g
Cesium-134	Nonparam	9	0	0.071	0.1	0.084	0.012	5.3889	0.148667	pCi/g
Cesium-137	Lognormal	12	0	0.71	2.5	1.41	0.49	4.633	3.68017	pCi/g
Plutonium-239/240	Lognormal	18	0	0.026	0.1	0.055	0.014	3.9604	0.110446	pCi/g
Strontium-89/90	Normal	9	0	0.095	1	0.618	0.298	5.3889	2.23892	pCi/g

All UTLs are calculated assuming normal distribution.

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APPENDIX 4

APPENDIX 5

Rock Creek Reserve Wildlife Species List

Taxanomic Group	Common Name		
Fish			
	Fathead Minnow	Fish	
	Largemouth Bass	Fish	
	Stoneroller	Fish	
Amphibian			
	Boreal Chorus Frog	Herptile	Amphibian
	Northern Leopard Frog	Herptile	Amphibian
	Tiger salamander	Herptile	Amphibian
Reptile			
	Bullsnake	Herptile	Reptile
	Prairie rattlesnake	Herptile	Reptile
	Western Painted Turtle	Herptile	Reptile
Passerine Bird			
	American Crow	Bird	Passerine
	American Goldfinch	Bird	Passerine
	American Robin	Bird	Passerine
	American Tree Sparrow	Bird	Passerine
	Barn Swallow	Bird	Passerine
	Black-billed Magpie	Bird	Passerine
	Black-capped Chickadee	Bird	Passerine
	Black-headed Grosbeak	Bird	Passerine
	Black-throated Gray Warbler	Bird	Passerine
	Blue Grosbeak	Bird	Passerine
	Blue Jay	Bird	Passerine
	Blue-gray Gnatcatcher	Bird	Passerine
	Bohemian Waxwing	Bird	Passerine
	Brewer's Blackbird	Bird	Passerine
	Brewer's Sparrow	Bird	Passerine
	Broad-tailed Hummingbird	Bird	Passerine
	Brown thrasher	Bird	Passerine
	Brown-headed Cowbird	Bird	Passerine
	Chestnut-collared longspur	Bird	Passerine
	Chestnut-sided warbler	Bird	Passerine
	Chipping Sparrow	Bird	Passerine
	Clay-colored Sparrow	Bird	Passerine
	Cliff Swallow	Bird	Passerine
	Common Grackle	Bird	Passerine
	Common Nighthawk	Bird	Passerine
	Common Poorwill	Bird	Passerine
	Common Raven	Bird	Passerine
	Common Yellowthroat	Bird	Passerine
	Dark-eyed Junco	Bird	Passerine
	Downy Woodpecker	Bird	Passerine
	Eastern Kingbird	Bird	Passerine
	Eastern Phoebe	Bird	Passerine
	European Starling	Bird	Passerine
	Fox sparrow	Bird	Passerine
	Golden-crowned Kinglet	Bird	Passerine
Passerine Bird	Grasshopper Sparrow	Bird	Passerine
	Gray Catbird	Bird	Passerine
	Green-tailed Towhee	Bird	Passerine

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Rock Creek Reserve Wildlife Species List

Taxanomic Group	Common Name		
	Hairy Woodpecker	Bird	Passerine
	Horned Lark	Bird	Passerine
	House Finch	Bird	Passerine
	House Sparrow	Bird	Passerine
	House Wren	Bird	Passerine
	Lapland Longspur	Bird	Passerine
	Lark Bunting	Bird	Passerine
	Lark Sparrow	Bird	Passerine
	Lazuli Bunting	Bird	Passerine
	Lesser Goldfinch	Bird	Passerine
	Loggerhead Shrike	Bird	Passerine
	MacGillivray's Warbler	Bird	Passerine
	Marsh Wren	Bird	Passerine
	Mountain Bluebird	Bird	Passerine
	Mountain chickadee	Bird	Passerine
	Mourning Dove	Bird	Passerine
	Northern Flicker	Bird	Passerine
	Northern mockingbird	Bird	Passerine
	Northern Oriole	Bird	Passerine
	Northern Shrike	Bird	Passerine
	Orange-crowned warbler	Bird	Passerine
	Pine Siskin	Bird	Passerine
	Red-breasted Nuthatch	Bird	Passerine
	Red-winged Blackbird	Bird	Passerine
	Rock Dove	Bird	Passerine
	Rock Wren	Bird	Passerine
	Ruby-crowned Kinglet	Bird	Passerine
	Rufous Hummingbird	Bird	Passerine
	Rufous-sided Towhee	Bird	Passerine
	Sage Thrasher	Bird	Passerine
	Savannah Sparrow	Bird	Passerine
	Say's Phoebe	Bird	Passerine
	Snow bunting	Bird	Passerine
	Solitary Vireo	Bird	Passerine
	Song Sparrow	Bird	Passerine
	Swainson's Thrush	Bird	Passerine
	Tree Swallow	Bird	Passerine
	Vesper Sparrow	Bird	Passerine
	Violet-green Swallow	Bird	Passerine
	Virginia's Warbler	Bird	Passerine
	Western Kingbird	Bird	Passerine
	Western Meadowlark	Bird	Passerine
	Western Tanager	Bird	Passerine
	Western Wood-Pewee	Bird	Passerine
	White-breasted Nuthatch	Bird	Passerine
Passerine Bird	White-crowned Sparrow	Bird	Passerine
	Willow Flycatcher	Bird	Passerine
	Wilson's Warbler	Bird	Passerine
	Yellow Warbler	Bird	Passerine
	Yellow-breasted Chat	Bird	Passerine
	Yellow-headed Blackbird	Bird	Passerine

Rock Creek Reserve Wildlife Species List

Taxanomic Group	Common Name		
	Yellow-rumped Warbler	Bird	Passerine
Raptor			
	American Kestrel	Bird	Raptor
	Bald Eagle	Bird	Raptor
	Barn Owl	Bird	Raptor
	Ferruginous Hawk	Bird	Raptor
	Golden Eagle	Bird	Raptor
	Great Horned Owl	Bird	Raptor
	Long-eared Owl	Bird	Raptor
	Merlin	Bird	Raptor
	Northern Goshawk	Bird	Raptor
	Northern Harrier	Bird	Raptor
	Peregrine Falcon	Bird	Raptor
	Prairie Falcon	Bird	Raptor
	Red-tailed Hawk	Bird	Raptor
	Rough-legged Hawk	Bird	Raptor
	Sharp-shinned Hawk	Bird	Raptor
	Short-eared Owl	Bird	Raptor
	Swainson's Hawk	Bird	Raptor
	Turkey Vulture	Bird	Raptor
Waterfowl			
	American Coot	Bird	Waterfowl
	American Wigeon	Bird	Waterfowl
	Black-crowned Night-heron	Bird	Waterfowl
	Blue-winged Teal	Bird	Waterfowl
	Bufflehead	Bird	Waterfowl
	Canada Goose	Bird	Waterfowl
	Cinnamon Teal	Bird	Waterfowl
	Common Merganser	Bird	Waterfowl
	Common Snipe	Bird	Waterfowl
	Double-crested Cormorant	Bird	Waterfowl
	Gadwall	Bird	Waterfowl
	Great Blue Heron	Bird	Waterfowl
	Greater Scaup	Bird	Waterfowl
	Greater Yellowlegs	Bird	Waterfowl
	Green-winged Teal	Bird	Waterfowl
	Killdeer	Bird	Waterfowl
	Lesser Scaup	Bird	Waterfowl
	Long-billed Curlew	Bird	Waterfowl
	Mallard	Bird	Waterfowl
	Redhead	Bird	Waterfowl
	Ring-billed Gull	Bird	Waterfowl
Waterfowl	Ring-necked Duck	Bird	Waterfowl
	Sandhill Crane	Bird	Waterfowl
	Semipalmated sandpiper	Bird	Waterfowl
	Sora	Bird	Waterfowl
	Virginia Rail	Bird	Waterfowl
Small Mammal			
	Deer Mouse	Mammal	Small
	Harvest mouse	Mammal	Small
	Hispid Pocket Mouse	Mammal	Small

Rock Creek Reserve Wildlife Species List

Taxanomic Group	Common Name		
	House Mouse	Mammal	Small
	Masked shrew	Mammal	Small
	Meadow Vole	Mammal	Small
	Mexican Woodrat	Mammal	Small
	Plains Harvest Mouse	Mammal	Small
	Prairie Vole	Mammal	Small
	Preble's meadow jumping mouse	Mammal	Small
	Western Harvest Mouse	Mammal	Small
Big Game			
	Elk (Wapiti)	Mammal	Big Game
	Mule deer	Mammal	Big Game
	Mule X White-tailed deer	Mammal	Big Game
	White-tailed deer	Mammal	Big Game
Midsized Mammal			
	Black-tailed prairie dog	Mammal	Midsized
	Common porcupine	Mammal	Midsized
	Eastern fox squirrel	Mammal	Midsized
	Jackrabbit species	Mammal	Midsized
	Muskrat	Mammal	Midsized
Carnivore			
	American black bear	Mammal	Carnivore
	Bobcat	Mammal	Carnivore
	Common gray fox	Mammal	Carnivore
	Coyote	Mammal	Carnivore
	Long-tailed weasel	Mammal	Carnivore
	Mink	Mammal	Carnivore
	Mountain lion	Mammal	Carnivore
	Raccoon	Mammal	Carnivore

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APPENDIX 6

PREBLE'S MEADOW JUMPING MOUSE
PROTECTION PLAN, REVISION 6
U.S. DEPARTMENT OF ENERGY, ROCKY FLATS FIELD OFFICE
(July 27, 1999)

1. This Protection Plan applies to the Department of Energy (DOE) and its contractors at Rocky Flats Environmental Technology Site (Site).
2. Site activities will be evaluated under Procedure 1-D06-EPR-END.03, *Identification and Protection of Threatened, Endangered, and Special-Concern Species* (T&E Procedure) to protect the Preble's meadow jumping mouse (*Zapus hudsonius preblei*) and its habitat at the Site. The Preble's meadow jumping mouse is listed as a threatened species under the Endangered Species Act (ESA), and as such is a Special-concern Species at the Site.
3. Site activities are also evaluated under Procedure 1-S73-ECOL-001, *Wetland Identification and Protection*, which ensures wetland protection at the Site. Wetland protection is also required under the Clean Water Act (CWA). Additionally, primary habitat of the Preble's mouse includes wetlands.
4. The DOE, Rocky Flats Field Office (RFFO) ESA Coordinator (or a designee), as identified in the T&E Procedure.
5. Figure 1 of Appendix A provides a map of the Protection Areas for the Preble's mouse. These designations include Protection Areas and Contiguous Wetlands. See Appendix A for definitions of these terms.
6. Only necessary work is permitted in Protection Areas. Necessary work is defined as: that which is designed to study the Preble's mouse; required to protect or enhance natural resource values; or is expressly required by regulatory direction or agreement. Any necessary work that may cause significant disturbance, destruction, or other impacts to Protection Areas must be approved in advance of any work, and reviewed by the U.S. Fish and Wildlife Service (USFWS). The Site's ecologists shall review and approve/disapprove projects proposed in Protection Areas, then refer projects that may modify Preble's mouse habitat to the ESA Coordinator for concurrence. No project that will cause significant impact to a Protection Area may proceed until the ESA Coordinator has concurred. The ESA Coordinator shall examine the project, review may affect determinations as required with the USFWS, and concur/object within 10 working days of notification. DOE may allow the project to proceed, with or without modification, after review with the USFWS has been completed. The ESA Coordinator shall notify the project manager and the ecologists of the results of the review process including whether the project may proceed and if project modifications are required.
7. Any Site activity that will occur in Contiguous Wetlands shall also be subject to review and approval under the T&E and Wetland Procedures. The Site's ecologists shall review and approve/disapprove projects proposed in Contiguous Wetlands. If disapproved, such activities will be referred to the ESA Coordinator. Project modification may occur to allow the project to proceed.
8. Any activity, in any of the areas identified, as indicated on the *Preble's Mouse Protection Area Map* (Figure 1, Appendix A), may be referred to the ESA Coordinator for review with the USFWS.

Appendix A

Preble's Protection Areas

Preble's Mouse Protection Areas

For the purpose of the *Preble's Meadow Jumping Mouse Protection Plan, Revision 6, U.S. Department of Energy, Rocky Flats Field Office*, Preble's Mouse Protection Areas are identified on Figure 1. The 1996 Site Vegetation Map was used as the base map from which units of characteristic Preble's mouse habitat, adjacent grassland vegetation, and wetlands were identified for use in this map. The riparian corridor understory mapping revisions made in 1999 and observations made during spring 1999 trapping were also used to make revisions to the protection area map. Protection Areas and Contiguous Wetlands are defined as follows:

Protection Areas

Protection Areas include all characteristic habitat where the Preble's mouse has been documented, based on studies conducted at the Site since 1991. This habitat is comprised of woody vegetation types: riparian woodland, riparian shrubland, tall upland shrubland, and short upland shrublands (snowberry and skunkbush sumac adjacent to streams). Also included in the protection area category is a 100-foot band of grassland/herbaceous wetland from the perimeter these woody vegetation types. These Protection Areas are along stream channels, pond margins, and around seep wetlands in all stream drainages of the Site.

Contiguous Wetlands

Contiguous Wetlands include wetlands adjacent to, contiguous with, or upstream from Protection Areas. Although these areas already receive protection under the Clean Water Act, they shall receive additional protection at the Site as potential Preble's mouse habitat and because they are essential to maintaining the quality of adjacent Preble's mouse habitat. Wetlands play an important role in capturing upstream waters, and regulating their release downstream. Wetlands are also a natural filtration system that helps settle silt and purify water. Thus, wetlands have a direct effect on Preble's mouse habitat by ensuring that a clean, consistent source of moisture is available to sustain the downstream areas. This naturally controlled release of water throughout the year may be an essential factor in long-term maintenance of the riparian vegetation communities and requisite for the survival of the Preble's mouse. Additionally, wetlands within the riparian zone are now known to act as travel corridors between occupied areas of Preble's mouse habitat and dispersal routes.

Note: This mapped feature does not include all Site wetlands. Projects planning work should use the Site Wetlands Map, which includes all jurisdictional wetlands, to ensure compliance with the Clean Water Act.

PREBLE'S MEADOW JUMPING MOUSE
PROTECTION POLICY, REVISION 5a
U.S. DEPARTMENT OF ENERGY, ROCKY FLATS FIELD OFFICE

1. This Protection Policy applies to the Department of Energy (DOE) and its contractors at Rocky Flats Environmental Technology Site (Site).

2. Site activities will be evaluated under Procedure 1-D06-EPR-END.03, *Identification and Protection of Threatened, Endangered, and Special-Concern Species* (T&E Procedure) to protect the Preble's meadow jumping mouse and its habitat at the Site. The Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is listed as a threatened species under the Endangered Species Act (ESA).

3. Site activities are also evaluated under Procedure 1-S73-ECOL-001, Wetland Identification and Protection, which ensures wetland protection at the Site. Primary habitat of the Preble's mouse includes wetlands. Wetland protection is also required under the Clean Water Act (CWA).

4. The DOE, Rocky Flats Field Office (RFFO) ESA Coordinator, as identified in the T&E Procedure, is the Regulatory Liaison Group Lead (or a designee).

5. Map E-6 provides the *Designated Protection Areas* for the Preble's mouse. These designations include *Known Habitat*, *Suitable Habitat* and *Supporting/Other Protected Vegetation*. See Appendix A for definitions of these terms.

6. Only necessary work is permitted in *Known Habitat*. Necessary work is defined as: that which is designed to study the Preble's mouse; required to protect or enhance natural resource values; or is expressly required by regulatory direction or agreement. Any necessary work that may cause disturbance, destruction, or other impacts to *Known Habitat* must be approved in advance of any work, and reviewed by the U.S. Fish and Wildlife Service (USFWS) during the *consultation* process required under the ESA. DOE's contract ecologists shall review and approve/disapprove projects proposed in *Known Habitat*, then refer such projects to the ESA Coordinator for concurrence. No project in *Known Habitat* may proceed until the ESA Coordinator has concurred. The ESA Coordinator shall review the project, *consult* with the USFWS, and concur/object within 10 working days of notification. DOE may allow the project to proceed, with or without modification, after *consultation* with the USFWS has been completed. The ESA Coordinator shall notify the project manager of the results of the consultation process including whether the project may proceed and if project modifications are required.
7. Any Site activity that will occur in *Suitable Habitat* shall be subject to review and approval under the T&E Procedure. The Site's contract ecologists shall

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review and approve/disapprove projects proposed in *Suitable Habitat*. Projects in *Suitable Habitat* that are *disapproved* by DOE's contract ecologists shall be referred to the ESA Coordinator for further review. This review shall be completed within 10 working days of notification. No disapproved project may proceed unless the ESA Coordinator has reversed the disapproval. DOE may require modification before allowing the project to proceed.

8. Any Site activity that will occur in *Supporting and Other Protected Vegetation* shall be subject to review and approval under the T&E and Wetland Procedures. If disapproved it should be referred to the ESA Coordinator. The Site's contract ecologists shall review and approve/disapprove projects proposed in *Supporting and Other Protected Vegetation*. Project modification may occur to allow the project to proceed.

9. Any activity, in any of the *Designated Protection Areas*, may be referred to the ESA Coordinator for *consultation* with the USFWS.

Preble's Meadow Jumping Mouse Designated Protection Areas

For the purpose of the *Preble's Meadow Jumping Mouse Protection Policy, Revision 5, U.S. Department of Energy, Rocky Flats Field Office*, Preble's mouse habitat has been identified in Map E-6, *Preble's Meadow Jumping Mouse Designated Protection Areas at Rocky Flats Environmental Technology Site*. For the purposes of this Policy and Map, these protection areas are defined as follows:

Known Habitat
Known Habitat is characteristic habitat where the Preble's mouse has been documented based on studies conducted at Rocky Flats Environmental Technology Site (Site) since 1991. This habitat typically includes the vegetation types classified as riparian woodland, riparian shrubland, tall upland shrubland, short upland shrublands adjacent to streams, and a grassland band that is immediately adjacent to the woody vegetation types. These areas are along stream channels and pond margins in all stream drainages of the Site.

Suitable Habitat
Suitable Habitat at the Site includes the remaining units of riparian woodland, riparian shrubland, and upland shrublands, and an inclusion of grasslands that are immediately adjacent to these woody vegetation types. Suitable Habitat is classified as high quality habitat that is very similar to Known Habitat, yet differs in that the Preble's mouse has not been documented in these areas. Suitable Habitat is particularly important because these areas may be needed for dispersal of juveniles and establishment of new population centers during times when optimum conditions allow population expansion.
Suitable Habitat, combined with Known Habitat, apparently provides the viable combination and extent of Preble's mouse habitat needed to sustain a population in a given stream drainage over time. Suitable Habitat has been mapped on the

basis of plant community, hydrology, and topography which in combination, according to recent studies at the Site, can be expected to support populations of the Preble's mouse. Based on the 1996 Vegetation Types Map, Suitable Habitat was designated by selecting all woody riparian vegetation types and adding a 100-foot strip of grassland surrounding these riparian types. This represents the habitat used by the Preble's mouse on the Site. The 100-foot strip is based on the current knowledge of the maximum foraging distance from streams.

Supporting and Other Protected Vegetation

Supporting and Other Protected Vegetation includes wetlands, most of which are adjacent to, contiguous with, or upstream of Known or Suitable Preble's mouse habitat. Although these areas already receive protection under the Clean Water Act, they shall receive additional protection at the Site both as potential habitat for the Preble's mouse, and because they contribute to, and help control the quality of, the adjacent Known and Suitable Preble's mouse habitat. Wetlands play an important role in capturing upstream waters, and regulating their release downstream. Wetlands are also a natural filtration system that helps settle silt and purify water. Thus, wetlands have a direct effect on Known and Suitable Habitats by ensuring that a clean, consistent source of moisture is available to sustain the downstream areas. This naturally controlled release of water throughout the year may be an essential factor in long-term maintenance of the riparian vegetation communities requisite for the survival of the Preble's mouse. Wetlands within the riparian zone act as travel corridors between areas of Known and Suitable Habitat. For all these reasons, wetlands play a supportive role in maintaining and enhancing Preble's mouse habitat at the Rocky Flats Environmental Technology Site. Based on the 1996 Vegetation Types Map, Supporting and Other Protected Vegetation was designated by selecting appropriate herbaceous riparian vegetation types. Note: this map feature does not include all Site wetlands, and should not be used to address wetland concerns or issues with the Clean Water Act.

APPENDIX 7

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Sensitive Species/Communities Known to Occur at the Site

"Watch Listed" indicates that observations/occurrences will be maintained by CNHP in the manual files and database. It is used for elements/species that harbor conservation priority.

Plant Communities	CNHP Ranking (global/state)	Status
Xeric Tallgrass Prairie	G2/ S2	Largest remaining remnant in Colorado and possibly in North America
Tall upland Shrubland	GU/ SU	May be globally unique
Riparian Shrubland (dominated by leadplant)	GU/ SU	May be globally unique
Short Grass Prairie	G3/ S3	
Plains Cottonwood Riparian Woodland	G2G3/ S2S3	
Birds	**CNHP Ranking (global/state)**	**Status**
Great Egret		1999 first sighting of species on the Site
Orange-crowned Warbler		1999 first sighting of species on the Site
Black Vulture		1999 first sighting of species on the Site, and possibly for the state
Grasshopper Sparrow	G5/ S3BS4B	Known to breed on the Site
Loggerhead Shrike	G4/ S3B	Suspected to breed on the Site, Special Concern Species
Western Burrowing Owl	G4/ S4B	State Threatened, Special Concern Species
Black-crowned Night Heron	G5/ S3B	Known to breed on the Site
Bald Eagle	G4/ S1BS3N	**Federal listed Threatened**, no nests observed
American Peregrine Falcon	G4T3/ S3BSZN	De-listed in 1998
Northern Goshawk	G5/ S3BSZN	Special Concern Species
Baird's Sparrow	"Watch-listed"	Special Concern Species
Ferruginous Hawk	G4/ S3B/S4N	Special Concern Species
Black Swift	"Watch-listed"	Special Concern Species
White-faced Ibis	"Watch-listed"	Species, Special Concern Species
Long-billed Curlew	G5/ S2BSZN	Colorado Species of Special Concern
Greater Sandhill Crane	"Watch-listed"	Colorado Species of Special Concern
American White Pelican	"Watch-listed"	Colorado Species of Special Concern
American Bittern	"Watch-listed"	
Bufflehead	"Watch-listed"	
Eared Grebe	"Watch-listed"	
Sora	"Watch-listed"	
Cooper's Hawk	"Watch-listed"	
Sharp-shinned Hawk	"Watch-listed"	
Golden Eagle	"Watch-listed"	
Swainson's Hawk	"Watch-listed"	Special Concern Species, breeds on the Site
Northern Harrier	"Watch-listed"	
Merlin	"Watch-listed"	
Prairie Falcon	"Watch-listed"	
Short-eared Owl	G5/ S2BSZN	
Olive-sided Flycatcher	"Watch-listed"	
Chestnut-sided Warbler	"Watch-listed"	
Virginia's Warbler	"Watch-listed"	
Lark Bunting	"Watch-listed"	
Chestnut-collared Longspur	G5/ S1BSZN	
Mammals	**CHNP Ranking global/state**	**Status**
Preble's Meadow Jumping Mouse	G5/T1?/S1?	**Federal listed Threatened**, resident, one of the largest remnant populations
Small-footed Myotis		Special Concern Species
Plains Pocket Mouse	G5T2/ S2	
Silky Pocket Mouse	G5T3/ S3	
Merriam's Shrew	G5/ S3	

Northern Pocket Gopher	G5T3/ S3	
Olive-backed Pocket Mouse	G5T?/ S2?	
Black-tailed Prairie Dog	G4/ S4	Special Concern Species, 3 small populations rebounding from Plague die-off
Fisheries		**Status**
Woman, Rock and Walnut Creeks		Support native, non-game fish populations, nine species
Amphibians and Reptiles	**CHNP Ranking global/state**	**Status**
Western Yellowbelly Racer	G5T5/ S3	
Eastern Short-horned Lizard		Special Concern Species
Northern Leopard Frog	G5/ S3	Colorado Species of Special Concern
Invertebrates	**CHNP Ranking global/state**	**Status**
Hops blue butterfly	G2Q/ S2	
Arogos Skipper	G3G4/ /S2	

Definitions of the Colorado Natural Heritage Program's ranking system are as follows. Each species or community is considered an element of natural diversity, or simply an element. Each element is assigned a rank that indicates its relative degree of rarity or imperilment on a 5-point scale (e.g. 1 = critically imperiled because of extreme rarity, 5 = demonstrably secure). Where two numbers appear in a state or global rank, (e.g., S2S3), the actual rank of the element falls between the two numbers. The primary criterion for ranking elements is the number of occurrences, i.e. the number of known distinct localities or populations. This factor is weighted more heavily because, all other factors being equal, an element found in one place is more imperiled than something found in twenty-one places.

Element conservation ranks are assigned both in terms of the element's abundance within Colorado (its State or S-rank) and over its entire range (its Global or G-rank). Those animals that migrate may spend only a portion of their life cycles within the state. In these cases, it is necessary to distinguish between breeding, non-breeding, and resident species. Ranks followed by a "B", e.g., S1B, indicate that the rank applies only to the status of breeding occurrences. Ranks followed by an "N", e.g., S4N, refer to non-breeding status, typically during migration and winter. Elements without this notation are believed to be year-round residents within the state. These ranks should not be interpreted as legal designations.

G/S1 – critically imperiled globally / state because of rarity (5 or fewer occurrences in the world / state; or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extinction.

G/S2 – imperiled globally / state because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range.

G/S3 – vulnerable throughout its range or found locally in a restricted range (21 to 100 occurrences).

G/S4 – apparently secure globally / state, though it might be quite rare in parts of its range, especially at the periphery.

G/S5 – demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G#? – indicates uncertainty about an assigned global rank.

G/SU – unable to assign rank due to lack of available information.

GQ – indicates uncertainty about taxonomic status.

G/SH – historically known, but not verified for an extended period, usually.

G#T# - trinomial rank (T) used for a subspecies or varieties. These species or subspecies are ranked on the same criteria as G1-G5.

S#B – refers to breeding season imperilment of elements that are not permanent residents.

S#N – refers to non-breeding season imperilment of elements that are not permanent residents. Where not consistent location can be discerned for migrants or non-breeding populations, a rank of SZN is used.

SZ – migrant whose occurrences are too irregular, transitory, and / or dispersed to be reliably identified, mapped, or protected.

SA – accidental in the state.

SR – reported to occur in the state, but unverified.

S? – unranked. Some evidence that species may be imperiled, but awaiting formal rarity ranking.

Note: # represents rank (1-5).

APPENDIX 8

MEMORANDUM OF AGREEMENT
FOR COORDINATION OF ENDANGERED SPECIES ACT COMPLIANCE WITH
ACTIVITIES AT ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
BETWEEN
DEPARTMENT OF INTERIOR FISH AND WILDLIFE SERVICE,
DEPARTMENT OF ENERGY, ENVIRONMENTAL PROTECTION AGENCY,
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AND
COLORADO DEPARTMENT OF NATURAL RESOURCES

I. BACKGROUND

1.1 On March 25, 1997, the Preble's Meadow Jumping Mouse (PMJM) was proposed for listing as an endangered species under the Endangered Species Act (ESA), 16 U.S.C. § 1531 et seq., by the Fish and Wildlife Service (Service), a constituent bureau of the U. S. Department of Interior. The PMJM is found in several of the wet riparian areas located at the Department of Energy (DOE) Rocky Flats Environmental Technology Site (Site). On May 13, 1998, the Service published a final rule to list the PMJM as a threatened species under the ESA. Following the listing, the PMJM became the subject of informal consultation pursuant to 50 C.F.R. § 402.13. In satisfaction of ESA requirements that federal agencies engage in interagency cooperation, 16 U.S.C. § 1536, and in conformance with the provisions of this Memorandum of Agreement (MOA), the DOE will prepare and submit a biological assessment (BA) and request that the Service initiate formal consultation concerning implementation of the Rocky Flats Cleanup Agreement (RFCA), other Site closure activities, and the "Preble's Meadow Jumping Mouse Protection Policy", to be finalized as the "Protection Plan".

1.2 The Site formerly played a role in the production of components for nuclear weapons. Weapons component production has ceased and the mission is now facility decommissioning and cleanup and closure of the Site. Activities at the Site range from stabilization and interim storage of plutonium awaiting final disposition off-site under the Atomic Energy Act (AEA), 42 U.S.C. § 2011 et seq., to hazardous substance removal and remediation activities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq., the Colorado Hazardous Waste Act (CHWA), Colorado Revised Statutes § 25-15-301, et. seq., and the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq.

1.3 All of the Site is a CERCLA National Priorities Listed (NPL) Site. Under CERCLA, all DOE cleanup and closure activities at the Site are governed by the July 1996 RFCA between the DOE, the U.S. Environmental Protection Agency (EPA), and the Colorado Department of Public Health and Environment (CDPHE). DOE is required by law to perform the cleanup work resulting in Site decommissioning. DOE activities in this regard are subject to EPA and CDPHE statutory authorities to approve and monitor both the conduct and completion of the cleanup. The provisions of the RFCA comprise the legal document that describes the relationship between the Agencies during cleanup and ensures the effective and efficient cleanup of the Site.

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1.4 Since as early as 1993, not long after the PMJM was discovered at the Site, DOE has proactively protected the PMJM and its habitat. Over time, protection has progressed from informal habitat protection to required protection and mitigation actions. Initial protection for the PMJM was afforded through implementation of the Site procedure to protect sensitive species, "Identification and Protection of Threatened, Endangered, and Special-Concern Species" (T&E Procedure). As a candidate species, the PMJM was protected in accordance with the T&E Procedure for special concern species. In 1994, the "Preble's Meadow Jumping Mouse Interim Protection Policy" was developed and informally implemented, and was subsequently formally implemented in 1995. The Interim Policy continued to be revised and refined and is currently identified as Revision 5a of the "Preble's Meadow Jumping Mouse Protection Policy". The current Policy acknowledges the status of the PMJM as a "threatened" species, and provides direction consistent with the T&E Procedure for protection of the species.

1.5 In addition to development and implementation of the Preble's Meadow Jumping Mouse Protection Policy, DOE has undertaken numerous ongoing efforts to protect and conserve the PMJM and associated habitat. In 1992, little was known about the PMJM following its discovery at the Site the previous year, although the PMJM was listed as a candidate species under the ESA. Consequently, DOE contracted to have a study conducted to identify locations of PMJM populations and to identify key habitat characteristics. This study, which spanned 1993 and 1994, provided the basis for development of protection measures for the species at the Site and has additionally served as a basis for the development of a Collaborative Planning Process currently being facilitated by the Colorado Department of Natural Resources (DNR). Since the initial study was performed, Site ecologists have made and continue to make annual evaluations of the Site PMJM populations and habitat. These studies have significantly contributed to the existing body of data relating to the species, including data describing habitat, population dynamics, genetics, and movement.

1.6 As a result of implementation of Site T&E Procedures in conjunction with habitat mapping activities at the Site, and as a result of implementation of the Preble's Meadow Jumping Mouse Protection Policy in conjunction with T&E Procedures, Site activities have been relocated or redesigned to limit impact to actual or potential PMJM habitat to ensure that activities being conducted at the Site: 1) first, eliminate impact to the PMJM; 2) reduce impact to the PMJM; or, 3) as a last resort, mitigate impact to the PMJM. Current PMJM protection and mitigation strategies that have been implemented include work site surveys in accordance with T&E procedures including: project redesign to remove projects from PMJM habitat; project footprint redesign to avoid PMJM impacts; installation of spill barriers between a project and a PMJM population drainage; project rescheduling to avoid PMJM active periods; and other mitigation activities.

II. STATEMENT OF PURPOSE

2.1 The purpose of this MOA is to develop a process by which each Party, in accordance with its authorities, can work together to achieve compliance with the mandates of the RFCA, other Site closure activities, and the ESA, including the conservation of listed species such as the PMJM.

III. AUTHORITIES FOR COORDINATING RFCA, OTHER SITE CLOSURE ACTIVITIES, AND ESA COMPLIANCE

3.1 RFCA provides that the Site is divided into the "Industrial Area" and the "Buffer Zone". Maps illustrating the location of each zone are attached. Pursuant to the RFCA, Part 8, Regulatory Approach, CDPHE has been designated the Lead Regulatory Agency (LRA) for RFCA activities in the Industrial Area, while EPA is the LRA for RFCA activities in the Buffer Zone. Conversely, CDPHE is the Support Regulatory Agency (SRA) for activities regulated by RFCA in the Buffer Zone and off-site, while EPA is the SRA for activities regulated by RFCA in the Industrial Area. The final selection of remedies will proceed according to CERCLA section 120 (see RFCA paragraph 84).

3.2 The parties to this MOA (Parties) acknowledge that, under the RFCA, Site cleanup must satisfy all applicable or relevant and appropriate federal and state environmental laws and regulations (ARARs) as required by 42 U.S.C. § 9621 (CERCLA section 121) absent waiver by EPA. A Master List of Site ARARs is incorporated in the August 1998 RFCA Implementation Guidance Document, Appendix J, which is updated annually. Under the heading "Natural Resource and Wildlife Protection Laws", the ESA is listed as a RFCA ARAR requiring substantive compliance with regard to consultation and preparation of a biological assessment under Section 7 of the ESA and 50 CFR § 402. The RFCA ESA ARAR provides that DOE, EPA, and CDPHE will engage in interagency cooperation with respect to species listed as endangered or threatened under the ESA.

3.3 The Federal Water Pollution Control Act (FWPCA), 33 U.S.C. § 1251 et. seq., is an ARAR under RFCA. Substantive compliance with the FWPCA, including requirements relating to wetlands impacts regulated by FWPCA section 404, 33 U.S.C. § 1344, is required in association with RFCA cleanup activities. A March 1996 Memorandum of Agreement for the Administration of a Wetland Bank at Rocky Flats (Wetland Banking MOA) between DOE, EPA, the United States Army Corps of Engineers (Corps), and the Service provides that EPA is responsible for ensuring substantive requirements of FWPCA section 404 are met in conjunction with RFCA cleanup activities. With respect to non-CERCLA activities at the Site, the Corps continues to administer substantive and administrative requirements of FWPCA section 404. A related compliance agreement is the June 1990 Memorandum of Agreement between DOE and the Federal Energy Regulatory Commission (FERC) which provides that FERC is responsible for Site dam safety and inspection to determine Site compliance with the Federal Guidelines for Dam Safety. The Wetland Banking MOA and the FERC MOA may be used to develop information and to coordinate compliance with the ESA at the Site.

3.4 Pursuant to CERCLA section 104(b)(2), an October 1994 Memorandum of Understanding establishes Natural Resource Trustee responsibilities at the Site. Site Natural Resource Trustees are comprised of DOE, DOI, DNR, CDPHE, and the Colorado Attorney General. The EPA is also a party to the Trustees MOU in recognition of its role as a CERCLA LRA at the Site. Under the Trustees MOU, parties are responsible for coordinating and cooperating in carrying out responsibilities involving multiple trustees due to coexisting or contiguous natural resources or concurrent jurisdictions. Parties to the Trustees MOU agree to cooperate in coordinating investigations and planning, and to cooperate in integrating natural resource protection, restoration, mitigation, and enhancement activities into Site cleanup plans and activities whenever practicable.

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3.5 The Service is responsible for administration and enforcement of the ESA. In November 1995, a Memorandum of Agreement between The State of Colorado and The Department of Interior Concerning Programs to Manage Colorado's Declining Native Species (Colorado MOA) was executed. Under the Colorado MOA, DOI and the Colorado DNR and its Division of Wildlife agree to cooperatively act and encourage voluntary actions designed to reduce or eliminate risks to species and their habitats through development of Conservation Agreements and other appropriate measures. Pursuant to the Colorado MOA, DNR is currently facilitating a region-wide Collaborative Planning Process to facilitate ESA compliance required by the listing of the PMJM as a threatened species under the ESA.

3.6 The Service enters into this Memorandum of Agreement for Coordination of Endangered Species Act Compliance With Cleanup and Closure Activities at Rocky Flats Environmental Technology Site (ESA MOA) pursuant to the ESA, the Colorado MOA Concerning Programs to Manage Colorado's Declining Native Species, the MOU for Natural Resource Trustee Responsibilities at the Site, and the Wetland Banking MOA.

3.7 DOE enters into this ESA MOA pursuant to the CERCLA, RCRA, AEA, RFCA, ESA, relevant Executive Orders, the Colorado MOA Concerning Programs to Manage Colorado's Declining Native Species, the MOU for Natural Resource Trustee Responsibilities at the Site, and the Wetland Banking MOA.

3.8 The EPA, Region VIII enters into this ESA MOA pursuant to CERCLA, RCRA, RFCA, relevant Executive Orders, the MOU for Natural Resource Trustee Responsibilities at the Site, and the Wetland Banking MOA.

3.9 The CDPHE enters into this ESA MOA pursuant to CERCLA, RCRA, CHWA, RFCA, the Colorado MOA Concerning Programs to Manage Colorado's Declining Native Species, and the MOU for Natural Resource Trustee Responsibilities at the Site.

3.10 The Colorado DNR enters into this ESA MOA pursuant to the ESA, the Colorado MOA Concerning Programs to Manage Colorado's Declining Native Species, and the MOU for Natural Resource Trustee Responsibilities at the Site.

3.11 Pursuant to, and to the extent of their respective authorities to enter into this ESA MOA as described above, the Parties agree they are bound by the provisions established in this ESA MOA to coordinate cleanup and closure activities at the Site and other Site closure activities with ESA compliance.

IV. INTERAGENCY COORDINATION

4.1 DOE is developing and has begun implementation of a conservation plan for the PMJM entitled the "Preble's Meadow Jumping Mouse Protection Policy", which is to be finalized as the "Protection Plan" (Plan). The Plan contains a long-term strategy for protection of the PMJM and for conservation of PMJM habitat at the Site. Through the interagency cooperation process, the Service will provide technical assistance as needed in the finalization and implementation of the Plan. The completed Plan is expected to include provisions to protect species that share PMJM habitat.

4.2 Following execution of this MOA, DOE will prepare and submit a BA and request that the Service initiate formal Section 7 consultation concerning the implementation of the RFCA, other Site closure activities, and the Plan. The BA will address actions that will have no affect and actions that may affect the PMJM or other federally listed species.

4.3 The DOE and the Service agree to provide all Parties with the opportunity to participate in the ESA consultation concerning the RFCA, other Site closure activities, and the PMJM Protection Plan. The DOE shall submit the Plan to the EPA and the CDPHE for review and concurrence prior to submitting the Plan to the Service for Section 7 consultation. The DOE shall include the Plan in the RFCA Implementation Guidance Document and shall implement the Plan in conjunction with other closure activities. Subsequent to consultation, the Plan requirements shall be addressed in RFCA decision documents and will be implemented in RFCA cleanup and closure activities in accordance with CERCLA section 121, 42 U.S.C. § 9621.

4.4 The Service will prepare a biological opinion (BO) based on the BA provided by the DOE on the RFCA, other Site closure activities, and the Plan. The Plan is expected to be the basis for any conservation recommendations, reasonable and prudent measures (RPMs), or reasonable and prudent alternatives (RPAs) developed for the PMJM or other listed species. The BO and the incidental take statement (ITS) issued by the Service shall apply to Site activities which may affect the PMJM or other listed species.

4.5 Prior to initiation of any actions or activities which are identified in the BA developed by DOE as having the potential to affect the PMJM or other federally listed species, written notice shall be provided to the Service regarding consistency with the BO and ITS. The Service shall have thirty (30) days to provide written concurrence or nonconcurrence. If the Service does not provide written concurrence within thirty (30) days, concurrence shall be presumed. If any RFCA or other Site closure activities cannot be undertaken consistent with the BO, Section 7 consultation may be reinitiated.

4.6 The Parties agree that if Section 7 consultation or the dispute resolution process defined herein produce recommendations for conservation, recovery, or habitat enhancement that require decisions relating to land use, such land use recommendations will be subject to public review.

