DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[**Docket No. FWS-R2-ES-2012-0016]**

[4500030114]

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List *Aliciella formosa* (Aztec gilia) as Endangered or Threatened with Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list *Aliciella formosa* (Aztec gilia) as endangered or threatened under the Endangered Species Act of 1973, as amended (Act), and designate critical habitat. Based on our review, we find that the petition does not present substantial information indicating that listing Aztec gilia may be warranted. Therefore, we are not

initiating a status review in response to this petition. However, we ask the public to submit to us any new information that becomes available concerning the status of, or threats to, Aztec gilia or its habitat at any time.

DATES: We made the finding announced in this document on [INSERT FEDERAL REGISTER PUBLICATION DATE].

ADDRESSES: This finding is available on the Internet at *http://www.regulations.gov* at Docket Number FWS-R2-ES-2012-0016. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, New Mexico Ecological Services Field Office, 2105 Osuna NE, Albuquerque, NM 87113. Please submit any new information, materials, comments, or questions concerning this finding to the above street address.

FOR FURTHER INFORMATION CONTACT: Wally "J" Murphy, Field Supervisor, New Mexico Ecological Services Field Office (see **ADDRESSES**) by telephone (505-346-2525) or by facsimile (505-346-2542). Persons who use a telecommunications device for the deaf (TTD) may call the Federal Information Relay Service (FIRS) at 800-877-8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1531 *et seq*.) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition and publish our notice of this finding promptly in the Federal Register.

Our standard for substantial information within the Code of Federal Regulations (CFR) with regard to a 90-day petition finding is "that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted" (50 CFR 424.14(b)). If we find that substantial scientific and commercial information was presented, we are required to promptly conduct a species status review, which we subsequently summarize in our 12-month finding.

Petition History

On February 12, 2010, we received a petition from the WildEarth Guardians, dated February 12, 2010, requesting that the *Aliciella formosa* (Aztec gilia) be listed as endangered or threatened and that critical habitat be designated under the Act. The

petition clearly identified itself as such and included the requisite identification information for the petitioner, as required at 50 CFR 424.14(a). In a July 19, 2010, letter to WildEarth Guardians, we acknowledged receipt of the petition, and reviewed the information presented in the petition and determined that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act was not warranted. This finding addresses the petition.

Previous Federal Actions

For the purposes of this document, we will refer to *Aliciella formosa* by its common name, Aztec gilia.

In September 1985, we published our candidate notice of review (CNOR) classifying Aztec gilia (identified as *Gilia formosa*) as a Category 2 species (50 FR 39526, September 27, 1985). Category 2 status included those taxa for which information in the Service's possession indicated that a proposed listing rule was possibly appropriate, but for which sufficient data on biological vulnerability and threats were not available to support a proposed rule. In the February 1990 CNOR, we retained a Category 2 designation for Aztec gilia (again identified as *Gilia formosa*) (55 FR 6184; February 21, 1990); in the September 1993 CNOR, we announced that the status of Aztec gilia (again identified as *Gilia formosa*) was "declining," but was still considered a Category 2 species (58 FR 51144, September 30, 1993).

In the 1996 CNOR, we announced a revised list of animal and plant taxa that were regarded as candidates for possible addition to the Lists of Endangered and Threatened Wildlife and Plants (61 FR 7596, February 28, 1996). The revised candidate list included only former Category 1 species. All former Category 2 species were dropped from the list in order to reduce confusion about the conservation status of these species, and to clarify that the Service no longer regarded these species as candidates for listing. Because Aztec gilia was a Category 2 species, it was removed from the candidate list in 1996, and was no longer recognized as a candidate species.

Species Information

The Aztec gilia (originally *Gilia formosa*) type specimen was collected prior to 1907, near Aztec, New Mexico (San Juan County), and was subsequently described by E. L. Greene in 1907 (Greene 1907, p. 119; Martin and Hutchins 1980, p. 1584; Kartesz 1994, p. 468). Additional collections are at the U.S. National Herbarium and the Missouri Botanical Gardens (Knight and Cully 1986, p. 5). In 1998, *G. formosa* was reclassified to *Aliciella formosa* (family Polemoniaceae) (Porter 1998, p. 33).

Aztec gilia is a monocarpic herbaceous perennial (a plant that lives for more than 2 years, flowers, sets seed, and then dies) (Porter 1998, p. 33). The plant is up to 30 centimeters (cm) (12 inches (in)) tall. Older plants are woody at the base, are glandular (sticky), and have numerous branched stems with long, sharp-pointed, smooth-edged leaves that are about 25 millimeters (mm) (1.0 in) tall. Flowers are up to 22 mm (0.87 in)

long, pinkish-purple, and trumpet-shaped. Aztec gilia blooms from late April through May and is distinguished from several closely related species by its perennial nature, woody base of older plants, entire leaves, and pinkish-purple flowers (New Mexico Native Plants Protection Advisory Committee (NMNPPAC) 1984, p. 218; Knight and Cully 1986, p. 7; Porter 1998, p. 33).

