

DRAFT ENVIRONMENTAL ASSESSMENT

FOR THE

DESIGNATION OF CRITICAL HABITAT

FOR THE

GIERISCH MALLOW

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U.S. FISH AND WILDLIFE SERVICE

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*Draft Environmental Assessment for Designation of Critical Habitat for
the Gierisch Mallow*

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ACRONYMS

AGFD	Arizona Game and Fish Department
ACEC	Area of Critical Environmental Concern
ASLD	Arizona State Land Department
AO	Authorized Official
BA	Biological Assessment
BLM	Bureau of Land Management
BO	Biological Opinion
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DOI	Department of the Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FO	Field Office
FR	Federal Register
IPM	Integrated Pest Management
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
OHV	Off-Highway Vehicle
PCE	Primary Constituent Element
USFWS	United States Fish and Wildlife Service (“Service”)

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CHAPTER 1: PURPOSE OF AND NEED FOR ACTION

INTRODUCTION

The purpose of this draft Environmental Assessment (EA) is to analyze the potential effects on physical and biological resources and social and economic conditions that may result from the designation of critical habitat for the Gierisch mallow (*Sphaeralcea gierischii*). On August 17, 2012, The U.S. Fish and Wildlife Service (the Service) published a proposed rule to list the Gierisch mallow as endangered under the Endangered Species Act of 1973 (ESA), as amended, concurrently with a proposed rule to designate critical habitat for the species (77 FR 49894). The Service has determined that environmental assessments or environmental impact statements are not necessary for ESA listing (48 FR 49244) or for critical habitat designations outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit (48 FR 49244). However, portions of the proposed critical habitat for the Gierisch mallow occur within Utah, which is located within the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit. The Service, under the ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75F.3d 1429 (10th Cir. 1996) undertakes NEPA analysis for critical habitat designation within states under the jurisdiction of the Tenth Circuit, including Utah.

This draft Environmental Assessment (Draft EA) will be used by the Service to decide whether critical habitat will be designated as proposed or if further refinements or analyses are needed. If the proposed action is selected as described, or with minimal changes, and no further environmental analyses are needed, a Finding of No Significant Impact (FONSI) would be prepared. If significant impacts are found, or major changes are needed, an Environmental Impact Statement would be prepared. This Draft EA presents the purpose of and need for critical habitat designation, the proposed action, and an evaluation of the direct, indirect, and cumulative effects of the alternatives pursuant to the NEPA of 1969 as implemented by the Council on Environmental Quality (CEQ) regulations (40 CFR 1500, et seq.) and according to the U.S. Department of the Interior (USDI) NEPA procedures (43 CFR 46).

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PURPOSE AND NEED FOR THE ACTION

Conservation of an endangered species requires protection of the species' habitat. Habitat protection and management is needed for Gierisch mallow because the species is limited to a few small populations that are threatened by habitat loss and degradation, inadequate existing regulatory mechanisms, the spread of nonnative, invasive plants, and other natural or manmade factors (77 FR 49894). Critical habitat designation is an effective means to provide protection and management of habitat that is essential to the conservation of listed species.

The purpose of the proposed action in this Draft EA is to designate critical habitat for the Gierisch mallow, a species proposed as endangered under the ESA. This critical habitat designation delineates geographic areas that are essential for conservation of the Gierisch mallow. The designation also describes primary constituent elements (PCEs), which are the physical and biological features that are essential to support conservation of the species and that define critical habitat for the species.

PROPOSED ACTION

The Proposed Action is to designate two geographic units as critical habitat for the Gierisch mallow. These critical habitat units are occupied by Gierisch mallow and contain features that the Service considers essential to the conservation of the species. Unit 1, Starvation Point, consists of approximately 1,339 ha (3,308.7 ac) and is located west of I-15 as it crosses the State line of Arizona and Utah, and is bounded by the Virgin River to the west and I-15 to the south and east (Figure 1). Unit 2, Black Knolls, consists of approximately 3,850 ha (9,513.30 ac) and is located south of I-15 as it crosses the State line of Arizona and Utah, and is bounded by Black Rock Gulch to the west and Mokaac Mountain to the south and east (Figure 1). The designation also describes primary constituent elements (PCEs), which are the physical and biological features that define critical habitat for a species.

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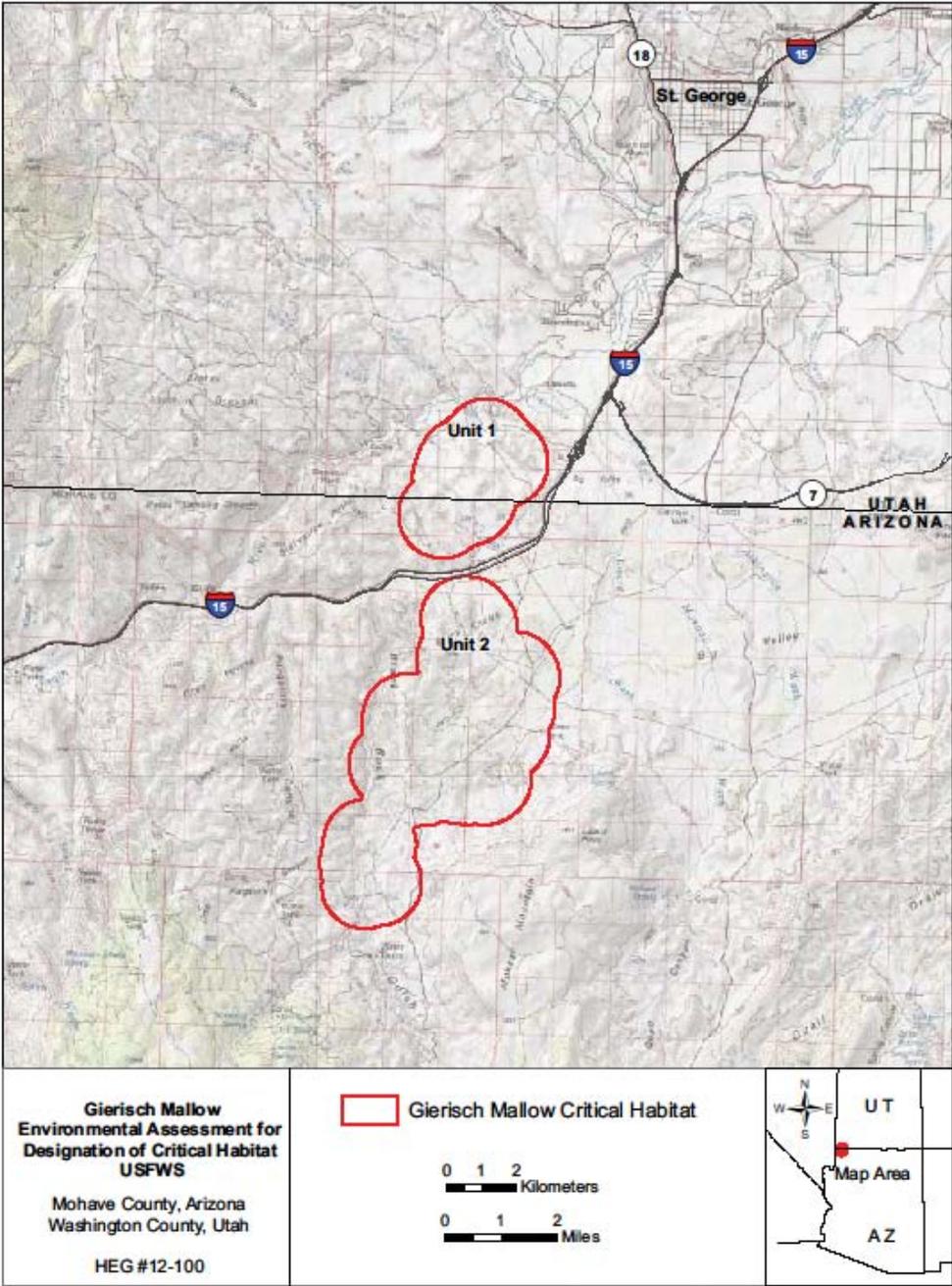


Figure 1. Location of Gierisch mallow critical habitat units, Mojave Co., AZ and Washington Co. UT.

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BACKGROUND

CRITICAL HABITAT

PROVISIONS OF THE ESA

ESA Section 3(5)(A), defines critical habitat as, (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the provisions of section 4 of the ESA, on which are found those physical or biological features (1) essential to the conservation of the species and (2) which 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 in accordance with the provisions of Section 4 of the Act, upon the determination by the Secretary of the Interior that such areas are essential for the conservation of the species.

ESA Section 4(b)(2) states that designation of critical habitat will be made, “on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat.” Section 4(b)(2) of the ESA also allows the Secretary of Interior to exclude an area from critical habitat designation if he determines, “the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.”

Section 4(a)(3) of the ESA states that critical habitat shall be designated to the maximum extent prudent and determinable and that such designation may be revised periodically as appropriate.

The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners.

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SECTION 4(B)(2) EXCLUSION PROCESS

Section 4(b)(2) of the ESA states the Secretary of the Interior may exclude any area from the critical habitat designation after considering the economic, national security, or other relevant impacts of designating the area as critical habitat or if the Secretary determines that the benefit of excluding the area exceeds the benefit of designating it as critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

SECTION 7 CONSULTATION

The primary means by which critical habitat designation may serve to protect the Gierisch mallow is through the Section 7 consultation process. Section 7(a)(2) of the ESA requires federal agencies to consult with the Service to “insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical.” Section 7 of the ESA does not apply to state, local, or private land unless there is a federal nexus (i.e., federal funding, authorization, or permitting).

A Federal agency responsible for a proposed action begins the Section 7 consultation process by determining the effects of the proposed action on both listed species and designated critical habitat. If the federal action agency determines that there would be no effect on listed species or designated critical habitat, then no further consultation is necessary. If the federal action agency determines that their proposed action may affect listed species or designated critical habitat, consultation with the Service is initiated. The Federal action agency may then conduct informal consultation with the Service to modify the project to reduce or eliminate impacts to the species or critical habitat. If these measures are not sufficient to eliminate adverse effects on the species or critical habitat, or informal consultation is not undertaken, the federal agency will then begin formal consultation with the Service.

Formal consultation is initiated when it is determined that the proposed federal action is likely to adversely affect listed species or critical habitat (50 CFR Part 402.14). Formal

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consultation assesses whether the proposed federal action is likely to jeopardize the continued existence of a listed species or to destroy or adversely modify critical habitat (50 CFR Part 402.14[h]). Formal consultation concludes with a biological opinion issued by the Service on whether the proposed federal action is likely to jeopardize the continued existence of a listed species or to destroy or adversely modify critical habitat (50 CFR Part 402.14[h])

There are some differences in the way impacts are assessed for a species (the jeopardy standard) versus critical habitat (an adverse modification standard). In *Gifford Pinchot Task Force v. United States Fish and Wildlife Service*, 378 F.3d 1059 (9th Cir. 2004), the court held that while the jeopardy standard concerns the survival of a species or its risk of extinction, the adverse modification standard concerns the value of critical habitat for the recovery, or eventual delisting, of a species. To evaluate the impacts on critical habitat, the Service examines how the proposed federal action will affect the PCEs.

A “nonjeopardy” or “no adverse modification” opinion concludes consultation, and the proposed action may proceed under the ESA. The Service may prepare an incidental take statement with reasonable and prudent measures to minimize take of non-plant species and associated, mandatory terms and conditions that describe the methods for accomplishing the reasonable and prudent measures. Discretionary conservation recommendations may be included in a biological opinion based on the effects on the species. Conservation recommendations, whether they relate to the jeopardy or adverse modification standard, are discretionary actions recommended by the Service. These recommendations may minimize adverse effects on listed species or critical habitat, identify studies or monitoring, or suggest how action agencies can assist species under their own authorities and Section 7(a)(1) of the ESA. There are no ESA section 9 prohibitions for critical habitat. Therefore, a biological opinion that concludes there is no anticipated destruction or adverse modification of critical habitat may contain conservation recommendations but would not include an incidental take statement, reasonable and prudent measures, or other terms and conditions.

In a biological opinion that results in a jeopardy or adverse modification conclusion, the Service develops mandatory reasonable and prudent alternatives to the proposed action. Reasonable and prudent alternatives are actions that the federal agency can take to avoid jeopardizing the continued existence of the species or adversely modifying the critical habitat. Reasonable and prudent alternatives may vary from minimal project

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changes to extensive redesign or relocation of the project, depending on the situations involved. Reasonable and prudent alternatives must be consistent with the intended purpose of the proposed action, and they also must be consistent with the scope of the federal agency's legal authority. Furthermore, the reasonable and prudent alternatives must be economically and technically feasible. A biological opinion that results in an adverse modification finding (but no jeopardy to the species) may include reasonable and prudent alternatives and conservation recommendations but no incidental take statement or associated reasonable and prudent measures and terms and conditions.

