

United States Department of the Interior

NATIONAL PARK SERVICE  
Big Bend National Park  
Rio Grande Wild and Scenic River  
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1.A.1 BIBE

Memorandum

Date: July 13, 2022

To: Director, National Park Service

Through: Regional Director, Regions 6, 7, and 8

From: Superintendent, Big Bend National Park /s/ B.K. 7/13/22

Subject: Wilderness Eligibility Assessment for the North Rosillos area of Big Bend National Park

This Wilderness Eligibility Assessment has been reviewed in accordance with National Park Service (NPS) *Management Policies* (2006) section 6.2.1 and completes the Wilderness Suitability process initiated in the park's 2004 [General Management Plan](#) (GMP). Of the 67,135 acres assessed, 63,505 acres of the North Rosillos area of Big Bend National Park meet the eligibility criteria and requirements necessary to qualify for Congressional designation in the National Wilderness Preservation System.

**Overview of Big Bend National Park and its Values**

Big Bend National Park was established June 12, 1944 through a lands gift from the state of Texas to the National Park Service, after enabling legislation was passed in 1935<sup>1</sup>. The park preserves a large area of the Chihuahuan Desert, encompassing wilderness character, scenic values, dark skies, and cultural, biological and geological diversity. Of the park's original 700,000 acres, 538,250 acres within the park were recommended to US Congress for formal wilderness designation in 1978, and an additional 44,750 acres were recommended for potential wilderness. In 1980 Public Law 96-607 authorized acquisitions of an additional 91,000 acres along the northwest park boundary. Acquisitions were made over the next decade. Currently all but about 25,000 acres of inholdings within the established park boundary are under NPS ownership. The majority of inholding land is located in South Rosillos (Malek) Ranch, which is not included in this assessment. The rest of the area is referred to as the North Rosillos or Harte Ranch Area (see Appendix E, Fig. 9). The North Rosillos was not included in the 1978 recommendation, which was completed prior to the land being added to the park.

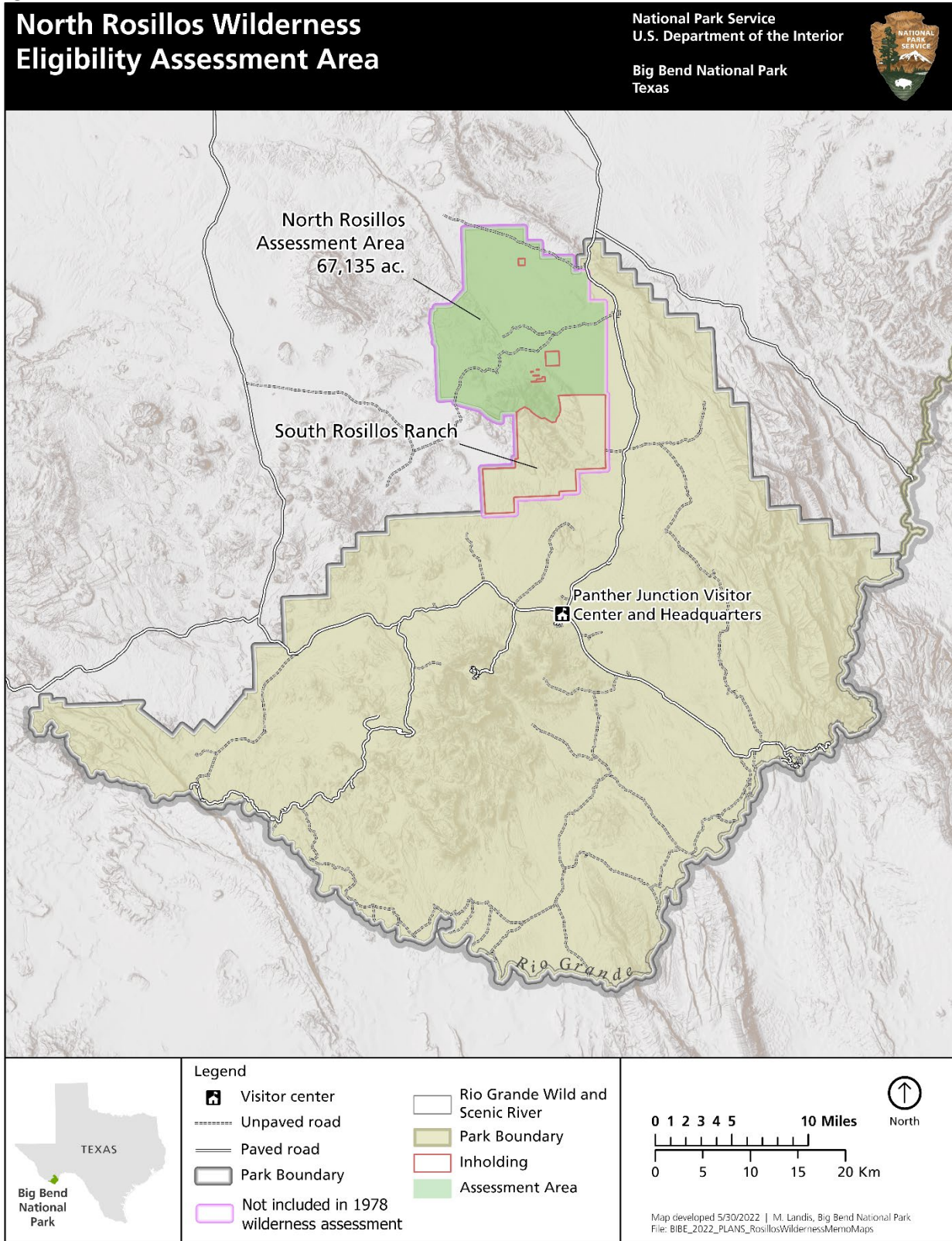
The wilderness suitability/eligibility assessment for the North Rosillos Area published as draft in the 2004 park GMP was completed in 2022 by park staff. The current park boundary forms the north, west, and southwest limits of the assessment area. The southern limit of the assessment