Aztec gilia is only known to occur in San Juan County, near the towns of Aztec and Bloomfield, New Mexico (Knight and Cully 1986, p. 8). This species appears to be found only in sandy clay soils of the Animas Formation, specifically the Nacimiento Formation, mostly on slopes, benches, and summits of gently rolling hills between 1,740 to 1,890 meters (m) (5,800 to 6,200 feet (ft)) (Knight and Cully 1986, p. 17; Porter 1998, p. 33). The Nacimiento Formation (the southern extension of the Animas Formation of the San Juan Basin) is made up of black and gray shales, with occasional channel sandstone beds (Fassett 1974, p. 229).

Aztec gilia is commonly associated with *Erigeron bistiensis* (Bisti fleabane) and *Sclerocactus cloverae* ssp. *brackii* (Brack's cactus) (Sivinski 1997, pp. 10–12; New Mexico Rare Plant Technical Council (NMRPTC) 2005, p. 2). General habitat associates found in areas inhabited by this species include *Juniperus osteosperma* (Utah juniper), *Pinus edulis* (Pinyon pine), *Purshia tridentata* (antelope bitterbrush), *Cercocarpus montanus* (mountain mahogany), *Amelanchier utahensis* (Utah serviceberry), *Ephedra* spp. (Mormon tea), *Yucca angustissima* (narrowleaf yucca), and *Atriplex confertifolia* (shadscale saltbush) (Sivinski 1997, pp. 10–12).

The petition provided no specific information on Aztec gilia populations. However, the Service's files reflect that Aztec gilia is known from more than 75 populations, ranging in size from a few dozen to thousands of plants (Knight and Cully 1986, p. 18; The Nature Conservancy 1990, p. A-3; DeBruin 1995, p. 6; Ecosphere Environmental Services (Ecosphere) 1995, p. 15; 1997, p. 3; Sivinski 1997, pp. 10–12; Marron *et al*. 2008, p. 26). Surveys estimated about 15,000 plants occur on Bureau of Land Management (BLM) lands, but several surveys only counted the number of populations, indicating that the total number of plants on BLM lands may be higher than 15,000. There are 5 populations of approximately 1,400 total plants on lands owned by the State of New Mexico and 14 populations (unknown number of plants) on private lands (Knight and Cully 1986, p. 20; Sivinski 1997, pp. 10–12). Finally, several Aztec gilia populations are known to occur on Navajo Nation lands in Kutz Canyon (mixed land ownership with BLM), but the number of plants is unknown (Navajo Nation 2008**,** p. 3; Navajo Natural Heritage Program 2008, p. 89). The petitioner provides no information indicating that any of these populations are declining or have been extirpated. In fact, Knight and Cully (1986, p. 16) reported no populations have ever been extirpated. We do not have any additional information on abundance or long-term monitoring data from populations throughout the range of the species.

In addition to the known populations described above, there appears to be a large amount of potentially suitable habitat unoccupied by the species (Knight and Cully 1986, pp. 16, 23; Sivinski 1997, p. 35). In 1990, the BLM contracted with the Nature

Conservancy to conduct survey work within the Farmington Resource Area for several federally listed and sensitive species, including the Aztec gilia. This survey concluded that approximately 5,700 hectares (ha) (14,000 acres (ac)) of public land support thousands of individual plants (The Nature Conservancy 1990, P. A-3). An additional 51,000 ha (125,000 ac) of BLM lands were described as unoccupied potential habitat (The Nature Conservancy 1990, p. A-3). We have no information on the amount of Aztec gilia habitat outside of BLM lands.

Evaluation of Information for This Finding

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR 424 set forth the procedures for adding species to, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

(C) Disease or predation;

(D) The inadequacy of existing regulatory mechanisms; or

(E) Other natural or manmade factors affecting its continued existence.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, that factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species may warrant listing as endangered or threatened as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively may not be sufficient to compel a finding that listing may be warranted. The information must contain evidence sufficient to suggest that these factors may be operative threats that act on the species to the point that the species may meet the definition of endangered or threatened under the Act.

In making this 90-day finding, we evaluated whether information on threats to the Aztec gilia, as presented in the petition and other information readily available in our files, is substantial, thereby indicating that the petitioned action may be warranted. Our evaluation of this information is presented below.

A. Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

The petition states that Aztec gilia and its habitat are threatened by the following: Oil and gas development; surface mining; road construction and use; off-road vehicle (ORV) use; electric transmission line installation; livestock grazing; human population growth; and BLM land uses. Each of these topics is discussed below.