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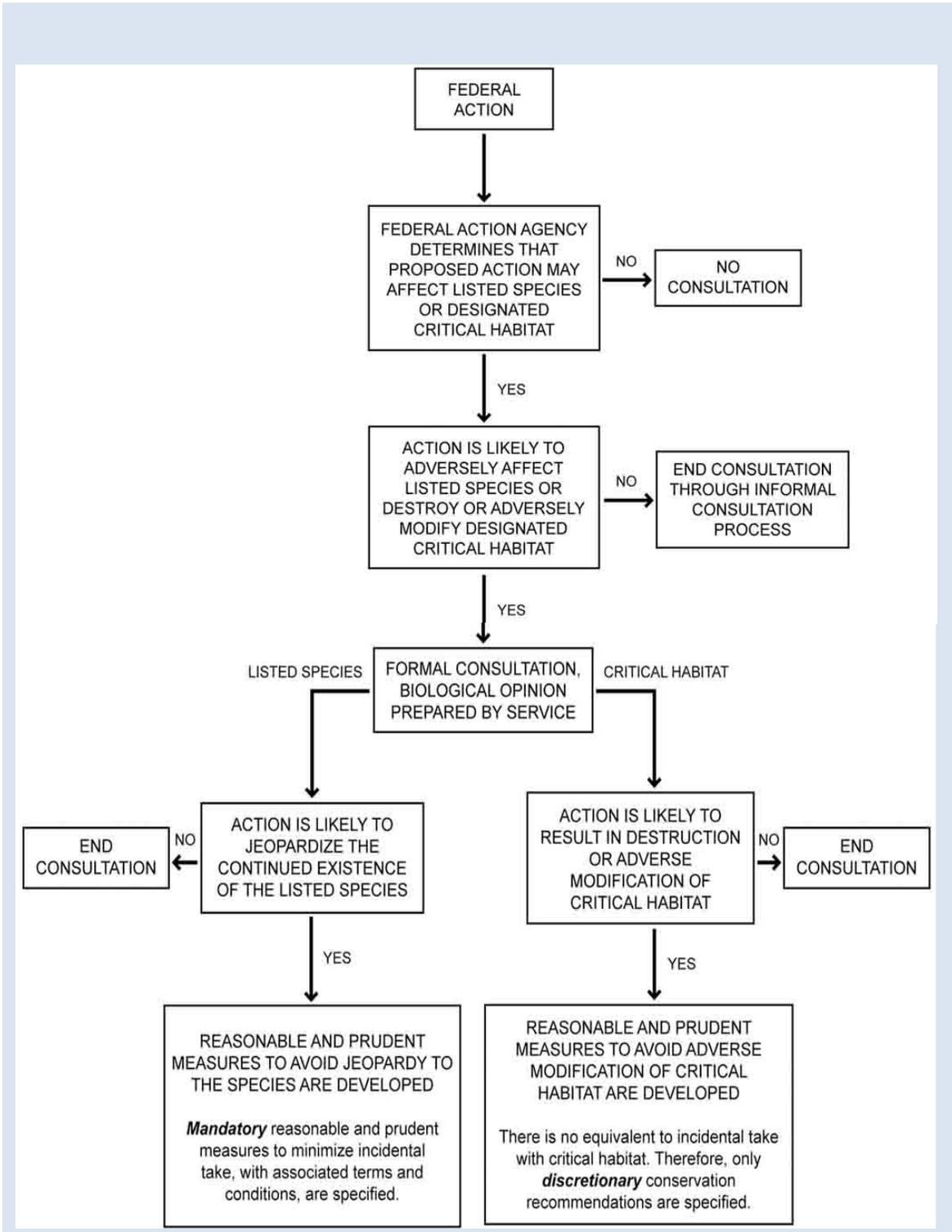


Figure 2. Simplified Diagram of the Section 7 consultation process.

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Table 1. Comparison of ESA listing and ESA listing with critical habitat designation.

	ESA listing only (without Critical Habitat)	In addition to ESA listing, Critical Habitat designation adds
Section 7 Consultation Process must consider	Jeopardy to the continued existence of the species (survival or risk of extinction)	Destruction or Adverse modification, based on whether the affected critical habitat would continue to serve its intended conservation role for the species (77FR 49913)
Type of impact a project may have	Take*	Destruction or Adverse modification, based on whether, the affected critical habitat would continue to serve its intended conservation role for the species (77FR 49913)
Incidental Take	Incidental Take may be granted by the Service	Incidental Take does not apply to Critical Habitat
Activities that may result in an impact	Actions that would result in “take” of individuals.	Actions that would significantly alter the PCEs

*Incidental take does not apply to plants.

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GIERISCH MALLOW

SPECIES DESCRIPTION

Gierisch mallow is a perennial flowering member of the mallow family. It produces few to many stems from a woody caudex (short, thickened, woody stem that is usually subterranean or at ground level). The stems are 43 to 103 centimeters (cm) (17 to 41 inches (in)) tall, and are often dark red-purple. The foliage is bright green and glabrous (not hairy). The leaf blades are 1.2 to 4 centimeters (cm) (0.47 to 1.57 inches(in)) long; 1 to 5 cm (0.4 to 1.9 in) wide; and usually longer than wide. The leaves are usually flat and egg-shaped; the leaf base is heart-shaped to truncate, with 3 to 5 lobes. The inflorescence is compound, with more than one flower per node. The outer envelope of the flower is 0.5 to 1.0 cm (0.2 to 0.4 in) long, green, and uniformly glabrous, and the orange petals are 1.5 to 2.5 cm (0.6 to 0.98 in) long (Atwood and Welsh 2002).

DISTRIBUTION

Gierisch mallow is only found on gypsum outcrops associated with the Harrisburg Member of the Kaibab Formation in northern Mohave County, Arizona, and adjacent Washington County, Utah (Atwood and Welsh 2002). Only 18 populations are known.

LIFE HISTORY

Very little is known about the life history of the Gierisch mallow. The species was not described until 2002, and few studies have been conducted on its life history. It is assumed to be perennial because it is woody at the base and the same individuals have been observed for more than one year. The pollination system, seed dispersal mechanisms, and seed germination conditions are unknown.

The Gierisch mallow is assumed to be pollinated by globemallow bee (*Diadasia diminuta*) because this bee is an important pollinator of other species of the genus *Sphaeralcea* (Tepedino 2010). Maintaining adequate populations of globemallow bee and other pollinators is essential to ensure Gierisch mallow is pollinated. Maintaining a full suite of pollinator species is important because abundance of each pollinator species can vary greatly from year to year, and maintaining a diversity of pollinator species would increase the likelihood that in years when some pollinator species are uncommon

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at least one species is abundant enough to adequately pollinate the Gierisch mallow. Because pollinator species for the Gierisch mallow are not fully known, it is also important to maintain a full suite of pollinator species to ensure potential pollinators of the mallow are not inadvertently extirpated. Additionally, species richness of bees is important for maintaining pollination services (Greenleaf 2005).

Germination requirements of Gierisch mallow have not been studied. However, soil crusts provide seed-germination sites for other species, stabilize soils, and help to retain moisture. Soil crusts are effective in capturing wind-borne dust deposits, and have been documented contributing to a 2- to 13-fold increase in nutrients in southeastern Utah (Reynolds *et al.* 2001 in Floyd *et al.* 2003). The presence of soil crusts generally increases the amount and depth of rainfall infiltration (Loope and Gifford 1972 and others in Floyd *et al.* 2003).

Gierisch mallow has been observed reestablishing in the reclaimed areas from the original seed bank. Hughes (2009) counted 50 and 32 plants on these sites in 2009. In 2011, Hughes (2012) completed transect surveys on the same reclaimed sites as he did in 2008 and 2009, and counted 67 plants on one rehabilitated site and 1 plant on the other rehabilitated site. In 2012, Hughes (2012b) counted 116 and 6 plants, respectively on these same rehabilitated sites, and estimated 75 occur on another. However, adult long-term survival in these sites is unknown, as are reproductive rates and population growth rates. Preliminary data shows numbers have decreased in some sites.

HABITAT

Gierisch mallow is only found on gypsum outcrops associated with the Harrisburg Member of the Kaibab Formation (Atwood and Welsh 2002). It is associated with Mojave Mid-Elevation Mixed Desert Scrub (CES 302.742) (Natureserve 2011). This ecological system represents the extensive desert scrub in the transition zone above *Larrea tridentata* – *Ambrosia dumosa* desert scrub and below the lower montane woodlands (700-1800 m elevations) that occur in the eastern and central Mojave Desert. It is also common on lower piedmont slopes in the transition zone into the southern Great Basin. The vegetation in this ecological system is quite variable. Codominants and diagnostic species include *Coleogyne ramosissima*, *Eriogonum fasciculatum*, *Ephedra nevadensis*, *Grayia spinosa*, *Lycium* spp., *Menodora spinescens*,

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Nolina spp., *Opuntia acanthocarpa*, *Salazaria mexicana*, *Viguiera parishii*, *Yucca brevifolia*, or *Yucca schidigera*. Less common are stands with scattered Joshua trees and a saltbush short-shrub layer dominated by *Atriplex canescens*, *Atriplex confertifolia*, or *Atriplex polycarpa*, or occasionally *Hymenoclea salsola* (Natureserve 2011).

Gierisch mallow has been associated with steep slopes and northern aspects, but the Service could not correlate the Gierisch mallow occurrences to a specific range of slopes; therefore, topography is not considered to be an essential physical feature for this species (USFWS unpublished data, 2012).

PRIMARY CONSTITUENT ELEMENTS FOR THE GIERISCH MALLOW

Under the Endangered Species Act and its implementing regulations, the Service is required to identify the physical and biological features of designated or proposed critical habitat essential to the conservation of the species, including, but 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 of offspring, germination, or seed dispersal; and (5) habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species. [ESA §3(5)(A)(i), 50 CFR §424.12(b)]. PCEs are derived from these physical and biological features. PCEs provide for a species' life-history processes and are essential to the conservation of the species. Based on the current available scientific knowledge, the Service has determined that the PCEs specific to the Gierisch mallow are:

(1) Appropriate geological layers or gypsiferous soils, in the Harrisburg Member of the Kaibab Formation, that support individual Gierisch mallow plants or their habitat, within the elevation range of 775 to 1,148 m (2,477 to 3,766 ft). Appropriate soils are defined as:

1. Badland,
2. Fluvaquents and Torrifluvents,
3. Riverwash,
4. Cave-Harrisburg-Grapevine complex,
5. Grapevine-Hobcan complex,

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6. Nikey-Ruesh complex,
7. Gypill-Hobog complex,
8. Hobog-Tidwell complex,
9. Hobog-Grapevine complex,
10. Grapevine-Shelly complex, and
11. Hindu-Rock outcrop-Gypill complex.

(2) Appropriate Mojave desert scrub plant community and associated native species for the soil types at the sites listed in PCE 1.

(3) The presence of insect visitors or pollinators, such as the globemallow bee and other solitary bees. To ensure the proper suite of pollinators are present, this includes habitat that provides nesting substrate for pollinators in the areas described in PCE 2.

(4) Areas free of disturbance and areas with low densities or absence of nonnative, invasive plants, such as red brome and cheatgrass.

RELATED LAWS, AUTHORIZATIONS, AND PLANS

ARIZONA NATIVE PLANT LAW

Arizona Statute 3-905: Destruction of protected plants by state. This law states:

A. Except in an emergency, if a state agency proposes to remove or destroy protected native plants over an area of state land exceeding one-fourth acre, the agency shall notify the department in writing as provided in section 3-904 at least sixty days before the plants are destroyed, and any such destruction must occur within one year of the date of destruction disclosed in the notice. The department shall post and disseminate copies of the notice as provided in section 3-904, subsection E. This state and its agencies and political subdivisions are exempt from any fees established for salvaged plants.

B. If the director determines that the proposed action by the state agency may affect a highly safeguarded plant, he shall consult with the state agency and other appropriate parties and use the best scientific data available to issue a written finding as to whether the proposed action would appreciably reduce the likelihood of survival or recovery of the plant taxon in this state. If the determination is affirmative, the director shall also specify reasonable, prudent and distinct alternatives to the proposed project that can be implemented and are consistent with conserving the plant taxon.

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C. The director shall adopt rules for the disposal and salvage of native plants subject to removal or destruction by a state agency either under permit to other government agencies or nonprofit organizations or sale to the general public or commercial dealers. The department may issue permits to donate, sell, salvage or harvest the plants after it ascertains the validity of the request and determines the kinds and approximate number of the plants involved. The permit shall specify the number and species of protected native plants and the area from which they may be taken.

These provisions apply to Gierisch mallow occurring on Arizona State Lands due to its Candidate status automatically placing it on the “Highly Safeguarded” list. The species would remain on the “Highly Safeguarded” list and these provisions would also apply if it is listed as threatened or endangered. Provisions for removal of protected native plants from private land do not apply to the Gierisch mallow because none are known to be found on private lands. In addition, the Arizona law does not provide for any protection of Gierisch mallow habitat.

