U.S. Customs and Border Protection
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RE: Tucson Border Barrier System Construction; Public Comment on Border Barrier System Construction – Pima, Yuma, Santa Cruz, and Cochise Counties, Arizona

I. Executive Summary

These comments are submitted to U.S. Customs and Border Protection (CBP) on behalf of the Center for Biological Diversity, San Xavier District of the Tohono O'odham Nation, Coalition for Sonoran Desert Protection, Sky Island Alliance, Rewilding Institute, Arizona Trail Association, Sierra Club - Grand Canyon Chapter, Sierra Club Borderlands, Wildlands Network, Endangered Species Coalition, Chispa Arizona, Great Old Broads for Wilderness, San Pedro 100, Madrean Archipelago Wildlife Center, Great Old Broads for Wilderness - Tucson Broadband, Friends of the Sonoran Desert, Friends of International Friendship Park and No Border Wall Coalition Laredo to express profound concern regarding CBP's proposal to construct new border barriers and related infrastructure across Pima, Santa Cruz, Cochise, and Yuma counties in southern Arizona (U.S. Customs and Border Protection, 2025d). On November 19, 2025, the Department of Homeland Security issued waivers of dozens of environmental, public health and cultural protection laws to expedite roughly 19 miles of new primary wall and 42 miles of secondary wall, along with 222 miles of high-intensity lighting, roads, and surveillance systems across the U.S. Border Patrol Tucson Sector. We strongly oppose the use of waivers and this project because it threatens irreparable harm to the region's unique ecosystems, wildlife, water resources, public health and cultural heritage, while offering little demonstrable benefit to CBP's stated goals.

The breadth and scale of the project, which is both wider in scope and more technologically intensive than prior efforts, threatens one of the most biologically rich and culturally significant regions in North America, including Chihuahuan and Sonoran Deserts, grasslands ecosystems, two rivers, several important streams, and the Madrean Sky Islands, including the Baboquivari, Pajarita-Atascosa, Patagonia, Huachuca and Peloncillo Mountains. The proposal will affect national park lands, national wildlife refuges, wilderness areas and hundreds of miles of public lands. The proposal follows on the heels of a similar and partially overlapping waiver issued in June 2025 for the San Rafael Valley (U.S. Customs and Border Protection, 2025c) and a series of

October 2025 waivers of all federal procurement laws for contracts for border wall construction from the Pacific Ocean to the Gulf of Mexico (Center for Biological Diversity, 2025). Together, these and past actions mark an alarming step toward a continent-wide infrastructure project that ignores science, subverts public process, undermines transparency and democracy, promulgates graft, wastes billions of dollars of tax-payer money and devastates ecosystems at a regional and hemispheric scale.

We urge CBP to reconsider the construction of 30-foot steel bollard walls as an ineffective and ecologically destructive course of action. Piece by piece, CBP is carrying out a continent-wide project that will have both predictable and unpredictable catastrophic ecological impacts to the Southwest United States and Northern Mexico. No other society before has attempted to wall off an entire continent from ocean to ocean. This is not a sound, normal or moral way to treat landscapes, ecosystems, human communities or our country's life support systems, nor our nation's immigration concerns.

Southern Arizona's borderlands encompass the Sky Island region, a globally recognized biodiversity hotspot where desert, grassland, and mountain ecosystems converge. This continental convergence zone of unique and disparate biotic communities hosts a remarkable array of federally protected species and supports transboundary wildlife corridors that are among the last of their kind in the United States (e.g., Warshall, 1994, Minckley & Radke, 2021, Harrity et al., 2024; Marín & Koprowski, 2025). In particular, the border wall segments proposed through Sycamore Canyon in the Pajarita Wilderness, the Atascosa Highlands west of Nogales, the Patagonia and Huachuca Mountains, and the Peloncillo Mountains at the New Mexico line will sever the last remaining corridors for the jaguar and ocelot in their northernmost occupied range globally. These big cats rely on the border's rugged wilderness linkages to move north from breeding populations in Mexico, and walling off these areas would effectively eliminate their natural recovery in the U.S. Access for jaguars to high value critical habitat north of the border in Arizona would be severed. The ecological importance of this region cannot be overstated.

The region's biodiversity is not limited to large mammals. Southern Arizona's Sky Islands support more native bee species than any other comparably sized region in the world. Over 1,000 native bee species are estimated to exist in Arizona, many of them micro-endemics found only in narrow ecological bands (Minckley & Radke, 2021). These pollinators play an essential role in maintaining plant communities, supporting food webs, and ensuring the reproductive success of rare and endemic flora, including federally listed species. Border infrastructure construction would degrade or destroy the shallow soils, seasonal wildflower blooms, and intact hydrology these species depend upon, factors especially sensitive to road building, lighting, and vehicular dust. Ground-nesting bee species, which make up the majority of native bees in the region, are highly vulnerable to soil compaction and chemical contamination associated with construction.

In total, the affected area intersects critical habitat or occupied range for dozens of listed species, including the jaguar, ocelot, Mexican spotted owl, northern Mexican gartersnake, Sonoran desert tortoise, yellow-billed cuckoo, Chiricahua leopard frog, Gila topminnow, Yaqui catfish, Huachuca water umbel, beardless chinchweed, and many others. Most of these species rely on interconnected hydrological systems and undeveloped habitat cores that are now directly in the path of new walls, lighting, and roads.

Border wall, industrial lighting and other infrastructure will cause predictable, unpredictable and permanent loss of the irreplaceable biological heritage of the Southwest United States. **For these reasons, and those detailed below, we urge CBP to abandon this ill-advised project or, at an absolute minimum, if construction proceeds, CBP must commit to comprehensive, science-based mitigation measures (as detailed in Section "Proposed Mitigation Strategies" below) to maintain wildlife connectivity and ecosystem health.**

II. Background and Legal Context

CBP plans to replace wildlife-permeable vehicle barriers and build new border walls across multiple Arizona counties in the Tucson Sector. The primary barriers would be 30-foot-high steel bollards set 4 inches apart with anti-climb features, backdropped by access roads, stadium-style lighting, surveillance cameras, and other "system attributes" spanning more than 200 miles. In some places, CBP plans to build secondary walls, a system of parallel 30-foot-high steel bollard walls. This sweeping project comes with an equally sweeping waiver of laws: pursuant to Section 102(c) of the 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA), and section 102 of the Real ID Act of 2005, the DHS Secretary waived dozens of federal statutes – including the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Clean Water Act, American Indian Religious Freedom Act, and many more, that would otherwise apply to this construction. By design, this waiver precludes the usual environmental impact studies and public transparency that such a massive project demands. Yet waiving the laws does not waive CBP's responsibility to make sound, science-driven decisions and to engage in good-faith consultation with affected communities and Tribes. Neither does it waive CBP's responsibility to uphold the U.S. Constitution. Although Congress authorized this delegation, the scope of that delegation violates the Constitution.

