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Natural Resource Stewardship and Science

Enjoy the View – Visual Resources Inventory Report

Petrified Forest National Park

Natural Resource Report NPS/PEFO/NRR—2019/1980

ON THE COVER
Photograph of petrified wood from Giant Logs Overlook
Photograph courtesy of NPS

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Petrified Forest National Park

Natural Resource Report NPS/ PEFO /NRR–2019/1980

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Contents

Page

Figures v

Tables vi

Appendices vi

Abstract vii

Acknowledgments vii

Keywords vii

1. Introduction 1

2. Methods 2

2.1 Visual Resource Inventory Overview 2

2.2 Inventory Team 3

2.3 View Selection 3

3. Summary of Findings 6

3.1 Landscape Character at Petrified Forest National Park 6

3.2 Scenic Quality, View Importance Ratings 6

3.2.1 Tiponi Point – Viewpoint #1 8

3.2.2 Tawa Trail – Lookout Point – Viewpoint #2 9

3.2.3 Kachina Point – Viewpoint #3 10

3.2.4 Chinde Point – Viewpoint #4 11

3.2.5 Pintado Point – Viewpoint #5 12

3.2.6 Lacey Point Overlook – Viewpoint #6 13

3.2.7 Puerco Valley South – Viewpoint #7 14

3.2.8 Newspaper Rock Overlook – Viewpoint #9 15

3.2.9 Teepees – Viewpoint #10 16

3.2.10 Blue Mesa Pedestal Logs – Viewpoint #11 17

3.2.11 Blue Forest/Puerco River Valley – Viewpoint #12 18

Contents

Page

3.2.12 Blue Mesa Loop – Viewpoint #13 19

3.2.13 Agate Bridge – Viewpoint #14 20

3.2.14 Buena Vista – Viewpoint #15 21

3.2.15 Jasper Forest Overlook – Viewpoint #16 22

3.2.16 Crystal Forest East – Viewpoint #17 23

3.2.17 Flattops No Name Pullout – Viewpoint #18 24

3.2.18 Giant Logs – Viewpoint #19 25

3.2.19 Giant Logs Overlook – Viewpoint #20 26

3.2.20 Route 66 – Viewpoint #21 27

3.3 Scenic Inventory Values 28

4. Conclusions 29

5. Literature Cited 30

Figures

Page

Figure 1. Petrified Forest National Park Inventory Viewpoints. 5

Figure 2. View from Tiponi Point 8

Figure 3. View from Tawa Trail – Lookout Point 9

Figure 4. View from Kachina Point 10

Figure 5. View from Chinde Point 11

Figure 6. View from Pintado Point 12

Figure 7. View from Lacey Point Overlook 13

Figure 8. View from Puerco Valley South 14

Figure 9. View from Newspaper Rock Overlook 15

Figure 10. View from Teepees 16

Figure 11. View from Blue Mesa Pedestal Logs 17

Figure 12. View from Blue Forest/Puerco River Valley 18

Figure 13. View from Blue Mesa Loop 19

Figure 14. Agate Bridge 20

Figure 15. View from Buena Vista 21

Figure 16. View from Jasper Forest Overlook 22

Figure 17. View from Crystal Forest East Overlook 23

Figure 18. View from Flattops No Name Pullout 24

Figure 19. View from Giant Logs 25

Figure 20. View from Giant Logs Overlook 26

Figure 21. View from Route 66 27

Tables

Page

Table 1. Scenic Inventory Value Matrix. 3

Table 2. Views Inventoried at Petrified Forest National Park 4

Table 3. Scenic Quality, View Importance Ratings and Scenic Inventory Values 7

Appendices

Page

Appendix A: Scenic Quality and View Importance Rating Methods 31

Appendix B: View Panoramas 33

Abstract

Each unit at the national park system has special visual characteristics that are often a central component of the unit's management and visitor experience. Petrified Forest National Park offers spectacularly colored badlands and large petrified log fossils, in a unique desert environment. The existing scenery at Petrified Forest is an important way to experience the park as the setting for the extraordinary petrified wood fossils. As part of the National Park Service's Call to Action #38, Enjoy the View, Petrified Forest National Park initiated a visual resource inventory that focused on identifying key facts about the scenic views for a portion of the Park. The inventory was completed according to the methodology developed by the National Park Service (NPS) for assessing and protecting visual resources. The inventory system consists of both fieldwork associated with view description and scenic quality ratings, and an office-based process for assigning importance values to the views. Petrified Forest National Park selected 20 views for the initial visual resource inventory to inform future park management objectives and collaboration efforts to conserve scenic views. The results of the inventory identified that majority of the views have very high or high scenic inventory value while one view fell into moderate category.

Acknowledgments

The authors and National Park Service wish to thank the management, staff, and volunteers of Petrified Forest National Park for their time and commitment to the inventory effort. We also want to thank the reviewers for their thoughtful and helpful comments.

Keywords

Visual resources, scenic resources, scenery, viewsheds, scenic inventory, Petrified Forest National Park

1. Introduction

The National Park Service (NPS) Organic Act identifies that the purpose of establishing the NPS: "…to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." With this central mission, NPS has been entrusted with some of the most spectacular and historically significant landscapes throughout the country.

Each unit of the national park system has special visual characteristics that are often a central component of the unit's management and visitor experience. Visitors typically rank scenic views as one of the top five reasons for visiting a park (Kulesza, 2013). Inspiring vistas can lift the human spirit, expand our sense of place, and provide connections to the natural world and our history as a country.

From a cultural and historical perspective, views are not just about the scenery, but an important way to understand the connection between natural and cultural resources. At Petrified Forest National Park, the desert environment and petrified wood provides a unique setting for telling the story of the how the petrified fossils were formed, and is a critical part of the visitor experience.

NPS Director Jonathan B. Jarvis issued a 5-year "Call to Action" plan for moving toward its second century. The purpose of the Enjoy the View Call to Action item is to ensure that by protecting visual resources and air quality the NPS can actively preserve these stunning and historically significant views for future generations. Many of the views extend beyond park boundaries. They can be affected by actions outside parks that influence air quality and adjoining land use. As part of NPS's Call to Action #38, Enjoy the View, Petrified Forest National Park initiated a visual resource inventory for the park.

The specific objectives of the visual resources inventory were to:

1. Conduct visual resource inventory assessment that establish a baseline crucial for park planning and internal and external decisions that may impact scenic, cultural, and natural resources.

2. Identify, describe, and map scenic resources at Petrified Forest National Park.

3. Provide an understanding of the value of clean air and scenic views and inform collaboration efforts with a variety of stakeholders to protect them.

2. Methods

2.1 Visual Resource Inventory Overview

The visual resource inventory (VRI) focused on identifying key facts about the scenic views at Petrified Forest National Park. The inventory was completed according to the inventory and evaluation methodology developed by NPS for assessing and protecting visual resources. The unit of inventory in the NPS VRI is "a view" consisting of the viewpoint, the viewed landscape, and potential viewers, i.e., park visitors. The inventory system consists of both fieldwork associated with view description and scenic quality ratings, and an office-based process for assigning importance values to the views. See Appendix 2 for more information on the methods.

For each view, the inventory fieldwork process included the collection of descriptive data, as well as a standardized assessment of scenic quality. Scenic quality assessments were conducted on March 8-10, 2016. The process included photo documentation, written descriptive information about the viewpoint and viewed landscape, and the scenic quality rating for each view. Scenic quality ratings are determined through group discussions of specific criteria, resulting in a single scenic quality value for the view. The rating is based on rating the components of three scenic quality factors: landscape character integrity, vividness, and visual harmony. Scenic quality ratings fall into five classes: from A to E based on how high they score. Class A views have the highest scenic quality and class E the lowest.

The view importance rating identifies NPS and visitor values for the view and also identifies key descriptive information about the viewpoint and viewed landscape. Similar to the scenic quality process, the view importance evaluation involves rating specific components of three primary factors: viewpoint importance, viewed landscape importance, and viewer concern. Each factor was assessed by a team of NPS staff and resulted in a single view importance rating for the view. View importance ratings fall into five classes: from 1 to 5 based on how high they score. Class 1 views have the highest view importance and class 5 the lowest.

The scenic quality and view importance ratings are combined to determine a scenic inventory value (SIV) for each view. The SIV is determined using a matrix that consolidates the 25 potential combinations of scenic quality and view importance into five values ranging from very low to very high (Table 1). The SIV and all other data collected during the scenic quality and view importance evaluations are stored in a geospatial database.

Table 1. Scenic Inventory Value Matrix. Scenic Quality is rated A through E where A is the highest score. View importance ratings range from very high to very low where VH = very high, H = high, M = medium, L = low, VL = very low.