BLM LAND MANAGEMENT PLANS

The U.S. Dept. of Interior, Bureau of Land Management (BLM) Saint George Field Office published an Environmental Impact Statement (EIS) for a Resource Management Plan (RMP) in 1999 (BLM 1999). The U.S. Dept. of Interior, BLM Arizona Strip Field Office published an EIS for a RMP in 2008 (BLM 2008). Specific desired future conditions or management actions for the Gierisch mallow are not listed in either RMP because the plant was not federally- listed at the time. However, management actions for special status plants (which includes all federally-listed plants) are included that applied to the Gierisch mallow once it was designated a Candidate species in December, 2008, which automatically added it to the BLM special status plant list. The management actions for special status plants include the following:

- *Special status plant habitat in the Arizona Strip FO will be preserved, protected, and managed.*
- *Monitoring efforts for special status plant populations within the Arizona Strip FO will continue.*
- *A program of public conservation education and planning directed towards preservation of special status plant habitat will be carried out.*

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Recreation Management

- *Recreational activities that degrade special status plant habitats will be modified or relocated to minimize or eliminate adverse effects.*
- *In listed plant habitats, hiking will be allowed. Biking will be allowed only on designated routes. Education programs and law enforcement contact will be used to minimize recreational activities that cause injury or mortality or degrade habitat of these species.*

Travel Management

- *Vehicle use in special status plant habitats will be limited to designated routes with reasonable use of the shoulder.*
- *In special status plant ACECs, use of OHVs off of designated routes will not be authorized except in emergencies.*

Grazing Management

- *Disturbance, injury, or mortality of special status plants resulting from grazing by livestock will be minimized or eliminated. Where grazing by livestock is leading to adverse effects, conservation measures will be implemented to reduce or mitigate loss of the plant species. Measures can include fencing, seasonal restrictions, or relocation of livestock developments. The need for implementation of conservation measures will be assessed on a case-by-case basis, typically at the time of the rangeland health assessment.*

Vegetation Management

- *Restoration and vegetation treatments will not be authorized in special status plant habitat, unless doing so provides benefits to the species.*
- *The impact of herbicide and pesticide use on special status plant species will be determined. The use of harmful herbicides in areas where special status plants might be affected will be limited or eliminated.*
- *Conservation measures will be implemented for all vegetation management actions in special status plant habitats as described in Appendix F*

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Surface Disturbing Activities

- *Impacts to special status plants and their habitats from surface disturbing activities will be reduced or eliminated.*
- *Proposed actions will be evaluated to ensure that trampling or crushing of special status plants will be minimized or eliminated. The BLM will continue to coordinate with USFWS to delineate buffer areas around special status plant populations. Use restrictions can be developed to minimize or eliminate trampling and/or crushing of special status plants within buffer areas.*
- *Conservation measures will be implemented for special status plants for all surface disturbing activities as described in Appendix F.*

APPROVED EA FOR BLACK ROCK GYPSUM MINE PLAN OF OPERATIONS

The BLM Arizona Strip FO published an EA for the Proposed Right of Way Grant and Plan of Operations: Black Rock Gypsum Mine in September, 2009 (BLM 2009). The Gierisch mallow was briefly mentioned as a newly described species that appeared to be returning on its own in areas that had been revegetated after mining. It was a Candidate species at the time and proposed conservation measures are listed in the EA, including methods for reseeding reclaimed areas and trials to test the effectiveness of reseeding efforts. With designation of critical habitat, consultation for this project would need to be reopened to analyze for adverse modification to critical habitat.

ALLOTMENT MANAGEMENT PLANS

Grazing allotments on BLM lands within the proposed critical habitat units each have allotment management plans on file with the BLM. Those plans address details of grazing practices on each allotment including animal unit months, seasonal deferrals, and other management practices.

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ISSUES FROM PUBLIC COMMENTS

Comments were received during the public comment period of August 17 – October 16, 2012 on the August 2012, listing and critical habitat proposed rule (77 FR 49894). Twenty comments were received, most of which focused on the proposed listing of the Gierisch mallow rather than the designation of critical habitat. Comments presented the following concerns associated with designation of critical habitat:

- The Service was urged to conduct a NEPA analysis on the proposed designation of critical habitat. The commenter believed that the designation of critical habitat would result in loss of revenue and jobs.
- Ranchers may lose money invested in their allotments if cattle numbers are reduced on allotments in critical habitat.
- The Service was urged to recommend livestock exclusion in critical habitat.
- Livestock watering tanks may increase the impacts of livestock grazing on critical habitat.
- It was suggested that a 14,000 acre “preserve” is not needed because only about 400 acres of white gypsiferous soils exist.
- Grazing and OHV use threatens biological soil crusts associated with Gierisch mallow and those uses should be restricted according to the comment.
- Exclusion of the Georgia-Pacific Mine from designation of critical habitat was requested on the basis of economic hardships that critical habitat designation would impose upon the mine.
- A comment felt that the designation of critical habitat threatens private lands because management of critical habitat encourages weeds and fires.

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TOPICS ANALYZED IN DETAIL IN THIS ENVIRONMENTAL ASSESSMENT

Several resources have been identified as potentially affected by the proposed designation during internal scoping and the public comment period. These resources, which are analyzed in Chapter 3.0 of this EA, are as follows:

1. Fish, wildlife, and plants
 - a. Threatened, endangered, and candidate species
 - b. Birds of conservation concern
 - c. Migratory birds
 - d. Bald and golden eagles
 - e. Other fish, wildlife, and plants
2. Fire Management
3. Construction (Roads, powerlines, waterlines, and other developments)
4. Livestock grazing
5. Land use
6. Ecologically critical areas, Wild and Scenic Rivers, or other unique natural areas
7. Gypsum mining operations
8. Recreation
9. Socioeconomics
10. Cultural or historic resources

RESOURCES WITH NO POTENTIAL EFFECTS

Federal regulations (40 CFR §1500 et seq.) require that certain topics be addressed as part of a NEPA analysis. The Service reviewed the mandatory topics listed below and determined that the proposed action has no potential to affect them. These topics have been dismissed from detailed analysis in this document.

ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Critical habitat designation for the Gierisch mallow is not likely to increase energy consumption.

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URBAN QUALITY AND DESIGN OF THE BUILT ENVIRONMENT

The proposed critical habitat segments specifically exclude urban or other built environments by text and therefore would not affect the quality of such environments.

PRIME AND UNIQUE AGRICULTURAL LANDS

Prime agricultural land is defined (7 U.S.C. 4202(a)) as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. No prime agricultural land occurs within the proposed critical habitat (NRCS 1997).

PUBLIC HEALTH AND SAFETY

Actions taken to protect and manage critical habitat for the Gierisch mallow would not introduce dangers likely to threaten public health or safety.

CLIMATE CHANGE

Climate change could have an effect of unknown strength on the species. However, any effects of designation of critical habitat on climate change are likely to be insignificant.

Conservation actions taken to recover the population may involve driving, which would increase production of greenhouse gasses. However, the production would be so minor compared to other sources of greenhouse gasses, the conservation actions would not contribute to climate change. It is unlikely that designation of critical habitat would result in conservation actions being taken in addition to the actions taken for recovering the population. Therefore the impact of critical habitat designation on climate change would be insignificant.

FLOODPLAINS AND WETLANDS

No wetlands occur within or near the proposed critical habitat units (USFWS 2012e). No floodplains occur within or near the proposed critical habitat units (FEMA 2012).

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ENVIRONMENTAL JUSTICE

The critical habitat units proposed are entirely on federal and state lands and are not occupied by any communities. Therefore there is no expected impact Environmental Justice impact from the proposal to designate critical habitat.

TRIBAL TRUST RESOURCES

There are no known tribal resources within the critical habitat units.

INDIAN SACRED SITES

Each executive branch agency with statutory or administrative responsibility for the management of Federal lands is required, to the extent practicable, permitted by law, and not clearly inconsistent with agency functions, to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners. They shall also avoid adversely affecting the physical integrity of the sacred sites. Where appropriate, agencies will maintain the confidentiality of sacred sites (Executive Order 13007). As far as we know, no Indian sacred sites are known to occur within the critical habitat units.

DECISION TO BE MADE

The decision to be made by the Secretary of the Department of the Interior is whether to designate critical habitat for the Gierisch mallow, and if critical habitat is designated, which lands will be critical habitat.

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CHAPTER 2: ALTERNATIVES

DEVELOPMENT OF ALTERNATIVES

The Service used the best scientific and commercial data available to propose areas for critical habitat within the geographical area occupied at the time of listing that contain the features essential to the conservation of the Gierisch mallow. The Service also considered all comments received from agencies and the public on the proposed rule for designating critical habitat for the Gierisch mallow.

ALTERNATIVE A: NO ACTION ALTERNATIVE

No critical habitat would be designated under this alternative. Gierisch mallow, if listed, would be protected as an endangered species under the Endangered Species Act of 1973, as amended, but critical habitat would not be designated. An analysis of a No Action Alternative is required by NEPA, and provides a baseline for analyzing effects of the action alternatives. Analysis of this alternative describes the existing environment and consequences that are anticipated as a result of the proposed listing of the species without the designation of critical habitat.

ALTERNATIVE B: CRITICAL HABITAT DESIGNATION

Gierisch mallow would be listed and protected as an endangered species under the Endangered Species Act of 1973, as amended. Two critical habitat units would be designated under this alternative. Unit 1, Starvation Point, consists of approximately 1339 ha (3,308.7 ac) and is located west of I-15 as it crosses the State line of Arizona and Utah, and is bounded by the Virgin River to the west and I-15 to the south and east (Figure 1). Unit 2, Black Knolls, consists of approximately 3,850 ha (9,513.30 ac) and is located south of I-15 as it crosses the State line of Arizona and Utah, and is bounded by Black Rock Gulch to the west and Mokaac Mountain to the south and east. The proposed units include Mohave County, Arizona and Washington County, Utah. The designations in these units total 12,822 acres (5,189 ha). Overall, Federal lands account for 88.8% of the proposed acreage and Arizona State Lands account for 11.2 % of the

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proposed acreage. No private lands occur within the proposed critical habitat units. Analysis of this alternative describes the environmental consequences that are anticipated as a result of the designation of critical habitat.

All units proposed to be designated as critical habitat are currently occupied by the Gierisch mallow and contain the PCEs essential to support the life-history needs of the species.

ALTERNATIVE C: CRITICAL HABITAT WITH EXCLUSION OF MINES

Alternative C would designate 4838 ha (11,955 ac) of critical habitat. This alternative resulted from public scoping of the proposed listing and critical habitat rule and would include the same units as Alternative B, except the Black Rock Gypsum Mine (including a proposed expansion area) and the Georgia-Pacific Mine would be excluded from critical habitat designation. The Black Rock Gypsum Mine is on Arizona Strip BLM lands, approximately 4 miles south of Interstate 15 (I-15) and currently encompasses approximately 81 ha (200 ac) (BLM 2009). Western Mining and Minerals, Inc. (WMMI) is proposing to expand its operation onto the Twisted Hills area, which encompasses approximately 92 ha (227 acres) of unpatented claims (BLM 2009). The Georgia-Pacific Mine is on Arizona State Trust lands in the Starvation Point Unit and currently encompasses approximately 178 ha (440 ac) of lands leased from the State of Arizona.

The rationale for excluding these areas is that their exclusion would provide an economic benefit to the community. Under section 4(b)(2) of the ESA, the Service may exclude areas from critical habitat designation if it is determined that the benefit of excluding the area outweighs the benefit of its inclusion in the designation, so long as the exclusion will not result in the extinction of the species.

As with Alternative B, all units proposed to be designated as critical habitat are currently occupied by the Gierisch mallow and contain the PCEs essential to support the life-history needs of the species. Developed areas, such as lands covered by buildings, pavement, and other structures are specifically excluded by text in the proposed rule (77 FR 49912).

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CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

METHODOLOGY

Descriptions of the affected environment presented in this section are based on a number of sources. These include:

- Published literature
- Available state and federal agency reports and management plans
- The proposed rule for designation of critical habitat
- The draft economic analysis

The evaluation of impacts in this chapter focuses on costs and outcomes of additional Section 7 consultations resulting from the designation of critical habitat for the Gierisch mallow over and above those needed as a result of the species being listed under ESA. Impacts may also include additional analysis and time for evaluating impacts to critical habitat as well as to the species. Impacts of additional or more complicated analysis may include the following:

1. Additional expenditures of effort and money by federal agencies, including the Service, and nonfederal proponents to complete the consultations.
2. Additional effort and costs to implement the reasonable and prudent alternatives and (possibly) discretionary conservation recommendations specified in biological opinions in which adverse modification was concluded.

ECONOMIC ANALYSIS

A separate Draft Economic Analysis was conducted by Industrial Economics Incorporated (IEc 2013) to assess the potential economic effects of critical habitat designation.

FISH, WILDLIFE, AND PLANTS

EXISTING CONDITIONS

THREATENED, ENDANGERED, AND CANDIDATE SPECIES

A number of threatened, endangered or candidate species occur in or near the proposed critical habitat units. Those likely to occur with Mohave County, AZ and Washington County, UT are shown in Table 2.