Oil and Gas Development

The petitioner claims that extensive oil and gas development has occurred within the range of Aztec gilia in the San Juan Basin (WildEarth Guardians 2010, pp. 9–12, citing Engler *et al.* 2001; BLM 2003; GO-TECH 2010a-e). The petitioner states that oil and gas extraction causes destruction and degradation of Aztec gilia habitat, and also kills plants. Moreover, the petitioner contends that associated roads, well pads, pipelines, waste pits, power lines, railroad tracks, and other infrastructure used in oil and gas operations cause significant habitat disturbance (WildEarth Guardians 2010, p. 10, citing Weller *et al.* 2002). The petitioner claims that, as of 2010, 18,000 active oil and gas wells were located within the San Juan Basin. The petitioner also claims that there are an additional 9,942 wells authorized over the next 20 years within areas known to be occupied by Aztec gilia (WildEarth Guardians 2010, pp. 9–10, citing BLM 2003). To support these additional wells, the petitioner indicates that 5,794 kilometers (km) (3,600 miles (mi)) of new gas pipeline will have a disturbance footprint of at least 4,709 ha (11,636 ac) (WildEarth Guardians 2010, p. 9, citing Engler *et al*. 2001).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claims, the factual description of oil and gas development presented appears plausible. However, the petitioner provided no specific data to support that oil and gas development might impact Aztec gilia populations. Information in our files indicates that some of the oil and gas wells likely overlap with Aztec gilia habitat, but the petition did not contain, nor do we have, any information on the extent or degree of occupied habitat that has been impacted or may be impacted. The petition states that, as of 2010, there are 18,000 active oil and gas wells located in the San Juan Basin. However, the petition does not address how much Aztec gilia habitat or how many populations may have been affected by these oil and gas wells. Habitat for Aztec gilia does not encompass the entirety of the San Juan Basin.

Despite the claim that destruction and degradation of Aztec gilia habitat has occurred from oil and gas activities, the petitioner does not provide citations or other substantial information to support their assertions regarding the present or threatened destruction, modification, or curtailment of habitat or range from oil and gas activities. On the contrary, the petitioner cites that this plant tolerates and recovers from some habitat disturbance (NatureServe 2009). Similarly, Sivinski (1997, p. 11) found a re-establishing occurrence of about 100 plants on a gas well pad and several other healthy populations near well pads and roads. Our files also contain BLM reports that summarize 4 years of monitoring (1991–1995) indicating a significant overall increase in the abundance of Aztec gilia, including those plots associated with oil and gas extraction

activities (BLM 1996, pp. 6–8; DeBruin 1995, entire). The BLM concluded that oil and gas, among other activities, did not cause the extirpation of plants, but populations associated with oil and gas activities contained younger individuals (seedlings and juveniles) (DeBruin 1995, p. 8; BLM 1996, pp. 6–8). This information illustrates that the species may be tolerant of disturbance. Based on this review, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that oil and gas development constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Surface Mining

The petitioner claims that surface mining has occurred within the range of Aztec gilia in the San Juan Basin (WildEarth Guardians 2010, pp. 2 and 18). The petitioner states that surface mining causes destruction and degradation of Aztec gilia habitat, and causes direct plant mortality. The BLM's 2003 Resource Management Plan (RMP) indicates that surface mining, specifically coal leases, will continue to be managed as specified in their 1988 RMP, with new coal leases considered on a case-by-case basis (BLM 2003, p. 8). The extent of surface mining leases that overlap with occupied Aztec gilia habitat was not provided by the petitioner nor do we have any readily available information on the extent or degree of occupied habitat that has been or may be impacted by surface mining activities.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claims, the factual description of surface mining presented appears plausible. The petitioner cites the BLM's 2003 RMP in the discussion of multiple use activities, which includes surface mining, on BLM land; however, the petitioner provided no specific data to support how surface mining might impact Aztec gilia populations. Despite the claim that surface mining could detrimentally affect Aztec gilia habitat, the petitioner does not provide citations or other substantial information to support their assertions regarding the present or threatened destruction, modification, or curtailment of habitat or range from surface mining. Therefore, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that surface mining constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Road Construction and Use

The petitioner states that road construction and use can detrimentally impact imperiled plants, including Aztec gilia, through soil compaction, soil erosion, spread of noxious weeds, heavy metals, and dust pollution, which can alter water flows, destabilize slopes, and offer increased access by ORVs (WildEarth Guardians 2010, p. 14, citing Forman and Alexander 1998; Trombulak and Frissell 2000; Glebard and Belknap 2003). The petitioner asserts that road density is high in the Aztec gilia's range and is increasing

due to oil and gas activities (WildEarth Guardians 2010, p. 15, citing BLM 2008b). The petition does not define or quantify the parameters used to describe road density as "high". The petitioner claims that one of the objectives in the 2003 BLM RMP is to improve existing roads, and that the maintenance activities associated with road improvement would increase disturbance to adjacent areas (WildEarth Guardians 2010, p. 14). The petitioner also asserts that the human populations in the towns of Farmington, Bloomfield, and Aztec, New Mexico, increased approximately 9 to 13 percent between the years 2000 and 2008, which may suggest that more roads will be constructed (WildEarth Guardians 2010, p. 14). The petitioner provides one example of a proposed road construction project within the City of Aztec, where 16 Aztec gilia plants might potentially be destroyed incidentally (WildEarth Guardians 2010, p. 14, citing Marron *et al.* 2008), but no further information was provided by the petitioner or found in our files.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claims concerning impacts from road construction and use, the factual description presented appears plausible. However, we reviewed citations provided by the petitioner and assertions regarding road construction and use, and find that the petitioner's statements concerning detrimental impacts from road construction and use to be unsubstantiated. The petition fails to describe how and to what extent roads may be affecting the species. There is no information with regards to whether the proposed City of Aztec road was built or if any plants were impacted. Nonetheless, the majority of habitat is on Federal land, and the potential loss of plants on

