

October 20, 2023

Marlon Avantyr District Ranger Nogales Ranger District, Coronado National Forest 303 Old Tucson Rd. Nogales, AZ 85621 Forest

Michelle Barnes Environmental Planning Lead Infrastructure Program Program Management Office Directorate U.S. Customs and Border Protection, U.S. Border Patrol Headquarters, 1300 Pennsylvania Avenue, 6.5E Mailstop 1039 Washington, DC 20229-1100

#### **RE: Proposed Holden Canyon Connector Road**

Dear Ms. Barnes and Mr. Avantyr:

The Center for Biological Diversity (the "Center"), along with Western Watersheds Project ("WWP"), Defenders of Wildlife, Tucson Audubon Society, Grand Canyon Chapter of the Sierra Club, Great Old Broads for Wilderness and the Madrean Archipelago Center, provides the following scoping comments on U.S. Customs and Border Protection's ("CBP") and Forest Service's (USFS) proposed Holden Canyon Connector Road Project ("Project") as described in the September 22, 2023 Scoping Letter. We support a "no action" alternative that involves no new road construction and spares wildlands and wildlife further harm atop that which is already resulting from CBP operations and USFS management.

This letter specifically addresses, among other things, that the Forest Service must initiate consultation pursuant to the Endangered Species Act ("ESA") with the Fish and Wildlife Service ("FWS") on the direct, indirect, and cumulative impacts of this Project on ESA-listed species and their critical habitat, including the jaguar, ocelot, yellow-billed cuckoo, Mexican spotted owl, Sonoran chub, Gila topminnow, Chiricahua leopard frog, Bartram's stonecrop, beardless chinchweed and Huachuca water-umbel. Further, CBP and Forest Service must conduct in depth analysis of cumulative impacts pursuant to the National Environmental Policy Act ("NEPA") that accounts for, among other things, cattle grazing and wildfire in the immediate area of the proposed Project as well as analysis of the incredibly vast damages CBP and its contractors have brought, and will likely continue to bring in the foreseeable future, across federal public lands including national park lands and national wildlife refuges - that were established for the protection and health of vital ecosystems and wildlife, including many of the same species and critical habitats that will be impacted in the Project area. CBP has undertaken the construction of a hugely destructive border wall near the proposed Project area, which the Department of Homeland Security exempted from NEPA, the ESA, and dozens of additional environmental laws. The impacts of nearby and regional border wall construction must be considered when

evaluating the cumulative impacts of the proposed Project, especially considering that no meaningful environmental analysis or consultation occurred when the border wall was being built.

## Signatory Organizations

These comments are submitted on behalf of the **Center for Biological Diversity** (the "Center") and its over 1.7 million supporters, many of whom live and recreate in and around the Tumacácori, Atascosa and Pajarito Mountains in Pima and Santa Cruz Counties, and the general Project area within the Coronado National Forest. The Center is a 501(c)(3) nonprofit organization founded in the 1990s that is based in Tucson, Arizona. Since its founding, the Center had been dedicated to protecting and restoring imperiled species and natural ecosystems. The Center uses science, policy, and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats they need to survive. The Center has and continues to actively advocate for increased protections for species and their habitats in southern Arizona, including within the Coronado National Forest and the wild and beautiful borderlands.

Western Watersheds Project (WWP) is a nonprofit organization dedicated to protecting and restoring western watersheds and wildlife through education, public policy initiatives, and legal advocacy. With over 15,000 members and supporters throughout the United States, including Arizona, WWP actively works to protect and improve upland and riparian areas, water quality, fisheries, wildlife, and other natural resources and ecological values. WWP's staff and members are concerned with the management of public lands throughout Arizona, including the lands managed by the Coronado National Forest. WWP is especially concerned with the impacts of livestock grazing on ecological integrity, wildlife, native plants, and recreation.

Founded in 1947, **Defenders of Wildlife** is a national non-profit conservation organization focused on conserving and restoring native species and the habitat upon which they depend. Based in Washington, DC, the organization also maintains regional field offices, including offices in Arizona and New Mexico. Defenders is dedicated to environmental protection, civil and human rights, and border communities, including groups that have witnessed first-hand the devastating impacts of border security infrastructure. We submit these comments on behalf of our nearly 2.2 million members and supporters.

**Tucson Audubon Society**, founded in 1949, is a member-supported, non-profit organization, dedicated to inspiring people to enjoy and protect birds and their habitats through recreation, education, wildlife conservation, advocacy, and protection and restoration of the environment on which we all depend. Tucson Audubon has approximately 3,200 members, many of whom live and recreate in and around the Tumacácori, Atascosa, and Pajarito Mountains in Pima and Santa Cruz Counties, and the general Project area within the Coronado National Forest. Tucson Audubon and its members and supporters are actively engaged in conservation and habitat-restoration activities to support Mexican spotted owl and Western yellow-billed cuckoo, two of the threatened or endangered species that the proposed project could significantly and negatively impact.

The Sierra Club is one of the largest and most influential grassroots environmental organizations in the U.S., with more than 3.7 million members and supporters. In addition to protecting every person's right to get outdoors and access the healing power of nature, the Sierra Club works to promote clean energy, safeguard the health of our communities, protect wildlife, and preserve our remaining wild places through grassroots activism, public education, lobbying, and legal action. **The Grand Canyon Chapter of the Sierra Club**, representing 16,000 members, has a long history of public education and advocacy to protect the public lands, waters, and wildlife, as well as our borderlands in Arizona. Our members recreate in these areas and enjoy hiking, camping, backpacking, wildlife viewing, and more.

**Great Old Broads for Wilderness Tucson Broadband** is the Arizona chapter of the womenled national grassroots organization that engages and inspires activism to preserve and protect wilderness and wild lands with a local focus on water, public lands and wildlife.

The **Madrean Archipelago Wildlife Center** (MAWC) located in the Huachuca Mountains of southeastern AZ is a 501 (c)(3) volunteer-run wildlife and conservation nonprofit organization for unspoiled wilderness and the health and protection of the environment. MAWC will continue to ground truth and amplify the impacts of the border wall to the land, water and wildlife in the Coronado National Forest and share the beauty of the borderlands through Madrean Archipelago Films.

#### I. Forest Service and CBP Must Initiate Consultation with the Fish and Wildlife Service.

#### A. ESA background

Congress enacted the ESA to provide "a program for the conservation of . . . endangered species and threatened species." 16 U.S.C. § 1531(b). Section 2(c) of the ESA establishes that it is "the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act." 16 U.S.C. § 1531(c)(1). The ESA defines "conservation" to mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Act] are no longer necessary." 16 U.S.C. § 1532(3). Section 7(a)(1) of the ESA explicitly directs that all federal agencies "utilize their authorities in furtherance of the [aforesaid] purposes" of the ESA. 16 U.S.C. § 1536(a)(1).

