National Park Service
U.S. Department of the Interior

NEW RIVER GORGE NATIONAL RIVER
GAULEY RIVER NATIONAL RECREATION AREA

ALTERNATIVE TRANSPORTATION FEASIBILITY STUDY – RIVER ACCESS SITES

2012

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Acronyms

ATFS	alternative transportation feasibility study
ATS	alternative transportation system
cfs	cubic feet per second
GARI	Gauley River National Recreation Area
GMP	General Management Plan
GSA	General Services Administration
NERI	New River Gorge National River
NPS	National Park Service
RM	river mile
WVPRO	West Virginia Professional River Outfitters (Association)

Introduction

New River Gorge National River and the Gauley River National Recreation Area received joint funding in 2010 to evaluate options for reducing congestion at popular river access sites and along roads providing access to those sites. Funding was provided through the NPS Park Roads and Parkways (PRP) Alternative Transportation Program (category III funding), an element of the Federal Highway Administration (FHWA) Federal Lands Highway Program. The planning team included NPS personnel at park headquarters in Glen Jean, WV, who jointly manage New River Gorge National River and the Gauley River National Recreation Area. A contractor assisted the planning team.

STUDY AREA

New River Gorge National River

New River Gorge National River (NERI) encompasses approximately 72,000 acres within a 53-mile corridor along the New River, extending from Hinton to Hawks Nest State Park in Summers, Raleigh, and Fayette Counties, West Virginia. Congress established the park in 1978 (Public Law 95-625, 11/20/78). The park purposes are to (NPS 2009b):

- preserve an important free-flowing segment of the New River
- preserve, protect, and conserve outstanding resources and values in and around the New River Gorge, including geologic and hydrologic features, terrestrial and aquatic ecosystems, historic and archeological resources, cultural heritage, and scenic character
- provide opportunities for public understanding, appreciation, and enjoyment of the park's natural, cultural, scenic, and recreational resources and values

Whitewater paddling is one of the classic New River Gorge experiences. A network of public and private river access sites provides access to the river for outfitted and private paddlers. The study area for this alternative transportation feasibility study encompasses the most popular river access sites where paddlers put-in to experience the park's most dramatic whitewater in the lower gorge of the New River. It focuses on existing access sites at Fayette Station, Cunard, and Brooklyn,

as well as options for a new access site at Surprise. The study area also includes the network of connecting public roads in Fayette County on river left[1].

Gauley River National Recreation Area

Gauley River National Recreation Area (GARI) encompasses approximately 11,500 acres encompassing 25.1 miles of the Gauley River and 5.5 miles of the Meadow River in Fayette and Nicholas Counties, West Virginia. Congress established the park in 1988 (Public Law 100-534, 10/26/88). The park's purposes are to:

- provide for the protection and enhancement of the natural, scenic, cultural, and recreational values on certain free-flowing segments of the New, Gauley, Meadow, and Bluestone Rivers in the state of West Virginia for the benefit and enjoyment of present and future generations
- protect and preserve the scenic, recreational, geological, and fish and wildlife resources of the Gauley River and its tributary, the Meadow River

Most visitors to GARI paddle the Gauley River during the fall Gauley Season when controlled releases from the US Army Corps of Engineers' Summersville Dam provide dramatic whitewater conditions. Gauley Season extends for six consecutive weekends beginning the weekend following Labor Day. The study area for this alternative transportation feasibility study includes the four public river access sites on the upper and lower Gauley. It focuses on existing public access sites at Tailwaters, Mason Branch, Woods Ferry, and Upper Swiss. The study area also includes the network of connecting public roads in Nicholas County on river right[2].

PROJECT PURPOSE

This alternative transportation feasibility study identifies and evaluates feasibility of transportation management alternatives to address visitor congestion at high use river access sites at New River Gorge National River (NERI) and Gauley River National Recreation Area (GARI). The purposes of the transportation management actions are to:

- enhance the visitor experience
- enhance visitor safety

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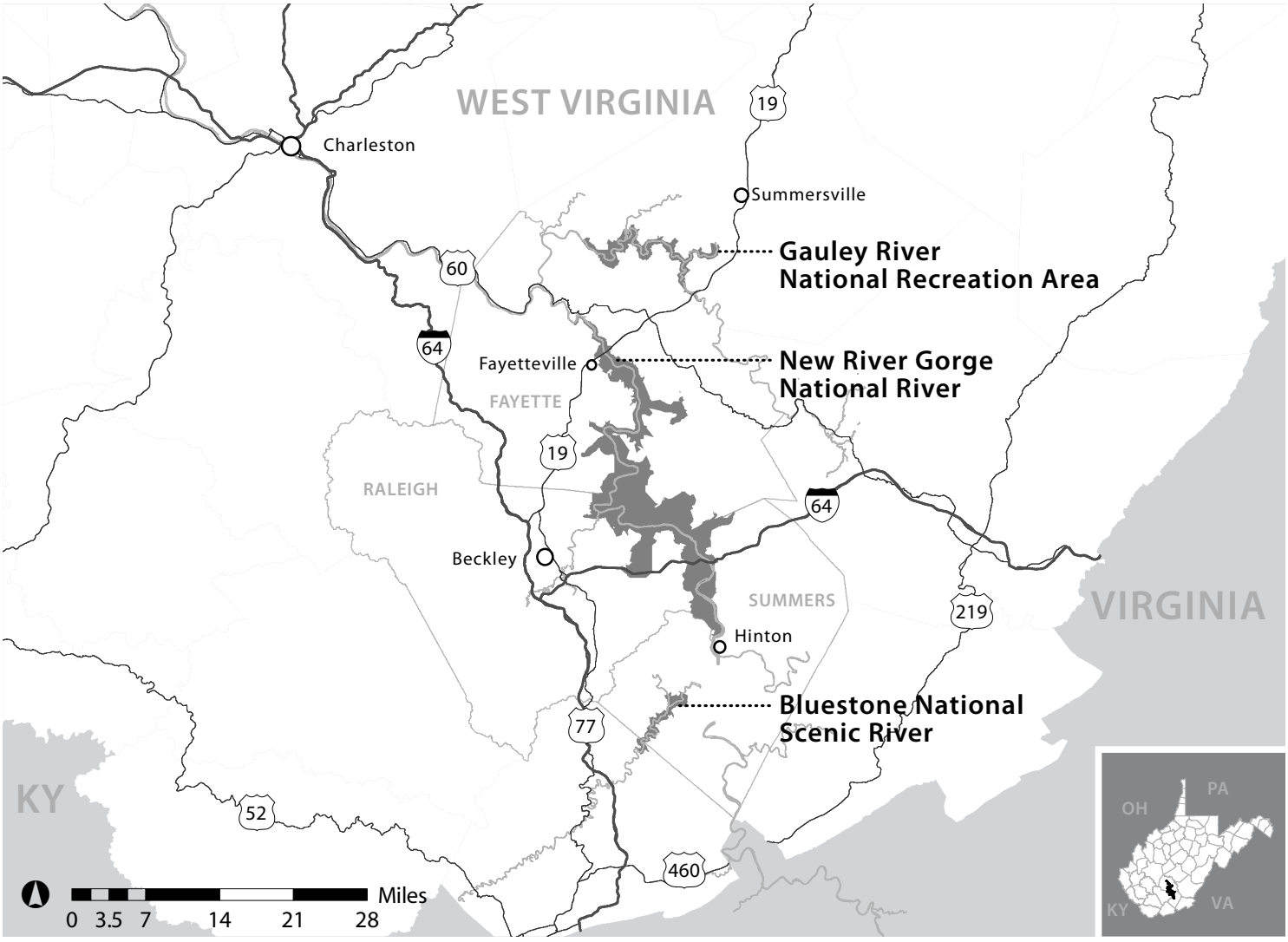
1 *"River left" includes the shoreline and adjacent upland on the left side of the river when looking downstream.*

2 *"River right" includes the shoreline and adjacent upland on the right side of the river when looking downstream.*

Figure I.1
Regional Location



- facilitate park operations
- enhance mobility and accessibility within the parks
- improve roadway conditions on public roads adjoining the parks

PROJECT NEED

The NPS is exploring transportation management alternatives to address its mandate to provide opportunities for public enjoyment of the natural, cultural, scenic, and recreational resources and values at both NERI and GARI. Consideration of management actions is needed for the following reasons:

- Existing river access facilities on the Lower New River and the Gauley River do not have adequate capacity to accommodate demand during peak days.
- Crowded conditions force visitors to compete for parking and staging sites, significantly diminishing the visitor experience due to stress and increased potential for conflicts with other visitors.
- Crowded conditions force some visitors to park illegally, adversely impacting park operations by increasing enforcement needs.
- Illegal parking along one-lane park roads and adjoining public roads in steep terrain reduces roadway capacity creating traffic jams and safety hazards by blocking emergency access.
- Some visitors take safety risks by illegally crossing active CSX rail lines.
- Resource damage occurs along the perimeter of existing river accesses and access roads where visitors park illegally.
- Congested road conditions adversely impact people living along roads leading to river access sites.

PROJECT WORK TASKS

Major work tasks completed included:

- identification of the potential for physical changes at existing river access sites to alleviate congestion
- identification of the potential for developing new river access sites at Brooklyn and/or Surprise at NERI
- feasibility analysis of a shared shuttle system serving NERI river access sites from spring through August and GARI river access sites during Gauley Season (from September through the third week in October)

- feasibility analysis of passenger rail service from Dunglen to Cunard within the historic “South Side Junction” railroad corridor

DATA SOURCES AND LIMITATIONS

The data in this report comes from existing studies and literature, NPS data collection, and personal communication with park staff and stakeholders. Field study included:

- planning team site visits to existing NERI river access sites during summer weekends to identify and analyze operational constraints
- planning team site visits to GARI river access sites and adjoining public roads during Gauley Season to identify and analyze operational constraints
- reconnaissance of the New River corridor (on the river and on the land) between Surprise Rapid and the lower end of Red Ash Island to identify suitable sites for a new river access

Very limited data are available for NERI and GARI on parking occupancy, traffic volumes, and use of existing NPS and outfitter shuttles.

REPORT STRUCTURE

This report is composed of three parts:

- Part 1 New River Gorge National River Alternative Transportation Feasibility Study
- Part 2 Gauley River National Recreation Area Alternative Transportation Feasibility Study
- Part 3 Recommended Actions

Findings for each park address:

- visitation and visitor use
- access and circulation
- existing river access sites
- river access site enhancement and shuttle alternatives – retained
- river access site enhancement alternatives – dismissed
- one-time capital costs (for retained alternatives)
- operating costs (for shuttle alternatives)

In addition to the main body of the report there are five appendices that provide supplemental information:

- potential new public river access on the New River near Surprise – site reconnaissance findings
- GARI equipment and limited paddler shuttle – vehicle identification analysis
- joint NERI/GARI paddler shuttle – vehicle identification analysis
- river access site recommended enhancements - environmental compliance
- environmental assessment scope of services

1. New River Gorge National River

1.1 VISITATION AND VISITOR USE

1.1.1 Overview

- **Visitation and Visitor Use Overview**

Annual Visitation. During the early years of New River Gorge National River – from 1984 to 1993 – the number of visitors to the park grew rapidly from about 0.2 million to 1.0 million people per year (see table 1.1). Since 1993 annual visitation has averaged 1.15 million, with slightly more visitors coming to the park in the late 1990s and early 2000s when compared to recent years.

It is worth noting that actual visitation to the park is probably higher than officially recorded by the NPS because visitor counting procedures do not include visitor use in remote areas of the park used for various adventure sports.

Seasonal Visitation. Summer is the time of year when the most people visit New River Gorge National River (see table 1.2). Approximately 48 percent of the visitation occurs in June, July, and August, with July being the busiest month. Larger numbers of visitors also come to the park during the spring (May) and the fall foliage season (October). Visitation is lowest in the winter months from December through February, with the quietest time during January.

Visitor Profile. Visitation to the New River Gorge region can be generally divided into three distinct visitor markets:

- local residents who make regular use of the park and who live in the four-county region of Fayette, Nicholas, Raleigh, and Summers Counties
- regional residents who take daytrips to the park and who live within 100 miles of Beckley but outside the our resident counties
- non-resident tourists who either stay overnight or visit as part of longer trips and who live outside the 100-mile radius of Beckley

The current base of non-resident tourists is estimated to be the number of counted visitors to New River Gorge who either stayed overnight or passed through. In 2004 these two groups accounted for 74 percent of all visitation. Applying this figure to the 1.07 million estimated 2011 annual visitors to New River Gorge, about 793,000

Table 1.1

New River Gorge National River
Park Total Visitation
(1984 – 2010)

Year	Total Visits
1984	231,295
1985	263,021
1986	395,159
1987	437,871
1988	400,802
1989	412,275
1990	379,115
1991	773,792
1992	952,979
1993	1,020,224
1994	1,088,102
1995	1,165,437
1996	1,225,345
1997	1,215,861
1998	1,183,853
1999	1,173,151
2000	1,117,657
2001	1,218,783
2002	1,203,404
2003	1,113,561
2004	1,154,181
2005	1,048,212
2006	1,127,086
2007	1,180,411
2008	1,212,854
2009	1,144,318
2010	1,095,918

Source: NPS 2012

Table 2.1

New River Gorge National River
Seasonal Visitation
(2011)

Month	Monthly Visits
January	20,093
February	30,234
March	43,589
April	71,324
May	99,395
June	156,255
July	192,867
August	168,157
September	93,498
October	131,133
November	39,693
December	27,250

Source: NPS 2012

non-resident tourists visit New River Gorge each year. These visitors are better educated and more affluent than the local resident base. In addition to being the target audience for tourism in the area, these individuals are increasingly becoming the target market for vacation and retirement home developments in Southern West Virginia.

The age distribution of visitors to the park reflects national age profiles. The largest share of visitors (35%) is in the baby boom generation from age 41 to 60 (Manni et al. 2005). Just 12 percent of visitors are age 61 or older, suggesting that there may be more opportunities to draw older visitors in the future (Manni et al. 2005).

Visitors to the park tend to be better educated than the overall traveling public. Nearly half of visitors to New River Gorge have at least a college education, indicating a well-educated (and affluent) visitor base (Manni et al. 2005). Eighteen percent of visitors have graduate degrees and another 29 percent have bachelor degrees.