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Table 2. Threatened, endangered, and candidate species in Mohave County, AZ and Washington County, UT.

COMMON NAME	SCIENTIFIC NAME	TAXONOMIC GROUP	STATUS*	CRITICAL HABITAT IN ACTION AREA?
Relict leopard frog	<i>Lithobates (Rana) onca</i>	Amphibians	C	N
American peregrine falcon	<i>Falco peregrinus anatum</i>	Birds	DL	N
Bald eagle	<i>Haliaeetus leucocephalus</i>	Birds	DL	N
California brown pelican	<i>Pelecanus occidentalis californicus</i>	Birds	DL	N
California condor	<i>Gymnogyps californianus</i>	Birds	E	N
California least tern	<i>Sterna antillarum browni</i>	Birds	E	N
Greater sage-grouse	<i>Centrocercus urophasianus</i>	Birds	C	N
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Birds	T	N
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Birds	E	Y
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Birds	C	N
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	Birds	E	N
Bonytail chub	<i>Gila elegans</i>	Fish	E	N
Humpback chub	<i>Gila cypha</i>	Fish	E	N
Razorback sucker	<i>Xyrauchen texanus</i>	Fish	E	N
Roundtail chub	<i>Gila robusta</i>	Fish	C	N
Virgin River chub	<i>Gila seminuda</i>	Fish	E	Y
Virgin spinedace	<i>Lepidomeda mollispinis mollispinis</i>	Fish	CA	N

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Habitat for the Gierisch Mallow*

COMMON NAME	SCIENTIFIC NAME	TAXONOMIC GROUP	STATUS*	CRITICAL HABITAT IN ACTION AREA?
Woundfin	<i>Plagopterus argentissimus</i>	Fish	E	Y
Gray Wolf	<i>Canis lupus baileyi</i>	Mammals	E	N
Hualapai Mexican vole	<i>Microtus mexicanus hualpaiensis</i>	Mammals	E	N
Utah Prairie-dog	<i>Cynomys parvidens</i>	Mammals	T	N
Arizona cliffrose	<i>Purshia subintegra</i>	Plants	E	N
Dwarf Bearclaw-poppy	<i>Arctomecon humilis</i>	Plants	E	N
Fickeisen plains cactus	<i>Pediocactus peeblesianus var. fickeiseniae</i>	Plants	PE	N
Holmgren (Paradox) milk vetch	<i>Astragalus holmgreniorum</i>	Plants	E	Y
Jones cycladenia	<i>Cycladenia humilis var. jonesii</i>	Plants	T	N
Shivwits or Shem Milkvetch	<i>Astragalus ampullarioides</i>	Plants	E	N
Siler pincushion cactus	<i>Pediocactus sileri</i>	Plants	T	N
Sonoran desert tortoise	<i>Gopherus morafkai</i>	Reptiles	C	N
Mojave desert tortoise	<i>Gopherus agassizii</i>	Reptiles	T	N

* E = endangered, T=threatened, C=candidate, DL=delisted, CA=conservation agreement, PE=proposed endangered, PT=proposed threatened

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Species with critical habitat overlapping the same geographic area as Gierisch mallow include, Southwestern willow flycatcher (*Empidonax traillii extimus*), woundfin (*Plagopterus argentissimus*), and Virgin River chub (*Gila seminuda*) (USFWS 2012d). Critical habitat for Gierisch mallow touches the boundary of critical habitat for Holmgren milk-vetch (*Astragalus holmgrenorium*).

Holmgren milk-vetch requires shallow, sparsely vegetated soils derived primarily from the Virgin limestone member of the Moenkopi Formation (USFWS 2012e). Holmgren milk-vetch is a principal member of a warm-desert shrub vegetative community at 823 to 854 m (2,700 to 2,800 ft) elevation. The species is found under limestone ridges and along draws in gravelly clay hills (USFWS 2012e).

Southwestern willow flycatcher is associated with densely vegetated riparian areas. PCEs for this species include riparian vegetation and insect prey populations as described in the proposed rule (76 FR 50551)

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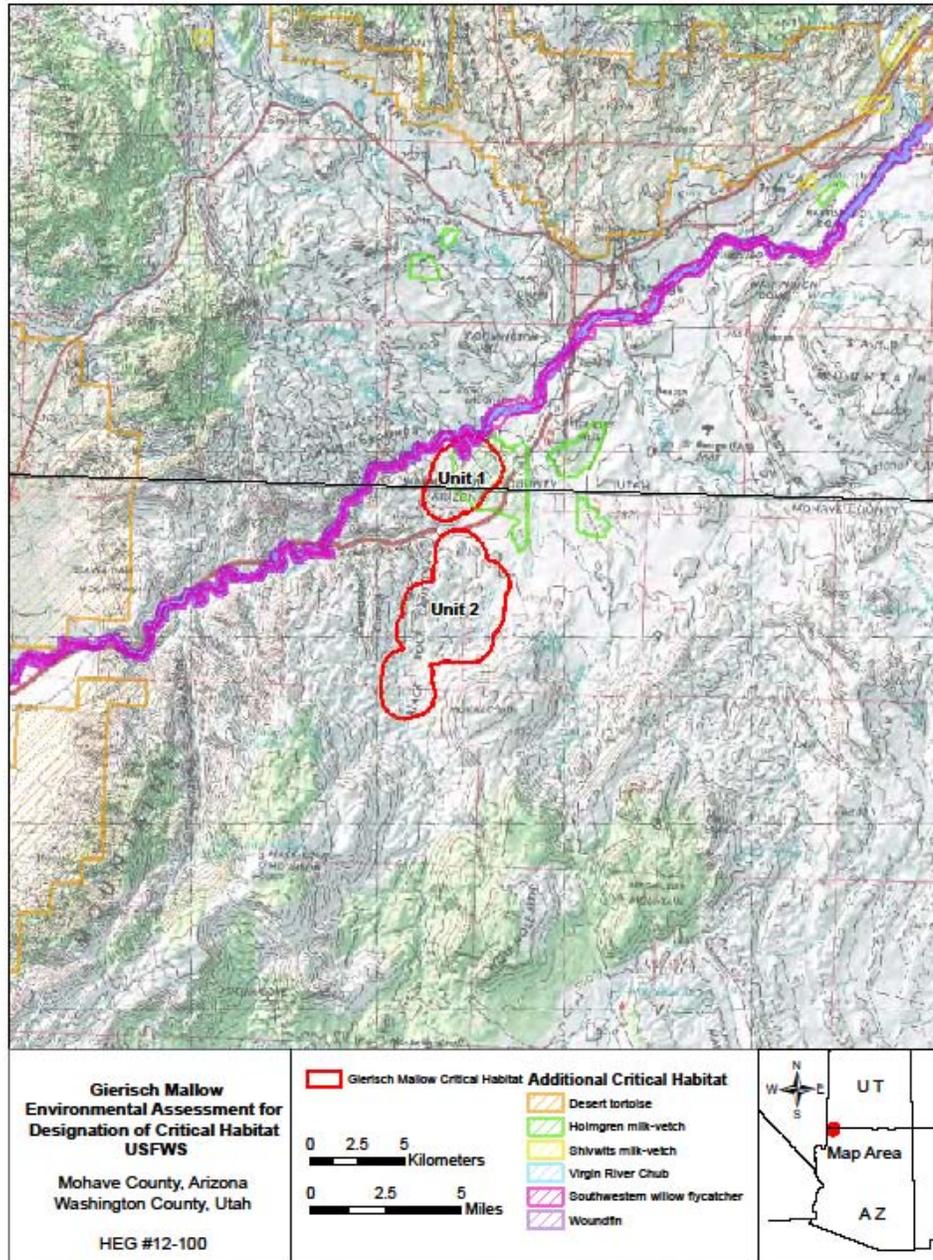


Figure 2. Critical habitat for other listed species near proposed critical habitat units for Gierisch mallow.

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Woundfin require shallow, warm, turbid, fast-flowing water (USFWS 2009a). This fish tolerates high salinities and relatively warm water temperatures. It is found below 1,372 m (4,500 ft) in elevation (USFWS 2009a).

Virgin River chub are most common in deeper areas where waters are swift, but not turbulent, as is generally associated with boulders or other cover (USFWS 2009). It occurs over sand and gravel substrates in water less than 30° C (86° F), and is very tolerant of high salinity and turbidity. It is found below 1,372 m (4,500 ft) in elevation (USFWS 2009b).

Although Holmgren milk-vetch, southwestern willow flycatcher, woundfin, and Virgin River chub have critical habitat in the same geographic area as the Gierisch mallow, their habitat needs are quite different from those of Gierisch mallow and PCEs for these species do not overlap with those of Gierisch mallow.

Other Federally-listed species that do not have critical habitat within the proposed units, but may have individuals or populations occurring within the proposed critical habitat units for the Gierisch mallow include: California condor (*Gymnogyps californianus*), and the Mojave population of desert tortoise (*Gopherus agassizii*).

BIRDS OF CONSERVATION CONCERN

All agencies are required to consider in planning documents, including NEPA documents, all Birds of Conservation Concern by Executive Order 13186. Proposed Critical Habitat units for the Gierisch mallow are in Bird Conservation Region (BCR) Number 16. Species occurring within the critical habitat units include those typical of Mojave desertscrub.

MIGRATORY BIRDS

The Migratory Bird Treaty Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition, this act serves to protect environmental conditions for migratory birds from pollution or other ecosystem degradations. Bird species protected by the Migratory Bird Treaty Act Species Act can be found at: <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtandx.html>

Nearly all bird species occurring on the proposed critical habitat are protected under this act.

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BALD AND GOLDEN EAGLES

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668c). Bald eagles occur in the general area as winter residents. However, no nesting or roosting habitat is known in the proposed critical habitat units. Bald eagles may occasionally forage along the Virgin River. The nearby Virgin River Gorge provides habitat for golden eagles, which may also forage in the proposed critical habitat units.

OTHER FISH, WILDLIFE, AND PLANTS

Gierisch mallow is associated with Mojave Mid-Elevation Mixed Desert Scrub ecological system (CES 302.742) (Natureserve 2011). Codominants and diagnostic species include *Coleogyne ramosissima*, *Eriogonum fasciculatum*, *Ephedra nevadensis*, *Grayia spinosa*, *Lycium* spp., *Menodora spinescens*, *Nolina* spp., *Opuntia acanthocarpa*, *Salazaria mexicana*, *Viguiera parishii*, *Yucca brevifolia*, or *Yucca schidigera* (Natureserve 2011). Less common are stands with scattered Joshua trees and a saltbush short-shrub layer dominated by *Atriplex canescens*, *Atriplex confertifolia*, or *Atriplex polycarpa*, or occasionally *Hymenoclea salsola* (Natureserve 2011). Desert grasses, including *Achnatherum hymenoides*, *Achnatherum speciosum*, *Muhlenbergia porteri*, *Pleuraphis jamesii*, *Pleuraphis rigida*, or *Poa secunda*, may form an herbaceous layer. Scattered *Juniperus osteosperma* or desert scrub species may also be present (NatureServe 2011).

The vegetation type of the proposed Black Rock Gypsum mine expansion area is typical of the critical habitat units. This area consists of Mojave Desert Scrub with components of Great Basin Desert Scrub (BLM 2009). Creosote-bush (*Larrea tridentata*) and shadscale (*Atriplex confertifolia*) dominate the vegetation of the mine expansion area (BLM 2008). Other plant species identified within the proposed critical habitat include desert needlegrass (*Achnatherum speciosum*), white bur-sage (*Ambrosia dumosa*), big sagebrush (*Artemisia tridentata*), baccharis (*Baccharis* sp.), red brome (*Bromus madritensis* ssp. *rubens*), desert paintbrush (*Castilleja chromosa*), rattlesnake weed (*Chamaesyce albomarginata*), blackbrush (*Coleogyne ramosissima*), cliffrose (*Cowania mexicana*), hiddenflower (*Cryptantha* sp.), silver cholla (*Cylindropuntia echinocarpa*), calico cactus (*Echinocereus engelmannii*), brittlebush (*Encelia* sp.), Nevada jointfir (*Ephedra nevadensis*), desert trumpet (*Eriogonum inflatum* var. *inflatum*), fluff-grass (*Erioneuron pulchellum*), red-stem stork's bill (*Erodium cicutarium*), hop-sage (*Grayia*

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spinosa), cheesebush (*Hymenoclea salsola*), winterfat, (*Krascheninnikovia lanata*), desert pepperweed (*Lepidium fremontii*), purple aster (*Machaeranthera* sp.), fishhook cactus (*Mammillaria tetrancistra*), smoothstem blazingstar (*Mentzelia laevicaulis*), giant four o'clock (*Mirabilis multiflora* var. *glandulosa*), Porter's muhly (*Muhlenbergia porteri*), Mojave pricklypear (*Opuntia polyacantha* var. *erinacea*), wooly plantain (*Plantago patagonica* var. *patagonica*), big galleta (*Pleuraphis rigida*), desert almond (*Prunus fasciculata*), Fremont's dalea (*Psorothamnus fremontii*), Russian thistle (*Salsola tragus*), purple sage (*Salvia dorrii* var. *pilosa*), desert hollyhock (*Sphaeralcea ambigua*), chinchweed (*Pectis papposa*), desert straw (*Stephanomeria pauciflora*), California barrel cactus (*Ferocactus cylindraceus*), bractscale (*Atriplex sernana*), and banana yucca (*Yucca baccata*), Hidden flower (*Cryptantha* sp.), kidneyshaped buckwheat (*Eriogonum subreniforme*), and desert fluff-grass (*Erioneuron pulchellum*) (BLM 2009). In the area that would be used for the mine expansion, two Arizona listed salvage restricted cacti species were identified during a biological survey conducted by the BLM, the clustered barrel cactus (*Echinocactus polycephalus* var. *polycephalus*) and the straw-top cholla (*Opuntia echinocarpa*) (Kay, et al 2007a, in BLM 2009).