Scenic Quality	View Importance Rating				
	1	2	3	4	5
A	VH	VH	VH	H	M
B	VH	VH	H	M	L
C	H	H	M	L	L
D	H	M	L	VL	VL
E	M	L	VL	VL	VL

2.2 Inventory Team

An interdisciplinary team conducted the scenic quality fieldwork for the visual resource inventory at Petrified Forest National Park. Team members attended a workshop at Petrified Forest National Park in March of 2016. The workshop included a day of training provided by staff from the NPS Air Resources Division that provided guidance on the NPS visual inventory process and a field training exercise. Staff and volunteers from the park along with ARD staff then spent two days in the field performing the landscape description and scenic quality evaluation of the selected views.

2.3 View Selection

Petrified Forest National Park selected 20 views for the initial visual resource inventory to inform internal view management objectives and external view conservation goals (Table 2, Figure 1). The selection process was based on the following general criteria:

- Critical inventory priorities include views that are highly valued as part of the visitor experience or where there an immediate threat to the view from a proposed project or land management or development decisions.

- Moderate inventory priorities included views that are not likely subject to changes in the view in the near future but where eventual land management or development could affect the view.

- Low inventory priorities included views that are currently somewhat protected from visual intrusions, and if needed, could be included in the inventory later.

Table 2. Views Inventoried at Petrified Forest National Park

#	View Name	Latitude Coordinate	Longitude Coordinate	View Direction/Bearing	Approximate Width of View
1	Tiponi Point	35.072134º	-109.769385º	N	73º
2	Tawa Trail – Lookout Point	35.081112º	-109.783454º	N	188º
3	Kachina Point	35.084513º	-109.788132º	NW	67º
4	Chinde Point	35.063072º	-109.79608º	NW	140º
5	Pintado Point	35.08151º	-109.801613º	N/A	360º
6	Lacey Point Overlook	35.063072º	-109.802639º	NW	126º
7	Puerco Valley South	35.016818º	-109.801001º	SE	134º
9	Newspaper Rock Overlook	34.961921º	-109.798975º	W	153º
10	Teepees	34.943358º	-109.777477º	E	163º
11	Blue Mesa Pedestal Logs	34.939705º	-109.753364º	SE	197º
12	Blue Forest/Puerco River Valley	34.939705º	-109.753364º	N	180º
13	Blue Mesa Loop	34.939222º	-109.757391º	SW	66º
14	Agate Bridge	34.892535º	-109.794241º	NE	123º
15	Buena Vista	34.892535º	-109.79334º	SE	167º
16	Jasper Forest Overlook	34.888907º	-109.807534º	NW	191º
17	Crystal Forest East	34.864191º	-109.791941º	E	118º
18	Flattops No Name Pullout	34.825383º	-109.835668º	W	115º
19	Giant Logs	34.815202º	-109.865998º	W	182º
20	Giant Logs Overlook	34.815617º	-109.869009º	NW	145º
21	Route 66	35.05125º	-109.8053º	S	80º

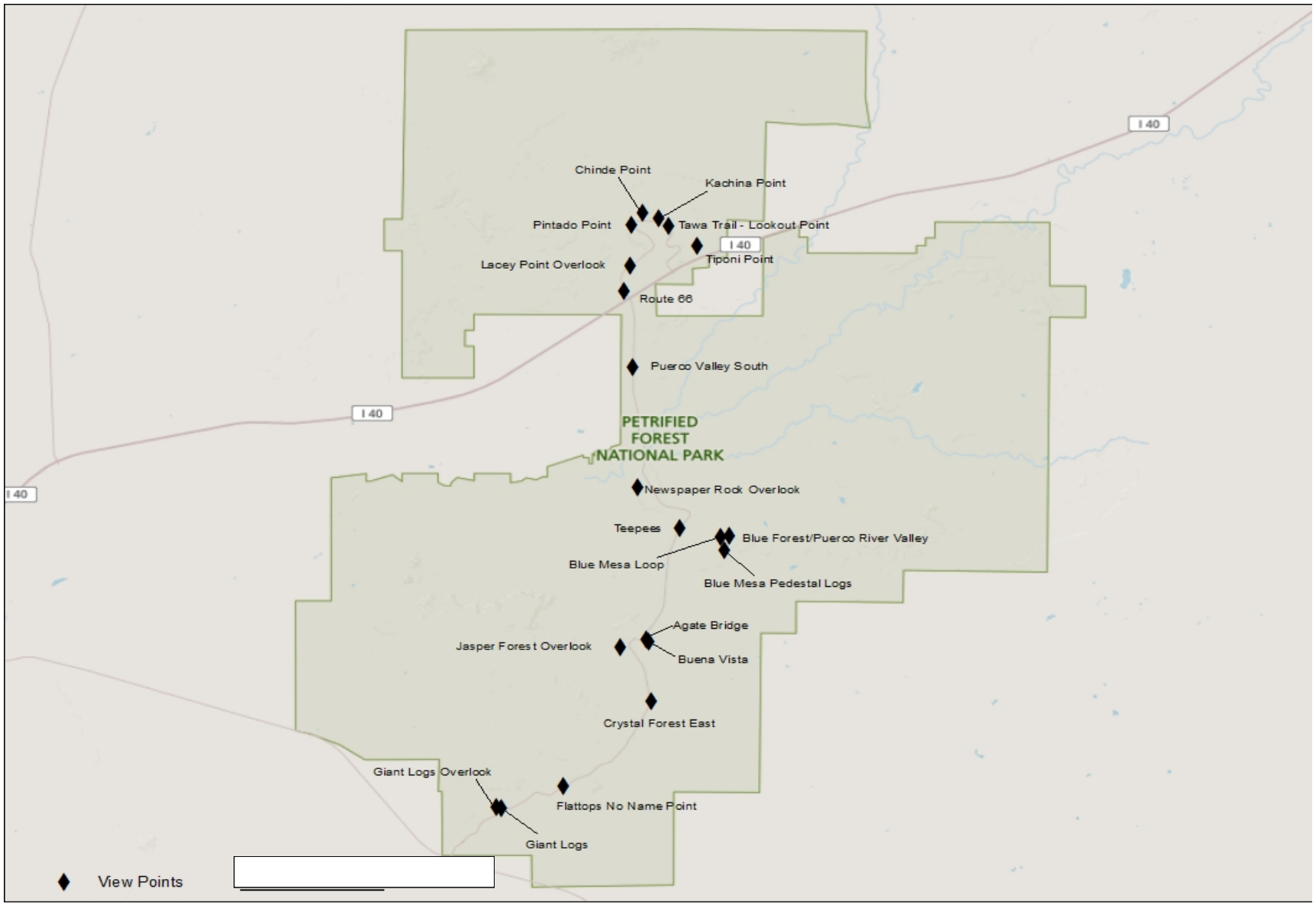

Figure 1. Petrified Forest National Park Inventory Viewpoints.

3. Summary of Findings

3.1 Landscape Character at Petrified Forest National Park

The landforms, geology, vegetation, and other features of the regional location of an NPS unit help define the visual characteristics of the landscape. Petrified Forest National Park is located in the Arizona/New Mexico Plateau Level III ecoregion (EPA 2016). This region expands from northern Arizona, northwestern New Mexico and the San Luis Valley of southern Colorado. The Park is located in northeastern Arizona and consists of plateaus, mesas, cliffs, deep canyons, and valleys. Climate in the ecoregion has dry, mid-latitude steppe, and desert climate. The area is marked by hot summers with almost no humidity, and cool to cold dry winters. Vegetation in the arid lower elevations consists of shadscale, fourwing saltbush, greasewood, blue and black gramas, while the higher elevations have pinyon-juniper woodlands, big sagebrush, rabbitbrush, and winterfat.

Landscape character is based on the physical objects and patterns in the landscape and represents a distinct, recognizable visual composition that makes one landscape different from another. At Petrified Forest, the overall landscape is natural appearing. Although an arid environment dominates the park area there is some low-density livestock grazing, oil and gas production and coal mining that take place in this ecoregion. The ecoregion is also used for recreation and tourism and has land set aside for tribal areas, national parks, national monuments and public rangeland.

3.2 Scenic Quality, View Importance Ratings

Most of the views inventoried at Petrified Forest National Park were assessed Scenic Quality ratings of A or B; two views were rated as having a Scenic Quality C (Table 3). At most viewpoints, visitor attention is focused on the natural features of the landscape and multiple focal points dispersed throughout the landscape.

Importance ratings for inventoried views ranged from 1 to 5 with no views receiving a rating of a 5 and four viewpoints receiving a score of 1 (Table 3). The location of the inventory viewpoints are shown in Figure 1, and an overview of the scenic quality and importance ratings at each location are below. Viewshed maps and panoramic photos for each view are in Appendix B.

