

**DRAFT ENVIRONMENTAL ASSESSMENT
PROPOSAL OF CRITICAL HABITAT
FOR DESERT YELLOWHEAD
(*Yermo xanthocephalus*)**

**Prepared by
U.S. Fish and Wildlife Service
Ecological Services Field Office
Cheyenne, Wyoming**

November 25, 2003

TABLE OF CONTENTS

1.0	Purpose of the Proposed Action.....	4
2.0	Need for the Action.....	4
2.1	Background.....	5
2.2	Endangered Species Act.....	7
2.2.1	Critical Habitat.....	7
2.2.2	Section 7 Consultation.....	8
2.2.3	Technical Assistance.....	10
3.0	Description of Alternatives.....	10
3.1	Alternatives Considered but Not Fully Evaluated.....	11
3.2	Alternative A. No Action Alternative.....	11
3.3	Action Alternatives.....	11
	3.3.1 Alternative B. Designation of Critical Habitat as Identified in the Proposed Rule (Proposed Alternative).....	11
	3.3.2 Alternative C. Designation of Critical Habitat Including Extension Into Unoccupied Habitat.....	13
4.0	Affected environment.....	13
4.1	Physical Environment.....	14
4.2	Fish, Wildlife, and Plants.....	14
4.3	Human Environment.....	14
4.4	Tribal Lands.....	16
5.0	Environmental Consequences.....	16
5.1	Physical Environment.....	18
5.2	Fish, Wildlife, and Plants.....	18
5.2.1	Desert Yellowhead.....	18
5.2.2	Other Fish, Wildlife, and Plants.....	18
5.3	Human Environment.....	19
	5.3.1 Oil and Gas Exploration and Development.....	19
	5.3.2 Bureau of Land Management, Lander Resource Management Plan.....	21
	5.3.3 Agriculture.....	21
	5.3.4 Rights-of-Way.....	22
	5.3.5 Mining.....	22
	5.3.6 Recreation and Special Use Permits.....	23
	5.3.7 Transportation.....	23
	5.4 Archeological and Cultural Resources.....	24
5.5	Environmental Justice.....	24

5.6 Cumulative Impact.....	24
6.0 Council on Environmental Quality Analysis of Significance.....	27
6.1 Context.....	27
6.2 Intensity.....	27
7.0 Contacts and Coordination With Others.....	29
8.0 List of Contributors.....	31
9.0 References Cited.....	31
Appendix 1. Map of Alternative B, Area Proposed as Critical Habitat for Desert Yellowhead (Proposed Alternative).....	33
Appendix 2. Map of Alternative C, Critical Habitat Including Extension Into Unoccupied Habitat.....	34
Appendix 3. Draft Economic Analysis of Critical Habitat Designation for the Desert Yellowhead.....	35

1.0 Purpose of the Proposed Action

The purpose of the proposed action is to designate critical habitat for the desert yellowhead (*Yermo xanthocephalus*) by utilizing provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act). The purpose of the Act is to conserve the ecosystems upon which endangered and threatened species depend. Critical habitat designation identifies areas essential to the survival and recovery of the desert yellowhead, and describes physical and biological features within critical habitat that require special management considerations to achieve conservation of the species.

2.0 Need for the Action

The need for this action is to comply with section 4 of the Act, which requires that critical habitat be designated for endangered and threatened species unless such designation is not prudent. When we published the proposed rule to list the desert yellowhead as threatened (published in the Federal Register on December 22, 1998; 63 FR 70745), we found that the designation of critical habitat was not prudent because the minimal benefits of such designation would be far outweighed by the increase of threats from over collection or other human activities. On November, 12, 2001, Biodiversity Legal Foundation, Biodiversity Associates, Center for Native Ecosystems, and Wyoming Outdoor Council filed a complaint in the U.S. District Court of Colorado alleging that the U.S. Fish and Wildlife Service (Service) failed to make a timely final listing determination and critical habitat designation for the desert yellowhead (Biodiversity Legal Foundation v. Norton, 01-B-2204 District of Colorado). The Court approved a settlement agreement on February 28, 2002, which included a March 8, 2003, date for submission of proposed critical habitat to the Federal Register for publication and a March 8, 2004, date for submission of final critical habitat. After a review of the best scientific data available and all comments received in response to the proposed rule to list the desert yellowhead, we published a final rule on March 14, 2002, designating the desert yellowhead as threatened throughout its range, but did not designate critical habitat at that time (67 FR 11442). On March 13, 2003, the rule proposing critical habitat for the desert yellowhead was published in the Federal Register (68 FR 12326).

Our position is that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the National Environmental Policy Act (NEPA) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the Federal Register on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (Douglas County v. Babbitt, 48 F .3d 1495 (Ninth Cir. Ore. 1995), cert. denied 116 S. Ct. 698 (1996)). However, when the range of the species includes States within the Tenth Circuit, pursuant to the Tenth Circuit ruling in Catron County Board of Commissioners v. U.S. Fish and Wildlife Service, 75 F .3d 1429 (Tenth Cir. 1996), we will complete a NEPA analysis. The range of the desert yellowhead includes States within the Tenth Circuit; therefore, we must complete an analysis.

Critical habitat is one of several provisions of the Act that aid in protecting the habitat of listed species until populations have recovered and threats have been minimized so that the species can be removed from the list of threatened and endangered species. Critical habitat designation is intended to assist in achieving long-term protection and recovery of the desert yellowhead and the ecosystem upon which it depends. Section 7(a)(2) of the Act (50 CFR §402.13) requires consultation for Federal actions that may effect critical habitat to avoid destruction or adverse modification of this habitat. Further explanation of critical habitat and its implementation is provided below.

2.1 Background

Wyoming botanist Robert Dorn discovered the desert yellowhead while conducting field work in the Beaver Rim area of central Wyoming in 1990. This area is southeast of the town of Lander in Fremont County, Wyoming. Dorn discovered a small population of an unusual species of Composite (Asteraceae). Dorn's closer examination revealed that the species was unknown to science and represented a new genus. Dorn (1991) named his discovery *Yermo xanthocephalus*, or literally "desert yellowhead."

The desert yellowhead is a tap-rooted, glabrous (hairless) perennial herb with leafy stems to 30 centimeters (cm) (12 inches (in)) high. The leathery leaves are alternate, lance-shaped to oval, 4 to 25 cm (1.5 to 10 in) long and often folded along the midvein. Leaf edges are smooth or toothed. Flower heads are many (25 to 180) and crowded at the top of the stem. Each head contains four to six yellow disk flowers (ray flowers are absent) surrounded by five yellow, keeled involucre (whorled) bracts (small leaves beneath the flower). The pappus (the outer whorl of flowering parts) consists of many white bristles.

The desert yellowhead flowers from mid-June to August and may flower a second time in September. The start and end of flowering, as well as the duration of flowering, vary between years and seems dependent upon temperature and other climatic variables. Fruits have been observed from mid-July to early September, but do not persist after the flower has dried and bracts ruptured (Heidel 2002).

The desert yellowhead appears to be an obligate outcrosser (cannot self-pollinate) (Heidel 2002) and is likely pollinated by visually-oriented insects attracted to the yellow flowers (Dorn 1991). Several Hymenopterans (order including sawflies, ants, bees, and wasps) have been collected from the flower heads, and small skipper butterflies noted on them, although the identity of these potential pollinators is not currently known (Heidel 2002). No work has been done to document the status of these potential pollinators in this vicinity. However, of the skippers known from Fremont County that most likely use desert yellowhead habitat, all have Nature Conservancy Global Ranks of G-4 (apparently secure globally) and G-5 (demonstrably secure globally) with no special conservation or management needs identified by Opler et al. (1995).