Table 1.3 New River Gorge National River – Visitor Use Statistics (1998 – 2010)

Location/ Visitor Use	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2010	Change (1998-2010)
Canyon Rim VC	450,623	405,060	378,363	460,308	440,855	341,193	362,053	321,888	360,633	405,348	378,987	-16%
Sandstone VC	0	0	0	0	0	20,281	51,850	52,345	53,056	53,720	49,341	NA
Grandview VC	168,968	233,475	203,690	250,558	208,928	329,653	338,703	268,405	275,368	243,563	213,270	+126%
Thurmond VC	20,120	14,086	15,600	11,178	11,052	13,290	12,594	7,804	7,233	7,527	6,162	-69%
Glen Jean Bank	2,654	3,187	3,494	3,805	3,523	3,253	3,209	2,630	1,884	1,701	1,691	-36%
Sandstone Falls	113,540	95,970	71,148	82,813	86,768	78,748	90,310	79,290	76,250	88,490	72,988	-36%
Glade Creek[1]	124,763	122,733	131,590	128,933	132,328	27,008	475	30,105	62,033	86,520	48,355	-61%
Outfitted Paddlers[2]	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	124,616	0%
	158,771 (DNR)	155,543 (DNR)	157,070 (DNR)	147,497 (DNR)	154,063 (DNR)	131,752 (DNR)	140,518 (DNR)	138,836 (DNR)	129,166 (DNR)	126,629 (DNR)	109,719 (DNR)	
Private Paddlers[3]	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	31,466	0%
Tent/RV Campers	17,433	17,765	21,783	18,998	19,555	10,415	11,048	9,613	10,558	10,710	10,003	-43%
Trail Users	74,939	70,025	79,839	55,247	85,734	77,243	71,626	66,750	67,635	67,897	96,860	+129%
Climbers	6,653	6,208	9,549	13,343	13,620	12,797	15,552	14,661	13,796	15,894	23,205	+349%
Bus Visitors	23,680	27,160	24,120	24,120	22,560	21,200	18,280	16,240	14,160	14,560	12,480	-47%
Special Events	22,000	19,000	20,000	11,000	20,000	20,000	20,000	20,000	26,000	26,000	26,494	+120%
Non-Rec Visitors	2,398	2,400	2,399	2,398	2,399	2,398	2,399	2,399	2,398	2,399	NA	NA
Total	1,183,853	1,173,151	1,117,657	1,218,783	1,203,404	1,113,561	1,154,181	1,048,212	1,127,086	1,180,411	1,095,918	-7%

1. Closures of the Glade Creek Road from 2003 have made the site less accessible for vehicles; the road reopened on January 8, 2008.
2. DNR estimates for the same years provided.
3. Actual estimates of private paddlers calculated in 1995 to be 31,466 (based on 1994 data); the same estimate was used from 1995 to 2007; 2010 estimate based on data collected in 2010 has been used since then.

Visitor Group Size and Travel Party Type. Groups visiting the park tend to be large, with 34 percent of parties containing five or more people and an overall average of 5.5 persons per party (Manni et al. 2005). However, 36 percent were parties of one or two people.

About two-thirds of visitors came in family groups or in groups composed of families and friends. Just 20 percent came as friends, demonstrating the family-oriented appeal of the area. Only 12 percent came to visit friends or family, unlike other parts of West Virginia where this market segment is near 40 percent of all visitors.

For about half of park visitors, New River Gorge is their primary travel destination and for about a third it is one of several travel destinations on their trip. About 20 percent of visitors arrive at the park without having planned to do so.

Visitor Length of Stay. Visitors to the park are transient by comparison to other national park units, many while "stopping by" spontaneously while on a road trip to other destinations. A part of one day is all that most visitors currently spend at New River Gorge (Manni et al. 2005). Visits lasting less than an hour are typical for about 25 percent of visitors. Only about 25 percent of visitors spend more the five hours in the park. For those staying more than one day, 66 percent are there for two days and about 10 percent spend more than five days in the park.

1.1.2 Opportunities for Exploration, Adventure, Discovery, Solitude, and Community

The dramatic New River Gorge landscape and the whitewater recreation opportunities of the New River attract most first-time visitors to the park. Those new to the park quickly discover that within the spectacular gorge landscape and along the river are hidden the remains of dozens of towns that tell the stories of West Virginia's coal, lumber and railroading industries that flourished in New River Gorge during the late nineteenth and early twentieth century. For most visitors the spectacular terrain of the gorge, the free-flowing New River, and the tranquil setting – interspersed with the remnants of the gorge's human history – offer appealing opportunities for a variety of recreation and learning experiences.

- **New River Gorge's Classic Visitor Experiences**

A few experiences at New River Gorge are "classic" because they showcase the park's most significant natural and cultural resource. These experiences occur in a few specific places where visitors go most often – where they know they will most easily experience the best of the gorge and typically where the NPS has facilitated access and provides visitor services and interpretation.

Canyon Rim. From Canyon Rim, visitors experience dramatic rim-to-river views of the gorge, the New River Bridge, and the broader Appalachian Plateau. At the Canyon Rim Visitor Center the NPS orients visitors to the park and tells the park's stories through exhibits and interpretive programs. More people visit Canyon Rim than any other site in the park because of the views, the visitor center facilities and services, proximity to the New River Bridge, and its easy regional access from US Route 19. In 2007 approximately 405,300 people – or 34 percent of all park visitors – stopped at the Canyon Rim Visitor Center.

Grandview. At Grandview, visitors have a traditional family recreation experience, including picnicking, playing, hiking, and outdoor theatre. The site also provides access to spectacular rim-to-river views in the Turkey Spur area. Grandview opened for public use in 1941 as one of the state's early state parks, built by the NPS and the Civilian Conservation Corps. Since that time several generations of West Virginians have grown up visiting Grandview and return on a regular basis to participate in family reunions which occur every weekend throughout the warm months in the Grandview picnic pavilions. A small visitor center provides visitors with information about the park and interpretive programs. Grandview is the second most visited site in the park. In 2007 approximately 243,560 people – or 21 percent of all park visitors – spent time at Grandview.

Sandstone Falls. Sandstone Falls provides visitors the opportunity to experience the sights, sounds, and smells of the river. A boardwalk enables visitors to get very close to the river at the site of the park's largest waterfall and to experience the adjoining rare Appalachian flatrock community. As a former settlement site in the upper gorge the site also offers also learn about the area's early history. Visitor facilities include a picnic area, interpretive waysides, a fishing beach, and a river access (below the falls). In 2007 approximately 88,490 people – or 7.5 percent of all park visitors – experienced the river at Sandstone Falls.

Sandstone Visitor Center. Approximately 50,000 visitors stop in at the Sandstone Visitor Center each year to get information about the park – its resources and stories and the experiences available. Views of the upper gorge provide visitor with a sense of the power of the river and the rugged forested terrain.

Endless Wall. A cliff top trail takes visitors through a beautiful pine forest and rhododendron thickets to the top of the sandstone outcrop known as the Endless Wall. The Endless Wall Trail takes visitors to Fern Point, Diamond Point, and numerous vantage points from which they experience the open expanse of the gorge and spectacular views of the Appalachian Plateau and the New River some 1000 feet below. From these vantage points visitors experience the power of the river evidenced by the gorge and the sheer rock walls it has carved.

Kaymoor and Nuttallburg. Visitors learn about the park's industrial heritage at Kaymoor and Nuttallburg. Those in good physical condition can hike down the 900 stairs to the former Kaymoor town site. Planned improvements will facilitate visitor access to the nationally significant Nutallburg Mining Complex and Town Site and enhance the visitor experience through new waysides and interpretive programs.

Fayette Station Road. Visitors can experience travel through the gorge as it was before the New River Bridge was built in 1977. The 100-year old Fayette Station Road winds down to the bottom of the gorge, crosses the river on a narrow bridge, and winds back up the gorge wall to the rim. Wayside exhibits describe the history of mining, transportation, and life in the gorge. Along the way visitors can stop at the sites of historic coal mining communities, view rock climbers, see the New River Bridge from below, get close to the river, and view paddlers as they pass through the Fayette Station Rapid.

Thurmond. At Thurmond visitors learn about the history and culture of New River Gorge during its industrial heyday. Thurmond – once a classic boomtown deep in the gorge – today remains surprisingly untouched except by the forces of nature seeking to reclaim the site. Now largely owned by the NPS, the town site is open for visitors to explore the ruins and remaining historic buildings stabilized by the NPS. The Thurmond Depot is now a small park visitor center where visitors are oriented to Thurmond through exhibits and interpretive programs. In 2007 approximately 7,500 people – or <1 percent of all park visitors – stopped at the Thurmond Depot Visitor Center.

- **Whitewater Paddling**

Table 1.4

New River Gorge National River

Whitewater Use River Sections

Upper New 1
- Hinton to Prince (McCreery)

Upper New 2
- Prince (McCreery) to Cunard

Lower New
- Cunard to below Fayette Station Rapid

Table 1.5

New River Gorge National River

River Trip Summary

(see figure 1.1)

Upper New 1
Canoe, Fish, Batteau Float
- Class I – II+ Rapids
- Upstream Hinton to Sandstone Falls
- high level of use

Upper New 1
Fishing Float
- Class I – II+ Rapids
- Meadow Creek to McCreery (or Grandview Sandbar)
- low level of use

Upper New 1
Beginning Paddler Float
- Class I – II+ Rapids
- Glade Creek to McCreery (or Grandview Sandbar)
- high level of use

Upper New 2
Family Float
- Class I – III Rapids
- McCreery (or Grandview Sandbar) to Stone Cliff (or at lower flows Stone Cliff to Cunard)
- moderate level of use

Lower New
Adventure Float – high water
- Class III – IV Rapids
- Stone Cliff to Fayette Station (or Teays Landing
- high level of use

Lower New
Adventure Float – summer flows or express trips
- Class III – IV Rapids
- Cunard to Fayette Station (or Teays Landing)
- high level of use

The New River attracts paddlers of all abilities seeking the thrill, exhilarating rush, and social bonding of the whitewater experience. Some of these visitors are extreme adventurists who paddle the Class IV rapids of the lower gorge in rafts and kayaks. Most are outfitted paddlers riding the river with experienced guides in organized commercial trips. Increasingly families are making guided and unguided river trips with teenage children or in family flotillas, preferring the more gentle rapids of the upper gorge. Collectively the whitewater paddlers – including the **outfitted paddlers** who ride with commercial outfitters and the **private paddlers** who ride on their own – compose one of the largest groups of visitors to the park. In 2010 approximately 110,000 outfitted paddlers and 12,000 private paddlers – or over 11 percent of all park visitors – floated the New River.

The New River from Hinton to Brooks Falls/Sandstone Falls is wide and shallow and popular with recreational paddlers in canoes or fishermen in john boats with small outboard motors (figure 1.1). The stretch from Sandstone Falls to Glade Creek (or Grandview Sandbar) is popular with fishermen and duck hunters in small motorized boats, and private paddlers in canoes. The stretch from Glade Creek to Grandview Sandbar is popular with an increasing number of beginning private paddlers because of the easy road-side shuttle, which enables visitors to make several runs in one day. The 13-mile stretch from McCreery to Stone Cliff contains many Class I to Class III rapids and is a popular one-day run for beginning kayakers and rafters. The stretch from Stone Cliff/Dun Glen to Cunard at normal water levels is the first half of the Lower New one-day trip and contains one very large Class III rapid and several long pools. Since development of the Cunard access in 1990, paddlers have had the option to skip the first half and instead put in at the beginning of the Class III to Class IV rapids. Commercial outfitters have accordingly developed this option into an express half-day trip. By far the most popular one-day or express whitewater run for all paddlers is the Lower New, either starting at Stone Cliff/Dun Glen during high water flows or starting at Cunard at normal or low water levels and ending at Fayette Station or the privately owned Teays river access sites.

Outfitted Paddling Overview. Whitewater paddling is the largest sector of the state's outdoor recreation economy. The state of West Virginia Department of Natural Resources regulates commercial whitewater use (outfitted paddling). Since

RIVER TRIPS

New River (upstream) — **New River (downstream)**

A	B	C	D	E	F	G	H	I	J	K
Upstream - Hinton (Private)	Sandstone Falls (Public)	Glade Creek (Public)	Grandview Sandbar (Public)	McCreery (Public)	Stone Cliff (Public)	Dunglen (Public)	ACE (Private)	Cunard (Public)	Fayette Station (Public)	Teays Landing (Private)

- Canoe, Fish, Batteau (Class I – II+ Rapids)
- Private Paddle (Class I – II+ Rapids)
- Fishing Float (Class I – II+ Rapids)
- Family Float (Class I – III Rapids)
- Adventure Float (Class III – IV Rapids) (<4,500 CFS)
- Adventure Float (Class III – IV Rapids) (>4,500 CFS)
- Family Float (Class I – III Rapids)

Upper New | Middle New | Lower New

RALEIGH COUNTY
DANIELS
SHADY SPRING
OAK HILL
FAYETTE COUNTY
FAYETTEVILLE
ANSTED
Hawks Nest Dam
McCreery
Grandview
Glade Creek
Stone Cliff
Dunglen
ACE
Fayette Station
Teays
Cunard
NEW RIVER GORGE NATIONAL RIVER
Babcock State Park
Sandstone Falls
HINTON
SUMMERS COUNTY
Meadow Bridge

Figure 1.1
Public River Access Sites

Existing River Access
- B Public
- A Private

Existing Visitor Use
- High Visitor Use
- Moderate Visitor Use
- Low Visitor Use

Land Ownership
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

N

0 mi. | 1.5 mi. | 3 mi. | 6 mi. | 9 mi. | 12 mi. | 15 mi.

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Table 1.6 West Virginia Commercial Rafting Industry Performance by River Segment, 1996 – 2010 (March through October) (thousand paddlers)

River Section	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2010	Change (1996-2010)
Upper New	22.8	20.5	24.7	22.7	23.8	31.7	24.7	28.4	24.7	23.4	23.9	20.5	14.7	-8.1
Lower New	134.2	125.2	133.7	132.9	133.2	116.4	129.3	105.8	111.5	113.7	103.7	106.1	94.6	-39.6
Upper Gauley	41.4	35.3	40.9	38.0	38.9	35.9	36.3	31.9	28.4	30.4	30.0	30.5	20.6	-20.8
Lower Gauley	21.4	20.6	23.0	21.1	23.5	24.0	22.2	24.1	18.3	16.2	17.8	16.3	11.7	- 9.7
Cheat	12.1	9.7	8.3	4.3	7.1	6.9	4.0	6.6	5.3	3.8	3.5	5.0		
Shenandoah	19.2	13.0	18.3	7.9	22.9	22.9	5.9	25.1	21.8	21.6	21.0	17.7		
Total	251.1	224.2	248.8	226.9	249.4	237.2	223.0	221.8	210.1	209.1	199.8	196.1		

1. Separate counts for Upper New 1 and 2 were only kept following the 1997 season. Upper New segment changes reflect from 1998
2. Tygart was excluded from data

Source: DNR Annual Boater Counts, 2002-2010; ERA 2007

1992 the state has limited the maximum daily commercial use on the Lower New to 3,875 outfitted paddlers. Limits are not in place for the Upper New.