Under the nondelegation doctrine Article I, Section 1 of the U.S. Constitution, Congress cannot cede its legislative powers to the executive branch without clear limits or guiding principles. Section 102(c), however, provides virtually no standards to constrain the Secretary's authority. It allows one *unelected* executive official to nullify dozens of duly enacted laws, such as the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, and the National Historic Preservation Act, without oversight, judicial review, or accountability. This sweeping and unchecked power undermines the separation of powers enshrined in the

Constitution by concentrating legislative authority in the hands of a single unelected administrator.

Equally concerning is the erosion of the Equal Protection Clause under the Fifth and Fourteenth Amendments. These waivers apply only in border regions, effectively stripping local communities, Tribal nations, and ecosystems in places that CBP currently plans to build new walls, double walls, and associated infrastructure, of legal rights and protections that remain intact across the rest of the country. All Americans are entitled to equal protection under the law, but under § 102(c), borderland residents are relegated to second-class status, denied access to environmental safeguards, public health, and cultural preservation.

No person or office should be above the law. Yet § 102(c) establishes a mechanism by which a single official can nullify decades of legal protections with no meaningful check. This raises urgent constitutional questions about the balance of powers, democratic accountability, and the fundamental rights of those who live in the borderlands. CBP must fully consider its legal and ethical responsibility to uphold the Constitution, and the grave implications of engaging in actions that strip Americans, particularly borderland and Indigenous communities, of their constitutional rights.

We remind CBP that Congress' waiver provision, while giving DHS extraordinary but unconstitutional power to bypass legal requirements, does not mandate ignorance. The agency still possesses discretion, and, we argue, the duty to voluntarily uphold these laws and should conduct all relevant studies to inform this project before moving forward. This means carefully evaluating the effectiveness of the wall, environmental impacts, avoiding damage to endangered species and cultural sites, and consulting with Tribal Nations as partners. Proceeding with wall construction without meaningful Tribal consultation would perpetuate a painful legacy of disregard for Indigenous rights and sacred lands. Federal policies (NHPA Section 106, Executive Order 13175 on tribal consultation, the American Indian Religious Freedom Act, etc.) strongly encourage engaging Tribes and protecting cultural resources and this remains morally necessary even if legal enforcement is waived. We urge CBP to honor these principles. The proposed barriers would directly affect sites and species of profound cultural significance. To ignore Tribal input is not only an environmental injustice but a civil rights issue.

It is important that CBP understand that the proposed project relies on the removal of bedrock American laws that are meant to protect the American people, our cultural heritage, our water, our wildlife, our dignity, our safety, our livelihoods and our natural life support systems. Each law waived for this project serves a critical function to protect.

Below is a list of many, but not all of the laws waived for CBP's proposed project and the impact that the loss of these laws entails for people, wildlife and wildplaces in the Arizona borderlands:

National Environmental Policy Act
Waiving the National Environmental Policy Act eliminates public disclosure and analysis of environmental impacts, depriving communities and decision-makers of information necessary to understand, avoid, or mitigate irreversible harm.

Endangered Species Act
Waiving the Endangered Species Act allows federal actions to proceed without safeguards to prevent jeopardy to listed species or destruction of critical habitat, accelerating biodiversity loss.

Native American Graves Protection and Repatriation Act
Waiving the Native American Graves Protection and Repatriation Act allows disturbance of Native American graves and cultural items without consultation or consent, violating Tribal dignity and religious practice.

Clean Water Act
Waiving the Clean Water Act permits construction activities to degrade wetlands, streams, and watersheds without permits or mitigation, threatening water quality and aquatic ecosystems.

National Historic Preservation Act
Waiving the National Historic Preservation Act removes requirements to identify, evaluate, and protect historic properties and traditional cultural landscapes, leading to permanent loss of irreplaceable heritage.

Migratory Bird Treaty Act
Waiving the Migratory Bird Treaty Act allows activities that kill or disturb migratory birds without accountability, undermining international conservation commitments.

Migratory Bird Conservation Act
Waiver of the Migratory Bird Conservation Act weakens protections for migratory bird habitats, increasing habitat loss along critical migration corridors.

Clean Air Act
Waiving the Clean Air Act allows construction-related emissions and dust to occur without controls, increasing risks to public health and regional air quality.

Archaeological Resources Protection Act
Waiving the Archaeological Resources Protection Act permits excavation or destruction of archaeological resources without permits or penalties, facilitating irreversible cultural loss.

Paleontological Resources Preservation Act
Waiver of the Paleontological Resources Preservation Act enables destruction of scientifically significant fossils without documentation or preservation, erasing irreplaceable records of natural history.

Federal Cave Resources Protection Act of 1988
Waiving the Federal Cave Resources Protection Act of 1988 exposes caves and subterranean ecosystems to damage or destruction, threatening unique geological and biological resources.

National Trails System Act
Waiving the National Trails System Act allows disruption of congressionally

designated trails, severing public access, scenic integrity, and historic travel corridors.

Safe Drinking Water Act
Waiving the Safe Drinking Water Act risks contamination of drinking water sources by removing safeguards that protect groundwater and public water systems.

Noise Control Act
Waiver of the Noise Control Act permits excessive construction noise without limits, harming wildlife behavior and degrading quality of life for nearby communities.

Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act
Waiving the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, allows hazardous and construction waste to be managed without federal standards, increasing risks of soil and groundwater contamination.

Comprehensive Environmental Response, Compensation, and Liability Act
Waiving the Comprehensive Environmental Response, Compensation, and Liability Act removes mechanisms for cleanup and accountability for hazardous substance releases, shifting environmental and financial burdens to the public.

Archaeological and Historic Preservation Act
Waiving the Archaeological and Historic Preservation Act eliminates requirements to recover and preserve archaeological data prior to destruction, resulting in permanent loss of cultural knowledge.

Antiquities Act
Waiving the Antiquities Act allows damage to historic landmarks and objects on federal lands without required protections, enabling irreversible loss of nationally significant cultural resources.

Historic Sites, Buildings, and Antiquities Act
Waiving the Historic Sites, Buildings, and Antiquities Act allows federal projects to proceed without regard for historic sites' preservation or public benefit.

Bald and Golden Eagle Protection Act
Waiving the Bald and Golden Eagle Protection Act permits disturbance or killing of eagles without authorization, threatening populations of culturally and ecologically significant species.

Administrative Procedure Act
Waiving the Administrative Procedure Act removes basic procedural safeguards, eliminating transparency, public participation, and judicial review of agency actions.

Section 438 of the Energy Independence and Security Act
Waiving Section 438 of the Energy Independence and Security Act allows federal projects to increase stormwater runoff and flooding by bypassing low-impact development requirements.

National Fish and Wildlife Act of 1956
Waiving the National Fish and Wildlife Act of 1956 undermines federal coordination for fish and wildlife conservation, weakening habitat protection and restoration efforts.

Fish and Wildlife Coordination Act
Waiving the Fish and Wildlife Coordination Act eliminates requirements to consider wildlife impacts of water-related projects, increasing harm to aquatic and riparian species.

Wild and Scenic Rivers Act
Waiving the Wild and Scenic Rivers Act allows degradation of protected rivers' free-flowing condition, water quality, and scenic values.