City of Aztec lands is likely not significant to the overall population. On BLM lands, surveys are required prior to project implementation (see discussion under Factor D, below). Under the BLM's Special Status Species policy, if Aztec gilia individuals are discovered on BLM lands, the agency requires that the project proponent minimize or avoid impacts. Therefore, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that road use and construction constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Off-Road Vehicles

The petitioner asserts that ORV use is detrimental to native vegetation and imperiled plants (Stokowski and Lapointe 2000; WildEarth Guardians 2010, p. 17 citing BLM 2006) and that the amount of ORV use on the Farmington Field Office BLM lands is increasing (BLM 2003). The petitioner claims that ORVs can access BLM lands that are occupied by Aztec gilia, or contain potentially suitable habitat, and that ORVs could run over and kill plants (WildEarth Guardians 2010, pp. 17, 19). Further, the petitioner believes that ORV use is not limited to designated trails within a large, unquantified area of potentially suitable Aztec gilia habitat (WildEarth Guardians 2010, p. 17). The petitioner suggests that the number of juvenile Aztec gilia is reduced in these areas with high ORV use (WildEarth Guardians 2010, p. 19, citing NatureServe 2009).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning impacts from ORVs, the factual description of impacts from ORV use presented appears plausible. Information in the petition discusses that ORV use can impact native vegetation and imperiled plants, in general (Stokowsi and Lapointe 2000, p. 3; BLM 2006, p. 58).

No information was presented indicating that ORV use is detrimental to Aztec gilia. ORV users can likely access areas with Aztec gilia populations and potentially suitable habitat (BLM 2003, pp. 3, 7; BLM 2006, pp. 42, 66). We also reviewed NatureServe (2009, p. 2) but could not substantiate the petitioner's claim that higher ORV use resulted in reduced juvenile Aztec gilia plants. In fact, DeBruin (1995, p. 7) found that plots disturbed by ORV use had the greatest increase in new recruits of Aztec gilia. Nevertheless, we acknowledge that ORVs partially damaged one monitoring plot of Aztec gilia, but note that the majority of the damage is likely due to a combination of drought and pipeline construction (Floyd-Hanna 1993, p. 8). We believe that this level of impact may not be significant to the species, because it did not result in the extirpation of Aztec gilia at this location. Moreover, Sivinski (1997, p. 11) reported healthy populations of Aztec gilia adjacent to an area heavily impacted by ORV traffic and in an area with a single gas well pad, road, and a motorcycle trail through the middle of the species' habitat. Based on this review, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that ORV use constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Electric Transmission Lines

The petitioner claims that in 2008, the city of Farmington, New Mexico, and their electric company, Kinder Morgan, proposed to construct a 14-mile electric transmission line that had known occurrences of Aztec gilia within the project area (WildEarth Guardians 2010, p. 17, citing City of Farmington 2008). The transmission line right-of-way is mostly on Federal land administered by the BLM with a few sections on State and private land (City of Farmington 2008).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning impacts from an electric transmission line installation by the City of Farmington, New Mexico, the factual information presented appears plausible. No information was presented that indicates there were direct impacts on plants, nor is there any documentation of direct or indirect impacts to Aztec gilia from this project in our files. We reviewed information provided by the petitioner and found that 10 Aztec gilia plants were located within the preliminary right-of-way for the project; however, the final design avoided all plants (City of Farmington 2008, p. 32). Under the BLM's 2003 RMP, if Aztec gilia individuals are discovered on BLM lands, the agency requires that the project proponent minimize or avoid impacts (see discussion under Factor D, below) (City of Farmington 2008, Exhibit A, p. 5). Also, readily available information in our files indicates that other transmission

line projects have similarly avoided damaging or destroying Aztec gilia plants. In 1987, Aztec gilia plants were also avoided along a proposed transmission line associated with the Navajo Dam project (City of Farmington 1987, p. 1). Additionally, Farmington Electric Utility Services, in coordination with the BLM, also avoided 21 populations with approximately 550 plants near the Potter Canyon compressor station electric utility powerline (Ecosphere 1997, p. 1). For these reasons, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that electric transmission line construction constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Livestock Grazing

The petitioner claims that domestic livestock grazing occurs within Aztec gilia's habitat on private, Navajo Nation, New Mexico State, and BLM lands (WildEarth Guardians 2010, p. 17). The petitioner asserts that the BLM disregarded livestock grazing as a potential threat in an environmental assessment for two grazing allotments within areas that potentially contain suitable habitat for Aztec gilia, because neither plant surveys nor mitigation measures were mentioned in that assessment (WildEarth Guardians 2010, p. 17, citing BLM 2009; WildEarth Guardians 2010a, b). The petitioner believes that livestock grazing spreads noxious weeds and invasive plants that could alter the habitat for Aztec gilia (WildEarth Guardians 2010, p. 17, citing Fleischner 1994; Belsky and Gelbard 2000; DiTomaso 2000; Parker *et al.* 2006). The petitioner further

claims that grazing compacts soil, increases erosion, and results in soil degradation. Moreover, the petitioner asserts that livestock trample and eat Aztec gilia.