Paddling on the New River – as elsewhere in the state – grew dramatically in the 1980s and 1990s, peaking in 2002. Since 1996 outfitted paddling has experienced a decline in volume statewide. At New River Gorge, in 2010 approximately 94,594 outfitted paddlers rode the lower New River (Cunard to Teays). While this was the highest paddling volume on the state's commercial whitewater rivers, it represented a 30 percent decline (-28,090 paddlers) when compared to 1996. In contrast, approximately 14,775 paddlers rode the upper New River (above Cunard) in 2010, representing a 35 percent decrease (-2,280 paddlers) when compared to 1996.

Outfitted paddler whitewater use of the New River begins on weekends in mid-March and builds into April to include some mid-week spring break business. While commercial whitewater use extends March through April, almost 90 percent of the total yearly visitor use occurs in the four-month period of May through August. Even though the New River has sufficient water levels to run river trips in September and October, most commercial whitewater use shifts to the nearby Gauley River National Recreation Area for the scheduled fall releases from Summersville Lake. Outfitted paddler use then shifts back to the New River for the last two weekends in October, including Bridge Day, and occasionally for a day or two in November.

Table 1.7 New River Outfitted Paddler Typical Trip Options

River Section	River Flow	Trip Length	Put-In	Take-Out
Upper New (Family Floats)	high (spring)	full day	Grandview Sandbar (NPS) or Prince (private)	Stone Cliff (NPS) or Stone Cliff (private)
	low (summer)	<full day	Stone Cliff (NPS) or Thurmond (private)	Cunard (NPS) or Cunard (private)
Lower New (Adventure Floats)	high (spring)	full day	Stone Cliff (NPS) or Thurmond (private)	Fayette Station (NPS) or Teays Landing (private)
	high[1] (spring)	1/2 day[1] (no lunch)	Cunard (NPS) or Cunard (private)[1]	Fayette Station (NPS) or Teays Landing (private)[1]
	low (summer)	<full day	Cunard (NPS) or Cunard (private)	Fayette Station (NPS) or Teays Landing (private)
	low (summer)	1/2 day (no lunch)	Cunard (NPS) or Cunard (private)	Fayette Station (NPS) or Teays Landing (private)

Source: WVPRO 2005

Outfitted paddler trips on the New River are directly related to water levels and the available public river accesses (see table 1.7).

Private Paddling Overview. Private paddlers float the New River in a variety of boats depending on the section of the river, the water level, and the paddler's skill level – including kayaks, canoes, shredders, duckie boats, and specially designed watercraft. Use generally occurs from mid-April through September with most private paddlers on the river during the warm summer months. In 2010 non-commercial use was estimated at 12,000 paddlers. Approximately 91% paddled the lower New River (Cunard to Teays), 8% paddled the upper New River (McCreery to Cunard), and 1% paddled the upper New River (above McCreery).

Whitewater kayaking on the New River has changed tremendously with the development of new kayaks, equipment, and extreme paddling skills. Experienced kayakers are more likely to paddle throughout the year and at higher water levels than kayakers from ten years ago. Rodeo kayaks were developed to surf large river hydraulics and to perform tricks. These paddlers generally like to stay at one play spot on the river for long periods of time and avoid the commercial raft traffic by generally starting their trip much later in the day. Some rodeo boaters start at Cunard, paddle to the first play spot, paddle for a few hours, and then carry their boats back upstream along the railroad tracks to the Cunard parking area. This type of stationary use is expected to increase in the Kenney Creek area with the recently improved state road access. Creek boats are generally short but high volume

kayaks developed to navigate narrow rocky streams with large vertical drops. Creek boaters like to paddle the steep tributary creeks, like Glade, Piney, Mann and others during periods of high water runoff. These paddlers are very skilled and have very different access needs and user preferences.

Management Concerns. During the development of the park's new GMP (NPS 2009) the scoping process with the public and the NPS identified several concerns related to whitewater paddling in the park:

- parking facilities are inadequate for private paddlers and other visitors at some public river accesses on peak visitation days
- crowding at river accesses and on the river occurs as a result of outfitted paddler trip logistics, suggesting the need to consider (1) adding a river access above Cunard, and (2) opening Glade Creek to outfitted paddler use
- changing stations and sanitary facilities are inadequate at some river accesses

1.2 PARK ACCESS

1.2.1 Road Access

- **Regional Road Access to the Park Vicinity**

Visitors to New River Gorge National River use a number of interstate highways to reach southern West Virginia, where they connect to smaller US roads and/or state roads that take them to Fayette, Raleigh, and Summers Counties. Interstate 79 (I-79) provides access from Pennsylvania and western Maryland. Visitors from Baltimore, Washington, and Virginia arrive in West Virginia on Interstate 64 (I-64). Those coming from Ohio and Charleston, WV, use I-77.

- **Local Road Access to Park Facilities**

Local Access Overview. Within the park's 53-mile river corridor a network of public and private roads provide access to the park from adjoining areas of Fayette, Raleigh, and Summers Counties (see figure 1.2 and table 1.8). Many lead to areas above the river on the plateau and rim. Less common are river level roads, which largely occur in the Upper Gorge on river right from Hinton to Meadow Creek and

on river left from Hinton to I-64, as well as in the Middle Gorge along river left from Glade Creek to Terry. Roads open for public use that travel from the rim to the river are least common.

Most roads in the park are WV state and county roads and are generally paved or gravel maintained (table 1.8). NPS has only a few official park roads that are open to the public (table 1.8); most NPS roads are administrative roads used for maintenance and emergency access open to the public only for hiking and some biking. Glade Creek Road, the Cunard Access Road, and the Turkey Spur Overlook Road at Grandview are the most heavily used NPS official roads.

Planned highway improvements in the next five years to state and federal roads within the park include routine maintenance to the New River Bridge, resurfacing of I-64, reconstruction of the New River bridges at Thurmond and Prince (WV State Route 41), and reconstruction of the Dunloup Creek Bridge (WV County Route 25) (WV DOT 2005, 2005 – 2006, and 2007). Construction of the New River Parkway on river left from above Sandstone to Hinton, including a bridge across the New River, is currently in final engineering design.

Local Access Management Concerns. Despite the availability of roads in many areas, access is perceived by many visitors to be poor and to limit where they can go and the experiences they can have in the park. Constrained access is largely the result of the difficulty in building and maintaining safe roads in the gorge:

- roads in rugged terrain are susceptible to recurring damage from slumping and slides and roads at river level are susceptible to recurring damage from flooding
- new road construction and routine road maintenance in rugged terrain has the potential for adverse impacts to natural resources and is costly
- existing roads in rugged terrain are typically narrow and steep with rough surface conditions making them difficult to drive and potentially hazardous to visitors not experienced with driving in mountainous areas

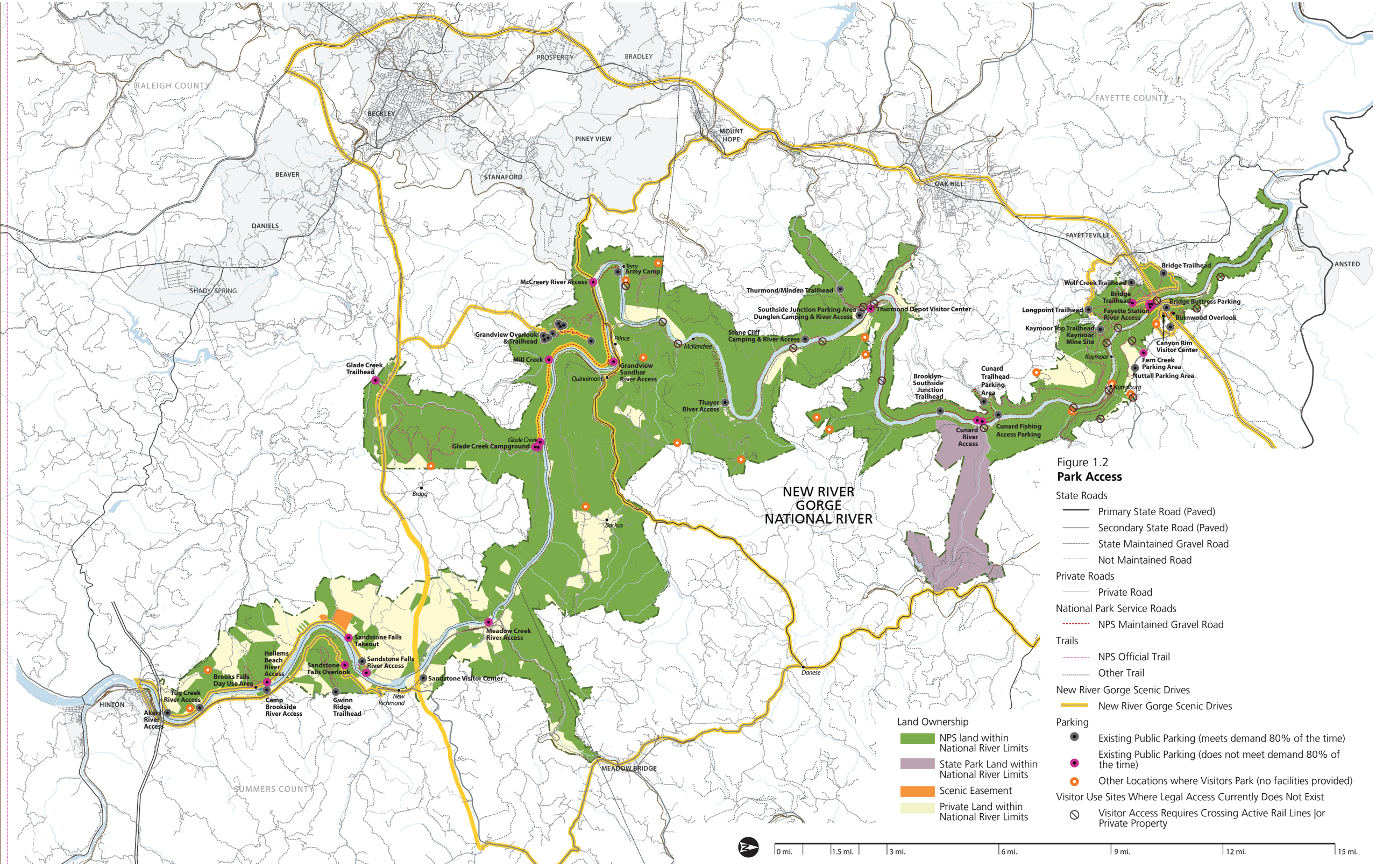

Figure 1.2
Park Access

Land Ownership
- NPS land within National River Limits
- State Park Land within National River Limits
- Scenic Easement
- Private Land within National River Limits

State Roads
- Primary State Road (Paved)
- Secondary State Road (Paved)
- State Maintained Gravel Road
- Not Maintained Road

Private Roads
- Private Road

National Park Service Roads
- NPS Maintained Gravel Road

Trails
- NPS Official Trail
- Other Trail

New River Gorge Scenic Drives
- New River Gorge Scenic Drives

Parking
- Existing Public Parking (meets demand 80% of the time)
- Existing Public Parking (does not meet demand 80% of the time)
- Other Locations where Visitors Park (no facilities provided)

Visitor Use Sites Where Legal Access Currently Does Not Exist
- Visitor Access Requires Crossing Active Rail Lines or Private Property

0 mi. 1.5 mi. 3 mi. 6 mi. 9 mi. 12 mi. 15 mi.

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Table 1.8 Roads Providing Access to Park Facilities

Road	Park Facilities Accessed	Road Surface/ Average Daily Trips	Related Issues/ Planned Improvements
WV State Route 20	▪ Sandstone Falls Overlook ▪ Camp Brookside ▪ Camp Brookside River Access ▪ Sandstone River Access	▪ paved maintained ▪ ADT 2100 at Sandstone ▪ ADT 2900 near Barksdale ▪ ADT 8300 west Hinton Br	▪ existing capacity and safety deficiencies (to be mitigated in part following construction of New River Parkway)
River Road WV County Route 26	▪ Tug Creek River Access ▪ Brooks Falls Day Use Area ▪ Hellems Beach River Access ▪ Sandstone Falls Take-Out ▪ Sandstone Falls ▪ Sandstone Falls River Access	▪ paved maintained	▪ existing capacity and safety deficiencies ▪ future planned redesign and reconstruction as New River Parkway
Brooks Mountain Road WV County Route 44/5	▪ Gwinn Ridge Trailhead	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 26/3	▪ Trump-Lilly Farm	▪ gravel maintained/ unimproved	▪ existing capacity and safety deficiencies
WV County Route 7	▪ Sandstone Visitor Center ▪ Meadow Creek River Access ▪ Jewell Tract River Access	▪ paved maintained ▪ ADT 360 before Sandstone Visitor Center	▪ no current or anticipated roadway capacity or safety deficiencies from I-64 to Sandstone VC ▪ existing capacity and safety deficiencies from Sandstone VC to Meadow Creek
Claypool Road WV County Route 7/1	▪ Meadow Creek fishing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
Backus Mountain Road WV County Route 22/7	▪ Backus Mountain hunting area	▪ paved maintained ▪ ADT 200 near Backus	▪ existing capacity and safety deficiencies
WV County Route 27/9	▪ Polls Branch hiking and fishing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 119/36	▪ Glade Creek Trailhead ▪ Glade Creek hiking and fishing area	▪ unimproved/primitive	▪ existing capacity and safety deficiencies ▪ road geometry constrains access for large vehicles
WV County Route 9	▪ Grandview day-use facilities ▪ Theatre West Virginia	▪ paved maintained ▪ ADT – 2600 north I-64 ▪ ADT – 820 at SR 983	▪ no current or anticipated roadway capacity or safety deficiencies
Grandview Entrance Road and Turkey Spur Overlook Road (NPS Park Roads)	▪ Grandview day-use facilities ▪ Theatre West Virginia ▪ Turkey Spur Overlook	▪ paved maintained	▪ no current or anticipated roadway capacity or safety efficiencies from park entrance to shelters ▪ existing access issues between amphitheater and visitor contact station ▪ existing capacity and safety issues for Turkey Spur Road will be mitigated by construction of new parking lot, pedestrian access
WV State Route 41	▪ McCreery River Access	▪ paved maintained ▪ ADT - 950 at Quinnimont ▪ ADT - 1150 at McCreery	▪ pedestrian crossing hazard at McCreery river access ▪ Thomas Burford Pugh Memorial