The fruits of the desert yellowhead are single-seeded achenes (dry fruit) with a parachute-like pappus of slender bristles. At maturity, the fruits are exposed to the wind, which may disperse

the seed over long distances. However, the clustered distribution pattern of the plants, often along colluvial (rock debris) washes, suggests that dispersal distances are short and perhaps fostered by water erosion (Heidel 2002).

The species is restricted to shallow deflation hollows in outcrops of Miocene sandstones of the Split Rock Formation (Love 1961, Van Houten 1964). These hollows have been shaped by the microscale dynamics of local winds, as well as erosional processes, in an unstable portion of the landscape on sites lacking desert pavement and with low vegetation exposed to strong-wind (Bynum 1993). Within the hollows, the desert yellowhead occurs on low slopes, rim margins, colluvial fans, and bottoms at elevations generally ranging from 2,050 to 2,060 meters (m) (6,720 to 6,760 feet (ft)) (Heidel 2002).

The desert yellowhead grows in recent soils derived from sandstones and limestones of the Split Rock Formation at its junction with the White River Formation (Heidel 2002). Bynum (1993) found these are shallow, loamy soils of the Entisol order that can be classified as a coarse-loamy over sandy-skeletal mixed Lithic Torriorthent. In contrast, the surrounding sagebrush community occupies deep sandy loam of the Aridisol order. The surface stratum is mildly alkaline with little organic matter, while subsurface layers have no accumulation of humus, clay, gypsum, salts, or carbonates (Bynum 1993).

The shape and orientation of the wind-excavated hollows may allow for accumulation of moisture from sheet wash coming off adjacent areas, so the hollows may be more mesic (moist) than surrounding areas (R. Scott, Central Wyoming College, pers. comm. 2002). The vegetation of these sites is typically sparse, with vegetative cover often as low as 10 percent, and consists primarily of low-cushion plants and scattered clumps of Indian ricegrass (*Stipa hymenoides*). Species common to these communities include Hooker's sandwort (*Arenaria hookeri*), thistle milkvetch (*Astragalus kentrophyta*), stemless hymenoxys (*Hymenoxys acaulis*), and squarestem phlox (*Phlox muscoides*) (Fertig 1995). A more complete list of frequently associated species can be found in Heidel (2002).

The desert yellowhead is currently known from a single population with plants widely scattered over an area of 20 ha (50 ac). This population consists of one large subpopulation at the base of Cedar Rim and two smaller subpopulations within 0.4 kilometer (km) (0.25 mile (mi)). Originally, Dorn observed approximately 500 plants within 1 ha (2.5 ac) in 1990 on Federal land managed by the Bureau of Land Management (BLM) (Dorn 1991). The estimate of the plant population's size has increased from 500 in 1990 to 11,967 plants in 2001 (R. Scott, Central Wyoming College, pers. comm., 2001). However, Dorn's original estimate of 500 plants was an ocular estimate and did not include two nearby subpopulations, while Scott has been conducting extensive population censuses in all three subpopulations using a monitoring grid (Heidel 2002). Therefore, the difference in estimates may be largely the result of different techniques used over differing acreages and cannot be assumed to show a significantly increasing trend in population size between 1990 and 2001. Based upon Scott's data collected from 1995 through 2001, the actual population count has increased from 9,293 in 1995 to 11,967 in 2001, possibly in response

to higher than normal precipitation over the study period (R. Scott, Central Wyoming College, pers. comm., 2001).

Surveys conducted between 1990 and 1994 failed to locate additional populations of the desert yellowhead on outcrops of the Split Rock, White River, Wagon Bed, and Wind River formations in the Cedar Rim and Beaver Rim areas of southern Fremont County (Fertig 1995). No additional populations were located during follow-up surveys conducted during 1997 along Beaver Rim in Fremont and Natrona counties, as well as in the Shirley Basin in Carbon County (Heidel 2002). Additional surveys were conducted during 2001 in segments of Cedar Rim and Beaver Rim and surrounding areas not previously surveyed; however, no new populations were located (Heidel 2002).

2.2 Endangered Species Act

2.2.1 Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as – (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. The term “conservation” as defined in section 3(3) of the Act, means “to use and the use of all methods and procedures which are necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary” (i.e., the species is recovered and removed from the list of endangered and threatened species).

Section 4(b)(2) of the Act requires that we base critical habitat designation on the best scientific and commercial data available, taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We may exclude areas from critical habitat designation if we determine that the benefits of exclusion outweigh the benefits of including the areas as critical habitat, provided the exclusion will not result in the extinction of the species. Within the geographic area occupied by the species, we will designate only areas currently known to be “essential to the conservation of the species.” Critical habitat should already have the features and habitat characteristics that are necessary to sustain the species. We will not speculate about what areas might be found to be essential if better information were available, or what areas may become essential over time. If information available at the time of designation does not show an area provides essential support for a species at any phase of its life cycle, then the area should not be included in the critical habitat designation. Within the geographic area occupied by the species, we will not designate areas that do not now have the primary constituent elements, as defined at 50 CFR 424.12(b), that provide essential life cycle needs of the species.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize designation of critical habitat may not include all habitat eventually determined as necessary to recover the species. For these reasons, areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) and the regulatory protections afforded by section 7(a)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. We specifically anticipate that federally-funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12 in determining which areas to propose as critical habitat, we are required to base critical habitat determinations on the best scientific and commercial data available and to consider physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations or protection. These include, but are not limited to-- (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing (or development) of offspring; and (5) habitats protected from disturbance or that are representative of the historic geographical and ecological distributions of a species.

2.2.2 Section 7 Consultation

Section 7(a)(2) of the Act requires every Federal agency, in consultation with and with the assistance of the Secretary, to insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. In fulfilling these requirements, each agency is to use the best scientific and commercial data available. This section of the Act sets out the consultation process, which is further implemented by regulation (50 CFR 402).

Each Federal agency is to review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If the action may affect a listed species or critical habitat, consultation with the Service is needed. It should be noted that section 7 requirements are not restricted to designated critical habitat, but apply to any Federal action that may affect a listed species.

Informal consultation is an optional process that includes all discussions and correspondence between the Service and a Federal agency or designated non-Federal representative, designed to assist the Federal agency in determining whether formal consultation or a conference is required. If during consultation it is determined by the Federal agency, with the written concurrence of the Service, that the action is not likely to adversely affect listed species or critical habitat, the

consultation process is terminated, and no further action is necessary. During informal consultation, the Service may suggest modifications to the action that the Federal agency and any applicant could implement to avoid the likelihood of adverse effects to listed species or critical habitat. Although the process for informal consultation is relatively simple, it can require substantial administrative effort on the part of all participants.

If the proposed action is likely to adversely affect a listed species or designated critical habitat, formal consultation with the Service is required. Formal consultation is a process between the Service and a Federal agency or applicant that: (1) determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; (2) begins with a Federal agency's request and submittal of a complete initiation package; and (3) concludes with the issuance of a biological opinion by the Service.