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning impacts from domestic livestock grazing, the factual information presented appears plausible. The petitioner states that domestic livestock grazing occurs on private, BLM, New Mexico State, and Navajo Nation lands. The petitioner states that grazing can destroy and degrade Aztec gilia habitat by promoting the spread of noxious weeds and invasive plants that could outcompete the Aztec gilia and by trampling the soil, leading to compaction and erosion of Aztec gilia habitat (WildEarth Guardians 2010, p. 17). In addition, Aztec gilia plants may be trampled and eaten by livestock.

However, the citations listed for this statement do not involve New Mexico private or State land, or BLM or Navajo Nation land, further, they are not citations specific to Aztec gilia (WildEarth Guardians 2010, p. 17, citing Fleischner 1994; Belsky and Gelbard 2000; DiTomaso 2000; Parker *et al.* 2006). Likewise, we have no substantial readily available information in our files regarding grazing as a possible threat to Aztec gilia, or whether grazing co-occurs with the species on New Mexico State or private lands. Additionally, DeBruin (1995, p. 7) monitored Aztec gilia over 4 years and found the species responded positively (i.e., increased in number) when disturbed by livestock. Finally, we have no readily available information in our files regarding the

threat to Aztec gilia and its habitat from noxious weeds and invasive species that may be spread by livestock grazing. The BLM's 2003 RMP outlines that the goals of the Livestock Management program include promoting native plant health, and soil stability, and providing the basic requirements of rangeland ecological sites. Based on this review, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that the livestock grazing, and the possible spread of noxious weeds and invasive species constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Human Population Growth

The petitioner asserts that human population growth of Aztec, Bloomfield, and Farmington, New Mexico, will increase commercial and residential construction, farming, and recreational impacts and will result in a threat to Aztec gilia and its habitat (WildEarth Guardians 2010, p. 18).

Evaluation of Information Provided in the Petition and Available in Service Files

The petitioner provided no specific information, nor do we have any readily available information in our files, to substantiate the extent of human population growth and its potential impact on Aztec gilia. Furthermore, the petitioner provided no specific information, nor do we have any readily available information in our files, to substantiate

if human population growth would result in any increase in commercial and residential construction, farming, or recreational impacts and their potential impact on Aztec gilia. Therefore, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that human population growth constitutes a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

Other BLM Land Uses

The petitioner asserts that a variety of activities occur on BLM land that could detrimentally affect Aztec gilia habitat including mining, motorized and non-motorized vehicle use on roads and trails, hiking, horseback riding, camping, and infrastructure developments such as picnic ground and camping areas (WildEarth Guardians 2010, p. 18).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning impacts from other BLM land uses, the factual information presented appears plausible. The petitioner cites the BLM's 2003 RMP in the discussion of multiple use activities on BLM land; however, the petitioner provided no specific data to support how these other land uses might impact Aztec gilia populations. Despite the claim that these other land uses could detrimentally affect Aztec gilia habitat, the petitioner does not provide citations or other substantial

information to support their assertions regarding the present or threatened destruction, modification, or curtailment of habitat or range from other BLM land uses. Therefore, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that other BLM land uses constitute a threat to the destruction, modification, or curtailment of Aztec gilia's habitat or range.

In summary, on the basis of a review of the information provided by the petitioner and readily available in our files, we determined that the petition does not present substantial information to indicate that listing Aztec gilia may be warranted due to the present or threatened destruction, modification, or curtailment of its habitat or range by any threats, including oil and gas development, surface mining, road construction and use, off-road vehicles, electric transmission line construction, livestock grazing, human population growth, or other BLM land uses.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Information Provided in the Petition

The petitioner cites that plants and seeds of Aztec gilia have been collected in the past by permit for mitigation efforts. However, the petioner does characterize the collection of Aztec gilia plants and seeds for mitigation purposes as overutilization (WildEarth Guardians 2010, p. 19).

Evaluation of Information Provided in the Petition and Available in Service Files

Readily available information in our files confirms that plants and seeds have been collected under a BLM permit (Floyd-Hanna 1994, entire; Ecosphere 1996, entire; BLM 1996, p. 5; Reeves 1996, entire; Murray 2006, p. 1). We do not know how many seeds were collected on BLM lands, thus we have no evidence of possible overutilization impacts to the species resulting from these activities. In addition, based on Service experience, the amount of seeds and plants collected for mitigation purposes is usually collected in a sustainable fashion so as not to impact the extant populations. In summary, on the basis of a review of the information provided by the petitioner and readily available in our files, we determined that the petition does not present substantial information to indicate that listing Aztec gilia may be warranted due to overutilization for commercial, recreational, scientific, or educational purposes. Therefore, we have determined that the petition does not present substantial information to indicate that listing may be warranted under this factor.

C. Disease or Predation

Information Provided in the Petition

The petitioner provides no information pertaining to Factor C.

Evaluation of Information Available in Service Files

Information in our files indicates that moth larvae (family Gelechiidae) may at times bore into the lower, woody caudex of Aztec gilia, contributing to mortality (Porter and Floyd 1992, p. 246; Floyd-Hanna 1993, p. 8). However, we have no information indicating that any populations have been significantly affected by moth larvae. We have no information of any other disease or predation potentially affecting the species. In summary, on the basis of a review of the information provided by the petitioner and readily available in our files, we determined that the petition does not present substantial information to indicate that listing Aztec gilia may be warranted due to disease or predation. Therefore, we have determined that the petition does not present substantial information to indicate that listing may be warranted under this factor.