V. DISPUTE RESOLUTION

5.1 Before any final BO is issued pursuant to this MOA, the Service will provide the DOE with a draft BO as provided by applicable regulations. Upon receipt of the draft Opinion, the DOE shall have a period of time agreed to by the Parties to confer with the EPA and the CDPHE and to provide comments or written disagreement with the draft BO and the associated reasoning or explanation for the disagreement.

5.2 If the DOE and the Service are unable to reach agreement with respect to a written disagreement or a dispute pursuant to this MOA, including whether proposed RFCA or other Site closure activities are consistent with the BO, the Parties agree to convene a meeting at the staff level to attempt, in good faith, to resolve the disagreement or dispute. If resolution at the staff level is not possible, the Parties agree that the level of management consistent with at least the level of the signatories to this MOA shall convene a meeting to attempt, in good faith, to resolve the disagreement or dispute.

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5.3 Upon receiving the comments of the DOE, and upon resolution of any written disagreement, the Service shall issue its final BO, which should include the resolution of any written disagreement submitted by the DOE, or the Service shall issue a final BO incorporating the Service's reasoning with respect to its findings concerning any disagreement.

5.4 The Service is not a party to the RFCA. The EPA, the CDPHE, and the DOE agree that efforts to resolve disputes between EPA or CDPHE and Service requirements may constitute force majeure or a valid basis upon which a good cause change of a RFCA regulatory milestone may be requested.

VI. PUBLIC INFORMATION

6.1 The Parties agree that public information campaigns may be useful in explaining the importance of coordinating ESA compliance and PMJM protection with Site activities. The Parties agree to discuss, and where appropriate to coordinate, the development and implementation of outreach efforts that may be conducted in association with this ESA MOA.

VII. CONSISTENCY WITH APPLICABLE LAW

7.1 This ESA MOA is subject to all applicable laws and nothing herein shall be construed to alter, amend, or affect existing laws. Nothing in this ESA MOA shall be construed as obligating any of the Parties to expend any funds in excess of appropriations authorized by law or otherwise commit any of the Parties to any action which it lacks authority to undertake.

VIII. EFFECTIVE DATE, DURATION, AND MODIFICATIONS

8.1 The effective date of this ESA MOA shall be the date on which the last Party signs this ESA MOA. This ESA MOA shall remain in effect for all Parties, subject to modification upon mutual agreement of the Parties, and subject to termination upon 90 days written notice by a single Party. Termination of participation or withdrawal by one Party shall not constitute a termination of the MOA nor affect the obligations of the remaining Parties.

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IX. APPROVAL OF ESA MOA

Ralph O. Morgenweck

Dr. Ralph O. Morgenweck
Regional Director, Region 6, U.S. Fish and Wildlife Service

January 19, 1999
Date

Jessie Roberson

Jessie M. Roberson
Manager, Rocky Flats Field Office, U.S. Department of Energy

December 8, 1998
Date

Max H. Dodson

Max H. Dodson
Director, Ecosystems Protection and Remediation,
U.S. Environmental Protection Agency, Region VIII

January 26, 1999
Date

James Nuttle

Executive Director,
Colorado Department of Public Health and Environment

February 9, 1999
Date

Greg Walcher

Executive Director, Colorado Department of Natural Resources

February 26, 1999
Date

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Rod Hoffman
12/13/2000 02:05 PM

To: Cliff Franklin/doe/rffo@RFFO
cc:
Subject: Re: Rock Creek Plan

I have reviewed the "Rock Creek Plan" and have determined that it contains no classified or sensitive information. It is approved for public release.

Rod Hoffman

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This page of this document contains personal and confidential information and can be located in the CERCLA AR upon request

This page of this document contains personal and confidential information and can be located in the CERCLA AR upon request

DOE F 1325.8

United States Government

Department of Energy

memorandum

Rocky Flats Field Office

DATE: DEC 07 2000

REPLY TO ATTN OF: AMEI:AI:JER:00-04193

SUBJECT: Rock Creek Reserve Integrated Natural Resources Management Plan (draft) Environmental Assessment

TO: Katherine Nakata, Office of NEPA Policy and Assistance, EH-42, HQ

Attached is the draft environmental assessment (EA) for the Rock Creek Reserve at the Rocky Flats Environmental Technology Site. As I discussed with you in our telephone conversation, the EA is based on a format commonly used within the Department of Army that incorporates the National Environmental Policy Act (NEPA) requirements within the Integrated Natural Resources Plan. The U.S. Fish and Wildlife employee assigned to coordinate the document with the Rocky Flats Field Office (RFFO) has utilized this approach in the past and the results have been very successful. As I had mentioned, an added benefit is the construction of one document rather than two, which helps in the reduction of paperwork.

Please provide comments at your earliest opportunity, note that the public comment period ends on January 31, 2001. Should you need additional information regarding this communication, please coordinate your requests through the RFFO NEPA Compliance Officer, Joe Rau. You may reach Joe at (303) 966-7410 or at, joe.rau@rf.doe.gov.

Thank you for your assistance in this matter.

Joseph E. Rau

Joseph E. Rau
NEPA Compliance Officer
Rocky Flats Field Office

Attachment

cc w/o Att:
R. Tyler, ERWM, RFFO
C. Franklin, AI, RFFO
S. Bell, OCC, RFFO

331

"Rocky Flats Coalition" <coalition@rfclog.org> on 12/05/2000 10:36:35 AM

To: Cliff Franklin/doe/rffo@RFFO
cc:
Subject: RE: attendees at Dec-7, 2000 meeting

Cliff,

I have pasted in the names from the minutes I am working on. If you need an actual copy of the sign-in sheet with phone numbers let me know and I will fax it over. Thanks.

Kimberly Chleboun
Program Assistant
303-412-1200
303-412-1211 fax

Board members in attendance: Michelle Lawrence (Director, Jefferson County), Nanette Neelan (Alternate, Jefferson County), Tom Brunner (Director, Broomfield), Hank Stovall (Alternate, Broomfield), Mike Bartleson (Alternate, Broomfield), Mary Harlow (Alternate, Westminster), Carol Lyons (Alternate, Arvada), Paul Danish (Director, Boulder County), Lisa Morzel (Director, City of Boulder), Matt Magley (Alternate, Superior).

Coalition staff members and consultants in attendance: David Abelson (Executive Director), John Marler (Technical Advisor), Kimberly Chleboun (Program Assistant), and Barbara Tenney (Icenogle, Norton, and Seter, P.C.).

Members of the Public: John Corsi (Kaiser-Hill), Dave Shelton (Kaiser-Hill), Jeremy Karpatkin (DOE), John Rampe (DOE), Tom Lukow (DOE), Rob Henneke (EPA), Steve Tarlton (CDPHE), Noelle Stenger (RFCAB), Gerald DePoorter (RFCAB), Kristi Pollard (Senator Allard), Doug Young (Congressman Udall), Theresa Sauer (Governor Owens), Nancy Hunter (Congressman Schaffer), Doris DePenning (Friends of the Foothills), Roman Kohler (RF Homesteaders), Sonja Groghegan (Citizens Concerned about Nuclear Waste Impacts), Dan Chesshir (RFSOIU Local #1), John Whitney (RFSOIU Local #1), John Barton (USWA Local Union 8031), Gail Bange (Wackenhut Services, LLC), John Kiekbusch (Jefferson County Sheriff,s Office), Beth Wohlberg (The Daily Camera), Cliff Franklin (DOE), Bruce Rosenlund (USFWS), Robin Romero (USFWS).

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Ken Brakken
11/13/2000 01:23 PM

To: Cliff Franklin/doe/rffo@RFFO
cc:
Subject: Agenda for NJAG 14 Nov 00

---------- Forwarded by Ken Brakken/doe/rffo on 11/13/2000 01:23 PM ----------

PDKilburn@cs.com on 11/08/2000 07:03:35 AM

To: Ken Brakken/doe/rffo@RFFO
cc:
Subject: Agenda for NJAG 14 Nov 00

NORTH JEFFCO AREA GROUP (NJAG) MEETING AGENDA.
14 November 2000, 2:00-4:00, DOW Bighorn Room, 6060 Broadway

1. Ken Brakken: Reclamation/Revegetation Workshop
2. Rich Griebling, Executive Dir, Colo Oil and Gas Commission: Oil and Gas Drilling in Study Area
3. Robin Romero, USFWS: Management Plan for Rocky Flats
4. Eric Odell, Division of Wildlife. Corridors for mapping.
5. Bill Broderick, DRCOG: Continued Map Preparation

Next Meeting in January

1. Pat Holloway, JC Commissioner, Open Space in the NJAG Area

Next meeting time and place

Respectfully submitted,
P. Kilburn,

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From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/06/2000 10:58 AM

To: Cliff Franklin/amgo/rffo@RFFO
cc:
Subject: Proposals for Future Use of RFETS

Dear Cliff,

I represent a homeowners association just south of SH72 and near RFETS, am on the Board of the Jefferson County Horsemen's Council, and have worked as a consultant at the Flats in years past. I am most interested in future uses of the site, particularly those associated with open space, multipurpose trails, and connections with adjacent trail systems for equestrian and other use. To make substantive comments on the current proposals for use of RFETS, I need additional information. What can you send me that will fully elucidate current proposals?

My mailing address is:

D. Jean Tate
[redacted]

[redacted]

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From: Roman Kohler <rkohle29@idt.net> on 06/09/2000 10:23 PM

To: Cliff Franklin/amgo/rffo@RFFO, Mariane Anderson/CED/rffo@RFFO
cc:
Subject: Rock Creek Comments

The following are comments to the Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment.
1.Goal
1.2 Issues:
1.2.2. I recommend the extension boundaries should follow geological or natural contour formations. The will provide manageable boundaries that are easily recognized.
2. Objective
2.1.1 Reintroduction
Any species of Prairie dogs are not to be considered for reintroduction.

2.1.2 Native Plant and animal species enhancement.
2.1.2.2 Prairie dogs are not to be considered for enhancement.
2.1.3 The Management Processes
2.1.3.5 Population management
XX The Reserve shall not be a candidate relocation site for Prairie dogs collected for relocation from neighboring communities. (The Reserve can not be opened as a dumping site for stray animals)

Sincerely
Roman Kohler
[redacted]

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2050309

STATE OF COLORADO
Bill Owens, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

John W. Mumma, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

00 MAY -2 AM 6:41

CCDM

For Wildlife-
For People

April 25, 2000

Joe Legare
Assistant Manager – Environment and Infrastructure
U. S. DOE – Rocky Flats Field Office
10808 Hwy. 93 Unit A
Golden, CO 80403-8200

RE: Wildlife Related Issues and Ideas on the Rocky Flats Property

Dear Mr. Legare:

At the suggestion of Ken Brakken of the DOE staff, I am writing to document the various wildlife related ideas and issues which our staff has discussed with DOE personnel over the past 10 years or so. We have made numerous field trips to the Rocky Flats Buffer Zone and have noted a number of opportunities to either preserve or improve wildlife habitat on the site. This listing includes all those of significance and hopefully will be of use to DOE in discussing future management of the site. There is no particular order.

Long Term Preservation of the Buffer Zone: Most of the Rocky Flats Buffer Zone is very high quality wildlife habitat, consisting of native grasslands, riparian areas, and spring/seep habitats. It is undoubtedly some of the best wildlife habitat in the metro area and some (the springs and seeps) are very rare and of high interest regionally. These habitats are potentially threatened by development proposals, hike/bike trail plans, noxious weed invasion, and other factors. The Division of Wildlife is on record stating that preserving these excellent habitats is important.

Noxious Weed Control: In recent years, the Buffer zone has been invaded by noxious weeds, especially diffuse knapweed and dalmatian toadflax. These plants seriously threaten the quality of the habitat on the site and are a major issue. Control measures have begun and we urge that they be continued aggressively to bring this problem under control.

Preble's Meadow Jumping Mouse: This Federally threatened sub-species of mouse is present in all the drainage areas of the Buffer Zone and Rocky Flats is an important habitat area for this animal. We encourage preservation of the mouse's habitat in the future, and close consideration of possible impacts to this species during clean-up.

54768

DEPARTMENT OF NATURAL RESOURCES, Greg Walcher, Executive Director
WILDLIFE COMMISSION, Bernard L. Black, Jr., Chairman • Rick Enstrom, Vice-Chairman • Philip James, Secretary
Members, Tom Burke • Mark LeValley • Marianna Raftopoulos • Robert Shoemaker • Olive Valdez
Ex-Officio Members, Greg Walcher and Don Ament

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Wetland Development: We have discussed with DOE staff the possibility of doing some wetland creation on the southeast corner of the site near the existing ponds managed by Charlie McKay. Some ideas proved impractical, but we are still looking at such potential projects and encourage DOE to continue cooperation on this concept.

Mining in the Buffer Zone: While DOE's control over mining on its property may be somewhat limited, we suggest that any mining proposals in the Buffer Zone be closely examined to avoid unnecessary impacts to wildlife habitats, and especially to avoid impacts to the groundwater situation which supports the existing springs and seeps in several drainages.

Water Rights: We have previously discussed the possibility of the Division of Wildlife filing on the water rights needed to protect the spring and seep areas from potential water diversions which could dry them up. That idea is still alive.

Re-Introduction of Plains Sharp-tailed Grouse: The plains sharp-tailed grouse is a bird which used to occur along much of the front range, including the Rocky Flats area. Its distribution has been greatly reduced, most likely by grazing practices, and it is now on the Colorado endangered species list. It is not on any Federal rare species list and is abundant in other states. None of these birds have been present in the Rocky Flats area for many years, but the habitat now present appears to be suitable to support them. We are currently working on a possible proposal to re-introduce this species to the Rocky Flats area and adjacent lands.

Introduction of Rare Fish to Rocky Flats Ponds: Several of the ponds present at the Rocky Flats site might be suitable places to introduce and rear some rare fish – all small minnow-like species. We will continue to pursue this discussion.

Controlled Burns of Grassland Areas: We continue to support the concept of controlled burning of selected portions of the grassland habitats in the buffer zone. Burning of these areas is a natural process which serves to "rejuvenate" the system and is important for the long-term health of the grasslands. We are happy to see DOE pursuing this activity.

I hope this information is helpful – please let me know if you have any questions.

Sincerely,

Dave Weber

Dave Weber
Habitat Biologist

Cc: Shaun Deeney, Scott Hoover – Area 5
Ken Brakken – DOE
Rob Witwer – DNR
John Swartout, Governor's Office

From: Marcia Murdock/RFFO1/USDOE@EXCHANGE on 05/19/2000 09:24 AM

To: Cliff Franklin/amgo/rffo@RFFO, Bruce Rosenlund <bruce_rosenlund@FWS.gov>@SMTP@rffo

cc: Stephen Nesta/RFFO1/USDOE@EXCHANGE

Subject: Draft Goals and Objectives for Rock Creek Reserve Management Plan

Cliff and Bruce,

The Rocky Flats onsite Ecology staff have some questions and comments on the plan outline that was provided to us. We were unfortunately too busy with the start of our field season to attend the May 18 meeting, but each of us will be forwarding comments.

My informal comments below are not in any particular order, but occurred as I reviewed the discussion of the Goals and Objectives.

- Will the Colorado Division of Wildlife have the opportunity to be involved in this process in tl future? At one point in the document in-stream flow water rights is mentioned; CDOW was working with DOE at one point a few years ago to try to find a way to file on these water rights. Dave Weber w involved in this. He might have some useful information that could help on this question. Water rights will be one of the larger challenges if an ambitious program is planned for ultimate abandonment of mc of the Site's ponds.
- In the second paragraph there is a discussion of the cooperative agreement for management of the Rock Creek Reserve. There are already DOE/K-H management programs in place -- that presently include Rock Creek -- that address weed control, vegetation and wildlife monitoring, revegetation, and other aspects of natural resource management. How will this plan mesh with the existing plan Will USFWS plans and monitoring supersede the existing plans, or will DOE management continu until such time as USFWS actually takes over management? How will USFWS coordinate with th DOE contractor which is presently charged with designing and implementing the management actions for the entire Site?
- There are a large number of vegetation monitoring transects and plots throughout the Site, how wil this plan protect those locations from encroachment, research impacts, and management impacts?
- How will this management plan allow wildlife monitoring transects to remain unimpacted? If ther will be a significant presence of other researchers, public visitors, etc., it may become necessary to coordinate these activities against regularly scheduled surveys to avoid unplanned impacts to surve areas while these surveys are in progress.
- Kaiser-Hill ecologists are very familiar with Rock Creek and the Site in general. They can provide considerable insight, and have access to nine years worth of ecological monitoring data (from pres programs as well as past characterizations) that may help USFWS personnel avoid redundancy anc duplicated effort during design of monitoring and research plans, and objectives for USFWS' management and research programs. One example of redundancy that has already occurred was when USFWS ecologists conducted gill netting in the Lindsay and Landfill ponds because they we unaware of preexisting data. The fish populations were already known from previous studies and long-term observation, so Site ecologists already knew what was likely to be present when the small-fish trapping effort was reinitiated two years ago. Because of this knowledge, gill netting in these, and other ponds was judged unlikely to be productive of new data, and minnow trapping wa done instead. Previous evaluations have trapped and netted all ponds.
- It should also be noted that until cleanup and closure are complete, several ponds are still designat as individual hazardous substance sites (IHSSs), and personnel who work in these waters, by Site safety procedures, need a minimum level of OSHA hazardous waste training (the Landfill Pond is

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one of these areas). Onsite personnel can help USFWS personnel identify such areas and avoid entering into potentially hazardous areas.

- If the present Ecological Monitoring Program performed under DOE auspices is to be successful ir achieving its goals, it will be necessary for the personnel from the two organizations to carefully coordinate actions and activities to ensure quality data for both purposes.
- There are a large number of special-concern species already documented on the Site, and any management plan should consider all of these. Site ecologists can help USFWS personnel by identifying these species and their areas of occurrence.
- There actually are a few prairie dogs that have reinhabited the Site since the plague epizootic, and they are continuing to reoccupy old colony areas, albeit at a slow rate of recovery. A specific prair dog management plan should be considered a necessary part of any long range management plan fc the Site.
- The use of native species for revegetation has been in progress for several years, and Site ecologist have identified seed mixtures and planting techniques that work well for local conditions. This might be useful information for the USFWS personnel involved in this project.
- How will new USFWS monitoring programs be coordinated with existing programs?
- It should be noted that restoration of the Lindsay ranch buildings will be very expensive, particular the old house. It is in extremely poor repair.
- It should be considered that the Rock Creek drainage is the most important mule deer fawning area on the Site, and dung the period from late May through early July is a sensitive one to the health of the herd on the Site. This area is, of course, also well populated with Preble's meadow jumping mice. To reduce unnecessary impacts to this sensitive area, USFWS should consider allowing only tours that are under the control of a guide, keeping trails restricted to uplands (perhaps where existing roads are), and restricting tours such that they are not too intrusive during the fawning and neotropical bird breeding season.
- I, personally, would have trouble supporting unlimited "recreational" public use in this sensitive habitat area because a heavy level of intrusion would be detrimental to both the habitat quality and the sensitive species living there. This is not an official position, only a personal/professional one.

I appreciate the opportunity to comment on this plan.

Marcia Murdock

From: Thomas Ryon/RFFO1/USDOE@EXCHANGE on 05/22/2000 03:27 PM

To: Cliff Franklin/amgo/rffo@RFFO, Bruce Rosenlund <bruce_rosenlund@fws.gov>@SMTP@rffo
cc: Stephen Nesta/RFFO1/USDOE@EXCHANGE
Subject: Comments on USFWS Manage Plan for Rock Creek

I have some comments on the USFWS Rock Creek Management Plan, but am unable to attend any of the meetings.

Comment 1:
Kaiser-Hill currently has an Ecology Program for the monitoring and management of the buffer zone through the clean-up in 2006. USFWS says, in their introduction, that they will coordinate ("co-manage" with DOE in their management of Rock Creek and possibly the entire buffer zone. It would be unfortunate if the USFWS did not co-manage Rock Creek with the cooperation of the Kaiser-Hill ecolog group. The reason this would be unfortunate, particularly if their management plan would expand to the entire buffer zone, because the Ecology Group contains a wealth of site-specific ecological information and has a perspective on long-term monitoring and management of the buffer zone. In addition, the Kaiser-Hill Ecology group has a long history of planning and conducting monitoring and management projects at a DOE complex. If USFWS chooses not to coordinate with the Kaiser-Hill Ecology group, the will find themselves years behind in terms of site ecology knowledge (every site is different) and operational knowledge vital to the success of their program.

Comment 2:
The USFWS says they will manage for native, sensitive and T&E species. There are many natural resources at Rocky Flats such as native plant communities that are not protected by the heavy environmental statues as some individual species are. Yet it is the combination of the plant communitie that provide the habitat for many imperiled species including the Preble's jumping mouse.

I would hope that the USFWS will manage the Rock Creek Reserve from an ecosystem management prospective and not let the heavy drivers for individual T&E species take precedence to sound wildland management. For example, it would be short-sighted to let non-native plant species propagate in order protect an individual protected species. I hope the USFWS will take a long-term view in making daily decisions about Rock Creek management.

Comment 3: Under population management of Preble's mice it is stated that the current monitoring will continue. Who will do this monitoring through 2006? Who will do this monitoring after 2006? Will other current ecological monitoring continue?

Comment 4: Research - If research by outside organizations and institutions is going to be allowed in Rock Creek, there needs to be coordination with the current monitoring program and site-specific management history. Researchers need to be appraised of the ecological conditions of their study sites (e.g., this plot was sprayed with herbicide in 1997) so that their study results can be interpreted in light o the correct historic land use.

Comment 5: Numerous observations at the site, such as elk, black bear, and mountain lion, indicate tha Rocky Flats is connected to the foothills ecosystem and is part of a larger system that provides habitat t wide-ranging species. It is likely that Coal Creek and the adjacent open space to the south provide the movement corridor and make the link to Rocky Flats. It is my hope that the USFWS will work with adjacent landlords to insure the continued existence of this important corridor and prevent Rocky Flats from becoming isolated from the foothills and surrounding open space.

Thomas Ryon, Wildlife Biologist
Exponent Environmental
Kaiser-Hill Ecology Group
Rocky Flats Environmental Technology Site

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(303) 966-3657
(303) 966-3578 fax
Email: thomas.ryon@rfets.gov
Find RFETS Ecological Data Online Now. Visit: http://167.253.8.4/eddie or http://www.rfets.gov
Click on EDDIE!

Comments on USFWS Rock Creek Reserved Integrated Natural Resources Management Plan
From Jody K. Nelson, [redacted]

1. Under Goal 1.1, one concern I have is that the statement concerns itself with the restoration, preservation, protection, and enhancement of native, sensitive, and T&E **species** only. It is a species specific management approach. There is no mention of plant communities or an overall ecosystem approach. An overriding goal for the management of the ecological resources for the Rocky Flats Environmental Technology Site (Site) should be an ecosystem management approach. Attention needs to be given to both individual species and plant communities. It should **not** be a species specific approach only or where priorities are only given to individual species first. Many of the rare and unique resources at the Site are not only individual species such as the Preble's mouse or the proposed species the USFWS may introduce, but the plant communities (i.e. xeric tallgrass prairie, tall upland shrubland, Great Plains riparian woodland, needle and threadgrass prairie, seep wetlands) themselves that are comprised of many species. If management for individual species is done at the expense of these communities then I do not support the USFWS approach to management of the ecological resources at the Site. I recommend that Goal 1.1 be revised to read, "...to restore, preserve, protect, and enhance native, sensitive, and Threatened and Endangered species **and communities** in a manner ..."

   If the USFWS cannot or will not employ an ecosystem management approach to their management of the ecological resources at the Site, then I would encourage the DOE to consider entering into an interagency agreement with the US Forest Service, Arapahoe/Roosevelt District, for management of the Site's ecological resources. The Site could be managed as national grassland, perhaps as part of the Pawnee National Grassland. The US Forest Service approach would be more of an ecosystem management and multi-use approach that would better preserve the resources of the Site.

2. Concerning Issues 1.2.2, I encourage the enlargement of the boundaries of the Rock Creek Reserve to include the entire BZ if possible or at least the majority of the xeric tallgrass prairie if that is not feasible. The entire Site needs preservation, not just the Rock Creek drainage. The opportunity exists to preserve a large tract of land that contains a high diversity of the region's rapidly disappearing flora and fauna. Habitat fragmentation is a major concern for many species that are currently declining. The Site is a large area, that combined with the surrounding Open Space lands provides a fairly large, contiguous area that is important for the continued long-term existence of many declining species.

3. Concerning Objectives 2.1, again the goals mentioned are species specific. I recommend incorporating the community aspect of the ecosystems to the goals and objectives. It is mentioned that the USFWS will use the Colorado Natural Heritage Programs Conservation Status Handbook for guidance concerning rare and declining species. This handbook (database) also lists the rare and imperiled plant communities found in Colorado as well. The plant communities on Site need protection also, but must be managed appropriately to sustain them in the long-term.

4. Concerning Objectives 2.1.3.8 and 2.1.4.2, it is mentioned that they support the continuation of existing monitoring programs.
   a. This is encouraging. The current monitoring program and ecologists have accumulated an incredible wealth of information and knowledge about the ecological resources at the Site. Additionally, the current ecologists have the knowledge of past resource management across the Site that is essential for designing and locating potential future studies. I would hope that the USFWS would take advantage of that knowledge and include the current ecologists in discussions about projects and proposals.
   b. In section 2.1.1.5, they mention monitoring of potentially reintroduced populations of several species. Who do they see doing this monitoring? USFWS personnel or current monitoring program personnel?
   c. How will current monitoring and potential future monitoring of reintroduced species (likely by USFWS personnel) be coordinated? The current monitoring program has monitoring locations (i.e. plots, transects, etc.) located across the Site. These locations need to remain undisturbed by USFWS personnel and others to preserve the integrity of the ongoing monitoring. If the USFWS

personnel set up monitoring locations, the current monitoring program ecologists need to know where they are in order not to disturb the work being conducted at those locations. There must be coordination between all parties involved and it must be at the field personnel level (not just managerial level). The field personnel are the ones who do the actual field work, know where the field plots and transects are located, and know what can and cannot be done at or nearby monitoring locations. So I would encourage some type of occasional meetings between Site ecologists and USFWS personnel to discuss these issues and others.

5. Concerning Issues 2.4, it is mentioned that research opportunities may be made available for a variety of issues.
   a. Does this refer to the current monitoring program efforts or is it in reference to potential future monitoring by academic researchers and/or others?
   b. If off-site researchers are going to be allowed to conduct research on-Site, then the current monitoring program ecologists must be involved in the coordination of these efforts and in the selection of monitoring locations for the same reasons mentioned in item #4. Again communication between off-site field personnel and on-Site ecologists is essential to preserve the integrity of current monitoring efforts and also to provide essential background information to other researchers for the design of their potential studies.

Cliff Franklin
06/08/2000 07:25 AM

Sent by: Cliff Franklin

To: "D. Jean Tate" <jeantate@enviro-support.com>
cc:
Subject: Re: Proposals for Future Use of RFETS

Thanks for your interest in the Management plan for the Rock Creek Reserve. I'm not clear if you have obtained the Table of Contents or the Goals and Objectives outline for the Management Plan or not. Those are the items that were mailed out and made available at the three public scoping meetings. If you don't have them let me know and I will send them out to you. At this time they are the only items that have been prepared. We are asking for comments on them prior to preparing a Draft Integrated Natural Resource Management Plan for the Rock Creek Wildlife Reserve. Based on comments from the public, we hope to have a Draft plan completed around the end of July, 2000. At that time the Draft Plan will be distributed to the public for comments. We hope to have the Final plan completed by December 31, 2000.

It should be noted that this plan is directed primarily to the Rock Creek Reserve with applicability to a proposed expansion of the Reserve and at some point, perhaps to the entire buffer Zone. We would like comments on the subjects in those two formats, expressing support for the items in there, disagreement with the items, or if there are some missing, please suggest those additions. Also if you have any strong feelings on any of the topics, we would like to know them.

Pleae let me know if you have the two formats: Table of Contents, and Goals and Objectives outline. I look forward to hearing from you.

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/06/2000 10:58 AM

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/06/2000 10:58 AM

To: Cliff Franklin/amgo/rffo@RFFO
cc:
Subject: Proposals for Future Use of RFETS

Dear Cliff,

I represent a homeowners association just south of SH72 and near RFETS, am on the Board of the Jefferson County Horsemen's Council, and have worked as a consultant at the Flats in years past. I am most interested in future uses of the site, particularly those associated with open space, multipurpose trails, and connections with adjacent trail systems for equestrian and other use. To make substantive comments on the current proposals for use of RFETS, I need additional information. What can you send me that will fully elucidate current proposals?

My mailing address is:

D. Jean Tate
[redacted]

You can also contact me via the above email address or by phone [redacted] I will try to get

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comments in to you by June 15, but am somewhat dependent on my receipt of your information packet.

Thanks!

D. Jean Tate.vcf

Jean

Cliff Franklin
06/08/2000 10:49 AM

Sent by: Cliff Franklin

To: "D. Jean Tate" <jeantate@enviro-support.com>
cc:
Subject: Re: Proposals for Future Use of RFETS

I will send the map and two formats today. We have directed the Plan toward the Rock Creek Reserve because it is the only area "currently" designated as the Reserve. The map I will include shows the current boundary and the proposed boundary expansion. We have limited the area of inclusion and proposed expansion to areas where it is generally agreed that contamination does not occur. Although we feel that most of the remainder of the buffer zone could be included, there is general concern among some segments of the public and local governments. Until those concerns are satisfactorily addressed we feel it is better to avoid those conflicts at this time. In addition, on the west side, we have avoided several areas that have active mining permits in existence. Within the next 5-6 years these issues will all have to be addressed, either through Congressional action or through the continuing collaborative involvement of the private citizens, special groups, and the local governments. It is expected that most aspects of this plan will be applicable for the entire buffer zone when the decision is made to include all of it in open space status, or wildlife refuge, if that becomes the decision of the public.

If you have any other questions, please ask. I will get the information in the mail for your review.

Cliff

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/08/2000 10:38 AM

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/08/2000 10:38 AM

To: Cliff Franklin/amgo/rffo@RFFO
cc:
Subject: Re: Proposals for Future Use of RFETS

Cliff,

I have nothing written at all, and would appreciate receiving any text and maps you can provide. I would also be interested in knowing the rationale for restricting the current plan to Rock Creek and not also including Woman Creek and the western uplands (i.e., an open space U open to the east and avoiding the industrial area and probably Walnut Creek seems most reasonable to me).

Jean
Jean Tate
[redacted]

----- Original Message -----
From: <Cliff.Franklin@rfets.gov>
To: "D. Jean Tate" <jeantate@enviro-support.com>
Sent: Thursday, June 08, 2000 7:25 AM

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Subject: Re: Proposals for Future Use of RFETS

> Thanks for your interest in the Management plan for the Rock Creek Reserve. I'm
> not clear if you have obtained the Table of Contents or the Goals and Objectives
> outline for the Management Plan or not. Those are the items that were mailed
> out and made available at the three public scoping meetings. If you don't have
> them let me know and I will send them out to you. At this time they are the
> only items that have been prepared. We are asking for comments on them prior to
> preparing a Draft Integrated Natural Resource Management Plan for the Rock Creek
> Wildlife Reserve. Based on comments from the public, we hope to have a Draft
> plan completed around the end of July, 2000. At that time the Draft Plan will
> be distributed to the public for comments. We hope to have the Final plan
> completed by December 31, 2000.
>
> It should be noted that this plan is directed primarily to the Rock Creek
> Reserve with applicability to a proposed expansion of the Reserve and at some
> point, perhaps to the entire buffer Zone. We would like comments on the
> subjects in those two formats, expressing support for the items in there,
> disagreement with the items, or if there are some missing, please suggest those
> additions. Also if you have any strong feelings on any of the topics, we would
> like to know them.
>
> Pleae let me know if you have the two formats: Table of Contents, and Goals and
> Objectives outline. I look forward to hearing from you.
>
>
>
>
>
> From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/06/2000 10:58 AM
>
> To: Cliff Franklin/amgo/rffo@RFFO
> cc:
> Subject: Proposals for Future Use of RFETS
>
> Dear Cliff,
>
> I represent a homeowners association just south of SH72 and near RFETS, am on
> the Board of the Jefferson County Horsemen's Council, and have worked as a
> consultant at the Flats in years past.

I am most interested in future uses of
the site, particularly those associated with open space, multipurpose
trails,
and connections with adjacent trail systems for equestrian and other use. To
make substantive comments on the current proposals for use of RFETS, I need
additional information. What can you send me that will fully elucidate
current
proposals?

My mailing address is:

D. Jean Tate
[redacted]

You can also contact me via the above email address or by phone
[redacted]
I will try to get comments in to you by June 15, but am somewhat dependent
on my
receipt of your information packet.

Thanks!

Jean(See attached file: D. Jean Tate.vcf)

Cliff Franklin
06/08/2000 12:50 PM

Sent by: Cliff Franklin

To: "D. Jean Tate" <jeantate@enviro-support.com>
cc:
Subject: Re: Woman Creek Ecorisk Data

I believe that all the data is, and has been available to anyone interested. The controversy continues over "soil Action Levels". I believe all data has shown no effect on biological systems, and even the col Div. of wildlife has stated there isn't any effect, however since there are public concerns it is better to limit the area of consideration for the Reserve at this time. Thanks for your comments, and I hope to hear more from you on the Plan.

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/08/2000 11:37 AM

From: "D. Jean Tate" <jeantate@enviro-support.com> on 06/08/2000 11:37 AM

To: Cliff Franklin/amgo/rffo@RFFO
cc:
Subject: Woman Creek Ecorisk Data

Cliff,

Thanks for the materials you are sending. Re: the Woman Creek drainage, have the data from ecorisk sampling in the Woman Creek drainage (aquatic and terrestrial) been brought to the attention of the public. My recollection is that very little contamination was found in biological tissues, where it would concentrate if anywhere....

D. Jean Tate.vcf

Jean

Times DRAFT RCR Plan was mailed To:

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~~ERIC ODELL~~

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will call in rest of address

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DOE F 1325.8

ATTORNEY CLIENT PRIVILEGED

United States Government **Department of Energy**

Informal Memo

Rocky Flats Field Office

DATE: April 3, 2001

REPLY TO ATTN OF: OCC:SCB:01-0401

SUBJECT: Integrated Natural Resources Management Plan and Environmental Assessment for the Rock Creek Reserve with attached Finding of No Significant Impact

TO: Cliff Franklin, Office of Environment and Infrastructure

I have reviewed the subject document that you prepared and sent to the Office of Chief Counsel for review and concurrence. I have a number of comments of a typographical nature. I will provide those to you on the document. The following are substantive comments.

(1) Page 1, last paragraph, second to the last sentence, beginning " transfer of the Rocky Flats . . .." Delete sentence and replace with the following, "It is anticipated that the transfer of the Rocky Flats property to the USFWS would not occur until the Final Comprehensive Environmental Response, Compensation, and Liability Act Record of Decision for Rocky Flats is issued."
(2) Page 3, last paragraph, first sentence, beginning "The plan will have . . .." Return the sentence to its original form and rewrite the response to comment. The sentence originally read, "The Plan has the signatory approval of the Service."
(3) Page 4, last paragraph, second sentence, beginning "At closure, ..." rewrite the beginning of the sentence to read, "At closure, it is anticipated that all nuclear materials . . .."
(4) Page 6, bullet on County Governments, second sentence. The reference to Jefferson County serving "on committees" is ambiguous. Can it be clarified?
(5) Page 9, last paragraph, second to the last sentence beginning "therefore options such as . . .." The sentence states that unrestricted access will not be "considered until closure is complete." Is this a true statement in light of the later statement within the Plan that reference the Site SAR and its focus on nuclear safety as the reason for not allowing unrestricted access? These statements should be consistent.
(6) Page 15, first paragraph under section 2.1.7, last three sentences. Ensure that the statements regarding the buffer zone report from CDPHE and its resolution are true and accurate.
(7) Page 34, first paragraph under section 4.2.1, reword the last sentences to read, "Preliminary data shows no contamination in the Rock Creek Reserve (Section 2.1.7). Sampling has been proposed to ensure that Rock Creek's water resources are not diminished."
(8) Figure 10 is labeled draft. It would seem that this is inconsistent with the final nature of the Plan.

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(9) A global comment is that the document should be reviewed closely to ensure that the following documents are referenced properly and appropriately, "Annual Vegetation Management Plan", "Vegetation Management Plan", and Vegetation Management Environmental Assessment". This is a very important issue since some of our most contentious issues, like prescribed burns, refer back to these existing documents, but some of the referencing seems inconsistent. See page 44, second paragraph stating that the Annual Vegetation management Plan was analyzed in an Environmental Assessment, as well as the FONSI reference to the site-wide annual vegetation management plan in the fifth bullet on the first page of the FONSI.

(10) Page 54, first bullet under Proposed action, delete "and will be incorporated into a Site-wide study for easement access." at the end of the bullet.

(11) Page 54, first paragraph under "**Prescribed Burning**", first sentence check and use the correct title for the multi-year burn plan, add it to the reference list, and state the date of the plan in the sentence.

(12) Same sentence as (11), delete "in accordance with" and replace it with "based on".

(13) Page 55, third paragraph, last sentence beginning "The multi-year fire plan . . .." Use the title used at the beginning of this section and delete the word "fire" and replace it with "prescribed burning".

(14) Page 55, fourth bullet delete the following "determines no unacceptable level of adverse effects to the mouse and/or its habitat will occur."

(15) Page 55, fifth bullet. Should we add the following so the sentence should read, "All prescribed burns will include public notification, as well as, application and receipt of burn permit from CDPHE . . .."? Or correct words to that effect?

(16) Page 60, second paragraph under "Options Considered But Not Selected", second sentence delete the following "from any recent or future off-site activities," from the sentence.

(17) Page 66, second paragraph under "Socioeconomics", last sentence delete "as do mineral right owners and mining permittees." This statement is unnecessary in this context.

(18) Page 67, section on "Cumulative Impacts", first paragraph, last sentence rewrite to read as follows, "Implementation of this management plan is not expected to result in incremental impacts to these surrounding lands or the Rock Creek Reserve; therefore the negative cumulative impacts will not be increased from the level currently existing."

(19) Page 68, last paragraph before "Summary of Impacts" rewrite the beginning of the first sentence to read, "The management of Rock Creek Reserve's natural resources now will help ensure the future quality of these lands, ..."

(20) FONSI, first paragraph, first sentence after "Department of Energy (DOE)" add "with the assistance and cooperation of the U.S. Fish and Wildlife Service".

(21) FONSI, third paragraph, before last sentence insert the following, "The comments were assessed and considered, and where appropriate, the plan was modified."

(22) FONSI, fourth paragraph, first sentence delete "during the next five years".

(23) FONSI, last bullet ensure that the language of this bullet tracks the language in the Plan.

(24) FONSI, section on "Environmental Effects", second paragraph delete last sentence. This is not an effect of the plan. Superfluous statements such as this weaken documents more than they strengthen.

(25) FONSI, throughout the FONSI the use of the shortenings "Plan" and "EA" should be consistent especially since it is an integrated document.

(26) Response to comment 3-5, insert "The approval of the Plan by the service does not presume the issuance of a FONSI."

(27) Response to comment 3-17, rewrite last sentence to read, "The Department of Energy neither tracks mineral leases nor maintains current maps depicting mineral leases."

(28) Response to comment 3-22, rewrite first sentence to read, "NWTC's existing management practices in the Rock Creek watershed will be considered as this plan is implemented." Get a copy of any written management practices that the NWTC has and include them in the administrative record file as appropriate.

(29) Response to comments 5-1, delete the second to the last sentence beginning, "The water right issue in Rock Creek . . .." This sentence is not necessary to answer the general question posed.

(30) Response to comment 6-3, delete and replace with the following, "The plan will monitor the natural resources in the Rock Creek Reserve. If monitoring determines there are impacts, they will be addressed as appropriate. The Department of Energy neither tracks mineral leases nor maintains current maps depicting mineral leases.

(31) Response to comment 6-4, delete the last sentence.

(32) Response to comment 7-4, in first sentence change "addressed" to "considered". Delete the second sentence, it is not accurate.