Table 1.8 Roads Providing Access to Park Facilities

Road	Park Facilities Accessed	Road Surface/ Average Daily Trips	Related Issues/ Planned Improvements
			Bridge Replacement after 2009 ▪ no other current or anticipated roadway capacity or safety deficiencies
Glade Creek Road (NPS Park Road) (State Scenic Backway)	▪ Glade Creek Campground ▪ Glade Creek River Access ▪ Glade Creek hiking, fishing, and hunting area ▪ Mill Creek River Access ▪ Grandview Sandbar Campground ▪ Grandview Sandbar River Access	▪ gravel maintained	▪ road closed due to slides in 2006 and 2007; repaired by FHWA and reopened 1/2008
Army Camp Road NPS Park Road	▪ Army Camp Campground ▪ Army Camp River Access	▪ gravel maintained	▪ no current or anticipated roadway capacity or safety deficiencies
McKendree Road (from Stone Cliff to Prince) WV County Route 25	▪ Thayer River Access ▪ Thayer Campground ▪ Stone Cliff and Buffalo Creek fishing area	▪ gravel maintained/ paved	▪ very poor capacity ▪ road geometry constrains access for large vehicles ▪ road from Thayer to Prince in poor condition and is subject to slides and slumping
Stone Cliff Road NPS Park Road	▪ Stone Cliff Campground ▪ Stone Cliff River Access ▪ Stone Cliff hiking area	▪ gravel maintained	▪ no current or anticipated roadway capacity or safety deficiencies
WV County Route 41/1	▪ Dowdy Creek hunting area	▪ gravel maintained/dirt	▪ existing capacity and safety deficiencies
WV County Route 25/2	▪ Claremont hunting area ▪ Above Thurmond hunting area ▪ Below Thurmond hunting area	▪ gravel maintained	▪ existing capacity and safety deficiencies ▪ road geometry constrains access for large vehicles
Terry Road WV County Route 41/8	▪ Terry Beach River Access	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 41/2	▪ Terry Batoff and Garden Ground hiking areas	▪ gravel maintained	▪ existing capacity and safety deficiencies
WV County Route 25 (from Glen Jean to Stone Cliff)	▪ Park Headquarters ▪ Dunloup Creek fishing area ▪ Thurmond-Minden Trailhead ▪ Southside Junction Parking Area ▪ Dun Glen Group Camping ▪ Dun Glen Group Picnicking ▪ Dun Glen River Access ▪ Dun Glen Park Operations Facility	▪ paved maintained ▪ ADT – 950 at Glen Jean	▪ no current or anticipated roadway capacity or safety deficiencies for small vehicles ▪ road geometry constrains access for large vehicles ▪ Laurel Creek Bridge replacement after 2013
Thurmond Access Road various state roads	▪ Thurmond Depot Visitor Center ▪ Thurmond Historic District	▪ paved maintained	▪ very poor capacity and numerous existing roadway capacity and safety deficiencies ▪ Thurmond Bridge (state-owned) replacement in 2012
Minden Road WV County Route 17	▪ Thurmond-Minden Trailhead	▪ paved maintained	▪ existing capacity and safety deficiencies
Keeney Creek Road WV County Route	▪ Nuttallburg Visitor Use Area	▪ paved maintained	▪ existing capacity and safety issues will be mitigated by construction

Table 1.8 Roads Providing Access to Park Facilities

Road	Park Facilities Accessed	Road Surface/ Average Daily Trips	Related Issues/ Planned Improvements
85/2			of new trailheads for the Nuttallburg Visitor Use Area ▪ road geometry constrains access for large vehicles
Lansing Road WV County Routes 5 and 82	▪ Canyon Rim Visitor Center ▪ Canyon Rim Boardwalk ▪ Ambassador Buttress climbing area Endless Wall climbing area ▪ Fern Creek Trailhead ▪ Nuttall Trailhead	▪ paved maintained ▪ ADT – 700 at Edmond ▪ ADT – 280 at Winona	▪ no current or anticipated roadway capacity or safety deficiencies
WV County Route 85/5	▪ Beauty Mountain Trailhead ▪ Beauty Mountain climbing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
Cunard Access Road NPS Park Road	▪ Cunard Trailhead ▪ Cunard River Access	▪ gravel maintained	▪ road damaged by recurring slides; repaired and widened by FHWA in 2007/2008
Brooklyn Road NPS Park Road	▪ Brooklyn Southside Junction Trailhead	▪ gravel maintained	▪ no current or anticipated roadway capacity or safety deficiencies
Gatewood Road WV County Route 9	▪ Longpoint Trailhead ▪ Kaymoor Top Area ▪ Cunard River Access	▪ paved maintained ▪ ADT – 2150 at SR 16 ▪ ADT – 1200 at Garden ▪ ADT – 470 at Cunard	▪ no current or anticipated roadway capacity or safety deficiencies
Kaymoor Top Road NPS Park Road	▪ Kaymoor Top Trailhead ▪ Craig Branch Trail ▪ South Nuttall climbing area ▪ Butcher Branch climbing area	▪ gravel maintained	▪ existing capacity and safety deficiencies
Fayette Station Road WV County Route 82	▪ Fayette Station River Access ▪ Wolf Creek Trailhead ▪ Bridge Climbing Area ▪ Bridge Trailhead ▪ Bridge Buttress Climbing Area ▪ Sunshine Buttress Climbing Area	▪ paved, one-way with pull-offs ▪ ADT – 120 at Canyon Rim ▪ ADT – 380 at US 19	▪ poor existing capacity, especially on peak visitation days ▪ steep gradients, tight curves, short stopping distances ▪ access constrained due to road geometry for large vehicles
US Route 19	▪ Burnwood Group Picnic Area ▪ Burnwood Park Operations Facility	▪ paved maintained ▪ ADT – 12000 above bridge ▪ ADT – 16200 below bridge	▪ no current or anticipated roadway capacity or safety deficiencies

Source: WV DOT 2005, 2005-2006, and 2007 (for planned improvements); 2006 (for average daily trips – ADTs)

- steep gradients, tight turns, and narrow travel lanes on some state and park roads is hazardous for large vehicles, such as buses, vans, and equipment trucks
- some WV county roads pose particular safety threats because they are no longer maintained by the state yet some visitors continue to use them

Additionally, many visitors to the park – particularly local residents – would like to use ATVs for access but ATVs are not permitted on NPS-owned lands or on NPS roads. Under current state law, within the park boundary visitors may operate ATVs on state roads and on private property (with the owner's permission), but visitors rarely make that distinction frequently leading to impacts on park resources.

1.2.2 Parking

- **Visitor Parking Overview**

The NPS provides parking at all developed visitor use facilities (see figure 1.2). In remote locations where visitors access the park for hunting, fishing, hiking, and backcountry camping the NPS provides designated parking where publicly-owned land is available within the park boundary and where site conditions make development of parking feasible.

- **Visitor Parking Management Concerns.**

Many locations within or adjoining the park used by visitors for access have no parking facilities or do not have adequate parking to meet visitor demand more than 80 percent of the time (figure 1.2).

The NPS faces three primary parking challenges in providing adequate parking in these locations:

- the park's rugged topography makes it impossible to develop more parking
- land suitable for parking remains in private ownership
- land suitable for parking is located near the park but outside the boundary

One or more of these conditions exist at most locations where parking is not available or inadequate to meet demand.

1.2.3 Hiking, Biking, and Equestrian Access

- **Hiking, Biking, and Equestrian Trails in the Park**

Approximately 76 miles of official NPS trails provide visitor access to the park's frontcountry and backcountry areas (see table 1.9). Trails vary from easy to difficult in terrain and from 0.1 mile to 8.6 miles in length. Many of the park's trails were preexisting at the time the NPS acquired property and follow the alignments of now abandoned roads and railroad grades from the park's industrial era. The NPS has constructed several new trails, most notably the Fayetteville trail complex – including the Fayetteville Trail, the Town Park Loop, and the Timber Ridge Trail – which was designed and built with assistance from volunteers and the International Mountain Bike Association (IMBA).

In 2007 approximately 67,900 hikers were counted on the park's official trails. Visitor use of hiking trails in the park is highest in the north end of the park and in the Glade Creek area. Trails at Grandview and at Sandstone Falls are also heavily used.

Table 1.9

New River Gorge National River

Generalized Trail Standards (for NPS Official Trails)

Trail Type	Standard
Backcountry	generally low use; highly experienced hikers; 18 to 24" width; roots/rocks possible
Frontcountry	medium use; broad range of users; 30 to 36" width; may be uneven surface
Developed	heavy use; less experience hikers; 48 to 60" width; hard surface
Administrative Road	vehicle, biking, and hiking use; 8' width on straight sections; may be gravel
Fully- Accessible	even tread to allow all pedestrian use; 60 to 72" hard surface
Climbing Spur	climbing access trails; 12 to 18" width natural surface
Railroad Grade	railroad bed and existing ties; 48 to 60" crushed stone surface

- **Management Concerns.**

During the GMP scoping process the public and the NPS identified several concerns related to hiking in the park:

- the park's trail system does not provide a diversity of trail types that enable different visitor experiences for people of all ages and physical conditions
- the park does not have a clearly defined opportunity for multi-day through the park or loop trail backpacking trip on backcountry trails
- many overlooks that provide dramatic views are not accessible by official park trails or park roads
- the CSX Corporation rights-of-way with active rail traffic block safe and legal visitor access to the river throughout much of the park
- many visitors interested in hiking prefer the experience of hiking on single-track trails to hiking on administrative roads
- adequate parking is not available at trailheads
- in the future trail cooperative trail planning and development by NPS and others should provide for future trail connections from the park to

adjoining communities, Babcock State Park, Hawks Nest state Park, the Gauley River National Recreation Area, and other regional trails

- **Future Trail Development**

Additional future development and management of the trail system at New River Gorge will occur in accordance with a new trail development strategy that is currently being developed by NPS staff. The recently completed general management plan (GMP) provides a set of guiding principles that summarize the approach to locating and designing the trail system, as follows:

- provide trails offering visitors opportunities to have a variety of recreation experiences and to explore the park's cultural resources
- design new trails for joint use by hikers and bikers, depending on environmental and safety conditions
- convert some significant historic railroad routes and lumbering roads located outside of backcountry zones to trails and rehabilitate them to their historic width, grade and alignment
- convert some ephemeral railroad routes and lumbering roads in backcountry zones to single-track trails
- provide trailheads with parking for all new trails
- continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible
- work collaboratively with gateway community partners, state agencies, railroad companies, and private landowners to develop trail connections from the park to nearby communities and other visitor attractions

The GMP provides examples of trail improvements that will be considered by NPS, subject to future NEPA compliance if and when funding becomes available. These will be specifically identified in the new trail development strategy to be completed in 2013.

Through Park Connector. Of particular importance to the trail connections concept plan is the proposed continuous Through Park Connector at NERI, a major feature identified in the park's new GMP. The trail would initially enable hikers to travel end to end of the park, generally at or near the river – on a new through park connector. A few segments would be scenic roads, making it possible for visitors unable to hike or bike to explore some of the remote areas of the park. The

through park connector would generally be composed of the following segments (from upstream to downstream):

- New River Parkway (existing River Road) – from Brooklyn (near Hinton) to the new New River Parkway Bridge
- a new trail from the new New River Parkway bridge to the Glade Creek Campground
- existing Glade Creek Road from the Glade Creek Campground to WV SR 41 and WV SR 41/8 – from Glade Creek Road to Terry
- existing WV SR 41 and McKendree Road from Glade Creek Road to Southside Junction
- existing trails and administrative roads from Southside Junction to the Bridge Trailhead (at Fayette Station Road)
- existing Fayette Station Road from the Bridge Trailhead to a new trailhead at Teays Landing
- new trail from a new trailhead at Teays Landing to Hawks Nest State Park

Over time, and as property and rights-of-way are acquired, NPS would seek to develop trails on both river right and river left, from the New River Parkway Bridge to Hawks Nest. These trails would connect and provide a loop trail that would provide for several days of hiking in the park. The loop trail would ultimately utilize existing bench roads, rim-top trails, and river level roads, and provide a variety of hiking experiences. Camping along the route would be facilitated so that people could enjoy multi-day hikes in the park.

1.2.4 State-Designated Scenic Byways and Backways

WV DOT has designated six scenic byways and seven scenic backways across the state, including the Glade Creek Road Scenic Backway in New River Gorge National River. Byways and backways provide access to numerous cultural, historical, natural, recreational and scenic sites. Typically popular activities along byways and backways include hiking, camping, picnicking, biking, fishing, viewing historic sites, and scenic driving. A scenic backway is similar to a byway but offers a slower pace, in a more intimate relationship with the land.

1.2.5 Transit Access to the Park

- **Mass Transit Overview**

Private bus companies, schools, commercial outfitters, and visitor user groups provide mass transit access to the park. In 2010 approximately 0.5 percent of the park's visitors – or 5,280 people - traveled to the park by tour bus. Many others arrived in small vans and buses owned and operated by church groups, scout troops, and other groups visiting the park. Visitors using commercial guiding services for paddling, climbing, and biking mostly traveled to and from outfitter base camps via bus. In 2007, 9.0 percent of the park's visitors – or 106,109 people – traveled by bus with whitewater outfitters to and from the park's public river accesses.

- **Mass Transit Management Concerns**

Three primary challenges to the use of mass transit exist in the park:

- rugged topography and narrow roads limit the areas where mass transit vehicles can safely operate
- rugged topography constrains the space suitable for maneuvering and parking mass transit vehicles at heavily used sites
- the seasonal nature of the potential demand for mass transit probably limits the feasibility of commercial shuttle services in the park to summer weekends and to very few locations, such as the Fayette Station area

These issues are most problematic at river access facilities – particularly McCreery, Cunard, and Fayette Station – and in climbing access areas. Two locations where the NPS is exploring potential use of mass transit for rim-to-river travel to alleviate crowding on peak visitation days are from Cunard Top to the Cunard River Access and from Canyon Rim to Fayette Station.

1.2.6 Freight and Passenger Rail Service

- **Freight and Passenger Rail Service Overview**

The CSX Corporation owns several railroad rights-of-way through the park and operates frequent freight service on most of them (see table 1.10). The CSX Mainline runs at the river level through the entire park on river right as well as on river left from Cunard downstream. Frequent freight and coal trains move daily on

Table 1.10

New River Gorge National River

CSX Corporation Rail Lines through the Park

Rail Lines
▪ **CSX Mainline** – - along the New River, on river right through the park - along the New River, on river left from Cunard downstream
▪ **CSX Corman Line**, along Dunloup Creek from Mt. Hope to Southside Junction
▪ **CSX Meadow Creek Line**, along Meadow Creek from Meadow Bridge to Meadow Creek
▪ **CSX Piney Creek Spur Line**, along Pine Creek

the Mainline through the park. Trains also frequently stop in the park at sidings at Thurmond and Meadow Creek and at yards at Hinton and Quinnimont.

AMTRAK uses the CSX Mainline tracks to provide passenger service three times a week on the Cardinal from New York to Chicago via Charlottesville, with regular stops at Prince and Hinton and a flag stop at Thurmond.