Table 3. Scenic Quality, View Importance Ratings and Scenic Inventory Values

#	View Name	Scenic Quality Rating	View Importance Rating	Scenic Inventory Value
1	Tiponi Point	B	2	VH
2	Tawa Trail – Lookout Point	A	2	VH
3	Kachina Point	A	1	VH
4	Chinde Point	A	1	VH
5	Pintado Point	B	2	VH
6	Lacey Point Overlook	A	3	VH
7	Puerco Valley South	B	4	M
9	Newspaper Rock Overlook	C	2	H
10	Teepees	B	2	VH
11	Blue Mesa Pedestal Logs	A	2	VH
12	Blue Forest/Puerco River Valley	A	3	VH
13	Blue Mesa Loop	A	3	VH
14	Agate Bridge	B	3	H
15	Buena Vista	A	3	VH
16	Jasper Forest Overlook	A	2	VH
17	Crystal Forest East	C	1	H
18	Flattops No Name Pullout	B	4	M
19	Giant Logs	B	1	VH
20	Giant Logs Overlook	B	3	H
21	Route 66	B	2	VH

3.2.1 Tiponi Point – Viewpoint #1

- Scenic Quality Rating: B
- View Importance Rating: 2

Tiponi Point is looking Northeast onto the Painted Desert with a mesa to the left of an expanse of rolling landforms and sparse vegetation. The view has few inconsistent elements but is lacking some of the landscape character features identified including riparian/wash features and visible petrified wood (Figure 2). The panoramic view has multiple weak to moderate focal points. The colors were slightly muted but there was good contrast of the grays and greens of the mesa landform and vegetation with the multiple reds of the Painted Desert landforms extending from the viewpoint. The view from Tiponi Point received a scenic quality rating score of 34.

As the first viewpoint on the Petrified Forest Road after leaving the visitor center, Tiponi Point receives a relatively high level of visitation even though it is not highly publicized on its own. Most visitors generally spend a short time at the viewpoint since they most often plan move to other viewpoints on the loop road. Facilities two level viewing platform, a large parking lot and two interpretive exhibits. The viewpoint received a view importance score of 34.5.

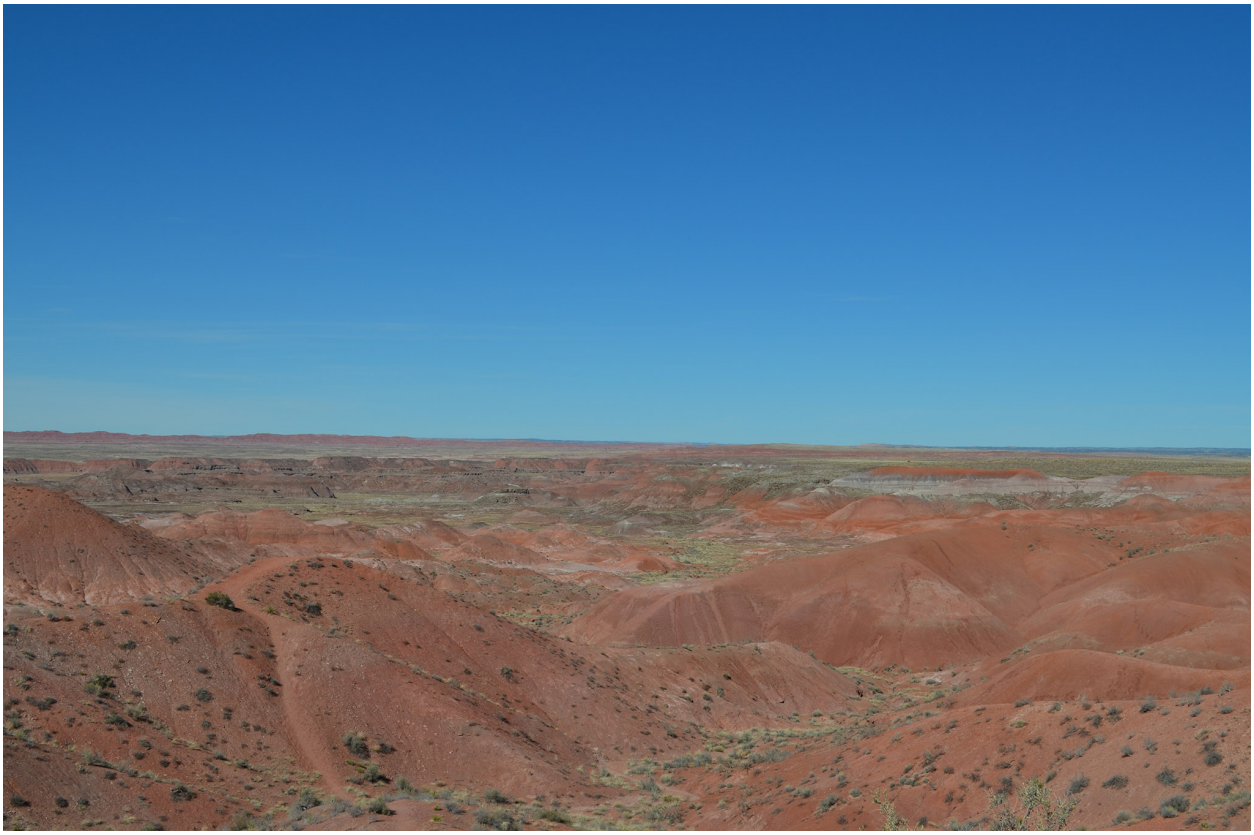

Figure 2. View from Tiponi Point

3.2.2 Tawa Trail – Lookout Point – Viewpoint #2

- Scenic Quality Rating: A
- View Importance Rating: 2

Tawa Trail – Lookout Point received a scenic quality score of 42.5. While this view also lacks riparian areas and petrified wood in the view the visible landforms have bolder lines and stronger colors and there is good contrast of reds and dark green juniper vegetation (Figure 3). There are few inconsistent elements with the cars parked at the Painted Desert Inn as only a minor distraction. The viewpoint is well balanced with the Painted Desert Inn providing an asymmetrical focal point of a building that appears to be regionally appropriate for the landscape.

The trailhead is somewhat heavily publicized and has multiple facilities such as trails, a parking lot and wells. Tawa Trail also has some interpretive services and looks out over designated wilderness. The view received an importance rating of 35.5.The daily visitation is somewhat moderate compared to other viewpoints and as with other viewpoints along the Petrified Forest Road visitors tend to stay at the viewpoint for a short time.

Figure 3. View from Tawa Trail – Lookout Point

3.2.3 Kachina Point – Viewpoint #3

- Scenic Quality Rating: A
- View Importance Rating: 1

The view from Kachina Point looks out over the Painted Desert badland formations with Pilot Rock in the background (Figure 4). The viewpoint received a scenic quality score of 43. Most all landscape character elements were present and in good condition. The area had no inconsistent elements visible and the bold colors and landforms of the Painted Desert were more prominent. Kachina Point spatially balanced and while there were several minor focal points, Pilot Rock was somewhat prominent.

With the Painted Desert Inn at Kachina Point the location has a higher level of publicity and overall visitation than some of the other viewpoints along the Petrified Forest Road. The view received a view importance rating of 40.5. Painted Desert Inn is open as a museum and some visitors stay longer at the viewpoint to tour the inn. The view from Kachina Point is considered one of the park's iconic views. A short trail leads out to the overlook as at Tawa Point also resulting in slightly longer visitor stays and there is in interpretive panel and low wall to provide some visitor control at the viewpoint. The Painted Desert Inn and parking area also serve at the trailhead for an approximate half mile trail that takes visitors out into the Painted Desert and the colorful badland formations. While the majority of visitors to this location do not take the time to use the trail, the duration of the visit for those who do is substantially longer than other visitors.

Figure 4. View from Kachina Point

3.2.4 Chinde Point – Viewpoint #4

- Scenic Quality Rating: A
- View Importance Rating: 1

Chinde Point looks out over a wide expanse of the Painted Desert, with Pilot Rock, front and center in the view (Figure 5). The view received a scenic quality score of 43.5. Nearly all desired landscape elements are present and appear in good condition. Landforms and colors are bold and Pilot Rock is a somewhat strong focal point. There are no inconsistent elements visible in the landscape and the overall view is well balanced.

Chinde Point is well publicized within the park as location to visit because of the view and the facilities available. The site has a picnic area with ramadas and restrooms along with an expansive informal parking area that can handle large vehicles. The view received an importance rating score of 38.5. Interpretive services offered at Chinde Point include a night program, educational programs and wayside pullouts at the overlook location. Chinde Point overlooks the Pilot Rock wilderness area and is a good example of the park's interpretive themes. Visitation is somewhat higher than some of the other loop road viewpoints – likely in the top one third of locations across the park – because of the facilities available and the duration is also somewhat longer.