(33) Response to comment 8-1, rewrite the third sentence to read, "The initial Rock Creek Reserve boundary was based upon best estimates of the ecosystem functions at the time, which are for the most part, independent of any boundary designation." Also add, the following, "The Rock Creek Reserve may be further expanded in the future as deemed appropriate." Delete reference to 8-2.

(34) Response 8-2, delete response and reference 8-1.

(35) Response to comment 9-4, rewrite to read as follows, "The Land Use section provides background information to place the management of the Rock Creek Reserve in context. Mineral owners have a right of access for extraction of minerals. How that extraction occurs and any mitigation required is determined by entities other than DOE. Also, please refer to Response #5-1"

(36) Response to comment 9-8, delete first two sentences and add the following to the end of the response, "Other Site wetlands mitigation is beyond the scope of this plan."

(37) Response to comment 10-4 add the following after the first sentence, "How that extraction occurs and any mitigation required is determined by entities other than DOE." Delete the remainder of the response leaving only the reference to responses 9-4, 6-3, and 5-1.

(38) Response to comment 11-1 rewrite the first sentence to read, "Restoration and re-vegetation using native species could be mining permit requirements and such requirements are the responsibility of entities other than DOE." The second sentence should read, "DOE supports the use of native species on reclamation activities."

(39) Response to comment 11-5, delete response and reference 8-1.

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KAISER•HILL
COMPANY

01 JAN 22 AM 8:14
CCDH

January 18, 2001

Mr. Joe Legare
Assistant Manager
For Environment and Infrastructure
DOE, RFFO

01-RF-00136

COMMENTS - KN-003-01

As you are aware, Kaiser-Hill Company, L.L.C. (K-H) submitted comments on the Integrated Natural Resources Management Plan for Rock Creek Reserve developed by the U.S. Fish and Wildlife Service (USFWS) and the Department of Energy (DOE). . These comments addressed clarifications and general concerns about the proposed management plan. The Ecology Group has additional specific concerns regarding some of the proposed actions. In response to your request, I am providing you with further information for consideration..

Site Ecology personnel are concerned that introductions of imperiled species to the Site may be ill advised. Specifically concerns were raised with respect to the following proposals:

> "*Coordinate with the Colorado DOW to reintroduce the Plains sharp-tailed grouse and implement monitoring. The grouse is State-listed in Colorado, but is considered abundant in other states, and is not being considered for federal listing.*"
>
> and,
>
> "*Coordinate with the DOW to introduce native, sensitive species of fish, including Iowa darter, northern redbelly dace and common shiner and implement monitoring. The purpose of this action is to establish a fishery representative of this area in its original condition, and to provide a source of these species for reintroductions elsewhere. These species are not State or federally-listed, nor are they being considered for proposal for federal listing.*"

The proposals need to seriously evaluate the impact on current existing species and the adequacy of the existing habitiat for the success and maintenance of the introduced species.

To clarify the status of these species, the **Plains sharp-tailed grouse** is State-listed as endangered. According to the Colorado Natural Heritage Program and the Colorado Division of Wildlife, "Plains sharp-tailed grouse formerly nested over much of the northern two-thirds of the eastern prairie, but the present population consists of only a few hundred birds in Douglas County. The decline is the result of overgrazing and the conversion of grassland to cropland and, more recently, to housing developments. What remains of Colorado's population is now severely threatened by proposed land developments in the area between Denver and Colorado Springs. If the remaining population is to be preserved, the existing grassland-shrub habitat must be kept free of further development. Additionally, medium to tall grasses and shrubs need to be maintained around the dancing grounds to provide protection from weather and

Kaiser Hill Company, L.L.C.
Rocky Flats Environmental Technology Site, 10808 Hwy. 93 Unit B, Golden CO 80403-8200 ♦ 303-966-7000

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predators." It is unclear if the Plains sharp-tailed grouse historically occupied the Rocky Flats area, but from available information, this area would have been at the extreme western extent of the local subspecies' range east of the Rocky Mountains in the state. General species range maps (which includes all subspecies) also show the distribution of the general species of sharp-tailed grouse in the northwestern quadrant of the state.

The status of the fish species, as presented in the statement above is incorrect. In a Colorado Wildlife Commission news release dated May 8, 1998, the southern and **northern redbelly dace** were added to the Colorado endangered list, and the **common shiner** was added to the state list of threatened species. The **Iowa darter** is presently classified as a "species of special concern" in Colorado. None of these species is federally-listed. Our available references do not show that the Rocky Flats Site is within the recorded range of the northern redbelly dace or the Iowa Darter, and that if they had occurred here, they would have been a peripheral population at the extreme of their distribution. Our references also show that the occurrence of the common shiner at the Site would have been unlikely, though perhaps possible with sufficient stream flow.

We are concerned that such introductions can result in single-species management, may unnecessarily deplete limited source populations from which transplant individuals are derived, and may adversely impact existing species. Further information on habitat needs, and our concerns that these transplantation goals cannot be successfully met are discussed below.

DOE should keep in mind that once introduced, and successfully established, populations of imperiled species will remain on the Site. The presence of such species may limit future land use options.

Plains Sharp-Tailed Grouse

According to information provided by The Nature Conservancy (TNC) website (<http://www.tnc.org/wings/wingresource/stgr2.htm>), the Plains sharp-tailed grouse "requires a mosaic of dense grass and shrubs with rich forb and insect foods during nesting and brood-rearing. During winter it often relies on riparian areas and other sites that support deciduous trees and shrubs for feeding, roosting, and escape cover; and it also utilizes non-native cultivated grains and hedgerow species. While on the surface, it appears that portions of the Site provide most of these types of habitats, the actual extent is quite limited. TNC recommends that a minimum total habitat area necessary for successful population persistance [sic] or reintroduction approaches 30 square kilometers (18 .7 sq mi); 33 percent should be undisturbed grass-shrub habitat in early to mid-successional stages; the remainder can be composed of cropland, pasture, and grazed uplands." The entire Rocky Flats Site is barely larger than 9 sq mi, and parts of this would not provide appropriate habitat. Woody riparian areas on Site are narrow and upland shrubs occur only in small, scattered patches. Surrounding Open Space holdings allow grazing, and should be evaluated for viable additional habitat before any introduction of Plains sharp-tailed grouse is seriously considered

TNC points out that certain features "such as forest encroachment, power pole and fence arrays, and other structures may favor avian predators by providing cover and platforms from which to more effectively hunt. Similarly, decreased availability of nesting or escape cover, or increased travel distance to forage resources, may create less-optimal habitats and increase vulnerability to many sources of predation." The

Site's predators include all of those listed in the TNC information (red fox, raccoon, coyote, plus various mustelids, felines, rodents, corvids, and several larger raptors); coyote and raptor populations are robust and well established. Note that in another part of the management plan, the installation of new (additional) perch-points for raptors is proposed.

TNC also notes that the reintroduction record is poor when it comes to establishing Plains sharp-tailed grouse populations in unoccupied habitat. Many past reintroduction efforts have failed to produce self-sustaining populations or increase the size or distribution of augmented populations. This would be particularly true for locations with insufficient areas of habitat or severely fragmented habitat such as the Site and surrounding vicinity would provide.

With insufficient habitat available onsite, it can be assumed that the grouse would be forced to seek habitat resources offsite. This would require them to cover large flight distances (making them more vulnerable to predation), and to cross at least two major high-speed highways (increasing the risk of roadkill). Adjacent grazed lands may not provide sufficiently viable habitat to compensate for the size-limited habitat available at the Site.

As a cautionary note, any introduction plan for Plains sharp-tailed grouse would need to consider the potential impacts on the vegetation management actions that are presently necessary to improve habitat conditions. The application of both prescribed fire and herbicides for weed control would have to be carefully timed to avoid adverse effects on the grouse.

In light of the information discussed above, the Site's abundant predator populations, and the lack of sufficient appropriate habitat at the Site, we strongly recommend against consideration of introducing Plains sharp-tailed grouse to the Site.

Native, Sensitive Species of Fish

Although the Integrated Natural Resources Management Plan for Rock Creek Reserve only vaguely refers to removing "the exotic species of fish, such as bass, using *established methods* (italics added) currently employed by the USFWS, from Rock Creek wetlands such as Lindsay Pond", the USFWS personnel with whom we have been working indicated that it is their intention to apply Rotenone, a fish poison, to the pond and surrounding waters. We are concerned that the act of poisoning the waters of Rock Creek can have unwanted, unintended adverse effects on non-target species. Information on Rotenone (available from myriad web sites) indicates that although it is considered an "organic" pesticide, it may have adverse effects on non-target species, which can include mice and rats exposed to high levels. It is normally sold as an insecticide and fish poison. Rotenone can take considerable time (5-6 weeks) to clear out of treated waters, though there are neutralizing agents (e.g., potassium permanganate) that will deactivate it rapidly. Rotenone will act on all fish species, and its effectiveness is related somewhat to solution concentrations. In the concentration levels at which it is used on fish, it is not toxic to waterfowl or mammals. It is, however, toxic to amphibians in the water.

Rock Creek contains our highest known populations of **northern leopard frog**, a "species of special concern" in Colorado. Applying Rotenone to the Lindsay Pond and surrounding wetlands will kill any immature (nymphal form) amphibians, and likely all adults in the water at the time of application. The affected species would include the northern leopard frog, boreal chorus frog, and the tiger salamander.

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There is insufficient information to determine the effect on aquatic reptiles, but our understanding is that they, too, may be affected; particularly juveniles. This is of concern to us because it sacrifices several species for the possible benefit of another that may not have adequate habitat to survive, and which is not documented to include the Site within its known range of occupation.

The habitat of the Iowa darter is clear, cool, weedy streams, and along the shoreline of small lakes. Common shiners prefer clean, gravel-bottomed streams, and are sometimes found in small lakes. It is a gravel nester, excavating a shallow depression in a gravel stream bottom. Northern redbelly dace habitat includes lakes, ponds, bogs, and pools in headwaters of creeks. It is usually found over silt, and often in association with vegetation. Although these general habitat descriptions are similar to portions of Rock Creek, such habitat is very limited within all reaches of that creek, and portions of the creek dry up each year. This very marginal habitat does not appear to us to be an appropriate location for transplantation/introduction of rare and imperiled species such as these. Also, as stated above, the Rocky Flats Site is only on the periphery, or not at all within the known ranges of these fish species.

An additional condition to note is that American white pelicans and double-crested cormorants are already known to forage occasionally in Lindsay Pond. With the removal of the larger bass, and their replacement with smaller fishes, it is likely these fish-eating species may spend more time at the pond. Presently their numbers are highest in Site ponds with abundant smaller fishes.

Another potential impact to the Rock Creek waters is the periodic mine water discharges into the Lindsay Branch of Rock Creek. At times in the recent past, waters from the aggregate mine in the southeast ¼ of Section 9 have been pumped from pools within the mine perimeter and discharged upstream of the pond known as Lindsay 2 (approximately ¾ mile upstream of Lindsay Pond). Such pumping has introduced heavily silted waters of unknown quality into the drainage. This practice should be evaluated before any imperiled fish species are introduced downstream of the discharge.

Our concerns, therefore, are that 1) applying poison into the Rock Creek drainage to eliminate one species may adversely affect several other species, some that are special-concern species themselves, and 2) introduction of rare and imperiled species into what appears to be habitat of marginal quality for those species is unwise for conservation of those species. We strongly recommend against this proposed action.

Monitoring Requirements

The introduction of any rare or imperiled species would require monitoring to verify success or failure of the transplantation effort. While the Site ecologists have the expertise to conduct the necessary types monitoring, it is not presently within the scope or staffing level capabilities for the Ecology Program.

K-H and DOE would need to address the need for additional FTE allocation to support the monitoring requirement for any introduction efforts, and would also need to allocate funding to support all necessary management actions associated with such a project.

If you require additional information, please feel free to contact me at 303-966-9876.

Sincerely,

Karan North

Karan North,Division Manager
Environmental System & Stewardship
Kaiser-Hill, L.L.C.

cc:
Cliff Franklin, DOE

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(1)

12-22-00
Murdock

COMMENTS AND CONCERNS REGARDING THE DRAFT ROCK CREEK RESERVE INTEGRATED NATURAL RESOURCE MAMAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

These comments do not necessarily follow the outline of the plan, because some are general in nature and apply throughout the draft document.

1. The various colors on Figure 1 would be better changed to other colors. On color copies of the map, differences between various open space ownership, water and state land, etc. is indistinct.
2. It should be understood that the expanded Rock Creek Reserve boundary includes parts of the Walnut Creek drainage. It will also include ponds other than the old Lindsay Ranch Pond.
3. It should be noted that the Natural Resource Management Policy document is supposed to be updated annually, and has never been updated. It therefore does not reflect current policy on aerial herbicide application and prescribed burning.
4. Under "Planned Initiatives" (p. 6), how can you accomplish sensitive species protection, habitat protection, and enhancement while allowing public access and recreation?
5. We assume that under Goal 4 (p. 10) that USFWS Reserve personnel will be interfacing with Site Air Quality, Water Quality, and Actinide Migration Study groups for input into this inventory.
6. In Section 2.1.4, last paragraph (p. 14) Rocky Flats Lake is southWEST of the Site.
7. Lindsay Pond is not the only manmade drainage feature in Rock Creek Reserve, but is the most visible. There are several other small stockponds and canals in Rock Creek.
8. Please see redline corrections in Section 3.4. We suggest that the word *vegetation* replace *flora* and *floral* as indicated in the redline document since all existing Site documents use "vegetation". One note, some of the information taken from the CNHP draft report for Rock Creek is actually not accurate. The redlines we have provided will make the statements more accurate. In particular, the references to black-crowned night herons nesting in tall upland shrubland in Rock Creek were attributed to Ms. Murdock, and she requested of CNHP that they be corrected. They apparently were not, and she would appreciate not having that mis-quote perpetuated. The night herons were recorded nesting in willows rimming Pond D-1 in the *southeastern* corner of the Site.
9. We would suggest that readers be guided to the most recent vegetation and wildlife reports on the DOE, Rocky Flats website and in public reading rooms (see redline). There are current reports for several monitoring years and up-to-date species lists at this website. The information has been considerably expanded and improved since the one-year baseline biological characterization study done in 1991.
10. The orange-crowned warbler was recorded in Woman Creek and Rock Creek in 1999.
11. The current (2000) Site Preble's Mouse Protection Plan should be used as the reference for both habitat description, and what is protected at RFETS. This redline appears throughout the redline document attached.
12. Section 4.4.1, Proposed Action (p. 40); there are no *endangered* species present at the Site.
13. Section 4.4.2.1.3, Proposed Action (p. 43); Site ecologists do not support the idea of planting cottonwood trees where they presently do not grow. There are several reasons for this, but we believe that during the nearly 50 years (or in other areas nearly 30 years) since grazing was removed from riparian areas, the cottonwoods have established where water sources will support them. From a Preble's mouse standpoint, our data indicate that the shrubby vegetation and heavy herbaceous growth is far more important to the mouse than trees, in fact, trees shade out the understory the mice use most. There also appear to be sufficient large trees for raptors to use as perches and nesting locations, with many younger trees already in place to provide replacements as the older trees become decadent and die. From

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our limited experiments in enhancement planting (particularly the need to irrigate for 2 years to help plantings establish) we are finding that attempts at enhancement plantings are more destructive than constructive. Additionally, there is the likelihood of greatly increased evapotranspiration from the additional cottonwood trees. We already see significant differences in creek flows between the dormant season for vegetation and the growing season. The drying effect of additional cottonwoods could also affect the amount of available water in the creeks – especially in dry years like summer 2000 was – this in turn could adversely affect the water-dependent Preble's mouse. One thing upon which researchers agree is that there must be available free water for the mouse to survive.

10 14. Note that there is no longer an "Annual Weed Control Plan". This is one and the same as the Annual Vegetation Management Plan which includes weed control as a subset of the vegetation management activities conducted at the Site. This redline appears throughout the redline document attached.

11 15. Nest boxes may be useful for some cavity nesters, and may encourage bluebirds to remain at the Site during the nesting season, but right now, bluebirds (mountain and western) are only observed during migration. It should also be noted that appropriate nesting habitat for wood ducks does not really occur in Rock Creek. Wood ducks, though they have been observed at the Site, have only been recorded a handful of times in 10 years, and then only during migration.

12 16. Site ecologists do not think attempting to install perch poles is advisable or necessary. Although there are some highlines crossing the Site, we have not discerned an actual problem with raptor electrocutions. The raptors are not so numerous that they appear to compete for perch points.

13 17. Site ecologists do not support the idea of restoring the Lindsay Ranch buildings, and more specifically do not agree with making the old ranch a visitor center. This would bring a considerable amount of activity to an place that is presently an area of refuge and respite for wildlife. In addition to the fact that there would be considerably increased pressure in and adjacent to Preble's mouse habitat in this location, other species, as well as wetlands and shrublands communities, would also be impacted. For a number of years a kestrel pair has nested in the walls of the old house, a porcupine dens in the basement, and great horned owls roost and nest in the barn. Deer often bed in the old stalls, and other species frequent the old buildings for shelter as well. A large construction project for restoration and rebuilding , in our opinion would cause unnecessary adverse effect to the local area, and having a visitor center there would have a permanent impact. It would be more appropriate to convert the "New" landfill buildings to a visitor center, and the unused "cells" could be converted to new ponds. Such a use would thereby keep such heavy visitor traffic out of the sensitive wetland/shrubland areas in Rock Creek.

3122803
00-04211

Rudes! Joe .. 01-11-01

STATE OF COLORADO
Bill Owens, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
AN EQUAL OPPORTUNITY EMPLOYER

Russell George, Director
6060 Broadway
Denver, Colorado 80216
Telephone: (303) 297-1192

DEC 28 AM 6:42
CCDM

Cliff! Nice job! Joe

Barbara M

For Wildlife-
For People

Joseph A. Legare
Assistant Manager
for Environment and Infrastructure
Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, Colorado 80403-8200

December 14, 2000

Dear Mr. Legare:

The Colorado Division of Wildlife has had the opportunity to review the Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment and have the following comments:

Overall, we are pleased with the Draft Plan that has been distributed. We are particularly pleased to see the plan's inclusion of noxious weed mapping and control throughout the preserve. As you are well aware, this is an issue that all landowners should be attentive of – your proactive measures are to be complimented. Additionally, we encourage and support the sensitive species proposed action in Sec. 4.4 for reintroducing sharp-tail grouse and perhaps some native minnows in the wetland areas.

In the Executive Report Summary a bulleted point of proposed action is "development of an access and recreation study for Rock Creek Reserve." There was no other mention of this throughout the remainder of the report, and we are curious to know what scale you are thinking. While we understand and appreciate the value of exposing people to wildlife and natural systems, we believe that an intricate trail system that would bring people into and throughout the Reserve could have negative impacts on wildlife. Preferably, this 'access and recreation' will be done in a thoughtful manner that will allow for the participation of people, while at the same time acting as preservation for the valuable natural heritage of the region.

Your incorporation of ecosystem management principles is also to be acknowledged, as this is an important aspect of responsible land management. Your goals of maintaining the 'crown jewel' for, among other things, biological diversity is greatly appreciated by this agency.

If you have any questions, or if we can be of further assistance, please do not hesitate to contact us.

DEPARTMENT OF NATURAL RESOURCES, Greg E. Walcher, Executive Director
WILDLIFE COMMISSION, Bernard L. Black, Jr., Chairman • Rick Enstrom, Vice-Chairman • Philip James, Secretary
Members, Tom Burke • Mark LeValley • Marianna Raftopoulos • Robert Shoemaker • Olive Valdez
Ex-Officio Members, Greg E. Walcher and Don Ament

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We appreciate the opportunity to comment on this Draft Plan.

Sincerely,

Scott Hoover

Scott Hoover
Acting Regional Manager
Northeast Region
Colorado Division of Wildlife

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(3)

Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

January 2, 2001

CCDM

Mr. Cliff Franklin
U.S. Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, CO 80403-8200

Dear Mr. Franklin:

SUBJECT: Golden Field Office Peer Review Comments on DOE/EA 1358

The DOE Golden Field Office (GO) and the National Renewable Energy Laboratory (NREL) have conducted a thorough peer review of the *Draft Integrated Natural Resources Management Plan and Environmental Assessment for Rock Creek Reserve* (DOE/EA-1358). Overall, the document represents a solid effort to incorporate integrated natural resource planning with the environmental assessment process. GO's review identified three general focus areas for our comments. These are:

- The plan could better reflect the ongoing status of DOE's National Wind Technology Center located adjacent to the Rock Creek Reserve
- Citations for data sources could be added throughout the document
- Presentation of the No Action Alternative could be clarified

Detailed comments and suggestions for clarification are enclosed for your review and consideration. Please contact Steve Blazek, GO's NEPA Compliance Officer, if you have any questions regarding the attached comments. Steve can be reached by phone at 303-275-4723 or by e-mail at steve_blazek@nrel.gov. The Golden Field Office appreciates this opportunity to comment on the Draft EA.

Sincerely,

Frank M. Stewart

Frank Stewart, Manager

Enclosure as Stated

Cc:
B. Mazurowski, RFFO
J. Baker, GO
S. Blazek, GO
M. Jordan, NREL

LE200

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DOE/Golden Field Office Peer Review Comments
on the
Integrated Natural Resources Management Plan and EA
For
Rock Creek Reserve
(DOE/EA-1358; RFETS and U.S. Fish and Wildlife Service)

General Comments:

- The plan represents a proactive approach to preservation and enhancement of the environment and biological diversity of the Rock Creek Reserve.
- The plan could better reflect the ongoing status of DOE's NWTC facility located adjacent to the Rock Creek Reserve.
- Citations for data sources could be added throughout the document to add credibility.

Specific Comments:

1. Preface: states "the buffer zone has been described as a 'crown jewel' for its importance..." A discussion of the origin and significance of the "crown jewel" designation would strengthen this discussion.
2. Preface: states that no clean-up funds will be used for preparation or implementation of the subject plan, but no other funding source is identified. How will the plan be funded?
3. Figure 1: Federal Land and State of CO land are indicated in the same color (Blue).
4. Figure 2: the existing Rock Creek Reserve boundary is not indicated. Have the Reserve boundaries been formally surveyed? Legal descriptions of the existing and proposed Reserve locations would help clarify Reserve boundaries as they relate to the Reserve's neighbors.
5. Page 3, *Environmental Compliance,* paragraph 2: States "The plan has the signatory approval of the Service." Presumes issuance of a FONSI prior to public comment. Same paragraph states "The plan assumes compliance with applicable laws and regulations..." Why is compliance assumed and not verified? "Facilitates" could be used in place of "assumes".
6. Page 4, *Relationship to the Rocky Flats Mission:* States the Rock Creek Reserve is essentially uncontaminated. This statement should be substantiated, based on the need for a contaminant study identified in the Summary (page 2). Appendix 1(DOE/FWS Interagency Agreement), page 2, states "The buffer zone, including the Rock Creek Reserve area, has subsequently been investigated for hazardous substance contamination. The investigation has shown that the Rock Creek Reserve area *and surrounding buffer zone* is not contaminated by hazardous substances." Information supporting this statement should be provided. If substantiating information is available, why does the subject plan indicate the need for a contaminants study?
7. Page 5, para. 1: What is the RFCA? The document needs a reference page identifying acronyms.
8. Page 7, first bullet: Indicates need for contaminants sampling and analysis - why?
9. Page 7, *Monitoring Plan Implementation:* What is the existing monitoring plan identified in this section?

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10. Page 11, *Proposed Action,* para. 2, line 6 states: "The expansion area does not contain any known contaminated areas or eligible archaeological or historic sites." This statement should be supported with citations, or with cross-references if citations occur elsewhere in the document.
11. Same para., line 9: first indication of watershed approach to ecosystem management. Descriptions of ecosystem and watershed management (objectives, guiding principles, etc.) here would clarify the ecosystem management approach as it relates to the Proposed Action and subsequent impact analyses.
12. Page 13, *2.0 Background* states "This section provides background information for Rock Creek Reserve only." Is this the existing 800 acres, the proposed expansion area, or the entire existing and proposed area?
13. Page 13, 2.1.1, *Location,* lines 1&2. Ref. To Fig. 1, "Near the line separating Boulder and Jefferson Counties..." Note that Fig. 1 does not indicate the county line.
14. Same para., line 4. "...and the DOE wind energy test site." The proper name for this site is the National Wind Technology Center (NWTC). NWTC is an existing DOE facility operated by the National Renewable Energy Laboratory (NREL).
15. Para. 2, line 1. See comment #13.
16. Same para., line 5 "Growth trends project a 20 percent population increase..." Statement needs a citation.
17. Page 14, 2.1.3, *Mineral Rights,* line 7. "Mining operations have not yet begun in this area." As a baseline condition, any known mining plans for this area (the 20 acres) should be indicated here. A map showing the mineral leases would strengthen this section.
18. Page 14, 2.1.4, *Rock Creek Reserve Neighbors,* para. 3, line 1 states "Preserved open space is the primary existing and proposed use of the lands north, west, and east of the site." Note that the NW corner of the subject plan area is immediately adjacent to the NWTC, which now encompasses approximately 280 acres. Wind energy research has been ongoing at the site since the mid-1970's. A large portion of the NWTC site is within the headwaters of the Rock Creek drainage. NWTC is DOE's premier wind and hybrid energy research and testing center. Also note that DOE is pursuing removal of NWTC from the National Priority List (NPL) with EPA, and that ongoing operations at NWTC are not governed by the RFETS closure plan. — Clarify separation

clarify that NWTC exists immediately next

19. Page 15, *Buffer Zone, para. 2.* See Comment #18.
20. 2.1.5, *Facilities, Easements.* A map showing the indicated easements would strengthen this discussion.
21. Page 16, *Water,* para. 1. See Comment 11. A discussion and map of the Rock Creek watershed would strengthen this section, and provide necessary baseline information for subsequent watershed management plan discussions and impact analyses.
22. Page 16, 2.1.6, *Projected Changes in Facilities.* This section does not address NWTC, which is a DOE facility carved out of the Rocky Flats buffer zone and not subject to 2006 closure. DOE plans to continue operating NWTC as its premier wind and hybrid energy R&D facility.
23. Page 16, 2.1.7, *Type and Extent of Contamination.* The document would be strengthened by clarifying the information presented in this section. For example, did RFETS specifically look for radionuclides on Rock Creek Reserve resulting from RFETS operations and the 1957 and 1969 fires?

24. Same Section, para.2. See Comment #10.
25. Page 17, 2.2.2.1, para. 1, lines 6-11. NWTC is a DOE facility not located on private land. See comment #18. A sound watershed management plan should encompass as much of the watershed as is possible. NWTC's current land management objectives and implementation plans are similar to those proposed in the subject plan. Areas not utilized for R&D purposes are managed with an emphasis on conservation of native habitat, and include practices such as noxious weed management. Incorporation of NWTC's existing management practices within the watershed would strengthen the ecosystem approach presented in the subject plan.
26. Page 17, 2.2.2.1, para.2, line 2. See comment #10.
27. Pages 20 and 21, sections 3.2.2 and 3.2.3. Document would be strengthened with data supporting claims of surface and groundwater baseline characteristics. If water quality is currently good, why is additional sampling indicated to determine potential impacts? If this data is available, it would benefit NWTC's efforts to pursue NPL removal with EPA.
28. 3.3.1.1. "Humidity" should be capitalized.
29. Page 24, 3.4.2. The Appendix 4 species list is missing.
30. Figure 5 shows the majority of the NWTC site as Xeric Tallgrass Prairie. However, NWTC's 1999-2000 *Vegetation Survey* indicates that the tallgrass plant community comprises only a small portion of the SW corner of the NWTC site. The remainder of NWTC is primarily comprised of other mixed grasslands, with small areas of wetlands, woodlands, shrublands, and disturbed areas. This current and thorough vegetation survey of the NWTC site is available from the NREL Public Reading Room.
31. Page 30, Section 3.6, Cultural Resources. A map showing cultural survey areas would strengthen this section.
32. Page 32, last line. Should public access to Rock Creek Reserve be restricted for reasons associated with unknown contaminants, for public safety reasons associated with proximity to the industrial area, or for purposes of National Security related to the presence of nuclear material? This section could be clarified.
33. Page 33, Section 4.0., and page 58, Section 5.0. The GO reviewers found this Chapter confusing in its handling of the "No Action" alternative. Our assumption is that "No Action" represents the application of Rock Creek Reserve management practices on the existing 800 acres to the entire proposed expansion area. As written, "No Action" could be interpreted as leaving the Reserve at 800 acres. This could be clarified throughout Chapters 4 and 5. We also assume that FWS involvement applies to both the Proposed and No Action alternatives. This also could be clarified. Also see Comments #10 and #25. A recommended outline modification is offered in Attachment 1 to these comments.
34. Page 65, Section 5.11, *Cumulative Impacts*. The subject plan provides limited information regarding ongoing activities outside the Rock Creek Reserve boundaries, and no Region of Influence for cumulative effects is identified. Thus, the conclusion of no negative cumulative impacts is not well supported.

define area

Attachment 1
Suggested Document Outline

It is confusing to consider management prescriptions as alternatives. Alternatives should be defined as the application of management prescriptions, as applicable, within a defined management unit. For example, alternatives could be identified as follows:

Proposed (Preferred) Action: Expand RCR to 1700 acres. Apply current and new management prescriptions to the entire 1700 acres.

Alternative 1: Apply current and proposed management prescriptions to the existing 800 acre RCR only.

Alternative 2: Expand RCR to 1700 acres and apply current management prescriptions only.

No Action Alternative: Continue application of current management prescriptions on the existing 800 acres.

This allows the impacts analyses to help determine which management prescriptions are appropriate within a given alternative. The document's basic outline could look like this:

1.0 Goals and the NEPA Process
2.0 Background
3.0 Integrated Natural Resources Management
    3.1 Watershed Approach to Ecosystem Management
    3.2 Management Prescriptions
        3.2.1 Existing
        3.2.2 Proposed
4.0 Proposed Actions and Alternatives (insert alternatives identified above, and assign prescriptions as appropriate from 3.2.1 and 3.2.2)
5.0 Existing Environment
6.0 Environmental Consequences (by alternative).

This suggested outline provides a matrixed approach for identifying potential prescriptions and then analyzing those prescriptions within the context of a defined management unit. A typical NEPA impact analysis follows the Alternative-Resource-Impact outline, whereas the RCR EA follows a Resource-Alternative-Impact outline. The outline suggested above would allow you to follow the typical outline, minimizing confusion regarding the No Action alternative, while still maintaining a resource-based approach and meeting the document's stated purpose of evaluating potential impacts associated with the management prescriptions.

This page of this document contains personal and confidential information and can be located in the CERCLA AR upon request

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Friends of the Foothills

Dedicated to the Preservation of the Golden-Boulder Corridor

P. O. Box 7002, Golden, CO 80403 ~ Phone / Fax (303) 642-1233 ~ e-mail: foothill@peakpeak.com

CCDM

January 29, 2001

Mr. Cliff Franklin
US Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, CO 80403-8200

Dear Mr. Franklin:

We have reviewed the draft Rock Creek Management Plan developed by USFWS with DOE, and support its adoption. Preservation of this land is clearly what is wanted by an overwhelming majority of citizens in the region.

As the plan is finalized, we strongly urge you to carefully craft the language of the document so that it will be compatible with the proposed future use of the entire Rocky Flats site as a wildlife refuge as represented in the Udall - Allard legislation.

Thanks to you and all who are involved in making this important land wildlife preservation effort become a reality.

Sincerely,

Tom Hoffman

Tom Hoffman
President

cc: Rocky Flats Coalition of Local Governments
Congressman Mark Udall
Senator Wayne Allard

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Jerry Henderson <jerryh@rfcab.org> on 01/30/2001 04:26:01 PM

To: cliff.franklin@rf.doe.gov
cc:

Subject: Rock Creek Reserve Plan Comments

Cliff-

Here are my comments on the Rock Creek Reserve Plan. Please note that these do not represent official comments of the CAB, of which none will be forthcoming.

Sorry for the sloppy formatting. If that is an inconvenience, I will be happy to resend in a different form.

Jerry

· Does the Plan deal sufficiently with the easements, mineral rights and water rights? Any one of these has the potential to affect sensitive habitat. Specific actions to be taken in these important areas seem lacking. At a minimum, the Plan should examine possible impacts of existing mineral rights on natural resources within the Reserve. · The plan establishes no timetable for some of its key proposals. For instance, agency personnel admit that completion of a Trails and Access Plan may be several years away. It could be needed as early as 2007.

· The Level III Contaminant Study is ill-defined. Does USFWS have more or less stringent requirements than the site's own buffer zone characterization? More information should be provided on this important topic.

==========

Jerry Henderson, Program Specialist
Rocky Flats Citizens Advisory Board
9035 North Wadsworth Parkway, Suite 2250
Westminster, CO 80021
303-420-7855 / fax: 303-420-7579
Email: jerryh@rfcab.org

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STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director
Dedicated to protecting and improving the health and environment of the people of Colorado
HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
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Joe

Colorado Department of Public Health and Environment

January 23, 2001

?

Cliff Franklin
DOE – RFFO
10808 Highway 93, Unit A
Golden, CO 80403-8200

Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment
December 2000

Dear Mr. Franklin:

The Colorado Department of Public Health and Environment (CDPHE) appreciates the opportunity to comment on the captioned document. We strongly endorse the need for integrated planning and management of the natural resources in the vicinity of Rocky Flats. There is a pressing need to identify management agencies capable of long-term stewardship of these resources and integrate them into site activities before closure of Rocky Flats. This report is a start in that direction, but its deficiencies lie in what is not included rather than what is stated.

The report does not appear to benefit from the experience of on-site personnel who currently perform buffer zone management work, prepare the survey reports (vegetation, wildlife, etc.) and interface with the other activities underway at the Site. Integration of these activities into Site operations is necessary to assure that closure actions are consistent with and supporting of natural resource management needs. Examples of activities that are of importance to closure and Buffer Zone management include:

- Weed control practices, including prescribed burns
- Land re-configuration
- Water balance studies
- Actinide migration studies
- Erosion controls and re-vegetation
- Environmental monitoring (the Integrated Monitoring Plan and special project monitoring), and
- The Comprehensive Risk Assessment for the Buffer Zone and Industrial Area.

The understanding of one area in particular is critical to the caretaker role of the reserve: its hydrology, specifically the water balance knowledge necessary to examine impacts to the ground

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water, seep and stream flow in the Reserve. Much is made of the role of imported water to Walnut Creek and Woman Creek, yet Rock Creek has little if any imported water and represents the goal of post-closure reclamation. Therefore, an understanding of the Rock Creek Reserve hydrology is critical for the water balance and land reconfiguration studies underway for the Industrial Area of Rocky Flats.

The report appears to minimize the potential impacts of current and permitted mining within and adjacent to the Reserve; in fact, mining areas are not even shown in the figures. The mining could influence the hydrology, which supports the habitats within the Reserve, and could directly remove surface features, requiring restoration to reestablish the habitat. To our knowledge, no baseline has been prepared of the Reserve showing the depth to ground water with spatial and temporal variation, the pathways for seeps and alluvial discharges, and the habitat requirements in relation to any proposed mining activities. Reclamation of the xeric prairie grasses (big blue stem) has been estimated to take a hundred years or more. Therefore, the cost of reclamation cannot be adequately assessed and incorporated in the economic analysis to determine the reclamation requirements for these lands.

The report also ignores the status of the Recovery Plan for the Preble's Meadow Jumping Mouse (PMJM) presently under development. Some major issues concerning the PMJM could materially impact management of the Reserve, the Site as a whole, and adjacent public lands. All of RFETS is potentially PMJM habitat, including what is now the Industrial Area after closure. Effective management of PMJM populations and habitat on Rocky Flats and surrounding public lands may relieve the pressures to manage equivalent habitat on privately owned lands.

As it stands, the report provides the minimum necessary to justify US Fish and Wildlife Service (FWS) management of the Rock Creek Reserve. What is required, however, is that both the DOE and FWS take seriously the need to integrate their activities in order to develop the additional knowledge and data necessary for both management of the Site's resources and for successful closure of the Site. These future activities need to occur within public view and with the involvement of all affected parties. We expect to monitor this progress and participate in assuring that the necessary integration takes place.

If you have any questions, please contact either Steve Tarlton at 303-692-3423 or Jeb Love at 303-692-3422.

Sincerely,

Steven H. Gunderson
RFCA Project Coordinator

cc: Jane Norton, CDPHE
Douglas H. Benevento, CDPHE
John Swartout, Office of the Governor
Tim Rehder, EPA
Administrative Records, Building 850

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"Carol Lyons" <CLYONS@ci.arvada.co.us> on 01/31/2001 04:21:22 PM

To: <Cliff.Franklin@rf.doe.gov>
cc: "Craig Kocian" <CKOCIAN@ci.arvada.co.us>, <mariane.anderson@rf.doe.gov>

Subject: Rock Creek Reserve Draft Integrated Natural Resources Management Plan and Environmental Assessment

January 31, 2001

Mr. Cliff Franklin
U.S. Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, CO 80403-8200

Rock Creek Reserve Draft Integrated Natural Resources Management Plan and Environmental Assessment

Dear Cliff:

On behalf of the City of Arvada, thank you for the opportunity to review the Rock Creek Reserve Draft Integrated Natural Resources Management Plan and Environmental Assessment.

The City of Arvada commends the U.S. Department of Energy (DOE) and the U.S. Fish & Wildlife Service (FWS) for the excellent work that was done to prepare this draft plan. The proposed actions to inventory, monitor, and manage the ecological resources in the Rocky Flats Buffer Zone are very positive and important.

1 Arvada appreciates DOE's efforts to enlist the resources of FWS temporarily during the Rocky Flats cleanup effort to assist in the stewardship of portions of the Buffer Zone. We hope that this arrangement will reinforce the Site's commitment to manage Rocky Flats' ecological resources in a manner that is firmly based on sound scientific analysis.

2 We support and advocate natural resource management and decision making based on direct measurement of environmental parameters and the use of proven technical strategies. We recommend that DOE and FWS focus primarily on natural methods of resource management, and minimize the use of artificial intervention, particularly in future efforts to reduce noxious weeds and to introduce native species.

We request that DOE and FWS add the provision for substantive local public involvement in all aspects of the development, implementation, and decision making of

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each of the proposed actions in the plan. There is extensive experience and knowledge relevant to all aspects of the plan in the communities near Rocky Flats that can assist in the temporary stewardship to preserve the Site land as a true asset to the region. Thus we ask that you provide for substantive consultation and involvement in this project (not just the standard public comment period).

4 In finalizing the plan, we recommend that the text be reviewed and revised to include the technical and policy comments that you receive as part of this initial comment period. My colleagues and I at the City of Arvada will be glad to help in any way we can. Please contact me at (303) 421-2550, ext. 3292, with any questions or if we can assist you.

Thank you again for your effort and commitment to the environment and to the community.

Sincerely,

Carol E. Lyons
Rocky Flats Coordinator

cc: Craig Kocian, City Manager
David Abelson, Rocky Flats Coalition of Local Governments

Carol E. Lyons
Rocky Flats Coordinator
City of Arvada
P.O. Box 8101
Arvada, CO 80001
303-421-2550 ext. 3292
fax 303-431-3911
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WESTMINSTER

January 31, 2001

Joseph Legare
Assistant Manager for Environment and Infrastructure
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, Colorado 80403-8200

City of Westminster
Department of
Public Works
and Utilities

4800 West 92nd Avenue
Westminster, Colorado
80031

303-430-2400
FAX 303-650-1643

Dear Mr. Legare:

Thank you for the opportunity to provide comments on the Integrated Natural Resources Management Plan and Environmental Assessment for the Rock Creek Reserve. The City questions the inclusion of the proposed expansion of the Rock Creek Reserve from 800 acres to 1700 acres in the Natural Resources Management Plan. The expansion should be addressed as a separate issue with (1) appropriate justification for increasing the Reserve from 800 to 1700 acres, (2) appropriate justification for not including the entire Rocky Flats Buffer Zone in the Reserve expansion. Westminster agrees with DOE that the entire Buffer Zone is a "crown jewel" for its importance as an area relatively unimpacted by agricultural use and development for many decades.