On two weekends in October the Collis P. Huntington Railroad Historical Society operates fall foliage trips for visitors on the New River Train using CSX tracks from Huntington to Hinton, typically with stops at Thurmond and Prince.

- **Freight and Passenger Rail Service Management Concerns**

Four primary issues relate to freight and passenger rail service through the park:

- legal pedestrian and vehicular access across the CSX right-of-way exists only where public roads cross the tracks
- at many locations in the park visitors frequently illegally cross the CSX right-of-way on foot at many locations to reach the river, exposing themselves to potential injury from passing trains (see figure 1.2)
- freight trains transport hazardous materials through the park that would endanger park resources and visitors in the event of a spill
- at this time passenger train service is infrequent and does not afford a viable means for visitor travel to the park

- **Actions Recommended in the GMP to Address Management Concerns**

In the future NPS will continue to work with the CSX Corporation to acquire additional legal crossings of the CSX rights-of-way in the park wherever possible. Priorities are to secure legal crossings at locations where visitors currently frequently cross tracks illegally. In addition effort will be focused on securing legal crossings needed for development of a new developed campground at Terry Beach and for a rim to river trail from GW Carver to Keeney Creek.

1.3 LOWER NEW RIVER – EXISTING PUBLIC RIVER ACCESS

1.3.1 Fayette Station (figure 1.3)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Fayette Station is the only public river take-out for visitors paddling the popular lower gorge of the New River. Other park visitors use the site to view the river, watch the paddlers, fish, and picnic. On summer weekends Fayette Station typically experiences congestion during the late morning and early afternoon hours when paddlers arrive at the end of their trip through the lower gorge. Take-out activity starts at around 11:00 am and peaks from 1:30 to 3:30. In recent years congestion has reduced somewhat, in part due to a decline in paddler visitation and in part due to increased outfitted paddler use of the private river access slightly downstream at Teays.

Fayette Station facilities include outfitted paddler bus parking (6 spaces), private paddler parking and day-use visitor parking (29 spaces total), restrooms/changing station, and separate river access sites for outfitters, private paddlers, and NPS rangers. A remote parking area (Cole Lot), located across an active CSX right-of-way, provides additional parking and staging capacity for private paddlers (30 spaces).

Parking and Staging Area Demand/Capacity. At Fayette Station existing parking and staging areas for outfitted paddler buses and equipment vehicles is adequate to meet demand (table 1.11). However parking for private paddlers and day-use visitors who drive the Fayette Station Road meets only approximately 63 percent of demand on peak days. In 2010 approximately 236 private paddlers took out at Fayette Station on peak days. Designing for 80 percent of peak demand and

Table 1.11 Fayette Station – Existing Parking Demand/Capacity

	Parking Demand (at 80% of peak visitation[1])	Existing Capacity
High and Low Flow – Outfitted Paddler Buses	4	6
High and Low Flow – Outfitted Paddler Equipment Vehicles	4	4+
Private Paddlers – High and Low Flow	94	59

[1] *Parking demand is the same for both high flow and low flow conditions.*
Peak Visitation Data Source: NPS 2010b

assuming two paddlers per car, Fayette Station should have 94 private paddler parking spaces. Currently there are 59 spaces, indicating a shortfall of 35 spaces.

Natural Resources. Portions of the Fayette Station site along the New River and Wolf Creek are within the floodplain. Accurate floodplain mapping is not available. Empirical data indicate that during flood events with river flows in the 80k to 100k cfs range the water rises to the 854' contour, flooding the upstream corner of the day-use parking area, submerging the private boater ramp and commercial river access, and depositing woody debris and mud.

Rare plant communities composed of sycamore-river birch riverscour woodland and Sycamore-ash floodplain forest characterize the undisturbed area between the parking facilities and the New River.

Cultural Resources. No cultural resources have been identified at the site.

Non-Federal Land Ownership and Retained Rights. CSX Corporation owns the railroad right-of-way which divides the site, separating the overflow private paddler parking area (Cole Lot) from the developed visitor facilities. A portion of the federally-owned land adjoining the site access road for old SR 82 has a perpetual reserved right for the "Wildwater Cemetery." Appalachian Wildwater has a retained right allowing access directly to the outfitted paddler launch, enabling outfitted paddlers and equipment to be picked up at the river edge.

- **GMP Actions for Consideration.**

The *New River Gorge National River GMP/EIS* (NPS 2011a and 2009a) identifies the following examples of changes needed to achieve desired conditions at Fayette Station:

- during periods of high visitor use, provide a concession-based shuttle from satellite parking areas to the river access site
- rehabilitate the existing parking area above the CSX right-of-way
- provide a day-use area adjacent to the New River

- **Management Concerns**

Table 1.12 summarizes existing management concerns at the Fayette Station river access.

Table 1.12 Fayette Station River Access – Existing Management Concerns

	Existing Management Concerns	
Visitor Experience	1a.	The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.
	1b.	Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.
	1c.	On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.
	1d.	On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).
	1e.	One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.
Park Operations	2a.	Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.
	2b.	Portions of the day-use area below the 854'contour are susceptible to flooding.
Resource Protection	3a.	Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.

Private Paddler River Access

Outfitted Paddler River Access

Outfitted Paddler Equipment Vehicle Parking

Ranger River Access

Observed Approximate Limit of Flooding at New River Flows of 80k to 100k cfs

15 Private Paddler Parking Spaces

6 Outfitted Paddler Bus Parking Spaces

2 Universal Access Parking Spaces

Restrooms/ Changing Facilities

12 Day-Use Parking Spaces (also used by as private paddlers spaces on peak days)

Gate

ACE Retained Right to Launch at Day-Use Beach

Day-Use Area

One-Lane Bridge with Pedestrian Walkway

Perpetual Reserved Right for Wildwater Cemetery

CSX Access/Staging Area

Illegal CSX Crossing

Cole Lot (30 private paddler overflow parking spaces)

SR 82

Figure 1.3

Fayette Station - Existing Conditions

Visitor Facilities

Existing Facilities

Outfitted Paddler Bus Parking Spaces:	6
Private Paddler Parking Spaces:	17
Day-Use Parking Spaces:	12
Private Paddler Overflow Parking Spaces:	30

Private and Outfitted Paddler River Access

One-Lane Bridge with Pedestrian Walkway

Restrooms/Changing Facilities

Natural Resources

Forest Cover

Rare Plant Community – Sycamore-River Birch Riverscour Woodland

Rare Plant Community – Sycamore-Ash Floodplain Forest

Ownership

Non-Federal

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1.3.2 Cunard (figure 1.4)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Cunard is the primary river access site used to launch river trips through the lower gorge on low flow days. It is also the take-out for the majority of upper New River trips during all flow conditions. Some fishermen use the site, typically parking along a separate access road (Fisherman Access Road). Little other day-use visitor activity occurs. During summer weekends Cunard experiences congestion during the early morning hours when outfitted paddlers arrive in buses, receive instructions, and carry rafts down slides to the river for launching. Put-in activity starts at around 7:00 am and peaks from 8:00 to 11:00 am. In recent years congestion has reduced due to a decline in paddler visitation. NPS currently estimates crowding to be an issue approximately 20 days per year.

Access to Cunard is via the Cunard Access Road, an NPS maintained road. Recent road improvements have enhanced operational safety, removing one-way segments on curves. Recurring landslides require ongoing maintenance.

Cunard facilities include outfitted paddler equipment vehicle parking (10 spaces), private paddler parking (17 spaces), restrooms/changing station, and separate river access sites for outfitters and private paddlers.

Parking Demand and Staging Area Capacity. At Cunard existing parking and staging areas for outfitted paddler buses and equipment vehicles is adequate to meet

Table 1.13 Cunard – Existing Parking Demand/Capacity

	Parking Demand (at 80% of peak visitation[1])	Existing Capacity
High Flow – Outfitted Paddler Equipment Vehicles	NA (outfitters put-in upstream)	10
High Flow – Outfitted Paddler Buses	NA (buses drop off and do not park)	NA
Low Flow – Outfitted Paddler Equipment Vehicles	9	10
Low Flow – Outfitted Paddler Buses	NA (buses drop off and do not park)	NA
Private Paddlers – High and Low Flow	32	17

Peak Visitation Data Source: NPS 2010b

demand during both high flow and low flow conditions (table 1.13). However parking for private paddlers meets only approximately 53 percent of demand on peak days. Designing for 80 percent of peak demand and assuming two paddlers per car, Cunard should have 32 private paddler parking spaces. Currently there are 17 spaces, representing a shortfall of 15 spaces.

Natural Resources. Shoreline areas subject to flooding along the Cunard site are limited due to the steep river banks. Accurate floodplain mapping is not available. Empirical data indicate that during flood events flood waters typically submerge both launching ramps depositing woody debris and mud.

A rare plant community – Sycamore-ash floodplain forest – characterizes the undisturbed area immediately upstream of the outfitted paddler river access.

Cultural Resources. Remnants of two tipple piers remain adjacent to the comfort station.

Non-Federal Land Ownership and Retained Rights. Three parcels remain in private ownership along the river in private ownership upstream of the outfitted paddler launch; outfitters own two parcels and the Boy Scouts of America owns one parcel.

- **GMP Actions for Consideration.**

The *New River Gorge National River GMP/EIS* (NPS 2011a and 2009a) identifies the following examples of changes needed to achieve desired conditions at Cunard:

- acquire property adjacent to the existing Cunard river access and provide an additional boat launch facility
- provide additional private paddler parking along the Fisherman's Trail access road
- provide facilities for disabled boaters to access the river at Cunard
- during periods of high visitor use provide a concession-based shuttle from satellite parking areas to the river access site
- if after making the river access improvements identified for Cunard and Brooklyn, capacity issues still remain on peak visitation days, then consider developing a new public river access facility at Surprise

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- **Management Concerns.**

Table 1.14 summarizes existing management concerns at the Cunard River Access.

Table 1.14 Cunard River Access – Existing Management Concerns

	Existing Management Concerns
Visitor Experience	1a. Steep terrain limits the area available for visitor facilities. Demand for river access during peak periods in the small space diminishes the visitor experience due to crowding. Visitors feel rushed as outfitters seek to move paddlers safely through the sequence of launching activities as quickly as possible to make room for others. 1b. Facilities are located above the river requiring paddlers to carry equipment down to the river from the parking and staging area, diminishing the visitor experience, slowing the launching process, and creating visitor safety hazards. 1c. The sidewalk along the perimeter of the outfitted paddler parking area is too narrow for groups carrying rafts, increasing the potential for visitor injuries particularly during congested morning conditions. 1d. The outfitted paddler raft slide is long and very steep, increasing the potential for visitor injuries on steps particularly during congested morning conditions. 1e. The supply of designated private paddler parking spaces is not adequate to meet demand on peak days, creating congestion and safety hazards on peak days. 1f. There is no suitable staging area for private paddlers, causing some to illegally use the handicapped parking space at the comfort station for staging. 1g. Families and other less-experienced visitors who paddle the upper New River take out at Cunard. Paddlers have to carry rafts up steps using the steep raft slide, increasing the potential for visitors particularly when they are tired at the trip end.
Park Operations	2a. Launching is difficult because trailers must be backed down the Fisherman Access Road.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts. 3b. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining expansion potential.

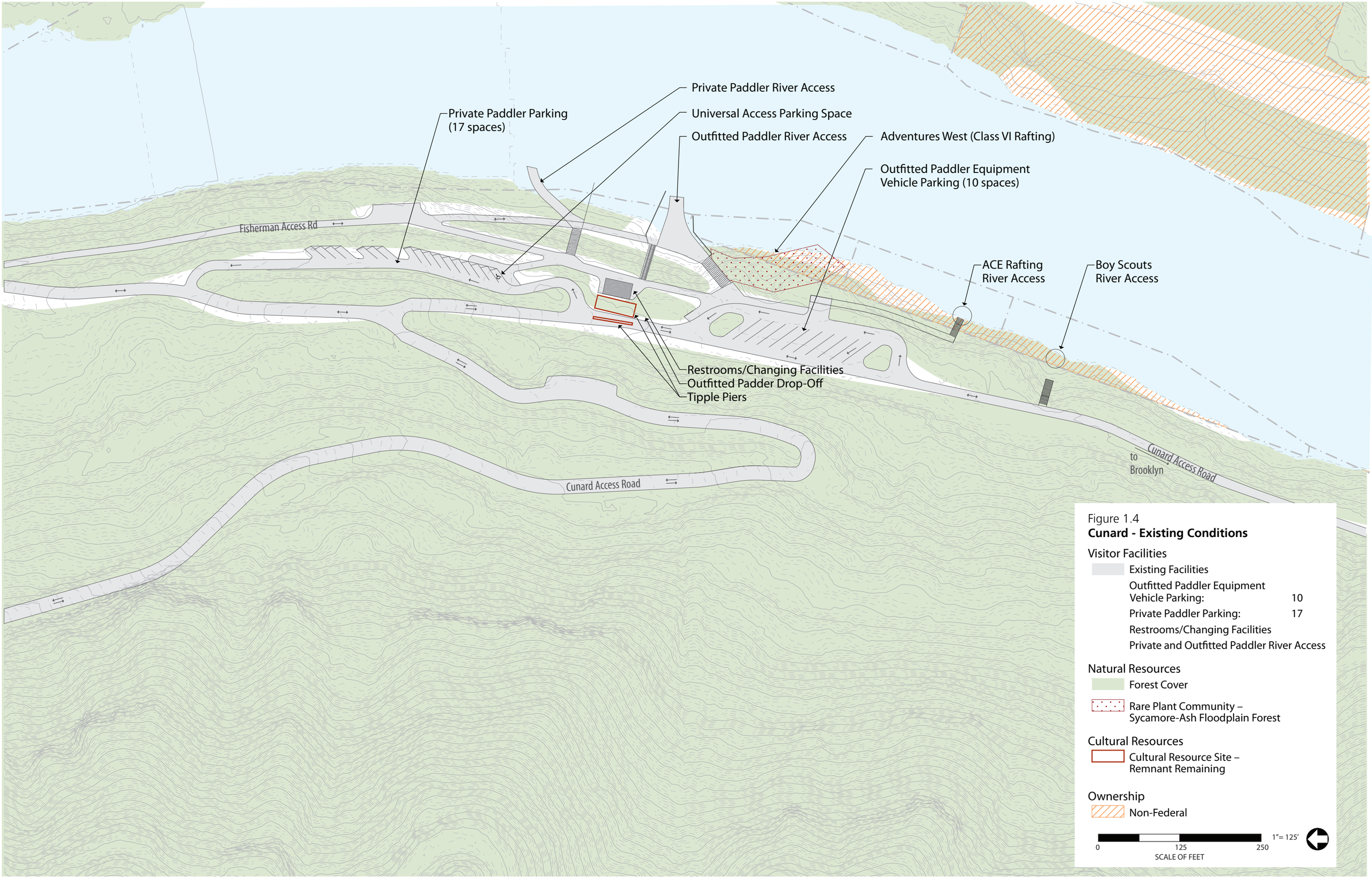

Figure 1.4
Cunard - Existing Conditions

Visitor Facilities
- Existing Facilities
- Outfitted Paddler Equipment Vehicle Parking: 10
- Private Paddler Parking: 17
- Restrooms/Changing Facilities
- Private and Outfitted Paddler River Access

Natural Resources
- Forest Cover
- Rare Plant Community – Sycamore-Ash Floodplain Forest

Cultural Resources
- Cultural Resource Site – Remnant Remaining

Ownership
- Non-Federal

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1.3.3 Brooklyn (figure 1.5)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Brooklyn is a small river access site used occasionally by private paddlers and fishermen. The terrain is steep and rough, making launching difficult. A boat slide is available for sliding Jon boats and rafts into the water. Vehicular access to Brooklyn is via the one-lane gravel park road from Cunard. Parking is informal with space for approximately five vehicles. Adjoining the launch site are five designated primitive campsites. Above the launch site is another area used for primitive camping without designated sites and a small parking area for day-use visitors who hike or bike the Southside Junction Trail.