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<sup>1</sup> *An Act to Provide for the Establishment of the Big Bend National Park in the State of Texas, and for Other Purposes*, S. 2131, 74<sup>th</sup> Cong., 1<sup>st</sup> Sess. (1935) (enacted)

area is the property line of a large inholding (Malek/South Rosillos Ranch). The eastern limit of the assessment area is the original Big Bend park boundary.

Figure 1, North Rosillos Wilderness Assessment Area



Terrain in the assessment area is varied, with elevations spanning from around 2,600' in the lowlands to over 5,400' at Rosillos Peak. The dominant landforms are the Rosillos Mountains, the flat expanses of Chalk Draw and Nine Point Draw, and northeast facing cliffs separating Cedar Creek from lowlands. The dominant vegetation type is Chihuahuan creosote bush, a common vegetation type for the larger region featuring a moderate to sparse shrub layer. Key for habitat and biodiversity are herb dry wash and colluvial slope vegetation types, which make up 13% of the assessment area. These washes intermittently flood and can support more diverse shrub and tree layers compared to the neighboring scrub groups. Native fauna is similar to what can be found in the rest of the park, and exotic wildlife is of special concern within the assessment area. Feral hogs currently occupy and occur only in the North Rosillos but have a high potential to spread elsewhere in the park.

Springs along the base of the Rosillos Mountains and high points with good views show indications of use by people over thousands of years. Hunter-gatherers used the land beginning as early as 3,500 B.C. In recent history the area was ranched until the land was acquired by the NPS. Currently the only permanent human infrastructure within the assessment area are unpaved roads, an active NPS airstrip, and an employee residence. Though indicators of ranching remain visible on the landscape in the form of tanks and several remaining structures, all livestock related activities ceased with NPS ownership.

