



September 2023

SOUTHWEST BORDER

Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction

Accessible Version

Why GAO Did This Study

To help address illegal cross-border activity, the federal government has constructed hundreds of miles of physical barriers along the southwest border. This included federal lands managed by Interior where important cultural and natural resources are located. DHS and DOD used legal authorities to waive various cultural and natural resource-related laws in constructing border barriers from January 2017 through January 2021. A presidential proclamation paused construction in January 2021.

GAO was asked to review border barrier impacts to cultural and natural resources. This report reviews (1) border barrier construction from January 2017 through January 2021 and associated impacts, (2) actions taken since January 2021 to address impacts, and (3) CBP and DOD assessments of potential impacts from construction conducted from 2017 to 2021. GAO analyzed CBP data and reviewed CBP and DOD assessments and plans. GAO also interviewed officials from federal agencies, Tribes, and stakeholders selected because of their proximity to, or expertise with, resource protection along the border.

What GAO Recommends

GAO is making three recommendations, including that CBP and Interior document a joint strategy to mitigate resource impacts from barrier construction and that CBP evaluate lessons learned from its assessments of potential cultural and natural resource impacts. The agencies agreed with these recommendations.

View [GAO-23-105443](#). For more information, contact Anna Maria Ortiz at (202) 512-3841 or ortiza@gao.gov or Rebecca Gambler at (202) 512-8777 or gablerr@gao.gov.

SOUTHWEST BORDER

Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction

What GAO Found

The Department of Homeland Security's (DHS) U.S. Customs and Border Protection (CBP) and the Department of Defense (DOD) installed about 458 miles of border barrier panels across the southwest border from January 2017 through January 2021. Most (81 percent) of the miles of panels replaced existing barriers. The agencies installed over 62 percent of barrier miles on federal lands, including on those managed by the Department of the Interior. Interior and CBP officials, as well as federally recognized Tribes and stakeholders, noted that the barriers led to various impacts, including to cultural resources, water sources, and endangered species, and from erosion.

Examples of Natural Resource Impacts from Barrier Construction (May 2022)



Erosion below the site of a cleared construction 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](#)

Since the administration paused border barrier construction in January 2021, CBP has prioritized efforts to address safety hazards left at incomplete project sites, such as removing exposed rebar. In addition, CBP and Interior have worked together to identify actions to mitigate the impacts on federal lands. As the agencies are both involved in addressing these impacts, they could benefit from clearly defining their roles and responsibilities for doing so and jointly identifying the costs and time frames to complete all of the identified mitigation actions, consistent with collaboration leading practices. Documenting a joint strategy that includes these inputs could help CBP and Interior better ensure that key resource impacts of border barrier construction are mitigated and that decision makers have the information needed to allocate resources.

Before proceeding with barrier construction from 2017 to 2021, CBP took steps to assess the potential impacts of such construction, while relying on waivers of cultural and natural resource-related laws to expedite construction. For example, CBP solicited input from land management agencies, Tribes, and the public. Interior and tribal officials and stakeholders told GAO that CBP's information was not sufficiently detailed to facilitate meaningful input. They provided suggestions to GAO for improving CBP's assessments. CBP has not evaluated lessons learned from its assessments. Doing so could help the agency better identify potential impacts of any future projects.

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Abbreviations

CBP U.S. Customs and Border Protection

DHS	Department of Homeland Security
DOD	Department of Defense
FWS	Fish and Wildlife Service
IIRIRA	Illegal Immigration Reform and Immigrant Responsibility Act
NEPA	National Environmental Policy Act of 1969
USACE	U.S. Army Corps of Engineers

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September 5, 2023

The Honorable Raúl M. Grijalva
Ranking Member
Committee on Natural Resources
House of Representatives

Dear Mr. Grijalva:

The U.S. southwest border spans nearly 2,000 miles between the U.S. and Mexico. To help address illegal cross-border activity, the federal government has, in recent decades, constructed hundreds of miles of physical barriers along the border, including on federal lands where important cultural and natural resources are located.¹ These resources include sacred sites for tribal communities, as well as critical habitat for threatened and endangered species.

U.S. Customs and Border Protection (CBP), within the Department of Homeland Security (DHS), is responsible for securing the border from illicit activity, while facilitating legitimate travel and trade. As part of its border security mission, as of fiscal year 2015, CBP had built more than 650 miles of barriers along the southwest border of the U.S. In January 2017, an executive order directed the Secretary of Homeland Security to immediately plan, design, and construct a contiguous wall or other impassable physical barrier at the southwest border.² In response, CBP

¹For the purposes of this report, we generally use the term “barrier” to refer to a physical structure, such as a pedestrian fence, vehicle barrier, or wall, or any combination of these structures intended to impede the movement of people or vehicles. The primary barrier, which may include pedestrian or vehicle barriers, is the first barrier encountered when moving into the U.S. from the border. In some locations, a secondary barrier is located behind the primary barrier on the U.S. side of the border, consisting solely of pedestrian barrier.

²*Border Security and Immigration Enforcement Improvements*, Exec. Order No. 13767, § 4, 82 Fed. Reg. 8793, 8794 (Jan. 30, 2017) (issued Jan. 25). Executive Order 13767 defines “wall” as a “contiguous, physical wall or other similarly secure, contiguous, and impassable physical barrier.” See *id.* § 3, 82 Fed. Reg. at 8794. In February 2021, this executive order was revoked by the President. See *Creating a Comprehensive Regional Framework To Address the Causes of Migration, To Manage Migration Throughout North and Central America, and To Provide Safe and Orderly Processing of Asylum Seekers at the United States Border*, Exec. Order No. 14010, 86 Fed. Reg. 8267 (Feb. 5, 2021) (issued Feb. 2).

initiated the Border Wall System Program to replace and construct new barriers along the southwest border.

In 2019, the President declared a national emergency that directed the Department of Defense (DOD) to provide additional support to CBP efforts to address border security and other goals at the southwest border.³ The administration also set a goal of building at least 450 miles of barriers with DOD support by the end of 2020. Within DOD, the U.S. Army Corps of Engineers (USACE) was tasked to help expedite the construction of border barriers using billions of dollars in DOD funding made available following the National Emergency Declaration. USACE has a long-standing role in supporting DHS along the southwest border, including providing project and contract management support.

To further expedite construction of border barriers, CBP and DOD used their statutory authorities to waive or disregard laws that they otherwise would have been required to comply with when undertaking such construction projects.⁴ These include the National Historic Preservation Act of 1966 as amended, the National Environmental Policy Act of 1969 (NEPA) as amended, and other cultural and natural resource-related laws.⁵ Border barrier construction since the 2017 executive order has encompassed some federal lands with significant cultural and natural resources, such as national monuments, wilderness areas, and wildlife refuges managed by the Department of the Interior.

³*Declaring a National Emergency Concerning the Southern Border of the United States*, Pres. Proclamation No. 9844, 84 Fed. Reg. 4949 (Feb. 20, 2019) (issued Feb. 15). The National Emergency Declaration required the use of the armed forces and invoked various statutes to address the security and humanitarian situation at the border.

⁴The Secretary of Homeland Security is authorized to waive all legal requirements to ensure expeditious construction of barriers and roads along the border. Pub. L. No. 104-208, div. C, tit. I, subtit. A, § 102, 110 Stat. 3009, 3009-554 to -555, as amended by REAL ID Act of 2005, Pub. L. No. 109-13, div. B, tit. I, § 102, 119 Stat. 231, 306 (classified, as amended, at 8 U.S.C. § 1103 note). The Secretary of Defense's waiver authority is under 10 U.S.C. section 2808(d) for all section 2808(a) construction that has been authorized under a National Emergency Declaration or declaration of war. Under this authority, the Secretary may waive or disregard any otherwise applicable law if the law does not provide its own means to waive, modify, or expedite it, and the Secretary determines that the nature of the national emergency necessitates noncompliance with the law.

⁵In this report, we refer to laws that, in some capacity, aim to protect or are related to cultural and natural resources as "cultural and natural resource-related laws." We also include NEPA as a cultural and natural resource-related law because it requires federal agencies to evaluate the likely environmental effects of major federal actions.

In January 2021, after a change in presidential administrations, a presidential proclamation revoked the 2019 National Emergency Declaration and paused border barrier construction.⁶ The President also directed DHS and DOD to develop a plan within 60 days for redirecting border barrier funding, as appropriate and consistent with applicable law. After developing this plan, DHS and DOD were to take appropriate steps to resume, modify, or terminate projects and to implement the plan.

You asked us to review southwest border barrier impacts to cultural and natural resources. This report (1) describes border barrier installed from January 2017 through January 2021 and its impacts to cultural and natural resources, (2) assesses actions taken to address those impacts since January 2021, and (3) examines CBP and DOD assessments of potential cultural and natural resource impacts of border barrier construction conducted from January 2017 through January 2021.

To address our objectives, we reviewed laws, regulations, and guidance applicable to the construction of border barriers, including the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996, as amended by the REAL ID Act of 2005, and other laws.⁷ We interviewed officials from CBP; USACE; and federal land management agencies, including Interior and its component agencies, such as the Bureau of Land Management, National Park Service, and Fish and Wildlife Service (FWS), and the U.S. Department of Agriculture's Forest Service. We interviewed officials from two tribal governments and five nongovernmental stakeholders regarding their perspectives and to obtain information relative to our objectives.⁸ We selected these Tribes and stakeholders because of their proximity to the border and expertise and

⁶*Termination of Emergency With Respect to the Southern Border of the United States and Redirection of Funds Diverted to Border Wall Construction*, Pres. Proclamation No. 10142, 86 Fed. Reg. 7225 (Jan. 27, 2021) (issued Jan. 20). The presidential proclamation paused all border barrier construction pending development of a plan by the Secretaries of Defense and Homeland Security, in coordination with other agency heads, that, among other things, was to address the potential redirection of border barrier funds while ensuring that funds that Congress explicitly appropriated for barrier construction were expended consistent with their appropriated purpose.

⁷Pub. L. No. 104-208, div. C, tit. I, subtit. A, § 102, 110 Stat. 3009, 3009-554 to -555, as amended by REAL ID Act of 2005, Pub. L. No. 109-13, div. B, tit. I, § 102, 119 Stat. 231, 306 (classified, as amended, at 8 U.S.C. § 1103 note).

⁸For the purposes of this report, we define "stakeholders" as the five selected organizations and individuals independent of Tribes and the federal government with expertise in cultural and natural resource protection along the southwest border.

experience related to cultural and natural resource protection along the southwest border. The information we collected is not generalizable but provided illustrative examples of cultural and natural resource impacts they identified.

To describe border barrier installed from January 2017 through January 2021, we analyzed CBP's geospatial data and overlaid it with data from the U.S. Geological Survey to determine the land management entity associated with each mile of installed barrier. We selected this period because Executive Order 13767 was issued in January 2017, and Presidential Proclamation No. 10142, which paused all border barrier construction, was issued in January 2021.⁹ We assessed these data and found them sufficiently reliable for our reporting objectives. To assess the actions that federal agencies have taken to address impacts from southwest border barrier construction since January 2021, we analyzed relevant DHS, DOD, and Interior documentation. We compared federal agencies' actions against leading practices for interagency collaboration and program management.¹⁰

To examine the assessments of potential cultural and natural resource impacts of southwest border barrier construction that CBP and USACE, within DOD, conducted before the January 2021 pause in construction, we reviewed documentation of their assessments and interviewed agency officials about the processes they used to assess effects on resources. We selected a nongeneralizable sample of six barrier construction projects for in-depth review. The selected projects varied in geographic location (across Arizona, California, and Texas), federal land management type, funding source, and type of impacts. We conducted site visits to selected project sites in Arizona and Texas during May and July 2022. We also summarized federal land management agency, tribal, and stakeholder perspectives collected in our interviews. We compared agency actions against key practices that we and others have identified

⁹Exec. Order No. 13767, 82 Fed. Reg. 8793 (Jan. 30, 2017) (issued Jan. 25); and Pres. Proclamation No. 10142, 86 Fed. Reg. 7225 (Jan. 27, 2021) (issued Jan. 20).

¹⁰GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 27, 2012); and Project Management Institute, Inc., *The Standard for Program Management*, Fourth Edition (2017).

for program and project management.¹¹ See appendix I for additional information about our scope and methodology.

We conducted this performance audit from September 2021 to September 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

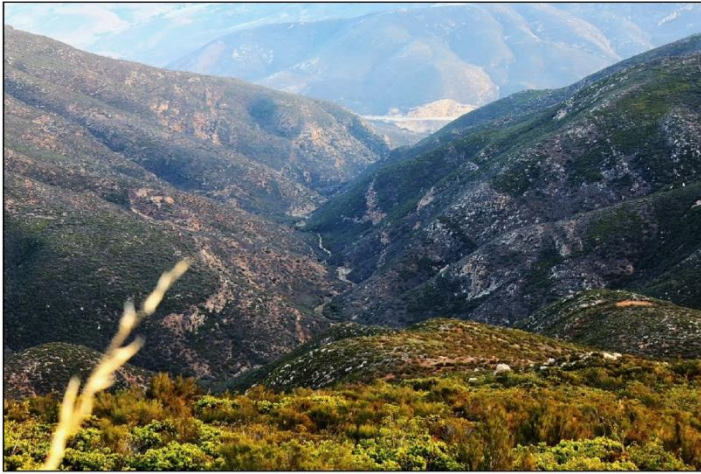
Background

The Southwest Border Area

The U.S.-Mexico border spans four states—California, Arizona, New Mexico, and Texas—and comprises different types of terrain, including coastal beaches, deserts, rugged mountains, and rivers, as well as urban centers. For example, in Texas, the border is marked by the Rio Grande River. Figure 1 shows the variety of terrain found on the southwest border.

¹¹GAO, *Project Management: DOE and NNSA Should Improve Their Lessons-Learned Process for Capital Asset Projects*, [GAO-19-25](#) (Washington, D.C.: Dec. 21, 2018). Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Sixth Edition (2017); and *Implementing Organizational Project Management: A Practice Guide*, First Edition (2014). *PMBOK* is a trademark of Project Management Institute, Inc.

Figure 1: Examples of Terrain along the U.S.-Mexico Border



Hilly terrain with dense vegetation in California



Desert mountain ranges and valleys in Arizona



Mountainous terrain and desert shrub in New Mexico



Remote mountainous terrain and river areas, including thick vegetation, in Texas

Sources (clockwise from upper left): U.S. Customs and Border Protection, M.PartsPhoto/stock.adobe.com, Mosto/stock.adobe.com, Arturo M/stock.adobe.com. | GAO-23-105443

The southwest border also comprises biodiverse lands, including the habitats of dozens of threatened and endangered species of animals and plants.¹² Additionally, this area encompasses the ancestral homelands for

¹²R. Peters et al., "Nature Divided, Scientists United: US-Mexico Border Wall Threatens Biodiversity and Binational Conservation," *BioScience*, vol. 68, no. 10 (2018), 740-743.

some federally recognized Tribes and other Indigenous communities.¹³ This includes, for example, the Tohono O’odham Nation and the Ysleta del Sur Pueblo.

Land Management and Federal Agency Roles along the Border

A mixture of federal, tribal, state, and private lands composes the area along the southwest border. Federal and tribal lands make up a total of about 760 miles, or approximately 40 percent, of the nearly 2,000 total border miles. The tribal lands primarily consist of the Tohono O’odham Nation reservation in Arizona.¹⁴ Private and state-owned lands constitute the remaining 60 percent of the border and are primarily in Texas.