Section 7 of the ESA requires the Forest Service, in consultation with the Fish and Wildlife Service ("FWS"), to ensure that any action authorized, funded, or carried out by the agency is not likely to (1) jeopardize the continued existence of any threatened or endangered species, or (2) result in the destruction or adverse modification of the critical habitat of such species. 16 U.S.C. § 1536(a)(2). For each proposed federal action, the Forest Service must request from FWS whether any listed or proposed species may be present in the area of the agency action. 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12. If listed or proposed species may be present in such area, the Forest Service must prepare a "biological assessment" to determine whether the listed species may be affected by the proposed action. *Id*.

If the Forest Service determines that its proposed action may affect any listed species or critical habitat, the agency must engage in formal consultation with FWS. 50 C.F.R. § 402.14. To complete formal consultation, FWS must provide the Forest Service with a "biological opinion" explaining how the proposed action will affect the listed species or habitat. 16 U.S.C. § 1536(b); 50 C.F.R. § 402.14. If FWS concludes that the proposed action will jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat, the biological opinion must outline "reasonable and prudent alternatives." 16 U.S.C. § 1536(b)(3)(A).

The Forest Service's proposed Project is an agency action under the ESA. Action is broadly defined under the ESA to include all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies, including the granting of leases, and actions that will directly or indirectly cause modifications to the land, water, or air. 50 C.F.R. § 402.02

Agencies are required to reinitiate ESA consultation if (1) the amount or extent of taking specified in the incidental take statement is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the action is modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the identified action. 50 C.F.R. § 402.16.

<u>B. The Forest Service must consult with FWS concerning impacts on all threatened and endangered species and on designated critical habitat for species such as the jaguar, Mexican spotted owl and Chiricahua leopard frog.</u>



FIGURE 1 Proposed Holden Canyon Connector Road Area in Critical Habitat – Western Extent

Per CBP's and the Forest Service's Scoping Letter, the Project is proposed to improve, repair, and construct approximately 12.62 miles of unpaved road as well as decommission approximately 3.94 miles of unpaved roads in Pima and Santa Cruz counties, Arizona. Portions of this proposed project would exist in habitat for at least 10 threatened and endangered species such as the jaguar, ocelot, yellow-billed cuckoo, Mexican spotted owl, Sonoran chub, Gila topminnow, Chiricahua leopard frog, Bartram's stonecrop, beardless chinchweed and Huachuca water-umbel. Parts of the Project also fall within federally designated jaguar, Mexican spotted owl and Chiricahua leopard frog critical habitat and very near yellow-billed cuckoo and Sonoran chub critical habitat which also stands to be affected.



FIGURE 2 Proposed Holden Canyon Connector Road Area in Critical Habitat – Eastern extent

Pursuant to ESA Section 7, the Forest Service, in consultation with FWS, is required to ensure that any action authorized, funded, or carried out by the agency is not likely to (1) jeopardize the continued existence of any threatened or endangered species, or (2) result in the destruction or adverse modification of the critical habitat of such species. 16 U.S.C. 1536(a)(2).

Furthermore, in a 2006 memorandum of understanding ("MOU") that Forest Service and CBP signed, both parties agreed "to maintain an emphasis on protection of federal trust resources such as endangered species."<sup>1</sup> And according to the Forest Service NEPA Handbook 1909.15, Ch. 11, "As part of the scoping process the lead agency shall: Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies."<sup>2</sup>

However, the scoping letter for the Project does not mention many of these threatened and endangered species nor the presence of federally designated critical habitat. Jaguars, ocelots, and Mexican spotted owls are not mentioned at all. Nor does the letter mention measures to protect rare and unique plant species identified in the Coronado National Forest Plan objectives for the Tumacácori Ecosystem Management Area, including Cochise woolwort, recurved corycactus, soft Mexican-orange, and Whisk fern. (Forest Plan pg 144.)

Failure to include information about threatened and endangered species, as well as critical habitat, within the project area during the scoping process is a disservice to stakeholders that rely on information from USFS and CBP to understand and comment on potential impacts from the Project. It is extremely surprising that USFS and CBP do not even list *endangered species* under the "resources Identified for Analysis" section of the scoping letter. Due to this significant failure to mention the highly likely impacts this project could pose on ESA-listed species, we request that the scoping comment period for this project be extended an additional 30 days starting after appropriate information about potential impacts to these listed species and their designated critical habitats is made available to the public.

#### C. Jaguar (Panthera onca)

FWS finalized its critical habitat designation of 764,207 acres for the jaguar in 2014, including "Unit 2" (the Atascosa Unit) with approximately 144,865 ac in the Tumacácori, Atascosa and Pajarito Mountains in Pima and Santa Cruz Counties where the Project is proposed to occur. 79 Fed. Reg. 12572, 12591 (Mar. 5, 2014). A majority of the proposed Project would be within Unit 2 of jaguar critical habitat. In making this designation of critical habitat for jaguars, FWS found that all designated areas were essential to the conservation of the species. *Id.* at 12572. FWS considered the Atascosa Unit occupied at the time of listing (37 FR 6476) and concluded that it may be currently occupied based on multiple photos of two, or possibly three, jaguars from 2001–2008, noting that the Atascosa Unit "contains all elements of the physical or biological feature essential to the conservation of the jaguar." 79 Fed. Reg. 12572, 12579.

Heavy machinery and work crews improving, repairing, constructing or decommissioning roads in jaguar critical habitat could impact the species and its critical habitat through disturbance of normal biological activities, loss of habitat, and habitat fragmentation. Roads have direct impacts to carnivores and their habitats, including roadkill, disturbance, habitat fragmentation, changes in prey numbers or distribution, and increased access for legal or illegal harvest (Menke and Hayes 2003, p. 12<sup>3</sup>; Colchero *et al.* 2010, entire<sup>4</sup>). Studies have also shown that jaguars selectively use large areas of relatively intact habitat away from certain forms of human influence. Zarza *et al.* (2007, pp. 107, 108<sup>5</sup>) report that towns and roads had an impact on the spatial distribution of jaguars in the Yucatan peninsula, where jaguars used areas located more than 6.5 km (4 mi) from human settlements and 4.5 km (2.8 mi) from roads.