With the request to initiate formal consultation, the Federal agency is to include: (1) a description of the proposed action, (2) a description of the area that may be affected, (3) a description of any listed species or critical habitat that may be affected, (4) a description of the manner in which the listed species or critical habitat may be affected and an analysis of cumulative effects, (5) relevant reports including any environmental impact statement, environmental assessment, or biological assessment, and (6) any other relevant and available information.

Formal consultation concludes 90 days after its initiation. Within 45 days after concluding formal consultation, the Service is to deliver a biological opinion to the Federal agency and any applicant. The biological opinion will include the Service's opinion on whether the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. Activities that would destroy or adversely modify critical habitat are defined as those actions that "appreciably diminish the value of critical habitat for both the survival and recovery" of the species (50 CFR 401.02). Activities that would jeopardize the continued existence of a species are defined as those actions that "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery" of the listed species (50 CFR 402.02). Given the similarity of these definitions, activities that would likely destroy or adversely modify critical habitat would almost always result in jeopardy to the species. This is particularly true in cases, such as the desert yellowhead, where the range of the species is relatively small and no unoccupied areas are proposed as critical habitat units.

If the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat, the biological opinion will include a reasonable and prudent alternative, if any exist. A reasonable and prudent alternative is a recommended alternative action that can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction, that is economically and technologically feasible, and that would avoid the likelihood of jeopardizing the continued existence of the listed species or the destruction or adverse modification of designated critical habitat.

2.2.3 Technical Assistance

Although it is not defined in the regulations, technical assistance includes those parts of the informal consultation that provide information to agencies, applicants, and/or consultants, but specifically stops short of concurrence on “may effect” determinations. The term is used to differentiate “informal” consultation (where a concurrence with an agency, applicant, or consultant on “may effect” is provided) and the provision of information. This differentiation is primarily made for record-keeping purposes.

A telephoned or written inquiry about the presence or absence of listed and/or proposed species in a project area usually initiates informal consultation and frequently generates technical assistance. Service biologists may respond in different ways:

1. If species are not likely to be present, the consultation requirement is met and the Service may advise the agency, applicant or consultant.
2. If historical records or habitat similarities suggest the species may be in the area, then some survey work may be recommended to make a more precise determination.
3. If the species is definitely in the project area, but the Service determines it will not be adversely affected, the Service may notify the agency of that finding.

Technical assistance from the Service may take a variety of forms. It can include information on candidate species as well as names of contacts having information on State listed species. The Service may provide correspondence to State agencies or other Service offices to alert them to a project.

As a part of technical assistance, the Service may recommend:

1. the action agency conduct additional studies on the species' distribution in the area affected by the action, or
2. the action agency monitor impacts of the action on aspects of the species' life cycle. Monitoring may be recommended when incidental take is not anticipated but might possibly occur, thus triggering the need for project changes or formal consultation.

3.0 Description of Alternatives

The Service considered three alternatives, including the No Action Alternative. The Action Alternatives are to designate critical habitat as agreed to in the court-approved settlement. The Action Alternatives vary by acreage of habitat included in the critical habitat designation. In addition, we considered one potential alternative without thoroughly examining the impacts of its implementation.

3.1 Alternatives Considered But Not Fully Evaluated

We considered an alternative that would designate as critical habitat not only the area currently proposed for designation (described below as the Proposed Alternative), but also an area of apparently suitable habitat located approximately 2 miles from the known population of desert yellowhead, west of the Sand Draw Highway (Highway 135) near Dishpan Butte in Fremont County, Wyoming. This area is Federal land managed by the BLM. However, there is no evidence that the desert yellowhead has ever occurred at this location. Any attempt to manage this area for desert yellowhead would require a translocation of plants to the site, an action not yet evaluated in the recovery planning process nor analyzed by BLM. Therefore, we are not proposing designation of this area as critical habitat and it was removed from further consideration.

3.2 Alternative A. No Action Alternative

Pursuant to NEPA and its implementing regulations (40 CFR 1502.14), we are required to consider the No Action Alternative. The No Action Alternative would basically maintain the status quo. The desert yellowhead would remain listed as a threatened species, but with no additional protection through designation of critical habitat. This alternative serves to delineate the existing environment and conditions that result from the listing of the species, without designation of critical habitat. Since the listing of the species as threatened, the desert yellowhead has been protected under section 7 of the Act by prohibiting Federal agencies from implementing actions that would jeopardize the continued existence of the species. This protection under the Act is considered the baseline against which we evaluate the action alternatives described below. In addition, the No Action Alternative would ignore the legal requirement to designate critical habitat, where prudent, and would be non-responsive to the court-mediated settlement to designate critical habitat by March 8, 2004.

3.3 Action Alternatives

Each Action Alternative includes designation of critical habitat in areas believed to contain the physical and biological features upon which the desert yellowhead depends. The Act refers to these essential habitat features as “primary constituent elements.”

Based on our knowledge to date, the primary constituent elements for the desert yellowhead consist of, but are not limited to:

(1) Recent soils derived from sandstones and limestones of the Split Rock Formation at its junction with the White River Formation. These are shallow, loamy soils of the Entisol order that can be classified as course-loamy over sandy-skeletal, mixed, Lithic Torriorthent. The surface stratum has little organic matter and subsurface layers show no accumulation of humus, clay, gypsum, salts, or carbonates.

(2) Plant communities associated with the desert yellowhead which include, but may not be limited to, sparsely-vegetated cushion plant communities with scattered clumps of Indian ricegrass (*Oryzopsis hymenoides*) between 2,043 and 2,073 m (6,700 and 6,800 ft) in Fremont

County, Wyoming. Species common to these communities include Hooker's sandwort (*Arenaria hookeri*), thistle milkvetch (*Astragalus kentrophyta*), stemless hymenoxys (*Hymenoxys acaulis*), and squarestem phlox (*Phlox muscoides*). These cushion-plant communities also contain natural openings.

(3) Topographic features/relief and physical processes, particularly hydrologic processes, that maintain the shape and orientation of the hollows characteristic of desert yellowhead habitat and maintain moisture below the surface of the ground.

We identified critical habitat essential for the conservation of the desert yellowhead in the only area where it is known to occur. There are no known historic locations for this species. While we acknowledge the high degree of threat that arises from chance catastrophic events given the limited geographic distribution of this species, we find no compelling evidence that the plant ever existed at other locations. We believe conservation of the species can be achieved through management of threats to the population within this proposed critical habitat.

3.3.1 Alternative B. Designation of Critical Habitat as Identified in the Proposed Rule (Proposed Alternative)

Our Proposed Alternative would designate critical habitat as described in the Proposed Rule published on March 13, 2003, in the Federal Register (68 FR 12326). The proposed critical habitat area constitutes our best assessment at this time of the area essential for the conservation of the desert yellowhead. The site includes the only known location where the species currently occurs and, as such, is essential.

The proposed critical habitat is approximately 146 ha (360 ac) of Federal lands managed by BLM in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. A map of the area is found in Appendix 1. Within this area, the desert yellowhead occurs in sparsely-vegetated cushion plant communities associated with shallow soils on low slopes, rim margins, colluvial fans, and bottoms within deflation hollows. Within the critical habitat, the desert yellowhead occurs in 3 subpopulations with a total population size of 11,967 plants in 2001 (R. Scott, Central Wyoming College, pers. comm. 2001). Dispersal from these subpopulations is limited and frequently occurs along colluvial washes.

