

**Fish and Wildlife Coordination Act  
Migratory Bird Treaty Act  
COMPLIANCE**

**881 HILLSIDE FRENCH DRAIN  
(881-HFD) PROJECT**

**FINAL HABITAT SURVEY REPORT**

**DEPARTMENT OF ENERGY  
ROCKY FLATS OFFICE  
GOLDEN, CO**

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**ADMIN RECORD**

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## 1 0 INTRODUCTION

Correspondence between the Department of Energy Rocky Flats Office (DOE RFO) and the U S Fish & Wildlife Service (USFWS) (dated 18 September 1991) identified several proposed remedial action and operational projects at RFP which may require official consultation with USFWS and the Colorado Division of Wildlife (CDOW) regarding potential impacts to resources protected under the Fish and Wildlife Coordination Act (FWCA) [16 U S C 661 666c] and the USFWS per the Migratory Bird Treaty Act (MBTA) [16 U S C 703 712] Internal DOE RFO guidance further emphasized the need to insure compliance with applicable biological regulations before proceeding with the proposed 881 Hillside French Drain (881 HFD) project On 19 September 1991 the DOE RFO met with USFWS Golden CO to discuss Rocky Flats Plant (RFP) compliance with the FWCA and MBTA with respect to water related projects and critical habitat for migratory bird species

At the meeting it was determined that consultation would be required on the proposed 881 HFD project To limit impacts to 881 HFD construction schedules DOE RFO requested that the consultation process be expedited To facilitate expeditious consultation DOE RFO and USFWS agreed that DOE RFO would prepare a report summarizing ecological survey data pertinent to migratory bird species collected during (a) performance of the 881 Hillside Operable Unit 1 (OU1) Environmental Evaluation (EE) and (b) special surveys on the 881 HFD project site USFWS visited the 881 HFD site the visits took place on 26 September 1991 and 17 October 1991

USFWS agreed to review the report to determine whether sufficient information had been presented therein to allow assessment of potential impacts to migratory bird species or their habitats in or near the 881 HFD project

Although work on the 881 HFD Project may begin in the immediate future compliance with the consultation requirements of the FWCA and the MBTA is still in progress

## 2 0 DESCRIPTION

### 2 1 Project Description

Details of the 881 HFD Project are contained in the 881 Hillside, Operable Unit 1 Interim Remedial Action Plan (IRAP) In general the excavation for the French Drain will extend along a section of the 881 Hillside to allow installation of a groundwater collection system The excavation will vary in sections from 3 to 10 meters in depth and from 10 to 30 meters in width and extend for approximately 800m along an east west transect The location for the project is shown in Drawing 1 The project will impact a total of about 2.8 hectares (approximately 7 acres)

### 2 2 Resource and Habitat Description

An updated list of species of concern (SOC) species which potentially exist at RFP is provided in Table 1 annotations show those with a documented presence at RFP and those with a documented presence at or near the project site

The Threatened and Endangered Species Evaluation Report, Rocky Flats Plant Site (April 4 1991) prepared by EG&G Rocky Flats Inc provides a broad picture of potential SOC species at RFP and provides the most recently published wetlands map habitat map and prairie dog colony map On 17 September 1991 USFWS transmitted to DOE RFO a list of additional SOC species these additional

species were incorporated into Table 1 Also applicable to surveying for SOC species is the recent delineation of habitat types in an updated habitat map finalized on 08 November 1991

Habitat types to be disturbed include woodlands wetlands wet meadow short and tall marsh disturbed areas and mesic grasslands The primary habitat is highly disturbed and typified by successional and rehabilitation species There is a small (approximately 400 m<sup>2</sup>) habitat group (two large cottonwood trees and associated wetland) above the western end of the French Drain alignment Habitat types immediately adjacent to the 881 HFD project site include wet meadow short marsh mesic grassland rehabilitation and disturbed types Activities in and near the 881 HFD will affect approximately 2.8 hectares (approximately 7 acres)

### 3 0 SURVEY

#### 3 1 Design

Methodologies used for ecological surveys at RFP are specified in the EG&G Environmental Management Department Standard Operating Procedures (SOP) Volume 5.0. Ecology These SOPs have been approved for use on CERCLA/RCRA investigations by EPA CDH USFWS and the Colorado Division of Wildlife (CDOW) Each Ecology SOP specifies a Master's Degree and two years of field experience as the minimum qualifications required of personnel conducting the surveys