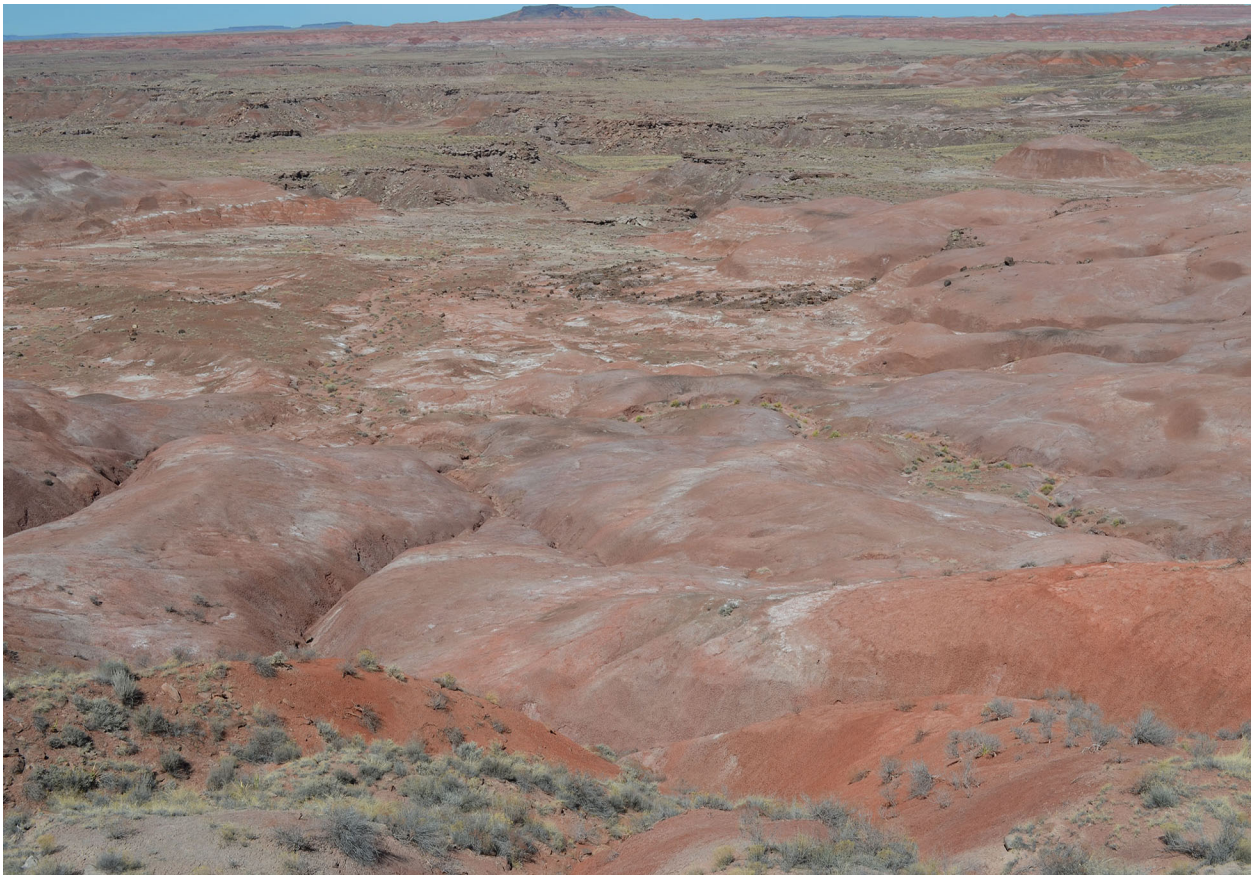

Figure 5. View from Chinde Point

3.2.5 Pintado Point – Viewpoint #5

- Scenic Quality Rating: B
- View Importance Rating: 2

The view from Pintado Point is from a slightly raised platform and offers a 360 degree view that overlooks a caldera to the south, the Painted Desert throughout the most of the view, and desert vegetation and landforms within the Petrified Forest Road to the east (Figure 6). The view from Pintado Point received a scenic quality rating score of 37.5. Nearly all landscape character elements are within the view and in good condition though there are inconsistent elements that include the interstate, a parking lot, communication tower, and signs. Pintado Point has bold forms, lines, and colors throughout most of the view and because of its 360° nature there are multiple focal points with none that draw and hold your attention.

As with most of the viewpoints along the Petrified Forest Road the individual viewpoint is not publicized heavily, but is still considered one of the park's iconic views. Pintado Point received a view importance rating score of 35. Facilities at the viewpoint include a parking area, stone walls and a path that leads to the elevated overlook, and an interpretive panel. Pintado Point has a relatively high number of visitors and while some visitors may stay for a while because of the expansive nature of the view, the level of interpretive services is lower than might be expected based on visitation.

Figure 6. View from Pintado Point

3.2.6 Lacey Point Overlook – Viewpoint #6

- Scenic Quality Rating: A
- View Importance Rating: 3

Lacey Point Overlook has a view of the Painted Desert on the west side of the park (Figure 7). The view received a scenic quality rating score of 42.5. Nearly all landscape elements are present and everything appears in good condition and there are only minor inconsistent elements. The viewpoint has two main focal points, Pilot Rock and Pintado Point; however, neither is very strong. Colors overall are bold but slightly monochromatic win the reds though there is good contrast with the dark colors of the mesa landform. Visual harmony is strong with a well composed view.

Lacey Point is one of three viewpoints within a little over half a mile along this section of the Petrified Forest Road. While the views are somewhat similar each has a slightly different perspective of the Painted Desert in this area of the park. The view importance rating score for Lacey Point Overlook was 30. The viewpoint has parking and an interpretive panel and looks out over a wilderness area. Since it is one of three closely spaced viewpoints visitation is somewhat moderate and duration is usually short as visitors move from one location to the next.

Figure 7. View from Lacey Point Overlook

3.2.7 Puerco Valley South – Viewpoint #7

- Scenic Quality Rating: B
- View Importance Rating: 4

The view at Puerco Valley South viewpoint received a scenic quality rating score of 33.5. The view had most all the landscape character elements described for this region landscape, but the riparian area was not as prominent compared to other inventoried viewpoints (Figure 8). Inconsistent elements included an industrial facility, the park road, railroad and power poles. Though most are fairly distant the park road is a focal point and draws your eye down the road. The landscape has muted colors but the view has good spatial and scale composition.

The viewpoint is not designated on park maps and has no facilities. It draws visitors because there is a service road that extends to the east from Petrified Forest Road and the location offers an expansive view Puero Valley to the south. The valley is identified as a grassland in park interpretive material. The view importance rating score for Puerco Valley South is 21.5. Though Petrified Forest Road carries heavy visitor traffic, the number of those stopping at this location is fairly modest and if they stop, duration is short as they typically take a photograph and continue heading into the south portion of the park. Since virtually all park visitors drive through the viewpoint area and this is an early broad vista of the south part of the park, the viewer sensitivity is expected to be high.

Figure 8. View from Puerco Valley South

3.2.8 Newspaper Rock Overlook – Viewpoint #9

- Scenic Quality Rating: C
- View Importance Rating: 2

Newspaper Rock Overlook faces west with Newspaper Rock in the immediate foreground and the Puerco River and industrial facilities in the middle ground and background (Figure 9). The view is has almost all the landscape character elements including a substantial riparian zone. The view from Newspaper Rock Overlook received a scenic quality rating score of a 26.5.The landscape and features appear in good condition—except for an abandoned train. There are multiple inconsistent elements including scattered throughout the view, a rail road line that runs across the view in the back ground and communication towers in the background. There are bold forms including the serpentine form of the river.

The Newspaper Rock viewpoint is highly publicized for its cultural resources and there are facilities for visitors such as a parking lot, scopes, overlook and wayside. The view importance rating score for Newspaper Rock Overlook was 32. The wayside provides interpretive services including a digital video message and there are park brochures offered at the viewpoint parking area. Visitation is high and many visitors stay for an extended amount of time to view the petroglyphs.

Figure 9. View from Newspaper Rock Overlook

3.2.9 Teepees – Viewpoint #10

- Scenic Quality Rating: B
- View Importance Rating: 2

This view is from the south Teepees viewpoint on the east side of Petrified Forest Road. The view looks east across the flat barren plain with sparse vegetation to badland formations (Figure 10). The view received a scenic quality rating score of 36.5.The view is missing multiple landscape features although there are bold forms and lines of Badlands formations and banding of the colored strata. The badland formations are also moderately strong focal points. The park road creates a distraction in the spatial relationship of the view because it appears to run diagonal through the landscape.