Farmland Protection Policy Act
Waiving the Farmland Protection Policy Act permits unnecessary conversion of prime farmland, undermining food security and rural economies.

Federal Land Policy and Management Act
Waiving the Federal Land Policy and Management Act allows federal land uses without multiple-use planning or environmental safeguards, increasing degradation of public lands.

National Wildlife Refuge System Improvement Act of 1997
Waiving the National Wildlife Refuge System Improvement Act of 1997 permits activities incompatible with wildlife conservation on refuge lands, undermining their core purpose.

National Park Service Organic Act
Waiving the National Park Service Organic Act allows actions that impair park resources, contrary to the mandate to conserve them unimpaired for future generations.

National Park Service General Authorities Act
Waiving the National Park Service General Authorities Act weakens statutory protections governing park management and resource preservation across the national park system.

National Forest Management Act of 1976
Waiving the National Forest Management Act of 1976 allows projects to proceed without forest planning, threatening ecosystem integrity and public input.

Multiple Use and Sustained Yield Act of 1960
Waiving the Multiple Use and Sustained Yield Act of 1960 undermines balanced management of national forests, privileging single uses over long-term sustainability.

The Wilderness Act
Waiving the Wilderness Act allows industrial development in areas Congress designated to remain untrammeled and undeveloped.

The Arizona–Idaho Conservation Act of 1988
Waiving the Arizona–Idaho Conservation Act of 1988 removes congressionally mandated protections for specific conservation lands, undermining legislative land-use decisions.

The Arizona Desert Wilderness Act
Waiving the Arizona Desert Wilderness Act permits construction in areas explicitly designated by Congress as wilderness, permanently altering protected desert ecosystems.

III. Effectiveness and Policy Concerns

The rush to build more wall is occurring despite evidence that such barriers have diminishing returns for border security, and cause harm to people, wildlife and ecosystem health. Border walls offer little demonstrable benefit to the agency's stated goals for border security. Walls have repeatedly failed to prevent migration; in fact, the highest levels of unauthorized crossings in recent years have occurred in areas that already feature 30-foot bollard-style barriers erected during the first Trump Administration, including within Organ Pipe Cactus National Monument. These expensive and destructive structures have not achieved their intended purpose, and instead endanger human lives, and strain humanitarian resources without delivering strategic gain. Recent research along the Arizona–Sonora border found virtually no instances of humans breaching vehicle barriers in remote areas like the San Rafael Valley and elsewhere, even during extensive monitoring. Yet the same study documented dramatic impacts to wildlife when taller bollard walls replaced those low vehicle barriers (Harrity et al., 2024). We ask CBP to weigh the enormous financial costs of constructing and maintaining these new walls against their questionable utility and proven harm. Notably, prior border wall segments have failed under extreme flood events, collapsing and requiring costly repairs. The proposed design would repeat these failures. This project is neither fiscally nor operationally prudent.

IV. Hydrological and Environmental Impacts

The introduction of continuous wall segments and extensive infrastructure will fundamentally alter the hydrology and ecology of this region. Southern Arizona's desert valleys and canyons are defined by ephemeral streams and seasonal washes that sustain life in an arid climate. Our specific concerns include:

A. Disruption of Natural Water Flows

A bollard wall across a floodplain can act like a dam, impeding water and debris during seasonal monsoon floods which pose a threat to the delicate hydrological systems and vital riparian corridors of southern Arizona. In areas like the Santa Cruz River valley, San Pedro River, Sycamore Canyon and other streams, springs, and cienegas, floodwaters that historically spread out in shallow overbank flows will be impounded or diverted at high velocity through narrow gaps, causing severe channel scouring. Field studies have shown that such scouring deepens streambeds and disconnects them from their floodplains. This in turn prevents aquifer recharge and the periodic flooding needed to germinate riparian plant seeds. A wall effectively reduces the surface area of inundation and percolation, robbing the ecosystem of its lifeblood of groundwater recharge. In the long term, this could desiccate wetlands and cottonwood-willow riparian forests that depend on seasonal flooding. For example, cutting off overbank flows in the Santa Cruz's headwaters could impede regeneration of cottonwoods and willows, habitat critical to

endangered birds like the Southwestern willow flycatcher and Western yellow-billed Cuckoo. By funneling water into eroded channels, the wall could also degrade stream habitat for desert fish such as the endangered Gila topminnow, whose shallow spawning areas and backwater nurseries are sustained by gentle floodplain inundation.

A bollard wall constructed across a floodplain functions in many ways like a dam, impeding the natural movement of water and debris during seasonal monsoon-driven floods, and thereby posing a substantial threat to the delicate hydrological systems and vital riparian corridors of southern Arizona. In dynamic floodplain systems such as the Santa Cruz River valley, the San Pedro River, Sycamore Canyon, and other streams, springs, and cienegas, floodwaters historically spread out as shallow overbank flows that slowly infiltrate soils, recharge aquifers, and maintain the mosaic of wet and dry habitats on which desert riparian ecosystems depend. A border wall interrupts these processes by impounding flow or diverting it at high velocity through narrow gaps, causing severe channel scouring. Field studies have demonstrated that such channel incision deepens streambeds and disconnects them from their floodplains, ultimately preventing aquifer recharge and eliminating the periodic inundation necessary to germinate riparian plant seeds and sustain cottonwood-willow gallery forests.

This disruption of floodplain function not only threatens terrestrial riparian vegetation and the endangered birds that depend on that vegetation, such as the Southwestern willow flycatcher and Western yellow-billed cuckoo, but also jeopardizes imperiled aquatic species. Gentle floodplain inundation historically created and maintained the shallow pools, backwater areas, and hydrologic connectivity upon which desert fish such as the endangered Gila topminnow rely. Similarly, the Sonoran chub (Gila ditaenia), a threatened desert fish with a highly limited U.S. distribution in Sycamore Canyon and adjacent waters, depends on the persistence of perennial pools and episodic connectivity along Sycamore Creek and its tributaries to sustain viable populations. Sycamore Creek represents the northern edge of the Sonoran chub's range and contains designated critical habitat; the species occupies isolated deeper pool habitats that are sensitive to changes in flow regime and are influenced by watershed condition and hydrologic processes. Disruption of natural floodplain dynamics by impermeable structures such as bollard walls can reduce the frequency and extent of surface water inundation, degrade the physical habitat structure of these perennial and intermittent streams, and further isolate remnant populations already stressed by drought, climate change, non-native species, and historical land use impacts. Consequently, border infrastructure that impedes overbank flows and alters channel morphology stands to exacerbate risks to the Sonoran chub's long-term survival by reducing aquatic habitat availability and connectivity in one of its few remaining U.S. strongholds Center for Biological Diversity, 2023).

B. Groundwater Depletion and Springs

Construction activities will consume enormous quantities of water for dust control and concrete. In Organ Pipe Cactus National Monument (southwestern Pima County) and the San Bernardino National Wildlife Refuges (southeastern Cochise County), wall segments required upwards of 700,000 gallons a day for wall construction. This water was pumped from local sources in some of the driest regions of the continent near some of the most critical wetland and spring systems for wildlife, including threatened and endangered species like the Quitobaquito pupfish, Sonoyta mud turtle, Yaqui topminnow, Yaqui chub, beautiful shiner, San Bernardino springsnail and Chiricahua leopard frog. Groundwater removal for wall projects is unwise and potentially irreversible, and CBP should categorically avoid water use that could harm springs.