Westminster strongly supports including the entire Woman Creek drainage located in the southern buffer zone in the Reserve plan as soon as possible. The drainage area contains high quality plant and animal communities that have been identified by the Nature Conservancy. This area is also a known habitat for the Prebles Meadow Jumping Mouse (PMJM) and the Habitat Conservation Plan for the PMJM suggests that this area is a high priority to conserve as habitat. Additionally, an important wildlife corridor exists from Standley Lake to the southern buffer zone that allows wildlife movement back and forth to the Foothills.

As you note in your document, large tracts of grasslands provide essential habitat for prairie species. Mesic-mixed grasslands cover approximately 55 percent of the entire Site, mostly in the Walnut and Woman Creek watersheds. Mule deer are very dependent on these grasslands at certain times of the year and many raptor species depend on open grasslands for foraging areas. Several species of prairie birds rely on these grasslands as nesting and foraging habitat and several species of reptiles require this habitat as well. Additionally, your document states that "the largest, best watered, and most diverse of the slope wetlands are located in the Rock Creek and Woman Creek watersheds."

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Specific Comments on the Document:

Figure 1, which is a draft map showing open space and its current ownership that is contiguous to Rocky Flats, needs to be upgraded to show additional open space that is owned by the City of Westminster. Attached you will find the map with the area to be included outlined.

Page 48, Options Considered But Not Selected. This section discusses the fact that prairie dogs do not currently populate the Rock Creek Reserve, but the potential exists for them to move into the Reserve naturally. Also noted was that prairie dogs that naturally migrate to Rock Creek Reserve are not expected to require population control, as these measures have never been necessary in the past, due to a health predator/prey balance. Westminster notes that there is a current assumption that the new landfill located in the northern buffer zone will be capped. Prairie dog migration into the Rock Creek Reserve has the potential to negatively impact the integrity of the proposed cap at some point in the future.

Development of an access and recreation study for the Rock Creek Reserve. Discussions of an access and recreation study for the Reserve are premature at this point in time. These discussions should commence after Congress passes the Allard/Udall Bill. Determination of access and recreational uses prior to enactment of the Bill could negatively impact the integrated site plan that would need to be developed for a Wildlife Refuge.

Assessment and determination of feasibility to stabilize all, or part of the Lindsay Ranch. Westminster supports use of private funds to provide an assessment and determination of a feasibility to stabilize all or part of the Lindsay Ranch. Cleanup funds should not be used for this purpose. The results of the assessment should be integrated into a "big picture" wildlife refuges management plan that will need to be developed within two years after enactment of the Allard/Udall Bill.

Within the site-wide annual noxious weed management plan, provide increased emphasis on the Reserve for noxious weed management, including increased biological controls; Page 26 lists the noxious weeds in the Reserve, and discusses the fact that several species of these weeds are found across the entire region and are spreading rapidly, especially in disturbed area. Westminster notes that these weed species are located across the site, not just in the Rock Creek Reserve area. It does not seem prudent to only treat the Rock Creek area. The entire buffer zone should be included in the Reserve and noxious weeds managed in a holistic manner.

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Monitoring of water quality and quantity for Rock Creek; including determination of current and minimum in-stream flows. If it is determined that there is not enough flow in Rock Creek to support the Reserve, will water shares have to be purchased to augment the flow? Who will provide and pay for the purchase of the additional water?

Introduction of sensitive, native faunal species (and removal of non-native) and federally-listed plant species (in accordance with approved recovery plans) into Rock Creek Reserve. Any introduction of sensitive, native faunal species should only occur after there is a plan in place for the management of the entire site as a wildlife refuge. Introduction of new species prematurely may interfere with the management plan that will be needed for the entire Wildlife Refuge.

Thank you for the opportunity to provide comments on the management plans for the Rock Creek Reserve. The City of Westminster strongly supports the entire Rocky Flats Site being designated as a Wildlife Refuge.

Sincerely,

Mary Harlow

✓Mary Harlow
Rocky Flats Coordinator

Cc: John Corsi, Kaiser-Hill Communications
David Abelsón, Rocky Flats Coalition of Local Governments

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(9) 2-01-01

City of Broomfield
ONE DESCOMBES DRIVE BROOMFIELD, CO 80020 (303) 469-3301

January 31, 2001

Mr. Cliff Franklin
US Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, CO 80403-8200

Re: Draft Rock Creek Reserve Management Plan

Dear Mr. Franklin:

The City of Broomfield appreciates the opportunity to review and comment on the Draft Rock Creek Reserve Management Plan, dated December 2000. Broomfield wants to ensure the plan addresses the protection of natural resources and reflects stewardship goals and objectives. Broomfield appreciates the thorough thought process, which includes preferred actions and alternative actions. The City staff has very thoughtfully and thoroughly reviewed this crucial document and has general comments and/or questions associated with the document.

Sensitive, Threatened and Endangered Species

The City of Broomfield is aware of the need to conserve threatened, endangered and sensitive species and would appreciate more dialogue within the document addressing habitat conservation planning and the incidental taking permitting process. The Rock Creek Plan does not identify the implementing agreements and agencies concerning the Prebles' meadow jumping mouse (PMJM) or the generation of a Habitat Conservation Plan (HCP). The document discusses the existing PMJM Protection Plan, Revision 6, prepared by the Site for the PMJM, but does not address drafting a HCP for the site. Is the map identifying the PMJM habitat based on actual trappings or identified riparian zones with the potential to maintain a viable habitat? Broomfield would appreciate reference or incorporation of the 4(D) rule into the document.

change to

With the decision to perform no additional surveys of the Ute ladies' tresses orchid or Colorado butterfly weed, the potential for small populations to go undetected and be harmed by herbicide application is high. Prior to herbicide application, the area should be inspected to ensure the tresses orchid or Colorado butterfly weed is not present, to prevent damage to the species.

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Environmental Stewardship/Land Use
The City appreciates the commitment Rocky Flats has to environmental stewardship, but the plan does not clearly define the tools and/or steps that will be utilized to ensure environmental stewardship associated with the Rock Creek Reserve. Land use currently addresses existing mining permits for minerals. This potential disturbance is not consistent with future proposed land use for Rock Creek, or with the stewardship goals identified for the area.

Easements
Additional information should be included within the document to address easements and access related to U. S. West fiber optic line, Coors Energy gas pipeline, Public Service gas line, the high voltage transmission line, and any other known easements. The easements for Upper Church and McKay ditches will also need to be accessed for routine operations and maintenance (O&M). The specific process addressing O&M is not clearly identified. The plan should clearly define easement holders' needs and the ability to access these areas.

Surface Water/Wetlands Management
Broomfield is continually concerned with the potential degradation of surface water. To determine if any undesirable runoff is entering Rock Creek, will sampling be performed to detect any undesirable chemicals associated with herbicide applications? The plan does not address the controls that will be in place to protect water quality. How often will the existing groundwater monitoring wells located in Rock Creek be sampled for herbicides or other chemicals? In the case of wetlands, how will the Site account for wetland impacts using a mitigation bank? With stewardship goals in mind, what are the foreseen activities that may potentially impact wetlands?

Air Quality
Fugitive dust (PM-10 and TSP) is currently not a problem with Rock Creek. However, control burns may impact air quality by increasing particulates, which impact PM-10 and TSP. Air quality may also be impacted by the release of radionuclides. The potential air quality impacts associated with prescribed burns need to be added to the air quality section within this document.

Floral Management/Noxious Weeds
The plan does not address the detail of proposed actions for floral management that will be used to control noxious weeds and the prevention of infestations from noxious weeds. Prescribed burns will require substantial communication with stakeholders to address the need for prescribed burns and associated positive impacts to ecological communities. The application of herbicides will also be used as a management tool to control noxious weeds, but the document does not address specifics such as how often, when, and where the herbicides will be used. Identify the document that will control the use and management of herbicide application within the Rock Creek Reserve.

Water Resources
Broomfield is concerned that the plan addresses the feasibility of <u>obtaining water rights</u> to provide the land manager with a wider array of options for management of water <u>quantity</u>, which could be necessary in the future to protect the PMJM. How does the Site plan on obtaining

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additional water rights? Is there a contingency plan to protect the PMJM or the natural resources within the area if additional water rights are not obtained?

Background Soils Characterization Plan
The executive summary defines two sampling efforts that were appropriate to characterize background surface soils. Group 1 included metals, naturally occurring radionuclides, and organic compounds. The "Group 1" sampling effort included semivolatile organic compounds, but did not include volatile organic compounds. What is the justification for omitting volatile organic compounds?

Thank you for the opportunity to comment on this crucial document. The City of Broomfield expects that we will continue to be involved, informed, and allowed to participate in the revisions to the Rock Creek Reserve Management Plan. If you have any questions, please feel free to call Shirley Garcia at 303-438-6329 or me at 303-438-6363.

Sincerely,

Kathy Schnoor

Kathy Schnoor
Environmental Services Superintendent

Pc: Hank Stovall, Broomfield City Council
Mike Bartleson, City of Broomfield
Shirley Garcia, City of Broomfield
Steve Gunderson, CDPHE
Tim Rehder, EPA
David Abelson, RFCLOG
Ken Korkia, RFCAB

3860

02-05-01

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

IN REPLY REFER TO:
ES/CO:
Mail Stop 65412

JAN 30 2001

Mr. Joseph A. Legare
Assistant Manager for Environment and Infrastructure
Department of Energy
Rocky Flats Field Office
10808 Highway 93, Unit A
Golden, Colorado 80403-8200

Subject: Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment, Jefferson County, Colorado

The Colorado Field Office of the U.S. Fish and Wildlife Service has reviewed the Draft Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment (Plan). We appreciate and support the efforts of the Department of Energy to maintain and enhance native species biodiversity as well as the population health of federally listed species under the Endangered Species Act (Act) as amended (16 U.S.C. 1531 et seq.). We support the Plan's stated Initiatives, including expansion of the Rock Creek Reserve Area (Reserve Area) from 800 to 1700 acres; determining current and minimum in-stream flows required to support native, sensitive, and listed species; conservation of threatened, endangered and sensitive species and their habitats; management for native biological diversity; and protection and conservation of wetland and riparian areas.

We have three general issues of concern regarding the subject document: (1) consistency with the Jefferson County and Boulder County Regional Planning efforts; (2) water-related issues; and (3) mineral and other mining rights issues.

GENERAL ISSUES AND RECOMMENDATIONS

The Reserve Area of the Rocky Flats Environmental Technology Site (RFETS) falls within the general regional planning areas of both Jefferson and Boulder Counties. These Counties, in cooperation with local governmental jurisdictions, and representatives from individual interests such as the agricultural industry and homebuilders are working to develop regional Habitat Conservation Plans which will address impacts to the Preble's meadow jumping mouse (Preble's) and associated habitat types. The Plan should contain a discussion of its consistency with these County Planning efforts, should include an evaluation in terms of how projects on both the Reserve Area, and RFETS in general, could potentially affect regional long-term conservation planning efforts, and should also discuss how proposed activities will sustain or preclude preserve design options.

Several water-related issues are discussed in the Plan, including water quality, water quantity, groundwater monitoring and management, and surface water and wetland monitoring and management. A discussion of current and future water diversions, offsite and onsite groundwater pumping and other depletion issues should be included, along with an analysis of associated potential adverse impacts on riparian areas and wetlands on the Reserve Area.

We recommend that the Plan discuss the effects of any proposed projects on the hydrology of riparian or wetland communities within their sphere of influence. Of particular importance is an analysis of the adequacy of proposed means to convey major flood or runoff flows without impacting vegetation off-site or in any restoration or enhancement areas.

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Mineral rights and other mining issues should be discussed in detail for both the Reserve Area as well as RFETS and areas adjacent. Actions that could have adverse affects on the natural resources of the Reserve Area include rock products extraction, mineral extraction, and oil or gas extraction. These activities can have several indirect or direct effects to habitat utilized by native, sensitive, or federally-listed species, such as direct habitat alteration, changes in hydrology, and contamination.

ADDITIONAL ISSUES FOR CLARIFICATION

Control of noxious weeds should be done in such a way that is consistent with endangered and sensitive species management. The Management Plan should identify specific standards for weed control that will not kill or harm federally-listed or sensitive species.

It is unclear why raptor poles are proposed within the Reserve Area. It is our understanding that all utility poles across RFETS were made bird-friendly to prevent raptor electrocutions in the mid-1990s. A second concern regarding this issue is how the placement of raptor poles will increase the level of predation on the Preble's or be consistent with efforts to reintroduce Plains sharp-tailed grouse. Rather than placing additional perches within the Reserve Area, we recommend that all unprotected lines and structures be enhanced using mitigating devices designed to protect birds from electrocution.

The Plan should contain specific measures which will be taken to perpetually protect the habitat value of proposed mitigation, as well as enhancement and restoration areas. Issues that should be addressed include restrictions on access as well as monitoring and management programs.

The issue of outstanding easements across the Reserve Area is mentioned within the document. However, there is no discussion regarding how the utilization of these easements would adversely affect native habitats or sensitive, threatened, or endangered species. We recommend that the final Plan contain a detailed analysis of these issues.

We recommend that the issue of future use or rehabilitation of the old landfill be addressed. Are there plans to actively use this facility in the future? If so, what are the potential adverse affects of such use? If the facility will not be used, will it be restored back to native habitat?

The Plan makes no mention of future transportation corridor issues. Are there any known or proposed transportation easements across the Reserve Area?

The document is unclear as to the definitions of preferred vs. proposed actions. Within the section 7 consultation process and the National Environmental Policy Act regulations, there are standardized uses of these terms. We recommend that these terms be well defined and used consistently throughout the document.

The document contains no discussion of a funding plan or guarantee of funding for the proposed actions. We recommend that the document define clear priorities regarding which monitoring and management actions will be carried out if full funding is unavailable or, in lieu of such a list, what mechanisms will be used to provide for implementation of the stated Plan actions.

Thank you for the opportunity to review and comment on the referenced document. If you have any questions, please contact Kathleen Linder of this office at (303) 275-2370.

Sincerely,

LeRoy W. Carlson
Colorado Field Supervisor

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cc: B. McCue
K. McDermond
B. Rosenlund
R. Romero
C. Franklin
Official File
Reading File
Linder

Ref:KAL\rckyflts\RockCreekPlancomments.wpd

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2-08-01

CITY OF BOULDER

OFFICE OF THE CITY MANAGER

January 30, 2001

Cliff Franklin
Department of Energy
Rocky Flats Field Office
PO Box 928
Golden, CO 80402-0928

Re: Draft Rock Creek Reserve Integrated Natural Resources Management Plan Comments

Thanks for the opportunity to comment on the Draft Rock Creek Reserve Integrated Natural Resources Management Plan. We look forward to continuing to work with the Department of Energy, U.S. Fish and Wildlife Service and neighboring land owners in shaping the area's natural lands management.

As a neighboring natural lands owner, we support and are enthusiastic about the plan's goals including conserving and enhancing native ecosystems, plant communities and wildlife species. The following comments are meant to help fine tune the plan..

Page 14, 2.1.3 Mineral Rights – We suggest adding language that either ensures or promotes restoration and revegetation of any mining area using native species obtained from the closest available source and adequate weed control.

Page 36, 4.2.3 Groundwater Inventory and Monitoring-- Additional groundwater monitoring in the northwest section of the Reserve should be conducted to assess any changes in groundwater flow from gravel mining or other activity that could adversely effect wetlands and streams. The Plan states that the Reserve "depends entirely on groundwater seeps, springs and surface water runoff to feed the streams" (page 16, 2.1.5). The Plan also states that "The most important sources for the formation and maintenance of the aquatic ecosystem are groundwater discharges that form springs and seeps in numerous places along Rock Creek" (page 20, 3.2.1). Most of these springs and seeps support wetlands and riparian areas and are located in the northwest portion of the Reserve where the Bluestone gravel mine is permitted. Gravel mining has the potential to adversely impact springs, seeps and streams by altering groundwater and surface water flow. However, Figure 10 shows no groundwater monitoring wells along Rock Creek.

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Page 43, 4.4.2.2 Sensitive, Threatened and Endangered Species – While no federally-listed plant species have been identified, we recommend that you be aware of and track plants listed as rare or imperiled on the Colorado Natural Heritage Program's state list.

Page 45, 4.4.2.3 Noxious Weeds – We support your efforts to control weeds and want to continue coordinating weed management especially on our mutual borders. While insects (biological controls) may be approved for release by the US Department of Agriculture and the State of Colorado, they were not likely tested on many of the native plants found in our area. As a result, we strongly request language to include a short and long term monitoring program to assess effectiveness and to ensure non-target organisms are not being adversely effected. The potential unintended costs to native plants both in the Reserve and on neighboring lands is great enough to more than offset the cost of adding this critical component to the weed inventory and monitoring program (see page 40, 4.4.1.2)

Page 57, 4.7.1 Public Use – We support and look forward to participating in an Access and Recreation Study to analyze public visitation options. It is important that we work together to ensure trail connections to City of Boulder lands that benefit visitors and that minimize environmental impacts. We request that the most recent research be used in this analysis including edge effect and habitat fragmentation information.

Page 59, 5.1 Rock Creek Reserve Boundary Expansion -- We continue to urge expansion of the proposed reserve to include about 320 contiguous acres to the west and the landfill area to the south. Both the gravel mine and landfill will eventually be closed and reclaimed. Expansion to the west would include southern portions of Section 4 and Section 9 in which the surface rights are owned by the Department of Energy. The Section 4 area contains exceptional tallgrass prairie (ESCO, 1999) and part of the Rock Creek drainage which supports the Preble's meadow jumping mouse. Precedence for accepting contaminated areas such as the landfill has been established at the Rocky Mountain Arsenal Wildlife Refuge.

Thank you for the opportunity to comment. The City of Boulder looks forward to working closely with the DOE on the Integrated Resource Management Pans.

Sincerely,

Ronald A. Secrist

City Manager

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Bruce_Rosenlund@fws.gov on 02/23/2001 05:20:34 PM

To: cliff.franklin@rf.doe.gov
cc:

Subject: Todays Comments

Cliff:

From my to do list.

6.5 Comment. The report ignores the status of the PMJM Recovery Plan, presently under development.

Response. The PMJM Recovery Team was formed in 2000, with a draft PMJM Recovery Plan not anticipated until at least October 2001. If a draft PMJM Recovery Plan is completed by October 2001, a final Plan should follow about a year latter. When the Recovery Plan is approved, any recovery criteria and tasks that apply to Rocky Flats will be incorporated into the RF Mouse Protection Plan, and this Plan will be reviewed by the FWS for Section 7 compliance under the ESA.

8.2 Comment. Westminster strongly supports including the entire Woman Creek drainage in the reserve plan as soon as possible.

8.2 Response. Woman Creek is outside the scope of this Plan. The scope of this Plan is limited to the agreement signed with the U.S. Fish and Wildlife Service in May 1999, to cooperative manage Rock Creek.

9.3 Comment. With the decision to perform no additional surveys of the Ute ladies tresses and CBW, the potential for small populations to go undetected and be harmed by herbicides is high.

9.3 Response. Multiple years of surveys for federally listed native plants on RF have been negative, with these plant species are not know to occur upstream of Rocky Flats. Based upon this information, the U.S. Fish and Wildlife Service informed Rocky Flats in 1999, that further formal surveys for these two species will not be required unless there will be disturbance of wetlands in potential habitat. Although no additional formal surveys are planned, work associated with pre and post herbicide applications will provide additional observation of plant species within Rocky Flats. Overall, without the control of noxious weeds, there will be additional losses to the Rocky Flats native plant community.

10.1 Comment. This is a boiler plate question from Kathleen. Intent is that any action will not stop the local HCP process

10.1 Response. (A revision of your original comment, to read:) DOE has been involved with the Jefferson Co. HCP effort, and supports the conservation of PMJM. There are no actions planned in Rock Creek that would jeopardize the development and implementation of the County HCP process, or negatively impact PMJM populations or habitat within Rock Creek.

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Response to Comment 9-14: In addition, real property acquisitions require Congressional authority and no budget authority has been requested to acquire additional water rights at this time. All possible fiscal resources are being directed toward the safe closure of the site. Should additional water rights be required, DOE will work with other Natural Resource Trustees and the future land management agency, if known, to determine the appropriate budget and acquiring agency.

Response to Comment 10-4: Those exercising mineral rights interests must comply with Federal, State, and local law pertaining to zoning, mining reclamation permits, endangered species, wetlands and other legal requirements. The mineral right owner and mining permittee are the responsible parties and they share responsibility with lessees and operators. Zoning variances are issued and administered by the Jefferson County Board of Adjustments through the Jefferson County Planning Department and Mining Reclamation Permits are issued by the Colorado Mined Land Reclamation Board and administered through the Colorado Division of Minerals and Geology. The DOE will continue to be good stewards by participating in the regulatory public processes with Jefferson County and the State of Colorado.

Response to Comment 11-1: Those exercising mineral rights interests must comply with Federal, State, and local law pertaining to zoning, mining reclamation permits, endangered species, wetlands and other legal requirements. The mineral right owner and mining permittee are the responsible parties and they share responsibility with lessees and operators. Zoning variances are issued and administered by the Jefferson County Board of Adjustments through the Jefferson County Planning Department and Mining Reclamation Permits are issued by the Colorado Mined Land Reclamation Board and administered through the Colorado Division of Minerals and Geology. The DOE will continue to be good stewards by participating in the regulatory public processes with Jefferson County and the State of Colorado.

Response to Comment 11-5: Agree with the response. In addition, several areas that are currently mined or under remediation like the land fill, and the south buffer zone, could be added to the reserve in the future. Change Jefferson County to… Zoning variances are issued and administered by the Jefferson County Board of Adjustments through the Jefferson County Planning Department and Mining Reclamation Permits are issued by the Colorado Mined Land Reclamation Board and administered through the Colorado Division of Minerals and Geology.

the plan does not identify those actions which will reflect the water balance studies and other natural resource planning in the future.

Response on 5-2: On the second line of the response add the word "Wildlife" to National Refuge. If no wildlife refuge, a transportation plan will be required by closure to manage the easement holders, mining operations, and the long term stewardship mission for the site.

Response to Comment 6-1: plans prepared by on-site personnel **were...**

Response to Comment 6-3: Use something like -- Zoning variances are issued and administered by Jefferson County Board of Adjustments through the Jefferson County Planning Department, and Mining Reclamation Permits are issued by the Colorado Mined Land Reclamation Board and administered through the Colorado Division of Minerals and Geology.

Response to Comment 8-8: Real property acquisitions require Congressional authority and no budget authority has been requested to acquire additional water rights at this time. All possible fiscal resources are being directed toward the safe closure of the site. Should additional water rights be required, DOE will work with other Natural Resource Trustees and the future land management agency, if known, to determine the appropriate budget and acquiring agency.

Response to Comment 9-4: The Department of Energy does not plan nor support a land management policy of restricting or precluding the real property interests of others. This applies to easement holders and those owning mineral rights or water rights at the Rocky Flats site. Current Jefferson County zoning has allowed existing mining operations to continue in areas of open space. Should the Rocky Flats site become a National Wildlife Refuge, continuance of existing mining may be allowed but be part of the planning of the refuge management agency. New mining operation applications may or may not be allowed by local government zoning in either open space zoning or a National Wildlife Refuge if designated.

Use something like -- Zoning variances are issued and administered by Jefferson County Board of Adjustments through the Jefferson County Planning Department, and Mining Reclamation Permits are issued by the Colorado Mined Land Reclamation Board and administered through the Colorado Division of Minerals and Geology.

Response to Comment 9-5: Typo- Change UD to US; Response... The management plan treats all easement holders alike. Access and exercising easement rights will adhere to RFETS procedures and follow the specific rights and interests in each individual easement. The management plan states that it does not preclude the use of private property rights and it is the private property right holder's responsibility to comply with Federal, State, and local laws.

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Informal Notes from the Desk of

Steven R. Schiesswohl
RFO Realty Officer

Date: 02/27/01

Subject: Real Property Responses to the Comments on the Rock Creek Reserve Integrated Natural Resources Management Plan

To Cliff Franklin, John Rampe

Response to Comment 2-3: Typo in the response-- Nation--National

Response to Comment 3-4: The RCR boundaries including the original 800 acres and the expansion area are identified on the map and shaded in red. Neither reserve boundary has been surveyed as all of the land and adjoining land is within the RFETS boundary except on the north side which is bordered by Colorado State Highway 128 and next to the National Wind Test Center (NWTC) which is also US property managed by the Department of Energy. Therefore, there are no adjacent neighbors except those north of Highway 128 and the NWTC.

Response to Comment 3-17: The regulatory entities for mining at Rocky Flats include the Jefferson County Board of Adjustments and its associated Planning Department and the Colorado Division of Minerals and Geology. Both agencies maintain current mining permit and zoning files. Mineral leases may or may not align with the mining permit and zoning maps and may or may not be recorded in the Jefferson County records. The Department of Energy neither tracks mineral leases nor can be responsible for the accuracy of a map depicting mineral leases.

Response to Comment 3-18: We are currently working on a map showing the existing easements at the Rocky Flats site, but it will not be completed in time to be included in the management plan. It may be referenced or included in some later revision of the management plan if a revision is required.

Response to Comment 5-1: ...easement holders have the rights of access set forth in their easements and must follow Rocky Flats procedures when exercising those rights. This applies to water conveyance easements and utility easements. Those exercising mineral rights interests must comply with Federal, State, and local law pertaining to zoning, mining reclamation permits, endangered species, wetlands and other legal requirements. The mineral right owner and mining permittee are the responsible parties and they share responsibility with lessees and operators. Zoning variances are issued and administered by the Jefferson County Board of Adjustments through the Jefferson County Planning Department and Mining Reclamation Permits are issued by the Colorado Mined Land Reclamation Board and administered through the Colorado Division of Minerals and Geology. The plan supports the water resources on the site which may require additional water rights or water management criteria in the future, but

Mariane Anderson 02/15/2001 01:39 PM

To: Cliff Franklin/doe/rffo@RFFO, Robin Romero/SiteReps/rffo@RFFO
cc:

Subject: RCR Response

Question 8-6

Cleanup funds will not be used for the purpose of conducting a feasibility study regarding stabilization of the Linsay Ranch nor for any subsequent work done on the structure. See response to question 3-2.

Cliff,
We probably shouldn't address the issue of accepting private funding as it gets into the relm of augmenting the Congressional appropriation. There is some sort of law against that. There may be a way to do it, but it is far to complicated to address here.
mariane

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Bruce Rosenlund
02/16/01 11:57 AM

To: Kenneth McDermond/R6/FWS/DOI@FWS
cc:
Subject: Rocky Flats

Ken:

The perch poles are out, nest boxes are toned down, but not dead. Attached are a couple of the official comments and draft responses to the RF INRMP, that appear to be at the heart of making the INRMP as Refuge compatable as possible. Let me know if we are on the right track here. About your suggestion for a disclaimer, the overall problem appears that there is a gray area for the next 3-4 years. You start the Refuge planning process 90 days after the act is signed, but a draft to congress is not due for 3 years....which is about the time the ROD should be signed, allowing for the land transfer. Thus, it appears there are 3-5 years from now until the land is transferred to the FWS and a Refuge Plan takes effect?

5.2 Comment. Plan establishes no timetable for some of it's key proposals. For instance, agency personnel admit that completion of a Trails and Access Plan may be several years away. It could be needed as early as 2007.

5.2 Response. Priorities of the proposed actions will be determined by available funds and personnel within the ~~next five years.~~ This document does not include a proposal ~~for a Trails~~ and Access Plan. An Access and Recreation Study is proposed, that will help develop a wide range of appropriate and Refuge compatable access and recreational options that could be considered in the future. This study could be an asset to any future Refuge, and could be contracted through the Refuge system.

5.3. Comment. The Level III Contaminant Study is ill defined. Does USFWS have more or less stringent requirements that the site's own buffer zone characterization.

5.3. Response. Overall, the USFWS requires a separate and independent assessment of contaminates. Assuming the transfer of this land to the USFWS, Department of Interior policy requires a preacquistion contaminants review process that includes three steps: Level I involves a standardized check list of contaminate issues. Level II involves a more detailed evaluation that is triggered by an affirmative finding in the Level I check list, and may involve site visits and a more involved review of existing documents. Level III, involves the collection of environmental samples for chemical analysis. A Level III review of this property was formally requested by the Fish and Wildlife Service, Division of Refuges, based upon their past experiences with other DOE and DOD properties.

8.9. Comment. Any introduction of sensitive, native faunal species should only occur after there is a plan in place for the management of the entire site as a wildlife refuge.

Ken, let me know which of these works best for Refuges. The issue here is introducing state listed birds and fish into Rock Creek:

8.9 Response. Pending passage of a Rocky Flats Refuge Bill by June 2001, Accepted.
or
8.9 Response. Providing habitat for native wildlife is one of the purposes of draft Rocky Flats Refuge Bill. Thus, any action that promotes the restoration and preservation of native species will not only meet the purpose of the Rocky Flats Refuge Bill, but will help promote partnerships with the state and counties for the preservation of native species within Boulder and Jefferson counties. Waiting for completion of the Refuge Plan and transfer of land ownership, will result in an unacceptable delay in conservation efforts.

Disclaimer (To be added to preface, and possibly the executive summary):

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Department of Energy

ROCKY FLATS FIELD OFFICE
10808 HIGHWAY 93, UNIT A
GOLDEN, COLORADO 80403-8200

MAY 16 2001

01-DOE-00928

Mr. LeRoy W. Carlson
Colorado Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
755 Parfet Street, Suite 361
Lakewood, Colorado 80215

Dear Mr. Carlson:

Enclosed is the Biological Assessment for implementation of the Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment (Plan). The Plan was developed jointly with the U.S. Fish and Wildlife Service for management of the Rock Creek Reserve.

The Biological Assessment is provided for informal consultation with the U.S. Fish and Wildlife Service under Section 7 of the Threatened and Endangered Species Act. The general activities described in the Plan and the Biological Assessment will have no affect, or may affect, but is not likely to adversely affect the Threatened and Endangered Species located within the area of the Rock Creek Reserve. If specific activities are later developed that affect the Preble's Meadow Jumping Mouse, or its habitat, additional consultation will be initiated.

The Department of Energy requests that the U.S. Fish and Wildlife Service concur with the Biological Assessment determination. If you have any questions, please call me at (303) 966-5918 or Cliff Franklin at (303) 966-5919.

Sincerely,

for

Joseph A. Legare
Assistant Manager
for Environment and Infrastructure

Enclosure

cc w/o Encl:
C. Franklin, AI, RFFO
J. Rau, AI, RFFO

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01-DOE-00928

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Sincerely,

Joseph A. Legare
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cc w/o Encl:
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Copy to Reading Room? YES_____ NO_____ (Please Initial)

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Franklin:dle	**Rampe**	Legare
05/16/01	**05/16/01**	05/ /01

PREVIOUS CONCURRENCES REMAIN VALID.

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BIOLOGICAL ASSESSMENT

FOR

IMPLEMENTATION OF THE ROCK CREEK RESERVE INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

ASSESSING POTENTIAL IMPACTS TO

PREBLE'S MEADOW JUMPING MOUSE
(*Zapus hudsonius preblei*)

AT

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE GOLDEN, COLORADO

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Scope

This Biological Assessment (BA) was prepared to comply with the Endangered Species Act (ESA) section 7(a)(2) and to fulfill the requirements of the National Environmental Policy Act (NEPA). A draft Integrated Natural Resources Management Plan and Environmental Assessment for Rock Creek Reserve (Plan) was prepared and submitted for public and agency review and comment in March 2001. The U.S. Fish and Wildlife Service (Service), Office of Ecological Services, requested a BA to identify potential impacts to the Preble's meadow jumping mouse (Preble's), a federally-listed threatened species that resides in the Rock Creek Reserve. 50 CFR Section 402.02 requires BAs to be prepared for "major construction activities", or activities with similar impacts. Federal agencies must document the evaluation of the effects of their actions to threatened or endangered species or their designated critical habitat. Informal consultation with the Service determined a BA to be the best method to begin formal consultation and identify potential impacts from proposed actions within the Plan. This BA discusses only those actions considered within the Plan that "may affect" Preble's or its habitat. This BA discusses only those potential impacts that would occur from management activities in the Rock Creek Reserve. Activities in other areas of the Rocky Flats Environmental Technology Site with potential to impact Preble's are being considered in a separate process.

Background

Rock Creek Reserve (Fig. 1) was established in May of 1999 in recognition of the area's biological significance. Although still under ownership of the Department of Energy (DOE), Rock Creek Reserve is co-managed with the Service as part of a cooperative agreement signed by the two agencies in 1999. The need for an integrated natural resources management plan was recognized and included as a requirement in the cooperative agreement. The Plan discusses management tools and options specifically for Rock Creek Reserve for the next five years.

The Plan was developed as a tool to cooperatively manage natural and cultural resources under the current federal ownership and land use conditions. Any significant changes to the current conditions will be addressed as a supplement to the Plan or in a separate document if necessary. All management strategies in the Plan will be consistent with Rocky Flats' current mission of facilities demolition and site remediation resulting in closure.

The Plan utilizes basic criteria for protecting and enhancing natural resources using watershed, landscape, and ecosystem perspectives, consistent with the current Rocky Flats mission and Service goals. Provisions of the Plan apply to all management entities at Rocky Flats. For the purposes of this document those entities are currently the DOE (including its contractors) and the Service. The Plan provides the management goals and guidance for Rock Creek Reserve for future specific natural resource management plans, such as noxious weed management plans, cultural resource management plans, etc.

Threats that warranted listing of Preble's by the Service under the ESA should be reduced and native species health and abundance improved through implementation of the Plan.

Upon public and agency review of the Plan and approval, the DOE agrees to implement the Plan and the "2001 Preble's Meadow Jumping Mouse Management Policy for the Rocky Flats Environmental Technology Site".

New construction that would potentially impact federally-listed species or their habitat, emergency actions and other activities not covered in this BA will require additional consultation under section 7 of the ESA.

I. BASELINE

Under the interagency agreement, Rock Creek Reserve was originally comprised of 800 acres in the north Buffer Zone area of the Rocky Flats Environmental Technology Site. Under the approved expansion proposal within the Plan, Rock Creek Reserve now comprises approximately 1700 acres. Of the 1700 acres, 150 to 200 acres contain Preble's habitat. Rock Creek Reserve is considered to be relatively uncontaminated with hazardous waste and radionuclides, showing background levels in previous samples (refer to the Plan for more details).

II. SPECIES INVOLVED

The primary focus of this BA is the potential for adverse impacts to Preble's and/or the habitat upon which the species depends within the Rock Creek Reserve. The potential impacts described in this BA could also impact other native species resident or transitory on Rock Creek Reserve. These species/communities include, but are not limited to, unique plant communities, native fish populations, and migratory birds. The Bald Eagle does not nest in Rock Creek Reserve, and the main prey in the area, prairie dogs, does not occur in Rock Creek Reserve. A pair of Bald Eagles nests near Standley Lake, a reservoir located approximately five miles from Rock Creek Reserve. None of the management proposals within the Plan are expected to affect Bald Eagles.

Using an ecosystem approach, implementation of the Plan should improve the status of Preble's and other native species existing within Rock Creek Reserve through actions designed to protect and enhance native plant communities and other resources. However, de-listing of federally-listed species will depend upon the removal of range-wide threats to the species and completion of the goals and objectives of a Service-approved Recovery Plan.

III. RESPONSIBLE PARTIES

Department of Energy Rocky Flats Field Office
10808 Highway 93 Unit A
Golden, CO 80403

United States Department of Interior
Colorado Fish and Wildlife Management Assistance Office
755 Parfet Suite 496
Lakewood CO 80215

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IV. PROBLEMS FACING PREBLE'S

The success of any conservation or recovery program depends on eliminating or reducing the impact of activities that threaten the species' existence. The following list is a compilation of threats based on the five criteria considered for federal listing of a species in Section 4(a)(1) of the ESA:

a. The present or threatened destruction, modification or curtailment of its habitat or range.

b. Overutilization for commercial, recreational, scientific or educational purposes.

c. Disease, predation, competition or hybridization.

d. The inadequacy of existing regulatory mechanisms.

e. Other natural (e.g., drought) or human induced (e.g., socio-political) factors affecting its continued existence.

The Plan identifies the main threat to Preble's, its habitat and other sensitive species/plant communities within the Rock Creek Reserve as modification of habitat through the presence of several species of particularly aggressive, invasive weeds, and outlines activities to remove or reduce this threat. These actions, although considered to be overall beneficial, have the potential to adversely affect Preble's individuals.

V. PROPOSED ACTIONS WITH POTENTIAL TO AFFECT PREBLE'S

Although beneficial in the long-term, the following natural resource management actions proposed within the Plan are considered to have the potential for short-term adverse impacts to Preble's or its habitat. Please refer to the Rock Creek Reserve Integrated Natural Resources Management Plan and Environmental Assessment for additional detail.

A. Noxious Weed Control Measures. Approximately 850 acres of Rock Creek Reserve are infested with several species of noxious (invasive) weeds. Of that acreage, approximately 10 to 15 acres falls within Preble's habitat. The Plant Protection Act and the Colorado Weed Management Act require that measures be undertaken to control, and prevent the spread, of listed noxious weeds. The following measures are proposed to control noxious weeds in the Rock Creek Reserve. They are listed in the order of severity of potential impacts to Preble's and other sensitive plant and animal species.

1. Herbicide applications.

1.1. Adverse impacts could result from direct exposure to the chemical at the time of application. Exposure from immediate ingestion of vegetation with the chemical residue on it or within it from a systemic herbicide could also occur. This type of exposure could result in a teratogenic or carcinogenic effect on the animal species exposed. Timing of applications is

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crucial to minimize these impacts while still gaining the benefit of controlling the weeds. No more than 2% (.3 acres) of Preble's habitat in Rock Creek Reserve will be treated with herbicides in any year, for a maximum total of 10% (1.5 acres) over the life of the Plan (5 years). Applications of herbicides will not be made in Preble's habitat while Preble's are active, or while migratory, ground-nesting birds are breeding in areas that could be impacted. Herbicides would not be used near open water and would be used in wetland areas only through the use of back-pack sprayers to ensure precise application to monocultures of the target weed (most likely Canada thistle). Applications would comply with label restrictions and would be done in very limited areas. Biological control would be the main strategy in riparian areas and wetlands.

1.2. Indirect impacts to Preble's and other sensitive species could result from adverse impacts to non-target plants which comprise the ecosystem. Diffuse knapweed and Dalmatian toadflax in the more upland habitat, and Canada thistle in the riparian area and wetlands are the main threats. These weeds displace the native vegetation that Preble's depends upon for survival. The Plan includes monitoring and re-vegetating with native species as the target weed populations decline. Removal of one weed species can set the stage for another aggressive weed to gain a foothold. Minimization of impacts to non-target species is important to the overall goal of the Plan. There will be, however, short-term, adverse impacts to non-target species from herbicide applications. Invasive weed control strategy as outlined in the Plan uses other, more long-term methods to control weeds, with herbicides used only in support of the other forms of control.

2. Prescribed burning. Prescribed burning has the beneficial impacts of returning nutrients to the soil for use by native plant species, and reducing fuel (thatch) in Preble's habitat. This will minimize the risk of wildfires, and fires made hotter by increased fuel loads, which could have an even greater impact on Preble's and its habitat. Prescribed burning would be done in conjunction with herbicide usage as described above to provide optimum benefit for weed control when applicable. This method would be used when a monoculture of the weed is present. Prescribed burning would be implemented in the fall, with herbicide applications following in the early spring to kill the increased number of weeds that germinate from the soil seed bank after burning. Heat from the fire may cause more weed seeds to germinate, along with the removal of the thatch's shading effect. Herbicides can then be used more effectively. This method may or may not be applicable in some areas of Preble's habitat.