Interior’s component agencies are the primary managers of federal lands along the border. These include the Bureau of Land Management, the National Park Service, and FWS. The Forest Service and DOD also manage border-adjacent land.¹⁵ Each agency has a distinct mission and set of responsibilities.¹⁶ For example, FWS’s mission is to preserve and enhance fish, wildlife, plants, and their habitats, including on the several

¹³For the purposes of this report, the term “Tribes” refers to Indian Tribes that have been federally recognized. As of July 2023, there are 574 federally recognized Tribes. 88 Fed. Reg. 2112 (Jan. 12, 2023). The term “recognize” means the federal government acknowledges as a matter of law that a particular Native American group is a Tribe by conferring specific legal status on that group and establishing a government-to-government relationship between the U.S. and the Tribe, among other things. Many Tribes signed treaties with the U.S. government that, among other things, ceded the Tribe’s land to the U.S. Because of these treaties and other federal actions, many Tribes’ ancestral lands are far from where the Tribes are located today. These ancestral lands may include sites that have a religious or cultural significance for the Tribe.

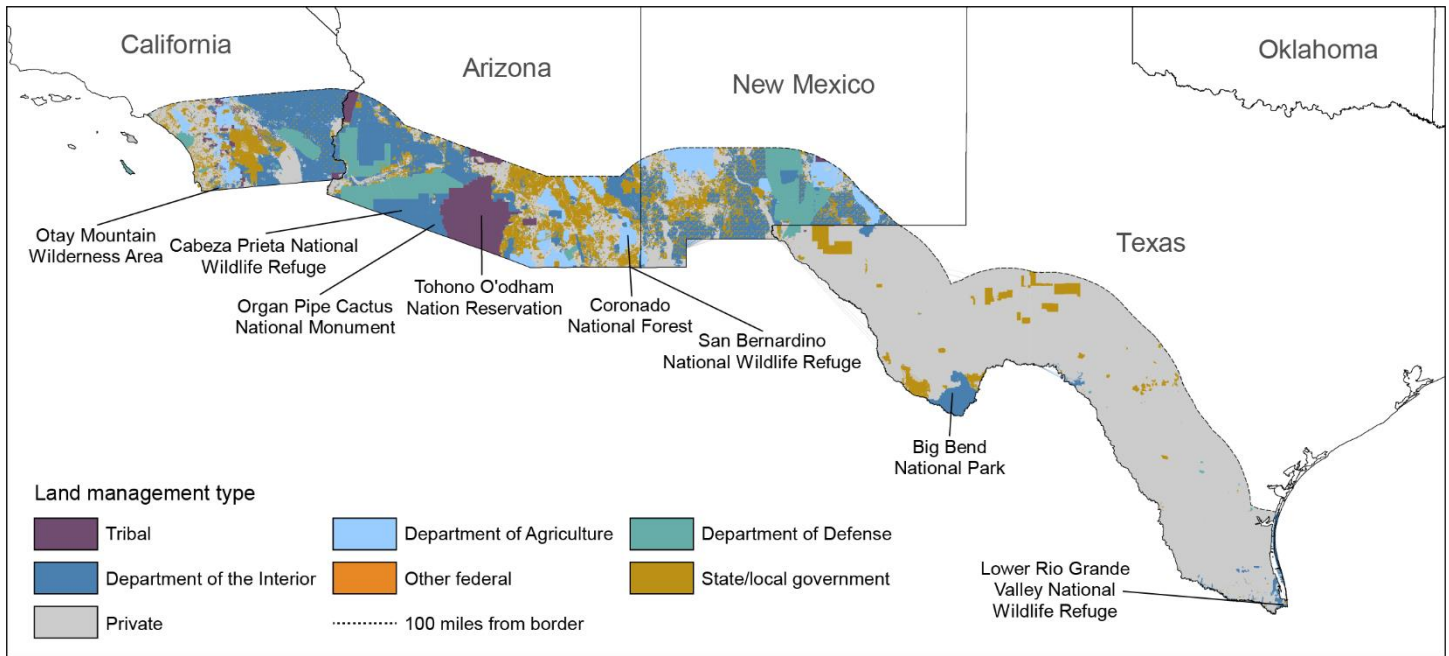
¹⁴Tribal trust lands located directly along the border include approximately 62 miles of the Tohono O’odham Nation reservation and about 6 miles of the Cocopah Indian Tribe reservation in Arizona. The federal government holds legal title to these trust lands for the benefit of the respective Tribe.

¹⁵DOD manages defense installations, including the Barry M. Goldwater Air Force Range in Arizona that includes 37 miles along the border.

¹⁶The mission and responsibilities for the Bureau of Land Management, the National Park Service, and the Forest Service are, respectively, to manage federal land for multiple uses, such as recreation, minerals, and the sustained yield of renewable resources; conserve the scenery, natural and historical objects, and wildlife of the national park system; and manage resources to sustain the health, diversity, and productivity of the nation’s forests and grasslands to meet the needs of present and future generations.

wildlife refuges located along the border. Figure 2 shows a map of the southwest border and associated land management.

Figure 2: Southwest Border and Associated Land Management Type



Source: GAO analysis of U.S. Geological Survey, Protected Areas Database of the United States data. | GAO-23-105443

Note: Tribal lands are American Indian Reservations-Federal and American Indian Trust Land, as defined by the U.S. Census Bureau.

CBP is responsible for planning the construction of physical barriers and deploying other infrastructure and technology along the southwest border. Although CBP and land management agency missions differ, the agencies have established mechanisms to facilitate coordination along the border where their operations overlap. This includes a 2006 memorandum of understanding that guides their routine activities on federal lands along the border.¹⁷ Under the memorandum, CBP generally must obtain specific authorization from federal land management

¹⁷The memorandum affirmed agency commitments to coordinate efforts in a number of areas, primarily regarding CBP's access to federal lands when conducting security operations. Department of Homeland Security, Department of the Interior, and U.S. Department of Agriculture, *Memorandum of Understanding Regarding Cooperative National Security and Counterterrorism Efforts on Federal Lands along the United States' Borders* (Washington, D.C.: Mar. 2006).

agencies before undertaking certain activities, such as installing surveillance equipment on federal lands.

Natural and Cultural Resource-Related Laws

Federal agencies, including CBP and DOD, also have responsibilities under several natural resource-related laws, including NEPA and the Endangered Species Act of 1973, as amended. These agencies are generally required to comply with these laws when undertaking construction projects and conducting certain other activities using federal funds, including on federal lands. For example, NEPA generally requires federal agencies to evaluate the potential environmental effects of actions they propose to carry out, fund, or approve by preparing analyses of a proposed project's effects on the environment and evaluating reasonable alternatives to the proposed project.¹⁸ Similarly, the Endangered Species Act of 1973, as amended, requires federal agencies to initiate a consultation with FWS when they determine that an action they authorize, fund, or carry out may affect a species listed as threatened or endangered.¹⁹

In addition, federal agencies are to comply with federal cultural resource-related laws, including the National Historic Preservation Act of 1966, as amended, and the Native American Graves Protection and Repatriation Act. Under these laws and their implementing regulations, federal agencies are required to consult with federally recognized Tribes in certain circumstances. For example, under section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, federal agencies must consult with Tribes when agency undertakings may affect historic properties prior to the approval of the expenditure of federal funds or the issuance of any licenses.²⁰ This includes historic properties to which Tribes attach religious or cultural significance.

In carrying out DHS's authority to install additional border barriers and infrastructure, the Secretary of Homeland Security is to consult with

¹⁸NEPA applies to major federal agency actions, which are generally activities or decisions subject to federal control and responsibility. Regulations implementing NEPA identify categories of major federal actions, such as adoption of official policies, programs, and formal plans, and approvals of specific projects. 40 C.F.R. § 1508.1(q)(3).

¹⁹16 U.S.C. § 1536(a)(2).

²⁰54 U.S.C. § 306108; 36 C.F.R. pt. 800.

Indian Tribes and others to minimize the impact on the environment, culture, commerce, and quality of life for communities and residents located near where border barrier is to be constructed.²¹ Agencies have also adopted policies that guide how they are to consult with Tribes.²² Government-to-government consultation generally involves identifying relevant Tribes that may be affected by, or have an interest in, proposed projects, notifying them about the opportunity to consult, and obtaining their input. According to the National Congress of American Indians, federal consultation with Tribes can help to minimize the potential negative impacts of federal infrastructure projects on Tribes' natural and cultural resources.²³

DHS and DOD are authorized to waive or disregard all laws, including natural and cultural resource-related laws, to facilitate border barrier construction in certain circumstances. Section 102(c) of IIRIRA, as amended, provides this legal authority to the Secretary of Homeland Security.²⁴ The Secretary of Defense has this authority under 10 U.S.C. § 2808(d) for certain construction activities authorized under a National Emergency Declaration or declaration of war.²⁵ In this report, we use the term "waive" to refer to actions taken under DHS's and DOD's respective authorities.

²¹See 8 U.S.C. § 1103 note.

²²See, for example, Department of the Interior, *Departmental Manual Chapter 4: Department of the Interior Policy on Consultation with Indian Tribes*, part 512, chap. 4 (Nov. 30, 2022); Department of Homeland Security, *Consultation and Coordination with Tribal Nations*, Directive 071-04 (Dec. 15, 2022); and Department of Homeland Security, *Implementing Consultation and Coordination with Tribal Nations*, Instruction 071-04-001 (Feb. 8, 2023).

²³See National Congress of American Indians, *NCAI Comments on Tribal Trust Compliance and Federal Infrastructure Decision-Making* (Nov. 30, 2016). The National Congress of American Indians is a nonprofit organization that advocates for tribal governments and communities.

²⁴8 U.S.C. § 1103 note. The REAL ID Act of 2005 amended IIRIRA by expanding the authority of the Secretary of Homeland Security to waive all legal requirements, as determined to be necessary, in the Secretary's sole discretion, to ensure expeditious construction of barriers and roads along the border. Pub. L. No. 109-13, div. B, tit. I, § 102, 119 Stat. at 306.

²⁵10 U.S.C. § 2808(d).

Southwest Border Barrier Construction over Time

Since the mid-2000s, CBP has undertaken two main periods of barrier construction along the southwest border, which differed primarily with respect to the (1) types of barrier required and (2) agencies authorized and funded to build the barrier.²⁶ One main period began with the Secure Fence Act of 2006.²⁷ Under this act and the Department of Homeland Security Appropriations Act, 2008, subject to funding and other provisions under later appropriations acts, CBP constructed barriers on certain segments of the southwest border; some segments also included roads, lighting, cameras, and sensors.²⁸

By 2015, CBP had constructed 654 miles of barrier along the southwest border, most of which CBP completed by 2009.²⁹ About half of the barriers installed were designed to impede pedestrians (pedestrian barriers): typically 18 feet tall, with vertical bollards spaced 4 to 5 inches apart. The other half were designed to impede vehicles (vehicle barriers): typically about 3 feet tall, with larger gaps between horizontal or vertical posts. See figure 3 for examples of barrier designs deployed along the southwest border from 2006 through 2009. Many of these barriers were installed on, or adjacent to, federal and tribal lands. DHS waived natural

²⁶IIRIRA requires the Secretary of Homeland Security to take necessary actions to install physical barriers and roads in the vicinity of the border to deter illegal crossings in areas of high illegal entry. Pub. L. No. 104-208, div. C, tit. I, subtit. A, § 102(a), 110 Stat. 3009, 3009-554 (classified, as amended, at 8 U.S.C. § 1103 note).

²⁷The Secure Fence Act of 2006 amended IIRIRA to require DHS to construct at least two layers of reinforced barriers, as well as roads, lighting, cameras, and sensors, on certain segments of the southwest border in California, Arizona, New Mexico, and Texas. The Secure Fence Act also required that DHS achieve and maintain operational control over U.S. borders through surveillance activities and physical infrastructure enhancements to prevent unlawful entry by foreign nationals and facilitate CBP's access to the borders. See Pub. L. No. 109-367, §§ 2, 3, 120 Stat. 2638, 2638-2639.

²⁸The Department of Homeland Security Appropriations Act, 2008, rewrote IIRIRA's border fencing section to require DHS to construct at least 700 miles of reinforced fencing where it would be most practical and effective and to install additional physical barriers, roads, lighting, cameras, and sensors to gain operational control of the southwest border. IIRIRA § 102(b), 110 Stat. at 3009-554 to -555, as amended by Pub. L. No. 110-161, div. E, tit. V, § 564(a)(2)(B)(ii), 121 Stat. 1844, 2090-91 (2007) (classified at 8 U.S.C. § 1103 note). Subsequent DHS appropriations acts included other provisions and funding.

²⁹See GAO, *Southwest Border: Information on Federal Agencies' Process for Acquiring Private Land for Barriers*, [GAO-21-114](#) (Washington, D.C.: Nov. 17, 2020).

and cultural resource-related laws to facilitate these barrier construction projects between 2006 and 2009.

Figure 3: Examples of Border Barrier Deployed from 2006 through 2009 on the Southwest Border



Bollard-style pedestrian fence



Normandy-style vehicle fence

Source: GAO; photos were taken March 2016. | GAO-23-105443

Another main period of barrier construction began in January 2017, when the President issued Executive Order 13767, directing the Secretary of Homeland Security to immediately plan, design, and construct a wall or other impassable physical barrier along the southwest border. That executive order also directed the Secretary to identify and, to the extent permitted by law, allocate all sources of federal funds for planning, designing, and constructing border barriers.

In response to the executive order, CBP initiated the Border Wall System Program to plan and deploy an integrated barrier system that included several required components: 18- to 30-foot pedestrian barriers consisting of concrete-filled steel bollard panels; supporting attributes, such as lights and sensors; and an enforcement zone with a patrol road.³⁰ As part of the completed barrier system, project areas were to be restored to their original condition by, for example, installing culverts and grading

³⁰CBP uses the term “wall system” to describe the combination of physical barriers, technology, and other infrastructure used at the southwest border. For our purposes, we generally use the term “barrier” to refer to pedestrian or vehicle fence, levee wall, combinations thereof, or any other types of physical structures that are designed to impede unlawful movement across the border.

roads to facilitate water drainage, reseeding ground to replace removed vegetation, and reclaiming or removing certain temporary access roads across federal lands.

With DHS's annual appropriations, CBP primarily began implementing the barrier system in the Rio Grande Valley in Texas in 2018 and 2019.³¹ For some border along the Rio Grande River, the pedestrian barriers sit atop a levee that protects communities from flooding—in some areas, the levee is an earthen berm, and in other areas it is a concrete wall. Figure 4 shows an example of Border Wall System Program components of the barrier installed in parts of the Rio Grande Valley from 2017 to 2021.

³¹CBP's fiscal year 2019 appropriation provided \$1.375 billion to construct primary pedestrian fencing in the Rio Grande Valley Sector in Texas. Pub. L. No. 116-6, div. A, tit. II, § 230(a), 133 Stat. 13, 28. CBP's fiscal year 2018 appropriation made \$251 million available for approximately 14 miles of secondary fencing in the San Diego Sector, \$445 million for 25 miles of primary pedestrian levee fencing and \$196 million for primary pedestrian fencing in the Rio Grande Valley Sector, \$445 million for replacement of existing primary pedestrian fencing along the southwest border, and \$38 million for border barrier planning and design. Pub. L. No. 115-141, div. F, tit. II, § 230(a), 132 Stat. 348, 616. Along the southwest border, CBP divides responsibility for border security operations between ports of entry geographically among nine sectors.

Figure 4: Border Wall System Program Components, Including Barrier atop a Levee, Rio Grande Valley, Texas (July 2022)



Source: GAO. | GAO-23-105443

In February 2019, the President issued a National Emergency Declaration directing DOD to provide support for, and expedite construction of, border barriers in terms of both funding and project execution. Following the declaration, the administration identified additional funding sources for border barrier construction, including under the following DOD statutes:

- **Drug Interdiction and Counterdrug Activities (counterdrug) funds.** Under 10 U.S.C. § 284(a), DOD is authorized to support the counterdrug activities of other federal agencies, if requested. CBP requested DOD's counterdrug assistance in the form of construction of fences and roads and installation of lighting to block drug

smuggling corridors.³² DOD selected the barrier projects to support with the counterdrug funds from a list identified by DHS.