V. Vegetation Clearing and Erosion

Building the wall entails clearing a wide swath of land for access roads, staging areas, and the patrol road (up to 24 feet wide) along the barrier. In high desert grasslands and on fragile desert soils, this kind of clearing invites severe erosion. The loss of native vegetation cover will accelerate runoff and sedimentation into streams, smothering aquatic habitats. It also encourages the spread of invasive plants (like buffelgrass and Lehmann lovegrass) that thrive on disturbed soil and can intensify wildfire cycles. Several endangered plants are at risk. For example, the Pima pineapple cactus, a federally endangered cactus of southern Arizona's semidesert grasslands, could be directly destroyed by ground clearance. This species grows low to the ground and is extremely hard to detect; without thorough surveys (which the waiver of NEPA/ESA means won't be done), construction equipment will likely crush many of them. Likewise, the Beardless chinchweed, a rare sunflower listed as endangered in 2021. Two of the only four populations known in the United States are within the path of CBP plans for new plans for expansive border wall construction: the Atascosa-Pajarito mountains complex and the Huachuca Mountains, and particularly the Coronado National Memorial, where double wall is planned. The plan's last populations occur on grassy hills right in the path of proposed wall segments. Uprooting vegetation and altering drainage in its habitat could also change fire regimes that the plant cannot survive. In sum, the project would replace living, complex habitats with a barren strip of road and steel, fragmenting plant communities and leaving them vulnerable to weeds and erosion. This represents a permanent scar across protected public lands including wilderness areas, national forest, and refuge lands that are foundational to the health and wealth of the United States.

VI. Impacts to Wildlife, Movement Corridors and Listed Species

A. Wildlife Movement and Fragmentation

CBP's proposed walls will create an impenetrable barrier for a significant number of terrestrial wildlife, undermining decades of binational conservation investments. Unlike the cattle fences or vehicle barriers they replace, which allowed virtually all species to pass freely, the new 30-foot bollard walls block large mountain lions, bears, jaguars, deer, and numerous other species.

The mountains and valleys of several areas CBP plans to build new wall and roads, especially the Baboquivari, Pajarita-Atascosa, Patagonia, Huachuca and Peloncillo mountains and associated lowlands, serve as crucial corridors for iconic species such as jaguars, ocelots, and black bears, which utilize riparian and montane forests for movement (Marín & Koprowski, 2025). CBP's proposed wall, with its extensive construction footprint and habitat fragmentation, could severely impact these delicate and crucial communities, with cascading negative effects on the entire ecosystem. A recent study by Harrity et al. (2024) in the Arizona-Sonora borderlands demonstrated that all 20 focal wildlife species (from javelina and deer up to mountain lions and black bears) could cross low vehicle barriers, but many of the larger species could not cross the bollard-style wall. In effect, the bollard wall can function as a potential extirpation filter for the U.S. populations of wide-ranging species, leading to rapid declines in genetic diversity and long term declines in wildlife population viability. A species like the jaguar cannot leap over or squeeze through a 30-foot wall and thus faces permanent genetic isolation from its kin in Mexico. The same is true for black bears, mountain lions, mule deer, and white-tailed deer, all documented in these border ecosystems. Fragmenting these populations not only threatens their genetic health (by cutting off gene flow) but also their demographic stability, as subpopulations can no longer be bolstered by incoming animals from a larger source population. Over time, local extirpation becomes more likely. In sum, the wall would disrupt the metapopulation dynamics that are essential for survival in this harsh, patchy and biodiverse environment.

Harrity et al. (2024) provides stark evidence: while all 20 focal terrestrial wildlife species could cross existing vehicle barriers, larger species including white-tailed deer, mule deer, American black bear, American badger, wild turkey, and mountain lion were completely unable to pass through the narrow (≤10 cm) interstitial spaces of steel bollard border walls (Harrity et al., 2024). Even for smaller species, crossing rates were dramatically lower at border walls; bobcats, for instance, were 5.1 times more likely to cross vehicle barriers (Harrity et al., 2024). Tragically, the study documented an adult collared peccary fatally stuck between bollards (Harrity et al., 2024).

The Harrity et al. (2024) study also highlighted the extreme scarcity and inadequacy of existing small wildlife passages (21.5×27.8 cm), with only 13 found along over 130 km of continuous

border wall, clustered in two locations separated by 95 km of solid wall (Harrity et al., 2024). While beneficial for some species like American badger and smaller mountain lion (which could not cross the bollard wall itself), these passages were ineffective for American black bear, deer, and wild turkey (Harrity et al., 2024). The mere presence of these passages in the wall increased overall activity across all species, with crossing rates 16.7 times higher in areas of the wall with small wildlife passageways than areas without these openings (Harrity et al., 2024; Wildlands Network).

Marín & Koprowski (2025) found that conspicuous larger mammals like black bears and white-tailed deer use areas closer to the international border less frequently, suggesting avoidance behavior linked to border infrastructure and activity (Marín & Koprowski, 2025). Their study also identified Mexico's Federal Highway 2, parallel to the border, as a "second barrier," negatively impacting smaller species and compounding fragmentation effects (Marín & Koprowski, 2025). Sites closer to existing border wall segments were less utilized by key small herbivores like leporids and collared peccaries (Marín & Koprowski, 2025). The complete blockage of large ungulates and bears will inevitably alter predator-prey dynamics (Harrity et al., 2024; Marín & Koprowski, 2025).

Table 1: Comparative Impact of Border Barrier Types on Wildlife Crossing Success (Adapted from Harrity et al., 2024)

Focal Species	Crossing Success/Rate at Vehicle Barriers	Crossing Success/Rate at Border Walls (Interstitial Spaces)	Crossing Success/Rate via Small Wildlife Passages (21.5×27.8 cm)
American black bear	Crossed	0% / Unable to cross	0% / Ineffective
White-tailed deer	Crossed	0% / Unable to cross	0% / Ineffective
Mule deer	Crossed	0% / Unable to cross	0% / Ineffective
Mountain lion	Crossed	0% / Unable to cross	Crossing rate 0.42 (SE=0.12); Improved passage
Collared peccary	Crossed	Low (rate 0.016, SE=0.016)	Crossing rate 0.38 (SE=0.06); 24x greater than wall
Coyote	Crossed	Moderate (rate 0.10, SE=0.03)	Crossing rate 0.62 (SE=0.05); Improved passage
Bobcat	Crossed (rate 0.82, SE=0.06)	Low (rate 0.16, SE=0.05)	Crossing rate 0.34 (SE=0.08)
American badger	Crossed	0% / Unable to cross	Crossing rate 0.09 (SE=0.09); Improved

			passage
Wild turkey	Crossed	0% / Unable to cross	0% / Ineffective
Gray fox	Crossed	Moderate (rate 0.16, SE=0.06)	Crossing rate 0.09 (SE=0.04)
Skunk species (pooled)	Crossed	Moderate (rate 0.20, SE=0.05)	Crossing rate 0.14 (SE=0.04)
Raccoon	Crossed	Low (rate 0.09, SE=0.03)	Crossing rate 0.10 (SE=0.02)

CBP's proposed border barrier alignment cuts directly through a vast region where the border intersects important habitat for numerous federally listed species (Greenwald et al., 2017; Peters et al., 2018). This high concentration underscores the potential to cause widespread and irreversible negative impacts. The focus on iconic species often overshadows the cumulative impact border barriers have on a multitude of less "charismatic" but ecologically vital listed species, potentially leading to broader ecosystem destabilization.