Given the clustered distribution pattern of the desert yellowhead and our assumption that dispersal distances are short and possibly fostered by water erosion, a limited amount of critical habitat is essential for maintenance of the seed bank and dispersal. Additionally, the persistence of the species requires some surrounding habitat to maintain the ecological processes that allow the population and the primary constituent elements to persist.

3.3.2 Alternative C. Designation of Critical Habitat Including Extension Into Unoccupied Habitat

Alternative C would designate critical habitat in an area that not only includes the area described above as the Proposed Alternative and in the Proposed Rule published on March 13, 2003, in the Federal Register (68 FR 12326), but also includes additional unoccupied habitat extending south and southeast of the proposed critical habitat. Alternative C would include the only known location where the species currently occurs, surrounding habitat to maintain the ecological processes that allow the population and the primary constituent elements to persist, and a larger area of unoccupied habitat (generally downslope) to facilitate dispersal.

This area of critical habitat would include approximately 275 ha (680 ac) of Federal lands managed by BLM in the Beaver Rim area approximately 10 km (6 mi) north of Sweetwater Station in southern Fremont County, Wyoming. A map of the area is found in Appendix 2. Within this area, the only known population of the desert yellowhead occurs in subpopulations found in sparsely-vegetated cushion plant communities associated with shallow soils on low slopes, rim margins, colluvial fans, and bottoms within deflation hollows. Available information indicates dispersal from these subpopulations is limited and frequently occurs along colluvial washes. To allow for the possibility of greater dispersal distances than seen to date, this alternative also includes an additional 320 acres located downslope of the known population (south half of section 34) and currently unoccupied by the desert yellowhead.

4.0 Affected Environment

The Action Alternatives are located in the same general vicinity and are comprised entirely of Federal land managed by the Lander Office of the Bureau of Land Management as part of the Beaver Creek Management Unit. Alternative B includes approximately 360 acres and Alternative C includes approximately 680 acres. The Beaver Creek Management Unit contains about 1,165,000 acres of BLM-administered land (Bureau of Land Management 1986). Unless otherwise noted, the following information has been taken from the *Draft Economic Analysis of Critical Habitat Designation for the Desert Yellowhead* (Industrial Economics, Incorporated 2003) which analyzed the economic effects of the Proposed Alternative (Alternative B) and is available in Appendix 3.

4.1 Physical Environment

The area described in both Action Alternatives is in the Wyoming Basin Shrub Steppe ecoregion, described by Ricketts et al. (1999) as high, open, arid country. The desert yellowhead grows in recent soils derived from sandstones and limestones of the Split Rock Formation at its junction with the White River Formation (Heidel 2002). Bynum (1993) found these are shallow, loamy soils of the Entisol order that can be classified as a coarse-loamy over sandy-skeletal mixed Lithic Torriorthent. In contrast, the surrounding sagebrush community occupies deep sandy loam of the Aridisol order. The surface stratum is mildly alkaline with little organic

matter, while subsurface layers have no accumulation of humus, clay, gypsum, salts, or carbonates (Bynum 1993).

4.2 Fish, Wildlife, and Plants

The dominant vegetation in the Wyoming Basin Shrub Steppe ecoregion is sagebrush (*Artemisia* spp.), often associated with wheatgrass (*Agropyron* spp.) or fescue (*Festuca* spp.) (Ricketts et al. 1999). Generally, wildlife potentially found in the vicinity of the proposed critical habitat include most species commonly found in the shrub steppe area. Pronghorn and sage grouse are found in the general vicinity. The areas described in both Action Alternatives are part of the habitat used by the Dishpan Butte Wild Horse Herd, although horses do not appear to concentrate in these areas nor does the BLM conduct roundup operations in these areas.

4.3 Human Environment

With an area of 9,182 square miles, Fremont County is generally a rural county with an estimated population of 35,967 in 2001.¹ Approximately 85% of the county is either Federal Land or tribal trust land or allotted land on the Wind River Indian Reservation and, thus, not subject to taxation.² The county seat is Lander.

The economy of Fremont County is diverse, with government, services and retail trade, and construction accounting for more than 75 percent of the earnings in the county, as well as employing 75 percent of the work force. Agriculture and mineral extraction are also represented as major employers of the county.

Cultural sites are abundant in the vicinity of the critical habitat described under both Action Alternatives. The Oregon and Mormon Pioneer Trails and related sites are located approximately 7 miles south of these areas.

The areas described in the Action Alternatives are covered by the BLM Lander Resource Management Plan (RMP), which was approved in 1987. Revision of the RMP is scheduled to begin in 2004.

Highway 135 is a secondary, paved road located outside of and downslope from the areas proposed as critical habitat in both Action Alternatives. The part of Highway 135 between mile post 27 and mile post 30 is located approximately 0.25 miles west of the proposed critical

¹Data from <http://quickfacts.census.gov/qfd/states/56/56013.html>

²Fremont County Assessor's Office, Mapping Division.

habitat. Cedar Rim Road, managed by the BLM, is a crowned and ditched road about 0.5 miles north of the proposed critical habitat. Additionally, there are numerous two-track roads in the general vicinity of the critical habitat. However, the right-of-way fence along Highway 135 generally precludes access to these two-track roads. Access to the desert yellowhead site is generally provided by an unmapped two-track road that parallels the Highway 135.

Rights-of-way for power lines, telephone lines, a snow fence, and pipelines occur in the general vicinity of, but not within, the areas of critical habitat described by the Action Alternatives. These rights-of-way generally follow Highway 135, the old roadbed of Highway 135 before it was realigned, or the Cedar Rim Road.

The area of both Action alternatives is part of the Big Pasture grazing allotment, which is used by cow/calf pairs and yearlings under seven permits, each issued for a ten-year period. The allotment contains 74,351 acres of BLM land and 5,373 acres of State and private land and is grazed from May 1 until November 7. The nearest source of water is approximately 2.5 miles from the population of desert yellowhead. To date, permittees have cooperated with the BLM in efforts to minimize congregation of livestock in area of the desert yellowhead population through implementation of measures including: (1) no mineral supplements in the vicinity of the population; (2) no supplemental feeding in the vicinity of the population; (3) no trailing cattle through the population; and (4) no water sources developed in the vicinity of the population. These measures have minimized the impact of grazing on the desert yellowhead to the extent that only a only a low level of trailing occurs in the vicinity of the population resulting in only occasional trampling of individual plants.

The Action Alternatives contain land within the Beaver Creek Resource Management Unit of the Lander RMP which is open to oil and gas leasing. Geophysical exploration for oil and gas occurred more than 20 years ago in the area proposed for critical habitat designation. Two active oil and gas leases include the proposed critical habitat (Alternative B). Although two wells have been authorized (only one of which was drilled), there are currently no producing oil or gas wells on these leases, which expire in 2006 and 2007.

The area of both Action Alternatives has a high potential for the occurrence of uranium and a moderate potential for the occurrence of zeolites, a locatable mineral with properties useful in water softening, manufacturing of catalysts, pollution control, and removal of radioactive products from radioactive waste.

Several types of recreational activities take place on BLM land in the vicinity of the critical habitat described in the Action Alternatives, although no authorization or permit is needed in most cases, such as hunting, rock collecting, wild horse viewing, and general site seeing. Some specific recreational uses (such as outfitted hunts, ORV races, and other organized group events) require the authorization provided in a special recreation permit (SRP). In the vicinity of the critical habitat, no SRP requests have been received in the past.