Parking Demand and Staging Area Capacity. Parking capacity at Brooklyn is currently adequate given the condition of the existing river launch. The five existing spaces are adequate to meet private paddler demand. While adequate space is available for fishermen who use the site for launching Jon boats, maneuvering a trailer is difficult.

Natural Resources. Shoreline areas subject to flooding along the Brooklyn site are limited due to the steep river banks. Accurate floodplain mapping is not available. Empirical data indicate that during flood events flood waters typically submerge the lower few feet of the boat slide. A rare plant community – Sycamore–River Birch Riverscour Woodland – characterizes most of the site.

Cultural Resources. Numerous cultural resources from the area's industrial period during the late 19th and early 20th centuries are found on the site. A rail line once ran through the site along which there was a bank of coke ovens, much of which still remains. Other sites of remnant mining structures include a pump house, engine house, and retaining walls.

Non-Federal Land Ownership and Retained Rights. The Brooklyn site is entirely in federal ownership. There are no retained rights.

Parking Demand and Staging Area Capacity. At Brooklyn existing parking and staging areas for outfitted paddler buses and equipment vehicles is adequate to meet demand during both high flow and low flow conditions (table 1.15). However parking for private paddlers meets only approximately 53 percent of demand. There is also demand for better access at Brooklyn for disabled fishermen.

Table 1.15 Brooklyn – Existing Parking Demand/Capacity

	Parking Demand (at 80% of peak visitation[1])	Existing Capacity
Private Paddlers – High and Low Flow	5	5

Peak Visitation Data Source: NPS 2010b

- **GMP Actions for Consideration.**

The *New River Gorge National River GMP/EIS* (NPS 2011a and 2009a) identifies the following examples of changes needed to achieve desired conditions at Brooklyn:

- provide new picnicking facilities with parking and pedestrian access to the river

- **Management Concerns**

Table 1.16 summarizes existing and potential management concerns at the Brooklyn River Access, which is under study for expansion.

Table 1.16 Brooklyn River Access (Under Study for Expansion) – Existing and Potential Management Concerns

	Existing and Potential Management Concerns	
Visitor Experience	1a.	The existing ramp with boat slide does not work well. The sharp turn on the approach and the steep slope make it very difficult to launch boats.
	1b.	Primitive campsites are very close to the launch site and interfere with parking for fishermen and paddlers.
	1c.	Primitive campsites are poorly drained and are often inundated with water.
	1d.	Primitive camping must continue to be accommodated at the site.
	1e.	Fishermen, hikers, and bikers frequently use the site and must be accommodated in future planning.
	1f.	Better access is needed for disabled fishermen.
Park Operations	2.	Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining facility expansion and posing potential recurring management challenges if facilities are expanded.
Resource Protection	3a.	Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.
	3b.	Numerous cultural resources on the site (both remnants and historic locations) must be protected from potential adverse effects associated with any future development of larger river access facilities.

Historic Rail Line
Gap in Coke Ovens
Coke Ovens
Campsites
Historic Rail Line
Camping/Private Paddler Boater Parking
Private Paddler/ Boater Access
Historic Rail Line
Southside Junction Trail (to Thurmond)
Pump House
Coke Oven Tipple
Gap in Coke Ovens
Coke Ovens
Mile Post
to Cunard
Gate
Coke Ovens
Retaining Wall
Historic Rail Line
Campsites
Day-Use Parking
Historic Rail Line
Engine House
Retaining Wall
Tipple
Haulage

Figure 1.5
Brooklyn - Existing Conditions

Visitor Facilities
- Existing Facilities
- Private Paddler/Boater River Access
- Camping/Private Boater Parking
- Camp Sites
- Day-Use Parking

Natural Resources
- Forest Cover
- Rare Plant Community – Sycamore-River Birch Riverscour Woodland
- State Rare Plants – *Cardamine flagellifera*

Cultural Resources
- Cultural Resource Site – Remnant Remaining
- Cultural Resource Site – No Remnant Remaining

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1.4 RIVER ACCESS SITE ENHANCEMENT ALTERNATIVES

1.4.1 Introduction

- **Alternatives Evaluation Framework**

This alternative transportation feasibility study (ATFS) has evaluated numerous options for transportation management actions to address visitor congestion at the existing river access sites at the park. The development of options considered:

- physical changes at existing river access sites to alleviate congestion
- development of new facilities at Brooklyn and/or Surprise
- development of a shuttle system serving Fayette Station and Cunard
- passenger rail service from Thurmond to Cunard

Initially the planning team considered a wide range of alternatives. Evaluation of the alternatives eliminated many from further consideration. Criteria used for the analysis were based upon the following evaluation criteria:

- project purposes
  - enhance the visitor experience
  - enhance visitor safety
  - facilitate park operations
  - enhance mobility and accessibility within the parks
  - improve roadway conditions on public roads adjoining the parks
- NPS programmatic goals of resource protection and partnership building
- practical implementation considerations, including constructability, recurring maintenance needs, and public acceptance

Table 1.17 lists the objectives and criteria for each goal which the planning team used to evaluate the alternatives.

Table 1.17 Project Objectives and Evaluation Criteria

	Objective	Evaluation Criteria
Project Purpose	enhance visitor safety	• addresses existing and potential safety hazards
	facilitate park operations	• reduces enforcement and management needs during peak periods
	enhance mobility and accessibility within the parks	• facilitates access to the river for all visitors
	improve roadway conditions on public roads adjoining the parks	• relieves congestion at river access sites • relieves congestion on roads accessing river access sites
NPS Programmatic Objectives	enhance visitor experience	• increases likelihood that visitors have their desired experience • reduces potential for visitor conflicts
	avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• avoids/minimizes impacts to forest resources • avoids/minimizes impacts to rare plant communities and rare/endangered species
	avoids/minimizes/or has no potential to affect known or suspected cultural resources	• does not have the potential to affect known or suspected cultural resources
	build partnerships	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites
Implementation Considerations	constructability	• can be built with relative ease and efficiency
	maintenance	• not likely to recurring unusual recurring maintenance investment
	public acceptance	• responds to known visitor concerns • responds to known stakeholder concerns

- **Alternatives Retained for More Detailed Consideration**

Using the evaluation framework the planning team has identified feasible alternatives that address the project propose and need. These alternatives were retained for further study and for development of capital cost estimates. Retained alternatives include:

- **Fayette Station**
  - Fayette Station Alternative 1c
  - Fayette Station Alternative 2b (options 1 or 2)
  - Fayette Station Alternative 4b
- **Cunard**
  - Cunard Alternative 1
- **Brooklyn**
  - Brooklyn Alternative 1
  - Brooklyn Alternative 2
- **Cunard/Fayette Station Shuttle**
  - composed of a shuttle, Cunard Alternative 1a, Cunard Rim Parking Alternative 1b or 1c, and Fayette Station Alternative 5

The following sections 1.4.2 through 1.4.6 summarize each retained alternative. A concept plan illustrates each alternative and a table summarizes the actions included in the concept plan which address management concerns. Capital cost estimates are summarized for the retained alternatives in Section 1.6 below.

Section 1.5 below summarizes each alternative considered but dismissed.

Fayette Station River Access

1.4.2 Fayette Station

Fayette Station Alternative 1c (Retained)

Table 1.18 Fayette Station River Access Alternative 1c – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line.	1a. The alternative would establish a legal pedestrian at-grade crossing across the active rail line.
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Day-use and private paddler parking lots would be expanded and the Cole Lot would include 32 parking spots for overflow parking.
	1e. One-way traffic along the bridge to the outfitted and paddler parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is very difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Areas of the day-use are below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854' contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.

Table 1.19 Fayette Station Alternative 1c (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• signalized at-grade crossing would establish a legal CSX crossing between Fayette Station and the Cole Lot • two-lane bridge would reduce potential for conflicts associated with the existing one-way bridge with two-way traffic • pedestrian walkway from the day-use to private/outfitter parking would reduce hazards associated with vehicular and pedestrian cross traffic
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns

Table 1.19 Fayette Station Alternative 1c (Retained) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand) • expanding parking would increase the potential for available day-use visitor parking on busy days
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• use of Cole lot would better distribute traffic within the access site
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • day-use visitors would be more likely to have their desired experience • removal of the tree island within the existing parking area would remove shade and detract from the visual setting
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• development would require minimal tree clearing within the existing disturbed area (0.1 acre)(tree island within the existing parking area)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would have no direct impact on rare plant communities and rare/endangered species
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development would occur within the existing disturbed area and would require minimal earthwork and reconstruction of an existing retaining wall (maximum height of 5’)
	• not likely to require unusual recurring maintenance investment	• improvements would not likely require unusual recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

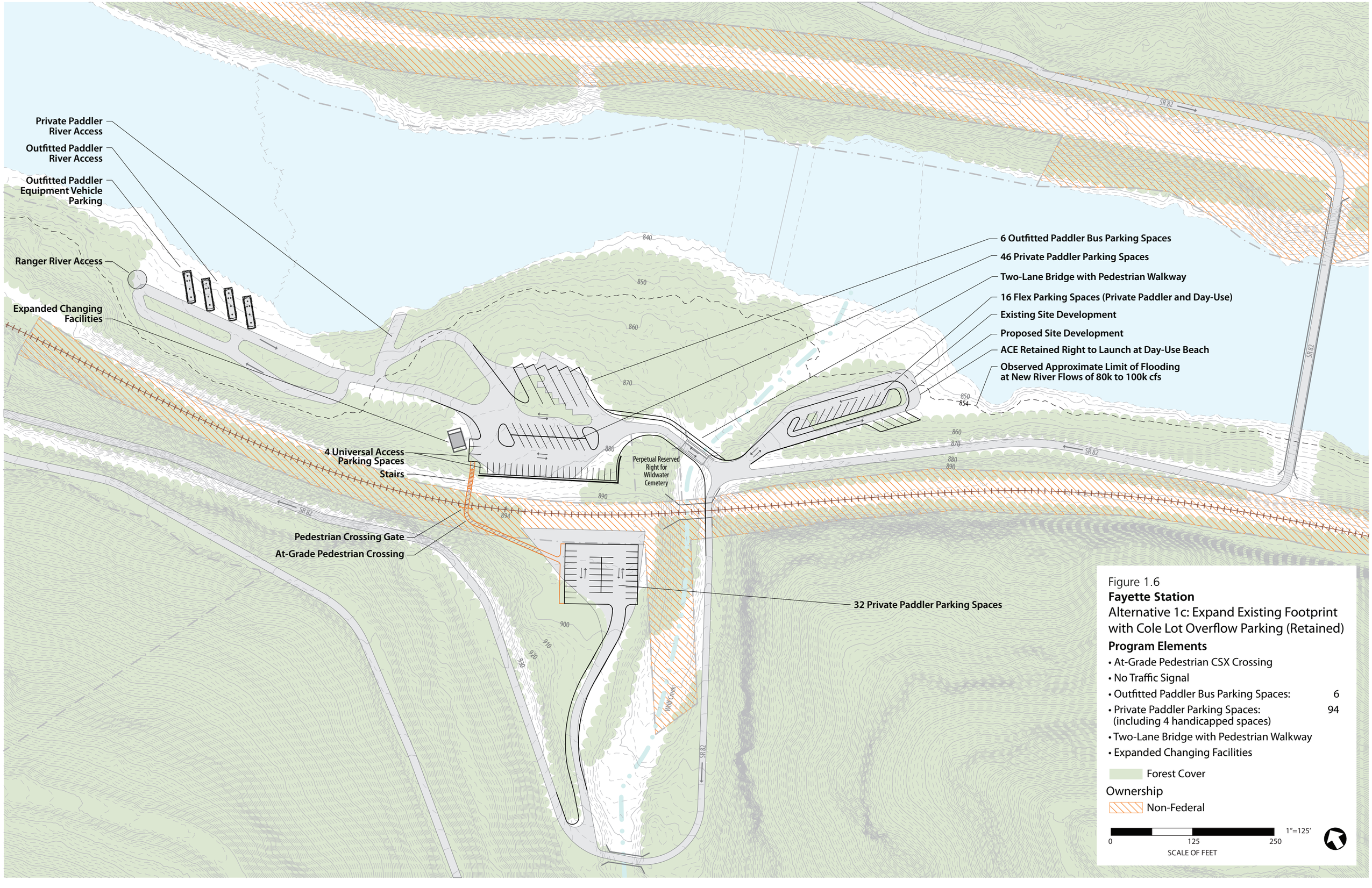

Figure 1.6

Fayette Station

Alternative 1c: Expand Existing Footprint with Cole Lot Overflow Parking (Retained)

Program Elements

- At-Grade Pedestrian CSX Crossing
- No Traffic Signal
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: (including 4 handicapped spaces) 94
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities

Forest Cover

Ownership

Non-Federal

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- **Fayette Station Alternative 2b Options 1 and 2 (Retained)**

Table 1.20 Fayette Station River Access Alternative 2b Options 1 and 2 – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.	1a. The alternative would establish a legal pedestrian at-grade crossing across the active rail line (option 1) or cantilevered below grade crossing (option 2).
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Day-use and private paddler parking lots would be expanded and the Cole Lot would include 44 parking spots for overflow parking.
	1e. One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Portions of the day-use area below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854' contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.