The viewpoint is not greatly publicized on its own and likely receives fewer visitors than the viewpoint on the west side just north of this location because it is shown on park maps. The view importance rating score for Teepees is a 32. This location is also a trailhead for a short trail leading into the badland formations. The view from this location is highly photographed though the overall visitation is not high and the duration tends to be short. The viewpoint is also designated as a traditional cultural property.

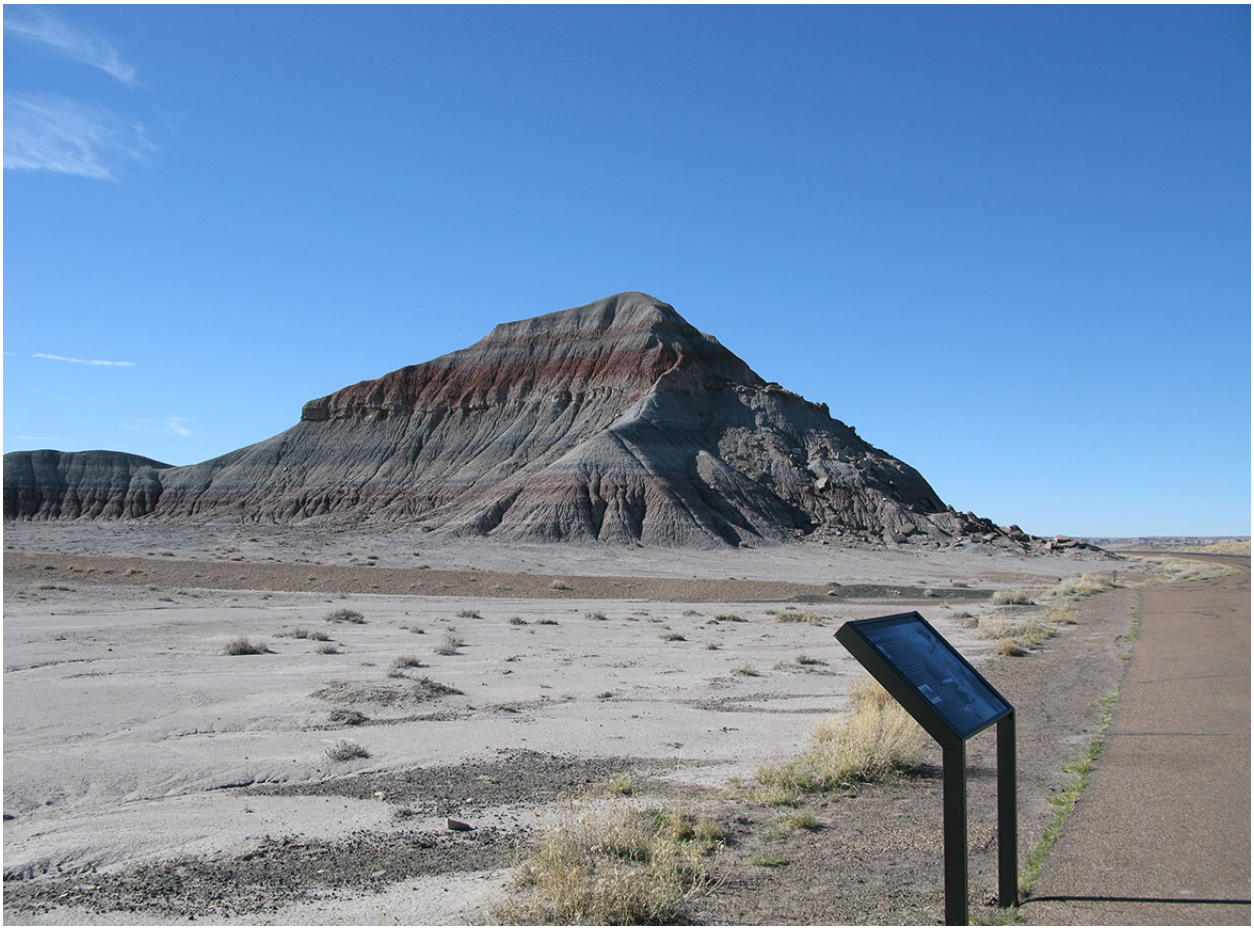

Figure 10. View from Teepees

3.2.10 Blue Mesa Pedestal Logs – Viewpoint #11

- Scenic Quality Rating: A
- View Importance Rating: 2

The view from Blue Mesa Pedestal Logs viewpoint looks out over the badland and has a flat prairie with grass and dunes in the background (Figure 11). The view received a scenic quality rating score of 39.5. Most landscape elements associated with the region are present. The quality and condition of the area appears to be good and there are no inconsistent elements within the view. Colors are somewhat muted. Although, there are many features in the view, they all fit together well and nothing is out of scale.

The viewpoint is one of several viewpoints highlighted on the Blue Mesa driving loop. Blue Mesa Pedestal Logs view importance rating score is a 33. This location has a pull off and interpretive panel and the view looks out onto a specially designated protected area. Visitation is generally high because of the elevated logs and many visitors make all the stops on the loop road

Figure 11. View from Blue Mesa Pedestal Logs

3.2.11 Blue Forest/Puerco River Valley – Viewpoint #12

- Scenic Quality Rating: A
- View Importance Ratings: 3

The Blue Forest/Puerco River Valley viewpoint looks north and south across the Puerco River Valley (Figure 12) and the view received a scenic quality rating score of 38.5. A couple of cell towers are the only inconsistent elements and while the view has multiple focal points, Pilot Rock seems to somewhat hold the viewer's attention. There are bold lines in the foreground and middleground on the right side of the view but most other features are in the background. The scale and spatial relationships of the view are good, and the only things out of scale are the cell towers.

The publicity of Blue Forest/Puerco River Valley is consistent with the other Blue Mesa viewpoints and the received an importance rating score of 30.Visitation is comparable to other Blue Mesa viewpoints though there are no interpretive services at this viewpoint.

Figure 12. View from Blue Forest/Puerco River Valley

3.2.12 Blue Mesa Loop – Viewpoint #13

- Scenic Quality Rating: A
- View Importance Ratings: 3

The viewpoint for Blue Mesa Loop is located slightly down the trail from the parking area and the view down the canyon to the southwest (Figure 13). Blue Mesa Loop received a scenic quality rating score of 40. The view has most landscape character elements visible except for the petrified wood and the only inconsistent elements are the vehicles visible at a viewpoint further along the loop road and the trail a the bottom of the canyon. The view has good spatial relationship as one views down the canyon and the colors work well together though not as bold as in some other locations.

The viewpoint is well publicized as a stop on the Blue Mesa loop and serves as the trailhead for the trail into the canyon bottom. The view importance rating score for Blue Mesa Loop was 27. The parking area is well developed and there is a shade structure and interpretive panels at the trailhead as well as one further down the trails. Even with the trail, visitation at Blue Mesa Loop is in relatively low with most visitors stopping only briefly for a photograph.

Figure 13. View from Blue Mesa Loop

3.2.13 Agate Bridge – Viewpoint #14

- Scenic Quality Rating: B
- View Importance Ratings: 3

Agate Bridge is a 100ft long petrified log spanning a gully that can be access by a short trail. The viewpoint is near the beginning of the trail. From this location as visitors begin the short walk they have panoramic view of open desert with Blue Mesa in the background and Agate Bridge just barely visible in the foreground (Figure 14). The view received a scenic quality rating score of 33.5. The view has most landscape character elements and has few inconsistent elements. Landforms offer some distinct lines in the landscape but colors are generally not very bold and there are no strong focal points. Overall visual harmony is good with colors, scale and spatial relationships offering an expansive view with good composition as they head toward Agate Bridge.

Viewpoint development at Agate Bridge includes a parking lot, the trail, a historic shelter offering interpretive information and an interpretive panel at the overlook where the bridge is visible. The view received a view importance rating score of 29. A wilderness area is visible from the viewpoint, but the view also has a few distractions in landscape though overall visitor attention is focused on moving on the trail towards the bridge feature and some changes in the landscape cold go unnoticed.

Figure 14. Agate Bridge

3.2.14 Buena Vista – Viewpoint #15

- Scenic Quality Rating: A
- View Importance Ratings: 3

The Buena Vista viewpoint is accessed from another trail that starts at the Agate Bridge parking area. The location offers a panorama view from the mesa edge of a desert valley with a mesa formation in the background (Figure 15). The view received a scenic quality rating score of 41. There are few inconsistent elements. A cliff formation in the foreground and the ridge of badland formations in the background are two focal points though neither is very strong. The view has bold vertical and horizontal lines, especially the banding on the badland formations, and the wash in the valley bottom creates a sinuous line through the landscape. Spatial and scale composition is good though the cliff in the foreground dominates the right side of the view and with it blocking part of the distant view the visitors can be drawn to try to see what is beyond.