D. The Inadequacy of Existing Regulatory Mechanisms

Information Provided in the Petition

The petitioner asserts that Aztec gilia is not adequately protected by Federal or State laws or policies to prevent its endangerment or extinction. The petition reports that Aztec gilia is listed as endangered by the State of New Mexico; however, the petitioner claims that this designation provides little regulatory protection for the habitat of the species (WildEarth Guardians 2010, p. 18, citing New Mexico Energy, Minerals, and Natural Resources Department 1995). The petitioner states that the Navajo Nation lists

the species as endangered (WildEarth Guardians 2010, p. 18, citing Navajo Nation 2008). This information is incorrect. The Navajo Nation has this species listed as G4, which is defined as any species or subspecies for which the Navajo Nation Department of Fish and Wildlife (NNDFWL) does not currently have sufficient information to support listing the species as G2 or G3 (endangered), but is actively seeking information to determine if this species warrants further protection on the Navajo Nation. The petition also states that NatureServe classifies this species as G2, globally imperiled; N2, nationally imperiled; S1 critically imperiled in the Navajo Nation; and S1, imperiled in the State of New Mexico (WildEarth Guardians 2010, p. 18, citing NatureServe 2009). The G2 status is defined as imperiled because it is a very narrow endemic dependent on soil type and has a high risk for extinction. The N2 status defined as imperiled due to a restricted range and very few populations; with a high risk for extirpation. The S1 status is critically imperiled because of extreme rarity or because of some factor(s), such as very steep declines, making it especially vulnerable to extirpation. The petition reports that the plant was previously a Category 2 species, indicating that the Service believed that listing the species may be appropriate; now Aztec gilia is considered a species of concern by the Service (WildEarth Guardians 2010, p. 18). The petitioner cites that Aztec gilia is also a BLM sensitive species and special management species; however, the petitioner further claims that these designations provide no protection or mitigation for impacts (WildEarth Guardians 2010, pp. 18–19, citing BLM 2009).

Finally, the petitioner states that inadequate regulatory protection exists for an area managed by the BLM and known to be occupied by Aztec gilia. That area,

designated as the Aztec Gilia Area of Environmental Concern (ACEC) is approximately 2,833 ha (7,000 ac) in size; however, the BLM rescinded the designation in 2003 (WildEarth Guardians 2010, pp. 9–10). The petitioner claims that oil and gas development, of up to 153 well sites, could occur within the former ACEC. Moreover, an additional 395 well sites could potentially be developed within Kutz Canyon on the Navajo Nation, another area where Aztec gilia occurs (WildEarth Guardians 2010, pp. 9–10, citing BLM 2003).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning the inadequacy of existing regulatory mechanisms, the information is not factually correct, particularly related to the statements regarding the Navajo Nation's status of the species, as explained above. The information in the petition and currently available in our files does not indicate that Aztec gilia is threatened by the inadequacy of existing regulatory mechanisms. This petition identifies risk classifications made by other organizations such as NatureServe or State Agencies, as evidence of extinction risk for a species. Risk classifications by other organizations or made under other Federal or State statutes may be informative, but the classification alone does not provide the rationale for a positive 90-day finding under the Act. For example, as explained by NatureServe, their assessments of a species' conservation status do "not constitute a recommendation by NatureServe for listing under the U.S. Endangered Species Act" because NatureServe assessments "have different criteria, evidence requirements, purposes and taxonomic coverage than government lists

of endangered and threatened species, and therefore these two types of lists should not be expected to coincide" (*http://www.natureserve.org/prodServices/statusAssessment.jsp*).

We find that Aztec gilia receives no protection from the NatureServe designations because these lists only serve to notify the public of the species' status and do not require any conservation or management actions or provide any regulatory authority for conservation of species.

The State of New Mexico lists Aztec gilia as endangered. As such, Aztec gilia is protected from unauthorized collection, transport, or sale by the New Mexico Endangered Plant Species Act, 75-6-1 NMSA 1978. This law prohibits the taking, possession, transportation and exportation, selling or offering for sale any listed plant species. Listed species can only be collected under permit from the State of New Mexico for scientific studies and impact mitigation; however, this law does not provide any protection for Aztec gilia habitat. There are no statutory requirements under the jurisdiction of the State of New Mexico that serve as an effective regulatory mechanism for reducing or eliminating the threats that may adversely affect Aztec gilia habitat. There are also no requirements under the New Mexico State statutes to develop a recovery plan that will restore and protect existing habitat for the species.

The petitioner incorrectly claims that Aztec gilia is listed as an endangered species on the Navajo Nation. The species is classified as a G4 species, which means that the NNDFWL does not currently have sufficient information to support it being listed as

an endangered species (Navajo Nation 2008, pp. 1, 3). As such, the NNDFWL actively seeks information on this species to determine if it warrants protection. Because Aztec gilia is listed as a G4 species, there is no regulatory protection provided to the species on the Navajo Nation.