- **Military construction funds.** Under 10 U.S.C. § 2808, the Secretary of Defense is authorized to undertake military construction projects in certain circumstances, including a National Emergency Declaration.³³ DOD selected the barrier projects that it undertook with military construction funds from a list provided by DHS.³⁴

In addition to the statutory provisions and restrictions governing the funds, the specific type of funding used—DHS appropriations, DOD counterdrug, or DOD military construction—dictated the agencies’ roles when implementing border barrier construction projects, including contract management, project management, and environmental planning. CBP led these activities for the DHS appropriations-funded projects, and USACE led these activities for the military construction-funded projects.³⁵ For counterdrug-funded projects, USACE led the project management and awarded and managed the contracts, and CBP led the environmental planning.³⁶ Between fiscal years 2017 and 2020, USACE had awarded contracts to construct 631 miles of border barrier system, as we reported in June 2021.³⁷

³²See 10 U.S.C. § 284(b)(7). While the President’s National Emergency Declaration on February 15, 2019, did not expressly invoke section 284, following a February 25 request from DHS to DOD for assistance under section 284, the Acting Secretary of Defense authorized the U.S. Army Corps of Engineers to begin planning and executing support to DHS pursuant to section 284. See Pres. Proclamation No. 9844, 84 Fed. Reg. 4949 (Feb. 15, 2019) (issued Feb. 20, 2019). DOD’s authority under section 284 is not dependent on a National Emergency Declaration.

³³10 U.S.C. § 2808.

³⁴GAO, *Southwest Border: Schedule Considerations Drove Army Corps of Engineers’ Approaches to Awarding Construction Contracts through 2020*, [GAO-21-372](#) (Washington, D.C.: June 17, 2021).

³⁵In a September 2019 memorandum, the Secretary of Defense directed the Acting Secretary of the Army to undertake the military construction-funded border barrier projects.

³⁶For most projects, USACE served as the design and construction agent supporting both DHS- and DOD-funded border barrier activities. USACE has a long-standing role in supporting DHS along the southwest border, including providing project and contract management support.

³⁷[GAO-21-372](#).

More specifically, the 631 miles under contract break out as follows:

- DOD counterdrug (fiscal years 2019–2020): 295 miles
- DHS appropriations (fiscal years 2017–2020): 240 miles
- DOD military construction (fiscal years 2019–2020): 96 miles

In January 2021, a presidential proclamation immediately paused all border barrier construction, among other actions.³⁸ The proclamation also revoked the 2019 National Emergency Declaration and called for the development of a plan by the Secretaries of Defense and Homeland Security (in coordination with other agency heads) that, among other things, was to address the potential redirection of border barrier funds while ensuring that they expended funds that Congress had explicitly appropriated for barrier construction. In June 2021, DOD issued its plan that (1) cancelled all military construction- and counterdrug-funded projects and (2) identified how it would redirect remaining funds.³⁹ DHS announced an initial plan in June 2021, amended in July 2022, detailing how the agency would prioritize the expenditure of the remaining funds for border barriers.⁴⁰ DHS's plan identified four primary activities as priorities, including addressing safety hazards; installing missing components, such as lights, cameras, and detection technology to incomplete portions of barrier system; conducting project site restoration; and mitigating environmental and cultural resource impacts from barrier construction.

³⁸Pres. Proclamation No. 10142, 86 Fed. Reg. 7225 (Jan. 27, 2021) (issued Jan. 20).

³⁹Department of Defense, *Plan for the Redirection of Border Wall Funds* (June 10, 2021).

⁴⁰Department of Homeland Security, *Border Wall Plan Pursuant to Presidential Proclamation 10142* (June 9, 2021); and *Amendment to DHS Border Wall Plan Pursuant to Presidential Proclamation 10142* (July 11, 2022).

Barrier Construction from January 2017 to January 2021 Had Various Impacts on Cultural and Natural Resources

Most Border Barrier Construction Projects from January 2017 to January 2021 Occurred on Federal Lands and Were in Various Stages of Completion When Agencies Paused Work

CBP and DOD, via USACE, installed approximately 458 miles of border barrier panels across the southwest border between January 2017 and January 2021—about 284 miles of which were on federal lands (62 percent).⁴¹ This includes installation on lands managed by the National Park Service, Bureau of Land Management, FWS, and the Forest Service, according to CBP data (see app. II for additional information). As we reported in 2021, most of the barrier miles that the agencies planned to construct with DOD military construction and counterdrug funding were on federal lands because doing so expedited the contracting and construction process.⁴² Table 1 shows installed miles of border barrier panels, by funding source and land management type between January 2017 and January 2021.

⁴¹Border barrier panels refer to the vertical pedestrian barrier component of CBP's border barrier system. The majority of the border barrier construction contracts awarded covered requirements for CBP's full barrier system—including the vertical pedestrian barrier panels, and other attributes—and, in some cases, also included features such as roads or levees. In this report, we refer to border barrier panels because most of these miles represented the installation of barrier panels rather than the completion of the entire CBP barrier system. CBP and DOD initiated 46 border barrier construction projects based on 37 construction contracts USACE awarded between October 2017 and September 2020. CBP awarded two additional construction contracts during this time frame that they terminated shortly after award. USACE did not award any contracts between October 2020 and January 2021, when the work was paused.

⁴²[GAO-21-372](#). We have previously reported that barrier construction on federal lands allowed CBP and DOD to proceed without the government first having to acquire real estate from private landowners—a process that could take years, according to CBP officials. See [GAO-21-114](#).

Table 1: Border Barrier Panel Miles Installed, by Funding Source and Land Management Type, January 2017 through January 2021

Land management type	Department of Defense (DOD) military construction funds ^a		DOD drug interdiction and counterdrug activities funds ^a		Department of Homeland Security appropriations ^b		Total border barrier panel miles	
	Border barrier panel miles	Percent of border barrier panel miles	Border barrier panel miles	Percent of border barrier panel miles	Border barrier panel miles	Percent of border barrier panel miles	Total border barrier panel miles	Percent of border barrier panel miles
Tribal	0	0%	2	1%	0	0%	2	0%
Federal government	78	89%	158	62%	48	41%	284	62%
State and local government	3	3%	36	14%	13	11%	51	11%
Private	7	8%	59	23%	56	48%	121	27%
Total	87	100%	255	100%	117	100%	458	100%

Source: GAO analysis of U.S. Customs and Border Protection and U.S. Geological Survey Protected Areas Database of the United States data. | GAO-23-105443

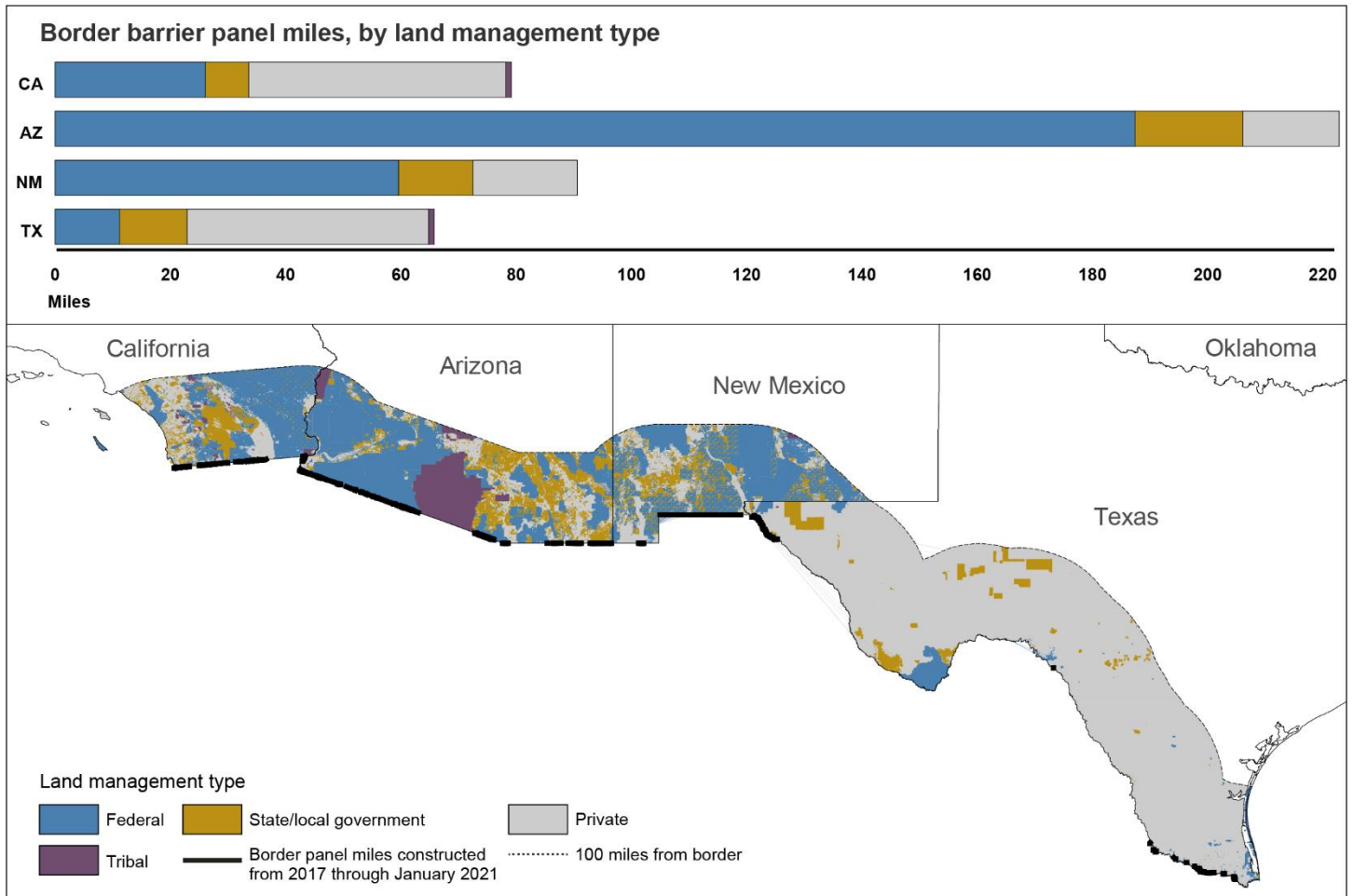
Notes: Data are current as of June 2023. Numbers are approximate and rounded to nearest whole number. Totals and percentages may not sum due to rounding. Tribal lands are American Indian Reservations-Federal and American Indian Trust Land, as defined by the U.S. Census Bureau.

^aDOD military construction funds and DOD drug interdiction and counterdrug activities funds were appropriated fiscal years 2019–2020.

^bDepartment of Homeland Security funding is from appropriations in fiscal years 2017–2019.

Out of the 458 miles installed as of January 2021, the agencies installed approximately 223 miles of barrier panels in Arizona, more than in any other state. Further, 84 percent (approximately 187 miles) of these miles in Arizona were on federal lands. This included miles of barrier panels through Organ Pipe Cactus National Monument, San Bernardino National Wildlife Refuge, Coronado National Forest, and other federal lands. The agencies installed the fewest miles of barrier panels in Texas: approximately 66 miles of barrier panels, 11 miles of which are on federal lands, primarily in one national wildlife refuge in the Lower Rio Grande Valley. Figure 5 shows installed miles of border barrier panels by land management type and state as of January 2021.

Figure 5: Miles of Border Barrier Panels Installed along the Southwest Border, by Land Management Type and State, January 2017 through January 2021



Source: GAO analysis of U.S. Customs and Border Protection and U.S. Geological Survey, Protected Areas Database of the United States data. | GAO-23-105443

Accessible Data for Figure 5: Miles of Border Barrier Panels Installed along the Southwest Border, by Land Management Type and State, January 2017 through January 2021

State	Tribal	Federal government	State and local government	Private	Total border barrier panel miles
California	1	26	8	45	79
Arizona	0	187	19	17	223
New Mexico	0	60	13	18	91
Texas	1	11	12	42	66

Source: GAO analysis of U.S. Customs and Border Protection and U.S. Geological Survey, Protected Areas Database of the United States data. | GAO-23-105443.

Note: This figure shows locations of miles of border barrier panels installed from 2017 through January 2021 only. It does not include locations of miles of barriers installed prior to 2017. Tribal lands are American Indian Reservations-Federal and American Indian Trust Land, as defined by the U.S. Census Bureau.

As noted, in response to the 2017 executive order, the agencies installed pedestrian barrier (rather than vehicle barrier) for any project initiated as part of the border barrier system after 2017. According to CBP data, most of the miles of pedestrian barriers that were installed replaced previously existing barrier (about 371 of 458 miles, or 81 percent). The remainder were installed (about 87 of 458 miles, or 19 percent) where no barrier had existed previously.⁴³ Of the approximately 371 miles of replacement barrier, about half replaced existing vehicle barrier, and half replaced existing pedestrian barrier. These previously existing vehicle barriers tended to be in remote areas, including across much of the federal land in Arizona and New Mexico.⁴⁴ For example, for one project in Cabeza Prieta National Wildlife Refuge, considered one of the most remote areas in the U.S., approximately 31 miles of vehicle barrier were replaced with pedestrian barrier.

The change from vehicle to pedestrian barrier can increase impacts to natural resources. According to CBP and Interior officials, vehicle barriers had wide enough openings to allow for wildlife passage, in contrast to the pedestrian barriers' smaller openings that can impede migration of larger animals. Similarly, these officials noted that replacing existing pedestrian barrier with CBP's border wall system could also increase the effects on natural resources because of its larger overall footprint and components such as lighting that may not have been part of the previous pedestrian barrier.

At the time of the pause in construction in January 2021, about 69 miles of installed barrier panels also included all of the required system components, as we previously reported.⁴⁵ Most of the barrier construction projects were left in various stages of completion, and contractors had not

⁴³For discussions of CBP's border barrier system, we define barrier constructed where no barriers had existed before as "new barrier." We define barrier constructed to replace existing barrier as "replacement barrier."

⁴⁴GAO, *Southwest Border: More Timely Border Patrol Access and Training Could Improve Security Operations and Natural Resource Protection on Federal Lands*, [GAO-11-38](#) (Washington, D.C.: Oct. 19, 2010).

⁴⁵We found that USACE had constructed about 69 miles of complete barrier system using DHS appropriations and that none of the miles of completed barrier system were constructed with DOD counterdrug or military construction funds. [GAO-21-372](#).

installed all components of the barrier system, including lights.⁴⁶ In addition, at some project sites, contractors installed noncontiguous sections of panels that, in some cases, resulted in openings greater than 100 feet between the different panel sections. For example, in some cases, contractors installed barrier panels but did not install flood or access gates that connect them (see fig. 6).

Figure 6: Incomplete Border Barrier in Arizona, with Opening (May 2022)



Source: GAO. | GAO-23-105443

Pausing construction and cancelling contracts also paused restoration work—such as completing water drainage structures and reseeded disturbed areas with native vegetation—called for in the contracts, according to CBP and USACE officials. For example, although contractors installed all barrier panels for one project in Arizona, agency

⁴⁶According to CBP, to consider a project complete, it was to include all components of CBP's barrier system, including physical barriers and deployment of related technology and infrastructure, such as lighting, surveillance systems, and roads for patrols and maintenance. [GAO-21-372](#).

officials stated they had not installed culverts for water drainage at the time of the pause.