4.4 Tribal lands

The Wind River Indian Reservation encompasses approximately 2 million acres in central Wyoming, approximately 20 miles north of the critical habitat. No critical habitat is proposed on tribal lands.

5.0 Environmental Consequences

This section reviews the expected environmental consequences of designating critical habitat for the desert yellowhead under the Action Alternatives and the environmental consequences of the No Action Alternative. Typically, determining the impacts of a proposed action involves evaluating the “without the action” baseline versus the “with the action” scenario. The impact of a proposed action equals the difference, or the increment, between the two scenarios. However, in the case of critical habitat designation, it is often difficult to ascertain whether the possible impacts are attributable solely to the critical habitat designation or whether they would result absent the designation due to the Act’s other protections for listed species.

The Tenth Circuit Court of Appeals, in a case involving economic analysis of critical habitat designation for the southwestern willow flycatcher, concluded that: “Congress intended that the Service conduct a full analysis of all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes.” (*New Mexico Cattle Growers Ass’n v. U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001)).

The focus of our economic analysis is on section 7 of the Act, which requires Federal agencies to insure that any action authorized, funded, or carried out will not likely jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. This analysis recognizes the difficulty in differentiating between consultations that result from the listing of the species (i.e., jeopardy) and consultations that result from the presence of critical habitat (i.e., adverse modification). By quantifying the potential impacts associated with all future section 7 impacts in or near proposed critical habitat, the analysis ensures that any critical habitat impacts that may occur co-extensively with the listing of the species are not overlooked. As a result, this analysis likely overstates the regulatory activity under section 7 attributable to designation of critical habitat.

In sum, the Service has tried to provide an assessment of the possible impacts from the designation. At the same time, however, it remains true that this NEPA analysis was necessitated by designation of critical habitat alone; listing a species pursuant to the Act is not subject to NEPA analysis. Thus, the Service has also tried to identify and analyze, to the greatest extent possible, those impacts that might result solely from critical habitat designation.

The desert yellowhead was listed as threatened in 2002, which has precipitated section 7 consultations and subsequently influenced management actions, all in the absence of a critical habitat designation. Thus the costs of section 7 consultation based upon the listing of the species would remain absent the designation. The following discussion discloses the potential impacts

associated with all future section 7 in or near critical habitat (as provided in the Draft Economic Analysis) and attempts to describe how much of this cost is attributable to critical habitat designation. However, the Service does not have adequate information to precisely describe the proportion of section 7 costs attributable to critical habitat designation, so all discussion is qualitative.

Individuals, organizations, States, local and Tribal governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.

Potential environmental consequences that may result from implementation of the No Action and the Action Alternatives are discussed below. All impacts are expected to be indirect, as critical habitat designation does not in itself directly result in any alteration of the environment.

Regardless of which alternative is chosen, in accordance with section 7(a)(2) of the Act, Federal agencies are required to review actions they authorize, fund, or carry out to determine the effects of proposed actions on federally listed species. If the Federal agency determines that its action may adversely affect a listed species, it must enter into formal consultation with the Service. This consultation results in a biological opinion issued by the Service as to whether the proposed action is likely to jeopardize the continued existence of the species, which is prohibited under the Act.

As required by NEPA, this document is in part intended to disclose the programmatic goals and objectives of the Act. The goals and objectives of the Act are to conserve threatened and endangered species and the ecosystems upon which they depend, and to carry out applicable international treaties and conventions.

Unless otherwise noted, the following information has been taken from the *Draft Economic Analysis of Critical Habitat Designation for the Desert Yellowhead* (Industrial Economics, Incorporated 2004) which is available as Appendix 3. Alternative C contains acreage equal to 1.89 times the acreage included in Alternative B. Therefore, where appropriate, the costs associated with Alternative B have been multiplied by 1.89 to estimate the costs of Alternative C. However, in some cases, such as the consultation regarding the Lander Resource Management Plan, the cost of consultation is the same for both Action Alternatives.

5.1 Physical Environment

None of the alternatives will impact the physical environment.

5.2 Fish, Wildlife, and Plants

5.2.1 Desert Yellowhead

The No Action Alternative would have no impacts on the desert yellowhead because the protections resulting from its listing in 2002 and the associated requirements of section 7 of the Act are already in place and duplicate protections associated with critical habitat designation.

Both Action Alternatives would have minimal additional impacts beyond those already considered in section 7 consultation since the 2002 listing. Benefits to the desert yellowhead that may accrue from designation of critical habitat would be the requirement under section 7 of the Act that Federal agencies review their actions to assess their effects on critical habitat. Designation of critical habitat may also provide some benefits to the desert yellowhead by alerting Federal agencies to situations when section 7 consultation is required. Another potential benefit is that critical habitat may help to focus Federal, State, and private conservation and management efforts by identifying the areas of most importance to a species. Critical habitat also allows for long-term planning for species conservation.

Designating critical habitat does not, in itself, lead to the recovery of a listed species. The designation does not establish a reserve, create a management plan, establish numerical population goals, prescribe specific management practices (inside or outside of critical habitat), or directly affect areas not designated as critical habitat. Specific management recommendations for areas designated as critical habitat are most appropriately addressed in recovery and management plans, and through section 7 consultation and section 10 permits.

5.2.2 Other Fish, Wildlife and Plant Species

The No Action Alternative would have no significant impacts on fish, wildlife or plants beyond those protections already in place as a result of listing of the desert yellowhead in 2002 and associated requirements of section 7 of the Act.

Both Action Alternatives would have minimal additional impacts beyond those already considered in section 7 consultation since the 2002 listing. The objectives of designating critical habitat are to protect features essential to the conservation of the species for which the habitat is designated.

Fish, wildlife, and plants may indirectly benefit as a result of protections provided through conservation of the desert yellowhead and the associated requirements of section 7(a)(2) of the Act. As a result of critical habitat designation, the BLM may be able to prioritize conservation actions that benefit the desert yellowhead and its habitat, as well as other fish, wildlife, and plant species. Critical habitat designation also may assist the State of Wyoming in prioritizing its conservation and land-managing programs.

5.3 Human Environment

As discussed above, individuals, organizations, States, local governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or authorization, or involve Federal funding. Since 2002, Federal agencies have been required to consider the effects of their actions on the desert yellowhead and consult with the Service as appropriate. While a similar process is required for critical habitat, analysis of effects to critical habitat is not expected to cause large increases in the number or complexity of consultations. This is true partially because unoccupied habitat has not been proposed as critical habitat. Differentiating between consultations that result from the listing of the desert yellowhead and consultations that result from the presence of critical habitat is difficult. Therefore, the following discussion will disclose the potential impacts associated with all future section 7 consultation in or near the critical habitat (as provided in the Draft Economic Analysis) and will qualitatively describe how much of this cost is likely attributable to critical habitat designation.

5.3.1 Oil and Gas Exploration and Development

The No Action Alternative would have no impacts on oil and gas exploration and development beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

The Action Alternatives would have minimal additional impacts beyond those already considered in section 7 consultation since the 2002 listing. Any new oil and gas leases will be issued with No Surface Occupancy (NSO) stipulations following the expiration of the existing leases. The NSO stipulations contained in the new leases will take into account the proposed designation, but the leases will generally not require NEPA review or section 7 consultation since those activities are being completed at the Lander RMP level. Therefore, the Service does not anticipate consulting with BLM during the next 10 years on the two oil and gas leases that encompass the critical habitat area when the leases expire.