B. Jaguars and Ocelots

The jaguar and ocelot are flagship examples of the wall's impact, but it bears repeating how critical this region is to their survival. The mountains and canyons of the Atascosa Highlands, Patagonia, Huachuca, and Peloncillo mountain ranges, all of which fall inside CBPs proposed action, form some of the only remaining travel routes by which these endangered cats from Mexico can enter the United States. These corridors have seen multiple jaguars return in recent decades – individuals like "El Jefe," photographed in the Santa Rita Mountains, "Yo'oko" in the Huachuca's, and most recently "O:ṣhad," a young male jaguar recorded more than a dozen times in 2023 in the Huachuca and Whetstone Mountains and again in 2025, and a new jaguar as of November 2025. In fact, since 1996 every confirmed wild jaguar in the U.S. has been detected in the Arizona-New Mexico borderlands, and scientific reviews identify this area as the jaguar's most significant north-of-Mexico habitat.

Ocelots, too, have been reported in the Sky Islands here, and south of the border in Sonora is a known breeding ocelot population which includes adult females with kittens. These Sonoran ocelots use the oak-covered canyons that extend toward Arizona, and young males in particular could disperse northward if no barrier and related infrastructure stops them. The Sycamore Canyon–Pajarita Wilderness–Atascosa Mountains corridor west of Nogales and the San Rafael Valley–Huachuca and Peloncillo corridor east of Nogales are the last transboundary linkages for these felines. Those areas are federally designated critical habitat for the jaguar by the U.S. Fish and Wildlife Service, reflecting their importance.

To erect a wall through these areas is to sever the lifeline of the jaguar in the U.S. It would violate the conservation mandates of the ESA and the Jaguar Recovery Plan, which emphasize

maintaining connectivity to Mexico. If this project proceeds, it will write off decades of progress by the conservation organizations and federal agencies to protect Sky Island habitats and connectivity, and it will do so at the expense of our natural heritage and Tribal cultural values. We call on CBP, in the strongest terms, to avoid constructing barriers in these remaining wild corridors. Protecting the permeability of the Sky Island Mountains a is crucial for the survival of jaguars and ocelots in the United States.

C. Desert Aquatic Species

The border region contains isolated springs, streams, and wetlands that harbor extremely rare aquatic fauna. In the San Rafael Valley and adjacent canyons, the endangered Sonora tiger salamander survives in a handful of cattle ponds and cienegas. This salamander breeds at night in shallow waters and is highly sensitive to disturbance. Construction could pollute or silt in its breeding ponds, and the planned high-intensity lighting would introduce perpetual day into its nocturnal world, disrupting breeding and foraging. Artificial light at night can trigger algal blooms and alter aquatic insect behavior, wreaking havoc on amphibian breeding cycles (Fonvielle, 2025). Likewise, the threatened Chiricahua leopard frog, found in stock tanks and creek pools in these regions, requires dark, quiet wetlands for calling and breeding. Noise, vibration from blasting, and runoff could extirpate local frog populations. Moreover, if the wall prevents movement of frogs (or salamanders) along riparian corridors, it could isolate and dry up the gene flow between populations needed for long-term survival. The Huachuca water-umbel, an endangered semi-aquatic plant, grows along stream edges and cienega wetlands in this areas that fall under new CPB plans Reduced stream flows or groundwater (as discussed in Hydrology above) could eliminate the shallow water habitat this plant needs to photosynthesize and reproduce. In short, border infrastructure would add unprecedented stress to an already fragile aquatic ecosystem, threatening to turn these small oases into ecological dead zones.

D. Riparian Birds

Several ESA-listed bird species use the riparian corridors and sping and wetland oases of southern Arizona. The endangered Southwestern willow flycatcher nests in dense willow-cottonwood stands along rivers like the Santa Cruz. The threatened Western yellow-billed cuckoo likewise breeds in these thickets and relies on monsoon-fed insects and frogs for food. If wall construction or floodplain alteration kills stretches of riparian forest (through changes in flood patterns or clearing), it will reduce available nesting habitat for these birds. Even if habitat remains, the planned continuous lighting is a grave concern: bright lights can disorient migrating birds (leading to exhaustion or collision) and can disrupt their circadian rhythms and breeding timing. An avian study found that artificial night lighting can trick birds into breeding out-of-sync with peak food availability, causing widespread nest failure (Senzaki, 2020) Both flycatchers and cuckoos undertake nocturnal migrations; a “wall of light” along their route could create a gauntlet of confusion and danger. In essence, the wall project threatens to transform rich riparian habitat into a population sink for these endangered birds, undercutting recovery efforts

that have been ongoing for decades. We note that the project area overlaps designated critical habitat for the Yellow-billed Cuckoo in the Nogales district, so any degradation there is especially problematic.

E. Bats and Nocturnal Pollinators

Southern Arizona is home to many bat species, including the recently delisted lesser long-nosed bat (a pollinator of saguaros and agaves) and the endangered Mexican long-nosed bat (Leptonycteris nivalis), which may migrate through the eastern border Sky Islands. The installation of perpetual bright lighting poses a major threat to bats. Studies show artificial light at night creates "ecological traps" for insects, drawing them in and resulting in their death or making them easy prey. This depletes the food source for bats.

The lesser long-nosed bat, a pollinator that feeds on cactus flowers at night could be impacted by lighting. Intense lighting could alter flowering behavior or keep these bats from approaching food plants if the foraging areas are illuminated. A wall of lights could be as impassable to them as a physical barrier, fragmenting their feeding and roosting grounds. Additionally, many bat species roost in rocky canyons and cave systems that could be subject to blasting or noise from construction. The cumulative effect is a significant loss of dark-sky habitat that bats and other nocturnal pollinators (like moths) need to survive. This impact cascades to plants—if pollinators are reduced, so is plant reproduction, creating a "pollination vacuum" that can alter entire plant communities.