Land Management Agencies, Tribes, and Others Highlighted Impacts from Barriers, Including to Cultural Sites and Wildlife

Federal officials—including from CBP, USACE, Interior and its component agencies, and the Forest Service—and representatives from Tribes and stakeholders we interviewed highlighted a variety of impacts to cultural and natural resources they have observed or documented from border barrier construction. Multiple factors contributed to the impacts they identified, including construction activities, the installed barrier system components, and incomplete project activities due to the cancellation of construction contracts after the January 2021 pause. For example, pausing construction and cancelling contracts exacerbated some of the negative impacts because contractors left project sites in an incomplete or unrestored state as of the January 2021 pause, and the sites remained that way, at times, for more than a year, according to agency officials. We discuss how CBP and others are addressing some of these impacts later in the report. We grouped the identified impacts into five broad categories: cultural resources; water sources and flooding; wildlife migration and habitats; vegetation and invasive species; and erosion.

Cultural Resources

Tribal and agency officials and four of the five stakeholders we interviewed told us that some projects caused significant damage and destruction to cultural resources, including historic sites and sites sacred to Tribes. Tohono O’odham Nation officials explained that damage and destruction to such sites is often irreparable because it can disrupt or end rites revered or cherished by specific cultural groups. Examples of the damage and destruction to cultural resources include the following:

- According to Tohono O’odham Nation officials, a culturally important site in Arizona was irreparably damaged when contractors used explosives to clear the way for expanding an existing patrol road. The blasting damaged portions of Monument Hill, a site that the Hia-C’ed O’odham, ancestors of the Tohono O’odham, and other Tribes historically used for religious ceremonies and that remains important to several Indigenous communities. According to Tohono O’odham Nation officials, Monument Hill was the site of intertribal battles and

contains the remains of Apache and O’odham ancestors who fought in those battles.⁴⁷

- Barrier construction also disrupted a different cultural site important to the Tohono O’odham Nation and other Indigenous communities, according to Tohono O’odham Nation officials. Located about 200 yards from the border, Quitobaquito Springs is a large oasis in the Sonoran Desert and is a sacred site for the O’odham people. Since O’odham ancestors inhabited the area for thousands of years, it is home to several O’odham burial sites. According to Tohono O’odham Nation officials, contractors cleared a large area near the springs, destroying a burial site that the Tribe had sought to protect.

Water Sources and Flooding

According to officials from several federal land management agencies and four of five stakeholders, and officials from one Tribe, construction of the border barrier affected water sources. Officials from the Bureau of Land Management and FWS and three of five stakeholders also said the barrier increased the potential for disrupting natural water flows. For example:

- According to a FWS study, water from an artesian well in the San Bernardino National Wildlife Refuge in Arizona no longer naturally flows to the surface, in part, as a result of barrier construction.⁴⁸ The study indicated a correlation between the reduced water pressure on the refuge and water use for barrier construction. According to one stakeholder, contractors drilled wells to access groundwater for construction at a project site near the refuge, where water supply is limited. As a result, the well now requires mechanical pumps to maintain water pressure, this stakeholder told us. Moreover, some

⁴⁷The O’odham people traditionally inhabited much of the area spanning what is now the U.S. and Mexico in the desert southwest. O’odham bands are now broken up into four federally recognized Tribes: the Tohono O’odham Nation, the Gila River Indian Community, the Ak-Chin Indian Community, and the Salt River Pima-Maricopa Indian Community. Each band is now politically and geographically distinct and separate. A remaining band, the Hia-C’ed O’odham, is not federally recognized but resides throughout southwestern Arizona.

⁴⁸“Artesian” water is defined by the pressure in the aquifer, which causes the water to naturally flow to the surface when tapped in a well. In this case, contractors degraded the pressure of the artesian water in the aquifer due to a decrease in the water table likely caused by use of the water in barrier construction activities. U.S. Fish and Wildlife Service, *Time Series Analysis for San Bernardino National Wildlife Refuge Mitigation Well and Glenn Ranch Well* (June 10, 2020).

ponds in the refuge are now void of water, which makes it difficult to maintain water levels in other ponds that have threatened and endangered fish species.

Also, the barrier system itself can disrupt the natural flow of water in heavy rain events. These rain events can occur regularly along rivers and drainages near the border, and barrier-related obstructions can exacerbate flooding, according to National Park Service and Bureau of Land Management officials. For example:

- During construction, the contractor built the patrol road several feet above the desert floor in Organ Pipe Cactus National Monument, in some places by as much as 8 feet. As a result, the raised road acts as a natural dam by impeding water flow during rain events. During heavy rains, water typically flows south across the desert into Mexico but now hits the side of the raised road, according to a National Park Service official. As of the January 2021 pause in construction, the contractor had not yet regraded the road to allow for proper drainage. (See fig. 7.)

Figure 7: Raised Patrol Road above the Desert Floor in Arizona (May 2022)



Raised roadbed in Arizona impeding water flow from right side of photo to left (see GAO staff at base of light pole for scale)

Source: GAO. | GAO-23-105443

Wildlife Migration and Habitats

Tribal and agency officials and all five stakeholders told us that installation of pedestrian barrier has affected wildlife by impeding their movement across the landscape, including in habitat for threatened and endangered species. Although some pedestrian barrier was designed to have small openings at the base to accommodate passage for small animals, bigger animals—such as the Sonoran pronghorn and wolves—are too large to pass through these openings. (See fig. 8.)

Figure 8: Border Barrier with a Small Opening (8½ by 11 inches) for Animals (May 2022)



Source: GAO. | GAO-23-105443

This impact on wildlife can be particularly pronounced in areas where pedestrian barrier replaced vehicle barrier because wildlife could more easily pass through the wider openings in the vehicle barriers, according to a FWS official and one stakeholder. Examples of barrier construction impacts to wildlife include the following:

- Installing the full border barrier system in parts of the Rio Grande Valley in Texas has fragmented the endangered ocelot's habitat, according to a joint FWS and CBP documented agreement. The barrier system has also severed the animal's travel corridors across the border. These cumulative impacts have substantially elevated the risks of the ocelot's extinction in the U.S., according to the agreement.
- Lighting along the border also negatively affects some species' behavior, according to Interior officials and four of five stakeholders. One stakeholder said that lighting along the border can affect bird migration and some species' foraging habits. The disruption of natural

patterns of light and dark produces a range of adverse effects for wildlife and numerous ecological processes, including orientation, reproduction, communication, competition, and predation.⁴⁹

Vegetation and Invasive Species

Clearing lands for border barrier construction damaged native vegetation. Also, leaving the lands cleared without reseeding them with native vegetation allowed invasive species to take root, according to Interior and FWS officials. CBP officials said contractors did not reseed cleared areas as initially planned at some sites because the projects were paused. For example:

- According to Tohono O’odham Nation officials, barrier construction activities destroyed many saguaro cacti in Arizona, which are sacred to the Tohono O’odham people and found only in the Sonoran Desert. The Tohono O’odham Nation officials explained that the saguaro is significant to O’odham culture and livelihood, as the saguaro provides an important fruit source and is a sacred plant to be given utmost respect, as a relative.⁵⁰ Many saguaro cacti also died after contractors transplanted them from project locations to nonproject areas to protect them from construction activities, according to a National Park Service official (see fig. 9). The official also said that after contracts were cancelled in 2021, watering and caretaking activities to encourage transplant survival ceased. As a result, the official estimated that as many as half of the transplanted cacti did not survive in some locations.

⁴⁹T. Longcore and C. Rich, “Ecological Light Pollution,” *Frontiers in Ecology and the Environment*, vol. 2, issue 4 (May 2004), 191-198.

⁵⁰In the O’odham culture, the saguaro is an elder brother to which the O’odham people talk and pray.

Figure 9: Saguaro Cactus That Did Not Survive Transplantation in Arizona (May 2022)



Source: GAO. | GAO-23-105443

- 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 (see fig. 10). Although construction contracts usually included reseeding native vegetation, in many cases the reseeding did not occur because of the January 2021 pause in construction, according to FWS officials.

Figure 10: Barrier Project Site Cleared of Native Vegetation in Texas (July 2022)



Source: GAO. | GAO-23-105443

Erosion

Agency officials and two of five stakeholders also identified erosion as an impact of border barrier construction. Some of these agency officials attributed some of this impact to the pause in construction and contract cancellations. Barrier construction on steep hillsides—and erosion control measures that were unfinished when construction was paused—have led to significant erosion in many locations, especially because the agencies were unable to address the erosion for more than a year in many cases, according to CBP officials. For some projects, contractors 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. Examples of erosion impacts include the following:

- According to CBP, Interior, and Forest Service officials, 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. Figure 11 shows the erosion that has occurred at multiple locations in the area.

Figure 11: Erosion on the Coronado National Forest in Arizona (May 2022)



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

- In multiple locations in Arizona, we observed erosion occurring adjacent to the border barrier along patrol roads where contractors did not complete installing culverts and other erosion control measures when projects were paused and contracts were ultimately cancelled, threatening the integrity of the barrier system.

Some officials also reported positive impacts of barrier construction on natural resources. For example, one Coronado National Forest official noted that there was more trash and trampling of native vegetation before the barrier was built. CBP officials also noted that the addition of barrier in some areas reduced the amount of drug trafficking across some federal lands, making it safer for patrol agents to travel along the border. In addition to the impacts already identified, Interior officials identified

several topics to study to help them better understand some of the longer-term impacts of border barriers on these resources, as we discuss later in this report.

CBP Has Taken Some Steps to Address Cultural and Natural Resource Impacts Since January 2021 but Could Benefit from a Joint Strategy with Interior

CBP has taken some steps to address cultural and natural resource impacts of border barrier construction since January 2021 through site restoration and environmental mitigation efforts. CBP identified a number of priorities and has primarily focused on addressing safety hazards. CBP has also begun planning and implementing site restoration at some, but not all, sites. Further, CBP, along with Interior, has initiated some environmental mitigation actions to address and identify longer-term impacts from the border barrier on federal lands. However, the agencies could benefit from defining their respective roles and responsibilities for mitigating these impacts and from documenting a joint strategy that does so, consistent with leading practices.

CBP Has Prioritized Four Broad Categories of Efforts Since January 2021 and Primarily Focused on Addressing Safety Hazards Posed by Incomplete Projects

After the January 2021 pause in construction, CBP identified four main categories of efforts that it planned to conduct: addressing immediate safety hazards, installing barrier system components, conducting project site restoration, and mitigating environmental impacts.

- **Addressing safety hazards.** These actions focus on addressing immediate dangers posed to individuals or communities at the incomplete project sites, such as exposed rebar, open trenches, and access to steep road grades.
- **Installing barrier system components.** These activities involve adding and completing the other components of CBP's barrier system—including lights, cameras, and detection technology—to the incomplete projects where contractors installed panels. As of June 2023, CBP had not begun to implement these activities.

According to CBP officials, the agency has begun environmental planning in support of adding these components and will award contracts after this planning is complete.

- **Project site restoration.** These activities involve restoring temporarily used areas around project sites to a state similar to before construction. They also include revegetating staging areas that had been cleared, stabilizing slopes and installing erosion control measures where contractors built temporary access roads, and restoring damaged cultural sites.
- **Environmental mitigation.**⁵¹ These activities are intended to identify and address long-term impacts from the barrier on cultural and natural resources. They can include restoring or replacing habitat, offsetting damaged cultural sites, and studying long-term impacts of the barrier on species and other natural resources.

Since January 2021, CBP has primarily focused on addressing safety hazards caused by leaving construction projects in different stages of completion, according to CBP officials. For example, CBP constructed concrete floodwalls to fix earthen levees that federal officials had deemed compromised by barrier construction activities in the Rio Grande Valley in Texas. In addition, CBP added panels and access gates to border barriers at project sites in California, Arizona, and Texas to address safety risks to patrol agents and nearby communities.

Further, USACE also addressed some safety hazards that remained at military construction- and counterdrug-funded project sites. For example, in the Otay Mountains in California, USACE removed and secured large and unstable rocks from a steep slope to prevent the rocks from falling onto a primary access road below. In response to the President's January 2021 proclamation ending the national emergency, DOD's plan stated it would conduct safety hazard work and redirect military construction and counterdrug funding sources that had been made available for barrier-related activities.⁵² For the projects DOD had previously funded, CBP planned to conduct additional work at the project sites, including work to install components, perform site restoration, and mitigate environmental

⁵¹For the purposes of this report, we use the term "mitigation" to mean addressing impacts that occurred as a result of an action.

⁵²Department of Defense, *Plan for the Redirection of Border Wall Funds*.

impacts, with remaining unspent DHS appropriations for border barrier construction.⁵³

To facilitate efforts to address safety hazards at border barrier construction sites, CBP and DOD used previous waivers of cultural and natural resource-related laws. This approach allowed them to address urgent safety concerns promptly, according to CBP and USACE officials. Similarly, CBP is using previous waivers to expedite its work to conduct site restoration at some project sites to allow them to more quickly address some urgent environmental impacts, according to CBP officials.⁵⁴ However, CBP does not intend to use its waiver authority for all of its identified categories of efforts, according to CBP officials. These officials explained that CBP cannot rely on DOD’s previous waiver authority to conduct restoration activities at the military construction-funded project sites.⁵⁵ Table 2 contains additional information about CBP and DOD use of previous waivers after January 2021.

Table 2: U.S. Customs and Border Protection (CBP) and Department of Defense (DOD) Use of Waivers for Post-January 2021 Activities

Agency	Post-January 2021 activity	Use of previous waivers, by previous barrier construction funding source (2017–2020)		
		Department of Homeland Security appropriations (2017–2020)	DOD counterdrug (2019–2020)	DOD military construction (2019–2020)
CBP and DOD	Addressing safety hazards	Yes	Yes ^a	Yes ^a
CBP	Installing system components	No	No	No
	Site restoration	Yes	Yes	No
	Environmental mitigation	Yes	TBD	No

Source: GAO analysis of CBP and DOD information. | GAO-23-105443

Notes: TBD indicates status is to be determined, meaning that, as of July 2023, CBP had not yet determined whether it will conduct the activity under a waiver. Agency implementation of post-pause activities and use of waivers differs, depending on the funding source used to construct barrier at project sites from fiscal years 2017 through 2020. The funding sources shown in the table represent the funding used for border barrier construction during the fiscal years indicated. CBP and DOD also

⁵³Department of Homeland Security, *Amendment to DHS Border Wall Plan*.

⁵⁴According to CBP officials, the waivers are applicable because these efforts were part of the original construction contracts.

⁵⁵DOD’s waiver authority under 10 U.S.C. § 2808 can only be applied to actions undertaken by DOD pursuant to this authority. Also, this authority is only operative in the event of a declaration of national emergency or war. Proclamation 10142 terminated the national emergency that was relied upon to utilize waivers to facilitate military construction under 10 U.S.C. § 2808.

used the funding sources shown to address safety hazards. However, since January 2021, CBP planned to conduct the other three activities using Department of Homeland Security appropriations.⁵⁶ DOD conducted activities to address safety hazards at DOD counterdrug- and military construction-funded project sites.⁵⁷

CBP Planned and Initiated Project Site Restoration Activities at Some Locations

CBP planned and initiated site restoration activities at some, but not all, project sites to help restore those sites to a preconstruction state and address some impacts from barrier construction. The funding source agencies used to install barrier at those sites directly influenced the type and amount of site restoration activities that CBP has conducted at these sites thus far. Specifically:

DHS appropriations-funded project sites. CBP restarted site restoration activities at these sites in May 2021, soon after the January 2021 pause in construction. CBP was able to quickly restart activities at some locations, in part, because the agency did not cancel construction contracts.⁵⁶ Instead, CBP officials explained, they modified the original contracts to include additional work, saving time and resources.⁵⁷

Counterdrug-funded project sites. CBP began soliciting public comment for what it calls “remediation plans” for these sites in January 2022. According to CBP officials, these plans comprise activities that contractors would have conducted under the original construction contracts. The activities are to help address some impacts to natural and cultural resources discussed above or to prevent site conditions from worsening. To identify specific restoration activities for the remediation plans, CBP coordinated with Interior and solicited input from the public and Tribes. For example, CBP conducted individual meetings with tribal officials to collect input about impacts and associated activities to address them. Examples of restoration activities for the counterdrug-funded sites include efforts to

⁵⁶In April 2021, DHS announced that it would proceed with erosion control measures along a 14-mile stretch of border in San Diego, California. In July 2021, DHS announced subsequent site restoration-related work in the Rio Grande Valley in Texas.