The conservation of wildlife populations at the periphery of a species range is considered extremely import to the long-term survival of endangered species (Abbit et al. 2000; Channel and Lomolino 2000; Nielson et al. 2001). The conservation of borderlands jaguars, which represent the current northernmost portion of the species' range is therefore critical to the ultimate survival of the species. Global climate trends, higher temperatures and drier environments are pushing many species further north and borderlands habitat for jaguars will likely become even more critical to the survival of the species. Conservation of jaguars requires large, relatively undisturbed core and connective habitats to avoid population fragmentation. Without these habitats the probability of extinction increases greatly.

One of the greatest single threats to jaguar recovery in the United States comes from CBP and the agency's border infrastructure. Contractors working to implement CBP infrastructure have expedited border barrier construction, roads, high-powered lighting and other infrastructure with little regard to wildlife or the environment. CBP and its contractors have installed border barriers and roads in the area of the proposed Project without compliance with environmental laws like the ESA, NEPA, the Clean Water Act, the Clean Air Act and dozens of other laws that the Department of Homeland Security ("DHS") elected to waive while building the border wall. To date, DHS has built more than 200 miles of border wall across Arizona with no environmental compliance and without meaningful environmental review.

These border walls have moved, ever closer, decade by decade, to sealing off the last remaining cross-border wildlife corridors for the already small, extremely imperiled, northernmost population of jaguars in the U.S. from the larger and source population in northwestern Mexico. In the foreseeable future CBP and contractors may continue to do so in the Project area and across other units of jaguar critical habitat across the southern border, dooming the northern population of jaguars to oblivion. The proposed Project will further contribute to habitat loss and fragmentation for jaguars and runs counter to decades of federal efforts to recover jaguars in the United States.

There is sufficient evidence to demonstrate that the proposed Project has a high likelihood of impacting jaguars and their designated critical habitat. We reiterate that it is extremely concerning that the species was not even mentioned in the scoping letter and repeat our request that you extend the comment period for the proposed Project for an additional 30 days starting after appropriate information regarding likely impacts to jaguars and other listed species and their designated critical habitats is made available to the public.

Please find more comments on the USFS's need to complete a cumulative impacts analysis that looks at the extensive, existential destruction CBP and contractors have done to jaguar critical habitat as well as important conservation lands established to protect the ecological health of southern Arizona in Section II below.



#### FIGURE 3

Example of CBP border infrastructure, including new road in Unit 2 of jaguar critical habitat and in Mexican spotted owl critical habitat in the Pajarito Mountains, Coronado National Forest, Nogales Ranger District. 31.33449° N, 111.07794° W Photo by Myles Traphagen



#### FIGURE 4 Example of CBP border infrastructure, including blasting for new road in Unit 5 jaguar critical habitat in Guadalupe Canyon, Arizona. 31.33266° N, 109.06922° W Photo by John Kurc

#### D. Mexican spotted owl (Strix occidentalis lucida)

A portion of the proposed project area falls within designated critical habitat for the Mexican spotted owl. Critical habitat was designated for the Mexican spotted owl in 2004. 69 Fed. Reg. 53182. In total, 8,647,749 acres have been designated as critical habitat in Arizona, New Mexico, Colorado, and Utah. *Id*. The proposed Project is located within critical habitat unit BR-W-13, which is 54,735 acres in size and is centered on the Atascosa and Pajarito Mountains primarily on the Nogales Ranger District of the Coronado National Forest. 69 Fed. Reg. 53212, 53215.



FIGURE 5

Map showing location of Mexican spotted owl critical habitat unit BR-W-13. 69 Fed. Reg. 532776

In accordance with ESA Section 3(5)(A)(i) and regulations at 50 C.F.R. § 424.12, FWS is required to base critical habitat designation on the best scientific and commercial data available and to consider those physical and biological features (primary constituent elements) that are essential to conservation of the species and that may require special management considerations

or protection. Such general requirements include but are not limited to: space for individual and population growth, and for normal behavior; food, water, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing of offspring; and habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species. FWS designated unit BR-W-13 as critical habitat for Mexican spotted owls because the agency determined the area essential to the conservation and survival of the owl. 69 Fed. Re. 53212, 53190.

Increased vehicle and equipment travel as well as construction and decommissioning work would likely create disturbance from increased noise and human presence that could cause the owls to relocate to a less suitable territory, increasing stress, decreasing foraging success, and decreasing breeding success.

CBP and contractors have done extensive damage to Mexican spotted owl critical habitat already in the Coronado National Forest, Nogales Ranger District and should be required to remediate all of those damages before attempting to engage in new projects.

## E. Chiricahua leopard frog (Rana chiricahuensis)

FWS listed the Chiricahua leopard frog as a threatened species in 2002. 67 Fed. Reg. 40790 (June 13, 2002). FWS's 2007 recovery plan lists the following threats to habitat or range of the Chiricahua leopard frog: Mining, including mining-related contaminants; other contaminants; dams; diversions; stream channelization; groundwater pumping; woodcutting; urban and agricultural development; road construction; grazing by livestock and elk; climate change; altered fire regimes; and chytridiomycosis and predation by nonnative species (FWS 2007, pp. 31–37).<sup>7</sup>

USFS must analyze impacts of road construction through Chiricahua leopard frog critical habitat.

#### II. USFS and CBP Must Conduct Adequate NEPA Review of the Holden Canyon Project

Given the large-scale and extremely destructive scope of recent projects by CBP and contractors at and near the U.S.-Mexico border in the Tumacácori Ecosystem Management Area and the Southwest region writ large, and the fact that it is reasonably foreseeable that CBP and contractors will continue such activities in the immediate area the USFS should prepare an EIS for this project. Such measure is necessary to fully explore the possible effects, with an emphasis on the cumulative effects of recently completed, ongoing and reasonably foreseeable projects including the construction of border barrier infrastructure, cattle grazing, mining, wildfires and other CBP initiated projects that constitute existing stressors to wildlife and the environment in the Project area.

<u>A. The USFS Must Fully Analyze All Direct, Indirect, and Cumulative Impacts</u>

Under the National Environmental Policy Act ("NEPA"), the USFS must fully review the impacts from all "past, present, and reasonably foreseeable future actions." These are the "cumulative effect/impacts" under NEPA. To comply with NEPA, the USFS must consider all direct, indirect, and cumulative environmental impacts of the proposed action. 40 C.F.R. § 1508.1(g)(3). Direct effects are caused by the action and occur at the same time and place as the proposed project. 1508.1(g)(1). Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Id. § 1508.1(g)(2). Both types of impacts include "effects on natural resources and on the components, structures, and functioning of affected ecosystems," as well as "aesthetic, historic, cultural, economic, social or health [effects]." Id. § 1508.1(g)(4). Cumulative effects are defined as: "[T]he effects on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508.1(g)(3). In a cumulative impact analysis, an agency must take a "hard look" at all actions.