#### 3 2 On Site Inspection

RFP ecology field programs which began in spring 1991 include the (a) Threatened and Endangered Species Evaluation Report Rocky Flats Plant Site (b) Baseline Wildlife/Vegetation Studies (c) OU1 environmental evaluation (EE) (d) OU2 EE (e) OU5 EE and (f) surveys specific to the 881 HFD project site In the aggregate these programs cover a survey area bounded on the west by a line 0.3 mile east of Highway 93 on the east by Indiana Street on the north by Highway 128 and on the south by a line 0.5 to 1.0 miles north of Highway 72 Ecology surveys conducted within OU1 OU2 OU5 and OU fringe areas have more densely spaced sampling locations than do surveys conducted in OU reference and baseline areas

The following types of ecological surveys which relate to migratory bird species were conducted throughout 1991 at or near the 881 HFD project site

**Relative Abundance Transects** Three relative abundance transects (RA01A RW01A RG01A) were designed to sample fauna along the 881 Hillside about 200 meters above and below (parallel alignment) the French Drain Observations of the fauna in association with the three transects have been made monthly or bi monthly since May 1991 each observation session required about one hour to complete All observations of vertebrates and selected invertebrates (e.g. butterflies) were tallied and assigned to habitat types Summaries were compiled in terms of species per unit time by habitat

**Emlen Bird Transects** Twelve bird transects ranging in length from 100 to 1000 meters and totaling 3300 meters were configured within habitats adjacent to the project area along Woman Creek and the 881 Hillside Data have been compiled from these transects five times since May Each sampling session required ten minutes to more than an hour to complete depending upon the transect length and the number of birds present Data were compiled on density of birds by season within habitat types

**Vegetation Transects** Vegetation sampling was conducted in conjunction with the aforementioned bird and mammal transects within the ditch environment. Data have been compiled on vegetation cover, density, composition, richness, and production from 80 x 50 meter point intercept cover transects, 80 x 2x50 meter belt transects, and from 140 0.25 m<sup>2</sup> production plots. The vegetation along the alignment of the French Drain has been characterized and quantified using these techniques.

### **Migratory Species Surveys (General)**

- Δ Raptor Surveys Intensive searches for habitat appropriate for raptor nests were conducted through the late winter, spring, and early summer. All observations of raptors have been recorded in a standardized format. These activities have consumed about 70 person hours.

### **3.3 Interviews with Experts**

Discussions have been conducted with Dr. Fred Harrington (Ebasco Services) regarding the occurrence of raptors on or near the project site.

### **3.4 Literature Review**

The Threatened and Endangered Species Evaluation Report, Rocky Flats Plant Site (April 4, 1991) prepared by EG&G Rocky Flats, Inc. provides a broad picture of potential SOC species at RFP and contains a literature review for those species which include migratory bird species. Literature searches have been performed for all of the additional species, including migratory bird species on the USFWS list, and this information is included as Attachment 2 in Identification and Reporting of Threatened and Endangered and Special Concern Species, EMD Administrative Procedures Manual (3-21000 ADM) Procedure NEPA 12 (15 October 1991 draft).

## **4.0 RESULTS**

These results represent ecological survey data collected between late winter 1991 and 11 October 1991 during the aforementioned surveys. They also include all documented findings of migratory bird species at RFP that might be impacted by the 881 HFD Project.

### **4.1 Presence of Migratory Bird Species**

**Bald Eagle** Individuals of this species (*Haliaeetus leucocephalus*), a federal and state endangered species, have been observed soaring over the developed area and flying over the northeast portion of the buffer zone. None have been observed to roost or hunt on RFP, and none have been observed in proximity to the 881 HFD.

**Peregrine Falcon** Two individuals of this species (*Falco peregrinus*), a federal and state endangered species, were observed at RFP in early fall. One was flying from west to east near the west gate. The other was observed perched on a powerline near Pond B-5 and made an attempt to capture a killdeer inbound to Pond B-5. However, no nesting or roosting activities have been observed, and none have been observed in proximity to the 881 HFD.

**Ferruginous Hawk** This species (*Buteo regalis*) a federal Category 1 species was observed adjacent to the 881 HFD in winter spring and early summer. A juvenile male was resident in the vicinity of the ditch for a six week period in early late spring and early summer. Nesting was not documented. This individual was observed hunting primarily in the riparian zone of Woman Creek and along the 881 Hillside directly above the 881 HFD. Most observations of this species have been in association with prairie dog colonies southeast of RFP.

**Swainson's Hawk** A pair of this species (*Buteo swainsonii*) a federal Category 3 species attempted to nest in early June in a cottonwood about 1500 meters southeast of the 881 HFD. The nest was abandoned for unknown reasons in early July. During this period members of the pair were not observed hunting in the vicinity of the 881 HFD although other observations of this species have been documented infrequently but widely on the RFP site.