⁵⁷These officials explained that, after January 2021, CBP modified the original contracts in the Rio Grande Valley to remove work to construct the pedestrian barrier and add activities to address safety hazards and site restoration that were not previously included.

- address erosion that occurred from cutting new roads and creating a staging area, including the significant erosion that occurred in the Pajarito Mountains on the Coronado National Forest described above;
- control invasive species and revegetate areas disturbed by construction; and
- install small wildlife passages in the barrier to facilitate wildlife access to habitat on either side of the border.

CBP first began conducting site restoration work at these sites in fall 2022. As of June 2023, CBP had awarded five contracts for site restoration work included in the remediation plans, and work was underway for each of those contracts.

Military construction-funded sites. CBP had not initiated site restoration work at the military construction-funded sites as of July 2023. CBP officials said that, because no waivers remain in effect at these sites, as noted above, they will conduct environmental planning for restoration activities at these sites in accordance with NEPA and all applicable laws. Officials said they began the required planning efforts in March 2023 and anticipated the process will take about 1 year to complete, after which they can begin restoration activities.⁵⁸ In the meantime, CBP officials said that conditions at some of these project sites continue to diminish. For example, they noted that erosion at one site in California—made significantly worse due to high amounts of rainfall—is now undermining the integrity of the panels that contractors installed.

CBP, with Interior, Has Initiated Some Environmental Mitigation Actions, but the Agencies Could Benefit from Documenting a Joint Strategy

CBP, along with Interior, has initiated some environmental mitigation actions on federal lands, and the two agencies have coordinated on

⁵⁸CBP officials told us in May 2022 that they had not started the required environmental planning for the military construction-funded sites at that time because DOD still had administrative jurisdiction over the land on which the sites were located. In 2019 and 2020, the Secretary of the Interior issued public land orders transferring administrative jurisdiction for approximately 660 acres of federal public lands along the border to the Department of the Army for border security purposes for specified periods. Most of these lands are located in the Roosevelt Reservation, a 60-foot strip of land lying parallel and adjacent to the border that is under Interior's jurisdiction. DOD assumed jurisdiction over these lands to construct a border barrier system. Administrative jurisdiction for the 660 acres of land automatically reverted back to Interior in September 2022 at the end of the specified period.

identifying planned actions. However, the agencies could benefit from documenting a joint strategy that clearly defines roles and responsibilities for funding and implementing mitigation actions; identifies costs and funding sources, and implementation time frames; and specifies when they will consult with Tribes.

Both CBP and Interior have a role in addressing impacts on federal lands, as noted above: CBP because it has committed to mitigating impacts that border barrier construction has caused and Interior because its component agencies are responsible for managing federal lands that comprise much of the southern border and were affected by barrier construction.⁵⁹ CBP and Interior have initiated some coordinated mitigation actions. For example, as of March 2023, CBP entered into two agreements with Interior to conduct mitigation actions in the Lower Rio Grande Valley in Texas.⁶⁰ These efforts are intended to assess and mitigate impacts to species and habitats attributed to border barrier construction and include plans to relocate and breed certain species. According to CBP officials, the agency selected projects to fund with DHS's fiscal year 2019 border barrier construction appropriation because they met criteria associated with that appropriation, and CBP could obligate the funding before it expired at the end of fiscal year 2023.

In addition, Interior, in coordination with CBP, identified impacts from border barrier construction projects across federal lands along the border, as well as more than 50 associated potential mitigation actions intended

⁵⁹For example, Interior has previously implemented mitigation actions to address environmental impacts from border barrier construction that CBP funded. As we reported in 2011, DHS committed to transfer up to \$50 million to Interior to implement mitigation actions. Interior, in turn, was to identify \$50 million worth of projects to benefit threatened and endangered species and their habitats. Interior and DHS then were to sign agreements for DHS to transfer the funding to Interior. [GAO-11-38](#). In addition, the Forest Service is responsible for managing the National Forest on the southwest border on which impacts also occurred.

⁶⁰First, CBP entered into an agreement with Interior's U.S. Geological Survey that provided \$6 million initially, with additional funding of up to \$54 million to be provided as it becomes available, for scientific assistance and expertise in mitigating impacts on species and their habitat due to border wall construction. Second, CBP entered into an agreement with FWS that provides \$37.5 million for technical assistance and mitigation projects related to nonlevee border barrier construction in the Lower Rio Grande Valley. The agreement includes projects to protect and recover endangered ocelots, such as relocating ocelots and breeding and raising them in captivity for future release into the wild; study the effects of border wall on certain species of wildlife; and conduct native forest restoration, among other activities.

to address them.⁶¹ As part of this effort, Interior also identified studies that could improve the understanding of impacts from the border barrier, for example, on wildlife migration.

Potential mitigation actions Interior identified included efforts for

- preserving several archaeological sites in Arizona, including in the Quitobaquito Springs area, directly affected by border barrier and road construction;
- recharging groundwater levels where contractors extracted water during border barrier construction near the San Pedro River in Arizona; and
- monitoring endangered Peninsular bighorn sheep in California that rely on habitat across the border.

According to Interior and CBP officials, the agencies developed the list of potential actions in 2021, so it may not capture all actions that will ultimately be needed to mitigate impacts. For example, a CBP official said they will not know the full scope of required mitigation actions until after the agency completes more site restoration work. Officials told us they are working together to develop a structured decision-making process meant to prioritize the mitigation actions that they have identified thus far, as funding becomes available. Interior officials said that using such a process to prioritize actions is important for determining actions with the greatest overall mitigation benefit to the resource relative to cost and because the costs may exceed available resources.⁶²

The agencies have taken positive steps to identify and begin implementing some of the identified mitigation actions. For those actions CBP has already agreed to fund, CBP officials said that the agencies

⁶¹Interior officials told us that they obtained input from the Forest Service about impacts that occurred on National Forest land and potential mitigation actions. CBP officials explained that they identified a set of impacts that had occurred from barrier construction soon after barrier project contracts were terminated. Interior then added the impacts and mitigation actions it identified to CBP's original list. In late 2021, Interior provided to the Office of Management and Budget the consolidated list of impacts and potential actions to mitigate those impacts.

⁶²Structured decision-making is an approach for careful and organized analysis of natural resource management decisions and is based in decision theory and risk analysis, according to the U.S. Geological Survey. Key structured decision-making concepts include making decisions based on clearly articulated fundamental objectives, recognizing the role of scientific predictions in decisions, dealing explicitly with uncertainty, and responding transparently to societal values in decision-making.

have defined their roles and responsibilities. However, they have not defined their roles and responsibilities regarding the remaining actions where no funding has been identified or for any potential future actions needed to mitigate impacts. They also have not fully identified costs and funding sources, as well as time frames to implement the remaining actions and potential future actions, or specified when they will consult with Tribes regarding the actions. More specifically:

Determining roles and responsibilities. Agency officials said they have defined their roles for the actions that CBP has already agreed to fund. However, these actions do not represent all of the already-identified mitigation actions or any future mitigation actions that may ultimately be needed to address impacts of the border barrier. It is not clear which agency would be responsible for implementing or funding the remainder of the identified actions or any future actions.⁶³ For example, CBP officials said that some of the actions Interior identified may not have a sufficient nexus to the border barrier for CBP to fund them, while Interior officials told us that they expect CBP to fund all barrier-related mitigation actions because CBP is responsible for border barrier activities. Interior officials also stated that it or one of its components may decide to implement mitigation actions without CBP involvement. Although the agencies have a 2006 memorandum of understanding in place that defines their roles and responsibilities with respect to routine border security operations on federal land, the agreement does not include conducting environmental mitigation actions on these lands.⁶⁴

Identifying costs and funding sources. In 2021, Interior produced a rough-order-of-magnitude estimate of over \$200 million for all of the potential mitigation actions that it had identified. We have previously reported that such estimates are useful when agencies need a quick estimate and few details are available, and that agencies refine their cost

⁶³Interior officials said that the agencies' roles and responsibilities continue to be defined by statutes and limits of agency appropriations.

⁶⁴Department of Homeland Security, Department of the Interior, and U.S. Department of Agriculture, *Memorandum of Understanding Regarding Cooperative National Security and Counterterrorism Efforts on Federal Lands along the United States' Borders* (Washington, D.C.: Mar. 2006).

estimates as they better define the specific activities that they will conduct.⁶⁵

CBP officials said they had identified a funding source for some of the identified mitigation actions, since they expect CBP to fund at least some of them. CBP officials told us that, as of April 2023, they had determined that about \$50 million was likely available for mitigation actions, out of the \$2.1 billion that remained unobligated from the agency's fiscal years 2020 and 2021 appropriations at that time.⁶⁶ CBP did not derive this amount based on estimated costs of the proposed mitigation actions that the agencies identified or that CBP might implement. Instead, a CBP official told us that it was the amount remaining for environmental mitigation after CBP had funded its other three, higher-priority efforts: addressing safety hazards, installing missing barrier system components, and conducting site restoration.

However, while \$50 million may address some of the potential mitigation actions, it is not likely to fully address all of them.⁶⁷ As noted above, CBP provided \$43.5 million from earlier appropriations on just the two

⁶⁵Rough-order-of-magnitude estimates are not budget-quality cost estimates due to limited data and time to develop them. See GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 2020).

⁶⁶CBP's fiscal year 2020 appropriation provides that of its total funding for procurement, construction, and improvements, around \$467.1 million remained available until September 30, 2022, and around \$1.44 billion remains available until September 30, 2024. Pub. L. No. 116-93, div. D, tit. II, 133 Stat. 2317, 2506 (2019). CBP's fiscal year 2021 appropriation provides that around \$322.2 million remains available until September 30, 2023, and around \$1.52 billion remains available until September 30, 2025. Pub. L. No. 116-260, div. F, tit. II, 134 Stat. 1182, 1452 (2020). Multiple-year appropriations are available for obligation for the period of time in excess of 1 fiscal year that is specified in the relevant appropriations law.

⁶⁷In July 2023, DHS, Interior, and other federal agencies entered into a settlement agreement with plaintiff states and nongovernmental organizations to resolve pending litigation over border barrier construction that requires DHS to allocate \$45 million of this \$50 million for specified mitigation projects. Specifically, \$45 million of DHS's fiscal year 2020 or 2021 barrier system appropriations is to be allocated for environmental mitigation projects to offset or mitigate the impacts of border barrier construction where construction was undertaken using military construction and counterdrug funding. Of that amount, \$25 million is to be paid to the State of California to assist with the purchase of a specified parcel of land that will be set aside for conservation purposes. \$1.1 million is to be used for monitoring studies of certain endangered species. The remaining \$18.9 million is to be used for environmental mitigation projects that will be identified through consultation with some parties to the agreement, including California and New Mexico wildlife officials and Interior officials.

agreements it signed with Interior for mitigation in the Rio Grande Valley, which represent a fraction of the total actions that Interior identified. CBP officials told us that they have not identified additional funding sources to mitigate impacts on federal lands. Interior officials also stated that they have not identified additional funding sources for these actions.

Identifying time frames. As part of its effort to identify mitigation actions to address the impacts, Interior also estimated the approximate amount of time that implementing each project would require. However, CBP and Interior have not jointly developed time frames for conducting or completing the mitigation actions. Developing such time frames is important, in part, because, according to CBP officials, the \$50 million in DHS's unobligated appropriations is only available to obligate through fiscal year 2025 at the latest.⁶⁸ Identifying the sequencing for implementing mitigation actions is complicated by the fact that two different agencies are involved and because the actions are not ready to implement in all cases. For example, CBP officials said that some mitigation actions could be initiated concurrently with site restoration projects and others only after site restoration is completed.

Consulting with Tribes. In addition, some of the federal lands affected by the barrier occur in areas of importance and significance to numerous Tribes. Interior and DHS policies direct the agencies to conduct government-to-government consultation with Tribes when their actions have tribal implications.⁶⁹ CBP officials told us they regularly communicate with tribal officials about a variety of border security issues,

⁶⁸See Pub. L. No. 116-93, div. D, tit. II, 133 Stat. at 2506; Pub. L. No. 116-260, div. F, tit. II, 134 Stat. at 1452.

⁶⁹Interior's tribal consultation policy states that Interior will consult with Tribes whenever there is a departmental action with tribal implications, which is defined as any regulation, rulemaking, policy, guidance, legislative proposal, plan, programmatic or operational activity, or grant or funding formula changes that may have a substantial direct effect on a Tribe in matters including, but not limited to, tribal cultural practices, ancestral lands, sacred sites, or access to traditional areas of cultural or religious importance on federally managed lands. Department of the Interior, *Departmental Manual*, part 512, chap. 4. DHS's instruction implementing its tribal consultation policy states that tribal implications exist when a proposed regulation, policy, legislative recommendation, or planned action causes, or is likely to cause, a substantial direct effect on the self-government, trust interests, or other rights of a Tribal Nation; the relationship between the federal government and Tribal Nations; or the distribution of power and responsibilities between the federal government and Tribal Nations. Department of Homeland Security, *Implementing Consultation and Coordination with Tribal Nations*.

including the impacts from the barrier of concern to the Tribes.⁷⁰ The officials also said they formally consulted with Tohono O’odham Nation regarding their actions to address impacts from the border barrier, including addressing safety hazards, conducting site restoration, and potential mitigation actions, but they did not consult about specific proposed projects, according to meeting documentation.⁷¹ In addition, the agencies have not formally consulted with all potentially affected Tribes regarding the specific proposed mitigation actions.

Interior and CBP officials stated that they plan to formally consult with Tribes over the specific mitigation actions once they have identified and selected individual mitigation actions to implement. A Bureau of Indian Affairs official stated that Interior needs to first refine projects and identify funding to a certain extent to have organized and relevant reference material on which to formally consult. However, according to another Bureau of Indian Affairs official we spoke with, consultation should begin before the agencies select mitigation actions to implement. Tohono O’odham Nation officials also noted that waiting to consult until after the agencies have prioritized and selected specific mitigation actions does not provide Tribes with the opportunity to provide their perspectives on the relative importance of the mitigation actions under consideration.

As discussed later in this report, tribal officials have voiced concerns about the lack of consultation throughout the border barrier construction process and in addressing cultural and natural resource impacts. Interior’s tribal consultation procedures direct the component agencies to invite Tribes early in the planning process to consult whenever a plan or action with tribal implications arises, but they do not specify when consultation should occur.⁷² DHS’s tribal consultation instruction states

⁷⁰CBP officials explained that they have been meeting regularly with Tohono O’odham Nation and Pascua Yaqui Tribe staff. They also said that they are working to address as many of the impacts from the barrier as possible as part of CBP’s site restoration work. CBP officials said that they are also working with Tribes in California as part of site restoration efforts. However, they noted that some of the actions needed to address impacts to cultural sites will be covered under mitigation actions.