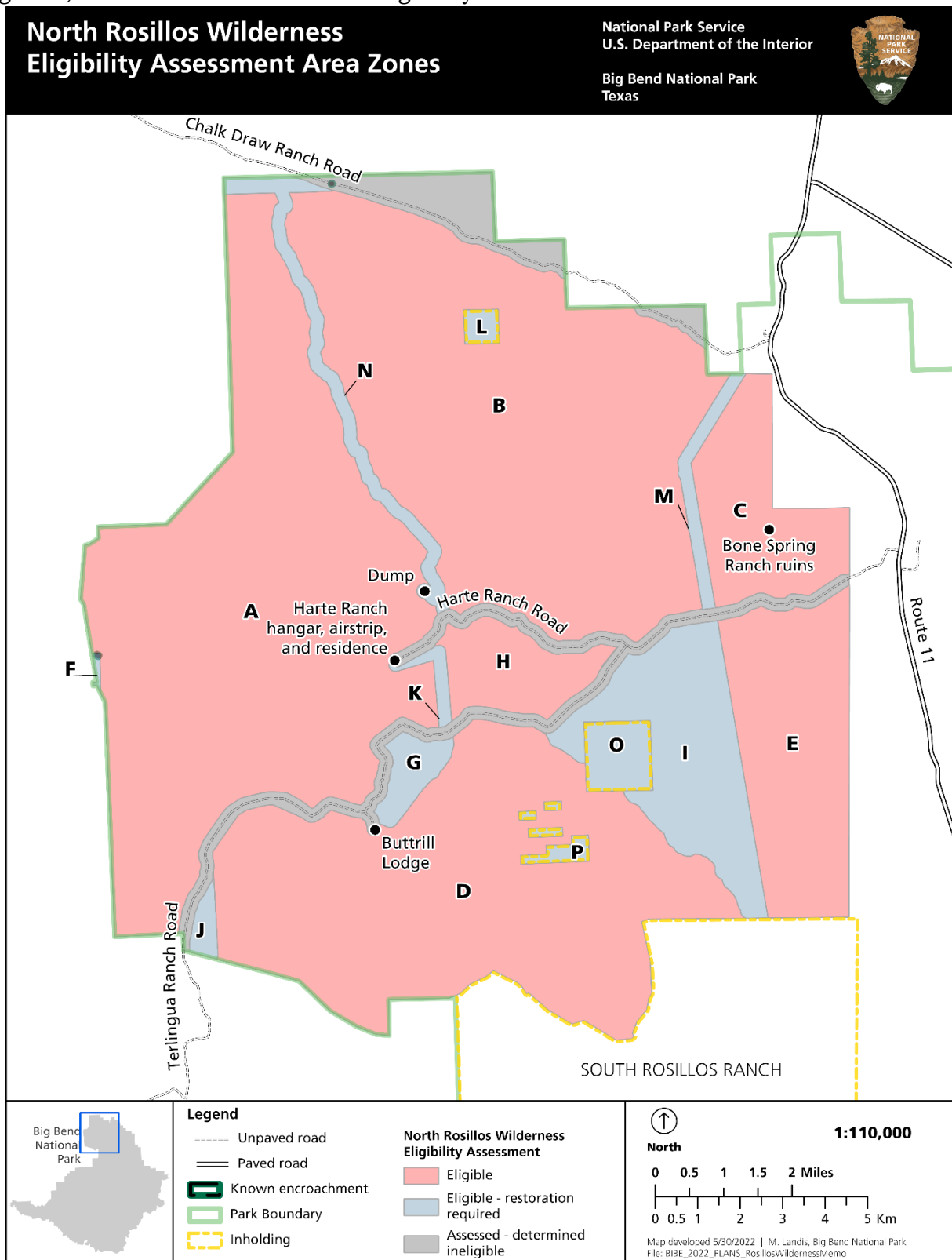
### **Summary of the Wilderness Eligibility Assessment Process**

This eligibility assessment is the conclusion of a process that began with the park's [General Management Plan](#), published in 2004. Public notification of the intent to complete the assessment was conducted along with the GMP.

Appendix E of the GMP included a draft memorandum to the Director, dated September 14, 2002, from the Regional Director, Intermountain Region determining that 62,700 acres in this area of the park were suitable for wilderness. The 2002 memorandum published in the GMP was labeled as a draft, and exhaustive efforts to determine if a final letter was ever signed came up empty. Hence the current effort reviews the status of the lands assessed previously, makes small acreage adjustments based on current conditions, and concludes the assessment process.

Big Bend National Park staff conducted field assessments in January and February 2022 including 2 aerial surveys, 23 miles of driving, and over 30 miles of hiking. The following eligibility discussion is based on that field work, existing site descriptions and studies, and the contextual knowledge of key staff, including the Superintendent and Chief of Science and Resource Management. Staff took into consideration current park boundaries, ownership, established recreational uses and visitation trends, current development, and cultural and natural conditions. This information was used to address the Primary Eligibility Criteria listed in Section 6.2.1.1 of *Management Policies*.