"An EA's analysis of cumulative impacts must give a sufficiently detailed catalogue of past, present, and future projects, and provide adequate analysis about how these projects, and differences between the projects, are thought to have impacted the environment. . . .Without such information, neither the courts nor the public . . . can be assured that the [agency] provided the hard look that it is required to provide." Te-Moak Tribe of Western Shoshone v. U.S. Dept. of Interior, 608 F.3d 592, 603 (9th Cir. 2010) (rejecting EA for mineral exploration that had failed to include detailed analysis of impacts from nearby proposed mining operations).

A cumulative impact analysis must provide a "useful analysis" that includes a detailed and quantified evaluation of cumulative impacts to allow for informed decision-making and public disclosure. Kern v. U.S. Bureau of Land Management, 284F.3d 1062, 1066 (9th Cir. 2002); Ocean Advocates v. U.S. Army Corps of Eng'rs, 361 F.3d 1108, 1118 (9th Cir. 2004). The NEPA requirement to analyze cumulative impacts prevents agencies from undertaking a piecemeal review of environmental impacts. Earth Island Institute v. U.S. Forest Serv., 351 F.3d 1291, 1306–07 (9th Cir. 2003).

The NEPA obligation to consider cumulative impacts extends to all "past," "present," and "reasonably foreseeable" future projects. Blue Mountains, 161 F.3d at 1214–15; Kern, 284 F.3d at 1076; Hall v. Norton, 266 F.3d 969, 978 (9th Cir. 2001) (finding cumulative analysis on land exchange for one development failed to consider impacts from other developments potentially subject to land exchanges); Great Basin Mine Watch v. Hankins, 456 F.3d 955, 971–74 (9th Cir. 2006) (requiring "mine-specific . . .cumulative data," a "quantified assessment of their [other projects] combined environmental impacts," and "objective quantification of the impacts" from other existing and proposed mining operations in the region). "If there is 'essential' information at the plan- or site-specific development and production stage, [the agency] will be required to perform the analysis ...." Native Village of Point Hope v. Jewell, 740 F.3d 489, 499 (9th Cir. 2014).

Thus, in this case, the USFS must fully consider the cumulative impacts from all past, present, and reasonably foreseeable future projects in the region on, at a minimum, water and air quality including ground and surface water quantity and quality, recreation, cultural/religious, wildlife, transportation/traffic, scenic and visual resources, etc. At a minimum, this requires the agency to fully review, and subject such review to public comment in a Draft EA or EIS, the cumulative impacts from all other border wall infrastructure, mining, exploration, grazing, recreation, energy development, roads, etc. in the project area and in the region.

#### B. USFS Must Fully Consider the Cumulative Impacts from All Past, Present and Future Actions on Habitat for Rare, Threatened and Endangered Species in the Region

The proposed road connector project, together with other actions in the project area, is likely to cumulatively harm imperiled species. The Chiricahua Leopard Frog Critical Habitat on the Cross S allotment within the Project area provides an illustrative example. A total of six critical habitat ponds are on this allotment: Mojonera Tank, two ponds labelled as Sierra Tanks, a third called Sierra Well, Upper Turner Tank and Bonita Tank at the terminus of the Critical Habitat stream in Bonita Canyon. Based on a May 4, 2021 field review by Center experts<sup>8</sup>, Mojonera Canyon has been degraded by cattle with signs of long-term use. The surveyed stream course was significantly grazed, browsed, littered with cattle feces and exhibited numerous trails, wallows and ground disturbances. Large concentrations of cattle feces were left on significantly impacted riparian benches. Cattle sign was both old and recent, indicating a sustained presence in the area. Cattle were also observed during the same 2021 survey. Critical habitat in Bonita

Canyon showed similar impacts to Mojonera Canyon and was significantly impacted by cattle. The six ponds within the Cross S allotment all showed significant impacts from cattle use. No exclosure fences were observed at any pond in this allotment. Abundant cattle feces surrounded the shoreline of all six ponds. Vegetation in surrounding areas was diminished through grazing/browsing in the pond vicinity. A strong stench of feces permeated the air at all locations. The two ponds known as the Sierra Tanks were completely dry and cow sign appeared consistent and extensive. Waterways leading to ponds were significantly impacted by cattle. Upper Turner Tank in Alamo wash contained feces. No understory vegetation remained in the surrounding area with multiple cattle trails leading to stock pond.

Hundreds of Chiricahua Leopard Frogs were observed in Mojonera Tank with some in the immediate stream vicinity. This occupied pond was contaminated with cattle feces, showed significant grazing/browsing pressure along the shoreline, and a strong stench of cattle feces permeated the air. This pond may have been augmented with captive-bred Chiricahua Leopard Frogs. No frogs were observed elsewhere on the allotment and they had no uncontaminated habitat option. These conditions do not support recovery.

Because the proposed road connector is likely to degrade Chiricahua Leopard Frog habitat, the agencies must disclose those impacts, together (cumulatively) with the past, present, and foreseeable harms from destructive levels of cattle grazing.

CBP and USFS must also analyze the cumulative impacts of nearby mining projects that would effect jaguar and Mexican spotted owl critical habitat and any other threatened,

endangered or sensitive species. Mining projects and exploration prospects in the nearby Patagonias are a perfect example. The Hermosa mine and the Sunnyside and Flux Canyon exploratory projects will impact threatened and endangered species also found in the proposed Project area. CBP and USFS must consider how the Project impacts will be cumulatively increased by these other operations.

### <u>C. USFS and CBP Must Fully Consider the Cumulative Impacts and Effect of the Proposed</u> <u>Project on Wildfire.</u>

USFS must address the increased risk of wildfire associated with forest roads when analyzing the proposed expansion of roads for CBP. USFS admits "Wildfires ... negatively impact recreation by damaging vegetation, roads, and recreation areas"<sup>9</sup> and recent wildfires are responsible for "erosion, sedimentation and the increase for invasive species establishment."<sup>10</sup> While fire is an essential process in dry forests, many fires started by humans burn outside of the natural fire season and result in harmful consequences, including those cited above. Researchers at WildEarth Guardians recently summarized these effects as follows: "Forest roads can increase the occurrence of human-caused fires, whether by accident or arson, and road access has been correlated with the number of fire ignitions (Syphard et al. 2007, <sup>11</sup> Yang et al., 2007, <sup>12</sup> Narayanaraj and Wimberly 2012,<sup>13</sup> Nagy et al. 2018<sup>14</sup>). A recent study found humans ignited four times as many fires as lightning, representing 92% of the fire ignitions in the eastern United States and 65% of the fire ignitions in the western U.S. (Nagy et al. 2018). Another study reviewed 1.5 million fire records over 20 years and found human-caused fires were responsible for 84% of wildfires and 44% of the total area burned (Balch et al. 2017<sup>15</sup>).