BLM Sensitive species/AGFD species verified to occur within the Black Rock Mine area of the critical habitat units include the following (BLM 2009):

- Western small-footed myotis (*Myotis ciliolabrum*) BLM sensitive
- Fringed myotis (*Myotis thysanodes*) BLM sensitive
- Big free-tailed bat (*Nyctinomops macrotis*) BLM sensitive
- Long-legged myotis (*Myotis volans*) BLM sensitive
- Long-eared myotis (*Myotis evotis*) BLM sensitive
- Spotted bat (*Euderma maculatum*) AGFD species of greatest conservation concern

Other species recorded in the area include chukar, quail, and rabbits, Great Basin collared lizard (*Crotaphytus bicinctores*), long-nosed leopard lizard (*Gambelia wislizenii*), packrat (*Neotoma* sp.), white-tailed antelope squirrel (*Ammospermophilus leucurus*) black-throated sparrow (*Amphispiza bilineata*), red-tailed hawk (*Buteo jamaicensis*), house finch (*Haemorhous mexicanus*), black-tailed gnatcatcher (*Poliophtila melanura*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*) (BLM 2009). Desert bighorn sheep habitat also occurs in the area (BLM 2009).

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ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A (NO ACTION)

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under the jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented and would benefit Gierisch mallow.

Other listed species are also likely to benefit from the improvements in Mojave desertscrub communities resulting from recovery actions for Gierisch mallow. Holmgren milk-vetch and desert tortoise are likely to benefit if the vegetation structure and species composition of Mojave Desert plant communities are improved as a result of these actions. Grazing currently occurs within critical habitat of the Holmgren milk-vetch. Relocation of grazing, mining, or OHV use from areas occupied by Gierisch mallow to other areas could conceivably have an adverse impact on populations of or critical habitat for the Holmgren milk-vetch or individuals of desert tortoise, however this is highly unlikely as Section 7 consultation would also address these species.

Riverine and riparian-associated listed species (Southwestern willow flycatcher, woundfin, and Virgin River chub) may also benefit from habitat restoration actions proposed to aid recovery of the Gierisch mallow. Measures taken to reduce or prevent soil compaction or disturbance may improve hydrologic functioning of watersheds supporting these federally-listed species associated with riparian and riverine habitat along the Virgin River. Similarly, measures taken to promote a native plant community may also promote better watershed functioning. Grazing occurs within critical habitat for the Southwestern willow flycatcher, but is seasonally deferred. A change in amount or timing of grazing in Southwestern willow flycatcher critical habitat that results from measures to protect the Gierisch mallow in other pastures on the same allotment could have a detrimental impact on southwestern willow flycatcher or its critical habitat. However such an impact is highly unlikely as Section 7 consultation would also address this species.

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Conservation actions to improve habitat for Gierisch mallow, such as control of invasive plant species, could benefit California condor, peregrine falcon, migratory birds, Bald and golden eagles, or Birds of Conservation Concern. These actions could also benefit other wildlife and plants native to Mojave Desert.

ALTERNATIVE B (DESIGNATION OF CRITICAL HABITAT)

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

Other listed species are likely to benefit from the improvements in Mojave desertscrub communities resulting from recovery actions for Gierisch mallow. In addition to recovery actions, improvements would come about as a result of Conservation Measures, recommendations in Biological Opinions, or mitigation proposed in other planning documents for actions affecting Gierisch mallow critical habitat. Holmgren milk-vetch and desert tortoise are likely to benefit if the vegetation structure and species composition of Mojave desertscrub is improved in critical habitat. These beneficial effects would not be significant because most would already be implemented

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as a result of listing alone. Grazing currently occurs within critical habitat of the Holmgren milk-vetch. Grazing also occurs in areas occupied by desert tortoise. Movement of grazing from Gierisch mallow critical habitat to other areas could conceivably have an adverse impact on desert tortoise or Holmgren milk-vetch or its critical habitat but such effects are unlikely. Any potential impacts are unlikely to be different than what would occur if critical habitat were not designated; therefore designation of critical habitat would have no effect on Holmgren milk-vetch or desert tortoise.

Riverine and riparian-associated listed species (Southwestern willow flycatcher, woundfin, and Virgin River chub) may also benefit from actions taken to improve critical habitat for Gierisch mallow. Measures taken to reduce or prevent soil compaction or disturbance may have a beneficial impact on watershed conditions, which may improve hydrologic functioning of the watershed supporting listed species associated with riparian and riverine habitat along the Virgin River. Similarly, measures taken to reduce invasive species and promote native plant communities may also promote better watershed functioning. The difference in amount or quality of habitat improvement resulting from designation of critical habitat versus that resulting from recovery planning is unlikely to be substantial. Grazing occurs within critical habitat for the Southwestern willow flycatcher, but is seasonally deferred. A change in amount or timing of grazing could have a detrimental impact on southwestern willow flycatcher or its critical habitat. However any potential impacts are unlikely to be different than what would occur if critical habitat were not designated, therefore designation of critical habitat would have no effect on Southwestern willow flycatcher, woundfin, or Virgin River chub.

The proposed designation of critical habitat for the Gierisch mallow would not negatively affect California condor, peregrine falcon, migratory birds, Bald and golden eagles, or Birds of Conservation Concern because it would not cause degradation of their habitat or take of birds or their nests. Conservation actions to improve habitat for Gierisch mallow, such as control of invasive plant species, could benefit California condor, peregrine falcon, migratory birds, Bald and golden eagles, or Birds of Conservation Concern. These actions could also benefit other wildlife and plants native to Mojave Desert. These beneficial effects would not be significant because most of the actions would already be implemented as a result of listing alone.

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ALTERNATIVE C

This alternative would exclude the mine areas from critical habitat designation. These two areas contain a significant proportion of the Gierisch mallow population. The proposed Black Rock Mine expansion area supports between 5,000 and 9,000 Gierisch mallow plants (Hughes 2012), the largest population in Arizona and almost half of the total Gierisch mallow population rangewide. The Georgia-Pacific Mine is on Arizona State Land Department lands and encompasses 178 ha (440 ac). Current mining operations are near a population of approximately 2,000–3,000 Gierisch mallow plants.

Although a large portion of Gierisch mallow habitat would be excluded under this alternative, exclusion of mines from designation of critical habitat would not reduce protection of Gierisch mallow habitat compared to Alternative B because the excluded areas are occupied by Gierisch mallow and actions in these areas would already be subject to Section 7 consultation under the jeopardy standard.

The effects of implementing this alternative would not differ from Alternative B for other fish, wildlife and plants.

FIRE MANAGEMENT

EXISTING CONDITIONS

In 2003, the BLM Arizona State Office amended its six RMPs and one MFP to address modern wildland fire management concerns. The amendments involved section 7 consultation with the Service regarding conservation measures for threatened, endangered, and candidate species. At this time, the mallow was not specifically considered as a candidate species, but the plan does include measures for other sensitive species that may also benefit the mallow. Upon listing and designation of critical habitat for the mallow, the Service will need to formally reinstate this consultation with the BLM to consider the mallow and its habitat.

The BLM St. George District does not have fire management areas. The BLM Arizona Strip portions of the proposed critical habitat are within the fire use category *Non Wildland Fire Use: Areas not suitable for wildland fire use for resource management benefit* in the 2008 Resource Management Plan (BLM 2008). Because the Gierisch

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mallow is a Candidate species, it is automatically considered a BLM Special Status Plant Species and the following Conservation Measures for fire suppression activities apply:

Conservation Measures for Special Status Plants

PL-1. Management Guidance for Fire Suppression and Related Actions

PL-1.A. Known locations and potential habitat for plant populations will be mapped to facilitate planning for wildland fire use, prescribed fires, and vegetation treatments, and to ensure protection of these populations during fire suppression.

PL-1.B. Delineate buffer areas around plant populations prior to prescribed fire and vegetation treatment activities. Coordinate with the USFWS during any emergency response and wildland fire use activities to ensure protection of plant populations from fire and fire suppression activities.

PL-1.C. No staging of equipment or personnel will be permitted within 100 meters of identified individuals or populations of special status plant species during fire suppression, wildland fire use, or prescribed fire. Off-road vehicles will not be allowed within the 100-meter buffer area, unless necessary for firefighter or public safety or the protection of property, improvements, or other resources.

PL-1.D. No prescribed burning will be implemented within 100 meters of identified locations or unsurveyed suitable habitat of special status plant species unless specifically designed.

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Conservation Measures for special status plants for fire management activities under the 2008 Arizona Strip District RMP and the Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management would continue to apply under this alternative. Also, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

The BLM would need to reinitiate Section 7 consultation with the Service on the RMPs and fire management plans as a result of listing the Gierisch mallow. Analysis under the

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adverse modification standard would not be required because no critical habitat would be designated.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP and the Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

Critical habitat designation would have no other effects on fire management.

ALTERNATIVE C

Designation of critical habitat with exclusions would not have any different effect on fire management than Alternative B.

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CONSTRUCTION (ROADS, POWERLINES, WATERLINES, AND OTHER DEVELOPMENTS)

EXISTING CONDITIONS

The proposed critical habitat area is remote and development is limited to the mines, roads, and fencing and other structures for grazing management. The BLM has approved a water pipeline ROW for the Black Rock Gypsum mine (BLM 2009).

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented.

The BLM may need to reinitiate Section 7 consultation with the Service on projects involving construction as a result of listing the Gierisch mallow. Consultation on the BLM Resource Management plans for each district may need to be reinitiated.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of

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consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

Designation of critical habitat would have no other effects on construction.

ALTERNATIVE C

The effects of implementing this alternative on construction would be the same as alternative B, except that the number of consultations requiring additional analysis under the adverse modification standard would be slightly fewer than Alternative B because construction in the mine areas would be excluded. Those consultations would still require analysis under the jeopardy standard. The effects of this additional analysis and its resultant administrative burden over the No Action Alternative would be minor. Therefore critical habitat designation with exclusions would have no effect on construction.

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LIVESTOCK GRAZING

EXISTING CONDITIONS

The Black Rock, Lambing-Starvation, and Purgatory grazing allotments in Arizona, and the Curly Hollow allotment in Utah each contain Gierisch mallow populations.

The Black Rock Allotment comprises 15,250 ha (37,685 ac), which are grazed year-round, but portions of the allotment are rested every year. Grazing is usually alternated between two pastures on this allotment so that each pasture gets one year of rest followed by one year of use. The 1,152 ha (2,856 ac) of the allotment that occurs on the Black Rock Gypsum Mine is not available for grazing.

The Lambing-Starvation allotment contains 5,446 ha (13,457 ac) of BLM and ASDL lands and is grazed from November 16 through May 15 each year. The BLM oversees the management of this allotment, including the ASDL portion. Two of the three pastures contain Gierisch mallow and the third contains southwestern willow flycatcher critical habitat. The pasture with southwestern willow flycatcher critical habitat is restricted seasonally, causing livestock to spend more time in the two pastures containing Gierisch mallow.

The Purgatory allotment encompasses 1,985 ha (4,095 ac) in a single pasture that is grazed from December 1 through May 31 each year. Only a small portion of a Gierisch mallow population occurs within this allotment.

The Curly Hollow allotment in Utah is comprised of 9,102 ha (22,500 ac) of BLM land and 2226 ha (5,500 ac) of Utah State Trust land. Gierisch mallow occurs only on one of the four pastures: the River Pasture, and is usually grazed from November 1 through February 28 each year.

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by

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the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented.

- Because each of the four allotments is administered by the BLM, each has a federal nexus and is subject to Section 7 consultation. Under this alternative Section 7 consultation would include analysis of potential jeopardy to the species but not analysis of adverse modification of critical habitat. Conservation measures recommended as a result of Section 7 consultation may include management actions such as constructing fencing, altering seasons or rotations to avoid the reproductive season, management of water trough or salt lick placement, or other management actions to recover the Gierisch mallow. Reduction or elimination of grazing is highly unlikely. Costs of actions would be provided by federal, state, or private conservation funding sources and not be borne by the ranchers.