The Buena Vista viewpoint is fairly well known though is a secondary viewpoint at Agate Bridge. The view received an importance rating score of 24.5. The viewpoint is accessed by a social trail rather than a developed one and there are no interpretive elements at the viewpoint. The view overlooks a wilderness area and demonstrates the parks interpretive themes of natural high elevation desert features such as grasslands, badlands and wide open vistas.

Figure 15. View from Buena Vista

3.2.15 Jasper Forest Overlook – Viewpoint #16

- Scenic Quality Rating: A
- View Importance Ratings: 2

The view from the Jasper Forest Overlook provides visitors with views of a broad valley with widely scattered petrified wood (Figure 16). The view received a scenic quality rating of 40.5. Most all landscape character elements are present and the quality and condition of the landscape appears good. There are bold lines and forms especially horizontal banding on the badland and mesa landforms. Colors are somewhat muted but fit well together and the view is well composed.

Jasper Forest Overlook is a short drive off of the Petrified Forest Road and provides a parking area, walkway and a short trail to a wayside at the overlook location. The view received an importance score of 35. There is extensive petrified wood in the Jasper Forest but mostly they are scattered pieces rather than whole logs. This is one of the first locations to see more than a few pieces of the park's namesake. Visitation is moderate – though generally of a moderate to short duration.

Figure 16. View from Jasper Forest Overlook

3.2.16 Crystal Forest East – Viewpoint #17

- Scenic Quality Rating: C
- View Importance Ratings: 2

At Crystal Forest East the viewpoint is from the northern corner of the parking lot. The view is enclosed by close landforms and lacks many of the landscape character elements visible in other views (Figure 17). The Crystal Forest East view had a scenic quality rating score of 28. The elements within the landscape seem worn out and many footprints are visible off trail. There are no focal points at Crystal Forest East but a shade structure with interpretive information is located as a dominant feature and is somewhat of a distraction from the surrounding landscape. Colors are mostly muted and the view generally lacks bold forms or lines.

The viewpoint has multiple facilities that include trails, wells, a parking lot, and interpretive exhibits. The view received an importance rating score of 42. Crystal Forest East is identified as a cultural landscape. The viewpoint is highly visited and duration is moderate with a good proportion of visitors taking the short trail through the scattered petrified wood.

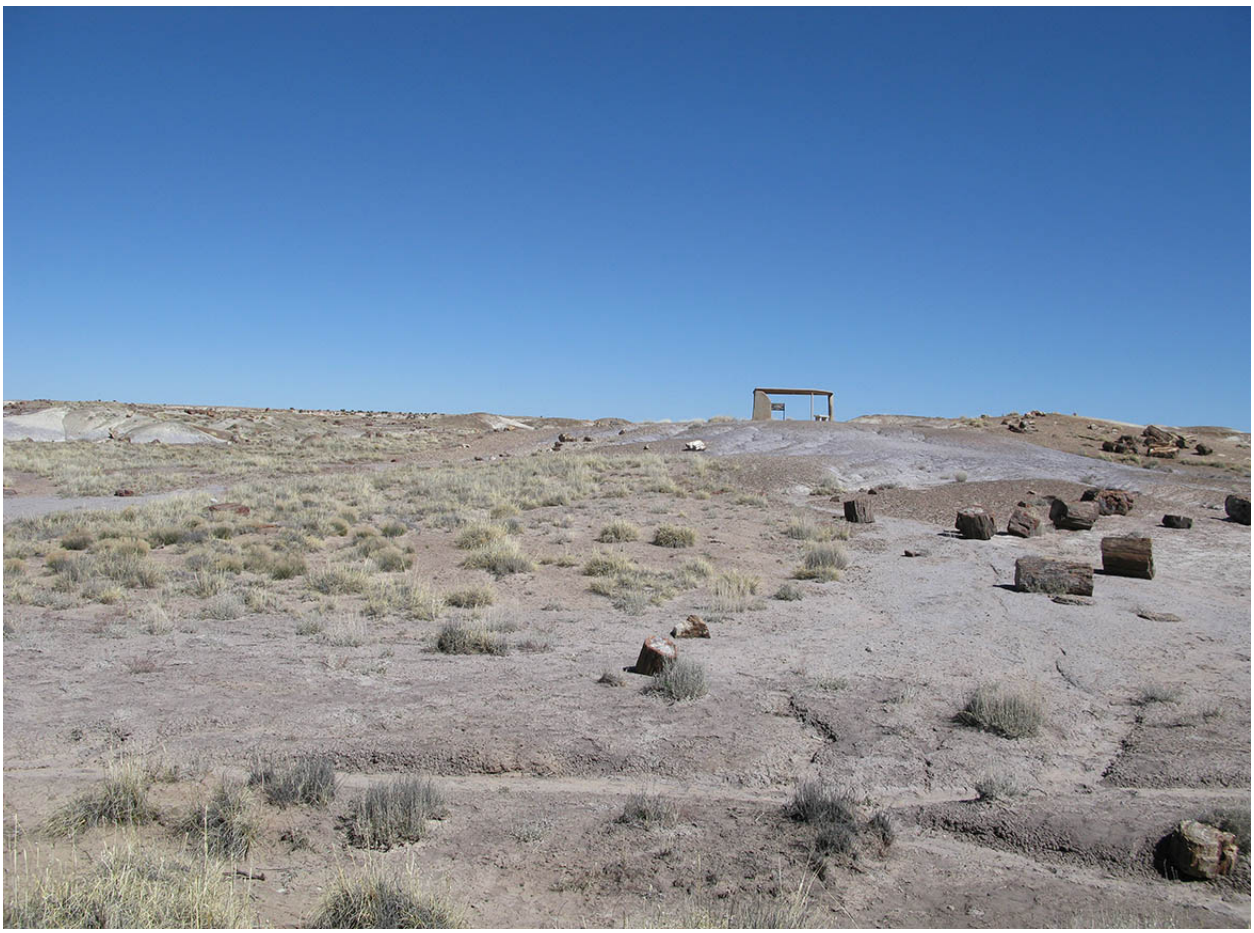

Figure 17. View from Crystal Forest East Overlook

3.2.17 Flattops No Name Pullout – Viewpoint #18

- Scenic Quality Rating: B
- View Importance Ratings: 4

Flattops No Name Pullout provides a view of the Rainbow Forest area badlands, grasslands, and buttes with a large grassland mesa in the background (Figure 18). The view received a scenic quality rating score of 34.5. The landscape has most landscape character elements but lacks petrified wood and riparian habitat area. An unidentifiable industrial facility in the background is a minor inconsistent element. The viewpoint has strong horizontal lines, and muted but generally harmonious colors. The view from the pullout is well balanced and a good composition.

Flattops No Name Pullout is publicized on park maps as a wilderness access location. The view received an importance rating score of 22. The viewpoint is close to the Rainbow Forest Museum and Giant Logs viewpoints and receives a moderate level of visitation. There are no interpretive features or other visitor facilities and duration of a stay at this location is likely short.

Figure 18. View from Flattops No Name Pullout

3.2.18 Giant Logs – Viewpoint #19

- Scenic Quality Rating: B
- View Importance Ratings: 1

The viewpoint for the giant logs is behind the Rainbow Forest Museum, near where the trail leads visitors into the giant logs area (Figure 19). The viewpoint received a scenic quality rating score of 34. The landscape has extensive petrified wood deposits. There are multiple significant focal points of logs throughout the landscape. Visually the trails appear to need maintenance and several barriers for visitor control look unstable. The trails create multiple lines in the landscape but also invite visitors to explore giant log landscape.

The view from the giant logs viewpoint is one of the most viewed landscapes in the park and it received a view importance rating score of 43.5. There are extensive education and interpretive exhibits at the Rainbow Forest Museum and the view is directly related to the primary interpretive themes of the park. Many visitors venture into the giant logs landscape and the duration of visits is typically longer than at most other locations.

Figure 19. View from Giant Logs

3.2.19 Giant Logs Overlook – Viewpoint #20

- Scenic Quality Rating: B
- View Importance Ratings: 3

The giant logs overlook is accessed by a short trail from the giant logs area at the Rainbow Forest Museum. The view received a scenic quality rating score of 34.5. The view has most landscape character elements but lacks the large logs one has seen near the museum (Figure 20). Badland features are in the background and not as prominent at this location and the view does not have strong focal points. There are strong horizontal lines of the background landforms and the badlands landforms that are visible add curing and irregular lines. Colors are somewhat muted but fit well together.

The view at the giant logs overlook is publicized as part of the giant logs and Rainbow Forest Museum. The view received an importance rating of 24.5.Visitation is generally high though as high as the giant logs area and the museum. While providing an expansive view, the duration of stay at the overlook is shorter than at the giant logs area and the museum. There are no additional interpretive elements at the site beyond the information at the museum.