The ACEC was established in the BLM's Farmington Field Office 1988 RMP, but was rescinded in 2003, when the RMP was revised (2003 RMP). During the revision, the BLM determined that lands within the ACEC were already leased for oil and gas exploration prior to the 1988 designation and the ACEC contained poor quality habitat for Aztec gilia (DeBruin 1991, entire; DeBruin 1995, pp.10–11; BLM 2003, p. 3). The petition implicitly relies on a general assumption that rescinding the ACEC would be detrimental to the species, but does not include any information regarding the improved protections from the species-specific measures provided by the 2003 RMP.

Nearly 70 percent (52 of 75) of the Aztec gilia occurrences are completely or partially on Federal land, and are therefore protected under the 2003 RMP and the Aztec gilia's status as a BLM special management species. For example, on BLM lands, Aztec gilia is managed as a candidate for Federal listing in order to minimize impacts and preclude listing. As a BLM special management species, all of the protections provided by the pre-2003 ACEC apply. Additionally, the BLM's Special Management Species Policy requires biological surveys prior to project implementation in known or suitable Aztec gilia habitat. If plants or suitable habitat are found, the pad or pipeline must be relocated and directional drilling can be used as needed. Avoidance is the primary

conservation measure; transplanting plants is only used as a last resort. As such, the BLM currently provides protective measures throughout habitat with the potential to support Aztec gilia. Based on our evaluation, we conclude that the 2003 RMP is more protective than the 1988 RMP and previous ACEC designation. The current guidelines under the 2003 RMP will minimize various impacts to Aztec gilia across the San Juan Basin (BLM 2003, pp. 3, 2.32; BLM 2008a, entire). Consequently, the petition fails to present substantial information indicating that the withdrawal of the ACEC designation is a threat. Further, we have no information concerning the potential well sites within the previous ACEC or Kutz Canyon, nor is there any documentation that if these sites were developed the species would be threatened.

The petitioner correctly notes that the Service identifies Aztec gilia as a species of concern (Service 2010). While not a formal legal designation under Service regulations, a species of concern is defined as a taxon for which further biological research and field study are needed to resolve its conservation status or which is considered sensitive, rare, or declining on lists maintained by Natural Heritage Programs, State wildlife agencies, other Federal agencies, or professional and academic scientific societies. Species of concern are identified for planning purposes only, and the title confers no regulatory protection.

The information in the petition and currently available in our files indicates that the existing regulatory mechanisms are providing adequate protection for the species. We find that the petitioner's claim that there are few protections within the range of Aztec

gilia does not constitute an argument for inadequacy of existing regulations, because we do not find substantial evidence that there are any threats to Aztec gilia. Based on our evaluation of the information presented in the petition and readily available in our files, we have determined that the petition does not present substantial information to indicate that listing Aztec gilia may be warranted due to the inadequacy of existing regulatory mechanisms.

E. Other Natural or Manmade Factors Affecting the Species' Continued Existence

The petitioner asserts that the following conditions under Factor E threaten Aztec gilia: Mitigation techniques; climate change; and the plant's narrow range. Each of these potential threats is discussed below.

Mitigation Techniques

The petitioner asserts there has been difficulty with mitigation efforts involving transplanting or reseeding of Aztec gilia and collection of seeds (WildEarth Guardians 2010, pp. 19–20). The petitioner indicates that Federal agencies generally avoid transplanting for mitigation purposes because they rarely succeed (WildEarth Guardians 2010, p. 19, citing U.S. Army Corp of Engineers 1997).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning difficulties with mitigation techniques, the factual information presented appears plausible. Our records indicate that for one project, Aztec gilia was transplanted and monitored from 1990 to 1995 (BLM 1996, pp. 5-6). The transplants had a 5 percent survival rate (Ecosphere 1996, p. 6). Another project in 1991, transplanted 92 Aztec gilia*;* by 1994, only 5 individuals survived, and by 1996, only 2 individuals survived (BLM 1996, p.7; Floyd-Hanna 1994, pp. 5–6). As a result of these attempts, the BLM does not consider transplanting to be viable mitigation. We found one reseeding report in our files that summarized Aztec gilia germination efforts in a greenhouse where there was 100 percent mortality before seedlings reached transplantable size (Reeves 1996, entire). Another report demonstrated that seed collection can be difficult in some years (Murray 2006, entire). No specific information was provided or is readily available in our files, to indicate that population size, range, and number of populations are so restricted that the limited success of transplanting, reseeding, or seed collection efforts are detrimental to the species. In addition, the petition did not provide evidence that mitigation techniques may pose a threat to Aztec gilia. Therefore, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to concerns about mitigation techniques.

Climate Change

The petitioner claims that, because of its restricted range, Aztec gilia is threatened

by climate change predictions of rising temperatures and increased duration of drought (WildEarth Guardians 2010, p. 20, citing Parmesan *et al.* 2000; National Safety Council (NSC) 2003; Intergovernmental Panel on Climate Change (IPCC) 2007; U.S. Climate Change Science Program (CCSP) 2008; Karl *et al*. 2009). The petitioner cites Allen and Breshears (1998), who predict that climate change would cause unprecedented rates of vegetation shifts due to increased warming, especially along boundaries of semi-arid ecosystems (WildEarth Guardians 2010, p. 21). The petitioner states that climate change effects are being tracked in New Mexico, and temperatures are warming at a rate comparable to projections for the next century with continued increases of greenhouse gases (WildEarth Guardians 2010, p. 20, citing Enquist and Gori 2008).