The BLM may need to reinitiate Section 7 consultation with the Service on the RMP and grazing allotment management plans as a result of listing the Gierisch mallow. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP and allotment management plans as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under

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the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

ALTERNATIVE C

Implementation of this alternative would be no different than discussed for Alternative B, because livestock grazing does not occur in the mine areas that would be excluded from critical habitat designation. Implementation of this alternative would have no effect on livestock grazing.

LAND USE

This section discusses potential effects under the No Action and Action Alternative on land use designations. Land management is discussed under the various sections on livestock grazing; fire management; gypsum mining; recreation; and fish, wildlife, and plants.

EXISTING CONDITION

Proposed critical habitat for the Gierisch mallow includes two recovery units that include portions of Mohave County, Arizona and Washington County, Utah. The designations in these units total 12,822 acres (5,189 ha). Overall, Federal Department of Interior (BLM) lands account for 88.8% of the proposed acreage and Arizona State Trust Land accounts for 11.2 % of the proposed acreage. No private lands or lands managed by other federal, state, or local agencies occur within the proposed critical habitat units.

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The current land use plan for the Arizona Strip District of the BLM is the *Arizona Strip Field Office Resource Management Plan*, completed in 2009. The current land use plan for the St. George Field Office is the *St. George Field Office Record of Decision and Resource Management Plan, 1999*. These RMPs outline land use allocations, management actions, and implementation decisions.

Of particular relevance to designation of critical habitat is the designation of Areas of Critical Environmental Concern (ACEC). The Omnibus Public Land Management Act of 2009 directed the St. George Field Office to identify areas in Washington County where “biological conservation is a priority” and to “undertake activities to conserve and restore plant and animal species and natural communities within such areas.” To fulfill this mandate, the St. George Field Office Resource Management Plan must be amended to designate additional Areas of Critical Environmental Concern (ACECs) for the conservation of biological resources and natural communities. The public has been invited to provide information about at risk species and areas where conservation could be a priority and to nominate these areas for consideration as ACECs. The Utah Native Plant Society nominated the Little Round Valley, which includes one of the Gierisch mallow occurrences in Utah, as an area of critical environmental concern in July of 2010. However, no action has been taken on the designation. While designation of an ACEC does not automatically restrict other uses, it does allow the BLM to focus management on the resource of concern.

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

The BLM may need to reinitiate Section 7 consultations with the Service on the RMPs as a result of listing the Gierisch mallow. Analysis under the adverse modification standard would not be required because no critical habitat would be designated. The listing of Gierisch mallow could draw public attention to the need to protect the plant. This attention could influence public comments on the Saint George RMP revision and result

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in designation of additional ACECs. Section 7 consultation would be necessary on the RMP revision.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

Critical habitat designation would not itself regulate land uses themselves and therefore would have no effect on land use. Land use designations may change as a result of changes to BLM policies and guidelines in the RMP, but these changes would result from ESA listing, not critical habitat designation. Therefore critical habitat designation would have no effect on land use due to any regulatory change.

The designation of critical habitat for Gierisch mallow could draw public attention to the need to protect the plant. This attention could influence public comments on the Saint George RMP revision and result in designation of additional ACECs. However, it is

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unlikely that the influence would be more than that of the listing alone. Therefore critical habitat designation could have a minor and indirect effect on land use designation changes through changing public perceptions and opinions.

ALTERNATIVE C

The effects of implementing this alternative would be the same as for Alternative B.

ECOLOGICALLY CRITICAL AREAS, WILD AND SCENIC RIVERS, OR OTHER UNIQUE NATURAL RESOURCES

EXISTING CONDITIONS

Lower Virgin River ACEC and Virgin River Corridor ACEC and Black Knolls ACEC all overlap with Unit 1 (Figure 3). The Utah Native Plant Society nominated the Little Round Valley, which includes one of the Gierisch mallow occurrences in Utah, as an area of critical environmental concern in July of 2010. However, no action has been taken on the designation.

Virgin River is designated as Wild and Scenic downstream from Unit 1. Unit 2 is near, but not in, an area managed for wilderness characteristics.

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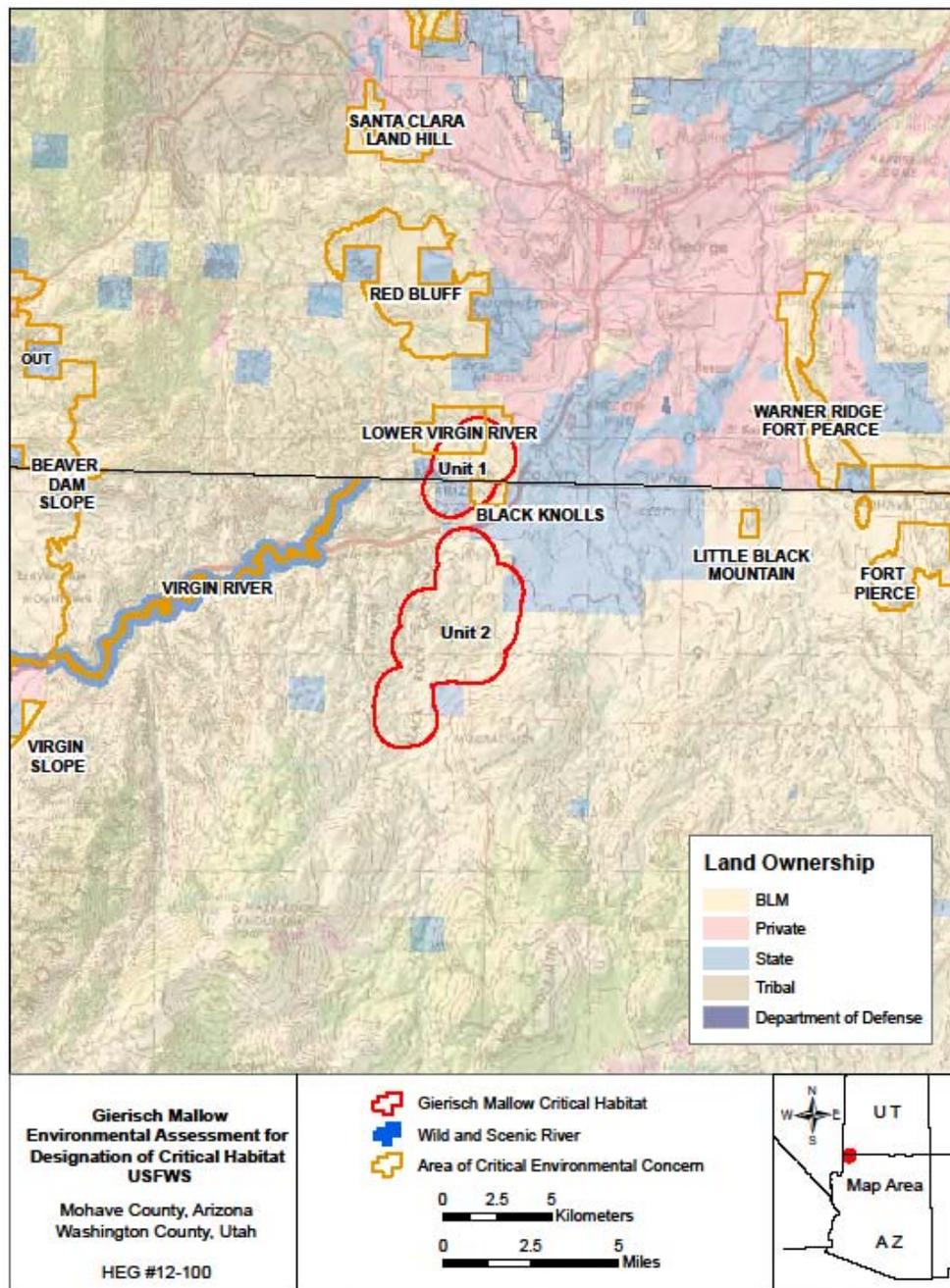


Figure 3. Location of Areas of critical environmental concern and wild and scenic rivers near proposed critical habitat for Gierisch mallow.

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ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

Critical habitat designation would have no effect on ecologically critical areas, wild and scenic rivers, or other unique natural resources because no activities resulting from

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designation would disturb scenic vistas, hydrologic function, or native species composition. Activities are instead likely to improve hydrologic function and native species composition of the critical habitat, which would benefit other plants and animals of the ACECs. These beneficial effects would not be significant because most of the actions would already be implemented as a result of listing alone.

ALTERNATIVE C

The effects of implementing this alternative would be the same as for Alternative B: critical habitat designation with exclusions would have no effect on ecologically critical areas, wild and scenic rivers, or other unique natural resources

GYPSUM MINING OPERATIONS

EXISTING CONDITIONS

Gypsum is a locatable mineral, and gypsum mining is, therefore, subject to the Mining Law of 1872. The BLM implements the Mining Law through Federal regulations, 43 CFR part 3800. On BLM-managed lands, mining occurs pursuant to the Mining Law of 1872 (30U.S.C. 21 *et seq.*), which was enacted to promote exploration and development of domestic mineral resources, as well as the settlement of the western United States. It permits U.S. citizens and businesses to freely prospect hardrock (locatable) minerals and, if a valuable deposit is found, file a claim giving them the right to use the land for mining activities and sell the minerals extracted, without having to pay the Federal government any holding fees or royalties.

Georgia-Pacific operates a gypsum mine on ASLD land. This mine contains approximately 2,000–3,000 Gierisch mallow plants and encompasses 178 ha (440 ac). In addition to the Georgia-Pacific mine, there are several ASLD-issued exploration permits in the area on ASLD lands surrounding Hill 5. These are all relatively new claims, and no significant work has been done on them, yet some drilling was completed, but no other exploration or mining work has occurred. With the depressed housing market, the ASLD does not anticipate any gypsum mining will occur until the housing market improves (Dixon 2011).

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WMMI is currently operating the mine known as the Black Rock Gypsum Mine, formerly operated by Western Gypsum, Inc. (BLM 2009). The Black Rock Gypsum Mine is on the BLM managed lands in the Arizona Strip, approximately 4 miles south of Interstate 15 (I-15) at Exit 27. The area currently being mined is referred to as Domtar/East Ridge (BLM 2008). The Domtar/East Ridge quarry was first opened to the east and later progressed to the north and south. Currently, there are about 200 acres affected by the quarrying portion of the operation. The majority of the mining is progressing to the north with very limited activity in the southern end. The Domtar/East Ridge quarry will continue to increase in size over the life of the mine to 320 acres. However, mineable reserves in the quarry have been removed from certain areas within the quarry and these areas are now being backfilled (BLM 2009). Ultimately, the Domtar/East Ridge quarry will reach equilibrium with 100 acres being actively mined while the balance is in a phase of reclamation (BLM 2009).

In order to continue meeting production requirements, WMMI plans for new quarrying sites in an area known as the Twisted Hills (BLM 2009). The area they propose to expand into currently supports the largest portion of the Hill 4 population, estimated to be between 5,000 and 9,000 plants (Hughes 2008, p. 14), which comprises almost half of the entire population rangewide and most of the population in Arizona (77 FR 49898). The proposed expansion would remove, at least temporarily, the entire population and its habitat on Hill 4 (77 FR 49898).

The BLM Arizona Strip Field Office's 2008 RMP has a number of management actions in place that could protect listed plants at mines that are listed below:

MA-LR-06 - Individual land use authorizations (ROWS, permits, leases, easements) will be evaluated on a case-by-case basis in accordance with other RMP provisions and NEPA compliance. New land use authorizations will be discouraged within avoidance areas (i.e., Areas of Critical Environmental Concern [ACECs], lands supporting listed species, National Historic Trails, riparian areas, and areas managed to maintain wilderness characteristics) and allowed in such areas only when no reasonable alternative exists and impacts to these sensitive resources can be mitigated.

MA-MI-02 - Special mitigation will be required in mining plans of operation to avoid impacts to cultural resources, special status species, and/or other sensitive resources in ACECs.

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MA-MI-07 - Extraction of mineral resources will proceed consistent with protection of sensitive resources and achieving Desired Future Conditions.

MA-TE-20 Special mitigation will be required in mining plans of operation to avoid impacts to special status species or proposed or designated critical habitat. MA-TE-14 Prior to surface disturbing activity, a special status species review will be conducted by a qualified specialist.

MA-TE-15 Special status species habitat surveys will be required whenever surface disturbances occur within an area of known or suspected occupancy by special status species.

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented.

Arizona State Land Department currently claims no federal nexus and therefore gypsum mines on ASLD lands would not be affected by regulations imposed due to listing of the Gierisch mallow. The ASLD would not deny a mine, or any other project, based on the presence of an endangered or threatened species; however, they can have stipulations written into the ASLD lease or the mining company's reclamation plan that would require them to make allowances for federally listed species.