The BLM does coordinate and consult with the Service on Applications for Permit to Drill (APD), because APDs are the vehicle that authorize activity on an active lease. For Alternative B, the BLM estimates it will initiate two consultations with the Service for APDs for oil and gas wells located nearby the proposed critical habitat designation. The cost estimate for two APDs related section 7 consultations is \$31,000 (\$6,000 in Service costs, \$8,000 in BLM costs and \$17,000 in third party costs). For Alternative C, the cost estimate for APD related section 7 consultations is \$58,590 (\$11,340 in Service costs, \$15,120 in BLM costs, \$32,130 in third party costs)³.

³ These figures were arrived at by multiplying the cost of Alternative B by 1.89 to account for Alternative C's larger acreage and, thus, the increased costs associated with these activities.

As stated above, any new leases encompassing the critical habitat area will be issued with NSO stipulations. In the interim, the BLM will approve APDs on the proposed designation (outside of a 200 meter buffer area) with stipulations to protect the desert yellowhead population and the proposed critical habitat. Given the size of the proposed designation, likely stipulations will require that lessees access oil or gas resources located beneath the surface of the proposed designation with wells drilled outside the boundaries of the buffer area. When the leases renew with NSO stipulations, the restricted drilling area will increase to incorporate the entire designation; pushing wells outside the boundaries of the critical habitat designation. For the anticipated two wells drilled in or nearby the proposed designation in Alternative B, project modifications (directional drilling) will cost the third party \$372,000 to \$428,000 during the next ten years. For the anticipated wells drilled in or nearby the proposed designation in Alternative C, project modifications (directional drilling) will cost the third party \$703,080 to \$808,920 during the next ten years³. While the BLM estimates two consultations for oil and gas extraction activities during the next ten years, the existing lessee has no plans to drill within the lease areas during the remaining terms of each lease. Therefore, any future consultations for oil and gas development will occur after the current leases expire in 2006 and 2007.

Additionally, the BLM anticipates initiating one informal consultation with the Service during the next ten years for geophysical operations located in the proposed critical habitat area. The cost estimate for this section 7 consultation in the area associated with Alternative B is \$15,000 (\$3,000 in Service costs, \$4,000 in BLM costs and \$8,000 in third party costs). For the area associated with Alternative C, the section 7 consultation costs are estimated at \$28,350 (\$5,670 in Service costs, \$7,560 in BLM costs, and \$15,120 in third party costs)³.

As discussed previously, only a portion of these section 7 costs is attributable to critical habitat designation. Even without critical habitat designation, this consultation on both exploration and development of oil and gas would be taking place because of the presence of the desert yellowhead. The component of the consultation addressing critical habitat (and associated costs) is only a part of the entire consultation. The Service is unable to quantify precisely what portion of the total co-extensive section 7 costs can be attributed to critical habitat designation.

5.3.2 Bureau of Land Management, Lander Resource Management Plan

The No Action Alternative would have no impacts on agricultural activities, including grazing, beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

The Action Alternatives would have minimal additional impacts beyond those already considered in section 7 consultation since the 2002 listing. During the next ten years, the BLM anticipates one formal consultation regarding the RMP, which is scheduled for revision beginning in 2004. When complete (2005 or 2006), the BLM will formally consult with the Service to assess whether management decisions in the revised RMP affect threatened and endangered species and designated habitat in the Lander Resource Area, including the desert yellowhead and its designated habitat. Although the consultation will address all threatened and endangered species and all designated habitat, this analysis assumes the formal consultation for the Lander RMP revision, including the BA, is attributable solely to the desert yellowhead (a conservative approach more likely to overstate impacts than understate them). It is estimated this section 7 consultation will cost \$43,000 to \$63,000; \$6,000 in Service costs and \$37,000 to \$57,000 in BLM costs. The cost is consistent regardless of which Action Alternative is selected.

As mentioned above, only a portion of these section 7 costs is attributable to critical habitat designation. Even without critical habitat designation, this consultation would be taking place because of the presence of the desert yellowhead and all other listed species occurring in the area covered by the Lander RMP. Since critical habitat for the desert yellowhead represents a very small portion of the land addressed by the Lander RMP, the component of the consultation addressing critical habitat (and associated costs) is a minor part of the entire consultation. The Service is unable to quantify precisely what portion of the total co-extensive section 7 costs can be attributed to critical habitat designation.

5.3.3 Agriculture

The No Action Alternative would have no impacts on agricultural activities, including grazing, beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

The Action Alternatives would have minimal additional impacts beyond those already considered in section 7 consultation since the 2002 listing. BLM and the Service agree that the proposed critical habitat area should remain unfenced with livestock grazing allowed to continue at current permitted levels. However, because grazing is having a small adverse effect on the desert yellowhead, BLM anticipates formally consulting with the Service on the renewal of the seven grazing permits (the BLM plans to group the permits together and consult with the Service once, on the group). For Alternative B, it is estimated this section 7 consultation will cost \$15,000 (\$3,000 in Service costs, \$4,000 in BLM costs, and \$8,000 in third party (7 permittees) costs). The costs associated with Alternative C are estimated to be \$28,350 (\$5,670 in Service costs, \$7,560 in BLM costs, and \$15,120 in third party costs)³.

³ These figures were arrived at by multiplying the cost of Alternative B by 1.89 to account for Alternative C's larger acreage and, thus, the increased costs associated with these activities.

As mentioned previously, only a portion of these section 7 costs is attributable to critical habitat designation. Even without critical habitat designation, this consultation would be taking place because of the presence of the desert yellowhead. The component of the consultation addressing critical habitat (and associated costs) is only a part of the entire consultation. The Service is unable to quantify precisely what portion of the total co-extensive section 7 costs can be attributed to critical habitat designation.

5.3.4 Rights-of-Way

The No Action Alternative would have no impacts on rights-of way beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

The Action Alternatives would have minimal additional impacts beyond those already considered in section 7 consultation since the 2002 listing. Existing right-of-way corridors will be used whenever possible for future projects. However, the BLM anticipates one informal consultation with the Service over the next ten years to address a new right-of-way near the boundary of the proposed critical habitat. For Alternative B, it is estimated this section 7 consultation will cost \$15,000 (\$3,000 in Service costs, \$4,000 in BLM costs, and \$8,000 in third party costs). The costs associated with Alternative C are estimated to be \$28,350 (\$5,670 in Service costs, \$7,560 in BLM costs, and \$15,120 in third party costs)³.

As mentioned previously, only a portion of these section 7 costs is attributable to critical habitat designation. Even without critical habitat designation, this consultation would be taking place because of the presence of the desert yellowhead. The component of the consultation addressing critical habitat (and associated costs) is only a part of the entire consultation. The Service is unable to quantify precisely what portion of the total co-extensive section 7 costs can be attributed to critical habitat designation.