Figure 2, North Rosillos Wilderness Eligibility Assessment Area Zones



The majority of the assessment area meets the six wilderness criteria as described in NPS Management Policy Chapter 6. However, the land is segmented by long-standing infrastructure including permanent roads, powerlines, an NPS airstrip and associated administrative structures which do not meet the Primary Eligibility Criteria. The land also contains 15 inholdings totaling 1,032 acres<sup>2</sup>. The South Rosillos Ranch inholding was not included in the assessment area.

The assessment area was divided into 16 zones of eligible wilderness, each bounded by a combination of existing NPS boundaries and existing infrastructure that would necessitate a break in wilderness. These assessment zones are shown in Figure 2 and described further in Appendix B.

### **Areas determined ineligible for wilderness**

An area around the existing permanent roads (Terlingua Ranch Road, Chalk Draw Road, and Harte Ranch Road), stretching 500 feet on either side of the centerline, was determined ineligible for wilderness.

This is a recommended exception to the standard NPS setback of 100 feet on either side of a centerline described in Director's Order 41, section 5.6. The reason for this recommendation is related to surface soil type, road engineering, and maintenance requirements. All roads within the assessment area are unpaved and are highly vulnerable to erosion. These roads cross vast expanses of bolson (sedimentary basin) fill deposits made up of unconsolidated sand, gravel, and boulders. Headcutting erosion in these loose alluvial sediments can rapidly create long, deep, impassible gullies that require wide detours. Entrenched roads sometimes capture water runoff and become artificial drainages, leading to flooding, erosion, and impassible mudholes. Mechanically excavated water bars, often over 200 feet in length, attempt to direct floodwater away from the road and into naturally existing washes. However, views of the road from the air show that despite this engineering the roads are dynamic and have been rerouted many times in the past. This is especially true around intersections, washes, and sharp curves. Road reroutes require the use of mechanical equipment up to 500 feet from the centerline to work undisturbed areas. Significant flooding or erosion may require a semi-permanent reroute utilizing land up to 500 feet on either side of the original road at any point. This has been the case for permanent, public-access unpaved roads elsewhere in the park as well as minimally maintained powerline access roads. Establishing an adequate nonwilderness corridor around these unstable roadways will ensure the roads can be preserved to the extent possible, rerouted when needed, and maintained without damage to wilderness from mechanized equipment.

The entire NPS Harte Ranch airstrip development lies inside the 500 feet on either side of the centerline non-wilderness-eligible corridor surrounding Harte Ranch Road.

An additional area of non-wilderness-eligible lands falls in three small parcels totaling 832 acres between the corridor for Chalk Draw Road and the north boundary of the park. This area is crisscrossed by dirt roads and many boundary/fence issues with the adjacent landowner, making rehabilitation more challenging and politically sensitive.

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<sup>2</sup> Acreages in this report were calculated using GIS software using the best available boundary spatial data and the NAD 83 UTM Zone 13 [2011] projection. Acreages listed in this memo are not expected to match exactly the acreages listed in legal land descriptions or deeds.

## Wilderness Criteria and the Assessment Area

Within the 67,135 acre assessment area, 63,505 acres meet the six Primary Wilderness Criteria, paraphrased below in bold text.

The assessment area contains no visitor services and no maintained developments beyond Terlingua Ranch Road, Chalk Draw Ranch Road, and the operational NPS infrastructure at Harte Ranch, all of which are excluded from the area determined eligible. Since ranching activities ceased three decades ago, the only current human use outside of these excluded corridors is recreational cross-country hiking and primitive backcountry camping. Therefore, this land is **where the Earth and its community of life are untrammelled by people, and where people are visitors who do not remain.**

The overall impression of the landscape is primeval and undisturbed. There are sparse indicators of past (relatively recent) human use within the areas assessed as eligible or potentially eligible for wilderness. These include:

- a. 20 earthen stock tanks
- b. 11 metal stock tanks
- c. Over 147 miles of abandoned, unpaved, unused roads
- d. A 1.5 acre dump/staging area that was used by ranchers prior to NPS acquisition of the land, located at the southern end of Zone N (assessed as potentially eligible)

These features are no longer in use and their immediate vicinities will be either rehabilitated or left to recover naturally. Therefore, this **undeveloped federal land retains its primeval character and influence, without permanent improvements or human habitation.**