F. Rare Plants

The border counties harbor a suite of rare plants, some of which are listed under the ESA or under consideration. The Arizona eryngo is a wetland plant proposed for threatened status; it grows in ciénega marshes like those in the San Rafael Valley. Any drawdown of shallow groundwater or trampling of marsh edges could eliminate this plant's colonies. The Bartram's stonecrop (Graptopetalum bartramii) is a succulent listed as threatened; it clings to shaded canyon cliffs in the Patagonia and Huachuca Mountains. Construction may increase dust deposition on rocky ledges or alter runoff in its canyons, affecting germination of this delicate plant. The Canelo Hills ladies'-tresses, an endangered orchid, lives in spring-fed Canelo Hills bogs within the project region. Changes in water flow or quality could jeopardize its survival. The Cochise pincushion cactus (Coryphantha robbinsorum), listed as threatened, exists near the border; increased human access from new border roads could spur illegal collection of this tiny cactus, compounding the harm from habitat disturbance. Wright's marsh thistle (Cirsium wrightii), a threatened wetland thistle, and Huachuca milkvetch (Astragalus hypoxylus, a candidate species) are among other plants vulnerable to the drying or trampling that the project would bring. In essence, the border wall footprint would cut through a living museum of botanical diversity, risking extinction of localized species that have survived here and nowhere else.

In summary, virtually every form of life in these borderlands – from large mammals to birds, fish, reptiles, insects, and plants – stands to lose if these barriers go up. The wall and its supporting infrastructure would fragment habitats, alter microclimates (through lights and cleared openings), pollute air and water, and create a stress cascade on species already pressured by climate change and human encroachment. CBP's proposal thus directly conflicts with the purpose of the Endangered Species Act: "to protect and recover imperiled species and the ecosystems upon which they depend." We ask that these impacts be fully recognized and avoided.

VII. Cultural and Community Impacts

The borderlands of southern Arizona are the ancestral homes and sacred landscapes of Indigenous peoples and a mosaic of protected public lands enjoyed by the broader community. The proposed project would irreversibly scar this cultural landscape:

A. Indigenous Cultural Heritage

Despite CBP's use of the Real ID Act to waive cultural, public health, and environmental laws, it retains a moral and government to government trust responsibility to respect and protect the cultural and spiritual values of Tribal Nations whose ancestral lands and cultural landscapes would be irreversibly harmed by new border wall construction in the the Baboquivari, Pajarita-Atascosa, Patagonia, Huachuca and Peloncillo Mountains and associated valleys, wetlands, and wildlife habitat. The O'odham and Yaqui peoples maintain deep cultural, historical, and spiritual relationships with this region, including connections to the jaguar, which is federally listed as endangered and holds cultural significance in both communities.

Members of the Tohono O'odham Nation regard the jaguar—*O:ṣhad*—as a spiritual guardian, part of O'odham *Himdag*, or Way of Life. The jaguar's steady return to ancestral territory in southern Arizona is seen not only as a conservation success but as a sacred act of cultural renewal. When a wild jaguar was documented returning to Arizona, more than a thousand members of the Nation voted to name him *O:ṣhad Ñu:kudam* (Jaguar Protector), affirming his cultural and spiritual role (Ingram 2024). San Xavier District Chairman Austin Nunez has explained that, "Jaguars and our people have coexisted in these mountains for millennia and are an important figure in O'odham Himdag…" (Nunez, 2025).

The proposed border barrier construction across Pima, Santa Cruz, Cochise, and Yuma counties intersects lands of extraordinary cultural and spiritual importance to the Tohono O'odham Nation and other Tribal Nations. In particular, these regions include areas of ancestral jaguar habitat that the Tohono O'odham people have revered for generations as part of their spiritual and ecological worldview. The jaguar, or O:ṣad, is a sacred being in O'odham Himdag (Way of Life), recognized not only as a keystone species in desert ecosystems but also as a spiritual guardian

that maintains balance within the land and among the people (San Xavier District Council, 2025).

In January 2025, the San Xavier District of the Tohono O'odham Nation passed Resolution No. SXDC 01-25-03 calling for the protection and reintroduction of the jaguar to its native range, including traditional O'odham lands (Washington, 2025). The resolution condemns the destruction of jaguar habitat and explicitly asserts that such destruction constitutes a violation of the Tohono O'odham's First Amendment rights to religious freedom (San Xavier District Council, 2025, Resolution No. SXDC 01-25-03). This claim rests on a long-held belief system in which jaguars are considered sacred beings sent by the Creator and integral to spiritual practices, songs, and oral traditions passed down through generations.

CBP, as a federal agency, has an affirmative legal and moral duty to uphold tribal sovereignty and the Constitutionally protected rights of Indigenous peoples. The First Amendment guarantees the free exercise of religion. When federal actions destroy the very ecological and spiritual foundations of traditional religious practices—such as sacred animal habitats, access to sacred sites, and the integrity of cultural landscapes—those actions may constitute unlawful infringements. This is particularly the case when such actions proceed without meaningful, government-to-government consultation, in violation of Executive Orders 13175 and 13007, as well as the National Historic Preservation Act and American Indian Religious Freedom Act.

Moreover, Resolution SXDC 01-25-03 outlines actionable steps for healing and consultation, including avoidance of further damage, full participation by tribal governments in planning and permitting, and the ceremonial restoration of desecrated habitats. CBP's ongoing reliance on statutory waivers to override these responsibilities not only violates the spirit of these legal protections but deepens the harm already inflicted on culturally significant landscapes.

CBP must honor these responsibilities. The agency must cease construction activities that further fragment jaguar habitat and sacred lands of the Tohono O'odham Nation. At minimum, it must initiate robust, good-faith consultation processes that respect tribal sovereignty, include tribal ecological knowledge in decision-making, and take meaningful steps to mitigate past and ongoing cultural harms.

Members of the Pascua Yaqui Tribe hold a parallel cultural understanding. In 2017, students at Hiaki High School, under advisement from the Pascua Yaqui Tribal Council, named a newly documented jaguar *Yo'oko Nahsuareo* (Jaguar Warrior) in 2017. The naming was an affirmation of cultural survival. "It's important for [the jaguar] to have a name in the Yaqui language because it's near our land and our ancestors gave it that name for a specific reason," explained one student (Conservation CATalyst, 2017). These acts show that the jaguar is not simply a species but also a cultural relative, part of an intergenerational relationship between people and land. Yo'oko was documented in locations very near Yaqui Canyon and Yaqui Spring where border wall construction crews are currently blasting and where double walls are planned.

In addition to the O'odham and Yaqui peoples' direct cultural and spiritual ties to the borderlands, other Tribal Nations have formally warned CBP that border wall planning in southern Arizona would irreparably injure Indigenous cultural landscapes and cross-border ceremonial relationships. In a May 13, 2020 letter to CBP concerning the Cochise, Pima, and Santa Cruz Border Protection Projects, the Hopi Tribe demanded "an immediate halt to all planning and preparation activities" for the proposed border wall in Arizona's Pima, Cochise, and Santa Cruz Counties (Hopi Tribe, 2020)

The Hopi Tribe explained that it has cultural affiliation to earlier identifiable Indigenous groups in the American Southwest, including the Hohokam, and emphasized that "since time immemorial" Hopi people have maintained cultural and ceremonial connections through the Palatkwapi Trail—a route providing passage to Mexico and Central America and linking Hopi communities to Indigenous groups to the south.

The Tribe warned that wall construction would impose a "permanent scar" across the Palatkwapi Trail and the Arizona Trail, and that the Arizona Trail also functions as part of a traditional Hopi migration route from Casas Grandes, Mexico to the Hopi Mesas.