The BLM Arizona Strip Field Office could restrict surface occupancy on new mine sites to protect the Gierisch mallow. No restrictions are anticipated on existing programs and facilities. The BLM's Arizona Strip Field Office's approved RMP (2008) states:

No surface occupancy or use is allowed on the lands containing special status plant species habitat (federally listed species only). This restriction will not apply to

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maintenance and operation of existing programs and facilities. The authorized officer may grant exception on a case-by-case basis if it can be shown that:

- (1) Legal rights would be curtailed;*
- (2) The plants are not present in a specific project location, or;*
- (3) The activity can be conducted so as not to adversely affect the plants.*

Therefore the existing Black Rock Mine programs and facilities would not be affected by restrictions in the RMP triggered by ESA listing. Mine expansions into new areas, or new mines, might be restricted if the BLM authorized officer decides not to grant one of the exceptions listed above.

Conservation measures proposed for the Black Rock Mine in 2008 when the species had Candidate status included reseeded trials in reclaimed areas. If determined successful, and WMMI has generated an equivalent acreage of Gierisch mallow habitat to replace the current (2009) acreage of Gierisch mallow habitat that would be disturbed by mining, WMMI would no longer be required to harvest or reseed with Gierisch mallow (BLM 2008). These measures would likely continue with listing of the species.

The BLM may need to reinitiate Section 7 consultation with the Service on the Arizona Strip District RMP, the Black Rock Mine Plan of Operations, and others as a result of listing the Gierisch mallow. Consultation would proceed under the jeopardy standard.

ALTERNATIVE B

The BLM may need to reinitiate Section 7 consultation with the Service on the Arizona Strip District RMP, the Black Rock Mine Plan of Operations, and other mining plans as a result of designation of critical habitat for the Gierisch mallow.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase

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because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

Arizona State Land Department currently claims no federal nexus and therefore gypsum mines on ASLD lands would not be affected by regulations due to listing of the Gierisch mallow or designation of critical habitat. The ASLD would not deny a mine, or any other project, based on the presence of an endangered or threatened species; however, they can have stipulations written into the ASLD lease or the mining company's reclamation plan that would require them to make allowances for federally listed species. These stipulations would be the same if critical habitat is designated or not.

The BLM could restrict surface occupancy on new mine sites to protect the Gierisch mallow. The BLM Arizona Strip Field Office's approved RMP (2008) states:

No surface occupancy or use is allowed on the lands containing special status plant species habitat (federally listed species only). This restriction will not apply to maintenance and operation of existing programs and facilities. The authorized officer may grant exception on a case-by-case basis if it can be shown that:

- (1) Legal rights would be curtailed;*
- (2) The plants are not present in a specific project location, or;*
- (3) The activity can be conducted so as not to adversely affect the plants.*

Therefore the existing Black Rock Mine programs and facilities would not be affected by restrictions in the RMP triggered by ESA listing or designation of critical habitat. However, expansions into new areas, or new mines, might be affected because designation of critical habitat may alter the authorized officer's interpretation of (2)

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above. Without designation of critical habitat, the authorized officer may grant an exception if no Gierisch mallow plants were within the project footprint or immediate vicinity. He or she would not be likely to grant an exception if that same project area were in critical habitat. However, the land area affected by this difference in interpretation is likely to be very small because Gierisch mallow does occur throughout the critical habitat units. Therefore, designation of critical habitat could cause a slight and unknown decrease in the number of exceptions granted. The difference would be based on authorized officials' perceptions and therefore is impossible to quantify but is likely to be insignificant because all the critical habitat units are occupied.

Therefore, designation of critical habitat would have no effect on gypsum mining.

ALTERNATIVE C

The BLM may need to reinitiate Section 7 consultation with the Service on the Arizona Strip District RMP as a result of listing the Gierisch mallow and designating critical habitat. Because the consultation covers the entire District, excluding mine areas would not reduce the administrative burden caused by adverse modification analysis.

By excluding the mines from critical habitat, adverse modification analysis for projects in the mine areas would not be necessary. However, federally supported actions in the excluded mine areas would still require Section 7 consultation under the jeopardy standard because the mine areas are occupied by Gierisch mallow. Therefore, the number of Section 7 consultations is not likely to be reduced by excluding the mines from critical habitat designation. The outcomes of these Section 7 consultations are unlikely to be materially different if the mines are excluded because actions that would have detrimentally affected PCEs of critical habitat would also impact reproduction, growth, and survival of Gierisch mallow. The complexity of consultations would be less if the consultation only covers actions in the excluded areas.

The BLM could restrict surface occupancy on new mine sites to protect the Gierisch mallow because even though critical habitat would not be designated in the mine areas, the listed species still occurs at the sites. No restrictions are anticipated on existing programs and facilities. The BLM Arizona Strip Field Office's approved RMP (2008) states:

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No surface occupancy or use is allowed on the lands containing special status plant species habitat (federally listed species only). This restriction will not apply to maintenance and operation of existing programs and facilities. The authorized officer may grant exception on a case-by-case basis if it can be shown that:

- (1) Legal rights would be curtailed;*
- (2) The plants are not present in a specific project location, or;*
- (3) The activity can be conducted so as not to adversely affect the plants.*

Therefore the existing Black Rock Mine programs and facilities would not be affected by restrictions in the RMP triggered by critical habitat designation. Expansions into new areas or new mines might be affected by restrictions in the RMP triggered by critical habitat designation if the BLM authorized officer decides not to grant one of the exceptions listed above. The number of exceptions granted for clause (2) would not be greater than that under the no action alternative, and could be slightly less than Alternative B, but the difference is likely to be minor.

The BLM would not need to reinitiate Section 7 consultation with the Service on the RMP, the Black Rock Mine Plan of Operations, and others as a result of designation of critical habitat for the Gierisch mallow because the mine areas would be excluded. However, consultation would need to be reinitiated due to listing alone under the Jeopardy standard. Therefore designation of critical habitat with exclusion of the mines would have no effect on gypsum mining.

RECREATION

EXISTING CONDITIONS

The Virgin River is a Wild and Scenic River in sections, but not where it overlaps with critical habitat for the Gierisch mallow. River runs and trails are used within the nearby Virgin River Gorge, but even there use is light (USFWS 2010). No wilderness areas occur within the critical habitat units. No historical trails, developed campgrounds, or other

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recreational facilities occur within either of the proposed critical habitat units. The area is remote, and primarily used for rural activities. Uses in Unit 2 are primitive, off-road uses (BLM 2008).

The nearby Virgin River Gorge Recreation Area has a campground that is open all year with 75 developed sites, tables, charcoal grills, water, flush toilets, two handicapped-accessible sites and paved roads. The 33-site day use area offers picnic tables, charcoal grills, shade shelters and rest rooms. The Sullivan trail is also nearby.

Outdoor recreation opportunities in the St. George Field Office range from casual sightseeing and hiking to mountain biking, ATV riding, rock climbing, horseback riding, and canyoneering (BLM 2012). The St. George Field Office experiences a high number of seasonal visitors with the busy seasons being spring and fall. The spring season begins in February and lasts through May, with the fall season running from September through November. Summer visitation is mainly associated with touring the nearby National Parks: Zion, Bryce Canyon and the North Rim of the Grand Canyon (BLM 2012).

OHV use is limited to designated roads and trails in the Arizona portion of the critical habitat units (BLM 2008, map 2.19). The area is designated as a rural travel management area. Unit 1 is within the Saint George Special Recreation Management Area (BLM 2008: Map 2.13) and the Saint George Basin Rural Park Recreation Management Zone (BLM 2008, Map 2.14). Unit 2 is within the Canyons and Mesas Recreation Management Zone (BLM 2008; Map 2.14).

In the Utah portion of critical habitat off-trail OHV use is considered a moderate threat to the second largest population of the plant (77 FR 49900). OHV use is limited to designated roads and trails in this area (BLM 1999), therefore the threat to Gierisch mallow is caused by illegal activities only. Continued unauthorized OHV use can have a significant effect on the long-term viability of the Utah population of the Gierisch mallow because habitat degradation can be severe enough to prevent reestablishment of new plants, as well as removing mature, reproducing plants from the population. Washington County is projected to be one of the fastest growing counties in Utah, with a growth rate of 3.9 percent. The population of St. George has grown from 64,201 (2005) to 88,001 (2010), and is expected to increase to 136,376 by 2020 (St. George Area Chamber 2010). The surrounding open spaces around St. George are popular for OHV use because of the relatively flat terrain and ease of access. The same areas in Utah

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that are subjected to unauthorized OHV use are also used for unauthorized target shooting and trash dumping, which are also considered moderate threats.

The Omnibus Public Land Management Act of 2009 directed the St. George Field Office to identify areas in Washington County where “biological conservation is a priority” and to “undertake activities to conserve and restore plant and animal species and natural communities within such areas.” To fulfill this mandate, the St. George Field Office Resource Management Plan, approved in 1999, must be amended to designate additional Areas of Critical Environmental Concern (ACECs) for the conservation of biological resources and natural communities. The public has been invited to provide information about at risk species and areas where conservation could be a priority and to nominate these areas for consideration as ACECs. The RMP Amendment would also evaluate the area designations for motorized off-highway vehicle (OHV) travel and make needed revisions. In 1999, public lands in Washington County were designated as “open” (OHV cross-country travel authorized); “limited” (OHV travel limited to designated routes, types of vehicles, seasons of use, etc.); or “closed” (OHV travel prohibited). Public input has been requested to identify the diverse OHV uses that are currently taking place on public lands, the presence of sensitive resources and public lands values, and potential conflicts with other uses.

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented.

Special management that may be necessary to protect Gierisch mallow populations include:

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- Directing recreational activity away from known populations
- Fencing small populations
- Removing or limiting access routes near populations
- Ensuring activities do not disturb the hydrologic regime near populations
- Avoiding activities that might concentrate water flows or sediments into populations

The listing of Gierisch mallow could draw public attention to the need to protect the plant and conflicts with unauthorized OHV use. This attention, coupled with the focus on establishing new ACECs, may influence public comments on the Saint George RMP revision and result in actions that would change OHV uses.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinitiate Section 7 consultation with the Service on the 2008 RMP as a result of listing the Gierisch mallow and designating critical habitat.

In general, designation of critical habitat could potentially have three effects on new Section 7 consultations: 1) increasing the number of consultations, 2) changing the outcome of consultations, or 3) increasing the complexity of consultations. In the case of Gierisch mallow critical habitat, only the latter (increasing the complexity of consultations) is likely to occur. The number of consultations would not increase because federally supported actions would already require Section 7 consultation under the jeopardy standard because all critical habitat units are occupied by the species. The outcomes of Section 7 consultations are unlikely to be materially different whether or not critical habitat is designated because actions that would detrimentally affect PCEs would also impact reproduction, growth, and survival of Gierisch mallow. In other words, conservation efforts requested by the Service through section 7 consultations to avoid potential destruction or adverse modification of critical habitat are unlikely to be different from those recommended to avoid jeopardy of the species. The complexity of Section 7 consultations would be greater because the analysis would also have to consider adverse modification to critical habitat. The effects of this additional administrative burden would be insignificant.

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As with Alternative A, special management actions may be necessary. These special management actions may encompass a larger area to protect critical habitat than isolated occurrences of the plant. The difference may not be regulatory, but based on perception of the area needed to protect the species.

The designation of critical habitat for Gierisch mallow could draw public attention to the need to protect the plant and conflicts with unauthorized OHV use off designated roads and trails. This attention, coupled with the RMP revision focus on establishing new ACECs, may influence public comments on the Saint George RMP revision and result in actions that would change OHV uses. However, these changes would likely be the same as those that would come about with ESA listing without designation of critical habitat.

ALTERNATIVE C

Implementation of this alternative would have no effect to a minor indirect effect on allowed recreational uses through influencing public opinion. The effects, if present, would be no different than those discussed for Alternative B, because recreational use does not occur in the mine areas that would be excluded from critical habitat designation.

SOCIOECONOMICS

EXISTING CONDITIONS

No communities exist within the proposed critical habitat units. The closest community is St. George, Utah, approximately 8 km (5 mi) to the Northwest of the Starvation Point unit.

Industries in Mohave County employing the most people are arts, entertainment, and recreation, and accommodation and food services (Table 3), employing a larger percentage of people than Arizona statewide (Table 3). The major industries in Washington County employing the most people are educational services, health care, and social assistance (Table 3), employing a slightly larger percentage of people than in Utah statewide. Agriculture, forestry, fishing and hunting, and mining employ less than

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one percent of the employed civilians in Mohave and Washington Counties, which is slightly less than for Arizona and Utah statewide.

Table 3. 2007-2011 Percent of population employed in selected industries for Mohave County, Arizona and Washington County, Utah (U.S. Census Bureau 2012).