In addition to changes in frequency, human-caused fires change the timing of fire occurring when fuel moisture is significantly higher than lightning-started fires (Nagy et al. 2018.). Forest roads may also limit fire growth acting as a fire break and providing access for suppression (Narayanaraj and Wimberly 2011, Robbinne et al. 2016<sup>16</sup>). The result is a spatial and temporal distribution of fire that differs from historical fire regimes.

Roaded areas create a distinct fire fuels profile which may influence ignition risk and burn severity (Narayanaraj and Wimberly 2013). Forest roads create linear gaps with reduced canopy cover, and increased solar radiation, temperature, and wind speed. Invasive weeds and grasses common along roadsides also create highly combustible fine fuels. These edge effects can change microclimates far into the forest (Narayanaraj and Wimberly 2012, Ricotta et al. 2018<sup>17</sup>). While there is little definitive research on roads and burn severity, an increase in the prevalence of lightning-caused fires in roaded areas may be due to roadside edge effects (Arienti et al 2009,<sup>18</sup> Narayanaraj and Wimberly 2012). Furthermore, heavily roaded watersheds have typically received intensive management in the past leaving forests in a condition of high fire vulnerability (Hessburg and Agee 2003<sup>19</sup>).

Roadless areas are remote and secure from many human impacts such as unintentional fire starts or arson. A forest fire is almost twice as likely to occur in a roaded area than a roadless area (USDA Forest Service 2000). In fact, human-ignited wildfire is almost five times more likely to occur in a roaded area than in a roadless area. (USDA Forest Service 2000). Higher road

density correlates with an increased probability of human-caused ignitions. (Syphard et al. 2007)."<sup>20</sup>

Because the proposed road connector is likely to increase recreational use and the frequency of human-caused wildlife ignitions in the project area, the agencies must disclose those impacts, together (cumulatively) with the past, present, and foreseeable impacts to changes in the fire regime caused by climate change and use resulting from the existing road network.

## D. USFS and CBP Must Fully Consider the Cumulative Impacts and Effect of the Proposed Project on Invasive Species.

There are significant concerns that the proposed project would introduce invasive plant species such as Lehmann lovegrass (*Eragrostis lehmanniana*) and buffelgrass (*Pennisetum ciliare*) to the area by road construction, use and maintenance activities. Lehmann lovegrass and buffelgrass compete with native plant species and create unnatural fire conditions, worsening burn frequency and severity. Both Lehmann lovegrasss and buffelgrass are prolific seed-producers that are well-adapted to fire and grazing. This allows them to out-compete other native plants, posing serious risks to native vegetation and altering fire regimes. All of these impacts must be thoroughly evaluated in the NEPA process.

Cumulative impacts analysis of invasive species must consider the introduction of invasive species as a result of CBP's actions to build border barriers and roads on USFS lands near the project area. CBP and USFS must disclose the impacts of road usage and increased traffic not just on the proposed Holden Canyon Road, but on all connected roads as well. A 2023 United States Government Accountability Office report details the increase in invasive vegetation that has occurred as a result of border wall construction, stating "Clearing lands for border barrier construction damaged native vegetation... [and] leaving the lands cleared without reseeding them with native vegetation allowed invasive species to take root."<sup>21</sup> The report continues "FWS officials told us that invasive plant species took root at project sites in Texas, where contractors cleared native vegetation to create staging areas to store construction equipment and materials, although the contractor ultimately did not install any barrier in these locations."

A 2021 U.S. Department of the Interior ("DOI") presentation on the impacts of border wall construction to DOI lands stated "Extensive areas of disturbed soils within the construction areas are already leading to the spread of noxious, invasive plant species that threaten native species conservation. These areas will require many years of monitoring and treatment to protect park resources."<sup>22</sup> A November 2022 memo from the San Bernardino National Wildlife Refuge entitled *SBNWR Border Wall Status and Impacts* highlighted "Ongoing concerns for post construction spread of invasive and non-native plants onto refuge."<sup>23</sup>

Because the proposed Project connector is likely to impact and contribute to the spread of invasive species in the project area, the agencies must disclose those impacts, together (cumulatively) with the past, present, and foreseeable impacts to invasive species caused by border wall construction, as well as existing roads and other factors.

<u>E. USFS and CBP Must Fully Consider the Cumulative Impacts of CBP's Border Infrastructure</u> <u>Projects Carried Out Under Real ID Act Waivers</u>

# 1. CBP has inflicted severe damages to public lands and wildlife in the Coronado National Forest and Across Arizona that remain unaddressed and unanalyzed.

CBP's past actions to construct border walls and associated roads and lighting have taken place wholly outside the scope of our nation's environmental, public health and cultural resource protection laws. DHS has insisted on using an obscure authority under the REAL ID Act to exempt all past border wall projects from these critical environmental laws, including those within and near the proposed project area. CBP's unwillingness to adhere to these laws has demonstrated the agency's total disregard for environmental stewardship, cultural resource protection, stakeholder engagement, and transparency. The agency's insistence on operating outside the scope of these bedrock environmental laws has led to hundreds of miles of border walls, roads, and lighting being built across the borderlands with no meaningful analysis of the clear harms the construction would cause, resulting in severe and sometimes permanent destruction of environmental and cultural resources across the borderlands.

CBP and its contractors have blasted Native American cultural and burial sites, decimated ancient springs vital to endangered species, destroyed portions of ecosystems vital to human society and damaged the critical habitat and movement corridors of some of the most sensitive, iconic and important wildlife species in North America. If these actions occurred anywhere outside of the border region, they would violate dozens of laws and CBP contractors would be arrested for such heinous destruction. CBP and USFS must conduct detailed analysis of cumulative impacts from past, present and future CBP activities in the area including border wall construction and associated infrastructure as well as all other projects/activities in the area that may affect resources, including but not limited to wildlife, vegetation, water quality/quantity, air quality, recreation, transportation/traffic, and cultural resources. Existing and proposed border infrastructure installation projects including but not limited to other road construction, Make Safe and Remediation activities on the former 284 Border Barrier construction project area, and remediation efforts in Mariposa Canyon, should be analyzed. Likewise, any existing or proposed projects in similar habitat in the region for species affected in the proposed Project, including but not limited to, mine proposals, cattle grazing, road construction and other developments should be analyzed. Projects affecting the Patagonia Mountains and the Baboquivari mountains should be analyzed as impacts there are likely to affect species and critical habitat including jaguars and Mexican spotted owls.