2.1. Direct impacts from burning that could adversely affect Preble's and other sensitive species include killing or harming individuals active above ground during a burn. A small window of opportunity for burning is available due to restrictions on burning at certain times of the year by the State of Colorado. Burning in Rock Creek Reserve would be prescribed during the early spring (March for xeric tallgrass prairie) or late fall (October for wetland areas) to avoid the presence of Preble's, nesting ground birds and most reptiles. If used, prescribed burning will be implemented in no more than 2% (1 to 4 acres) of Preble's habitat in any one year, for a maximum of no more than 10% (5 to 20 acres) of Preble's habitat being burned over the life of the Plan. Prescribed burning is a controversial issue at Rocky Flats because of public concerns, and burning may not be implemented at all, or at the lesser (1 acre) range of implementation. If approved for implementation, areas not within Preble's habitat will be burned in accordance with the Prescribed Burn Annual Rotation Plan for Rocky Flats. These areas will then afford firebreak protection for subsequent burns. It is DOE policy that each prescribed burn

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implemented at Rocky Flats will be coordinated and documented in a specific burn prescription plan. Any burn planned to take place in Rock Creek Reserve in all, or part, of Preble's habitat will also include a Preble's habitat protection and mitigation section in the case that a prescribed burn were to become uncontrollable due to unexpected high winds, etc. This habitat protection and mitigation section could include measures such as the use of natural firebreaks (roads, creek, etc.), immediate re-vegetation efforts or re-location of individuals to other areas of suitable habitat in an emergency situation. Specific burn prescription plans that include Preble's habitat will be submitted to Ecological Services for consultation and approval.

2.2. Indirect adverse impacts to Preble's and other sensitive species could occur from damage to the native plant communities through too frequent use of burns. Frequent burning can damage the root systems of the native grasses allowing annual, weedy species to dominate. This is apparent in areas that are burned every year, for example, ranges on military lands that often catch fire as a result of military training. Damage to the native grasses and other vegetation in general also results in erosion from areas of bare ground. Loss of topsoil and sedimentation from run-off could result in increased stream turbidity and off-site transport, especially during heavy rain events. Burning wetland areas in the fall decreases the chances of this happening until ground cover has re-established somewhat. Due to the availability of water, wetland vegetation has the ability to recover at a faster rate than vegetation in the xeric, upland areas. A given area of ground would only be subjected to prescribed burning one time during the five-year period of the Plan, with burning planned for late October/early November, or in April.

Not utilizing prescribed burning may also be considered a potential adverse impact. Years of fire suppression have caused a high level of thatch buildup, increasing the fuel load greatly above what would naturally occur. This increases the potential for an uncontrollable wildfire in Preble's habitat, and for the increased fuel load to cause fires to burn hotter, causing more damage to plant roots and trapped wildlife.

3. Biological Control. Biological controls (insects) have been released at Rocky Flats for several species of noxious weeds. The Plan proposes to increase the use of biological control for diffuse knapweed, dalmatian toadflax and Canada thistle.

3.1. Direct impacts to Preble's and its habitat would be insignificant. The insects would not cause impacts, and the presence of workers releasing insects and recording field data would be minimal. No insect species will be released if they have been proven to attack native plants elsewhere. A literature search has revealed very little research implicating problems with non-target hosts, implying that this has not been a significant problem with biological control of weeds under current environmental laws, such as the ESA and NEPA.

3.2. Indirect impacts would be beneficial overall through the restoration of habitat to native plant species. As with any weed control method, an adverse indirect impact could result through the succession of different weed species as the target weed populations decline, especially if the secondary weed is of no use as food or cover for Preble's. Monitoring of the weedy areas will determine if reseeding/revegetation is required.

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B. Structural stabilization of the Lindsay Ranch. The barn is located approximately 200 feet from the streambed and Lindsay pond, and the ranch house is approximately 300 feet from the stream and pond.

1. Direct impacts. Any construction activity in the vicinity of the house or barn has the potential to harm or harass wildlife, including individual Preble's. The barn and house are used extensively by wildlife. America kestrels nest in the house, great horned owls nest in the barn. Deer use the barn for shelter, and a porcupine has been reported to use the house for shelter. Any stabilization activity would be accomplished in the late fall or winter to avoid the harm or harassment of nesting raptors and other migratory birds, including waterfowl on Lindsay pond. Preble's would be hibernating, and care would be taken to keep all vehicles and equipment on the road to avoid damage to vegetation and soils.

2. Indirect impacts to wildlife could result if the stabilization measures rendered the buildings unusable for wildlife (especially raptors) by closing off entrances/exits to the buildings, or removing nesting substrates. This could actually benefit individual Preble's by removing the presence of those predators from the immediate area.

C. Use of rotenone to remove bass from Lindsay pond. The use of rotenone in Lindsay pond would have severe short-term impacts on the aquatic life in the pond, especially fish, amphibians and invertebrates. These impacts are very short-lived, and the return of native fish, amphibians and invertebrates to ponds treated in this manner is generally quite successful.

1. Direct adverse impacts to Preble's and other non-target wildlife would be insignificant due to the timing of the rotenone application. This would be scheduled for October when impacts to wildlife would be minimal, and Preble's would be hibernating. Barriers such as sandbags would be used to prevent leakage of rotenone and potassium permanganate (neutralizer) into the downstream area.

2. Indirect impacts would be overall beneficial. Bass, a non-native species, have great impact, especially in small isolated systems where they remove all native fish and most amphibians, through predation. They are currently the only fish species present in Lindsay pond. Bass prey on small mammals and birds also, and could prey on swimming Preble's. The removal of this fish species will have a positive effect in general through the re-establishment of a more diverse population of aquatic species in Lindsay pond, and would remove the possibility of bass preying upon Preble's in Lindsay pond.

VI. CUMULATIVE IMPACTS

The potential exists for cumulative adverse short-term impacts from the combination of prescribed burning and spraying herbicides in Preble's habitat. This would be minimized through mitigation. Mitigation would include timing burns and herbicide applications to take place during Preble's hibernation, spot spraying of small areas of weeds to minimize impacts to non-target vegetation, burning combined with spraying only when a monoculture of the weed is present, and monitoring impacts. If adverse impacts such as succession of non-desirable vegetation or lack of re-vegetation are observed after the first year (or at any time), those control

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methods will cease while the techniques are re-evaluated. Controlling noxious weeds and restoring native vegetation would have long-term cumulative benefits to Preble's and its habitat.

VII. CONCLUSIONS

Implementation of the proposed actions discussed above is subject to the availability of funds. These actions were identified as having the potential to adversely affect individual Preble's through short-term, direct and indirect impacts. Mitigation as part of the proposed actions ensures the adverse impacts would be minimal or non-existent and would impact only individuals; the continued existence of the species would not be jeopardized. The overall long-term impacts are expected to be beneficial not only to Preble's, but to the wildlife in general found in the Rock Creek Reserve.

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Final Plan sent to

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Director
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7305 Grandview Avenue
Arvada, CO 80002-9960

Mr. Bob Sievers
University of Colorado
Environmental Programs
Boulder, CO 80309

Mr. Steve Smith
Xcel
1225 17th Street, Suite 1300
Denver, CO 80201

Ms. Connie Soloman
Office of Congressman Joel Hefley
104 South Cascade Avenue, Suite 105
Colorado Springs, CO 80903

Ms. Joan Sowinski
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
D[illegible]r, CO 80222-1523

The Honorable Mayor Spence
Town of Superior
124 East Coal Creek Drive
Superior, CO 80027

Mr. Robert Stewart
U.S. Department of Interior, Office of Secretary
Denver Federal Center, Building 56, Room 1003
P.O. Box 25007 (D-108
Denver, CO 80225-0007

The Honorable Hank Stovall
Mayor Pro Tem
City of Broomfield
One DesCombes Drive
Broomfield, CO 80020-2495

Mr. John Swartout
Office of governor Bill Owens
136 State Capitol
Denver, CO 80203-1792

Mr. Steve Tarlton
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, CO 80246-1523

Ms. Carol Taylor
U.S. Fish and Wildlife Service
Fisheries/Endangered Species
P.O. Box 25486
Denver, CO 80225

Mr. Erik Telesmanich
National Renewable Energy Laboratory
1617 Cole Blvd.
Golden, CO 80401

Mr. Richard Turner
Jefferson County
100 Jefferson County Parkway
Golden, CO 80419

M[illegible]lly White
Jefferson County Nature Association
P.O. Box 593
Morrison, CO 80465

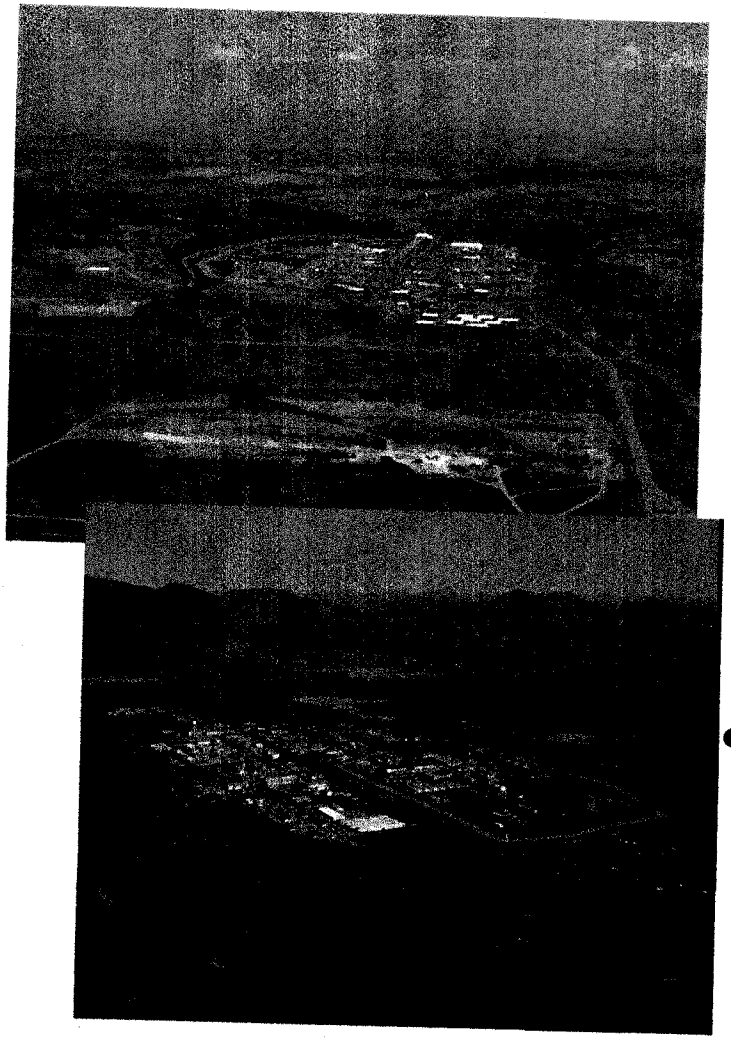
Mr. Harvey Wittmier
Chief, Division of Realty
U.S. Fish and Wildlife Service
P.O. Box 25486
134 Union Blvd.
Denver, CO 80225

Mr. Larry Woods
Woods Environmental
829 West Conifer Circle
Louisville, CO 80027

Mr. Doug Young
Office of Congressman Mark Udall
1333 West 120th Avenue, Suite 120
Westminster, CO 80234

Mr. Mac Zimmerman
Office of Congressman Scott McInnis
225 North 5th Street, Suite 702
Grand Junction, CO 81501

Rock Creek Wildlife Reserve



- Proclamation of support for Reserve signed May 17, 2000 by:
  - Bill Richardson - Secretary of Energy
  - Bill Owens - Colorado Governor
  - Ralph Morganweck - US F&WS Regional Director

- Rock Creek Reserve Boundary includes approximately 800 acres

CLOSURE 2006
ROCKY FLATS CLOSURE PROJECT

Department of Energy

413

WHY EXPAND ?

BIGGER IS BETTER

FOCUS ON NATIVE SPECIES

CONNECTION WITH EXISTING OPEN SPACE

Interagency Agreement

US FWS Actions:

•Annual Report by January 4, 2000 addressing:

1. Adequacy of RFETS natural resource data and monitoring program

2. Evaluate ecological value of Reserve for long term protection

3. Logical expansion of the Reserve boundaries

CLOSURE 2006
ROCKY FLATS CLOSURE PROJECT

Department of Energy

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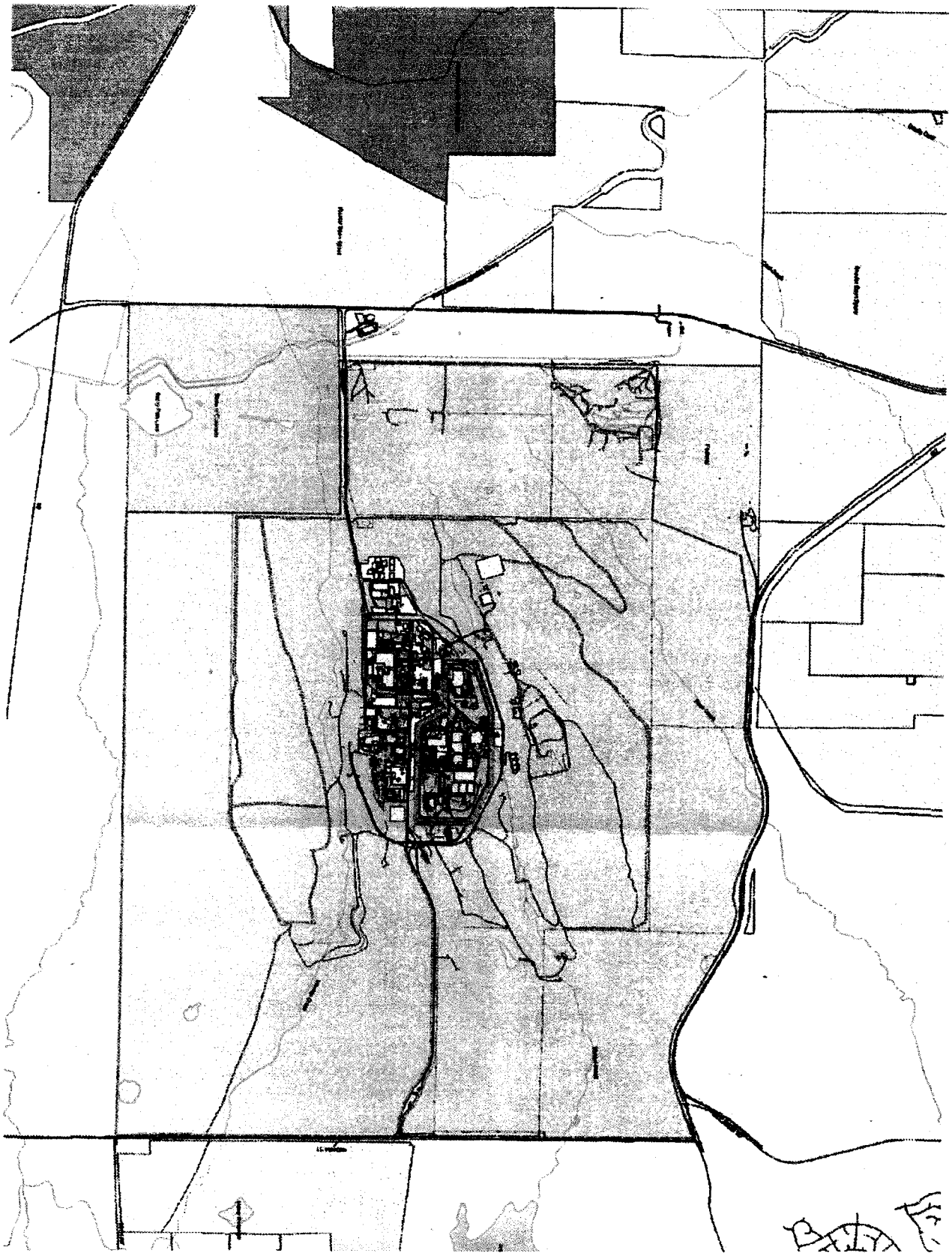
Interagency Agreement -Continued

- **Complete Integrated Natural Resources Management Plan by December 31, 2000, including:**
  1. Obtaining stakeholder involvement
  2. Prepare Plan for Rock Creek Reserve with applicability for entire buffer zone
  3. Plan to include necessary NEPA analysis

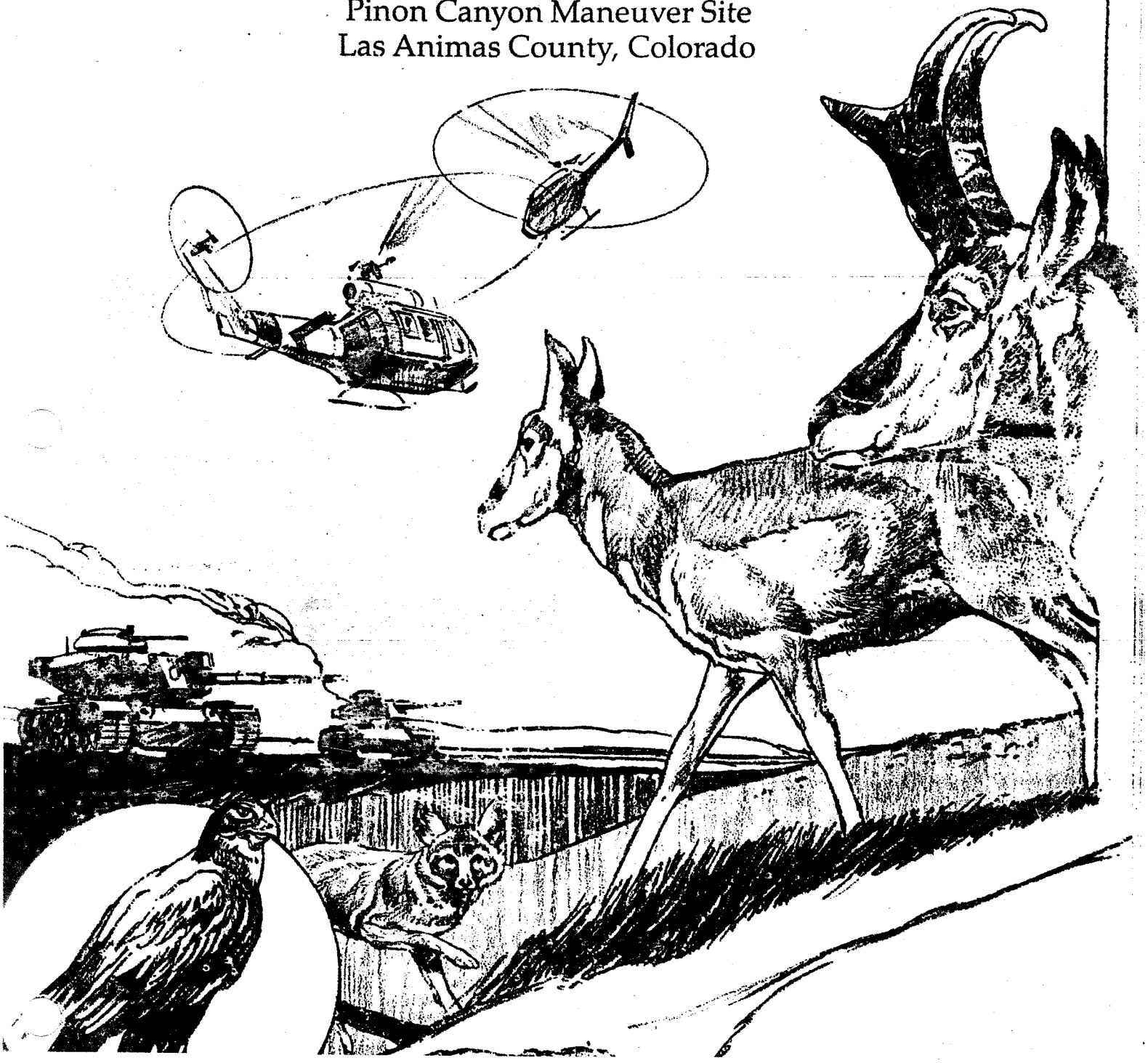
CLOSURE 2006
ROCKY FLATS CLOSURE PROJECT

Department of Energy

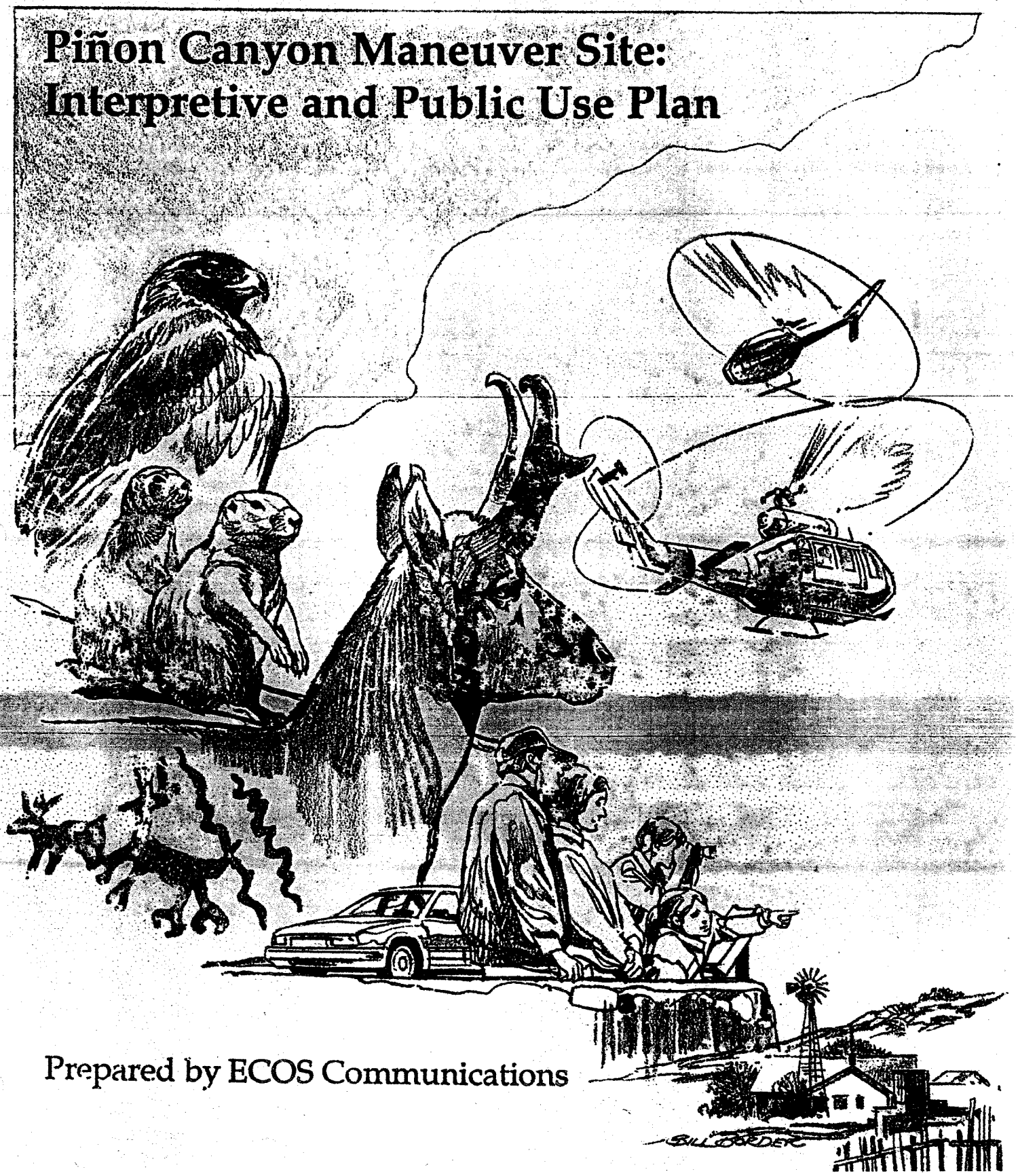


Fish and Wildlife Management Recommendations

Pinon Canyon Maneuver Site
Las Animas County, Colorado



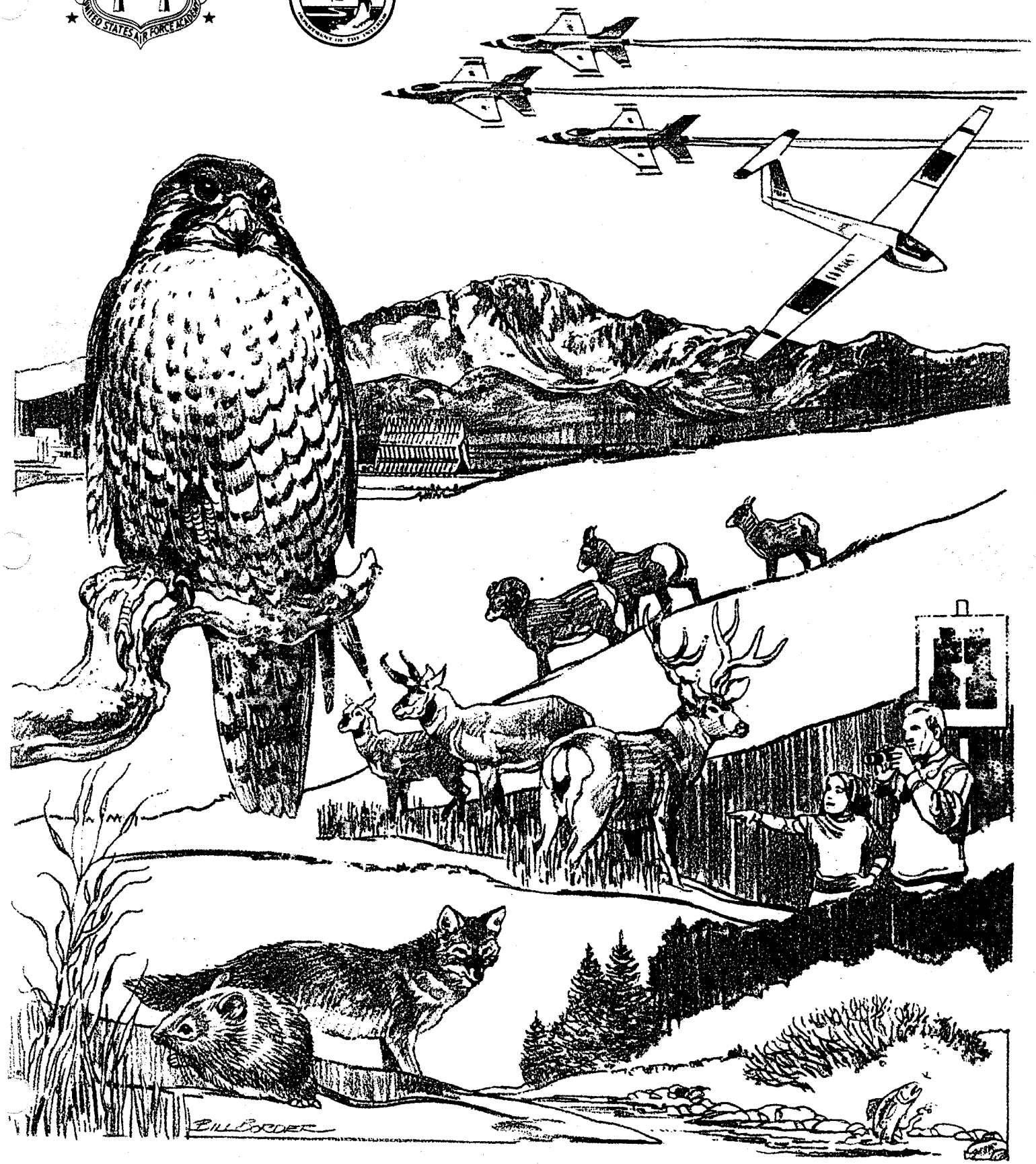
Piñon Canyon Maneuver Site: Interpretive and Public Use Plan

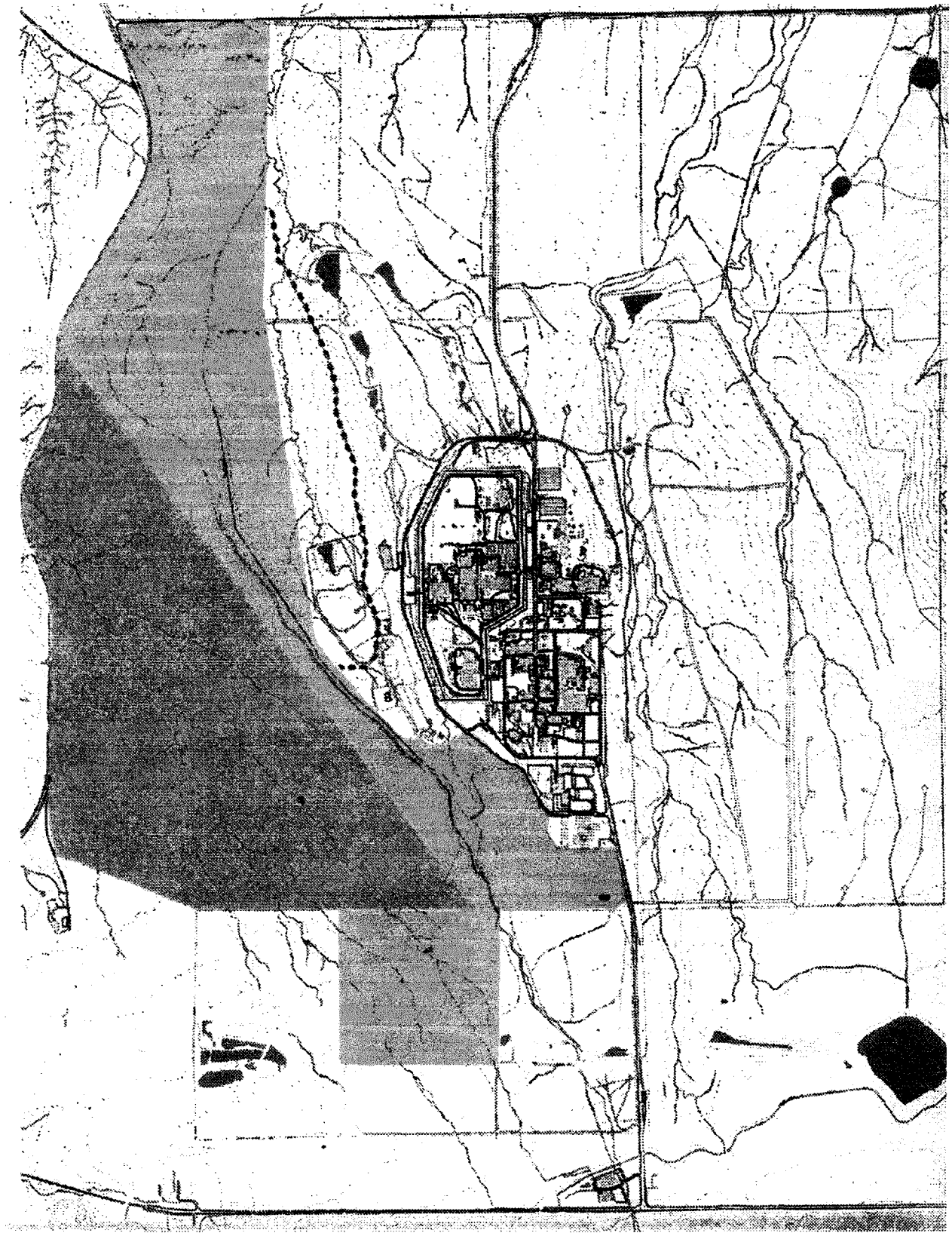


Prepared by ECOS Communications

United States Air Force Academy

Fish and Wildlife Management Plan





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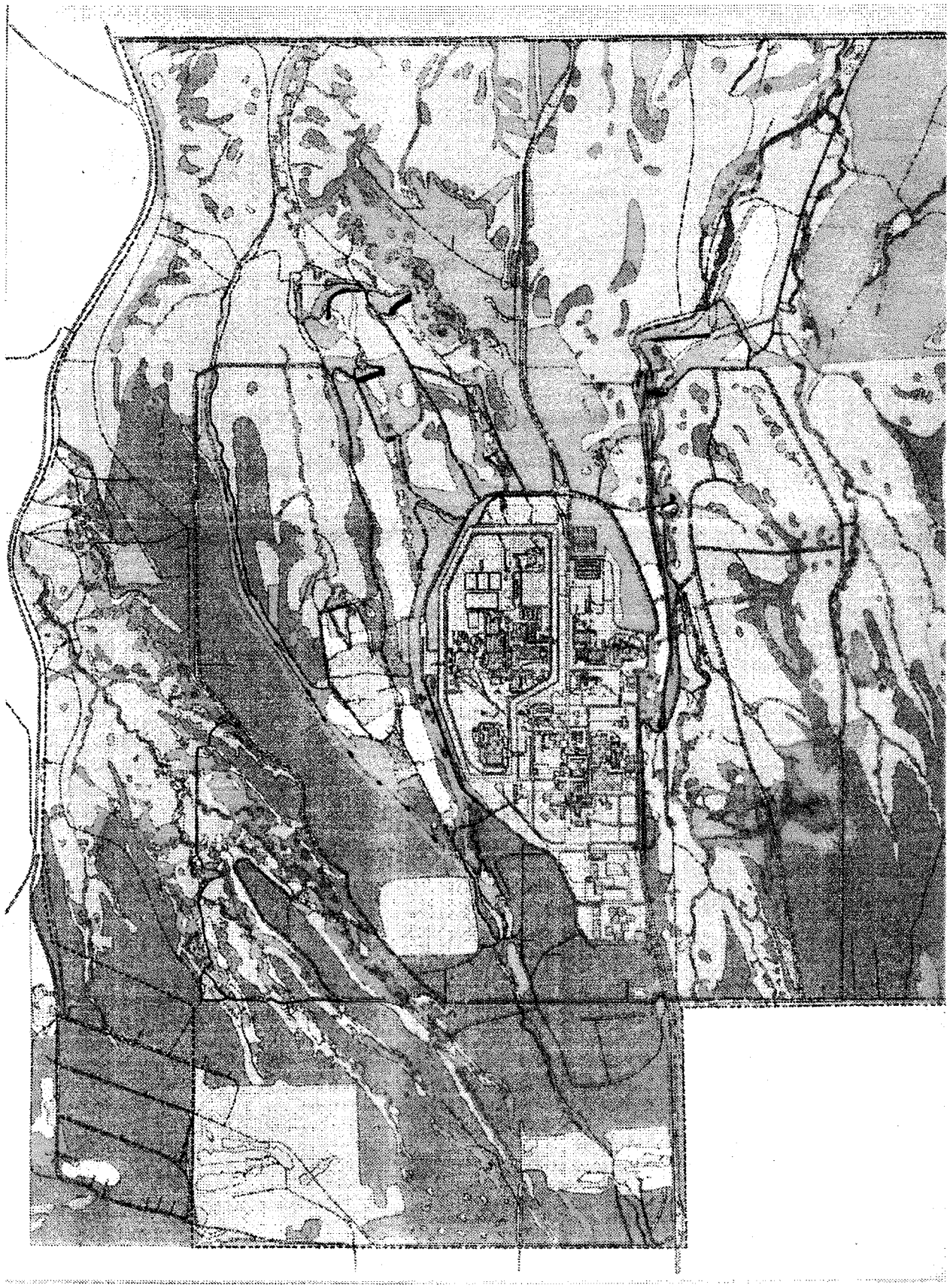

RF Site's Public process

Key Meetings

- RFCA Annual Review
  RSAL Review
- State of the Flats
- Managers Quarterly Meetings
- State Water Management Working Group Data Exchange Mtg. (inc. COMRAD)
- Environmental Restoration Committee
- Stewardship Committee
- Actinide Tech. Migration Review

PANELS/Groups

- Actinide Migration Panel
- RSALS Oversight Panel
- Health Advisory Panel
- D&D Monthly Meetings
- Rocky Flats History Project Group
- Integrated Monitoring Plan Working Group

RFCA Focus Group

CAB

RFCLOG

Sanctioned Community Organizations

Long Term Stewardship Working Group

Tool Box Group

Emergency Joint Planning Team

Rock Creek Preserve Plan

4/29 Cpc ref: Public Relations

Natural Resource Management Issues

Rock Creek Reserve Management Plan

In December 2000, the U.S. Fish and Wildlife Service (USFWS) issued a draft of the Integrated Natural Resources Management Plan for Rock Creek Reserve. This comes 18 months after USFWS and the Department of Energy (DOE) entered into an agreement creating the reserve. Per the agreement, USFWS is required to formulate a management plan consistent with the sitewide natural resources policy, which calls for maintaining the quality and diversity of native habitat.

The reserve is situated in the northwest quadrant of the Rocky Flats site. It lies on the margin between the plains and the foothills. In ecological parlance, this is termed a contact zone, where a convergence of topography produces unique mixtures of plants. Here is found a plant community called the tall upland shrubland, where Hawthorne and choke cherry grow side by side. The association of these two species has not been documented elsewhere in the world.

With its steep ravines and rocky outcrops, the Rock Creek watershed is a refuge for native plant species. Eighty-six percent of the plants found there are indigenous. Just south of the creek, a wide swath of xeric tallgrass prairie sits atop the mesa. This type of grassland is considered rare and valuable. If the expansion proposed in the plan is adopted, the reserve will encompass more than half of the tallgrass prairie at Rocky Flats.

Perhaps the most significant action unveiled in the plan is the proposed doubling of the size of the reserve, from 800 to 1,700 acres. The new boundaries would take in a greater portion of the watershed. From the perspective of ecosystem management, it is sound practice to conserve as much of the drainage as possible. Moreover, the expanded reserve provides a better connection with existing open space located north and west of the site.

Another key element of the plan is reintroduction of native species. The Plains sharp-tailed grouse, a species listed by the State of Colorado, would be reintroduced in the reserve. This effort would be coordinated with the Colorado Division of Wildlife. Additionally, USFWS plans to establish within the reserve, a fishery representative of pre-settlement conditions. Toward this end, Lindsay Pond and other wetlands would be emptied of exotic species - primarily bass - and stocked with native species such as Iowa darter, northern redbelly lace and common shriner.

The plan includes enhancements to the vegetation management program. Prescribed burning, herbicide application, and insect controls are methods of choice for dealing with the proliferation of weeds. Measures will be taken to ensure that neither the Preble's meadow jumping mouse, nor any other sensitive species, receives adverse impacts from these activities. Since implementation of the plan must comply with all sitewide policies, the use of prescribed burning will be put on hold pending review by DOE.

An Access and Recreation Study will be conducted under the plan to explore opening the reserve to the public. USFWS is charged with determining what level of public access the area's natural resources could withstand. Non-essential roads will be reseeded with native plants. If deemed appropriate, a network of trails may be planned. However, this is speculative and is still many years from becoming a reality.

Pursuant to the plan, the USFWS would conduct a contaminant study above and beyond what is required for the Buffer Zone as a whole. The service's own Environmental Contaminants Division would coordinate such a study. Although USFWS believes the reserve to be relatively unaffected by bomb-making activities, it places great importance on identifying potential areas where contamination may be present.

For the purpose of paperwork reduction, other documentation required by law has been incorporated into the plan. Whenever an action is proposed, such as expanding the reserve or conducting a prescribed burn, the environmental consequences of that action must be documented. The proposed action must also be compared with alternative courses of action. Upon weighing the costs and benefits of the actions covered in this plan, none of the proposed actions were found to be a net detriment to the natural resources of the reserve.

Though some sections are light on detail, the plan sets forth general conservation principles aimed at preserving some of the site's most valuable natural resources through site closure, and until such time as the ultimate reuse decision has been made. Public comments on the plan were accepted through January 31, 2001. At press time, the agencies had not announced what changes to the plan, if any, would result from those comments.

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Cliff Franklin
05/23/2001 11:50 AM

To: David Bailey <dbailey@mssdenverlaw.com>
cc:

Subject: Re: Draft Rock Creek Reserve Management

The comment period on the Rock Creek Plan ended on 31 January 2001. The Plan has been prepared in Final form and will be mailed out to the public as soon as we get the signed copy back from the Fish & Wildlife Service. I expect it within the next week. If you would like to obtain a copy of the Final Plan, please send me you address and I will add you to the mailing list.

Cliff

David Bailey <dbailey@mssdenverlaw.com> on 05/23/2001 11:14:37 AM

David Bailey <dbailey@mssdenverlaw.com> on 05/23/2001 11:14:37 AM

To: "'cliff.franklin@rf.doe.gov'" <cliff.franklin@rf.doe.gov>
cc:

Subject: Draft Rock Creek Reserve Management

I tried to access this report off the net and received a message that I was not authorized to access the report. Is that right or do I need to do something else? Is the comment period closed on this report?