Critically, the Hopi Tribe's letter ties these cultural harms to the federal government's prior use of sweeping waiver authority for border infrastructure. The Tribe objected to the Secretary of Homeland Security's May 15, 2019 waiver for border infrastructure construction, noting that it set aside core cultural resource protection statutes, including the Archaeological Resources Protection Act, the National Historic Preservation Act, and NAGPRA, among others.

The letter further warned that the wall expansion at issue would significantly damage the environment and harm habitats for imperiled species "such as jaguars, ocelots and the Mexican spotted owl," would "seal off critical habitat" designated for the endangered jaguar, and could "effectively end the jaguar recovery efforts in the United States."

It also cautioned that the project would cut through and destroy protected public lands, including a wildlife refuge, a designated wilderness area, national forest lands, and a national memorial. The Hopi Tribe reiterated its opposition to border wall construction and expressed support for the Tohono O'odham Nation as it confronts adverse impacts from competing federal agency actions on ancestral tribal lands.

Despite these documented beliefs and relationships, CBP has not conducted a full Traditional Cultural Property (TCP) or cultural landscape analysis of the vast landscapes the agency plans to construct in, nor has it meaningfully consulted with the Tohono O'odham Nation or Pascua Yaqui Tribe on the spiritual or cultural consequences of wall construction. NEPA and NHPA obligations, though waived, do not eliminate the agency's ability or responsibility to engage in

respectful, good-faith consultation and apply the principles of environmental justice and cultural integrity in its decision-making.

To proceed without meaningful Tribal consultation is not only a violation of trust and dignity, but a continuation of a long and painful legacy in which federal agencies have disregarded treaty rights, ignored sacred sites, and imposed irreversible harm on Native peoples and their homelands. The bypassing of consultation and environmental law in this context echoes historic patterns of dispossession and environmental destruction carried out in the name of national interest. CBP cannot absolve itself of the responsibilities and consequences of such actions.

These concerns are grounded in federal law and policy. Section 106 of the NHPA (54 U.S.C. § 306108) requires identification and evaluation of traditional cultural properties. Executive Order 13175 mandates meaningful government-to-government consultation on federal actions with tribal implications. The American Indian Religious Freedom Act (42 U.S.C. § 1996) and the Religious Freedom Restoration Act (42 U.S.C. § 2000bb) requires federal agencies to avoid actions that substantially burden Native spiritual practice, including desecration of sacred lands or species.

Border wall construction through this area fragments federally designated critical habitat for the jaguar, including parts of Unit 1 in the Baboquivari Mountains, Unit 3 in the Patagonia and Huachuca Mountains and Unit 5 in the Peloncillo Mountains (USFWS, 2014). By further degrading these landscapes, CBP's actions impede not only species recovery but the exercise of Indigenous religion and cultural continuity. This is a conservation concern and a civil rights issue.

CBP's public comment period is procedurally hollow if it does not result in meaningful changes to policy or practice in response to the cultural concerns raised by Tribal Nations. We urge CBP to demonstrate respect, responsibility, and restraint by fully evaluating the cultural and spiritual consequences of wall construction and engaging in real consultation with affected Tribes. Doing so is essential to justice.

B. Historic and Public Lands

The project area includes or abuts units of the National Park System and National Wildlife Refuge System, as well as designated wilderness and National Forest lands. For example, Coronado National Memorial in the Huachuca foothills preserves not only the story of the first Spanish entrada (the Coronado expedition) but also the ecological richness of a Sky Island environment. This is also the location of the southern terminus of the Arizona National Scenic Trail. Visitors come to Coronado Memorial's Montezuma Pass for sweeping vistas of an unbroken landscape, a vista that includes one of the last viable jaguar corridors in the U.S. (McSpadden & Jordahl, 2025). A towering double layer of wall is completely contrary to the Memorial's purpose and the National Park Service's mandate to leave resources "unimpaired for the enjoyment of future generations." This project also violates the nature and purposes for

which the Arizona Trail was designated a National Scenic Trail by Congress (Omnibus Public Land Management Act of 2009 - Public Law 111-11). These public lands hold special designations (Wilderness Areas, Important Bird Areas, National Scenic Trail, etc.) recognizing their irreplaceable value. The wall violates the spirit of those designations by fencing in wildlife and fencing out the natural processes (like migration, flood regimes) that they depend on, in addition to negative visual impacts on a landscape recognized for its outstanding scenic values that have remained relatively unchanged over the past 500 years.

VIII. Proposed Mitigation Strategies

We find that the proposed border barrier construction in southern Arizona, as currently outlined, is environmentally indefensible and culturally irresponsible.

Should CBP nonetheless choose to move forward, it must not do so in the business-as-usual manner enabled by the blanket waivers. Instead, CBP should incorporate robust mitigation measures and design modifications to reduce harm. We recommend the following actions, derived from scientific research and expert consensus, be required as part of any construction:

A. Wildlife Passage Openings

Dramatically increase the number and size of wildlife openings in any new border walls. Research indicates that small openings (~21×28 cm) are inadequate; larger passages are needed for species up to the size of black bears. We recommend installing frequent wildlife passages (at least one per 100 meters) of varying dimensions (small mammal pipes, medium culverts, and occasional larger gaps). These openings should be distributed at ground level under both walls and patrol roads to allow animals to cross when humans are not present. As Harrity et al. (2024) concluded, more numerous and varied-sized passages" are urgently needed in existing walls. Therefore, a new design must integrate wildlife permeability as a core principle, or risk permanent biodiversity loss. We note that existing wall segments have virtually no effective wildlife crossings, a deficiency that can and must be corrected.

To reduce the risk of wildlife becoming trapped between parallel border barriers, CBP should design and implement small wildlife openings in a manner that functions as an integrated passage system rather than as isolated features. Species known to use small openings are particularly vulnerable to entrapment when they can pass through the first barrier but are unable to locate or access a corresponding opening in the second. This risk can be substantially reduced by mirroring small wildlife openings in both walls, with paired panels installed directly across from one another so that animals encountering the first opening are guided intuitively and directly to the second.

These paired openings should not be installed singly or sporadically. Instead, CBP should cluster a minimum of six paired openings along an east–west stretch of the border that is at least as wide

as the north–south spacing between the two walls. This configuration increases the likelihood that animals moving laterally between the barriers will encounter an aligned passage rather than being funneled into a dead-end corridor. To further guide wildlife movement and prevent animals from wandering away from the openings once they enter the space between the walls, cattle guards should be installed at both ends of each series of paired openings.

If wildlife entrapment between the walls is nonetheless observed, CBP should immediately open flood gates or other available escape features to allow animals to exit the corridor safely. In addition, artificial lighting should be avoided in the vicinity of small wildlife openings, as illumination can deter use by nocturnal and crepuscular species and further increase the risk of disorientation and entrapment. Collectively, these measures would materially reduce harm to wildlife.