Evaluation of Information Provided in the Petition and Available in Service Files

In reference to the petitioner's claim concerning impacts from climate change, the factual information presented appears plausible. The petitioner does not cite any information or publications in support of the claim that there is a substantiated relationship between climate change and the persistence of Aztec gilia. At a global or regional scale, the Service acknowledges that climate change could result in rising temperatures and increased drought periods, based on models and research cited in the petitioner's references (IPCC 2007a, pp. 30, 48; Karl *et al*. 2009, pp. 129-134; NSC 2003, p. 38; Parmesan *et al*. 2000, entire; CCSP 2008, pp. 37-46). The Service also recognizes that vegetation shifts could occur in semi-arid ecosystems as a result of climate change, even though citations provided by the petitioner (Allen and Breshears

1998, entire) discuss forest-woodland ecotones where Aztec gilia does not occur. Enquist and Gori (2008, pp. 4–7) used 30-year climate data from New Mexico to develop trend climatology maps applied to specific conservation areas. Their results indicate that the Colorado Plateau ecoregion in the far northwestern portion of New Mexico, where Aztec gilia does occur, had a climate exposure score in the 78th percentile, which is considered a moderate to high ranking, meaning this ecoregion is more likely to have negative ecological impacts from warming (Enquist and Gori 2008, pp. 20, 32).

We acknowledge that current climate projections indicate that warming in the U.S. Southwest will persist, and may worsen (IPCC 2007b, p. 15; IPCC 2007c, p. 887). However, we find the information presented in the petition and readily available in our files on the subject of climate change to be insufficiently specific to Aztec gilia to be considered substantial. Additionally, no data are available to evaluate whether long-term weather patterns have negatively affected the habitat or population sizes of Aztec gilia. In fact, we are not aware of any Aztec gilia populations that have been extirpated since 1986, nor are we aware of monitoring data to compare population sizes to determine whether there has been a downward trend in the number of plants across the range of the species. Based on these results, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to threats from climate change.

Narrow Range

The petitioner states that because the Service routinely recognizes small population size and restricted range as increasing the likelihood of extinction, Aztec gilia should be considered particularly vulnerable (WildEarth Guardians 2010, p. 21). The petitioner asserts that the species' limited range indicates vulnerability to weather events, such as drought and storms, suggesting the Service should consider this plant's narrow range a threat to the taxon (WildEarth Guardians 2010, p. 21).

Evaluation of Information Provided in the Petition and Available in Service Files

No specific information was provided or is available in our files to indicate that Aztec gilia may be imperiled by its population size or narrow range. The petitioner provides information about generalized threats to other species with limited population size or small geographic ranges, but they are located on islands in the Pacific Ocean and not relevant to Aztec gilia. Therefore, we find that the information provided in the petition, as well as other information readily available in our files, does not present substantial scientific or commercial information indicating that the petitioned action may be warranted due to concerns about small population sizes and a narrow range.

Finding

The petition does not present substantial information on whether oil and gas activities, surface mining, road construction and use, off-road vehicle use, electric

transmission line construction, domestic livestock grazing, human population growth, other BLM land uses, inadequate regulatory mechanisms, limited ability to reseed or transplant, climate change, small population size, or a restricted range may threaten Aztec gilia populations and their habitat. Even though Aztec gilia and its habitat may be exposed to the factors listed above, this does not necessarily mean that the species may be threatened by those factors. We found very few negative impacts to the plant resulting, or documented, from the potential threats cited in the petition or in our review of information readily available in our files. The petitioner cites generalized information about potential impacts that can occur due to these situations and stressors. Little information is presented in the petition regarding the magnitude of potential impacts on the species, or whether the potential impacts may have population-level effects. The loss of a few individuals does not necessarily mean that the species may be in danger of extinction. Our review of the readily available information indicates that the species appears to be maintaining its presence in all known locations throughout its range.

In summary, we find no information to suggest that threats are acting on Aztec gilia such that the species may be in danger of extinction now or in the foreseeable future. On the basis of our determination under section 4(b)(3)(A) of the Act, we conclude that the petition does not present substantial scientific or commercial information to indicate that listing Aztec gilia under the Act as endangered or threatened may be warranted at this time.

Although we will not review the status of the species at this time, we encourage

interested parties to continue to gather data that will assist with the conservation of Aztec gilia. If you wish to provide information regarding Aztec gilia, you may submit your information or materials to the Field Supervisor/Listing Coordinator, New Mexico Ecological Services Field Office, U.S. Fish and Wildlife Service (see **ADDRESSES** section, above), at any time.

References Cited

A complete list of all references cited in this finding is available upon request from the New Mexico Ecological Services Field Office (see ADDRESSES section, above).

Authors

The primary authors of this rule are the staff members of the New Mexico Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq*.).

Date: 18 April 2012

Gregory E. Siekaniec

Deputy Director, Fish and Wildlife Service

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