⁷¹CBP formally consulted with the Tohono O’odham Nation in May 2022 when the DHS Assistant Secretary for Partnership and Engagement met with the Chairman of the Tohono O’odham Nation. According to the meeting agenda, this formal consultation included a broad discussion of how CBP intended to address impacts through site restoration and mitigation actions, but did not include specific proposed mitigation actions.

⁷²Department of the Interior, *Departmental Manual*, part 512, chap. 5 (Nov. 30, 2022).

that the degree and extent of consultation depends on the identified potential tribal implication and does not provide specific guidelines for every potential scenario.⁷³

CBP and Interior have not made or documented joint determinations regarding these items because, according to officials, their existing coordination approach has been sufficient to identify and begin to implement mitigation actions. However, additional coordination to jointly identify items like roles and responsibilities, planned funding, and time frames, would better position CBP and Interior to manage and oversee implementation of mitigation actions. For example, we have previously reported that agencies can enhance and sustain collaborative efforts to address issues that cut across federal agencies by establishing joint strategies to achieve common goals.⁷⁴ Such goals would include mitigating environmental impacts that occurred from the border barrier on federal land. We have also found that agencies that articulate their agreements in formal documents can strengthen their commitment to working collaboratively.

In addition, we have previously reported that leading practices for interagency collaboration include defining roles and responsibilities and noted the importance of agencies clearly delineating and agreeing to their roles. Program management principles call for agency programmatic efforts to identify the costs associated with the actions and corresponding sources of funding and time frames for implementing actions.⁷⁵ We have also found that effective consultation is a key tenet of the government-to-government relationship that the U.S. has with Tribes, which is based on tribal sovereignty.⁷⁶ In particular, consultation regarding identifying and selecting mitigation actions could help the agencies benefit from understanding tribal concerns and priorities.

Documenting a joint strategy that defines each agency's roles and responsibilities for undertaking specific mitigation actions; identifies costs

⁷³Department of Homeland Security, *Implementing Consultation and Coordination with Tribal Nations*.

⁷⁴[GAO-12-1022](#).

⁷⁵Project Management Institute, Inc., *The Standard for Program Management*, Fourth Edition (2017).

⁷⁶GAO, *Native American Issues: Examples of Certain Federal Requirements That Apply to Cultural Resources and Factors That Impact Tribal Consultation*, [GAO-20-466T](#) (Washington, D.C.: Feb. 26, 2020).

and associated funding sources and time frames needed to implement them; and specifies when agencies are to consult with Tribes could help CBP and Interior better ensure that key resource impacts of border barrier construction on federal lands are mitigated. In addition, agency decision makers would have better information to support deliberations and determine an appropriate level of resources to dedicate to these efforts.

CBP and DOD Considered Potential Impacts, but CBP Could Benefit from Evaluating Lessons Learned to Inform Potential Future Efforts

CBP and USACE, within DOD, took some steps to assess potential cultural and natural resource impacts of border barrier construction and actions to minimize them, including reviewing studies and soliciting input beyond their respective agencies. CBP and USACE took these steps after legal requirements had been waived, including cultural and natural resource-related laws. Therefore, the agencies did not have to conduct the activities necessary to meet those requirements before constructing border barriers from 2017 to 2021. Officials from land management agencies and Tribes, and stakeholders, expressed concerns and suggested improvements regarding the steps that CBP and USACE took. However, CBP has not evaluated lessons learned that could inform potentially similar future efforts.

Agencies' Steps to Assess Potential Impacts Included Reviewing Studies and Soliciting Input

CBP and USACE, within DOD, each took steps to assess potential cultural and natural resource impacts of border barrier construction and actions to help minimize them for the projects they managed. Because the agencies waived legal requirements, including cultural and natural resource-related laws, before constructing border barriers between 2017 and January 2021, they did not have to conduct any assessments required by those laws, such as environmental assessments required by

NEPA.⁷⁷ According to agency officials, the assessments conducted differed from the assessments required by NEPA.

The specifics of the agencies' assessment processes differed as well. CBP assessed potential impacts and actions to help minimize them for the DHS-funded and counterdrug-funded projects using a process specific to operating under waivers that, according to a CBP official, the agency first developed in the late 2000s.⁷⁸ USACE assessed potential impacts and actions to help minimize them for the military construction-funded projects. Unlike DHS, USACE officials said that USACE had not conducted such assessments under waivers in the past. Instead, USACE created a new approach to do so, as well as a newly formed office, after receiving direction to construct barriers in 2019.

Although officials from both agencies said that their approaches differed from what they would have done if they had been required to comply with NEPA, CBP officials told us they tried to meet, as closely as possible, NEPA's substantive requirements, when time permitted. USACE officials also said that they took the steps they could, while operating in the best and fastest way possible.

According to CBP and USACE officials, the agencies' assessments included the following activities:

- **Reviewing studies and conducting site assessments and surveys.** Agency officials told us they reviewed studies, including

⁷⁷CBP and DOD used their statutory authorities to waive a variety of cultural and natural resource-related laws to facilitate border barrier construction between 2017 and 2021. The laws CBP waived included, but were not limited to, NEPA, Endangered Species Act, Federal Water Pollution Control Act (Clean Water Act), Clean Air Act, National Historic Preservation Act, Migratory Bird Treaty Act, Archeological Resources Protection Act, Paleontological Resources Preservation Act, Safe Drinking Water Act, Solid Waste Disposal Act, and the Native American Graves Protection and Repatriation Act. See, e.g., 84 Fed. Reg. 52118 (Oct. 1, 2019). The laws DOD waived included: NEPA, National Historic Preservation Act, Endangered Species Act, Migratory Bird Treaty Act, Migratory Bird Conservation Act, Eagle Protection Act, Clean Water Act, Fish and Wildlife Coordination Act, and the Clean Air Act.

⁷⁸According to CBP's fiscal year 2020 report to Congress on border barrier mitigation, CBP is committed to protecting the nation's cultural and natural resources when executing all federal undertakings, including construction of the border wall system. The report states that in instances when the Secretary of Homeland Security determines it necessary to issue a waiver of environmental laws to expedite construction of a new border wall system, "CBP still seeks to accomplish responsible environmental planning within a managed time frame to meet operational needs."

prior CBP assessments used for constructing barrier in similar locations, where available.⁷⁹ They said that they also conducted physical surveys of areas marked for construction, such as archeological and biological surveys, to identify potential cultural and natural resource impacts.

- **Soliciting input from federal agencies and others.** CBP and USACE officials told us they solicited input from federal land management agencies ahead of construction early in their assessments of potential impacts. CBP officials said they also solicited input from Tribes, state agencies, and other stakeholders early in its process.⁸⁰ For the four CBP projects we reviewed, CBP provided those agencies, Tribes, and stakeholders 2 months or more to provide input about potential impacts and efforts to minimize them. Unlike CBP, USACE did not solicit input from a broad range of entities early in its assessment and did not offer agencies a specified amount of time to provide the input. However, USACE officials said they coordinated with other entities, in some cases, as construction was ongoing. Officials from both agencies said they held regularly scheduled meetings with federal partners during the construction process.

CBP and USACE also documented their assessments. When operating under a waiver, CBP created assessment reports, called Environmental Stewardship Plans. These plans describe the analysis that CBP conducted for the projects covered by the plan. CBP officials said they used a template to complete these reports, which includes several standard categories of assessment: Vegetation, Wildlife and Aquatic Resources, Protected Species and Critical Habitat, and Cultural Resources. In addition, CBP created Stakeholder Feedback Reports to

⁷⁹For example, a CBP official said that they reviewed Environmental Stewardship Plans completed in 2007 as part of its consideration of potential impacts of the new barrier. However, for areas where CBP had not previously built barriers, no such reviews existed.

⁸⁰Under section 102(b)(1)(C) of IIRIRA, as amended, the Secretary of Homeland Security is required, in carrying out responsibilities to install additional border barriers and roads as needed, to consult with the Secretaries of the Interior and Agriculture, states, local governments, Indian Tribes, and property owners in the U.S. to “minimize the impact on the environment, culture, commerce, and quality of life for the communities and residents located near the sites at which such fencing is to be constructed.” See 8 U.S.C. § 1103 note. DHS officials told us that projects carried out pursuant to section 102(c) waivers were not subject to the DHS tribal consultation policy that was in effect until December 15, 2022. They said that, instead, the agency followed the consultation requirements in section 102(b)(1)(C) for border barrier construction projects. In addition, DOD specifically waived its tribal consultation policy.

summarize the input that it received to help inform those assessments for each of the four reports we reviewed.⁸¹ CBP also published completed Environmental Stewardship Plans on its website.

USACE produced reports, referred to as Environmental Baseline Surveys. The reports summarized existing information from studies, surveys, and inputs that the agency gathered when staff were just beginning to plan the projects. However, according to USACE officials, these reports did not include documentation of additional surveys conducted after construction began, because the reports were considered final prior to construction.⁸² USACE identified potential impacts to resources in several of the same categories found in CBP's Environmental Stewardship Plans, based on the two Environmental Baseline Survey reports we reviewed. USACE did not make its reports public.

In addition, CBP and USACE identified actions that they could implement—known as best management practices—to help minimize the impacts. Best management practices are construction practices designed to reduce the effects of construction on the environment, among other goals. According to both CBP and USACE officials, the agencies incorporated best management practices into the barrier construction contracts and made some adjustments as construction was ongoing. For the projects we reviewed, this included environmental awareness training, such as training contractors to recognize sensitive or threatened species and the actions to take if they encounter such species. It also included having biological and cultural resource monitors on-site to monitor and enforce contractor adherence to best management practices during construction. According to CBP and USACE officials, monitors were to routinely report their results through daily and weekly reports.

Agencies, Tribes, and Stakeholders Identified Concerns about Assessments of Potential Impacts Before

⁸¹CBP's Stakeholder Feedback Reports summarize input received from the public regarding the potential impacts of planned projects to the environment, culture, commerce, and quality of life, including socioeconomic impacts. CBP was to use the input to inform Environmental Stewardship Plans for each project.

⁸²According to USACE officials, an initial team was assembled to quickly collect existing information and to obtain input from other federal agencies. The initial team created the Environmental Baseline Survey. USACE stood up a new environmental team to carry out the activities of the projects.

Construction, and CBP Could Benefit from Evaluating Lessons Learned

Officials from federal land management agencies, tribal officials, and stakeholders identified concerns regarding CBP's and USACE's assessments of potential impacts to cultural and natural resources before constructing border barrier from 2017 to January 2021. However, CBP has not evaluated lessons learned from its approach to assessing potential impacts, which could help inform future efforts.

Land management agency officials, tribal officials, and stakeholders told us about their concerns regarding how CBP and USACE assessed potential cultural and natural resource impacts and, in some cases, noted that they shared these concerns with CBP and USACE. CBP and USACE officials also noted some concerns regarding the assessments. We obtained perspectives on CBP's and USACE's assessments in the following three areas: (1) soliciting and incorporating input, (2) sufficiency of analysis, and (3) flexibility in barrier decision-making.

Soliciting and Incorporating Input

Land management agency officials, a tribal official, and all five of the stakeholders we interviewed suggested that CBP and USACE could improve their approach to soliciting and incorporating input regarding their assessments. In particular, they noted that it would be helpful if CBP provided more detailed information when soliciting input, formally consulted with Tribes, and increased transparency in how it incorporated input.

Specifically, land management agency officials and two of the five stakeholders said that in several cases, the information that CBP and USACE shared about the projects when soliciting input lacked sufficient detail necessary for stakeholders to provide meaningful feedback. For example, officials from FWS and the National Park Service both described instances when CBP maps or project descriptions did not include important details, such as whether the proposed barrier would include lighting, and the specific height of the barrier panels. As a result, those land management agencies either had to conduct their own studies or provide only general feedback.

In addition, the Chairman of the Tohono O'odham Nation said that the agencies did not conduct formal consultation with the Tribe before

undertaking barrier projects. For example, the Chairman said that although CBP solicited the Tribe's input on certain aspects of proposed projects that affected important cultural sites, the interactions were not with sufficiently senior staff with decision-making authority. The Chairman noted that conducting formal consultation, even when agencies waive laws and policies, is necessary for respecting the government-to-government relationship between the U.S. and the Tribe.

Regarding transparency, land management agency officials and three of the five stakeholders said that they were often unaware of the extent to which agencies considered and incorporated their input because CBP and USACE did not share how they resolved the input.⁸³ For example, FWS officials said that CBP did not systematically convey how it considered FWS input and suggestions. In one instance, FWS officials noted that CBP ultimately constructed a 150-foot-wide enforcement zone in some national wildlife refuge parcels in Texas, whereas the officials believed that CBP had agreed to construct a narrower zone in those locations. However, CBP did not provide an explanation for this decision. Moreover, FWS officials said they did not know whether several of the other issues they raised were eventually included in construction contracts, since CBP did not clearly communicate this to them.

CBP and USACE efforts to obtain and incorporate input also yielded benefits to cultural and natural resources, according to National Park Service and FWS officials and tribal officials. For example, according to an Interior official, after obtaining input from FWS officials on a project along the Rio Grande River in Texas, CBP incorporated low-angle ramps to help tortoises and other animals escape from being trapped by floodwaters that can build up at the base of border barrier that is built on top of a concrete floodwall. In another example, the Tohono O'odham Nation Chairman told us that a senior USACE official met with the Tribe to identify ways to minimize impacts to a burial site located in Cabeza Prieta National Wildlife Refuge in Arizona. According to USACE officials, USACE modified the barrier's foundation and covered the site during construction to minimize impacts to the site and to address the Tribe's concerns.

⁸³CBP summarizes, at a high level, the input it receives in Stakeholder Feedback Reports, but it does not include information in these reports about how the agency responds to that input.

Sufficiency of Analysis

Land management agency officials, one tribal official, and four of the five stakeholders we interviewed told us that the agencies could improve the sufficiency of their analyses of the impacts to resources. For example, one stakeholder and a tribal official emphasized the importance of studying related issues before taking action to construct barriers. They raised concerns about CBP installing lights on border infrastructure in the San Bernardino National Wildlife Refuge and elsewhere in dark areas of Arizona without first studying the impacts of lighting on wildlife. According to federal agency research, introducing artificial light into naturally dark environments can have adverse effects on wildlife, including migratory birds.⁸⁴

In addition, some of the CBP and USACE assessment reports we reviewed identified limitations of the agencies' own analyses. For example, CBP's assessment of potential impacts for a project in Arizona stated that the agency did not survey the project location at the right time of year to identify many of the potentially affected species or their potential habitats. As another example, USACE's assessment for a California project in the Otay Mountain Range stated that it was unknown if there were any species of special interest at the project site "due to the limited scope" of the assessment. The report recommended that the agency conduct a more thorough review of the site prior to earth-moving activities, but USACE did not conduct such a review, according to agency officials.

Flexibility in Barrier Decision-Making

Land management agency officials and three of the five stakeholders we interviewed also noted concerns about the agencies' limited flexibility in decision-making about barrier system installation, including barrier type (pedestrian or vehicle), location, and components. One Interior official said that having such flexibility could provide more opportunities to satisfy both CBP's border security mission and the land management agencies' missions, especially on federal lands that have been specifically protected for their natural resource value. This Interior official and one stakeholder

⁸⁴Frank Turina, "Protecting Night Skies and Naturally Dark Conditions in National Parks," in *Visual Resource Stewardship Conference Proceedings: Landscape and Seascape Management in a Time of Change*, ed. Paul H. Gobster and Richard C. Smardon, General Technical Report NRS-P-183 (Newtown Square, PA: U.S. Department of Agriculture, U.S. Forest Service: Dec. 2018): 190.

said that CBP should determine the appropriate barrier type based on the particular characteristics of different areas.