Table 1.21 Fayette Station Alternative 2b Options 1 and 2 (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• signalized at-grade crossing (option 1) or cantilevered pedestrian bridge (option 2) would establish a legal CSX crossing between Fayette Station and the Cole Lot • two-lane bridge would reduce potential for conflicts associated with the existing one-way bridge with two-way traffic • pedestrian walkway from the day-use to private/outfitter parking would reduce hazards associated with vehicular and pedestrian cross traffic
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns

Table 1.21 Fayette Station Alternative 2b Options 1 and 2 (Retained) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand) • expanding parking would increase the potential for available day-use visitor parking on busy days
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• use of Cole lot would better distribute traffic within the access site
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • day-use visitors would be more likely to have their desired experience
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• development would require minimal tree clearing within the existing disturbed area along the perimeter of the Cole Lot (0.1 acre)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would have no direct impact on rare plant communities and rare/endangered species
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development would occur largely within the existing disturbed area and would require minimal earthwork
	• not likely to require unusual recurring maintenance investment	• improvements would not likely require unusual recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

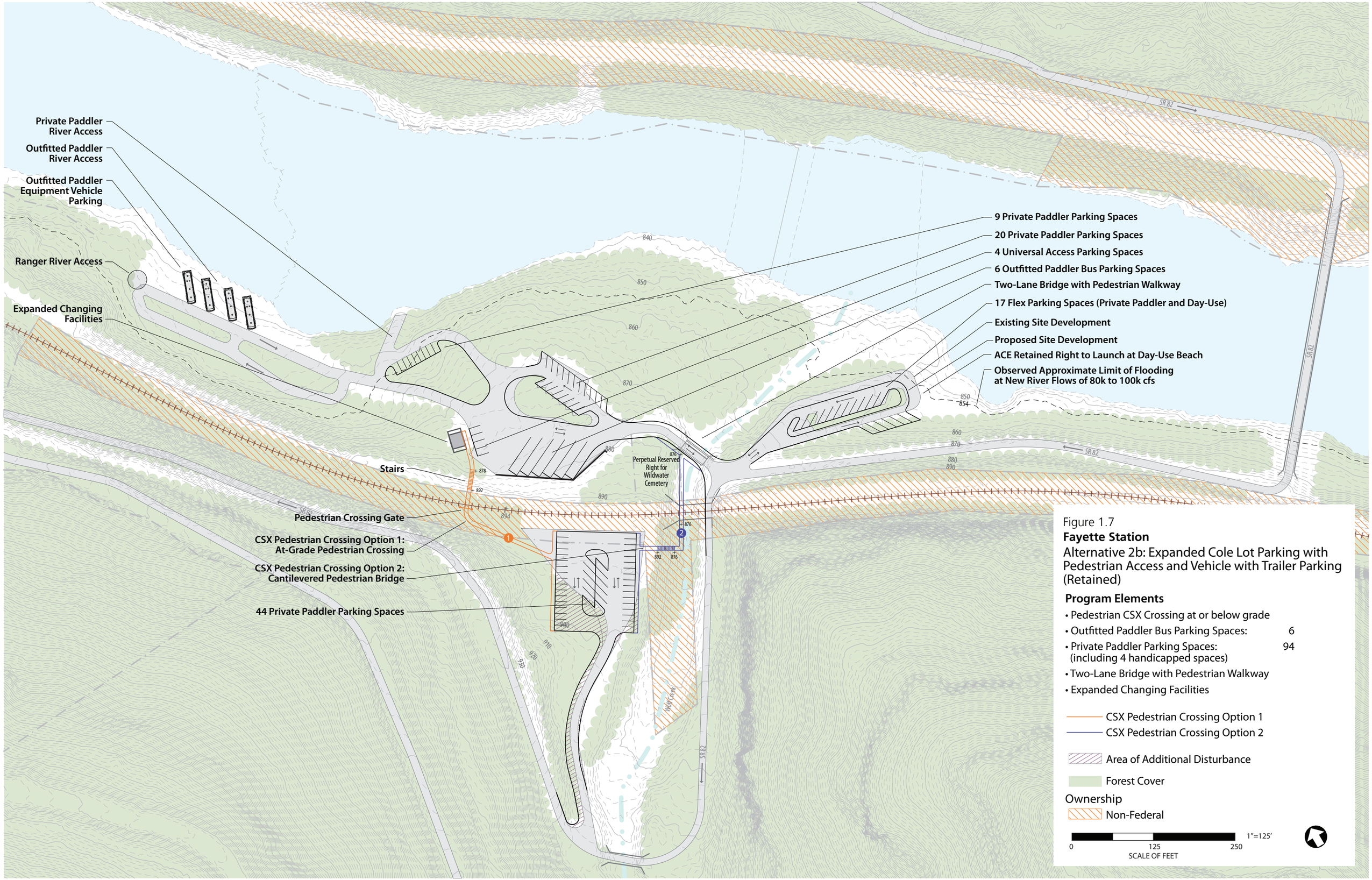

Figure 1.7

Fayette Station

Alternative 2b: Expanded Cole Lot Parking with Pedestrian Access and Vehicle with Trailer Parking (Retained)

Program Elements

- Pedestrian CSX Crossing at or below grade
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: 94 (including 4 handicapped spaces)
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities

CSX Pedestrian Crossing Option 1

CSX Pedestrian Crossing Option 2

Area of Additional Disturbance

Forest Cover

Ownership

Non-Federal

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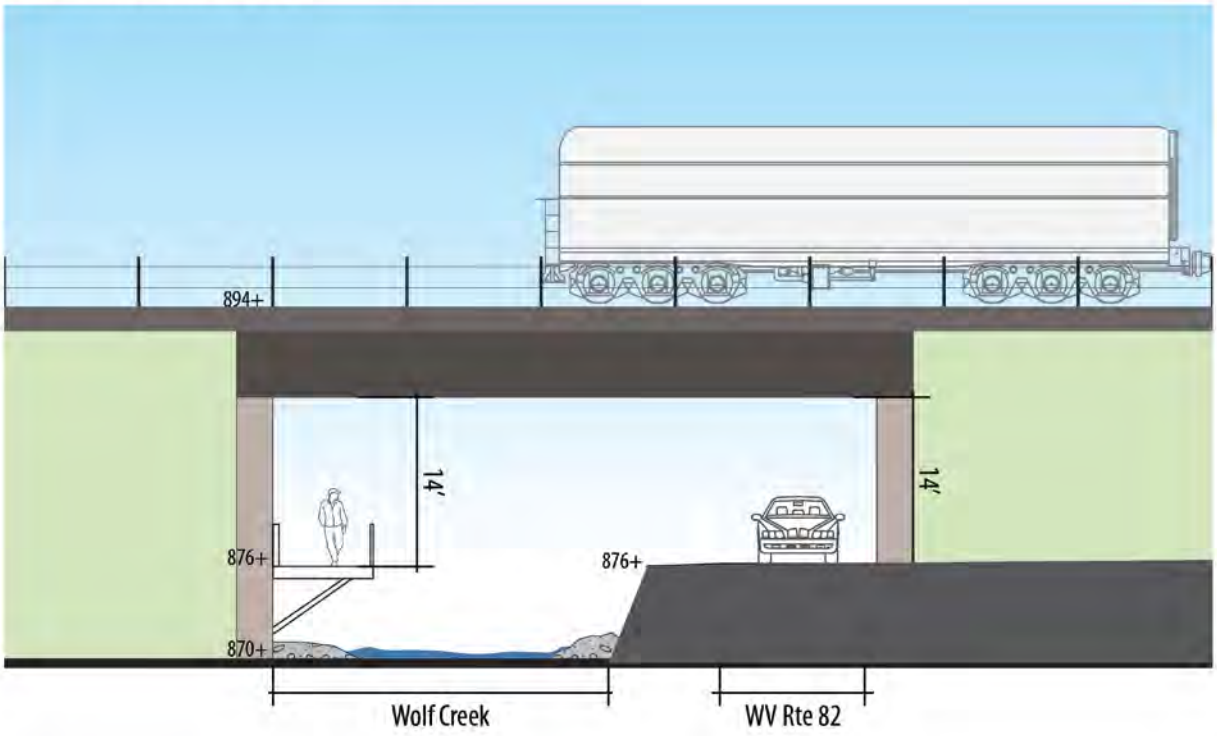
Figure 1.8
Fayette Station Alternative 2b Option 2 -
Cantilevered Pedestrian Bridge



- **Fayette Station Alternative 4b (Retained)**

Table 1.22 Fayette Station River Access Alternative 4b – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.	1a. The alternative would include a CSX crossing below the active rail line via a pedestrian tunnel.
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Day-use and private paddler parking lots would be expanded and the Cole Lot would include 44 parking spots for overflow parking.
	1e. One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Portions of the day-use area below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854' contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.

Table 1.23 Fayette Station Alternative 4b (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• pedestrian tunnel would establish a legal CSX crossing between Fayette Station and the Cole Lot • two-lane bridge would reduce potential for conflicts associated with the existing one-way bridge with two-way traffic • pedestrian walkway from the day-use to private/outfitter parking would reduce hazards associated with vehicular and pedestrian cross traffic
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand)

Table 1.23 Fayette Station Alternative 4b (Retained) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
		• expanding parking would increase the potential for available day-use visitor parking on busy days
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• use of Cole lot would better distribute traffic within the access site
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • day-use visitors would be more likely to have their desired experience
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• development would require minimal tree clearing within the existing developed area (0.1 acre) along the perimeter of the Cole Lot
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would have no direct impact on rare plant communities and rare/endangered species
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development would occur within the existing disturbed area and would require minimal earthwork and reconstruction of an existing retaining wall (maximum height of 5') • development of a pedestrian tunnel under the CSX ROW would require earth removal, grading, and construction of retaining walls (maximum height of 5')
	• not likely to require unusual recurring maintenance investment	• improvements would not likely require unusual recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

Fayette Station River Access

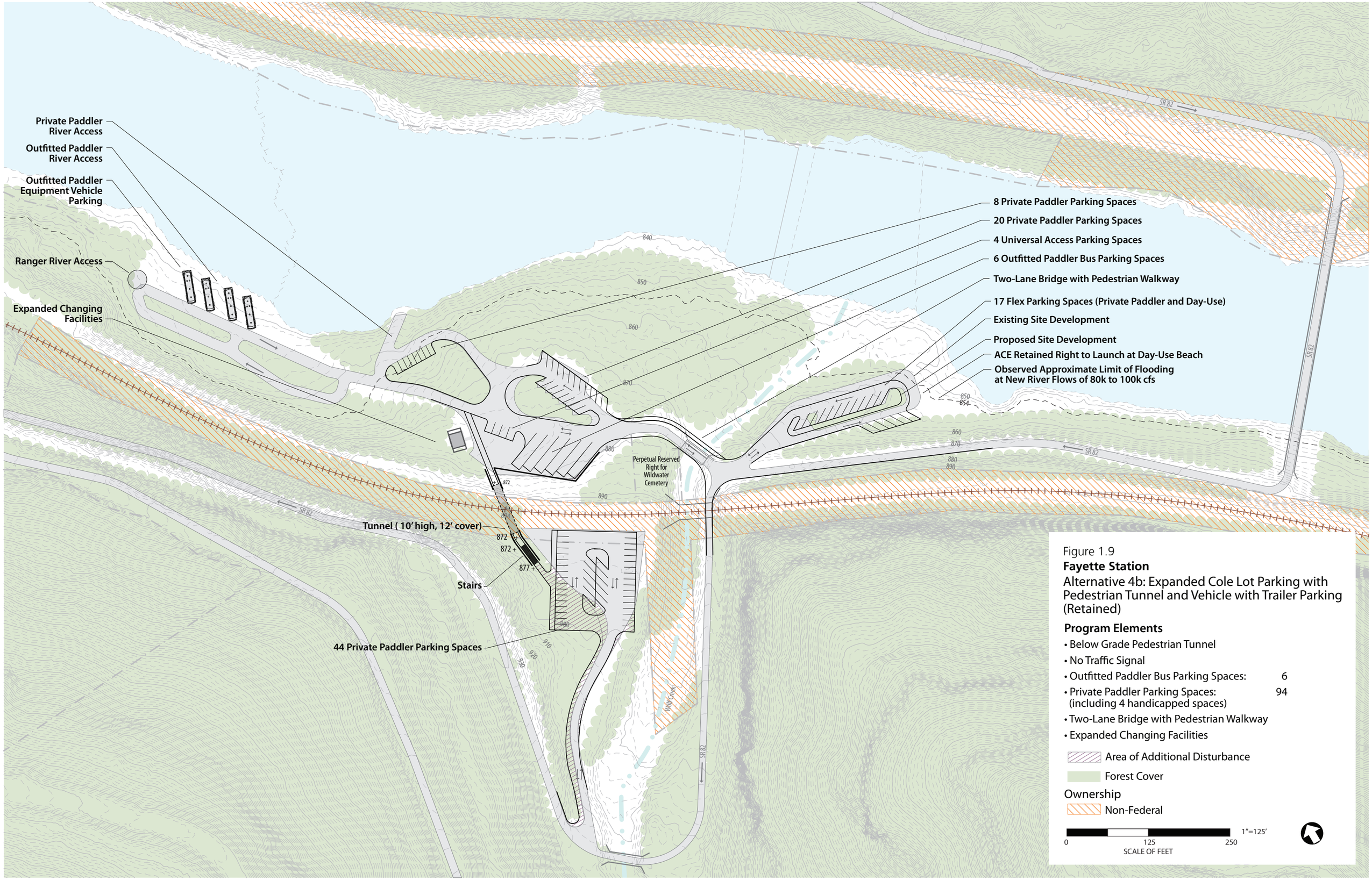


Figure 1.9

Fayette Station

Alternative 4b: Expanded Cole Lot Parking with Pedestrian Tunnel and Vehicle with Trailer Parking (Retained)

Program Elements

- Below Grade Pedestrian Tunnel
- No Traffic Signal
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: (including 4 handicapped spaces) 94
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities

Area of Additional Disturbance

Forest Cover

Ownership

Non-Federal

1"=125'

0 125 250

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1.4.3 Cunard

- **Cunard Alternative 1 (Retained)**

Table 1.24 Cunard River Access Alternative 1 – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Steep terrain limits the area available for visitor facilities. Demand for river access during peak periods in the small space diminishes the visitor experience due to crowding. Visitors feel rushed as outfitters seek to move paddlers safely through the sequence of launching activities as quickly as possible to make room for others.	1a. No action. Creating a larger staging space at the Cunard launch would require walls over 5'.
	1b. Facilities are located above the river requiring paddlers to carry equipment down to the river from the parking and staging area, diminishing the visitor experience, slowing the launching process, and creating visitor safety hazards.	1b. An inclined raft lift would transport rafts from the top of the stairs to the outfitted paddler river access.
	1c. The sidewalk along the perimeter of the outfitted paddler parking area is too narrow for groups carrying rafts, increasing the potential for visitor injuries particularly during congested morning conditions.	1c. A striped pedestrian walkway would be at the same grade as the parking area. The curb and gutter would be removed and relocated to the opposite side of the sidewalk.
	1d. The outfitted paddler raft slide is long and very steep, increasing the potential for visitor injuries on steps particularly during congested morning conditions.	1d. An inclined raft lift would transport rafts from the top of the stairs to the outfitted paddler river access.
	1e. The supply of designated private paddler parking spaces is not adequate to meet demand on peak days, creating congestion and safety hazards on peak days.	1e. Additional parking would be provided at the existing private paddler parking area and along Fishermans Access Road.
	1f. There is no suitable staging area for private paddlers, causing some to illegally use the handicapped parking space at the comfort station for staging.	1f. An area adjacent to the vault toilets and at the current handicap parking space would be designated as private paddler staging areas. The handicap parking spot would be relocated.
	1g. Families and other less-experienced visitors who paddle the upper New River take out at Cunard. Paddlers have to carry rafts up steps using the steep raft slide, increasing the potential for visitors particularly when they are tired at the trip end.	1g. An inclined raft lift would transport rafts from the outfitted paddler river access to the top of the stairs.
Park Operations	2a. Launching is difficult because trailers must be backed down the Fisherman Access Road.	2a. No action. Topography would require walls over 5' to establish turning radius required for vehicles with trailers.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining expansion potential.	3b. New development would not occur in uphill areas susceptible to slides.