Decades of rest diminish existing human use indicators. The primary forces shaping the landscape of the assessment area are wind and water. However, human use in this area and in surrounding areas outside the park has brought about exotic species including invasive grasses and nonnative wildlife such as elk and feral hogs. The existing earthen tanks provide water sources that are attractive to animals, causing them to use different habitats and routes than they would if the landscape was completely unaffected by humans. **Primarily this land has been affected by forces of nature, with the imprints of human work substantially unnoticeable.**

Currently there are no management practices in the areas assessed as eligible for wilderness that would be at odds with wilderness character. However, existing threats to the fidelity of the ecosystem may require some activities that could have temporary adverse effects on wilderness quality. These include:

- a. Exotic plant, animal, and trespass livestock management, especially related to feral hogs.
- b. Law enforcement activities related to targeting illegal activities.
- c. Prescribed burns for fuel reduction or ecosystem restoration.
- d. Broaching or removal of roads, stock tanks, fences, power lines, dumps, trash piles, etc. and restoration of original contours and vegetation.
- e. Trail or primitive campsite designation may occur in order to direct visitors for resource protection, human and resource safety, and crowd dispersal.

Ultimately these activities **protect and manage the land so as to preserve its natural conditions.**

Due to the lack of visitor attractions, this is one of the least visited areas in Big Bend National Park. Solitude is easy to come by. Recreation opportunities include driving Terlingua Ranch Road, which showcases scenic values; wildlife viewing; hiking cross-country; and zoned (primitive) camping. The area **has outstanding opportunities for solitude and a primitive, unconfined type of recreation.**

While the geology, wildlife, flora, and cultural resources are like those found throughout the midelevations of Big Bend, this section of the park is unique in that it has a recent history of human use. The North Rosillos is a case study in Chihuahuan desert ranchland recovery, giving the area **significant ecological, scientific, educational, and historical value.**

### **Summary of Public Involvement**

Public involvement with respect to wilderness in the North Rosillos area was addressed during the development of Big Bend National Park's GMP published in 2004. No additional public involvement is required until the Director approves the Assessment. Upon approval by the Director, Big Bend National Park will issue a news release publishing the Director's determination and the NPS will publish a Federal Register notice of the final eligibility determination.

### **Conclusion**

Of the 67,135 acres assessed, 63,505 acres of the North Rosillos area of Big Bend National Park meet the eligibility criteria and requirements necessary to qualify for Congressional designation in the National Wilderness Preservation System.

Of the 63,505 acres meeting wilderness eligibility criteria, 7,163 acres have non-conforming uses that could be removed or restored, including existing powerline infrastructure, presence of administrative or service roads, rights-of-ways, and relatively small inholdings. The remaining 3,630 acres do not meet the eligibility criteria due to the presence of permanent roads and development that is critical to park operations.

# Appendix A

## Figure 3, 1978 Wilderness Plan, DSC-155-20.004 D



## Appendix B

### Descriptions of Zones in Assessment Area

**Table 1:**  
**Assessment Area Acreage**

Assessment Determination	Zone (Fig. 2)	Total Acres
Eligible Wilderness – No Restoration Required	A	17,910
	B	16,257
	C	2,827
	D	13,265
	E	4,568
	H	1,515
<b>Eligible – No Restoration Required Total</b>		<b>56,342</b>
Eligible – Restoration Required	F	30
	G	524
	I	3,632
	J	204
	K	188
	M	452
	N	1,101
<b>Eligible – Restoration Required Total</b>		<b>6,131</b>
Inholdings	L	162
	O	634
	P	236
<b>Inholdings total</b>		<b>1,032</b>
<b>Eligible Wilderness Total</b>		<b>63,505</b>
<b>Ineligible For Wilderness</b>		<b>3,630</b>
<b>Assessed Area Total</b>		<b>67,135</b>

### Zones currently eligible for wilderness

Zone A contains undeveloped land between the park boundary, a service road that gets rare use (Kent Road), Harte Ranch, and Terlingua Ranch Road.

Zone B contains undeveloped land between Kent Road, Chalk Draw Ranch Road, a powerline corridor, and Harte Ranch Road.

Zone C contains undeveloped land between a powerline corridor and the boundary of the original Big Bend National Park boundary, that was included in the 1978 wilderness recommendation to Congress. There is an unused structure (Bone Spring Ranch) in this zone

that needs a Determination of Eligibility for the National Register of Historic Places. If found ineligible for the National Register, it may warrant removal via a Minimum Requirement Analysis (MRA) process. The NPS has no intent of actively managing this structure even if found to be eligible for the National Register.