For example, FWS officials said they requested that CBP leave openings in the barrier at key wildlife crossings to facilitate wildlife movement, potentially securing those openings with additional technology. At the time, CBP determined that it could not leave the openings and still meet its operational requirements. However, now that the January 2021 pause in construction has resulted in several large openings between installed panels, the FWS officials said that CBP has an opportunity to determine if it can meet operational needs and better support wildlife movement by retaining those openings. (See fig. 12.)

Figure 12: Opening Between Installed Panels in Texas (July 2022)



Source: GAO. | GAO-23-105443

The Chairman of the Tohono O’odham Nation noted that agency flexibility in adapting the barrier design could help avoid negative impacts to important cultural sites and habitats. Specifically, before the recent construction began, he suggested that CBP add sensors or lighting to

existing pedestrian barrier at Monument Hill in Organ Pipe Cactus National Monument in Arizona instead of replacing it with the larger barrier system, which would damage the area. However, similar to the FWS example above, CBP officials said they could not accommodate that suggestion and still meet their operational needs. Ultimately, tribal officials found that the explosives that the contractors used to clear the construction area to install the larger barrier system irreparably damaged a site that is culturally significant for several Indigenous communities.

CBP and USACE officials also identified shortcomings associated with their assessments and said they informally reviewed their processes as projects were ongoing. Regarding soliciting input, according to USACE officials, the short time frames limited their ability to solicit and incorporate additional input. CBP officials said that they did not always respond to the input they received and noted that they could do a better job of that in the future. Regarding analyses, USACE officials told us that their approach was not as rigorous as it would have been under the NEPA process because the process was developed and executed quickly to meet their goals. Similarly, CBP officials explained that they did not undertake some studies because they would not have completed them in time to meet construction deadlines. However, these officials also said that certain actions they developed, such as having biological monitors present during construction, were meant to minimize some of those shortcomings.

Lastly, regarding flexibility in barrier installation, CBP officials told us that the 2017 executive order and appropriations acts limited their flexibility in varying the barrier system components, such as their ability to install vehicle barrier. As noted, the executive order directed the planning, design, and construction of a contiguous and impassable physical barrier, and CBP's fiscal years 2018 through 2021 appropriations acts directed the agency to use operationally effective barrier designs that were already deployed as of May 2017.⁸⁵ According to USACE officials, they also did not have flexibility in choosing barrier system components to install, and the military construction projects were to comply with CBP's standard for the border barrier system.

Federal land management agencies, tribal officials, and stakeholders have described concerns with, or areas of, improvement regarding

⁸⁵CBP's fiscal years 2020 and 2021 appropriations also permitted certain operationally effective adaptations of those earlier designs.

assessments of potential impacts. However, CBP, which has committed to implementing mitigation actions and maintains its authority to construct border barriers, has not fully evaluated these concerns to inform any future actions or efforts.⁸⁶ According to key practices that we and others have identified for both program and project management, it is important to identify and apply lessons learned from programs, projects, and missions to limit the chance of recurrence of previous failures or difficulties.⁸⁷ Moreover, agencies can learn lessons from an event and make decisions about when and how to use that knowledge to change behavior.

CBP officials said they have not evaluated lessons learned regarding their assessments because they have not completed the barrier construction projects. They said that they would typically wait to consider such lessons once that occurs. However, CBP conducted its efforts to assess the potential impacts of those projects prior to January 2021, which would allow it to consider any lessons from those efforts now, even if it is conducting additional work at the project sites. Moreover, CBP's statutory authority to build border barrier, as well as to waive laws when doing so, remains in effect, so it is important to take the opportunity to improve its process before conducting any new assessments. By evaluating lessons learned, with input from federal agencies, tribes, and stakeholders, from its prior assessments of potential impacts, CBP could gain insights for any future barrier construction efforts it may implement using its waiver authority.

Conclusions

Construction of border barriers has negatively affected some cultural and natural resources along the southwest border. CBP and Interior have taken some actions to address impacts that occurred as a result of this construction on federal lands along the border. CBP and Interior could both have a role in implementing actions to mitigate these longer-term impacts, but they have not clearly defined their respective roles and responsibilities for all of the mitigation actions they have identified, and

⁸⁶As previously noted, as of June 2021, DOD had cancelled all military construction- and counterdrug-funded border barrier projects.

⁸⁷[GAO-19-25](#). We also identified lessons-learned practices from reports by the Project Management Institute. See Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Sixth Edition (2017); and *Implementing Organizational Project Management: A Practice Guide*, First Edition (2014).

ones that may be needed in the future, or jointly identified costs and time frames to implement them. CBP and Interior documenting a joint strategy that defines each agency's roles and responsibilities for undertaking specific mitigation actions; identifies costs and associated funding sources and time frames needed to implement them; and specifies when agencies are to consult with Tribes could help the agencies ensure that key resource impacts of border barrier construction on federal lands are mitigated. In addition, agency decision makers would have better information to support deliberations and determine an appropriate level of resources to dedicate to these efforts.

Moreover, officials with federal land management agencies, Tribes, and stakeholders identified concerns with, and suggestions for, CBP to improve its assessments of potential impacts before barrier construction when operating under waivers. CBP also identified improvements. Evaluating lessons learned from its prior assessments of potential impacts, with input from federal agencies—including Interior and USACE, within DOD—Tribes, and stakeholders, could help CBP gain insights for any future barrier construction efforts it may implement using its waiver authority.

Recommendations for Executive Action

We are making three recommendations, including two to CBP and one to Interior.

- The Commissioner of CBP should document, jointly with Interior, a strategy to mitigate cultural and natural resource impacts from border barrier construction that defines agency roles and responsibilities for undertaking specific mitigation actions; identifies the costs, associated funding sources, and time frames necessary to implement them; and specifies when agencies are to consult with Tribes.
(Recommendation 1)
- The Secretary of the Interior should document, jointly with CBP, a strategy to mitigate cultural and natural resource impacts from border barrier construction that defines agency roles and responsibilities for undertaking specific mitigation actions; identifies the costs, associated funding sources, and time frames necessary to implement them; and specifies when agencies are to consult with Tribes.
(Recommendation 2)

- The Commissioner of CBP, with input from Interior, DOD, Tribes, and stakeholders, should evaluate lessons learned from its prior assessments of potential impacts. (Recommendation 3)

Agency and Third-Party Comments

We provided a draft of this report for review and comment to the Departments of Defense, Homeland Security, and the Interior; and to the Tohono O’odham Nation. DHS and Interior agreed with our recommendations, and their written comments are reproduced in appendixes III and IV, respectively. DHS, Interior, USACE (responding on behalf of DOD), and the Tohono O’odham Nation provided technical comments, which we incorporated as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 2 days from the report date. At that time, we will send copies to the appropriate congressional committees; the Secretaries of Defense, Homeland Security, and the Interior; the Chairman of the Tohono O’odham Nation; and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff members have any questions regarding this report, please contact Anna Maria Ortiz at (202) 512-3841 or OrtizA@gao.gov or Rebecca Gambler at (202) 512-8777 or GamblerR@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to the report are listed in appendix V.

Sincerely yours,



Anna Maria Ortiz
Director, Natural Resources and Environment

Letter

A handwritten signature in black ink that reads "Rebecca Gambler". The signature is written in a cursive, flowing style.

Rebecca Gambler
Director, Homeland Security and Justice

Appendix I: Objectives, Scope, and Methodology

This report (1) describes border barrier installed from January 2017 through January 2021 and its impacts to cultural and natural resources; (2) assesses actions taken to address those impacts since January 2021; and (3) examines U.S. Customs and Border Protection (CBP) and the Department of Defense (DOD) assessments of potential cultural and natural resource impacts of border barrier construction conducted from January 2017 through January 2021.

To address our objectives, we reviewed laws, regulations, and guidance applicable to the construction of border barriers, including the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996, as amended by the REAL ID Act of 2005, and other laws.¹ We also reviewed Department of Homeland Security (DHS) and DOD documentation that identified the cultural and natural resource-related laws that the agencies waived or disregarded to facilitate border barrier construction from January 2017 to January 2021.

We also met with cognizant headquarters, component agencies, and field office officials from DHS; the U.S. Army Corps of Engineers (USACE); and the Department of the Interior, including the Bureau of Indian Affairs, Bureau of Land Management, Bureau of Reclamation, National Park Service, and Fish and Wildlife Service (FWS). We also met with officials from the Department of Agriculture's U.S. Forest Service's Coronado National Forest, located along the border (see table 3). We selected a nongeneralizable sample of six barrier construction projects for in-depth review. We selected these projects to account for geographic diversity and differences in federal land management type, cultural and natural resource impacts, and funding source used to install barrier. We conducted site visits to five of the six border barrier construction project sites in Arizona and Texas during May and July 2022.

¹Pub. L. No. 104-208, div. C, tit. I, subtit. A, § 102, 110 Stat. 3009, 3009-554 to -555, as amended by REAL ID Act of 2005, Pub. L. No. 109-13, div. B, tit. I, § 102, 119 Stat. 231, 306 (classified, as amended, at 8 U.S.C. § 1103 note).

Appendix I: Objectives, Scope, and Methodology

Table 3: Federal Agencies Included in GAO’s Review

Department	Agency	Office, unit
Defense	U.S. Army Corps of Engineers	Headquarters
Defense	U.S. Army Corps of Engineers	South Pacific Division
Defense	U.S. Army Corps of Engineers	South Pacific Border District
Defense	U.S. Army Corps of Engineers	Los Angeles District
Defense	U.S. Army Corps of Engineers	Fort Worth District
Defense	U.S. Army Corps of Engineers	Tribal Nations Technical Center of Expertise
Homeland Security	U.S. Customs and Border Protection and U.S. Border Patrol	U.S. Border Patrol Rio Grande Valley Sector
Homeland Security	U.S. Customs and Border Protection and U.S. Border Patrol	U.S. Border Patrol Tucson Sector
Homeland Security	U.S. Customs and Border Protection and U.S. Border Patrol	U.S. Border Patrol Yuma Sector
Interior	Office of the Secretary	Interagency Borderland Coordination
Interior	Bureau of Indian Affairs	Headquarters
Interior	Bureau of Land Management	Arizona State Office
Interior	Bureau of Land Management	California State Office, Palm Springs-South Coast Field Office
Interior	Bureau of Reclamation	Yuma Area Office
Interior	National Park Service	Coronado National Memorial
Interior	National Park Service	Organ Pipe Cactus National Monument
Interior	U.S. Fish and Wildlife Service	Southwest Region Headquarters
Interior	U.S. Fish and Wildlife Service	Buenos Aires National Wildlife Refuge
Interior	U.S. Fish and Wildlife Service	Cabeza Prieta National Wildlife Refuge
Interior	U.S. Fish and Wildlife Service	Carlsbad Fish and Wildlife Office
Interior	U.S. Fish and Wildlife Service	Lower Rio Grande Valley National Wildlife Refuge
Interior	U.S. Fish and Wildlife Service	Santa Ana National Wildlife Refuge
Agriculture	U.S. Forest Service	Coronado National Forest

Source: GAO. | GAO-23-105443

We interviewed tribal officials regarding their perspectives and information relevant to each of our objectives. Specifically, we interviewed officials from the Tohono O’odham Nation and the Viejas Band of Kumeyaay Indians because they have tribal land located on or near the southwest border.² We identified these Tribes to include in our review by reviewing tribal land along the border and agency assessment documents that mentioned affected Tribes.

We also interviewed five stakeholders, including representatives from four nongovernmental organizations and one individual with expertise and experience in cultural and natural resource protection along the southwest border.³ The four nongovernmental organizations include the Center for Biological Diversity, Sierra Club-Grand Canyon Chapter, Sky Island Alliance, and Wildlands Network. We identified stakeholders based on our review of related documents and through our interviews with an initial set of stakeholders. While the selected agencies, Tribes, and stakeholders do not represent views held by all affected parties and are not generalizable, we selected them because they provided diverse perspectives on (1) the cultural and natural resource impacts of specific border barrier construction projects and (2) federal agencies’ efforts to consider those impacts before construction. Their views provide illustrative examples.

To describe border barrier installed from January 2017 through January 2021, we analyzed CBP’s geospatial data. Specifically, we obtained data from CBP’s geodatabase, which contains information about the locations of the segments of barrier that were installed during this time. We selected this period because Executive Order 13767 was issued in January 2017, and Presidential Proclamation No. 10142, which paused all border barrier construction, was issued in January 2021.⁴

²Tohono O’odham Nation of Arizona is a federally recognized Tribe. Viejas Band of Kumeyaay Indians is part of the federally recognized Capitan Grande Band of Diegueno Mission Indians of California.

³For the purposes of this report, we define “stakeholders” as the selected individuals and organizations independent of Tribes and the federal government.

⁴*Border Security and Immigration Enforcement Improvements*, Exec. Order No. 13767, 82 Fed. Reg. 8793 (Jan. 30, 2017) (issued Jan. 25). *Termination of Emergency With Respect to the Southern Border of the United States and Redirection of Funds Diverted to Border Wall Construction*, Pres. Proclamation No. 10142, 86 Fed. Reg. 7225 (Jan. 27, 2021) (issued Jan. 20).

We overlaid CBP's geospatial location information with data from the U.S. Geological Survey's Protected Areas Database of the United States to determine the land management entity associated with each mile of installed barrier. We disaggregated the data by (1) new pedestrian barriers (barrier constructed where there was no existing barrier) and replacement barriers (pedestrian barriers that replaced existing pedestrian or vehicle barrier); (2) agency and funding source—that is, whether funded by DHS or DOD; (3) land management entity, including tribal, federal, local government, private, and state lands; and (4) state. To determine the reliability of CBP's data, we examined the data for obvious errors, inconsistencies, and missing information; interviewed knowledgeable CBP officials; and used verified data from a prior GAO report to corroborate the data we received from CBP.⁵ We assessed these data and found them to be sufficiently reliable for our reporting objectives.

To identify natural and cultural resource impacts of the border barrier installed from January 2017 through January 2021, we interviewed the CBP and USACE officials, federal land management agency officials, tribal officials, and stakeholders identified above about their perspectives. We analyzed information gathered during our interviews to determine general categories of natural and cultural resource impacts identified as resulting from barrier construction. We corroborated information collected through interviews with direct observations from our site visits to Arizona and Texas. We also reviewed documentation associated with those impacts from federal land management agencies, the Tohono O'odham Nation, and stakeholders.

To assess the actions that federal agencies have taken to address impacts from southwest border barrier construction on natural and cultural resources since pausing construction, we analyzed DHS and DOD directives, guidance, and plans issued after the January 2021 pause in construction, and relevant agency documentation of actions to address those impacts. For example, we reviewed a report describing actions that USACE took to address immediate safety hazards and CBP's plans that outline site restoration activities ("remediation plans"). For certain impacts that occurred on federal land, we also reviewed documents from Interior that described those impacts and proposed actions to address them. We

⁵CBP provided us with these data in June 2023 and noted that its geodatabase only contains segments of barrier that were completed between January 2017 and January 2021.

also interviewed cognizant officials from CBP, USACE, and Interior, as described above. We compared CBP's and Interior's efforts to address impacts from the barrier against leading practices for interagency collaboration and program management.⁶

To examine the assessments of potential cultural and natural resource impacts of southwest border barrier construction that CBP and USACE, within DOD, conducted before the January 2021 pause in construction, we interviewed CBP and USACE officials about the processes they used to assess effects on resources. As noted, we selected a nongeneralizable sample of six barrier construction projects for in-depth review. For each project, we reviewed and analyzed agency assessments and documentation about potential impacts and actions that could help minimize those impacts and interviewed agency officials responsible for conducting the assessments. We also interviewed the tribal officials, stakeholders, and federal land management agency officials described above to obtain their perspectives on how CBP and USACE identified potential impacts of border barrier construction to cultural and natural resources and their suggestions for improvement. We compared CBP's actions with respect to these perspectives and suggestions against key practices that we and others have identified for both program and project management.⁷

We conducted this performance audit from September 2021 to September 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁶GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 27, 2012); and Project Management Institute, Inc., *The Standard for Program Management*, Fourth Edition (2017).