In 2020 and 2021, CBP contractors dynamited mountainsides and built access roads on the Coronado National Forest in areas near the proposed Project area. Many of these locations remain at serious risk of erosion or in danger of complete collapse. A September 2023 report by the Government Accountability Office (GA)noted:

[C]ontractors disturbed large tracts of mountainside to install barrier, build access roads, and clear construction staging areas, leaving steep slopes unstable and at risk of collapse. In addition, according to CBP officials, incomplete erosion control measures along the

barrier and patrol roads threatened the integrity of the barrier system itself. (GAO Report, 2023. Pg 29).<sup>24</sup>

The GAO report specifically highlights damages to Pajarito Mountains in the Coronado National Forest, stating:

Contractors built a large construction staging area near the top of a mountain in the Pajarito Mountains on the Coronado National Forest in Arizona, clearing the mountainside of its vegetation that kept the soil in place. As a result, silt is draining down the side of the mountain and, according to Forest Service officials, is beginning to fill a human-made pond, threatening to eliminate it as a drinking source for cattle and wildlife. Moreover, the entire mountainside is in danger of collapse, according to a Forest Service official. (*Ibid.*)

The severe danger to people and wildlife posed by existing border wall construction on the Coronado National Forest requires immediate attention and remediation. Forest Service and CBP's first priority should be restoring and revegetating the damages cause by border wall construction, rather than proposing to build new roads that will further fragment and destroy wildlife habitat.



Erosion below the site of a cleared staging area (left); erosion below an area where only several border barrier panels were installed as of January 2021 (right). Source: GAO. | GAO-23-105443

#### FIGURE 6

Damage to Pajarito Mountains in Coronado National Forest as printed in 2023 US GAO Report "Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction"

# **2.** CBP's "Environmental Stewardship Plans" are not a substitute for NEPA, do not constitute meaningful review, and are not scientific basis to examine cumulative impacts

CBP recently begun publishing what the agency calls "Environmental Stewardship Plans" (ESPs), which the agency has falsely touted as a viable alternative to NEPA and a framework for stakeholder engagement.<sup>25</sup> We must note that ESPs are not and will never be an adequate substitute for the NEPA process. ESPs fail to meet the rigor set forth by NEPA in numerous ways. As stated in the Council on Environmental Quality's regulations implementing the procedural provisions of NEPA, alternatives are "the heart of the environmental impact statement."<sup>26</sup> Whether in the context of an EIS or an EA, NEPA requires agencies to "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."<sup>27</sup> As such, referencing CBP's ESPs in relation to analyzing the potential cumulative impacts of the proposed Project will not suffice as any sort of meaningful or scientific analysis, and certainly not qualify as an adequate examination of cumulative impacts.

# **III. USFS and CBP Should Comply with Requirement of the Forest Plan, the National Forest Management Act and Other Rules and Regulations**

In addition to impacts to species listed under the ESA, the USFS and CBP should protect sensitive species and comply with the requirements of the Coronado National Forest, Forest Plan and agency manuals, policies and directives requiring protection of sensitive species as required by the National Forest Management Act (NFMA).

As stated in the Final EIS for the revised Forest Plan (2018):

The regional forester's sensitive species program is the Forest Service's dedicated initiative to conserve and recover plant and animal species according to Forest Service policy found in Forest Service Manual 2670. The Coronado National Forest improves habitat and restores ecosystems for sensitive species through vegetation treatments and management practices. Sensitive species are those plant and animal species identified by the regional forester for which population viability is a concern, as evidenced by the following:

• significant current or predicted downward trends in population numbers or density

• significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. (U.S. Forest Serv., Final Programmatic Environmental Impact Statement for Revision of the Coronado National Forest Land and Resource Management Plan, at 251 (Apr. 2018).<sup>28</sup> [hereinafter FEIS].)

"Other forest planning species" are not listed as threatened, endangered, or sensitive but still have species-specific threats to their population viability that should be addressed by the coarse-filter analysis. FEIS. FEIS Table 73 has the Coronado's list of sensitive species, including those in the Tumacocori Ecosystem Management Area, which covers the project area. *See* FEIS at 252–54.

At a minimum, USFS and CBP should analyze how the project's impacts, alone and cumulatively with other past, present, and reasonably foreseeable activities may affect these species and complies with these requirements.

We urge USFS and CBP to do the required analysis of the baseline conditions, numbers, and habitat for these species (the same is true for ESA-listed species) in the lands/waters potentially affected by the project, in accordance of both NEPA, the NFMA, and agency manuals, policies and directives.

## IV. USFS and CBP Must Consider Full Range of Alternatives, Including a No Action Alternative and an Alternative Solely Focused on Road Decommissioning

Alternatives analysis are the heart of a fully compliant NEPA process. USFS and CBP must consider a full range of alternatives for this project, including a No Action Alternative.

USFS and CBP should also consider an alternative solely focused on the decommissioning and revegetation of the 20 existing unimproved roads (consisting of 3.94 total miles) referenced in the scoping letter. The Center supports the decommissioning of these roads in consultation with FWS, and USFS and CBP should move forward with this road decommissioning in a project entirely separate from that of the proposed Project to construct new roads.

## V. USFS and CBP Must Evaluate How Creating New Roads May Lead to Increased Illicit Traffic, Migration and Smuggling, In Addition to Increased Legal Traffic

Building New roads such as the proposed Project would increase both legal and illegal vehicle traffic and associated cross-country travel. Detrimental effects from road construction include direct, indirect, and cumulative impacts, ranging from wildlife mortality from vehicles, modification of animal behaviors, altered use of habitats, facilitation of the spread of exotic, invasive, and parasitic species, adverse genetic effects, and fragmentation of connected habitats.<sup>29 30 31</sup> Currently, the project area does not have major problems with illicit off-road vehicle traffic. The proposed Project could change this by allowing an array of new access points for illicit cross-country travel. The direct and cumulative impacts of this must be thoroughly analyzed in relation to the proposed Project.