5.3.5 Mining

The No Action Alternative would have no impacts on recreation and issuance of special use permits beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

Both Action Alternatives would have no additional impacts beyond those already considered in section 7 consultation since the 2002 listing. The BLM plans to pursue withdrawal of the critical habitat designation from locatable mineral development (entry, prospecting, location, exploration, and development) within the next year or two. Section 7 consultation regarding this

Federal action will be handled as part of an ongoing programmatic consultation, resulting in no additional administrative costs. The lost opportunity to mine locatable minerals in the withdrawal area will have no impact on the local economy, as the extraction of potential uranium and zeolite resources is not economic in the current price environment and is unlikely to be in the near future.

5.3.6 Recreation and Special Recreation Permits

The No Action Alternative would have no impacts on recreation and issuance of special use permits beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

Both Action Alternatives would have no additional impacts beyond those already considered in section 7 consultation since the 2002 listing. There will be no section 7 consultation with the Service for recreational use activities during the next ten years as there is no Federal nexus that ties the recreational use activities to the BLM. Additionally, the BLM has not received special recreation permit requests for recreational activities in the proposed critical habitat area in the past, and the BLM does not anticipate any such requests for recreational activities in the proposed critical habitat area during the next ten years.

5.3.7 Transportation

The No Action Alternative would have no impacts on transportation, including road construction and maintenance, beyond those already resulting from the 2002 listing of the desert yellowhead and the associated requirements of section 7 of the Act.

Both Action Alternatives would have no additional impacts beyond those already considered in section 7 consultation since the 2002 listing. During the next ten years, the Wyoming Department of Transportation anticipates resurfacing the section of Wyoming State Highway located near the proposed critical habitat, as well as performing routine maintenance activities along the shoulder of the road. These activities will be constructed within the existing right-of-way. Such activities on secondary roads do not usually involve funding from the Federal Highway Administration. Additionally, these activities are not likely to require a Clean Water Act section 404 permit from the U.S. Army Corps of Engineers. Therefore, there will be no Federal nexus, no resultant section 7 consultation with the Service, and no anticipated cost from designation of critical habitat.

5.4 Archeological and Cultural Resources

The No Action Alternative would have no impacts on archaeological and cultural areas.

Similarly, the Action Alternatives would have no impacts on archeological and cultural sites. Because designation of critical habitat involves no ground-disturbing activities or changes in management, designation of critical habitat is expected to have no impacts on these

archaeological and cultural resources. As a result of designation, increased protection of these sites and resources within critical habitat may occur if a Federal action is proposed.

5.5 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629 (1994), directs Federal agencies to incorporate environmental justice in their decision making processes. Federal agencies are directed to identify and address, as appropriate, any disproportionately high and adverse environmental effects of their programs, policies, and activities on minority or low-income populations. This assessment has not identified any adverse or beneficial effects unique to minority or low-income populations in the affected areas.

5.6 Cumulative Impact

According to Council on Environmental Quality NEPA regulations (40 C.F.R.1508.7), cumulative impact is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

We have attempted to determine cumulative impacts by combining the impacts of the Action alternatives with other past, present, and reasonably foreseeable future actions conducted by the Service and others within the critical habitat. Actions contributing to the cumulative impacts in the vicinity of the proposed critical habitat appear limited, but include natural events (such as drought) and activities related to BLM land management decisions (such as oil and gas development).

Ranching activities continue to be affected by ongoing drought conditions throughout parts of central Wyoming. Portions of Wyoming received rain alleviating some of the immediate effects of drought (forage drought), although the relief was short-lived and benefitted only the cool season forage plants. The hydrologic drought is more severe and continues to affect agricultural operations. However, Federal drought assistance programs have been available in Fremont County during 2002 and 2003 on a limited basis (generally low-interest loans), possibly mitigating a small portion of the effect of the drought. In general, drought has resulted in many operators selling off large portions of their livestock (M. Hoobler, Wyoming Department of Agriculture, pers. comm. 2003).

Few BLM authorized activities are occurring in the vicinity of the proposed critical habitat. Oil and gas development is occurring throughout much of Wyoming, although, as indicated previously, little oil and gas development is occurring in the vicinity of the proposed critical habitat.

Potential cumulative effects are unlikely to have any noticeable effect on local services, the availability of housing, or the local or regional economy.

Table 1. SUMMARY OF MAXIMUM POTENTIAL ENVIRONMENTAL CONSEQUENCES BY ALTERNATIVE (Total Section 7 Costs)

IMPACTS	ALTERNATIVES		
	ALTERNATIVE A. NO ACTION	ALTERNATIVE B. PROPOSED ACTION	ALTERNATIVE C. EXTENDED AREA
Desert Yellowhead	No change to existing situation.	May be minimal beneficial impacts beyond those associated with the 2002 listing.	May be minimal beneficial impacts beyond those associated with the 2002 listing.
Other Fish, Wildlife, and Plants	No change to existing situation.	May be minimal beneficial impacts beyond those associated with the 2002 listing.	May be minimal beneficial impacts beyond those associated with the 2002 listing.
Oil and Gas Exploration and Development	No change to existing situation.	Total section 7 consultation costs - \$418,000 - \$474,000	Total section 7 consultation costs - \$790,020 - \$895,860
Lander Resource Management Plan	No change to existing situation.	Total section 7 consultation costs - \$43,000 - \$63,000	Total section 7 consultation costs - \$43,000 - \$63,000
Agriculture	No change to existing situation.	Total section 7 consultation costs - \$15,000	Total section 7 consultation costs - \$28,350
Rights-of-Way	No change to existing situation.	Total section 7 consultation costs - \$15,000	Total section 7 consultation costs - \$28,350
Mining	No change to existing situation.	No impacts.	No impacts.
Recreation	No change to existing situation.	No impacts.	No impacts.
Transportation	No change to existing situation.	No impacts.	No impacts.
Archaeological and Cultural	No change to existing situation.	No impacts.	No impacts.
Environmental Justice	No change to existing situation.	No impacts.	No impacts.
Total	No change to existing situation.	\$491,000 to \$567,000	\$889,720 - \$1,015,560

6.0 Council on Environmental Quality Analysis of Significance

Under CEQ 40 CFR Part 1508.27, the determination of “significantly” requires consideration of both context and intensity.

6.1 Context

Based upon information present in the Draft Economic Analysis and responses from agencies and the public, any effects, although long-term, will not be national, only regional and mostly local in context. When considered in the context of the value of the economic activity that is predicted to occur over the next ten years in the region, the total economic costs associated with the total co-extensive section 7 implementation for the desert yellowhead appear relatively low. The total earnings in Fremont County during 2000 were \$456,218,000.

Additionally, only a portion of the section 7 costs is attributable to critical habitat designation. Even without critical habitat designation, section 7 consultation would be taking place because of the presence of the desert yellowhead. The component of the consultation addressing critical habitat (and associated costs) is only a part of the entire consultation.

6.2 Intensity

Intensity is defined by CEQ as referring to the severity of impact. The following 10 points identified by CEQ were considered in evaluating intensity:

- 1. Environmentally beneficial actions.** Critical habitat identifies geographic areas that are essential for the conservation of a threatened or endangered species and which may require special management considerations or protection. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. It does not allow government or public access to private lands. Federal agencies must consult with the Service on activities they undertake, fund, or permit that may affect critical habitat. However, the Endangered Species Act prohibits unauthorized take of listed species and requires consultation for activities that may affect them, including habitat alterations, regardless of whether critical habitat has been designated. In 30 years of implementing the Act, the Service has found that the designation of critical habitat provides little additional protection to most listed species.
- 2. Public health and safety.** This designation will not have a discernable impact on human health or safety.
- 3. Unique characteristics of the geographic area.** Although the area proposed as critical habitat may be in proximity to historic and cultural sites, parklands, farmland, wetlands, scenic rivers and ecologically critical areas, no adverse impacts will occur to these areas since designation of critical habitat involves no ground-disturbing activities or changes in management.