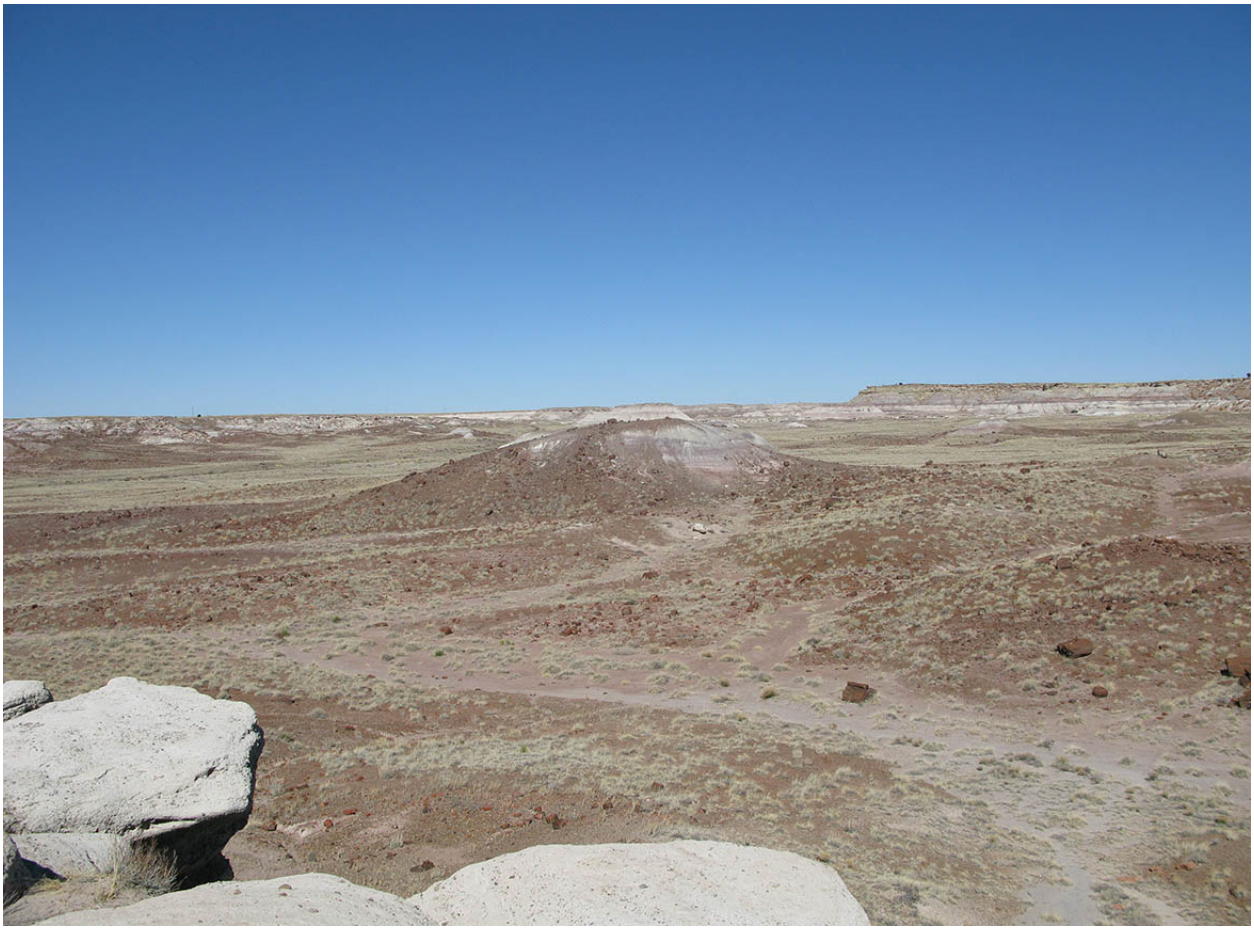

Figure 20. View from Giant Logs Overlook

3.2.20 Route 66 – Viewpoint #21

- Scenic Quality Rating: B
- View Importance Ratings: 2

The Route 66 viewpoint is located along Petrified Forest Road at the location where Route 66 crossed the landscape. The view received a scenic quality rating score of 32.5. The view is missing some landscape character elements and has several inconsistent elements including Interstate 40 which dominates the view (Figure 21). The overall spatial relationship is good; and viewpoint colors are harmonious but muted. The poles of the power line that paralleled Route 66 add interest to the view as they receded toward the horizon.

The viewpoint for Route 66 is a popular stop for park visitors as well as for tourists interested in Route 66. The view received a view importance rating score of 34.5. The viewpoint has high level of publicity because of its dual relationship to the park and Route 66. There is a pullout, interpretive panel and bench at the viewpoint as well as an old car to complete the connection to Route 66. The view has multiple intrusions that affect the visual experience and additional changes in the landscape are not likely to affect the viewing experience at this location.

Figure 21. View from Route 66

3.3 Scenic Inventory Values

The Scenic Inventory Values (SIV) at Petrified Forest National Park derived from the combination of Scenic Quality and View Importance ratings range from Moderate to Very High. Fourteen out of the twenty viewpoints inventoried received very high ratings with four viewpoints receiving high rating and only one receiving a moderate rating. Scenic quality ratings ranged from A to C with the highest rated views being identified as natural landscapes. View importance ratings ranged from 1 to 5 and the historic and cultural values of the landscape resulted in high values at some viewpoints. The one view that received a moderate value-Puerco Valley South- SIV did not receive high marks in the view importance and had moderate scenic quality.

4. Conclusions

The views in Petrified Forest National Park cover a wide range of natural landscapes from the Painted Desert in the north to the petrified forest features in the south and the experiencing these views is an important aspect of the overall park experience for many visitors. The views selected for this inventory represent views throughout the park and help establish a baseline of the existing conditions of the views.

The park encompasses a small portion of the Painted Desert that spreads across northeast Arizona. The inventoried views of the Painted Desert are some of the first experiences of many park visitors because the visitor center is located just north of Interstate 40 and the Painted Desert Road and the viewpoints are first locations visitors come to when they travel the Painted Desert Road to the rest of the park. All of the selected views have high scenic quality, offering expansive and mostly undisturbed vistas of the Painted Desert's landforms, colors and geologic features. Visitation at most of these locations is high and they have well developed visitor facilities and interpretive services, also indicating a high level of importance to the NPS and the visitor experience.

Most of the views in the southern part of the park are located along the Painted Desert Road or at locations on one of the publicized feature areas such as Newspaper Rock or Blue Mesa. While many offer undisturbed desert vistas some such as Newspaper Rock are important to the park story for their cultural significance though scenic quality is not high because of the level of development that detracts from the visual setting. Multiple viewpoints offer close-up views of petrified wood and are a strong attraction for visitors. Most of these views are primarily natural and the limited visual intrusions do not likely affect the visitor experience because the focus is on the petrified wood and interpretive information in the immediate foreground.

Currently visitors enjoy a high quality visual experience at the park with most development or distractions in the background at distances that do not substantially diminish the view. The wide open nature of the desert environment with generally flat topography and low profile landforms allow visitors to see great distances from many locations in the park. While some views could be at risk of reduced scenic quality with the introduction of large development or landscape disturbance, incorporation of design and mitigation strategies would reduce the potential impact on the visitor experience.

5. Literature Cited

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Appendix A: Scenic Quality and View Importance Rating Methods

Scenic Quality

Assessing scenic quality involves field-based assessments of: Landscape Character Integrity, Vividness and Visual Harmony.

Each component is assessed in the field while viewing the landscape from the viewpoint, and the assessments requires that the group evaluate three factors for each component. All factors are equally weighted.

Landscape Character Integrity

Scenic integrity indicates the degree of intactness and wholeness of the landscape character identified in the landscape description section. The highest scenic integrity ratings are given to those landscapes, which have little or no deviation from the character valued for its aesthetic appeal.

The rating process assumes that in order to have the highest degree of integrity, i.e. a high quality example of the identified landscape character the view must:

- Have most or all of the key elements of landscape character present;
- Have elements that are of high quality and in the appropriate condition for the landscape character, i.e. well built, well cared for, or, for historic/rustic landscapes, appropriately worn/aged; and
- Be relatively free of elements that are inconsistent with the landscape character.

Vividness

Vividness is the degree to which landscape elements are distinctive or striking enough to make a view memorable. The rating assumes that to have a high degree of vividness, the view must:

- Contain one or more dominant visual features or focal points;
- Contain striking forms and/or lines; and
- Contain striking colors, textures, or visible motion.