USFS and CBP scoping letter articulates that "[t]he purpose of this project is to improve mobility and accessibility for CBP agents responding to and seeking to prevent illegal crossborder traffic." We must note that there is a reasonable likelihood that the new and upgraded roads will *increase*, rather than decrease, illicit traffic in the project area. Recent construction of border walls and associated roads in the San Bernardino Valley has led to an uptick in migrant traffic and smuggling, evidenced by a number of conversations with landowners and ranchers. In 2008, when CBP installed an all-weather road through previously unpassable terrain, drug smugglers began utilizing the new road within just three days of its construction. The San Bernardino National Wildlife Refuge 2008 Annual Report recounts: Within three days of the completion of the project in the San Bernardino Valley, drug smugglers began cutting portions of the Normandy barrier, which a group of men could then physically lift and move to allow vehicles loaded with marijuana to drive into the United States using the new system of all-weather roads constructed by DHS. Drive-through drug loads have subsequently increased in the San Bernardino Valley.<sup>32</sup>

USFS and CBP's stated Purpose and Need for the proposed Project to help respond to and "prevent illegal cross-border traffic," may be better achieved by taking no action at all as the proposed Project would clearly open up new corridors for migrants and smugglers.

In comparing the No Action Alternative with multiple other alternatives, the potential for improved roads to increase, rather than decrease, illicit traffic should be examined, in light of this and other examples of road construction making it easier for smugglers to move through our borderlands.

#### CONCLUSION

CBP's actions to build border walls and roads while ignoring NEPA, the ESA and dozens of other environmental laws have devastated wildlife and public lands on the Coronado National Forest. Because the Coronado National Forest and the critical habitat within it have been so heavily damaged by CBP border infrastructure, in addition to unchecked cattle grazing, it is imperative that analysis is done to understand the full range of cumulative impacts in the project area and region.

A cumulative analysis of CBP's actions will demonstrate that major remediation and mitigation actions are desperately needed to address CBP's destruction of public lands and natural resources during border wall construction. This remediation should be the priority for CBP and the USFS, rather than the construction of destructive new roads through designated critical habitat for endangered jaguars, Mexican spotted owls and Chiricahua leopard frogs. Remediating the past harm caused by the border wall will also help restore the disgraced reputation CBP has made for itself in southern Arizona after years of skirting environmental laws while destroying critical habitat for endangered species, national monument lands, wildlife refuges, archeological sites, and Indigenous sacred sites and burial grounds.

Sincerely,

Russ McSpadden Southwest Conservation Advocate Center for Biological Diversity <u>rmcspadden@biologicaldiversity.org</u> 928-310-6713 P.O. Box 710 Tucson, AZ 85702-0710 Cyndi Tuell Arizona and New Mexico Director Western Watersheds Project <u>cyndi@westernwatersheds.org</u> 520-272-2454 738 N. 5th St. Suite 206 Tucson, AZ 85705

Bryan Bird Southwest Program Director Defenders of Wildlife <u>BBird@defenders.org</u> (505) 501-4488

David Robinson Director of Advocacy Tucson Audubon Society <u>drobinson@tucsonaudubon.org</u> 520-260-6994

Sandy Bahr Director Sierra Club - Grand Canyon Chapter sandy.bahr@sierraclub.org

Su Libby Co-leader Great Old Broads for Wilderness Tucson Broadband <u>bigwiscon@gmail.com</u> 715-563-9539

Kate Scott & Tony Heath Founders Madrean Archipelago Wildlife Center (520) 975-8107 <sup>3</sup> Menke, Kurt A. and Charles L. Hayes. 2003 "Evaluation of the Relative Suitability of Potential Jaguar Habitat in New Mexico." Santa Fe: New Mexico Department of Game and Fish. Accessible:

https://www.cambridge.org/core/journals/oryx/article/systematic-review-of-potential-habitat-suitability-for-the-jaguar-panthera-onca-in-central-arizona-and-new-mexico-usa/9CCF8FB0975725AC100EBE20CBB08DB2

<sup>4</sup> F. Colchero, D. A. Conde, C. Manterola, C. Chavez, A. Rivera & G. Ceballos. 2010. Jaguars on the move: modeling movement to mitigate fragmentation from road expansion in the Mayan Forest. Animal Conservation. Accessible: <u>https://zslpublications.onlinelibrary.wiley.com/doi/10.1111/j.1469-1795.2010.00406.x</u>

<sup>5</sup> Zarza, H., C. Chávez, and G. Ceballos. 2007. Uso de hábitat del jaguar a escala regional en un paisaje dominado por actividades humanas en el sur de la península de Yucatán. Pp 101-110 in Ceballos, G, C. Chávez, R. List y H. Zarza (editores). 2007. Conservación y manejo del jaguar en México: estudios de caso y perspectivas. Conabio -Alianza WWF- Telcel – Universidad Nacional Autónoma de México. México.

<sup>6</sup> 69 FR 53277. Map image accessible: <u>https://www.federalregister.gov/d/04-19501</u>

<sup>7</sup> U.S. Fish and Wildlife Service. 2007. Chiricahua Leopard Frog Final Recovery Plan. Accessible here: <u>https://www.amphibians.org/wp-content/uploads/2019/04/Chiricahua-leopard-frog-Recovery-Plan.pdf</u>

<sup>8</sup> Center for Biological Diversity. 2022. Sixty-Day Notice of Intent to Sue the U.S. Forest Service and the U.S. Fish and Wildlife Service for Endangered Species Act Violations for Failing to Ensure that Forest Service Authorized Cow Grazing on the Coronado National Forest Does Not continue destroying Western Yellow-Billed Cuckoo, Chiricahua Leopard Frog, and Northern Mexican Garter Snake Critical Habitat. Accessible:

https://www.biologicaldiversity.org/programs/public\_lands/grazing/pdfs/coronado-NOI-20220228.pdf

<sup>9</sup> Chiricahua Public Access EA, page 14.

<sup>10</sup> *Id.*, page 16.

<sup>11</sup> Syphard, A.D., Radeloff, V.C., Keeley, J.E., Hawbaker, T.J., Clayton, M.K., Stewart, S.I. and Hammer, R.B. (2007), HUMAN INFLUENCE ON CALIFORNIA FIRE REGIMES. Ecological Applications, 17: 1388-1402. https://doi.org/10.1890/06-1128.1

<sup>12</sup> Yang, Jian & He, Hong & Shifley, Stephen & Gustafson, Eric. (2007). Spatial Patterns of Modern Period Human-Caused Fire Occurrence in the Missouri Ozark Highlands. Forest Science -Washington-. 53.