⁷See GAO, *Project Management: DOE and NNSA Should Improve Their Lessons-Learned Process for Capital Asset Projects*, [GAO-19-25](#) (Washington, D.C.: Dec. 21, 2018). We also identified lessons-learned practices from reports by the Project Management Institute. See Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Sixth Edition (2017); and *Implementing Organizational Project Management: A Practice Guide*, First Edition (2014).

Appendix II: Additional Information about Border Barrier Panels Installed from 2017 through January 2021

This appendix provides additional details about the approximately 458 miles of border barrier panels that U.S. Customs and Border Protection (CBP) and the Department of Defense (DOD) installed across the southwest border between January 2017 and January 2021.¹ Border barrier panels refer to the vertical pedestrian barrier component of CBP’s border barrier system. Table 4 shows the number of border barrier panel miles by land management type and state.

Table 4: Border Barrier Panel Miles Installed, by Land Management Type and State, January 2017 through January 2021

State	Tribal	Federal government	State and local government	Private	Total border barrier panel miles
California	1	26	8	45	79
Arizona	0	187	19	17	223
New Mexico	0	60	13	18	91
Texas	1	11	12	42	66
Total	2	284	51^a	121	458

Source: GAO analysis of U.S. Customs and Border Protection and U.S. Geological Survey Protected Areas Database of the United States data. | GAO-23-105443

Notes: Data are current as of May 2023. Numbers are approximate and rounded to the nearest whole number. Totals may not sum due to rounding. Tribal lands are American Indian Reservations-Federal and American Indian Trust Land, as defined by the U.S. Census Bureau.

^aOf the approximately 51 miles, about 15 miles are on local government land, and about 36 miles are on state government land.

¹For the purposes of this report, we generally use the term “barrier” to refer to a physical structure, such as a pedestrian fence, vehicle barrier, or wall, or any combination of these structures, that is intended to impede the movement of people or vehicles. The majority of the border barrier construction contracts awarded covered requirements for CBP’s full barrier system—including the vertical pedestrian barrier panels, and other attributes—and, in some cases, also included features such as roads or levees. In this report, we refer to border barrier panels because most of these miles represented the installation of barrier panels rather than the completion of the entire CBP barrier system.

**Appendix II: Additional Information about
Border Barrier Panels Installed from 2017
through January 2021**

Table 5 shows the number of border barrier panel miles installed on federal lands, by federal agency.

Table 5: Border Barrier Panel Miles Installed on Federal Lands, by Federal Agency, January 2017 through January 2021

Federal department	Federal agency	Total border barrier panel miles	Percent of border barrier panel miles
Department of the Interior	Bureau of Land Management	112	39%
Department of the Interior	Bureau of Reclamation	15	6%
Department of the Interior	Fish and Wildlife Service	66	23%
Department of the Interior	National Park Service	29	10%
Department of Defense	na	44	16%
Department of Agriculture	U.S. Forest Service	19	7%
Total		284	100%

Source: GAO analysis of U.S. Customs and Border Protection and U.S. Geological Survey Protected Areas Database of the United States data. | GAO-23-105443

Notes: Data are current as of May 2023. Numbers are approximate and rounded to nearest whole number. Totals and percentages may not sum due to rounding.

Table 6 shows the number of miles of panels of new barriers (barrier constructed where there was no existing barrier) and replacement barriers (barriers that replaced existing barriers—either pedestrian or vehicle barrier), by land management type.

Table 6: New and Replacement Border Barrier Panel Miles Installed, by Land Management Type, January 2017 through January 2021

Land management type	New ^a		Replacement ^b		Total border barrier panel miles
	Miles of border barrier panel where barrier did not exist	Miles of border barrier panel that replaced pedestrian barrier	Miles of border barrier panel that replaced vehicle barrier		
Tribal	<1	1	<1		2
Federal government	69	61	155		284
State and local government	3	30	19		51
Private	16	84	22		121
Total	87	176	195		458

Source: GAO analysis of U.S. Customs and Border Protection and U.S. Geological Survey Protected Areas Database of the United States data. | GAO-23-105443

**Appendix II: Additional Information about
Border Barrier Panels Installed from 2017
through January 2021**

Notes: Data are current as of May 2023. Numbers are approximate and rounded to nearest whole number. Totals may not sum due to rounding. Tribal lands are American Indian Reservations-Federal and American Indian Trust Land, as defined by the U.S. Census Bureau.

^aFor the purposes of this table, new border barrier includes both primary and secondary pedestrian barrier. The primary barrier, which may include pedestrian or vehicle barriers, is the first barrier encountered when moving into the U.S. from the border. All border barrier built between January 2017 and January 2021 was pedestrian barrier. Secondary barriers, located behind the primary barrier on the U.S. side of the border, consist solely of pedestrian barrier. Approximately 61 percent (about 53 of 87 miles) were primary barrier miles, and 40 percent (about 35 of 87 miles) were secondary barrier miles.

^bFor the purposes of this table, replacement border barrier includes both primary and secondary pedestrian barrier. Approximately 21 of 176 miles replaced existing secondary pedestrian barrier.

Appendix III: Comments from the Department of Homeland Security

**Appendix III: Comments from the Department
of Homeland Security**

U.S. Department of Homeland Security
Washington, DC 20528



**Homeland
Security**

July 21, 2023

Anna Maria Ortiz
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548-0001

Rebecca Gambler
Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548-0001

Re: Management Response to Draft Report GAO-23-105443, "SOUTHWEST
BORDER: Additional Actions Needed to Address Cultural and Natural Resource
Impacts from Barrier Construction"

Dear Mses. Ortiz and Gambler:

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

The Department is pleased to note GAO's recognition of U.S. Customs and Border Protection's (CBP) efforts to conduct comprehensive environmental planning within a managed time frame. Specifically, GAO noted U.S. Border Patrol's (USBP) efforts to: (1) allow two months or more for a broad range of entities to provide input about potential project impacts and efforts to minimize them; (2) coordinate and communicate with other agencies and Tribes; and (3) ensure compliance during construction, to include environmental awareness trainings and environmental and cultural monitors. USBP is also actively working to allocate additional funding for restoration and mitigation of cultural and natural resource impacts, while maintaining regular coordination with other agencies, Tribes, and non-government organizations. DHS remains committed to

**Appendix III: Comments from the Department
of Homeland Security**

coordinating with stakeholders regularly to ensure environmental planning for these projects is inclusive and comprehensive.

The draft report included three recommendations, including two for CBP with which the Department concurs. Enclosed find our detailed response to each recommendation. DHS previously submitted technical comments addressing several accuracy, contextual, and other issues under a separate cover for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H CRUMPACKER Digitally signed by JIM H
CRUMPACKER
Date: 2023.07.21 11:33:18 -04'00'

JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Enclosure

**Enclosure: Management Response to Recommendations
Contained in GAO-23-105443**

GAO recommended that the Commissioner of CBP:

Recommendation 1: Jointly document, with Interior [Department of the Interior], a strategy to mitigate cultural and natural resource impacts from border barrier construction that defines agency roles and responsibilities for undertaking specific mitigation actions; identifies the costs, associated funding sources, and time frames necessary to implement them; and specifies when agencies are to consult with Tribes.

Response: Concur. CBP's USBP will assign a lead coordinator to work with Interior on the creation of a joint strategy to mitigate border barrier cultural and natural resource impacts. USBP will also hold strategy sessions with Interior to collaborate on agency roles and responsibilities, mitigation actions, costs and associated funding sources, implementation time frames, and protocols addressing when agencies are to consult with Tribes. Prior to finalizing the strategy, CBP and Interior leadership will also have an opportunity to review and provide comment, as appropriate. Estimated Completion Date (ECD): June 28, 2024.

Recommendation 3: With input from Interior, DOD [Department of Defense], Tribes, and stakeholders, evaluate lessons learned from its prior assessments of potential impacts.

Response: Concur. CBP's USBP will assign a lead coordinator to collaborate with Interior, DOD, Tribes, and stakeholders on the evaluation and documentation of lessons learned from border barrier environmental planning efforts. USBP will also hold internal strategy sessions to document lessons learned and compile a draft report of lessons learned. Further, USBP will solicit public input from stakeholders, and will initiate meetings with Tribes to collect input from Tribal leaders on lessons learned. Information collected will be compiled into a final lessons learned report for USBP's internal use. ECD: June 28, 2024.

Accessible Text for Appendix III: Comments from the Department of Homeland Security

July 21, 2023

Anna Maria Ortiz
Director, Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548-0001

Rebecca Gambler
Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548-0001

Re: Management Response to Draft Report GAO-23-105443, "SOUTHWEST BORDER: Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction"

Dear Mses. Ortiz and Gambler:

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

The Department is pleased to note GAO's recognition of U.S. Customs and Border Protection's (CBP) efforts to conduct comprehensive environmental planning within a managed time frame. Specifically, GAO noted U.S. Border Patrol's (USBP) efforts to: (1) allow two months or more for a broad range of entities to provide input about potential project impacts and efforts to minimize them; (2) coordinate and communicate with other agencies and Tribes; and (3) ensure compliance during construction, to include environmental awareness trainings and environmental and cultural monitors. USBP is also actively working to allocate additional funding for restoration and mitigation of cultural and natural resource impacts, while maintaining regular coordination with other agencies, Tribes, and non-government organizations.

DHS remains committed to coordinating with stakeholders regularly to ensure environmental planning for these projects is inclusive and comprehensive.

The draft report included three recommendations, including two for CBP with which the Department concurs. Enclosed find our detailed response to each recommendation. DHS previously submitted technical comments addressing several accuracy, contextual, and other issues under a separate cover for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H CRUMPACKER

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Date: 2023.07.21 11:33:18 -04'00'

JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Enclosure

Enclosure: Management Response to Recommendations Contained in GAO-23-105443

GAO recommended that the Commissioner of CBP:

Recommendation 1: Jointly document, with Interior [Department of the Interior], a strategy to mitigate cultural and natural resource impacts from border barrier construction that defines agency roles and responsibilities for undertaking specific mitigation actions; identifies the costs, associated funding sources, and time frames necessary to implement them; and specifies when agencies are to consult with Tribes.

Response: Concur. CBP's USBP will assign a lead coordinator to work with Interior on the creation of a joint strategy to mitigate border barrier cultural and natural resource impacts. USBP will also hold strategy sessions with Interior to collaborate on agency roles and responsibilities, mitigation actions, costs and associated funding

sources, implementation time frames, and protocols addressing when agencies are to consult with Tribes. Prior to finalizing the strategy, CBP and Interior leadership will also have an opportunity to review and provide comment, as appropriate. Estimated Completion Date (ECD): June 28, 2024.

Recommendation 3: With input from Interior, DOD [Department of Defense], Tribes, and stakeholders, evaluate lessons learned from its prior assessments of potential impacts.

Response: Concur. CBP's USBP will assign a lead coordinator to collaborate with Interior, DOD, Tribes, and stakeholders on the evaluation and documentation of lessons learned from border barrier environmental planning efforts. USBP will also hold internal strategy sessions to document lessons learned and compile a draft report of lessons learned. Further, USBP will solicit public input from stakeholders, and will initiate meetings with Tribes to collect input from Tribal leaders on lessons learned. Information collected will be compiled into a final lessons learned report for USBP's internal use.
ECD: June 28, 2024.

Appendix IV: Comments from the Department of the Interior

**Appendix IV: Comments from the Department
of the Interior**



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

Anna Maria Ortiz
Director, Natural Resources and Environment
Rebecca Gambler
Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Director Ortiz and Director Gambler,

Thank you for providing the Department of the Interior (Department) the opportunity to review and comment on the draft Government Accountability Office (GAO) report titled, *Southwest Border: Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction (GAO-23-105443SU)*. We appreciate GAO's review of the impacts of U.S.-Mexico border wall on cultural and natural resources.

The Department *concurs* with the following recommendation issued by GAO.

Recommendation 2: The Secretary of the Interior should jointly document, with CBP, a strategy to mitigate cultural and natural resource impacts from border barrier construction that defines agency roles and responsibilities for undertaking specific mitigation actions; identifies the costs, associated funding sources, and time frames necessary to implement them; and specifies when agencies are to consult with Tribes.

Response: The Secretary of the Interior will work with the U.S. Customs and Border Protection (CBP) to document a strategy, as recommended.

Responsible Official: Office of Policy, Management and Budget (PMB), Deputy Assistant Secretary for Public Safety, Resource Protection and Emergency Services (DAS-PRE), Program Manager-Interagency Borderland Coordination and Field Communications

Target Date: July 31, 2024

Technical comments for GAO consideration have been provided separately, as requested. If you have any questions, please contact the Office of Financial Management (PFM) Audit Management Division (doi_pfm_am@ios.doi.gov).

Sincerely,

**JOAN
MOONEY**

Digitally signed by
JOAN MOONEY
Date: 2023.08.01
13:14:19 -0400

Joan M. Mooney
Principal Deputy Assistant Secretary
for Policy, Management and Budget
Exercising the Authority of the Assistant
Secretary for Policy, Management and Budget

Accessible Text for Appendix IV: Comments from the Department of the Interior

Anna Maria Ortiz

Director, Natural Resources and Environment Rebecca Gambler
Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Director Ortiz and Director Gambler,

Thank you for providing the Department of the Interior (Department) the opportunity to review and comment on the draft Government Accountability Office (GAO) report titled, Southwest Border: Additional Actions Needed to Address Cultural and Natural Resource Impacts from Barrier Construction (GAO-23-105443SU). We appreciate GAO's review of the impacts of U.S.-Mexico border wall on cultural and natural resources.

The Department concurs with the following recommendation issued by GAO.

Recommendation 2: The Secretary of the Interior should jointly document, with CBP, a strategy to mitigate cultural and natural resource impacts from border barrier construction that defines agency roles and responsibilities for undertaking specific mitigation actions; identifies the costs, associated funding sources, and time frames necessary to implement them; and specifies when agencies are to consult with Tribes.

Response: The Secretary of the Interior will work with the U.S. Customs and Border Protection (CBP) to document a strategy, as recommended.

Responsible Official: Office of Policy, Management and Budget (PMB), Deputy Assistant Secretary for Public Safety, Resource Protection and Emergency Services (DAS-PRE), Program Manager-Interagency Borderland Coordination and Field Communications

Target Date: July 31, 2024

Technical comments for GAO consideration have been provided separately, as requested. If you have any questions, please contact the Office of Financial Management (PFM) Audit Management Division (doi_pfm_am@ios.doi.gov).

Sincerely,

JOAN MOONEY

Digitally signed by JOAN MOONEY
Date: 2023.08.01 13:14:19 -04'00'

Joan M. Mooney
Principal Deputy Assistant Secretary for Policy, Management and Budget
Exercising the Authority of the Assistant Secretary for Policy, Management and Budget

Appendix V: GAO Contacts and Staff Acknowledgments

GAO Contacts

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Rebecca Gambler, (202) 512-8777 or gablerr@gao.gov

Staff Acknowledgments

In addition to the contacts named above, Leslie Kaas Pollock (Assistant Director), Jeanette Henriquez (Assistant Director), Ulana Bihun (Analyst in Charge), Adrian Apodaca, Ellen Fried, Brian Hartman, Brian Lipman, Serena Lo, Matthew McLaughlin, John Mingus, Jr., Sasan J. “Jon” Najmi, Lesley Rinner, Eric Smith, and Jeanette Soares made significant contributions to this report.

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