Thanks

Cliff Franklin
03/27/2001 12:17 PM

To: "Harlow, Mary" <MHarlow@ci.westminster.co.us>
cc: Joe Legare/AMEC/DMTP/rffo@RFFO, John Rampe/amppi/rffo@RFFO

Subject: RE: Rock Creek Reserve Comments

Mary

The Rock Creek Management Plan is in the final approval stage. I expect it to be approved either this week or next week. As soon as it is approved, it will be printed and bound in final form and mailed out to all the stakeholders on the original mailing list and any others who responded. Responses to all the comments are included in the document as one of the appendices. It has taken much longer than I envisioned, however partly due to having two agencies involved for final approval. I'm hopeful it will mailed out the week of 4-09-01.

Cliff
"Harlow, Mary" <MHarlow@ci.westminster.co.us> on 03/27/2001 12:09:18 PM

"Harlow, Mary" <MHarlow@ci.westminster.co.us> on 03/27/2001 12:09:18 PM

To: 'Shirley Garcia' <SGarcia@ci.broomfield.co.us>, "'cliff.franklin@rf.doe.gov'" <cliff.franklin@rf.doe.gov>, Kathy Schnoor <KSCHNOOR@ci.broomfield.co.us>
cc: "Harlow, Mary" <MHarlow@ci.westminster.co.us>, 'John Corsi' <John.Corsi@rfets.gov>, 'Jerry Henderson' <jerryh@rfcab.org>

Subject: RE: Rock Creek Reserve Comments

Westminster also provided comments. What is the status of the Plan at this point in time? Has it been finalized? Have our comments been incorporated?

-----Original Message-----
From: Shirley Garcia [mailto:SGarcia@ci.broomfield.co.us]
Sent: Tuesday, March 27, 2001 11:43 AM
To: 'cliff.franklin@rf.doe.gov'; Kathy Schnoor
Cc: 'm ickey harlow'; 'John Corsi'; 'Jerry Henderson'
Subject: Rock Creek Reserve Comments

Cliff,

Broomfield provided comments on the Rock Creek Reserve Plan in January and we have not received any response to our comments. When do you think the City may be expecting a response to our comments? I would like to know the status of the plan and see the revised plan if possible. I can be reached at 303-438-6329.

Thank you,
Shirley

4/27

Cliff Franklin
03/27/2001 11:52 AM

To: Shirley Garcia <SGarcia@ci.broomfield.co.us>
cc: Joe Legare/AMEC/DMTP/rffo@RFFO, John Rampe/amppi/rffo@RFFO

Subject: Re: Rock Creek Reserve Comments

Shirley

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Cliff

Shirley Garcia <SGarcia@ci.broomfield.co.us> on 03/27/2001 11:42:47 AM

Shirley Garcia <SGarcia@ci.broomfield.co.us> on 03/27/2001 11:42:47 AM

To: "'cliff.franklin@rf.doe.gov'" <cliff.franklin@rf.doe.gov>, Kathy Schnoor <KSCHNOOR@ci.broomfield.co.us>
cc: 'm ickey harlow' <mharlow@ci.westminster.co.us>, 'John Corsi' <John.Corsi@rfets.gov >, 'Jerry Henderson' <jerryh@rfcab.org>

Subject: Rock Creek Reserve Comments

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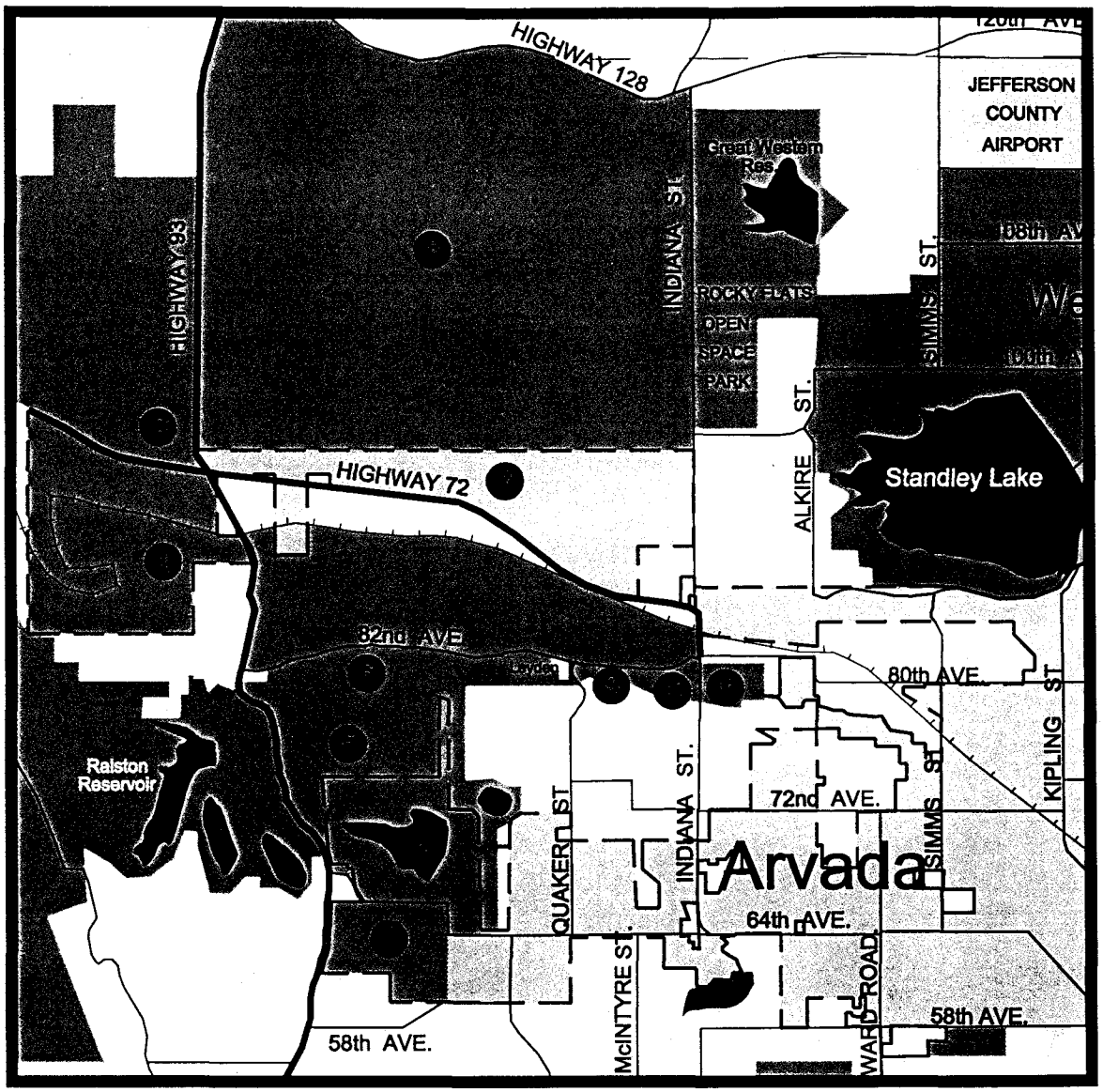
Shirley

428



1. Leyden Gulch: 2,825 acres purchased in 1999 by the City of Arvada, Jefferson County Open Space, and the Denver Water Board for ~$24.8 million. This property is a significant segment of the Front Range Mountain Backdrop in the northern part of Jefferson County. The property is adjacent to and encompasses a portion of the Ralston Buttes Natural Heritage Site. Approximately 800 acres of the site may be a future reservoir.

2. Jewel Mountain/Van Vleet properties: 1,500 acres purchased by the Conservation Fund and the City of Boulder in 1999 for ~$9 million. The properties include expanses of unique prairie habitat and the Coal Creek riparian corridor. These properties contribute significantly to the preservation of the Front Range Mountain Backdrop.

3. Long Lakes Ranch: 430 acres acquired by Jefferson County Open Space, planned as a major regional park emphasizing active recreation. The master plan includes the northern Jefferson County R1 School football and soccer stadium, a championship baseball field, 15 softball/baseball fields, numerous football/soccer fields, multiple trails, playgrounds, lakes, the Churches Ranch National Historic site, and 150 acres of open space habitat.

4. Arvada Reservoir: 658 acres, including the Arvada Reservoir and over two miles of trail extending the Ralston Creek trail to Highway 93.

5. City of Arvada northern Reservoir site: 430 acres purchased by the City of Arvada, currently being mined for gravel. Eventually this site will hold several small water storage reservoirs with significant trails and wetland habitat areas.

6. Pattridge Property: 394 acres of open space under consideration for purchase by the City of Arvada and Jefferson County Open Space.

7. Vauxmont Intermountain Communities: 1,121 acres comprising a future mixed use development for commercial, office, industrial office, single-family residential, multi-family residential and open space. The Vauxmont development will comprise one of the last available sites for industrial and high-tech job developments in Jefferson County.

8. Rocky Flats Environmental Technology Site: Over 6,000 acres owned by the Department of Energy. The ultimate clean-up and closure of this site will culminate in more than 6,000 acres of land to be set aside primarily for open space use.

9. Jo Hayes property: 23 acres of open space along the Leyden Creek Corridor, under consideration for purchase by the City of Arvada and Jefferson County Open Space.

10. Leyden Lake: 70 acres of open space and wetlands along the Leyden Creek Corridor, under consideration for purchase by the City of Arvada and Jefferson County Open Space.

11. Pearce Property: 75 acres of open space purchased by the City of Arvada and Jefferson County Open Space, directly west of the new Ralston Valley High School.

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National Wildlife Refuge System

Brief History

Beginning with Teddy Roosevelt's 1903 Executive Order establishing Pelican Island Refuge, the National Wildlife Refuge System, managed by the U.S. Fish & Wildlife Service, is unique among other federal land management agencies. Rather than having purposes based on scenic or historic values, or on concepts of multiple use in both recreational and economic terms, refuges focus on wildlife, and most often, species held in trust. Trust species have been defined in laws and treaties passed or ratified by Congress:

- Migratory birds
- Threatened and endangered species
- Certain fisheries
- Marine mammals
- Species listed in individual refuge-establishing legislation or EOs

Fifty-six refuges were created under the authority of the Endangered Species Act, explicitly for conservation of endangered species. These trust species have played, and will continue to play, a defining role in managing and growth of the System.

The System functioned without a true organic act for nearly all of its developmental years. There was no law giving the System a unifying mission, and refuges were a patchwork of Executive Orders and individual refuge or general conservation laws. The Refuge Recreation Act of 1962 and the Refuge Administration Act of 1966 helped bring refuges together, but both laws were more concerned with how refuges would be used rather than how they should function as a system.

Current policies

In 1997 President Clinton signed the National Wildlife Refuge System Improvement Act. Building upon a 1996 Executive Order (EO 12996), the Act provided a mission for the System, and clear standards for its management, use, planning, and growth. The Act calls for continued but expanded involvement from the public, states, Tribes and other stakeholders. The System is based on an ecosystem approach, under which wildlife comes first.

Service policy ensures that conservation of listed species is the highest priority on refuge, and guidance comes through individual recovery plans.

Public use

The System is currently managing public use through policies in the Service Manual and compatibility determinations made by each refuge manager. Compatibility has recently been more clearly defined in the Refuge Improvement Act. The Act refers to two main types of general public use:

- Priority wildlife-dependent public uses (hunting, fishing, wildlife observation, photography and environmental education and interpretation)
- Other general public uses

Refuges need to facilitate compatible wildlife-dependent public use, but not other uses. All uses must be judged against a common standard to be allowed – whether they would materially interfere with, or detract from, the fulfillment of the mission of the System or the purposes of the refuge. Thresholds for different types of activity need to be used to make compatibility determinations. The Refuge Recreation Act and the Refuge Administration Act placed into law the concept that refuges would be closed to all recreation uses, until a manager could determine compatibility with the refuge's establishing purpose, and that funding was available to administer those uses. Local pressure and interests influenced decisions and caused a variety of different public uses across the System. Thus, education and interpretation have become important objectives to promote the public's conservation awareness.

National Public Use Requirements were established as minimum standards in 1984. These were used in refuge evaluations called Public Use Reviews. These reviews provided complete documentation of the facilities and program improvements needed to attain the public use service identified in that process. In "Fulfilling the Promise, the National Wildlife Refuge System, 1999" the Service sets a goal to recommit to that process. Although still valid in general terms, the minimum standards need to be updated to reflect the recent Refuge Improvement Act and other directives. Cumulative impacts from public use must also be reviewed. Improvements to the existing Refuge Management Information Database at the field level are necessary to accurately reflect public use.

Past problems with public use and compatibility were addressed in the Refuge Improvement Act by clearly stating that the needs of wildlife come first. The Service must now involve the public in compatibility decisions. The law also asserts that compatible activities which depend on healthy fish and wildlife populations will be recognized as priority general public uses. Six of these have been identified: hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation- and these are, when compatible,

legitimate and appropriate uses of the System. The decision, however, on which to allow on each refuge is a function of refuge purposes, wildlife and habitat objectives, local demographics and attributes of the land itself. To implement the Refuge Improvement Act, the development of public use management policies must be a priority with the Service.

Land acquisition

Numerous laws, not including refuge-specific legislation, give the Service authority for acquisition of land. This open-ended framework for acquisition has presented a challenge. The Land Acquisition Priority System (LAPS), in use for over 10 years, provides a nationwide biologically-based evaluation procedure to prioritize lands and waters for acquisition. However, LAPS is a ranking system sometimes applied after a decision has been made to pursue acquisition of certain lands. LAPS does not tend to answer which areas to acquire, but rather in what order.

The Service recognizes that one of the most important challenges in the land acquisition process is the development of integrated nationals and regional habitat goals and objectives, linking all habitats throughout North America. National guidance is needed to establish this goal. This guidance will be provided by the Service's Ecosystem Teams. It should also ensure that LAPS and other land acquisition processes reflect the areas of greatest conservation concern and are aligned with this coordinated approach.

Ecosystem Teams establish priorities and identify areas of greatest conservation concern in their ecosystems, working together with Federal, state, tribal and private organizations. That is accomplished here by the Region 6 Ecosystem Team.

More information on the goals of the National Wildlife Refuge System can be found in "Fulfilling the Promise, The National Wildlife Refuge System".

United States Department of the Interior

COLORADO FISH AND WILDLIFE ASSISTANCE OFFICE
755 Parfet Street, Suite 496
Lakewood, Colorado 80215

30 November 1999
Rocky Flats Meeting

1. Previous Business
   - Expanded map of Rock Creek Preserve
   - Jeffco meeting

2. Refuge Criteria
   - Ecosystem Meeting, 2 November
   - Meeting notes
   - Slides-refuge criteria

3. Aquatic Surveys
   - Lindsay Pond/Landfill Pond
   - Other drainages

4. Air Force Academy Preble's Meadow Jumping Mouse Plan
   - With RF GIS system, how many acres of PMJM habitat? < Reserve total / RFETS
   - Do PMJM Plan and construction plan for RF?

5. Future Work
   - Complete written FWS Refuge proposal for RF
   - Site visit by CDOW for T&E fish- coordinate with Marsha during base survey

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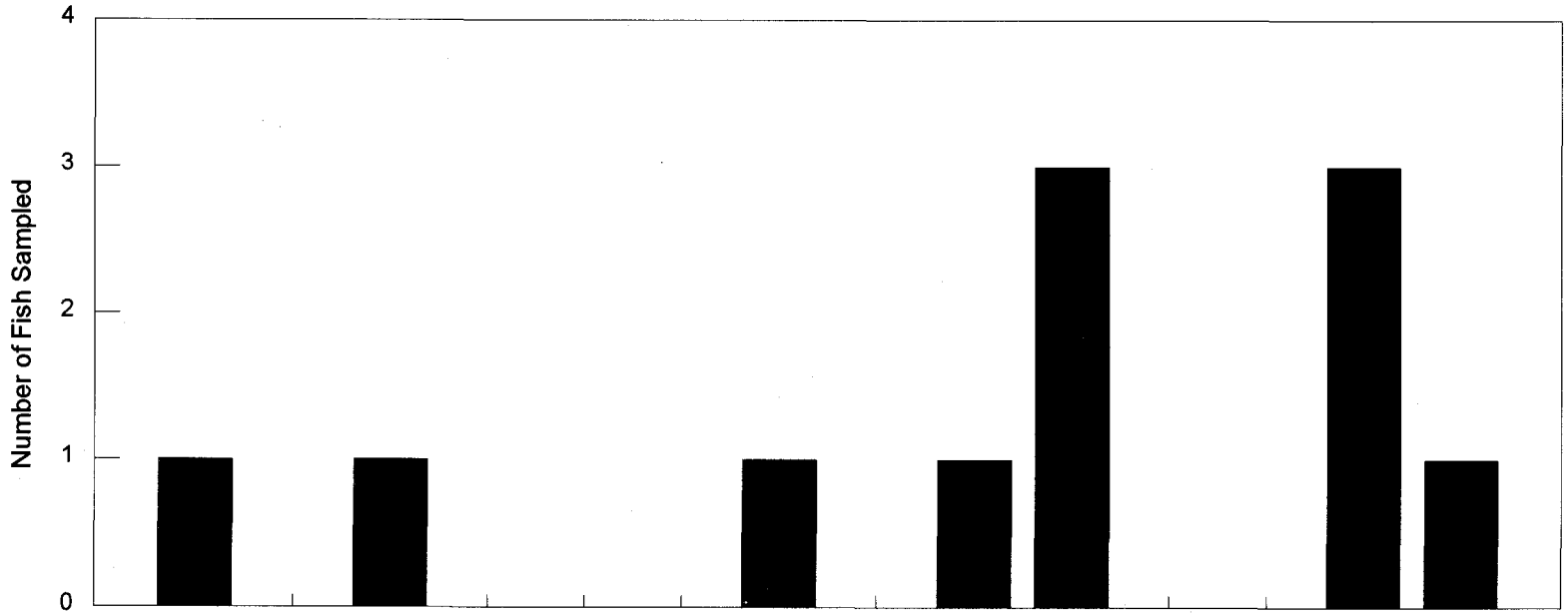
Gill Net Survey Results, Lindsay Pond, Rocky Flats ETS, 11/16-17/99



Length(mm)	160-170	171-180	181-190	191-200	201-210	211-220	221-230	231-240	241-250	251-260	261-270	271-280	281-290	291-300
■ # Largemouth Bass	1		1				1		1	3			3	1

Data does not include 2 fish which were not measured, both were estimated at 250mm
All fish sampled were largemouth bass

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Rocky Flats
2 November 1999

Rocky Flats is located at the edge of the Denver metro area, with an extensive amount of inventory work completed at by CNHP and DOE contractors. Currently, 180 species of birds, 40 species of mammals, nine species of reptiles, seven species and amphibians, and several rare invertebrates have been documented. In addition, the area holds an 1,800 acre remnant of xeric tallgrass prairie, a globally unique shrubland community, and one of the largest remnant populations of Preble's meadow jumping mice.

In May 1999, the FWS and DOE signed a cooperative agreement to evaluate portions of the ~5,000 acre Rocky Flats as a future NWR. As part of the 1999 agreement, the FWS will work with DOE, and other interested parties, in developing a long range natural resources management plan. It is anticipated that clean-up and closure of Rocky Flats will be completed by 2006, and that area could function as a satellite of an existing NWR.

Migratory Birds

1. Minor waterfowl use.

Endangered Species	**Listing**	**Breeding**
Preble's Meadow Jumping Mouse	FT	X (one of the largest remanent populations)
Burrowing owl	ST	X
Resident/Breeding Species of Special Concern		
Northern Leopard frog	SC	

Fisheries

1. Woman, Rock and Walnut Creeks supports a native non-game fish population
2. Potential exists to establish a T&E fish refugium on Rock Creek.

Plants	**Community**	**CNHP State Ranking**
	Xeric Tall Grass Prairies*	S2
	Shortgrass Prairie	S3
	Plains Cottonwoods	S1
	Bulrush	S3
	Tall Upland Shrub**	Unique world wide community

* largest remnant in Colorado, and possibly the largest in all of North America.
** may not occur anywhere else in the world.

Landscape Integrity

1. This area could form a bridge between existing county owned open spaces to the north and south, and be part of an east/west wildlife corridor from the foothills to Stanley Lake.

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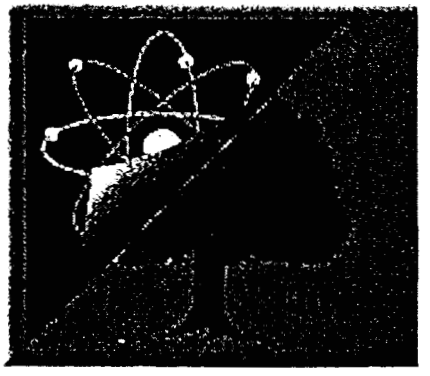
Colorado Natural Heritage Program Newsletter, Vol. 3 No. 1

Rock Creek at Rocky Flats Recognized for Conservation Value

FIELDNOTES



Rocky Flats logo emphasizes a conservation perspective

May 17, 1999 was an important day for biological diversity in Colorado, and worldwide. On that day,the Rock Creek drainage of Rocky Flats was dedicated as the Rock Creek Reserve in perpetuity to protect and recognize globally significant biological values. Information collected by CNHP in a 1995 rapid ecological assessment was used as a major point in the Department of Energy's recognition of the facility's biological significance.

In 1995, CNHP ecologists documented an 1,800-acre xeric tallgrass prairie as the largest known remnant in Colorado, and probably the largest remaining parcel in all of North America. CNHP also documented a rare and declining Great Plains riparian plant community, and a Tall Upland Shrubland community that may only occur along the Colorado Front Range and not anywhere else in the world.

These plant communities provide important habitat for several species of conservation concern including a "key site for the protection of the Preble's Meadow Jumping Mouse (PMJM)" according to the PMJM Science Team. According to a 1999 U.S. Fish and Wildlife Service report on Rocky Flats, "establishing [Rock Creek Reserve] represents the first and best opportunity for establishing a refuge for this species". In addition, it supports 180 species of birds, more than 40 species of mammals, nine species of reptiles, seven species of amphibians, and several rare invertebrates.

Secretary Richardson of the U.S. Department of Energy dedicated the 800- acre reserve that will be managed by the U.S. Fish and Wildlife Service. Secretary Richardson said, "Our partnership with the U.S. Fish and Wildlife Service and the state of Colorado ensures that future generations will enjoy this ecological treasure and the abundant wildlife that make their home in Rock Creek." This is yet another example of how CNHP information is being used to protect some of the world's most important conservation areas right here in Colorado.

INSIDE:

2 Director's Column
3 Conservation Handbook Available
4 Field Season Preview
5 More Field Season
6 Species Highlights
7 Volunteer Feature
8 CNHP Secrets Part 3 Special Insert

Colorado State University

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Prairie/Mountain Ecosystem Team Meeting
November 2-3, 1999

General Comments

Team effectiveness survey on disk, provided by NCTC - team should fill out

1. GIS Mapping of Plant Communities - Jim Minnerath

Flint Hills and Rocky Mountain Arsenal have done this.

Is their a need for botanist/plant ecologist position to help refuges? If botanist is on staff, they may have another job besides filed position and are overwhelmed by other duties. Have relied on Jim to ensure that refuge activities are on track.

There is emphasis in refuges to hire more refuge biologists. Should a few of these be botanist positions? Probably not a need for full time botanist at each refuge bu there is a need occasionally for one at each refuge, particularly when initially inventorying and mapping plant communities on refuge. Perhaps a regional botanist or contractor.

Concern that refuges may be managing for inappropriate plant communities(some of this may be policy dictated). Fragmentation and loss of important plant communities has occurred.

If botanist is needed, folks should put it in RONS package. May not be high priority for individual refuge.

SCEP program may be an avenue to bring botanist/plant ecologists on staff.

Conclusion:

Need to start acquiring information related to plant communities and appropriate management.

2. Potential Refuge Acquisitions - Bruce Rosenlund

Both potential acquisitions within prairie ecosystem at edge of foothills - hosts a number of priority species, greenback cutthroat trout, Prebles meadow jumping mouse, mountain plover, burrowing owls, mexican spotted owl

Pueblo Army Depot - Pueblo, Colorado
Rocky Flats - Denver, Colorado

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1. Pueblo Army Depot
closure under Base Realignment and Closure Act
-see handout

Have developed Integrated Plan on what base will look like in the future, incorporates draft goals and objectives

Core zone surrounded by buffer zone

Prairie dog communities, nesting mountain plovers, swift fox, Arkansas darters

Has been estimated it would cost $250,000 to manage per year.

2. Rocky Flats (see handout)
800 acres put under agreement with FWS to study Rock Creek area, focus on Prebles meadow jumping mouse, for potential inclusion in refuge system

Largest piece of tall-grass prairie left in CO (1800 acres).
Choke cherry community, unique nationally, perhaps internationally

Conclusion: Important to preserve both as open space.

3. Ecosystem Team Role in Identifying Acquisition Projects - Bill Gill

-see handouts (email from Ken M, draft policy on Conservation Strategy Criteria for New Refuge Acquisitions) - soliciting input from ecosystem teams

What is role of Migratory Bird Commission in refuge expansions? Unknown.

Need to evaluate how opportunistic potential acquisitions fit into bigger, landscape picture and identified ecosystem priorities.
Are currently identified ecosystem priorities detailed enough to accomplish this? e.g. focus areas, specific types of species,

Need to evaluate if non-Service entities are available to purchase entirely, or partner with, that could accomplish preservation/restoration.

Identify parcels outside of refuge boundaries of high priority for long-range acquisitions/protection along with potential partners and strategies for acquisition/protection.

Ecoteam can help project leader better describe benefits of proposal.

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Conclusion: Ecosystem team has legitimate role in prioritizing proposals.
Recommendations:

Review criteria document and provide recommendations for revisions (in addition to those already identified).
- Should this include other acquisitions outside of refuge system (e.g. hatcheries, Black Footed Ferret Training Center)?
- Process #1 - recommend changing text to read, ". . . proposals must be reviewed and prioritized by the ecoteam . . ."
-Process #2A - Forward to the "appropriate" PARD.
-Process #2C - Recommend adding that if proposal is disapproved, reasons for disapproval must be provided.
-Process #3C - same comment as #2C.
-Criteria Title - Recommend revising to read, "Criteria for Developing Proposals."
-Criteria #1 - Recommend changing the sentence to read, "The proposed project must lie within a ecosysstem priority identified by the ecoteam(s) as highly significant to fulfilling the mission of the Service within the ecosystem."
-Criteria #2 - Is trust resources defined in the Refuge Improvement Act? If not, please include definition of trust resources.
-Criteria #3 - Change "detailed" to "concise" and add to end of bullet, " . . and management alternatives."
Criteria #4 - Recommend revising to read, " The proposal must address the following:"
Criteria #4A - Emphasis is on breeding/nesting areas only, does not take into consideration other types of seasonal uses (e.g. staging areas, migration corridors, wintering areas, roost areas, etc.). Delete "documented" in bullets 2-4. Might be useful to include factors such as the second and third factors identified under Endangered Species. What does the asterisk refer to in bullet 3? This factor may warrant its own category or be included in the endangered species category (as there are other species of special concern that are not avian).
Criteria #4B - Add another bullet to read, " How would the acquisition contribute to the conservation/recovery of the species?" Delete "documented" and "during critical life stages" from second bullet. Delete fourth bullet entirely.
Criteria #4C - Change title from "Fisheries" to "Aquatic Species". Revise first bullet to read, "Land acquisition will significantly contribute to the restoration/recovery of the target aquatic species." Delete "proposal must" from bullets 2 and 3.
Criteria #4D - Delete "T&E"
Criteria #4E - Revise first bullet to read, ". . .or address one of the above criteria." Revise second bullet to include, " . . .or address one of the above criteria."
Criteria #4F - The bullet needs revision to incorporate landscape ecology concepts. Do not necessarily want to avoid acquiring a piece of land because it is an island, or it may be a linkage to other islands.
Criteria #4 - Add another category, Public Outreach. This corresponds with proceeding checklist.
Coarse Filter Criteria - Delete this entire category.

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Revise Criteria Checklist to correspond with above.

Acquire from Realty a list of already approved proposals to familiarize team

Recommendations:

1. Rocky Flats - Service should pursue potential acquisition of entire Rocky Flats area as satellite to RMA.
2. Pueblo Army Depot -

4. Invasive Species Discussion(lead by Linda Drees)

Ecoteam members submitted invasive species lists to Linda prior to meeting (refer to handouts). The compiled list was provided to the Regional Office

Invasive Species Training

NCTC is developing an invasive species training. Looking at 3 pronged approach to reach policymakers, technical staff and middle management.

The team identified the following training needs:
Weed identification
IPM techniques-mechanical, biological, cultural, chemical
"Nuts ands bolts";
we need a simplified reporting process
training on monitoring
preventative actions--use models for management
safety

Other broader IPM issues identified by the team during the training discussion included:
reducing chemicals...is it feasible?
negative impacts associated with some of the techniques
wildland weed research
decision tree would be helpful
we need to understand the true biology of some of these species(some may be better off left alone)
NEPA compliance is an issue
risk analysis may be needed
address whether we need some of the noxious weed laws that aren't effective
need better communication with weed boards
application certification;
Program/money/FTE's --need position dedicated to invasives
consider activities of other agencies
promote invasives education(101 and develop a workbook- public needs to understand

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ROCKY FLATS CITIZENS ADVISORY BOARD

00 JUL 10 PM 1:19

An Advisory Board to the U.S. Department of Energy

CCDM

00 JUL 10 PM 1:19
CCDM

July 7, 2000

The Honorable Wayne Allard
United States Senator
513 Hart Senate Office Building
Washington, DC 20510

The Honorable Mark Udall
United States Representative
128 Cannon House Office Building
Washington, DC 20515

Dear Senator Allard and Congressman Udall:

The Rocky Flats Citizens Advisory Board (RFCAB) has reviewed the draft Rocky Flats National Wildlife Refuge Act of 2000 from Senator Allard, and the Rocky Flats Open Space Act presented by Congressman Udall last year. The Board commends both of your efforts to preserve the unique and valuable Rocky Flats area for future generations to enjoy. We have long supported preserving the entire Rocky Flats site upon completion of a safe and thorough cleanup.

The two pieces of draft legislation bring up several issues the Board would like to address:

- RFCAB supports continued federal ownership of and responsibility for the Rocky Flats site. Additionally, the Board supports the language currently in Congressman Udall's draft bill stating that the government shall retain future ownership of Rocky Flats unless Congress provides otherwise.

- Appropriate cleanup levels should be determined through the existing Rocky Flats Cleanup Agreement (RFCA) process. Any legislation needs to clearly state that it cannot be used to dictate a less stringent cleanup at the site than agreed upon under RFCA.

- Under any final legislation, public involvement in land management decisions must be inclusive and comprehensive. The Rocky Flats stakeholder community is a very educated, dedicated, and diverse group. All views should be included in any land management decisions, as they have been in all cleanup decisions. RFCAB has a strong interest in being a primary participant in the design of a public involvement process and in developing any recommendations.

- The Board would prefer that any privately-held mineral rights at Rocky Flats be acquired by the federal government or other public entity, and that this issue be addressed in any legislation that is introduced. Any costs for acquiring the rights should not be taken from Rocky Flats cleanup funding, but rather should be separately appropriated.

547LP

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- While some Board members have initial opinions on issues such as allowance for a potential transportation corridor and development of a visitor's center or museum, we approve of the proposed strategy to allow participants in a future broad-based public involvement process to provide recommendations on these issues. Therefore, we are comfortable that the proposed legislation does not dictate how these issues should be resolved.

- In a 1998 recommendation, the Board took a position that the entire site should be preserved as some type of open space. Since we have not yet fully investigated the implications of making Rocky Flats a National Wildlife Refuge, we tend to favor Congressman Udall's approach of leaving this specific decision up to the recommendations produced under the envisioned public involvement process. That being said, both plans do appear to accomplish preservation of the site according to the community's wishes.

The Board sincerely hopes that your offices are willing and able to work together to craft a bipartisan bill that can be introduced in both the Senate and the House of Representatives. As stakeholders at Rocky Flats, we have often been advised that our recommendations are stronger if we "speak with one voice." We believe this would also hold true in Congress.

Please keep us apprised as you move forward with these drafts and your joint efforts. We would be pleased to review and provide our impressions of any revised proposals.

Thank you for the opportunity to provide our comments on the draft legislation. You both have demonstrated your commitment to working closely with the community to protect the precious resources of Rocky Flats, and you have our support.

Sincerely,

Dr. Gerald L. DePoorter

Dr. Gerald L. DePoorter
Chair

cc: Barbara Mazurowski, DOE-RFFO
Steve Gunderson, CDPHE
Tim Rehder, EPA
Michelle Lawrence, RFCLOG

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Interagency Agreement
(Cont.)

- Complete Integrated Natural Resources Management Plan by December 31, 2000, including:

1. Obtaining stakeholder involvement

Public meetings currently being presented Available to meet with other groups, etc.

RFETS 5-18 **Comments back by June 15, 2000**

kArvada City Hall 5.25 **Draft Plan by mid to end of July**

Citizens Advisory Borard 6-1

Upon completion, the Draft Plan will be distributed for comment

2. Prepare Plan for Rock Creek Reserve with applicability for entire buffer zone

Direct Plan toward RCR with ability to apply to expansion or entire buffer zone.

Plan to cover 5 yr period of I.A.

3. Plan to include necessary NEPA analysis

EA prepared and included as appendices to Plan

4N3

Send comments by **15 June, 2000** to:

Cliff Franklin
DOE - Rocky Flats Field Office
10808 Highway # 93, Unit A
Golden, CO 80403

cliff.franklin@rfets.gov

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Interagency Agreement

US FWS Actions:

- Annual Report by January 4, 2000 addressing:

1. adequacy of RFETS natural resource data and monitoring program The FWS found the existing data to be excellent. Biological information is of a quality and quantity that exceeds information available for most existing FWS Refuges.

2. evaluate ecological value of Reserve for long term protection

   The existence of the Preble's Mouse, Tall grass Prairie, and natural wildlife habitat justifies the long term protection. In addition, including the surrounding protected lands, it serves as an important connecting parcel This Plan will not address the type of long-term protection, such as open space, refuge, or other uses, that decision will have to be made elsewhere.

3. logical expansion of the Reserve boundaries

   DOE asked the FWS to consider and recommend any expansion of the boundaries to better fit the ecological conditions. Refer to map handout at meeting showing proposed new boundary

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Rock Creek Wildlife Reserve

- Dedicated on May 17, 1999 by Sec. of Energy Bill Richardson
- An Interagency Agreement for joint management between DOE and the US Fish & Wildlife Service signed on May 17, 1999
- Proclamation of support for Reserve signed May 17, 2000 by:

  Bill Richardson - Secretary of Energy
  Bill Owens - Colorado Governor
  Ralph Morganweck - US F&WS Regional Director

  (Support expressed by local Gov., Envir. Groups, and individuals_*
- Rock Creek Reserve Boundary includes approximately 800 acres

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Rock Creek Wildlife Reserve

- Dedicated on May 17, 1999 by Sec. of Energy Bill Richardson

- An Interagency Agreement for joint management between DOE and the US Fish & Wildlife Service signed on May 17, 1999

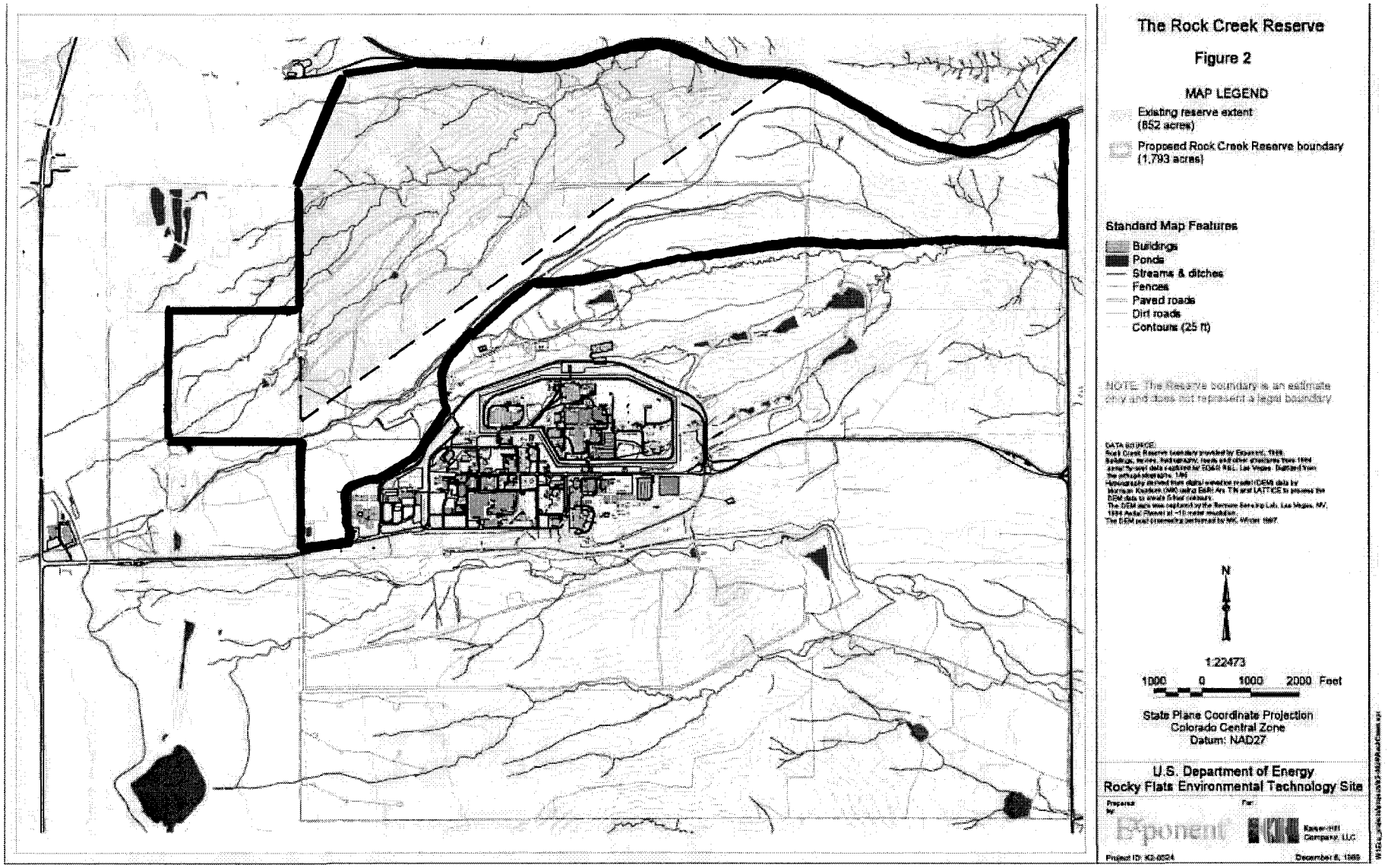
Interagency Agreement

FWS Actions:

1. Evaluate ecological value of Reserve for long term protection.

2. Address logical expansion of Reserve boundaries.

3. Complete Integrated Natural Resources Management Plan.



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Integrated Natural Resource Management Plan

1. Complete necessary National Environmental Policy Act (NEPA) analysis.

2. Obtain Stakeholder involvement.

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Public Process

1. Three public Scoping meetings held in June of 2000. Presentations made to CAB, Coalition, & NJAG.
   Distributed Plan table of Contents & Goals & Objectives

2. Draft Plan presented to Coalition on 4 Dec., 2000 and public meeting was held 19 Dec., 2000.

3. Draft Plan comment period ran from 4 December, 2000 to 31 January, 2001.
   extended at request of Coalition

4. Draft Plan available in Reading Rooms and on RFFO Home Page.

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Integrated Management Plan Specifics

1. Life of Plan is same as term of Interagency Agreement, but expected to be extended through Closure.
   unless refuge approved

2. NEPA requirements are incorporated into RCR Management Plan.

3. Plan based on Joint management of RCR reserve by DOE/FWS.

4. Does not relieve K-H from any of their responsibilities for natural resource management at RFETS.

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Key Proposed Actions in Management Plan/EA

1. Boundary expansion from 800 acres to 1700 acres.

2. Enhanced vegetation management program, including use of prescribed burning, herbicide use, and increased bio-control for D. Knapweed.

3. Introduction of native species, such as northern redbelly dace, sharptail grouse, and recovery plan targeted species.

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Key Proposed Actions in Management Plan/EA (Cont.)