10.1142/9789812706713\_0001. <u>https://www.nrs.fs.usda.gov/pubs/jrnl/2007/nc\_2007\_yang\_001.pdf</u> <sup>13</sup> Narayanaraj, Ganapathy & Wimberly, Michael. (2012). Influences of forest roads on the spatial patterns of human- and lightning-caused wildfire ignitions. Applied Geography. 32. 878–888. 10.1016/j.apgeog.2011.09.004. <u>https://www.researchgate.net/publication/256972109\_Influences\_of\_forest\_roads\_on\_the\_spatial\_patterns\_of\_huma</u> <u>n- and lightning-caused wildfire ignitions</u>

<sup>14</sup> Nagy RC, Fusco E, Bradley B, Abatzoglou JT, Balch J. Human-Related Ignitions Increase the Number of Large Wildfires across U.S. Ecoregions. *Fire*. 2018; 1(1):4. <u>https://doi.org/10.3390/fire1010004</u>

<sup>15</sup> Balch, J. K., Bradley, B. A., Abatzoglou, J. T., Nagy, R. C., Fusco, E. J., & Mahood, A. L. (2017). Human-started wildfires expand the fire niche across the United States. Proceedings of the National Academy of Sciences, 114(11), 2946-2951. <u>https://doi.org/10.1073/pnas.1617394114</u>

<sup>16</sup> Robinne, François-Nicolas & Bladon, Kevin & Miller, Carol & Parisien, Marc-André & Mathieu, Jérôme & Flannigan, Mike. (2017). A spatial evaluation of global wildfire-water risks to human and natural systems. The Science of the total environment. 610-611. 1193-1206. 10.1016/j.scitotenv.2017.08.112. https://www.researchgate.net/publication/319403396 A spatial evaluation of global wildfire-

water risks to human and natural systems

<sup>17</sup> Ricotta, Carlo & Bajocco, Sofia & Guglietta, Daniela & Conedera, Marco. (2018). Assessing the Influence of Roads on Fire Ignition: Does Land Cover Matter?. Fire. 1. 24. 10.3390/fire1020024. https://www.researchgate.net/publication/326279822\_Assessing the\_Influence\_of\_Roads\_on\_Fire\_Ignition\_Does\_Land\_Cover\_Matter

<sup>18</sup> Arienti M. Cecilia, Cumming Steven G., Krawchuk Meg A., Boutin Stan (2009) Road network density correlated with increased lightning fire incidence in the Canadian western boreal forest. *International Journal of Wildland Fire* **18**, 970-982. <u>https://doi.org/10.1071/WF08011</u> accessible <u>https://www.researchgate.net/profile/Maria-</u>

<sup>&</sup>lt;sup>1</sup> Office of Congressional and Legislative Affairs. U.S. Department of the Interior. Border Security Consequences of Federal Lands Management Along the U.S. Border to Rural Communities and National Security Accessible: <u>https://www.doi.gov/ocl/border-security-1</u>

<sup>&</sup>lt;sup>2</sup> U.S. Department of Agriculture. 2012. Forest Service Handbook, National Environmental Policy Act. Accessible: <u>https://www.resolutionmineeis.us/sites/default/files/references/usfs-nepa-handbook-2012.pdf</u>

Latham/publication/240506317 Road network density correlated with increased lightning fire incidence in the Canadian western boreal forest/links/00b4952d213a4e146000000/Road-network-density-correlated-with-increased-lightning-fire-incidence-in-the-Canadian-western-boreal-forest.pdf

<sup>19</sup> Hessburg, Paul & Agee, James. (2003). An Environmental Narrative of Inland Northwest United States Forests, 1800–2000. Forest Ecology and Management. 178. 23-59. 10.1016/S0378-1127(03)00052-5.

https://www.researchgate.net/publication/222410524 An Environmental Narrative of Inland Northwest United States Forests 1800-2000

<sup>20</sup> WildEarth Guardians. 2020. "The Environmental Consequences of Forest Roads and Achieving a Sustainable Road System." An update to The Wilderness Society report titled "Transportation Infrastructure and Access on National Forests and Grasslands: A Literature Review. May 2014." Available online at https://pdf.wildearthguardians.org/support\_docs/Roads-Lit-Review-2020.pdf.

<sup>21</sup> Government Accountability Office. 2023. SOUTHWEST BORDER: Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction. GAO-23-105443. https://www.gao.gov/products/gao-23-105443

<sup>22</sup> U.S. Department of the Interior. 2021. DOI Briefing to Senate Appropriations Staff. "Southern Border Natural and Cultural Resource Impacts from Border Barrier Construction and Termination of Contracts. June 11, 2021.

<sup>23</sup> San Bernadino National Wildlife Refuge. 2022. Memo: *Wall Status and Impacts SBNWR*. U.S. Fish and Wildlife Service. Obtained through FOIA.

<sup>24</sup> Government Accountability Office. September 2023. SOUTHWEST BORDER: Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction. GAO-23-105443. Accessible: https://www.gao.gov/assets/gao-23-105443.pdf

<sup>25</sup> Paul Enriquez, U.S. Customs and Border Protection. 2018. Statement made during webinar on Rio Grande Valley border wall construction. October 30, 2018.

<sup>26</sup> 40 C.F.R. § 1502.14.

<sup>27</sup> 42 U.S.C. § 4332(E).

<sup>28</sup> United States Department of Agriculture. April 2018. Final Programmatic Environmental Impact Statement for Revision of the Coronado National Forest Land and Resource Management Plan Cochise, Graham, Pima, Pinal, and Santa Cruz Counties, Arizona and Hidalgo County, New Mexico. Accessible: https://www.fs.usda.gov/Internet/FSE\_DOCUMENTS/fseprd583210.pdf

<sup>29</sup> Trombulak, S.C., and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic

communities. Conservation Biology 14: 18-30 <u>https://conbio.onlinelibrary.wiley.com/doi/full/10.1046/j.1523-</u>1739.2000.99084.x

<sup>30</sup> Wisdom, M.J., A.A. Ager, H.K. Preisler, N.J. Cimon, and B.K. Johnson. 2004. Effects of off-road recreation on mule deer and elk. Transactions of the North American Wildlife and Natural Resources Conference 69: 531-550. <u>https://www.fs.usda.gov/pnw/pubs/journals/uncaptured/pnw\_2004\_wisdom001.pdf</u>

<sup>31</sup> Van Riper, C. III., and R. Ockenfels. 1998. The influence of transportation corridors on the movement of pronghorn antelope over a fragmented landscape in northern Arizona. Proceedings International Conference on Wildlife Ecology and Transportation (ICOWET). <u>http://www.georgewright.org/13vanrip.pdf</u>

<sup>32</sup> San Bernardino National Wildlife Refuge, Leslie Canyon National Wildlife Refuge Annual Narrative Report Calendar Year 2008. U.S. Department of the Interior, Fish and Wildlife

Service, National Wildlife Refuge System. <u>https://www.biologicaldiversity.org/programs/public\_lands/pdfs/San-</u> Bernardino-National-Wildlife-Refuge-Leslie-Canyon-National-Wildlife-Refuge-Annual-Narrative-Report-2008.pdf