Zone D contains undeveloped land between the Malek/South Rosillos Ranch inholding, the park boundary, Terlingua Ranch Road, a powerline corridor, and a powerline right-of-way/access road. There is an operationally critical radio repeater on Rosillos Peak that is serviced by helicopter and may require an MRA for continued operations if this area is formally designated wilderness.

Zone E contains land between a powerline corridor, the boundary of the original National Park boundary, that was included in the 1978 wilderness recommendation to Congress, and the Malek/South Rosillos Ranch.

Zone H contains land between Harte Ranch Road and Terlingua Ranch Road, and a powerline.

#### **Zones that are eligible for wilderness with restoration**

Zone F contains a known encroachment where a privately-owned structure and roads were built on NPS land. If the encroaching structures were removed, this land would meet wilderness eligibility requirements.

Zone G contains a powerline and powerline access roadway. If the powerline was removed and the access road closed, this land would meet wilderness eligibility requirements.

Zone I contains a powerline access road and powerline. The powerline access road is also the access right-of-way for an inholding. If the powerline was removed, the inholding acquired by NPS, and the access road closed, this land would meet wilderness eligibility requirements.

Zone J contains a powerline and access road. If the powerline was removed and the road closed, this land would meet wilderness eligibility requirements.

Zone K contains a powerline. If the powerline was removed and the access road closed, this land would meet wilderness eligibility requirements.

Zone M contains a powerline. If the powerline was removed, this land would meet wilderness eligibility requirements.

Zone N contains a 1.5 acre dump and Kent Road, a rarely-used unpaved administrative road that the park has used for feral hog trapping operations. If the dump was rehabilitated and the road was closed, this land would meet wilderness eligibility requirements. Maintaining this road may be required for feral hog management activities critical to maintaining wilderness character of the larger region. An MRA may therefore be appropriate.

The following areas are included in the 67,135 acres assessed for wilderness, but aerial observations indicate that other than their status as inholdings and the presence of access roads there are no conflicts with the six primary wilderness criteria. If these lands were acquired by the NPS, they would be eligible for wilderness designation.

Zone L is an inholding with no development.

Zone O contains an inholding with minimal development, including two trailers and an unpaved access road.

Zone P contains several inholdings with no development.

## Appendix C

### Photos

Fig. 4: Northwest view in Zone B  
Photo by Joan Spalding, January 2022



Fig. 5: Metal tank in Zone D  
Photo by Joan Spalding, November 2021



Fig. 6: Bone Spring ruins  
Photo by Joan Spalding, January 2021



Fig. 7: Erosion, elk tracks, and an earthen tank, Zone B  
Photo by Marie Landis, January 2021



Fig. 8: Water bars and remains of abandoned routes at the junction of Harte Ranch and Terlingua Ranch Roads. Green line shows 100 feet from road centerline for reference. Imagery courtesy of Hexagon, 2020.



## Appendix D

### Vegetation

**Table II.**  
**Vegetation In North Rosillos Wilderness Eligibility Assessment Area<sup>3</sup>**

<b>Vegetation group</b>	<b>Percent of assessment area</b>
Chihuahuan Creosote bush - Mixed Desert Scrub (G288)	50.29
Warm Semi-Desert Shrub & Herb Dry Wash & Colluvial Slope (G541)	12.69
Chihuahuan Gypsophilous Grassland (G492)	9.39
Chihuahuan Desert Foothill-Piedmont & Lower Montane Grassland (G490)	9.28
Chihuahuan Semi-Desert Lowland Grassland (G489)	6.65
Chihuahuan Desert Succulent Scrub (G286)	5.63
Western North American Cliff, Scree & Rock Vegetation (G565)	2.85
North American Warm Desert Ruderal Grassland (G677)	2.79
(developed areas, roads, etc.)	0.40
Western Interior Riparian Forest & Woodland (G797)	0.01
North American Warm Desert Riparian Low Bosque & Shrubland (G533)	0.00
<b>Grand Total</b>	<b>100.00</b>

<sup>3</sup> Cogan D and Lea C. 2021. Vegetation inventory project: Big Bend National Park. Natural Resource Report. NPS/CHDN/NRR—2021/2275. National Park Service. Fort Collins, Colorado.  
<https://doi.org/10.36967/nrr-2286674>

### Boundary Additions Related To PL-96-607

[illegible]