4. Access and Recreation Study to be prepared after coordination with adjacent open space managers.

5. Additional surveys for water quality and quantity.

6. Emphasis on soil contamination survey for RCR.

7. Study feasibility of stabilizing Lindsay Ranch.

Public Comments

Need to improve mailing list - didn't include Sierra Club or adjacent mining companies.

1. 11 Comment letters received: adjacent cities, CDPHE, DOW, US FWS, NWTC, etc.

2. All received comments have been responded to by:
   a. acknowledgement
   b. change to text
   c. explanation in response

3. Comments/Responses included in Plan Appendix 9

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Main Comment topics

1. Access and Recreation Study
2. Contamination survey
3. Mining Activities
4. Reserve Boundary Expansion
5. Introduction of sensitive species
6. Noxious Weed Management
7. Prescribed Burning
8. Herbicide Application
9. Lindsay Ranch preservation

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Remaining Actions

1. Joint signature on transmittal letter
   (Rocky Flats Manager - Regional Director of Fish & Wildlife Service)

2. Rocky Flats Manager sign FONSI

3. Assemble document and Print copies

4. Distribute to public on mailing list and to Reading rooms

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Presidential Documents

Proclamation 7319 of June 9, 2000

Establishment of the Hanford Reach National Monument

By the President of the United States of America

A Proclamation

The Hanford Reach National Monument is a unique and biologically diverse landscape, encompassing an array of scientific and historic objects. This magnificent area contains an irreplaceable natural and historic legacy, preserved by unusual circumstances. Maintained as a buffer area in a Federal reservation conducting nuclear weapons development and, more recently, environmental cleanup activities, with limits on development and human use for the past 50 years, the monument is now a haven for important and increasingly scarce objects of scientific and historic interest. Bisected by the stunning Hanford Reach of the Columbia River, the monument contains the largest remnant of the shrub-steppe ecosystem that once blanketed the Columbia River Basin. The monument is also one of the few remaining archaeologically rich areas in the western Columbia Plateau, containing well-preserved remnants of human history spanning more than 10,000 years. The monument is equally rich in geologic history, with dramatic landscapes that reveal the creative forces of tectonic, volcanic, and erosive power.

The monument is a biological treasure, embracing important riparian, aquatic, and upland shrub-steppe habitats that are rare or in decline in other areas. Within its mosaic of habitats, the monument supports a wealth of increasingly uncommon native plant and animal species, the size and diversity of which is unmatched in the Columbia Basin. Migrating salmon, birds, and hundreds of other native plant and animal species rely on its natural ecosystems.

The monument includes the 51-mile long "Hanford Reach," the last free-flowing, nontidal stretch of the Columbia River. The Reach contains islands, riffles, gravel bars, oxbow ponds, and backwater sloughs that support some of the most productive spawning areas in the Northwest, where approximately 80 percent of the upper Columbia Basin's fall chinook salmon spawn. It also supports healthy runs of naturally-spawning sturgeon and other highly-valued fish species. The loss of other spawning grounds on the Columbia and its tributaries has increased the importance of the Hanford Reach for fisheries.

The monument contains one of the last remaining large blocks of shrub-steppe ecosystems in the Columbia River Basin, supporting an unusually high diversity of native plant and animal species. A large number of rare and sensitive plant species are found dispersed throughout the monument. A recent inventory resulted in the discovery of two plant species new to science, the Umtanum desert buckwheat and the White Bluffs bladderpod. Fragile microbiotic crusts, themselves of biological interest, are well developed in the monument and play an important role in stabilizing soils and providing nutrients to plants.

The monument contains significant breeding populations of nearly all steppe and shrub-steppe dependent birds, including the loggerhead shrike, the sage sparrow, the sage thrasher, and the ferruginous hawk. The Hanford Reach and surrounding wetlands provide important stop-over habitat for migratory birds, as well as habitat for many resident species. The area is important wintering habitat for bald eagles, white pelicans, and many species of waterfowl such as mallards, green-winged teal, pintails, goldeneye, gadwall, and

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buffleheads. The monument's bluff habitats provide valuable nesting sites for several bird species, including prairie falcons, and important perch sites for raptors such as peregrine falcons.

Many species of mammals are also found within the monument, including elk, beaver, badgers, and bobcats. Insect populations, though less conspicuous, include species that have been lost elsewhere due to habitat conversion, fragmentation, and application of pesticides. A recent biological inventory uncovered 41 species and 2 subspecies of insects new to science and many species not before identified in the State of Washington. Such rich and diverse insect populations are important to supporting the fauna in the monument.

In addition to its vital biological resources, the monument contains significant geological and paleontological objects. The late-Miocene to late-Pliocene Ringold Formation, known as the White Bluffs, was formed from river and lake sediments deposited by the ancestral Columbia River and its tributaries. These striking cliffs form the eastern bank of the Columbia for nearly half of the length of the Reach, and are significant for the mammalian fossils that they contain. Fossil remains from rhinoceros, camel, and mastodon, among others, have been found within these bluffs.

The Hanford Dune Field, located on the western shore of the Columbia in the southeastern part of the monument, is also of geologic significance. This active area of migrating barchan dunes and partially stabilized transverse dunes rises 10 to 16 feet above the ground, creating sandy habitats ranging from 2 to several hundred acres in size.

The monument also contains important archaeological and historic information. More than 10,000 years of human activity in this largely arid environment have left extensive archaeological deposits. Areas upland from the river show evidence of concentrated human activity, and recent surveys indicate extensive use of arid lowlands for hunting. Hundreds of prehistoric archaeological sites have been recorded, including the remains of pithouses, graves, spirit quest monuments, hunting camps, game drive complexes, quarries, and hunting and kill sites. A number of Native American groups still have cultural ties to the monument. The monument also contains some historic structures and other remains from more recent human activities, including homesteads from small towns established along the riverbanks in the early 20th century.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

WHEREAS it appears that it would be in the public interest to reserve such lands as a national monument to be known as the Hanford Reach National Monument:

NOW, THEREFORE, I, WILLIAM J. CLINTON, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as the Hanford Reach National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled "Hanford Reach National Monument" attached to and forming a part of this proclamation. The Federal land and interests in land reserved consist of approximately 195,000 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

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All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, or leasing or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument.

For the purpose of protecting the objects identified above, the Secretary of the Interior and the Secretary of Energy shall prohibit all motorized and mechanized vehicle use off road, except for emergency or other federally authorized purposes, including remediation purposes. There is hereby reserved, as of the date of this proclamation and subject to valid existing rights, a quantity of water in the Columbia River sufficient to fulfill the purposes for which this monument is established. Nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States on or before the date of this proclamation.

For the purpose of protecting the objects identified above, the Secretary of the Interior shall prohibit livestock grazing.

The monument shall be managed by the U.S. Fish and Wildlife Service under existing agreements with the Department of Energy, except that the Department of Energy shall manage the lands within the monument that are not subject to management agreements with the Service, and in developing any management plans and rules and regulations governing the portions of the monument for which the Department of Energy has management responsibility, the Secretary of Energy shall consult with the Secretary of the Interior.

As the Department of Energy and the U.S. Fish and Wildlife Service determine that lands within the monument managed by the Department of Energy become suitable for management by the U.S. Fish and Wildlife Service, the U.S. Fish and Wildlife Service will assume management by agreement with the Department of Energy. All agreements between the U.S. Fish and Wildlife Service and the Department of Energy shall be consistent with the provisions of this proclamation.

Nothing in this proclamation shall affect the responsibility of the Department of Energy under environmental laws, including the remediation of hazardous substances or the restoration of natural resources at the Hanford facility; nor affect the Department of Energy's statutory authority to control public access or statutory responsibility to take other measures for environmental remediation, monitoring, security, safety, or emergency preparedness purposes; nor affect any Department of Energy activities on lands not included within the monument.

Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Washington with respect to fish and wildlife management.

Nothing in this proclamation shall enlarge or diminish the rights of any Indian tribe.

The establishment of this monument is subject to valid existing rights.

Nothing in this proclamation shall interfere with the operation and maintenance of existing facilities of the Columbia Basin Reclamation Project, the Federal Columbia River Transmission System, or other existing utility services that are located within the monument. Existing Federal Columbia River Transmission System facilities located within the monument may be replaced, modified and expanded, and new facilities constructed within the monument, as authorized by other applicable law. Such replacement, modification, expansion, or construction of new facilities shall be carried out in a manner consistent with proper care and management of the objects of this proclamation, to be determined in accordance with the management arrangements previously set out in this proclamation.

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Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this ninth day of June, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fourth.

William J Clinton

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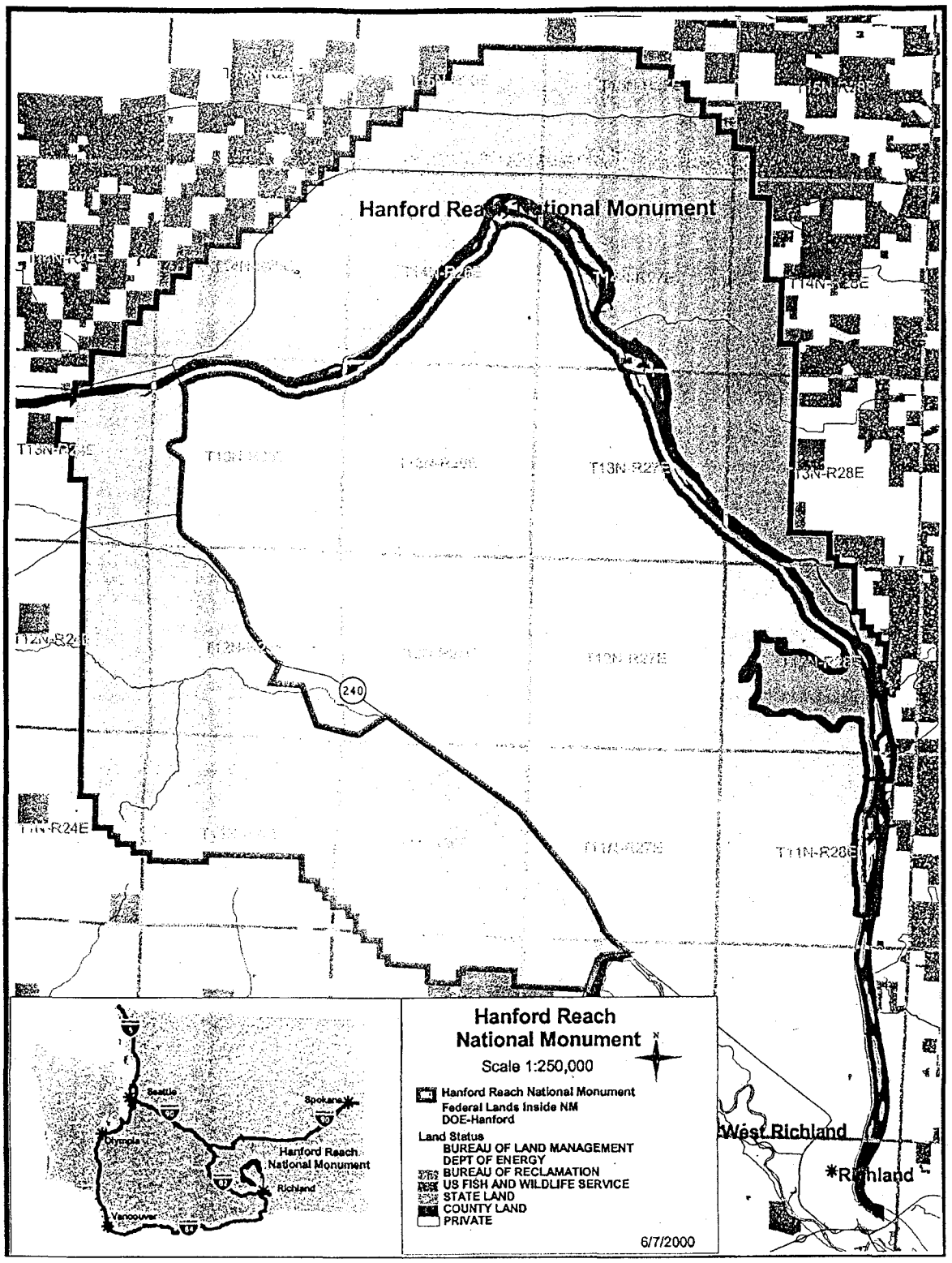

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Filed 6–12–00; 10:47 am]

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ROCKY FLATS COALITION OF LOCAL GOVERNMENTS
2000 Board of Directors

Arvada

Hon. Lorraine Anderson, Director
Hon. Ken Fellman, First Alternate
Carol Lyons, Second Alternate

Boulder

Hon. Lisa Morzel, Director
Mike Weil, Alternate
Amy Mueller, Second Alternate

Boulder County

Hon. Paul Danish, Director
Carolyn Dulchinos, Alternate

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Jefferson County

Hon. Michelle Lawrence, Director
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Nanette Neelan, Second Alternate

Superior

Hon. Andrew Muckle, Director
Hon. Susan Spence, First Alternate
Second Alternate – position not currently filled

Westminster

Hon. Sam Dixion, Director
Mary Harlow, First Alternate
Hon. Herb Atchison, Second Alternate

Congress of the United States
Washington, DC 20515

FAX COVER SHEET

Senator Wayne Allard
7340 East Caley, #215
Englewood, CO 80203
Phone: 303-220-7414
Fax: 303-220-8126
or
513 Hart Senate Building
Washington, D.C. 20510
Phone: 202-224-5941
Fax: 202-224-6471

Congressman Mark Udall
1333 West 120th Avenue, #210
Westminster, CO 80234
Phone: 303-457-4500
Fax: 303-457-4504
or
128 Cannon House Building
Washington, D.C. 20515
Phone: 202-225-2161
Fax: 202-226-3806

DATE: August, 18, 2000

FROM: Senator Allard, Congressman Udall and Staff

TO: Rocky Flats Stakeholder

COMMENTS: Please review the following joint draft legislation on the future land-use of Rocky Flats. Preliminary comments should be directed to either Doug Flander's in Senator Allard's Washington, D.C. office, or to Doug Young in Congressman Udall's Westminster Office by August 25th. We appreciate your interest.

Total pages: 22

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Congress of the United States

Washington, DC 20515

August 18, 2000

Dear Rocky Flats Stakeholder:

The future of the Rocky Flats site is a matter of great importance for Colorado.

Having the site cleaned up and closed in a safe, effective, and timely manner is a top priority for us and the rest of the Colorado delegation in Congress – and we are making progress toward that objective. We think that now is the time to plan for what comes once that goal is achieved

Last year Representative Udall introduced a bill to require that Rocky Flats remain in federal ownership and that its buffer zone remain permanently undeveloped open space. Earlier this year, Senator Allard announced his intention to develop legislation that would designate the site as a National Wildlife Refuge. Since then, we have discussed these proposals with each other and with many interested parties in Colorado and have decided to develop a new legislative proposal that could be introduced in both the Senate and the House of Representatives before the end of the current Session of Congress.

Accordingly, we have developed the attached draft of such a bill. We would appreciate your reviewing it and would be very interested in any comments or suggestions you may wish to make concerning it.

Please note that one part of the draft bill – section 4(e), related to possible use of part of the site for transportation – shows alternative approaches. We would particularly appreciate your comments on whether any such provision should be included and, if so, how this subject should be addressed.

Because of the imminence of the general elections, we expect that Congress will be in session for only a short time after it reconvenes in September. Therefore, we would appreciate hearing from you by August 25th. Doug Flanders in Senator Allard's Washington office and Doug Young in Representative Udall's Colorado office are the staff members who will be responsible for collecting your comments.

Thank you for your interest in this important matter. We look forward to hearing from you.

Sincerely,

Wayne Allard
U.S. Senate

Mark Udall
U.S. House of Representatives

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[DISCUSSION DRAFT]
August 17, 2000

A BILL

To establish the Rocky Flats National Wildlife Refuge in Colorado and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Rocky Flats National Wildlife Refuge Act of 2000".

SEC. 2. FINDINGS AND PURPOSE.

(a) FINDINGS.—

Congress finds the following:

(1) The Federal Government, through the Atomic Energy Commission, acquired the Rocky Flats site in 1951 and began operations there in 1952. The site remains a Department of Energy facility. Since 1992, the mission of the Rocky Flats site has changed from the production of nuclear weapons components to managing wastes and materials and cleaning up and converting the

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site to beneficial uses in a manner that is safe, environmentally and socially responsible, physically secure, and cost-effective.

(2) The site has generally remained undisturbed since its acquisition by the federal government. The site, especially areas in the buffer zone, possesses an impressive diversity of plant and animal species and provides important wildlife habitat for a number of threatened and endangered species.

(3) The State of Colorado is experiencing increasing growth and development, especially in the metropolitan Denver Front Range area in the vicinity of the Rocky Flats site. This growth and development reduces the amount of open space and thereby diminishes for many metropolitan Denver communities the vistas of the striking Front Range mountain backdrop.

(4) Some areas of the site contain contamination and will require further cleanup. The national interest requires that the ongoing cleanup and closure of the entire site be completed safely, effectively, and without unnecessary delay and that the site thereafter be retained by the United States and managed so as to preserve its value for open space and wildlife habitat.

(5) The Rocky Flats site provides habitat for many wildlife species, including a number of threatened and endangered species, and is marked by the presence of rare xeric tallgrass prairie plant species. Establishing the site as a unit of the National Wildlife Refuge System will promote the preservation and enhancement of these resources for present and future generations.

(b) PURPOSE.—The purpose of this Act is to provide for the establishment of the Rocky Flats site as a national wildlife refuge while creating a process for public input on refuge management and ensuring that the site is thoroughly and completely cleaned up.

SEC. 3. DEFINITIONS.

In this Act:

(1) CLEANUP AND CLOSURE.—The term "cleanup and closure" means the remedial actions and decommissioning activities being undertaken at the Rocky Flats site by the Department of Energy under the 1996 Rocky Flats Cleanup Agreement, the closure plans and baselines, and any other relevant documents.

(2) COALITION.—The term "Coalition" means the Rocky Flats Coalition of Local Governments established by the Intergovernmental Agreement, dated February 16, 1999, among--

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(A) the city of Arvada, Colorado;

(B) the city of Boulder, Colorado;

(C) the city of Broomfield, Colorado;

(D) the city of Westminster, Colorado;

(E) the town of Superior, Colorado;

(F) Boulder County, Colorado;

(G) Jefferson County, Colorado.

(3) HAZARDOUS SUBSTANCE.—The term "hazardous substance" has the meaning given the term under section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601).

(4) POLLUTANT OR CONTAMINANT.—The term "pollutant or contaminant" has the meaning given the term under section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601).

(5) REFUGE.—The term "refuge" means the Rocky Flats National Wildlife Refuge established under section 7.

(6) RESPONSE ACTION.—The term "response action" has the meaning given the term "response" under section 101 of the

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1 Comprehensive Environmental Response, Compensation, and
2 Liability Act of 1980 (42 U.S.C. 9601).
3 (7) RFCA.—The term "RFCA" means the Rocky Flats
4 Cleanup Agreement, an intergovernmental agreement, dated July
5 19, 1996, among—
6 (A) the Department of Energy;
7 (B) the Environmental Protection Agency; and
8 (C) the Department of Public Health and
9 Environment of the State of Colorado.
10 (8) ROCKY FLATS.—The term "Rocky Flats" means the
11 Rocky Flats Environmental Technology Site, Colorado, a defense
12 nuclear facility, as depicted on the map entitled "Rocky Flats
13 Environmental Technology Site", dated July 15, 1998.
14 (9) ROCKY FLATS TRUSTEES.—The term "Rocky Flats
15 Trustees" means the Federal and State of Colorado entities that
16 have been identified as trustees for the Rocky Flats site under
17 section 104(b)(2) of the Comprehensive, Environmental Response,
18 Compensation, and Liability Act of 1980 (42 U.S.C. 9601).
19 (10) SECRETARY.—The term "Secretary" means the Secretary
20 of Energy.

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1 **SEC. 4. FUTURE OWNERSHIP AND MANAGEMENT.**

2 (a) FEDERAL OWNERSHIP.—Unless Congress provides otherwise in
3 an Act enacted after the date of the enactment of this Act, all right, title,
4 and interest of the United States, held on or acquired after the date of the
5 enactment of this Act, to lands within the boundaries of the Rocky Flats
6 site shall be retained by the United States.

7 (b) LINDSAY RANCH.—The structures that comprise the former
8 Lindsay Ranch homestead site in the Rock Creek Reserve area of the
9 buffer zone as depicted on the map shall be permanently preserved and
10 maintained in accordance with the National Historic Preservation Act (16
11 U.S.C. 470 et seq.).

12 (c) PROHIBITION AGAINST ANNEXATION.—Notwithstanding section
13 5(a)(2) of the National Wildlife Refuge System Act of 1966 as amended
14 (16 U.S.C. 668dd(a)(2)), the Secretary of the Interior shall not allow the
15 annexation of land within the refuge by any unit of local government.

16 (d) PROHIBITION AGAINST THROUGH ROADS.—Except as provided in
17 paragraph (e), no public road shall be constructed through Rocky Flats.

18 **OPTION 1:** [(e) TRANSPORTATION CORRIDOR.—(1) Upon submission of
19 an application meeting all of the conditions in subparagraph (2), the
20 Secretary and the Secretary of Interior are authorized to make available

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lands within a portion of the eastern and southeastern boundary of the buffer zone for the sole purpose of a regional transportation corridor as depicted on the map entitled Potential Regional Transportation Corridor. Availability of lands for such purposes may be by easement or sale to an appropriate entity or entities.]

OPTION TWO: [(e) TRANSPORTATION RIGHT-OF-WAY.—(1) The Secretary and the Secretary of the Interior are authorized to make available lands within a portion of the eastern boundary of the site for the sole purpose of transportation improvements along Indiana Street. Any action under this paragraph shall be taken in compliance with all applicable provisions of law. Land made available under this paragraph may not exceed 150 feet from the west edge of the Indiana Street right-of-way as such right-of-way exists as of the date of enactment of this Act. Availability of lands for such purposes may be by easement or sale to an appropriate entity or entities.]

(2) An application for lands under this subsection can be submitted by any one or more members of the Coalition and shall include documentation showing that all of the following conditions are met:

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(A) the transportation project is compatible with the management of the site as a wildlife refuge;

(B) the transportation project has the approval of at least 5 of the members of the Coalition; and

(C) the transportation project is included in the Regional Transportation Plan of the Denver metropolitan area's designated Metropolitan Planning Organization under 49 U.S.C. 5303 et seq.

SEC. 5. TRANSFER OF MANAGEMENT RESPONSIBILITIES AND JURISDICTION OVER ROCKY FLATS.

(a) IN GENERAL.—

(1) MEMORANDUM OF UNDERSTANDING.—No later than 18 months after the date of enactment of this Act, the Secretary and the Secretary of the Interior shall enter into a Memorandum of Understanding under which the Secretary shall transfer to the Secretary of the Interior administrative jurisdiction over Rocky Flats. This memorandum of understanding shall provide for the division of responsibilities between the Secretary and the Secretary of the Interior for the period until transfer and shall provide an appropriate allocation of costs and personnel to the Secretary of the

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Interior, provided however that the Memorandum of Understanding shall not result in any reduction in funds available to the Secretary for cleanup and closure of Rocky Flats.

(2) EXCLUSIONS.—The transfer under paragraph (1) shall not include any property or facility over which the Secretary retains jurisdiction, authority, and control under subsection (b)(1).

(3) CONDITION.—The transfer under paragraph (1) shall occur no later than 10 days following the signing by the Environmental Protection Agency's Regional Administrator for Region VIII of the Final Close Out Report as required under the U.S. Environmental Protection Agency's directive (Office of Solid Waste and Emergency Response (OSWER) Directive 9320.2-09A-P, issued January 2000) for the completion of the cleanup of sites on the National Priorities List.

(4) COST; IMPROVEMENTS.—The transfer shall—

(A) be completed without cost to the Secretary of the Interior; and

(B) include such buildings or other improvements as the Secretary of the Interior may request in writing for refuge management purposes.

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1 (b) PROPERTY AND FACILITIES EXCLUDED FROM TRANSFERS.—

2 (1) IN GENERAL.—The Secretary shall retain jurisdiction,
3 authority, and control over all real property and facilities at Rocky
4 Flats that are to be used for--

5 (A) any necessary and appropriate long-term operation
6 and maintenance facilities to intercept, treat and control a
7 hazardous substance, pollutant or contaminant;

8 (B) any other purpose related to a response action or
9 any other action that is required to be carried out at Rocky
10 Flats.

11 (2) CONSULTATION.—The Secretary shall consult with the
12 Secretary of the Interior on the identification and management of all
13 real property retained under this subsection to ensure, to the
14 maximum extent practicable, that any activity carried out on the
15 property is consistent with—

16 (A) the purposes of the refuge established under 6(b);
17 and

18 (B) paragraph (1).

19 (3) ACCESS.—As a condition of the transfer under subsection
20 (a), the Secretary shall be accorded all easements and access as may

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be reasonably required to carry out any obligation or address any other liability described in section 5.

(c) ADMINISTRATION.—

(1) IN GENERAL.—On completion of the transfer under subsection (a), the Secretary of the Interior shall administer Rocky Flats in accordance with this Act subject to—

(A) any response action at Rocky Flats carried out by or under the authority of the Secretary under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.); and

(B) any other action required under any other law to be carried out by or under the authority of the Secretary.

(2) CONFLICT.— In case of any conflict between management of the property by the Secretary of the Interior and the conduct of any response action or other action described in subparagraph (A) or (B) of paragraph (1), the response action or other action shall take priority.

(3) CONTINUING ACTIONS.—Except as provided in paragraph (1), nothing in this subsection affects any response action or other

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action initiated at Rocky Flats on or before the date of the transfer in subsection (a).

(4) LIABILITY.—The Secretary shall retain any obligation or other liability under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.) for land transferred under subsection (a).

SEC. 6. CONTINUATION OF ENVIRONMENTAL CLEANUP AND CLOSURE.

(a) ONGOING CLEANUP AND CLOSURE.—The Secretary shall continue to carry out to completion the cleanup and closure activities at the Rocky Flats site. Nothing in this Act, and no actions taken under this Act, shall be construed to restrict the Secretary from employing new cleanup technologies that may become available.

(b) RULES OF CONSTRUCTION.—(1) Nothing in this Act, and no action taken under this Act, shall relieve the Secretary or any other person from any obligation or other liability with respect to the Rocky Flats site under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.), the RFCA or any other applicable Federal or State law or regulation.

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1 (2) Except as provided in paragraph (3) of this subsection,
2 nothing in this Act shall be construed to affect the degree of
3 cleanup at the Rocky Flats site required under the Comprehensive
4 Environmental Response, Compensation, and Liability Act of 1980
5 (42 U.S.C.9601), the RFCA , or any other applicable requirements.
6 (3) (A) The requirements of this Act for establishment and
7 management of the Rocky Flats site as a national wildlife
8 refuge shall not affect the level of cleanup.
9 (B) The Secretary is required to conduct cleanup and
10 closure of Rocky Flats to the levels hereafter established for
11 soil, water, and other media following a thorough review by
12 the parties and the public of the appropriateness of the
13 interim levels in the RFCA.
14 (4) Nothing in this Act, and no actions taken under this Act,
15 shall affect any long-term obligation of the United States for
16 funding, construction, or operation and maintenance of any
17 necessary and appropriate intercept and treatment facilities or other
18 measures to control contamination.
19 (c) PAYMENT OF RESPONSE ACTION COSTS.—Nothing in this Act
20 affects the obligation of a Federal department or agency that had or has

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1 operations at Rocky Flats resulting in the release or threatened release of a
2 hazardous substance, pollutant, or contaminant to pay the costs of
3 response actions carried out to abate the release of, or clean up, the
4 hazardous substance, pollutant, or contaminant.

5 (d) CONSULTATION.—In carrying out a response action at Rocky
6 Flats, the Secretary shall consult with the Secretary of the Interior to
7 ensure that the response action is carried out in a manner that, to the
8 maximum extent practicable, furthers the purposes of the refuge.

9 **SEC. 7. ROCKY FLATS NATIONAL WILDLIFE REFUGE.**

10 (a) ESTABLISHMENT.—Not later than 30 days after the transfer of
11 jurisdiction under section 5(a)(3), the Secretary shall establish at Rocky
12 Flats a national wildlife refuge to be known as the "Rocky Flats National
13 Wildlife Refuge".

14 (b) COMPOSITION.—The refuge shall consist of the real property
15 transferred under section 5(a)(1).

16 (c) NOTICE.—The Secretary of the Interior shall publish in the
17 Federal Register a notice of the establishment of the refuge.

18 (d) ADMINISTRATION AND PURPOSES.—(1) The Secretary of the
19 Interior shall manage the refuge in accordance with all applicable
20 provisions of law, including this Act and the National Wildlife Refuge

1 System Administration Act of 1966, as amended (16 U.S.C. 668dd et
2 seq.), including the purposes specified in that Act.
3 (2) To the extent consistent with applicable provisions of law,
4 the refuge shall be managed for the purposes of –
5 (A) restoring and preserving native ecosystems;
6 (B) providing habitat for and population management
7 of native plants and migratory and resident wildlife;
8 (C) conserving threatened and endangered species
9 (including species that are candidates for listing under the
10 Endangered Species Act of 1973);
11 (D) providing opportunities for compatible
12 environmental scientific research;
13 (E) providing the public with opportunities for outdoor
14 recreational and educational activities.
15 **SEC. 8. PUBLIC INVOLVEMENT.**
16 (a) In General.—
17 (1) ESTABLISHMENT OF PROCESS.—Not later than 90 days
18 after the date of enactment of this Act, in developing plans for the
19 management of fish and wildlife and public use of the refuge, the
20 Secretary of the Interior, in consultation with the Secretary, the

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1 members of the Coalition, the Governor of the State of Colorado
2 and the Rocky Flats trustees, shall establish a process for
3 involvement of the public and local communities to accomplish the
4 purposes and objectives of this section.

5 (2) OTHER PARTICIPANTS.—In addition to the entities
6 identified in subparagraph (1), the public involvement process shall
7 include the opportunity for direct involvement of entities not
8 presently members of the Coalition, including the Rocky Flats
9 Citizens' Advisory Board and the cities in Colorado of Thornton,
10 Northglenn, Golden, Louisville and Lafayette.

11 (3) DISSOLUTION OF THE COALITION.—In the event that the
12 Coalition dissolves, or any Coalition member chooses to leave the
13 Coalition during the public involvement process outlined in this
14 section, the public involvement process under this section shall
15 continue and an opportunity shall be provided to the entity or
16 entities comprising the Coalition for direct involvement in the
17 public-participation process.

18 (4) PURPOSES.—The public involvement process developed
19 under paragraph (1) shall provide input and make recommendations
20 to the Secretary and the Secretary of the Interior on the following—

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(A) the long-term management of the refuge consistent with the refuge purposes identified in section 7(e) and the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd et seq.), as amended;

(B) the identification of any land referred to in section 4(e) that could be made available for transportation purposes;

(C) the potential for leasing any land on Rocky Flats for the National Renewable Energy Laboratory to carry out projects related to the National Wind Technology Center;

(D) the characteristics and configuration of any perimeter fencing that may be necessary, appropriate or compatible for cleanup or refuge purposes;

(E) the feasibility of locating, and potential location for, a visitor and education center at the refuge;

(F) the establishment of a Rocky Flats museum described in section 10; and

(G) any other issues relevant to the site.

(5) REPORT.—Not later than 2 years from enactment of this Act, the Secretary of the Interior, shall submit to Congress a report outlining the conclusions of the public involvement process and, to

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1 the degree that any input or recommendations from the public
2 involvement process were not accepted, clearly stating the reasons
3 not accepting such input or recommendations.

4 **SEC. 9. PROPERTY RIGHTS.**

5 (a) IN GENERAL.—

6 (1) Except as provided in subsection (c) of this section,
7 nothing in this Act shall be construed to limit any valid, existing
8 property rights at the Rocky Flats site which are owned by any
9 party. Such property rights include, but are not limited to—

10 (A) mineral rights;

11 (B) water rights; and

12 (C) facilities and rights-of-way for utilities.

13 (b) ACCESS.—Except as provided in paragraph (c), nothing in this
14 Act shall affect the rights of the owners of such property rights to access
15 to their property.

16 (c) REASONABLE CONDITIONS.—The Secretary or Secretary of
17 Interior may impose such reasonable conditions on access to the property
18 rights in this section as may be necessary and appropriate for the cleanup
19 of Rocky Flats and for the management of the refuge. Nothing in this Act

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1 shall affect any other applicable federal, state or local law or regulation
2 related to the use, development and management of such property rights.
3 (d) PURCHASE OF MINERAL RIGHTS.—The Secretary shall seek to
4 acquire any and all mineral rights at Rocky Flats through donation or
5 through purchase or exchange for fair market value from willing sellers,
6 but no such acquisition shall result in any reduction in funds available to
7 the Secretary for cleanup and closure of Rocky Flats.
8 (e) UTILITY EXTENSION.—The Secretary or the Secretary of the
9 Interior is authorized to allow the extension of existing utility rights-of-
10 way on Rocky Flats as may be necessary. Such extensions, if any, shall
11 be subject to the conditions in paragraph (c).
12 **SEC. 10. ROCKY FLATS MUSEUM.**
13 (a) MUSEUM.—In order to commemorate the contribution that
14 Rocky Flats and its worker force provided to the winning of the Cold War
15 and the impact it has had on the nearby communities and the State of
16 Colorado, the Secretary is authorized to establish a Rocky Flats Museum.
17 (b) LOCATION.—The Rocky Flats Museum shall be located in the
18 City of Arvada.
19 (c) STUDY.—The Secretary shall consult with the City of Arvada,
20 other local communities, and the Colorado State Historical Society on the

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1 development of the museum, its siting, and any other issues relevant to its
2 development and construction.

3 (d) REPORT.—Not later than 3 years following enactment of this
4 Act, the Secretary, in coordination with the City of Arvada, shall submit a
5 report to Congress regarding the costs associated with the construction of
6 the museum and any other relevant issues to its construction and
7 development.

8 **SEC. 11. FUNDING.**

9 (a) Beginning at the time of submission of the first Presidential
10 budget proposal submitted after the date of enactment of this Act, the
11 Secretary and the Secretary of the Interior shall annually inform the
12 Congress as to the costs incurred in implementing this Act during the
13 preceding fiscal year and the funds required to implement this Act during
14 the subsequent fiscal year.

These pages are personal and confidential and were not microfilmed for public viewing

RCR INRMP Scoping
5/18/00 Bldg 60

	Name	Org	Phone
	Jeb Love	CDPHE	303-692-3422
	Maureen Jordan	NREL	303-275-3248
	Ken Korkia	RFCAB Staff	303-420-7855
	Steve Tarlton	CDPHE	303-692-3423
	HANK STOVALL	CITY OF BAMFLD	303-466-5986
	KATHY SCHNOOR	BROOMFIELD	303-438-6363
	Shirley Garcia	Broomfield	303-438-6329
NEEDS AR ✓	Doug Young	Rep. Marc Udall	303.457.4500
	Patty Stevens	USFWS	303-236-8155 x251.
	Steve Schiesswohl	DOE	303.966.6501
Needs AR	Matt Jones	City of Bldr Open Space Dept	303-441-4495 x243
	John Kampe	DOE-RFFO	303 966-6246
	Joanna Blatt	DOE-RFFO	303 966 6313
	Robin L. Romero	USFWS	719-526-0912
	Mariane Anderson	DOE-RFFO	303-966-6088
	FRANK KUNZE	Jeffco Open Space	303-271-5925

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ROCKY FLATS CITIZENS ADVISORY BOARD
WORK SESSION
PUBLIC ATTENDANCE LIST
June 1, 2000

NAME	AFFILIATION	ADDRESS (include zip code)	PHONE NO.	FAX NO.
John Marler	RFCLOG	[redacted]	[redacted]	412 12-11
Roman Kohler	Rocky Flats Homesteaders	[redacted]	[redacted]	on file
TOM STEWART	CDPHE	[redacted]	[redacted]	ON FILE
Doug Young	Rep. Mark Udall	[redacted]	[redacted]	KY504
David Graver	DNFSB	[redacted]	[redacted]	on file
Anna Martinez	DOE	[redacted]	[redacted]	on file
Robin Romero	USFWS	[redacted]	[redacted]	719-526-1705
John Corsi	KH	[redacted]	[redacted]	
PJ Timmerman	GAO	[redacted]	[redacted]	303 572 7433
Louise JANSON	citizen	[redacted]	[redacted]	

9

NAME	AFFILIATION	ADDRESS (include zip code)	PHONE NO.	FAX NO.
Ed Ross	Westminster	[redacted]		
Carl Spreng	CDPHE			
SCHIERKOLK	CITIZEN			

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Rock Creek Reserve Integrated Natural Resources Management Plan
Scoping Meeting
May 25, 2000

NAME/ ORGANIZATION	ADDRESS	PHONE/ FAX
STEVE BLAZEK DOE / GOLDEN	[redacted]	[redacted]
Carol Lyons City of Arvada	[redacted]	[redacted]
John Marler RFCLOG	[redacted]	[redacted]
Steve Tarlton CDPHE	[redacted]	[redacted]
Mary Harlow City of Westminster	[redacted]	[redacted]
Pamela J. Timmerman US General Accounting Office	[redacted]	[redacted]
Bruce Rosenlund U.S. Fish & Wildlife	[redacted]	[redacted]
Robin Romero U.S. Fish & Wildlife	[redacted]	[redacted]
Ken McDermond U.S. Fish & Wildlife Service	[redacted]	[redacted]
JEFFREY BAKER U.S. DOE / GOLDEN FIELD OFFICE OFFICE OF ENERGY EFFICIENCY +	[redacted]	[redacted]

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NJAG Mtg 2 May 00

			email
Paul Kilburn	JCNA	[redacted]	dkilburn@cs.com
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Ann Bonnell	Plan Jeffco	[redacted]	abonnell@juno.com
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Rock Creek Reserve Integrated Natural Resources Management Plan
Public Meeting
December 19, 2000

NAME/ ORGANIZATION	ADDRESS	E-MAIL	PHONE/ FAX
Jim Johnson/NREL	[redacted]		
Maureen Jordan/NREL			
Jerry Henderson/RFCAB			
Kimberly Chleboun/RFCLOG			
Shirley Garcia/Broomfield			
Steve Blazek/Golden			
Patty Walters/Golden			
Frank Kanze Jefco open space			
Carol E. Lyons			

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Rock Creek Reserve Integrated Natural Resources Management Plan
Public Meeting
December 19, 2000

NAME/ ORGANIZATION	ADDRESS	E-MAIL	PHONE/ FAX
Nanette Neelan	[redacted]		

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3-12-01 RCR comments

Name	Org.	phone #
Cliff Franklin	RFFO	[redacted]
Steve Black	DOE/GO	
Roselle Drahushak-Crow	DOE/GO	
Rick DiSalvo	DOE/RFFO	
John Ramp	DOE-RFFO	

meeting with personnel from the National Wind Technology Center to discuss their comments.