4. **Controversy.** There is a perception by some segments of the public that critical habitat designation will severely limit property rights; however, critical habitat designation has no effect on private actions on private land that do not involve Federal approval or action. As discussed above, Federal agencies must consult with the Service on activities they undertake, fund, or permit that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. It does not allow government or public access to private lands. Public understanding of critical habitat has improved since the publication of the Proposed Rule, largely as a result of ongoing outreach efforts (such as extensive discussions with the Wyoming Department of Agriculture to facilitate a better understanding of what constitutes a Federal nexus).

5. **Uncertain, unique, or unknown risks.** The Service has designated critical habitat for other species in the recent past and we are familiar with the associated effects. Therefore, we anticipate minimal effects to the human environment and we are certain this action does not involve any unique or unknown risks.

6. **Precedent-setting aspects.** This designation of critical habitat is not expected to set any precedents for future actions with significant effects or represent a decision in principle about a future consideration because critical habitat has been designated before for other species, as required by law.

7. **Cumulative effects.** We have attempted to determine cumulative impacts by combining the impacts of the Proposed Alternative with other past, present, and reasonably foreseeable future actions conducted by the Service and others within the critical habitat. Other activities considered included natural events (such as drought) and activities related to BLM land management decisions (such as oil and gas development). Potential cumulative effects are unlikely to have any noticeable effect on local services, the availability of housing, or the local or regional economy.

8. **Cultural resource effects.** This designation will have no impact on National Register of Historic Places or other cultural sites.

9. **Endangered species effects.** In general, there will be little or no impact to threatened or endangered species. Some impacts from this designation of critical habitat will be slightly beneficial to endangered and threatened species, particularly the desert yellowhead.

10. **Violation of environmental protection laws.** This designation of critical habitat will not violate any Federal, State, or local laws or requirements imposed for the protection of the environment.

7.0 Contacts and Coordination with Others

The following is a list of individuals, organizations, and public agencies contacted concerning development of this Draft Environmental Assessment and the Proposed Rule to designate critical habitat for the desert yellowhead or to whom copies of this Draft Environmental Assessment were sent. Each of these individuals will also be notified of publication of the final rule:

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

Wyoming State Office

Lander Field Office

U.S. Fish and Wildlife Service

Fish and Wildlife Management Assistance Office, Lander, WY

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

FEDERAL CONGRESSIONAL DELEGATION

Office of Senator Craig Thomas

Office of Senator Mike Enzi

Office of Representative Barbara Cubin

STATE AGENCIES

Wyoming Game and Fish Department

Wyoming Department of Agriculture

Wyoming Department of Environmental Quality

Wyoming Board of State Lands Commissioners

Wyoming Department of Transportation

Wyoming Division of State Parks and Historic Sites

Wyoming Department of Commerce

Wyoming State Lands and Farm Loans Office

Wyoming State Lands and Investments Office, State Forestry

Wyoming State Clearinghouse

Wyoming Office of Federal Land Policy

Wyoming Game and Fish Commission

Wyoming Natural Diversity Database

Wyoming Cooperative Fishery and Wildlife Research Unit

Wyoming Oil and Gas Conservation Commission

Wyoming Livestock Board

GOVERNOR

Wyoming, Dave Freudenthal

STATE LEGISLATIVE MEMBERS

Senators

Rae Lynn Job, Grant C. Larson, Cale Case, Robert A. Peck,

Representatives

Pete Jorgenson, Monte Olsen, Harry B. Tipton, Frank Philp, Del McOmie, David Miller

COUNTY COMMISSIONERS

County Commissioners Fremont County

LOCAL GOVERNMENTS AND PRIVATE GROUPS

Biodiversity Conservation Alliance
Lander Valley People for the USA
Wyoming Association of Conservation Districts
Wyoming Audubon Society
Wyoming Farm Bureau
Wyoming Stock Growers Association
Wyoming Outdoor Council
Wyoming Wildlife Federation
Wyoming Wool Growers Association
Wyoming Natural Diversity Database
Gene and Donna DeFOe
Dr. Richard and Beverly Scott
E&P Environment
Cyanostar Energy, Inc.
Myers Land and Cattle Company
Graham Ranch, Inc.
John Corbett
Double T Ranches
Lee Whitlock
Crofts Sheep Company
Rob and Carla Crofts
Hydrocarbon Engineers
Animal Protection Institute

8.0 List of Contributors

Mary Jennings, Fish and Wildlife Biologist
4000 Airport Parkway
Cheyenne, Wyoming 82001
307-772-2374, extension 32

9.0 References Cited

- Bureau of Land Management. 1986. Final Resource Management Plan/ Environmental Impact Statement for the Lander Resource Area.
- Bynum, M. 1993. Soils 5120 Term Project. Unpublished soil survey prepared for Dr. Larry Munn, University of Wyoming. 7pp.
- Dorn, R.D. 1991. Yermo xanthocephalus (Asteraceae: Senecioneae): A New genus and Species from Wyoming. Madrono 38(3):198-201.
- Fertig, W. 1995. Status Report on Yermo xanthocephalus in central Wyoming. Wyoming Natural Diversity Database Report to the BLM, Wyoming State Office and Rawlins District. 46pp.
- Heidel, B. 2002. Status Report on Yermo xanthocephalus in Wyoming. Wyoming Natural Diversity Database Report to the BLM, Wyoming State Office and Rawlins District. 24pp.
- Love, J.D. 1961. Geological Survey Bulletin 112: Split Rock Formation (Miocene) and moonstone Formation (Pliocene) in central Wyoming. Contributions to General Geology. 1-I. United States Government Printing Office, Washington, D.C.
- Opler, P.A., H. Pavulaan, and R.E. Stanford (coordinators). 1995. Butterflies of North America. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/distr/lepid/bflyusa/bflyusa.htm> (Version 26JUN2002).
- Ricketts, T.H., E. Dinerstein, D.M. Olson, C.J. Loucks, W. Eichbaum, D. DellaSala, K. Kavanagh, P. Hedao, P.T. Hurley, K.M. Carney, R. Abell, and S. Walters. 1999. Terrestrial Ecoregions of North America: A Conservation Assessment. Island Press, Washington, D.C. 485pp.

Scott, R.W. 2000. Field Studies on Yermo xanthocephalus Dorn: BLM Cooperative Agreement No. KAA000003, Final Report. Department of Biology, Central Wyoming College. 13pp.

Van Houten, F.B. 1964. Tertiary Geology of the Beaver Rim Area Fremont and Natrona Counties, Wyoming: Geological Survey Bulletin 1164. United States Government Printing Office, Washington, D.C.

Appendix 1. Map of Alternative B, Area Proposed as Critical Habitat for Desert Yellowhead (Proposed Alternative)

-- See Proposed rule under Tab 5

Appendix 2. Map of Alternative C, Critical Habitat Including Extension Into Unoccupied Habitat

Appendix 3. Draft Economic Analysis of Critical Habitat Designation for the Desert Yellowhead

-- See document under Tab 2