Visual Harmony

Visual harmony is the extent to which there is a pleasing array of visual elements in a landscape, usually as a result of a sense of visual order, compatibility, and completeness between and among the landforms, water forms, vegetation, or built elements visible in the landscape. The approach assumes that a high degree of visual harmony is achieved when:

- There is a clearly recognizable structure, pattern, or order to the spatial relationships of the landscape elements;
- The landscape elements display pleasing scale relationships; and
- The landscape displays pleasing color relationships.

Scenic quality ratings fall into five classes from A to E. Class A views have the highest scenic quality and Class E the lowest.

Importance Values

The view importance rating identifies NPS and visitor values for the viewpoint, the viewed landscape and the viewers. The view importance rating is an office-based exercise. Each component is assessed by a team of NPS staff. In the same manner as Scenic Quality, the process requires that the group evaluate three factors for each component and all factors are equally weighted.

Viewpoint Importance

Viewpoint importance assesses the extent to which the viewpoint is publicized and managed for visitors. The rating system assumes that to have the highest importance rating the viewpoint must:

- Be extensively publicized, especially for its scenic views, in NPS or external communications and media (e.g. hiking guides, web sites, movies).
- Have facilities that have been added or are planned for the viewpoint area to enhance the visitor experience and;
- Have a high level of interpretive services that contribute to the visitors' enjoyment of scenic, historical, cultural scientific or other NPS values of the unit.

Viewed Landscape Importance

Viewed landscape importance assesses the extent to which the elements in the viewed landscape are publicized and used for interpretation. The assessment also evaluates how important special designations such as Wilderness or historic sites are within the view. The viewed rating system assumes that to have the highest level of importance the viewed landscape must:

- Be extensively publicized, especially for its scenic views, in NPS or in external communications or media (e.g. hiking guides, web sites).
- Consist of all or mostly specially designated areas, or nationally/regionally significant scenic, historic, cultural, or scientific features or landmarks (e.g. wilderness areas, cultural landscapes).
- Strongly illustrate the NPS unit's scenic character or important interpretive themes and/or be connected to the unit's goal for visitor experience

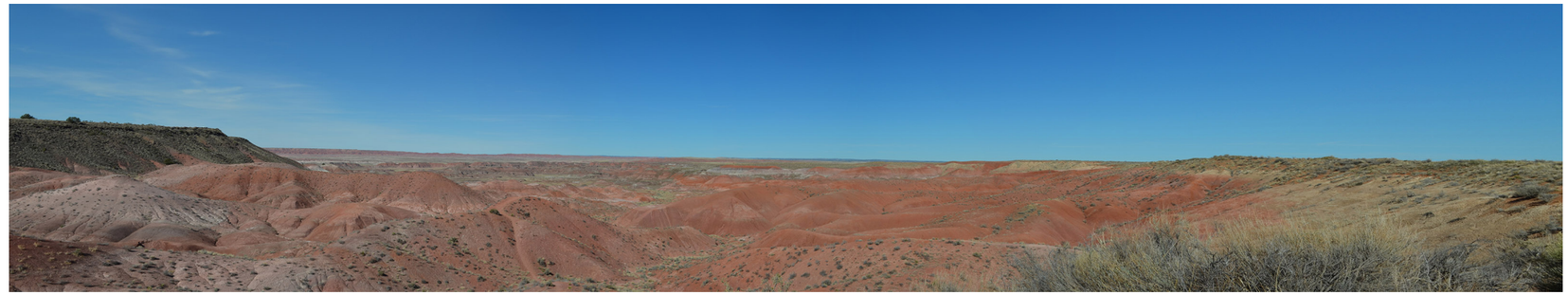
Viewer Concern

The evaluation of viewer concern relies primarily on the knowledge and professional judgment of NPS staff, and the rating system assumes that to have the highest level of viewer concern:

- The viewpoint must have a high level of visitation in relation to other viewpoints in the park;
- Viewers generally spend an extended period of time at the viewpoint; and
- Most visitors would be unusually sensitive to potential changes in a view because they are seeking views of natural character or historic significance.

View importance ratings fall into five classes from 1 to 5. Class 1 views have the highest view importance and Class 5 the lowest.

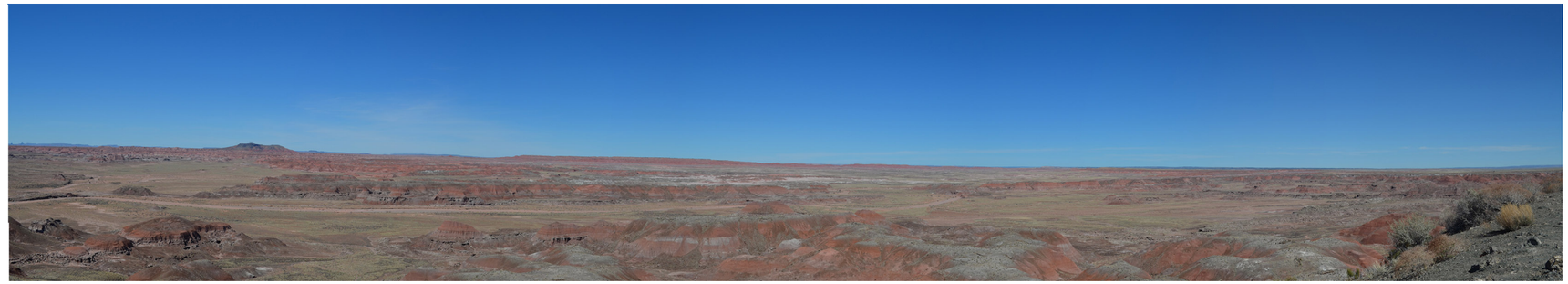
Appendix B: View Panoramas



Tiponi Point, View Direction: North, Approximate Width of View: 73 degrees

Tawa Trail – Lookout Point, View Direction: North, Approximate Width of View: 188 degrees

Kachina Point, View Direction: Northwest, Approximate Width of View: 67 degrees



Chinde Point, View Direction: Northwest, Approximate Width of View: 140 degrees

Pintado Point, View Direction: N/A, Approximate Width of View: 360 degrees

Lacey Point Overlook, View Direction: Northwest, Approximate Width of View: 126 degrees

Puerco Valley South, View Direction: Southeast, Approximate Width of View: 134 degrees

Newspaper Rock Overlook, View Direction: West, Approximate Width of View: 153 degrees

Teepees, View Direction: East, Approximate Width of View: 163 degrees

Blue Mesa Pedestal Logs, View Direction: Southeast, Approximate Width of View: 197 degrees

Blue Forest/Puerco River Valley, View Direction: North, Approximate Width of View: 180 degrees

Blue Mesa Loop, View Direction: Southwest, Approximate Width of View: 66 degrees

Agate Bridge, View Direction: Northeas,; Approximate Width of View: 123 degrees

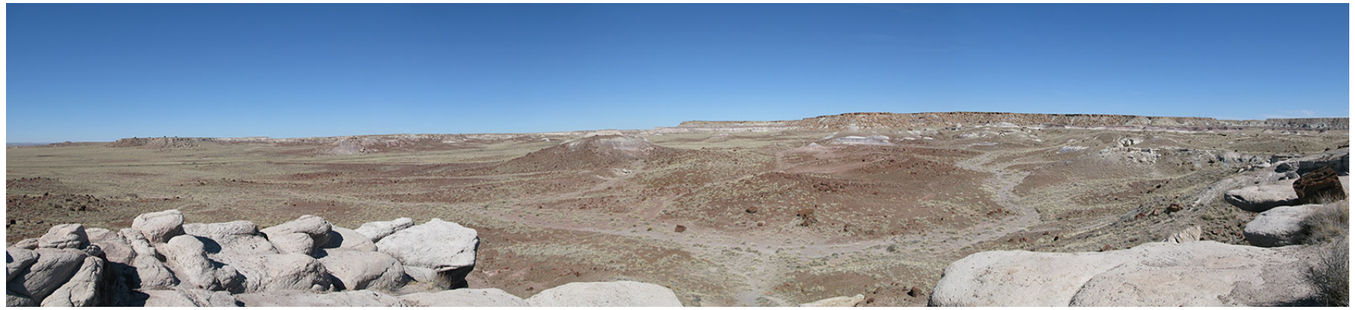
Buena Vista, View Direction: Southeast, Approximate Width of View: 167 degrees

Jasper Forest Overlook, View Direction: Northwest, Approximate Width of View: 191 degrees

Crystal Forest East, View Direction: East, Approximate Width of View: 118 degrees

Flattops No Name Pullout, View Direction: West, Approximate Width of View: 115 degrees

Giant Logs, View Direction: West, Approximate Width of View: 182 degrees



Giant Logs Overlook, View Direction: Northwest, Approximate Width of View: 145 degrees

Route 66, View Direction: South, Approximate Width of View: 80 degrees

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

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National Park Service
U.S. Department of the Interior

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