Industry	Mohave County, Arizona	Washington County, Utah	Arizona	Utah
Civilian employed population 16 years and over	73,759	54,003	2,739,077	1,251,302
Agriculture, forestry, fishing and hunting, and mining	0.9%	0.9%	1.4%	2.0%
Construction	8.6%	10.5%	8.0%	7.5%
Manufacturing	6.4%	5.6%	7.6%	10.8%
Wholesale trade	1.6%	2.2%	2.6%	2.8%
Retail trade	14.9%	16.0%	12.2%	12.3%
Transportation and warehousing, and utilities	5.7%	5.6%	4.9%	4.8%
Information	2.0%	1.4%	1.8%	2.3%
Finance and insurance, and real estate and rental and leasing	4.9%	6.2%	8.0%	6.8%
Professional, scientific, and management, and administrative and waste management services	6.4%	8.4%	11.3%	10.9%
Educational services, and health care and social assistance	18.6%	23.0%	21.1%	21.2%
Arts, entertainment, and recreation, and accommodation and food services	19.1%	12.2%	10.5%	8.6%
Other services, except public administration	4.3%	5.0%	4.8%	4.4%
Public administration	6.6%	3.1%	5.6%	5.6%

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Minority and low-income population demographics of the counties and states affected are shown in Table 4. Minority groups are generally underrepresented in the counties containing the critical habitat units.

Table 4. Race and ethnicity in Mohave County, Arizona and Washington County, Utah.

Race or Ethnicity	Mohave County, Arizona	Washington County, Utah	Arizona	Utah
Total population	200,690	137,020	6,337,373	2,715,379
ONE RACE	96.3%	98.4%	97.3%	97.8%
White	89.9%	92.6%	78.7%	89.3%
Black or African American	1.0%	0.4%	4.0%	1.1%
American Indian and Alaska Native	1.8%	1.3%	4.4%	1.1%
Cherokee tribal grouping	0.1%	0.1%	0.1%	0.0%
Navajo tribal grouping	0.2%	0.8%	2.2%	0.6%
Asian	1.0%	0.8%	2.7%	2.0%
Native Hawaiian and Other Pacific Islander	0.1%	0.8%	0.2%	0.9%
Some other race	2.5%	2.5%	7.3%	3.3%
TWO OR MORE RACES	3.7%	1.6%	2.7%	2.2%
White and Black or African American	0.3%	0.4%	0.5%	0.3%
White and American Indian and Alaska Native	2.1%	0.3%	0.6%	0.5%
White and Asian	0.4%	0.3%	0.5%	0.6%
Black or African American and American Indian and Alaska Native	0.0%	0.0%	0.1%	0.0%

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Race or Ethnicity	Mohave County, Arizona	Washington County, Utah	Arizona	Utah
HISPANIC OR LATINO AND RACE				
Hispanic or Latino (of any race)	14.7%	9.5%	29.4%	12.7%
Mexican	12.7%	7.6%	26.6%	9.5%
Puerto Rican	0.3%	0.1%	0.5%	0.2%
Cuban	0.1%	0.0%	0.1%	0.1%
Other Hispanic or Latino	1.6%	1.8%	2.2%	2.8%
Not Hispanic or Latino	85.3%	90.5%	70.6%	87.3%
White alone	79.7%	86.0%	58.2%	80.7%
Black or African American alone	0.9%	0.4%	3.8%	1.0%
American Indian and Alaska Native alone	1.3%	1.3%	4.1%	1.0%
Asian alone	1.0%	0.8%	2.7%	2.0%
Native Hawaiian and Other Pacific Islander alone	0.1%	0.8%	0.2%	0.9%
Some other race alone	0.0%	0.0%	0.1%	0.1%
Two or more races	2.3%	1.2%	1.6%	1.6%
Two races including Some other race	0.0%	0.0%	0.1%	0.1%
Two races excluding Some other race, and Three or more races	2.3%	1.2%	1.6%	1.6%

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Table 5. 2007-2011 income and poverty statistics for Mohave County, Arizona and Washington County, Utah (U.S. Census Bureau 2012).

Income And Poverty Levels	Mohave County, Arizona	Washington County, Utah	Arizona	Utah
Total households	80,389	46,088	2,344,215	871,358
Income and benefits (in 2011 inflation-adjusted dollars)				
Household income	59,758	69,010	77,760	80,685
Per capita income	21,457	21,467	25,784	23,650
Percentage of families and people whose income in the past 12 months is below the poverty level				
All families	11.5%	8.4%	11.7%	8.3%
All people	16.8%	11.9%	16.2%	11.4%

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Baseline costs resulting from listing of the Gierisch mallow include increased consultation costs for grazing, mining, BLM land management activities, Interstate 15 road widening, and right-of-way maintenance (IEc 2013). Total Baseline costs would be approximately \$770,000 (IEc 2013). Baseline costs would be as follows (IEc 2013):

Gypsum Mining Activities

- Consultation on Black Rock Gypsum Mine expansion and technical assistance on Georgia-Pacific mine: \$130,000

Grazing Activities

- Two consultations on grazing activity within BLM-managed lands: \$470,000

BLM Land Management Activities

- Reinitiate consultation with the BLM on the Arizona Strip District RMP and the Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management: \$36,000

Transportation Activities

- Annual technical assistance on ROW maintenance within I-15 and informal consultation on I-15 road widening: \$130,000

ALTERNATIVE B

No communities exist within the proposed critical habitat units and therefore no residences or businesses would be displaced. Designation of critical habitat would not affect community services or community cohesion within St. George. Community resources such as schools, law enforcement, medical services, and social services, would not change as a result of designation of critical habitat.

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A separate economic analysis was conducted (IEc 2013). The effects of listing alone are considered baseline costs in the economic analysis. Effects of designation of critical habitat are considered incremental costs. All incremental costs are due to increased complexity of Section 7 Consultations (IEc 2013). Incremental costs are from 2013-2032 using present value costs at a seven percent discount rate.

Incremental costs of critical habitat designation include increased consultation costs for grazing, mining, BLM land management activities, Interstate 15 road widening, and right-of-way maintenance (IEc 2013). Total incremental costs would be \$51,000 (IEc 2013). Incremental costs would be as follows (IEc 2013):

Gypsum Mining Activities

- Consultation on Black Rock Gypsum Mine expansion and technical assistance on Georgia-Pacific mine: \$4,700

Grazing Activities

- Two consultations on grazing activity within BLM-managed lands: \$27,000

BLM Land Management Activities

- Reinitiate consultation with the BLM on the Arizona Strip District RMP and the Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management: \$12,000

Transportation Activities

- Annual technical assistance on ROW maintenance within I-15 and informal consultation on I-15 road widening: \$7,000

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Table 5. Baseline and incremental costs of designation of critical habitat for the Gierisch mallow.

ACTIVITY	BASELINE COSTS¹	INCREMENTAL COSTS¹
Mining	\$130,000	\$4,700
Grazing	\$470,000	\$27,000
BLM Land Management Activities	\$36,000	\$12,000
Transportation	\$130,000	\$7,000
Total	\$770,000	\$51,000
¹ From separate draft economic analysis; rounded to nearest two significant digits (IEc 2013)		

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ALTERNATIVE C

The effects of implementing this alternative would be the same as for Alternative B except that the incremental costs of consultation for the Black Rock Mine expansion and technical assistance on the Georgia-Pacific mine would not occur because the mines would be excluded from critical habitat designations. The savings would be \$4,700 (IEc 2013).

CULTURAL OR HISTORIC RESOURCES (1502.16)

EXISTING CONDITIONS

We are unaware of any archaeological or cultural resources in the proposed critical habitat units.

ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE A

Under this alternative, federally supported actions that may affect the Gierisch mallow would require Section 7 consultations under jeopardy standards in all areas occupied by the species. Analysis under the adverse modification standard would not be required because no critical habitat would be designated.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented. Potential ground-disturbing actions could include construction of fencing, moving water sources, re-routing of OHV trails, and others.

ALTERNATIVE B

The Arizona Strip District BLM may need to reinstate Section 7 consultation with the Service on the 2008 RMP as a result of listing the Gierisch mallow and designating critical habitat.

Recovery actions and conservation measures to promote Gierisch mallow recovery would be implemented. Potential ground-disturbing actions could include construction of fencing, moving water sources, re-routing of OHV trails, and others. Actions taken to protect and restore

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PCEs of critical habitat would be the same as those taken to provide recovery for the species, therefore designation of critical habitat will have no effect on cultural or historic resources.

ALTERNATIVE C

The effects of this alternative on cultural and historic resources would be the same as for Alternative B.

CHAPTER 4: COUNCIL ON ENVIRONMENTAL QUALITY ANALYSIS OF SIGNIFICANCE

The primary purpose of preparing an environmental assessment under NEPA is to determine whether a proposed action would have significant impacts on the human environment. If significant impacts may result from a proposed action, then an environmental impact statement is required (40 CFR §1502.3). Whether a proposed action exceeds a threshold of significance is determined by analyzing the *context* and the *intensity* of the proposed action (40 CFR §1508.27). Context refers to the setting of the proposed action and potential impacts of that action. The context of a significance determination may be society as a whole (human, national), the affected region, the affected interests, or the locality. Intensity refers to the severity of the impacts.

The context of short and long-term impacts of the proposed designation of critical habitat for the Gierisch mallow includes two recovery units—an area that includes portions of Mohave County, Arizona and Washington County, Utah. The designations in these units total 12,822 acres (5,189 ha). Overall, Federal lands account for 88.8% of the proposed acreage and state lands account for 11.2 % of the proposed acreage. No private lands occur within the proposed critical habitat units.

Under regulations of the Council of Environmental Quality (CEQ), which is responsible for ensuring compliance with NEPA, intensity is determined by considering 10 criteria (CFR 40 §1508.27[b]): (1) beneficial and adverse impacts; (2) the degree of impacts on health and safety; (3) impacts on the unique characteristics of the area; (4) the degree to which the impacts would likely be highly controversial; (5) the degree to which the proposed action would impose unique, unknown, or uncertain risks; (6) the degree to which the proposed action might establish a precedent for future actions with significant effects or represent a decision in

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principle about a future consideration; (7) whether the proposed action is related to other actions, which cumulatively could produce significant impacts; (8) the degree to which the proposed action might adversely affect locales, objects, or structures eligible for listing in the National Register of Historic Places; (9) the degree to which the proposed action might adversely affect an endangered or threatened species or its habitat, as determined to be critical under the ESA of 1973; and (10) whether the proposed action threatens a violation of federal, state, or local law. We consider each of these ten points below:

1. Potential impacts on environmental resources, both beneficial and adverse, would be minor. Impacts of critical habitat designation on natural resources within the areas proposed as Gierisch mallow critical habitat were analyzed and discussed in Chapter 3 of this EA. Applying the analysis of impacts to the significance criteria identified above, the Service concludes that the adverse impacts of critical habitat designation would not be significant, based on the following judgments:
2. There would be no impacts on public health or safety from the proposed designation of critical habitat and no impacts on unique characteristics of the geographic area. No impacts on fire management activities would occur. There would be no impacts on flood control because no floodplains occur in the units.
3. Impacts to the unique characteristics of the area would be negligible. The nearest Wild and Scenic River is a section of the Virgin River, which is downstream from critical habitat Unit 1. We have analyzed potential impacts on unique cultural and historic resources in the area, and Areas of Environmental Concern and found no impacts.
4. The impacts will not be highly controversial because the area affected is small and few people are involved.
5. The impacts do not pose any uncertain, unique, or unknown risks. New activities with a federal nexus would result in Section 7 consultations.
6. The designation of critical habitat by the Service for the conservation of threatened species is not a precedent-setting action with significant effects. The agency has designated critical habitat for numerous other species.

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7. The proposed action is not related to other actions which cumulatively could produce significant impacts. There would not be significant cumulative impacts because the cumulative impacts would be limited to Section 7 consultation outcomes. Cumulative impacts of this designation and other federal actions on land management could include impacts to grazing allotments including 1) cumulative impacts of the proposed critical habitat designation, Gierisch mallow ESA listing, and conservation measures for southwestern willow flycatcher on the Lambing-Starvation allotment, and 2) cumulative impacts of the proposed critical habitat designation, Gierisch mallow ESA listing, and withdrawal of the mining area from grazing on the Black Rock allotment. These cumulative impacts would not be significant.
8. Critical habitat designation is not likely to affect sites, objects, or structures of historical, scientific, or cultural significance. The proposed designation would not result in any ground-disturbing activities that have the potential to affect archeological or other cultural resources. Potential conservation measures or project modifications to protect critical habitat PCEs would not modify or pose risk of harm to any historic properties listed in or eligible for the National Register of Historic Places.
9. Critical habitat designation would not adversely affect an endangered or threatened species or its habitat. Designation will have long-term, beneficial, conservation-related impacts on the Gierisch mallow survival and recovery through maintenance of PCEs.
10. Proposed critical habitat designation would not violate any federal, state, or local laws. The designation of critical habitat is required by law in order to comply with the ESA.

CHAPTER 5: COORDINATION WITH THE PUBLIC

The proposed rule for listing the Gierisch mallow as an endangered species and designating critical habitat was published in the Federal Register on 17 August 2012 (77 FR 49894). Public comments were solicited in the Federal Register notice. Comments were accepted until 16 October 2012. Twenty comments were received during this period and issues identified by comments were included in Chapter 1. This Draft EA will be available for public review for 30 days and comments received will be incorporated into the final EA.

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