B. Permeable Barrier Designs in Sensitive Areas

In the most critical wildlife corridors and floodplains, CBP should forego a solid bollard wall entirely and opt for more permeable alternatives. For instance, in designated critical habitats (Jaguar Units in the Baboquivari, Atascosa, Patagonia, and Peloncillo regions) and across major drainages, use horizontal bar fencing, or larger-spaced bollards that allow the passage of wildlife and water. Engineering solutions exist that can maintain some ecological connectivity. Monolithic walls should not bisect areas identified by biologists as key linkages (we urge consultation with USFWS and conservation organizations to map these). By using a context-sensitive design (rather than a one-size-fits-all wall), CBP can reduce the impact on wildlife pathways.

C. Engineered Flood Gates

Incorporate operable flood gates or breakaway sections at regular intervals in all flood-prone areas. We recommend flood gates (or drop-down panels) every 500 feet in mapped floodplains and ephemeral stream channels. These gates should ordinarily remain open to both reduce flood risk and allow wildlife passage in normal conditions. Past mistakes, such as permanently closed flood gates that caused washouts, must not be repeated.

D. Lighting Mitigation

The widespread deployment of continuous, high-intensity lighting along the proposed border infrastructure corridor threatens to cause significant ecological degradation across the region. Artificial lighting is not a neutral intervention; it is a form of pollution that alters natural ecological processes, disrupts species behavior, and fragments habitat in ways comparable to physical barriers. In the rich, dark-sky ecosystems of southern Arizona, the consequences are especially acute (McSpadden et al. 2023).

Artificial light can interfere with the movement, foraging, and reproductive behavior of a wide array of nocturnal species, including pollinators, migratory birds, bats, reptiles, and carnivores. It can disorient wildlife, increase predation risk, and suppress insect abundance, which ripples upward through food webs. In desert environments, where many species have evolved to rely on the integrity of natural night cycles, even low levels of light can cause measurable harm. Research shows that linear corridors of lighting can function as de facto habitat edges or barriers, deterring wildlife movement across otherwise suitable habitat. In the case of species like the jaguar, ocelot, and lesser long-nosed bat, lighting may undermine critical connectivity in narrow migration corridors, compounding the impacts of physical walls and roadways (McSpadden et al. 2023).

Lighting should not be installed in remote or ecologically sensitive areas, including the San Rafael Valley, Cabeza Prieta National Wildlife Refuge, Pajarita-Atascosa, Baboquivari, Patagonia, Huachuca and Peloncillo Mountains, and other wildland zones that serve as biodiversity refugia and designated dark-sky landscapes. These places are essential to the ecological integrity of the region and should remain undisturbed by artificial light. Where lighting is deemed necessary for operational safety, it must be limited to developed sites and subject to strict mitigation:

- Fixtures must be fully shielded and low-intensity, emitting no upward or outward glare.
- Lights should be activated only by motion sensors or timers, remaining off during periods of inactivity.
- Use of infrared or near-infrared illumination compatible with night-vision systems should be prioritized to reduce wildlife impacts.
- CBP should commission site-specific ecological assessments, especially for sensitive species such as bats and migratory birds, to inform exclusion zones where no lighting is permissible.
- Lighting installations must include sunset clauses or periodic review to prevent permanent degradation in areas where operational needs have changed.

Ultimately, light must be treated as the ecological hazard it is. Its deployment should be selective, proportional, and rooted in site-specific justification. Preserving the natural night sky across southern Arizona is not only vital for ecological function but also for the cultural, aesthetic, and spiritual values that these lands hold.

E. Habitat Restoration and Monitoring

For areas unavoidably disturbed, CBP must commit to comprehensive habitat restoration once construction is done. This includes re-contouring and re-vegetating temporary disturbance areas (staging yards, etc.) with native plants, controlling invasive weeds, and installing water bars or other erosion control measures on new roads. Special care should be taken to salvage and replace

soil crusts and cacti from Sonoran Desert areas, for instance, any saguaro cacti in the construction zone should be transplanted rather than mulched. We also urge CBP to fund and participate in long-term ecological monitoring. This could involve partnering with agencies, universities, and local communities to track wildlife movements (via camera traps and radio telemetry) and water levels pre- and post-construction. Citizen science platforms (e.g. web-based reporting of wildlife sightings) can augment this. By monitoring key indicators, jaguar/ocelot presence, pronghorn movement, stream flow changes, nocturnal pollinator activity, etc., CBP can adaptively manage the infrastructure (for example, by creating new openings or adjusting gate operations if negative impacts are detected). Mitigation cannot be a one-time effort; it requires ongoing commitment to ensure the border barrier does not silently drive species to extinction.

F. Cultural Resource Protection

Even under the waiver, CBP should implement the best practices of cultural resource management. This means conducting archaeological surveys with Tribal monitors present before ground disturbance in any sensitive areas. Known sites and human remains should be avoided in consultation with Tribes. We also recommend establishing communication protocols so that if Border Patrol maintenance crews or agents encounter artifacts or cultural items in the field, work halts and experts are called. In addition, access for ceremonial purposes should be preserved. Committing to an open dialogue and specific mitigation (like funding the relocation of certain sacred plants if needed) can show respect for Tribal concerns even in the absence of formal NHPA processes.

IX. Conclusion

CBP's proposed project is environmentally indefensible and culturally irresponsible. The project would violate the integrity of multiple federally protected habitats, endanger numerous listed species, and trample on the rights and heritage of Indigenous and local communities, all for a dubious enhancement of border infrastructure in remote areas. We strongly urge CBP to abandon this plan for new wall construction

We stress that mitigation measures, while necessary, do not erase the fundamental problems with this project. Even with the best mitigation, a 30-foot wall through a wilderness will never be ecologically sound or culturally acceptable. Our recommendations are not an endorsement of the wall, but a fallback if the project proceeds despite the compelling reasons to halt it. The preferred solution is to stop construction of new barriers in these environmentally and culturally critical areas and instead pursue alternatives that do not create an ecological and human divide.

In closing, we appeal to CBP and DHS to heed the science and the voices of stakeholders. The borderlands of southern Arizona are a national treasure, a place where jaguars roam, rare orchids bloom, critical riparian corridors hold rich biodiversity, and Indigenous communities maintain traditions and connections tied to the ecology of the landscapes. The borderlands include

incredible binational communities with ties to both the United States and Mexico. To bulldoze and wall off this living landscape would be a grave mistake viewed in hindsight. The damage will be felt for generations and the potential benefits are uncertain at best. We urge you to choose a path of conservation, consultation, and common-sense stewardship. Do not let this beautiful, biodiverse region become a casualty of short-sighted policy, xenophobia and fearmongering.

Thank you for the opportunity to comment. We ask that CBP seriously consider these concerns and recommendations, despite the legal waivers in place, and will adjust its plans in a manner that upholds our nation's values of environmental responsibility and respect for cultural heritage.

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Sky Island Alliance
Rewilding Institute
Arizona Trail Association
Great Old Broads for Wilderness
Wildlands Network
Sierra Club - Grand Canyon Chapter
Sierra Club Borderlands
San Xavier District, Tohono O'odham Nation
Endangered Species Coalition
San Pedro 100
Madrean Archipelago Wildlife Center
Friends of the Sonoran Desert
Friends of International Friendship Park
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