**Passerines** The following species were observed nesting on the 881 Hillside located directly above the central reach of the 881 HFD: Onole, Western Kingbird, Mourning Dove, Vesper Sparrow, Meadowlark, American Robin, Killdeer, Mallard Duck, Yellow Warbler, Red wing, Blackbird, Kestrel, Hawk. The following bird species were found using the area as a foraging ground: Say's Phoebe, American Gold Finch, Common House Finch. This list serves to indicate the high diversity of migratory passerines utilizing the habitats along the 881 Hillside near the 881 HFD project site. Population density values will be calculated as part of the OU1 EE however these numbers are not yet available.

#### 4.2 Presence of Critical Habitat

No threatened, endangered, or proposed (T&E) species have been documented in or near the project site and the majority of the project site's 2.8 hectares should not be considered as critical to T&E species.

### 5.0 ANALYSIS OF POTENTIAL IMPACTS

#### 5.1 Water Related Activities

While water related, the 881 HFD Project should be excluded from consideration under FWCA due to its being (a) not an intentional impoundment and (b) a land management project being performed by DOE on land under its jurisdiction.

There is the possibility for increased sedimentation into Woman Creek from excavation activities at the 881 HFD project site. Due to the shallow nature of the creek, even a small increase in sedimentation levels could greatly affect the macrobenthos and fish populations in the creek. Seven species of fish have been identified in Woman Creek: Stoneroller, Creek Chub, Golden Shiner, Fathead Minnow, Largemouth Bass, Green Sunfish, and the Western White Sucker. Consultation with USFWS under FWCA may be required if it can be shown (either empirically or by calculation) that excavation of the 881 HFD would cause reduced (as a result of sedimentation) flows in Woman Creek, thereby constituting a modification to a stream.

It is also possible that installation of the French Drain could restrict or eliminate recharge of a significant portion of the Woman Creek drainage from the 881 Hillside, including that portion of the creek which may harbor a *Zapus* population. There is no quantitative hydrologic information currently available to either confirm or deny this possibility.

## 5 2 Wildlife Benefits/Losses

Habitats (including wetlands) at the location of the 881 HFD Project will be totally destroyed during excavation. The small approximately 1200 m<sup>2</sup> habitat group (two stands of trees 10 trunks in one eight in the other average DBH ~30 cm and approximately 600 m<sup>2</sup> of willows cattails and rushes) above the western end of the French Drain alignment will be completely removed by the project. This is fairly unique habitat within the Woman Creek drainage and is known to support as many as 14 species of migratory birds both for nesting and foraging. Impacts to the grassland and wetland areas along the project alignment may be potentially harmful to the migratory birds utilizing the area. However there are significant areas of similar habitat throughout RFP that could compensate for the loss of the 881 HFD habitat.

Although the small wetland habitat in the 881 HFD does not represent a substantial portion of the total wetland habitat present at RFP they comprise none the less a man made jurisdictional wetland as defined in 33 CFR 328 3(b) and 40 CFR 230 3(t). This wetland is shown on the maps prepared for the Wetlands Assessment, Rock Flats Plant Site (01 April 1991). As the 881 HFD project is new construction wetland impacts would not qualify for exclusion under 10 CFR 1022 5(g). Construction projects affecting wetlands not discussed in the September 1977 RFP EIS are subject to the requirements of 10 CFR 1022.

Disturbance of the land around the 881 HFD due to excavation activities could lead to the invasion of opportunistic plant species that are less desirable as forage for small mammal and bird populations.

## 5 3 Conservation Measures

Both the potential for increased sedimentation into Woman Creek and invasion of disturbed land by opportunistic plant species can be mitigated through careful control and management of construction activities. It would also be prudent to develop a contingency mitigation plan for offsetting habitat losses before proceeding with any excavation activities.

## 6 0 DETERMINATION

Based on the data currently available DOE RFO has determined that any excavation for the 881 HFD could have adverse impacts on migratory bird species or other species in or near the project. DOE RFO proposes to (a) develop a plan that will minimize the possibility of increasing sediment loads in Woman Creek (b) develop a plan that will minimize impacts to the vegetation on either side of the 881 HFD and (c) negotiate a mitigation strategy with USFWS to offset the loss of this habitat.

Based on the data currently available DOE RFO has determined that any activity involving impacts to the small wetland habitat is subject to the requirements of 10 CFR 1022 1.

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1) Prepared by EG&G Rocky Flats EM/NEPA Division (303) 273 6188. Report originally compiled and written by Dr. Bruce K. Hope, reviewed by Mr. Scott McGlochin. Information on the types and results of surveys conducted were transcribed from a report (Letter RFEV3 EDEN EGRF M 015) prepared by Dr. D. Jean Tate (Ebasco Services) and Dr. Fred Harrington (Ebasco Services) under EM/NEPA Division Contract BA64980EB.

Drawing 1 Site Plan for French Drain and Related Elements showing affected length of South Interceptor Ditch