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Rocky Flats Environmental Technology Site
Open Space
Figure 1
Boulder Open Space
Broomfield (TBD)
Federal
Jefferson County Open Space
Westminster Open Space
State of Colorado
RFETS Boundary
Boulder Open Space
Federal
Broomfield Property
Great Western Reservoir
Jefferson County Open Space
Boulder Open Space
State of Colorado
Rocky Flats Lake
Westminster Open Space
Mower Reservoir
W 100TH AV
96TH AV
Standley Lake
72
UNION PACIFIC RAILROAD
Barbara Gulch
Walnut Creek
Woman Creek
Rock Creek
Coal Creek
Dutch Creek
Community Ditch
Church Ditch
INDIANA ST
ALCOTT RD
EL TORDO PL
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The information depicted is provided as a graphical representation only. While source documents were developed in compliance with National Map Accuracy Standards, the City of Boulder provides no guarantee, express or implied, as to the accuracy and/or completeness of the information contained herein.
N
1 inch represents 1200 feet
500 0 500 1000 1500
Feet
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27
SAFE CLOSURE
This map is to be considered a pictorial representation
All data provided "as is" with the understanding that it is not guaranteed to be correct or complete and conclusions drawn from the data are the sole responsibility of the user
U.S. Department of Energy
Rocky Flats Environmental Technology Site
GIS Dept. 303-966-7707
DRAFT

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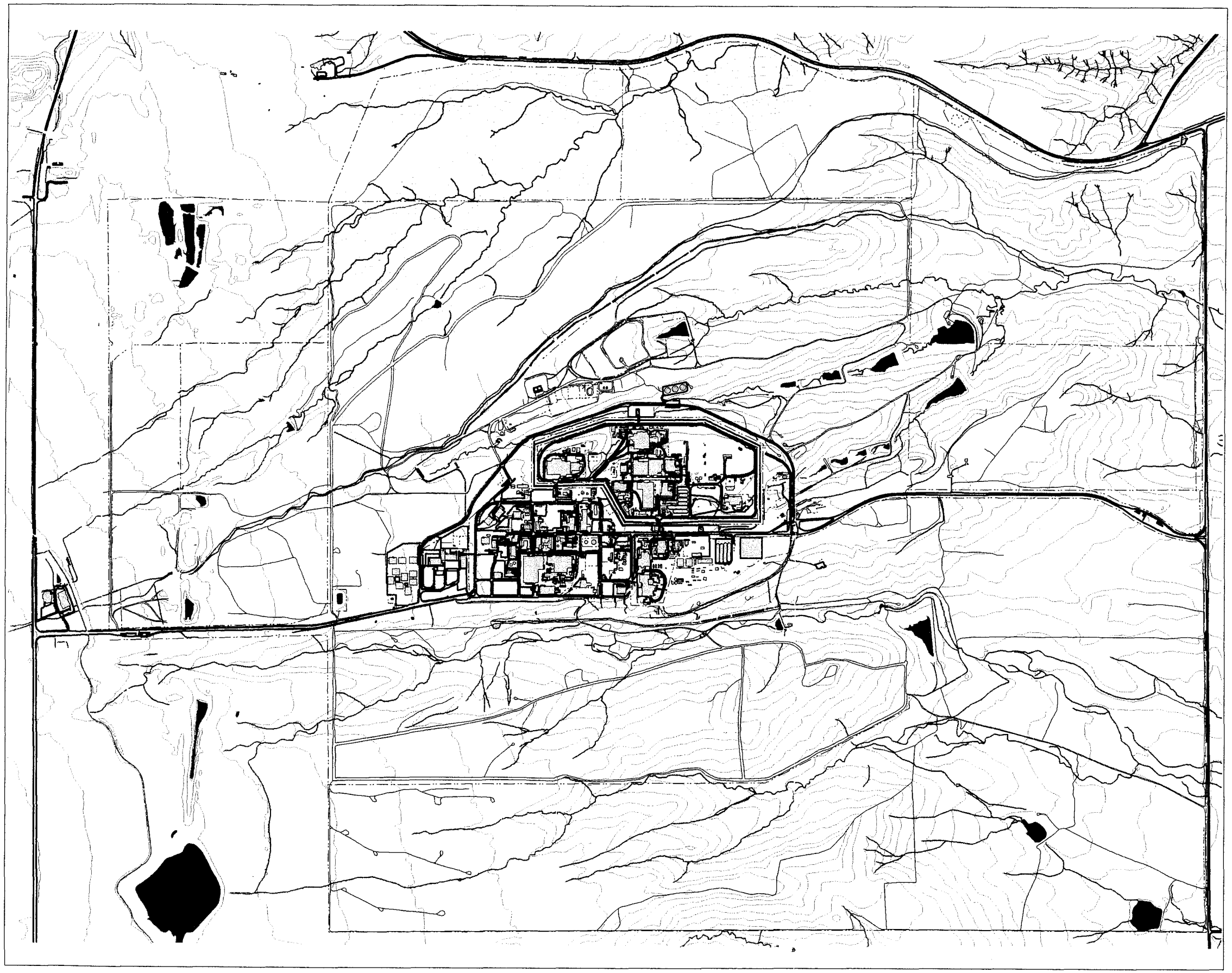

The Rock Creek Reserve

Figure 2

MAP LEGEND

Existing reserve extent
(852 acres)

Proposed Rock Creek Reserve boundary
(1,793 acres)

Standard Map Features

- Buildings
- Ponds
- Streams & ditches
- Fences
- Paved roads
- Dirt roads
- Contours (25 ft)

NOTE: The Reserve boundary is an estimate only and does not represent a legal boundary.

DATA SOURCE:
Rock Creek Reserve boundary provided by Exponent, 1999.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas. Digitized from the orthophotographs, 1/95
Hypsography derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours.
The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV, 1994 Aerial Flyover at ~10 meter resolution.
The DEM post-processing performed by MK, Winter 1997.

N

1:22473

1000 0 1000 2000 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: Exponent

For: Kaiser-Hill Company, LLC

Project ID: K2-0024

December 6, 1999

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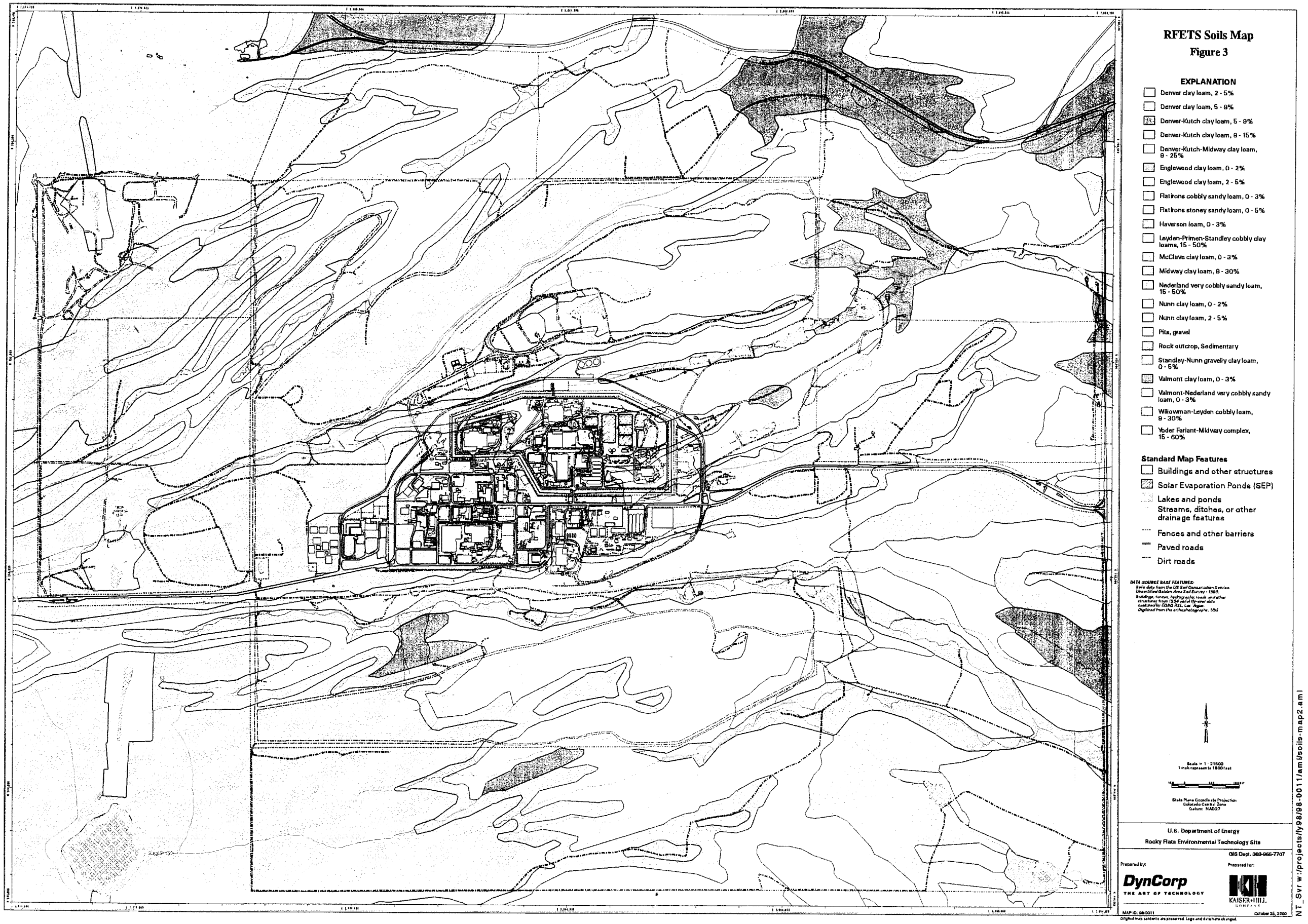

RFETS Soils Map
Figure 3
EXPLANATION
Denver clay loam, 2 - 5%
Denver clay loam, 5 - 8%
Denver-Kutch clay loam, 5 - 8%
Denver-Kutch clay loam, 8 - 15%
Denver-Kutch-Midway clay loam, 8 - 25%
Englewood clay loam, 0 - 2%
Englewood clay loam, 2 - 5%
Flatirons cobbly sandy loam, 0 - 3%
Flatirons stoney sandy loam, 0 - 5%
Haverson loam, 0 - 3%
Leyden-Primen-Standley cobbly clay loams, 15 - 50%
McClave clay loam, 0 - 3%
Midway clay loam, 8 - 30%
Nederland very cobbly sandy loam, 15 - 50%
Nunn clay loam, 0 - 2%
Nunn clay loam, 2 - 5%
Pits, gravel
Rock outcrop, Sedimentary
Standley-Nunn gravelly clay loam, 0 - 5%
Valmont clay loam, 0 - 3%
Valmont-Nederland very cobbly sandy loam, 0 - 3%
Willowman-Leyden cobbly loam, 8 - 30%
Yoder Farlant-Midway complex, 15 - 60%
Standard Map Features
Buildings and other structures
Solar Evaporation Ponds (SEP)
Lakes and ponds
Streams, ditches, or other drainage features
Fences and other barriers
Paved roads
Dirt roads
DATA SOURCE BASE FEATURES:
Soils data from the US Soil Conservation Service Unverified Golden Area Soil Survey - 1980.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G ASL, Las Vegas.
Digitized from the orthophotographs. USGS
Scale = 1 : 21600
1 inch represents 1800 feet
State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27
U.S. Department of Energy
Rocky Flats Environmental Technology Site
GIS Dept. 303-966-7707
Prepared by:
DynCorp
THE ART OF TECHNOLOGY
Prepared for:
KAISER-HILL COMPANY
MAP ID: 98-0011
October 25, 2000
Original map contents are preserved. Logo and data have changed.
NT_Svr w:/projects/fy98/98-0011/arcinfo/soils-map2.aml

218

Wetlands

Figure 4

MAP LEGEND

Wetlands (Combined Wet Meadow/Marsh, Short Marsh, and Tall Marsh Habitat Types)

Standard Map Features

- New Landfill
- Buildings
- Lakes & Ponds
- Streams & ditches
- Fences
- Paved roads
- Dirt roads

DATA SOURCE:
Management Unit and wetland boundaries provided by Exponent.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs, 1/95
Hypsography derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours.
The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV, 1994 Aerial Flyover at ~10 meter resolution.
The DEM post-processing performed by MK, Winter 1997.

Note:
These locations approximate the boundaries of the Management Units. The boundaries are not exact and should not be treated as such.

N

1:23552

1000 0 1000 2000 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: Exponent

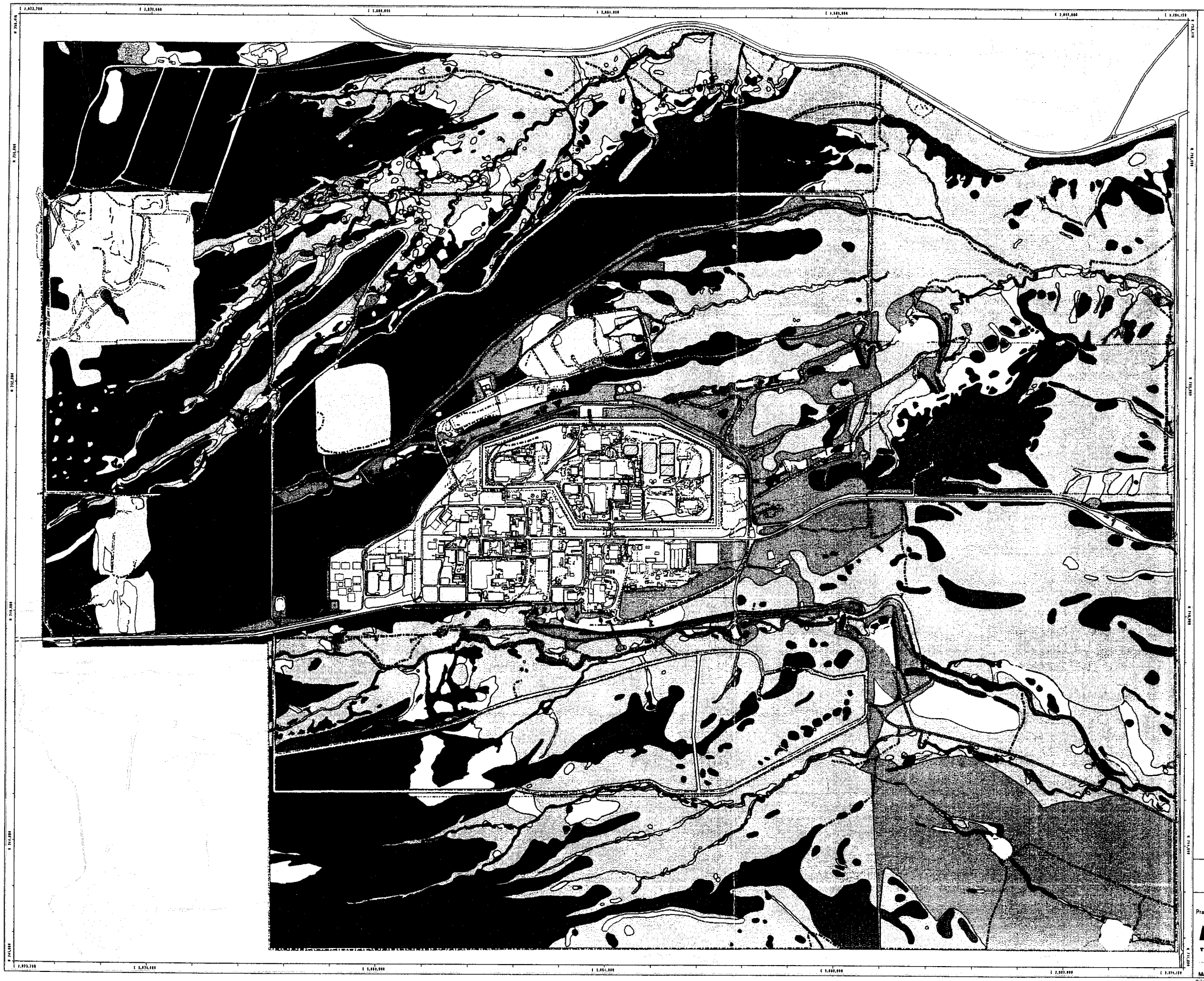
For: Kaiser-Hill Company, LLC

MAP ID: 2k-0158

March 14, 2000

\\Gisrv\GIS\ECO-projects\projects\2k-0158\management units.apr\Wetland Management Unit view

221



RFETS Vegetation Map 1996

Figure 5

LEGEND

- Riparian Woodland
- Leadplant Riparian Shrubland
- Wet Meadow/Marsh Ecotone
- Short Upland Shrubland
- Willow Riparian Shrubland
- Annual Grass/Forb Community
- Xeric Tallgrass Prairie
- Ponderosa Woodland
- Reclaimed Mixed Grassland
- Mesic Mixed Grassland
- Savannah Shrubland
- Tall Upland Shrubland
- Short Marsh
- Xeric Needle and Thread Grass Prairie
- Short Grassland
- Disturbed and Developed Areas
- Open Water
- Riprap, Rock, and Gravel Piles
- Mudflats
- Tree Plantings
- Tall Marsh

Standard Map Features

- Buildings and other structures
- Solar Evaporation Ponds (SEP)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Paved roads
- Dirt roads

DATA SOURCE BASE FEATURES:
Vegetation map data provided by
FTI Environmental Services
Ecology Group.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs. 1/95

NOTE:

Scale = 1 : 21380
1 inch represents approximately 1778 feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy

Rocky Flats Environmental Technology Site

GIS Dept. 303-966-7707

Prepared by: DynCorp — THE ART OF TECHNOLOGY

Prepared for: KAISER-HILL COMPANY

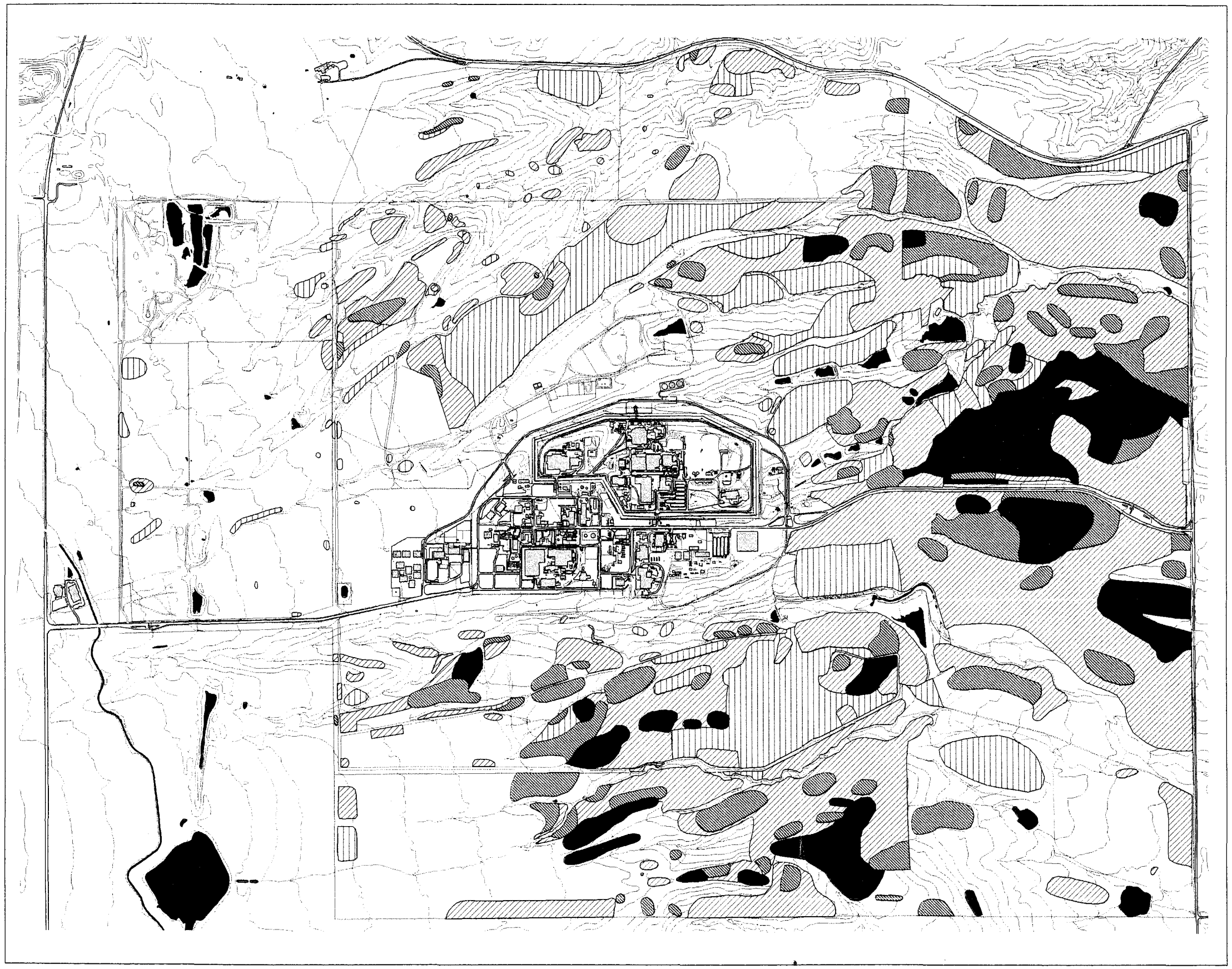
MAP ID: rf-map-aml

October 25, 2000

Original map contents are preserved. Logo and date have changed.

NT_Svr w:/amle/rf-map-amls/vegetation-maps/vegmap96a-nt.aml

226



1999 Dalmatian Toadflax (Linaria dalmatica) Distribution

Figure 6

MAP LEGEND

- High Density Areas
- Medium Density Areas
- Low Density Areas
- Scattered Density Areas

Standard Map Features

- Buildings
- Lakes & Ponds
- Streams & ditches
- Fences
- Paved roads
- Dirt roads
- Contours (20 ft)

DATA SOURCE:
1999 weed distributions provided by Exponent.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs, 1/95
Hypsography derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours.
The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV, 1994 Aerial Flyover at ~10 meter resolution.
The DEM post-processing performed by MK, Winter 1997.

Note:

These locations approximate the boundaries of infestation areas. The boundaries are not exact and should not be treated as such. These areas may not represent all populations on Site.

N

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1000 0 1000 2000 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: Exponent

For: Kaiser-Hill Company, LLC

MAP ID: K2-0018

March 14, 2000

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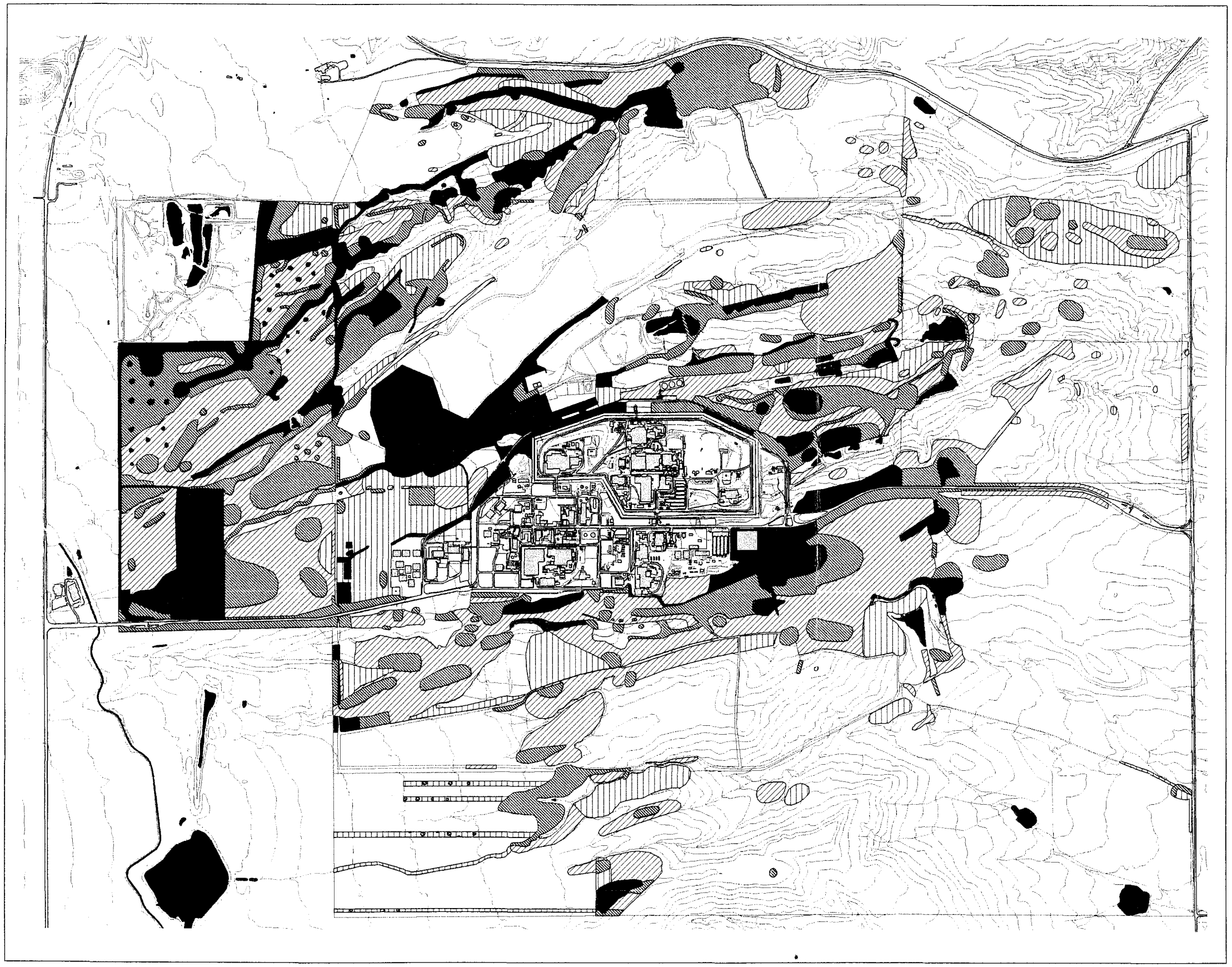
229



1999 Diffuse Knapweed (Centaurea diffusa) Distribution

Figure 7

MAP LEGEND

- High Density Areas
- Medium Density Areas
- Low Density Areas
- Scattered Density Areas

Standard Map Features

- Buildings
- Lakes & Ponds
- Streams & ditches
- Fences
- Paved roads
- Dirt roads
- Contours (20 ft)

DATA SOURCE:
1999 weed distributions provided by Exponent.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs, 1/95
Hypsography derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours.
The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV, 1994 Aerial Flyover at ~10 meter resolution.
The DEM post-processing performed by MK, Winter 1997.

Note:

These locations approximate the boundaries of infestation areas. The boundaries are not exact and should not be treated as such. These areas may not represent all populations on Site.

N

1:23552

1000 0 1000 2000 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: Exponent

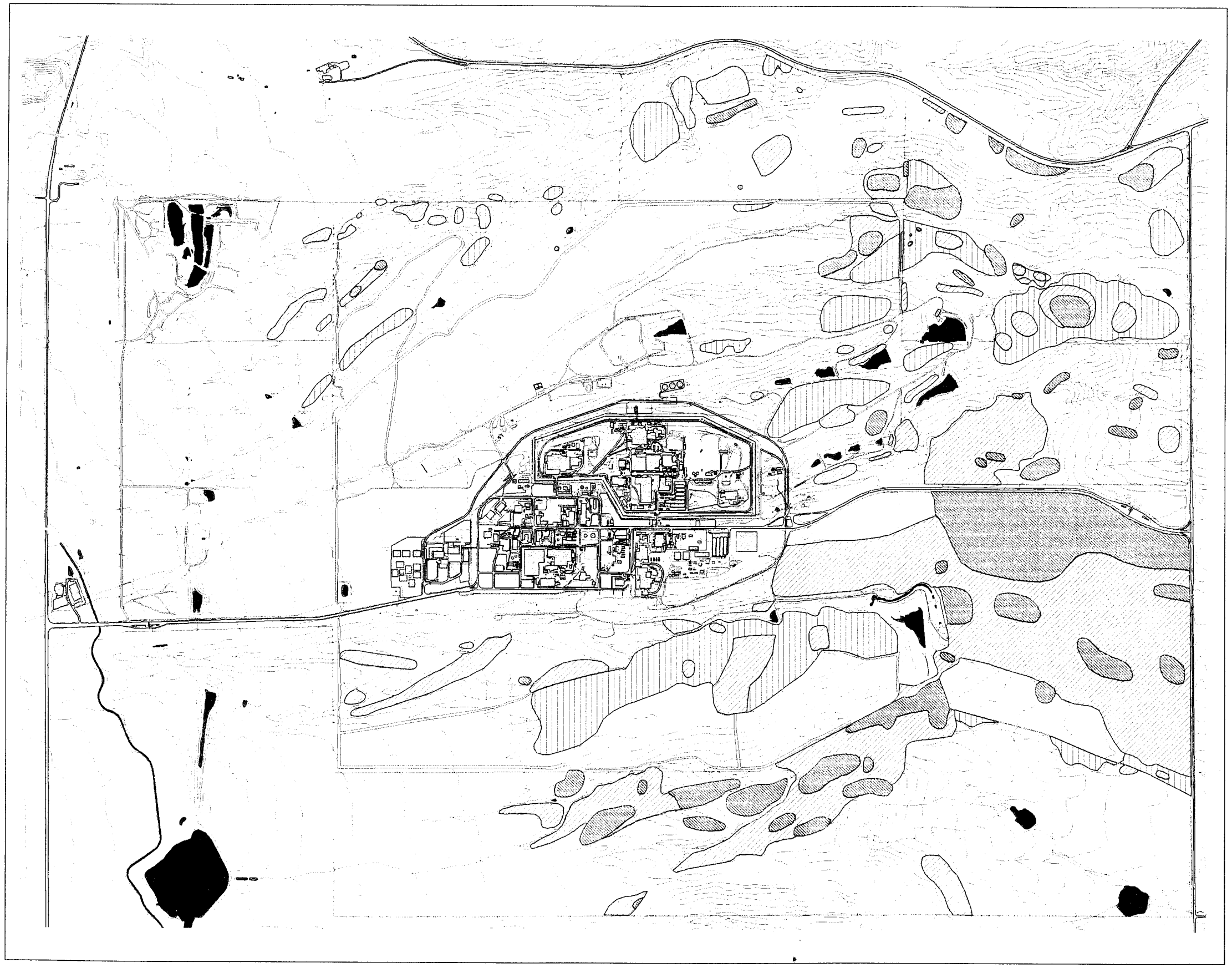
For: Kaiser-Hill Company, LLC

MAP ID: K2-0017

March 14, 2000

\\Gissrv\GIS\ECO-projects\projects\k2-0017ced\299.apr\1999 Diffuse Knapweed Distribution view

230



1999 Musk Thistle (Carduus nutans) Distribution

Figure 8

MAP LEGEND

- High Density Areas
- Medium Density Areas
- Low Density Areas
- Scattered Density Areas

Standard Map Features

- Buildings
- Lakes & Ponds
- Streams & ditches
- Fences
- Paved roads
- Dirt roads
- Contours (20 ft)

DATA SOURCE:
1999 weed distributions provided by Exponent.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs, 1/95
Hypsography derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours.
The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV, 1994 Aerial Flyover at ~10 meter resolution.
The DEM post-processing performed by MK, Winter 1997.

Note:

These locations approximate the boundaries of infestation areas. The boundaries are not exact and should not be treated as such. These areas may not represent all populations on Site.

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1000 0 1000 2000 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by:

For:

Kaiser-Hill Company, LLC

MAP ID: K2-0019

March 14, 2000

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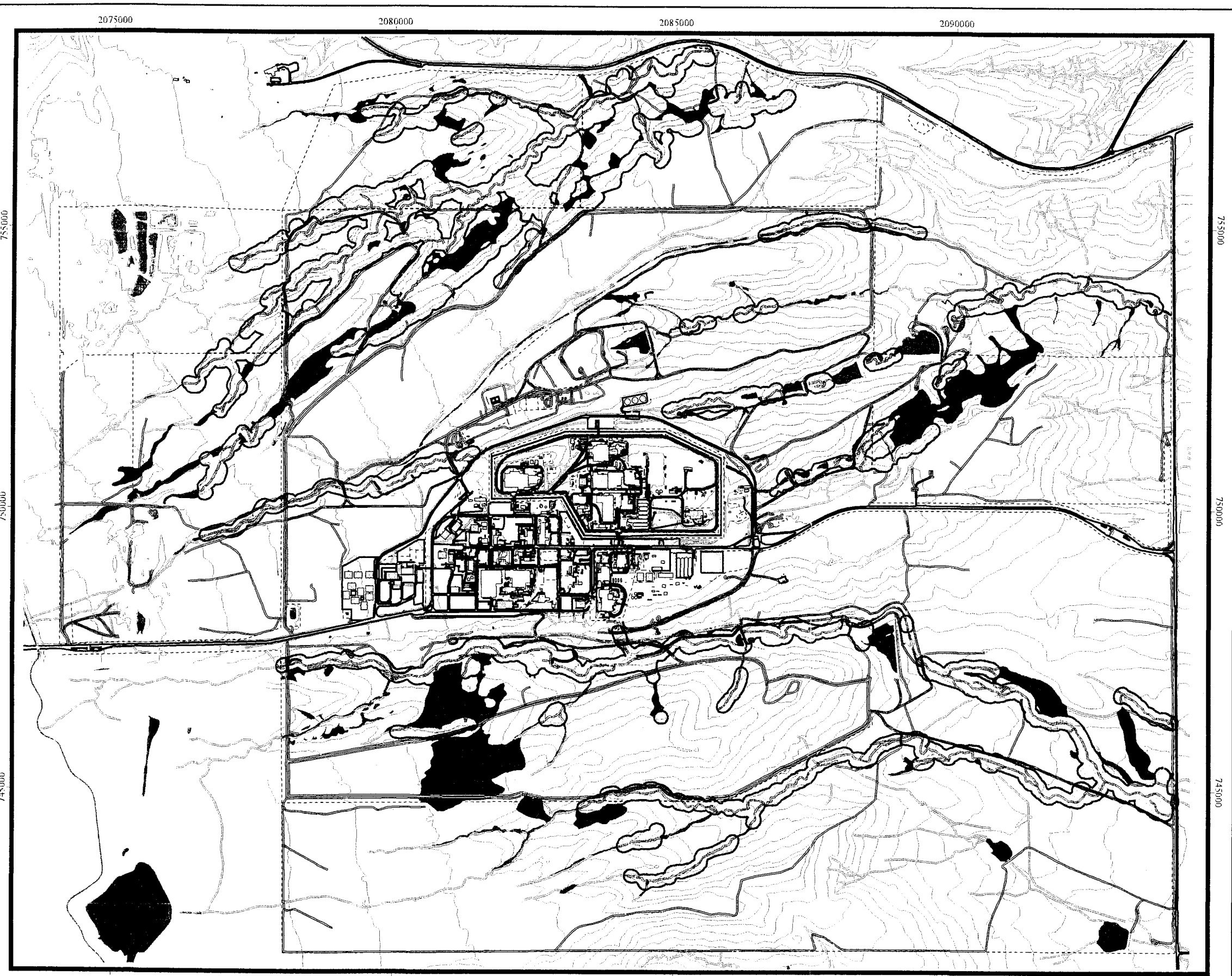

Preble's mouse protection area map August, 2000.

Figure 9

LEGEND

- Protection Areas
- Contiguous Wetlands

Standard Features

- Buildings
- Lakes & ponds
- Streams & ditches
- Fences
- Paved roads
- Dirt roads
- Contours (25 ft)

DATA SOURCE FOR STANDARD FEATURES:
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs, 1/95
Hypsography derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours.
The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV, 1994 Aerial Flyover at ~10 meter resolution.
The DEM post-processing performed by MK, Winter 1997.

Data Source -
Protection Areas and Contiguous Wetlands provided by Exponent, 2000.
POC Karan North, KH x9876.

Note:
This map is based on best current knowledge as of August, 2000, and supersedes all previous versions of this map.
As research on the species continues, this map will undergo further revision. Be sure to use the most current map for planning.

N

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1000 0 1000 2000 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by: Exponent

For: Kaiser-Hill Company, LLC

MAP ID: 99-0367

August 15, 2000

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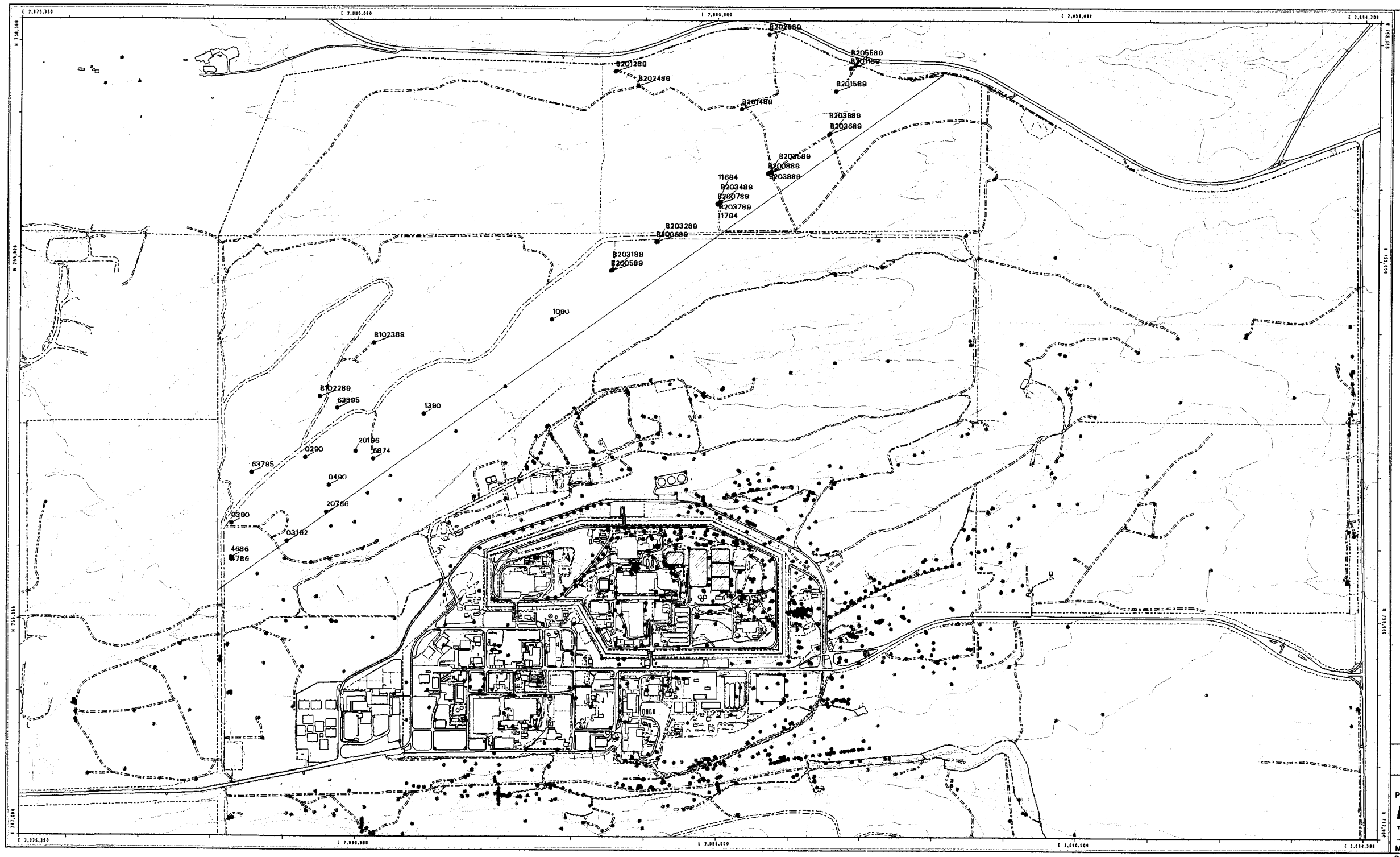
236



*** DRAFT ***

Rock Creek Reserve and Ground Water Wells

Figure 10

EXPLANATION

- Groundwater Wells outside of Rock Creek Reserve
- Groundwater Wells inside of Rock Creek Reserve
- Rock Creek Reserve
- Proposed Rock Creek Reserve Boundary

Standard Map Features

- Buildings and other structures
- Solar Evaporation Ponds (SEP)
- Lakes and ponds
- Streams, ditches, or other drainage features
- Fences and other barriers
- Contour (20-Foot)
- Paved roads
- Dirt roads

DATA SOURCE BASE FEATURES:
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G REC, Las Vegas.
Digitized from the orthophotographs, 1993.

Topographic contours were derived from digital elevation model (DEM) data by Morrison Knudsen (MK) using ESRI Arc TIN and LATTICE to process the DEM data to create 5-foot contours. The DEM data was captured by the Remote Sensing Lab, Las Vegas, NV 1994 Aerial Fly-over at ~ 10 meter resolution. DEM post processing performed by MK Winter 1997.

Scale = 1 : 18090
1 inch represents approximately 1508 feet

400 0 800 1600 ft

State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 303-966-7707

Prepared by: DynCorp — THE ART OF TECHNOLOGY

Prepared for: KAISER-HILL COMPANY

MAP ID: 2k-0385

October 25, 2000

Original map contents are preserved. Logo and date have changed.

NT_Svr h:/projects/fy2001/01-0048/rockcreek_gw.aml

342