Table 1.25 Cunard Alternative 1 (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• raft lift would address safety concerns associated with transporting rafts down and up steep steps • relocating curb and gutter would address hazards associated with existing sidewalk width
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand)
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate private paddler parking at different locations at the river access site and by diverting private paddler vehicles to satellite parking on the rim
	• relieves congestion on roads accessing river access sites	• generally would reduce congestion by diverting private paddler vehicles to satellite parking on the rim • expanding parking would likely relieve congestion on the Cunard Access Road by reducing pull-off roadside parking by private paddlers who cannot find designated parking spaces
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • staging areas would provide private paddlers with space to stage near the river access • raft lift would enhance circulation on existing steep stairs to river access
	• avoids/minimizes impacts to forest resources	• development would require minimal clearing within the existing disturbed area (0.1 acre)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would have no direct impact on rare plant communities and rare/endangered species
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development would occur within the existing disturbed area and would require minimal earthwork and construction of retaining walls; maximum retaining wall height would be approximately 8’
	• not likely to require unusual recurring maintenance investment	• improvements would not likely require unusual recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

Figure 1.10

Cunard

Alternative 1: Raft Lift

Program Elements

- Raft Lift
- Private Paddler Parking Spaces: 32
- Private Paddler Staging Areas: 2
- Private Paddler Vehicle with Trailer Parking Spaces: 4
- Reconstructed Walkway

Area of Additional Disturbance

Tree Cover

Rare Plant Communities

Sycamore - Ash Floodplain Forest

Ownership

Non-Federal

0 125 250

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4 Private Paddler Vehicle with Trailer Parking Spaces

6 Additional Private Paddler Parking Spaces

9 Additional Private Paddler Parking Spaces

1 Universal Access Parking Space

Private Paddler Staging Area (Temporary Parking)

Private Paddler Vehicle-Trailer Staging Area

Inclined Raft Lift

Remove/ Relocate Gutter and Curb and Stripe Pedestrian Walkway

Stabilized Launch

Inclined Raft Lift

Step Enhancements

2 Outfitted Paddler Vehicle Parking Spaces

Bus Turnaround

8' Retaining Wall

Fisherman Access Rd

Cunard Access Road

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1.4.4 Brooklyn

Brooklyn Alternative 1 (Retained)

Table 1.26 Brooklyn River Access Alternative 1 (under study for expansion) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The existing ramp with boat slide does not work well. The sharp turn on the approach and the steep slope make it very difficult to launch boats.	1a. The existing launch would be removed and replaced with a stabilized launch. The ramp would descend at a 10% slope and require no turns when backing to the river.
	1b. Primitive campsites are very close to the launch site and interfere with parking for fishermen and paddlers.	1b. Primitive campsites would be relocated to the opposite side of the road and away from the river access site.
	1c. Primitive campsites are poorly drained and are often inundated with water.	1c. Primitive campsites would be relocated to the opposite side of the road and at a higher elevation.
	1d. Primitive camping must continue to be accommodated at the site.	1d. Primitive camping would remain at Brooklyn.
	1e. Fishermen, hikers, and bikers frequently use the site and must be accommodated in future planning.	1e. Trailhead parking for hikers, bikers, and fishermen would remain at Brooklyn.
	1f. Better access is needed for disabled fishermen.	1f. New river launch and parking would enable fishing access for disabled fishermen.
Park Operations	2a. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining facility expansion and posing potential recurring management challenges if facilities are expanded.	2a. New development would largely be contained to areas of existing development and the historic rail grade.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Numerous cultural resources on the site (both remnants and historic locations) must be protected from potential adverse effects associated with any future development of larger river access facilities.	3b. New development would be designed around cultural resources.

Table 1.27 Brooklyn Alternative 1 (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• new river launch would descend to the river at a 10% slope and require no sharp turns
	• reduces enforcement and management needs during peak periods	• enforcement and management needs would increase during peak periods would continue due to increased visitor use
	• facilitates access to the river for all visitors	• new river launch would descend to the river at a 10% slope and require no sharp turns • expanding parking would increase likelihood of available parking for private paddlers and river access • new roads and staging spaces would facilitate outfitted paddler use of the river access • addition of a river launch at Brooklyn would provide needed fishing access for disabled fishermen

Table 1.27 Brooklyn Alternative 1 (Retained) – Performance Summary (Continued)

	Evaluation Criteria	Performance Summary
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by diverting use to an enhanced access at Brooklyn
	• relieves congestion on roads accessing river access sites	• vehicular congestion in Cunard outfitter parking area would increase due to through traffic going to Brooklyn
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• new river launch would descend to the river at a 10% slope and require no sharp turns • expanding parking would increase likelihood of available parking for private paddlers and river access • new roads and staging spaces would facilitate outfitted paddler use of the river access • relocating campsites would be in an area that is better drained and less likely to be inundated by water
	• reduces potential for visitor conflicts	• parking expansion would reduce potential for conflicts related to inadequate parking • potential for conflicts between campers and paddlers would increase due to increased day-use
	• avoids/minimizes impacts to forest resources	• development would largely occur within the existing disturbed area and would require forest clearing (0.6 acre)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would largely occur within the existing disturbed area and clearing of rare sycamore-river birch riverscour woodland (0.75 acre)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• site planning would likely avoid or minimize potential effects to cultural resources
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development would largely occur within the existing disturbed area and would require minimal earthwork/construction of retaining walls • bus turnaround would require earthwork and 6’ retaining wall • new roads would require earthwork to connect the grade of the historic railbed to the existing roadway at a 10% grade • new stabilized launch would require earthwork and retaining walls up to 6’
	• not likely to require unusual recurring maintenance investment	• grading and construction of retaining walls subject to slide damage and would likely requiring some recurring maintenance
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• private paddler concerns would be addressed

Figure 1.11
Brooklyn
Alternative 1: Distributed Parking (Retained)

Program Elements

• Outfitted Paddler Equipment Vehicle Spaces	4
• Private Paddler Parking Spaces	20
• Jon Boat Parking Spaces	5
• Trailhead Parking Spaces	8
• Campsite Parking Spaces	10
• Campsites	5
• Vault Toilet	

Natural Resources

- Forest Cover
- Rare Plant Community – Sycamore-River Birch Riverscour Woodland
- State Rare Plants – *Cardamine flagellifera*

Cultural Resources

- Cultural Resource Site – Remnant Remaining
- Cultural Resource Site – No Remnant Remaining

Vault Toilet
2 Outfitted Paddler Equipment Vehicle Parking Spaces
2 Outfitted Paddler Equipment Vehicle Parking Spaces
Relocated Gate
Expanded Roadway for Trailer Maneuvering
6' Retaining Wall
Southside Junction Trail (to Thurmond)
10% slope
+ 980
+ 1000
Mile Post
to Cunard
+ 1006
+ 1005
+ 1020
Gate
+ 1024
5 Campsites
10 Camp Parking Spaces
Vault Toilet
20 Private Paddler Parking Spaces
5 Jon Boat Parking Spaces
8 Trailhead Parking Spaces
1 Universal Access Parking Space

1" = 100'
0 100 200
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- **Brooklyn Alternative 2 (Retained)**

Table 1.28 Brooklyn River Access Alternative 2 (under study for expansion) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The existing ramp with boat slide does not work well. The sharp turn on the approach and the steep slope make it very difficult to launch boats.	1a. The existing launch would be removed and replaced with a stabilized launch. The ramp would descend at a 10% slope and require no turns when backing to the river.
	1b. Primitive campsites are very close to the launch site and interfere with parking for fishermen and paddlers.	1b. Primitive campsites would be relocated to the opposite side of the road and away from the river access site.
	1c. Primitive campsites are poorly drained and are often inundated with water.	1c. Primitive campsites would be relocated to the opposite side of the road and at a higher elevation.
	1d. Primitive camping must continue to be accommodated at the site.	1d. Primitive camping would remain at Brooklyn.
	1e. Fishermen, hikers, and bikers frequently use the site and must be accommodated in future planning.	1e. Trailhead parking for hikers, bikers, and fishermen would remain at Brooklyn.
	1f. Better access is needed for disabled fishermen.	1f. New river launch and parking would enable fishing access for disabled fishermen.
Park Operations	2a. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining facility expansion and posing potential recurring management challenges if facilities are expanded.	2a. New development would largely be contained to areas of existing development and the historic rail grade.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Numerous cultural resources on the site (both remnants and historic locations) must be protected from potential adverse effects associated with any future development of larger river access facilities.	3b. New development would be designed around cultural resources. 7

Table 1.29 Brooklyn Alternative 2 (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• new river launch would descend to the river at a 10% slope and require no sharp turns
	• reduces enforcement and management needs during peak periods	• enforcement and management needs would increase during peak periods would continue due to increased visitor use
	• facilitates access to the river for all visitors	• new river launch would descend to the river at a 10% slope and require no sharp turns • expanding parking would increase likelihood of available parking for private paddlers and river access • new roads and staging spaces would facilitate outfitted paddler use of the river access • addition of a river launch at Brooklyn would provide needed fishing access for disabled fishermen
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by diverting

Table 1.29 Brooklyn Alternative 2 (Retained) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
		use to an enhanced access at Brooklyn
	• relieves congestion on roads accessing river access sites	• vehicular congestion in Cunard outfitter parking area would increase due to through traffic going to Brooklyn
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• new river launch would descend to the river at a 10% slope and require no sharp turns • expanding parking would increase likelihood of available parking for private paddlers and river access • new roads and staging spaces would facilitate outfitted paddler use of the river access • relocating campsites would be in an area that is better drained and less likely to be inundated by water
	• reduces potential for visitor conflicts	• parking expansion would reduce potential for conflicts related to inadequate parking • potential for conflicts between campers and paddlers would increase due to increased day-use
	• avoids/minimizes impacts to forest resources	• development would largely occur within the existing disturbed area and would require forest clearing (0.6 acre)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would largely occur within the existing disturbed area and clearing of rare sycamore-river birch riverscour woodland (0.6 acre)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• site planning would likely avoid or minimize potential effects to cultural resources
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development would largely occur within the existing disturbed area and would require minimal earthwork/construction of retaining walls • bus turnaround would require earthwork and 6' retaining wall • new roads would require earthwork to connect the grade of the historic railbed to the existing roadway at a 10% grade • new stabilized launch would require earthwork and retaining walls up to 6'
	• not likely to require unusual recurring maintenance investment	• grading and construction of retaining walls subject to slide damage and would likely requiring some recurring maintenance
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• private paddler concerns would be addressed

Figure 1.12
Brooklyn
Alternative 2: Concentrated Parking (Retained)

Program Elements

• Outfitted Paddler Equipment Vehicle Spaces	4
• Private Paddler Parking Spaces	20
• Jon Boat Parking Spaces	5
• Trailhead Parking Spaces	8
• Campsite Parking Spaces	10
• Campsites	5
• Vault Toilet	

Natural Resources

- Forest Cover
- Rare Plant Community – Sycamore-River Birch Riverscour Woodland
- State Rare Plants – *Cardamine flagellifera*

Cultural Resources

- Cultural Resource Site – Remnant Remaining
- Cultural Resource Site – No Remnant Remaining

Vault Toilet
5 Jon Boat Spaces
4 Outfitted Paddler Bus Parking Spaces
Relocated Gate
Expanded Roadway for Trailer Maneuvering
6' Retaining Wall
10% slope
+ 980
Southside Junction Trail (to Thurmond)
Mile Post
+ 1006
+ 1005
to Cunard
+ 1000
+ 1020
Gate
+ 1024
5 Campsites
10 Camp Parking Spaces
Vault Toilet
20 Private Paddler Parking Spaces
8 Trailhead Parking Spaces
1 Universal Access Parking Space

1"= 100'
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1.4.5 Cunard/Fayette Station Shuttle Alternative

As an alternative to providing up to 94 private paddler spaces at the river level at Fayette Station (as proposed in Fayette Station alternatives 1c and 2b above) the NPS is exploring a private paddler shuttle alternative at Cunard and Fayette Station. In this alternative private paddler parking at river level at Cunard and Fayette Station would be adequate to meet all of the private paddler parking demand on weekdays but only 20 percent of the demand on weekends from Memorial Day weekend through Labor Day weekend. On weekends once parking at the river level at Cunard and Fayette Station is filled, private paddlers would be directed to a satellite parking facility on the Cunard plateau. A shuttle would transport them from the plateau to the river. In the afternoon, the same shuttle would pick them up at Fayette Station and take them back to their cars at Cunard. The shuttle would be "mandatory" for those arriving in the morning at Fayette Station or Cunard once all designated private paddler parking spaces are filled.

- **Shuttle Routes**

Figure 1.13 illustrates the proposed shuttle routes. Shuttle segment 1 would operate in the morning taking paddlers from the Cunard plateau down the Cunard Access Road (1.7 miles) to a new drop-off at the river level. Shuttle segment 2 would operate in the afternoon taking paddlers from a new pick-up at the river level at Fayette Station back to their cars via WV Route 82, US Route 19, US Route 16, and WV Route 9 – a total distance of 11.3 miles for those returning to the satellite parking area on the plateau and 13.0 miles for those returning to the Cunard river level.

The return to Fayette Station would be slightly longer due to the one-way direction of traffic on WV Route 82. On the return trip the shuttle would follow its route back to US Route 19, where it would continue across the New River Bridge. North of the bridge it would turn right onto WV Route 5 and then turn right again onto US Route 82. It would then descend into the gorge and recross the river on the old WV Route 82 New River Bridge, after which it would turn into Fayette Station. The return trip would be 17 miles long, making the total shuttle loop 30 miles long.

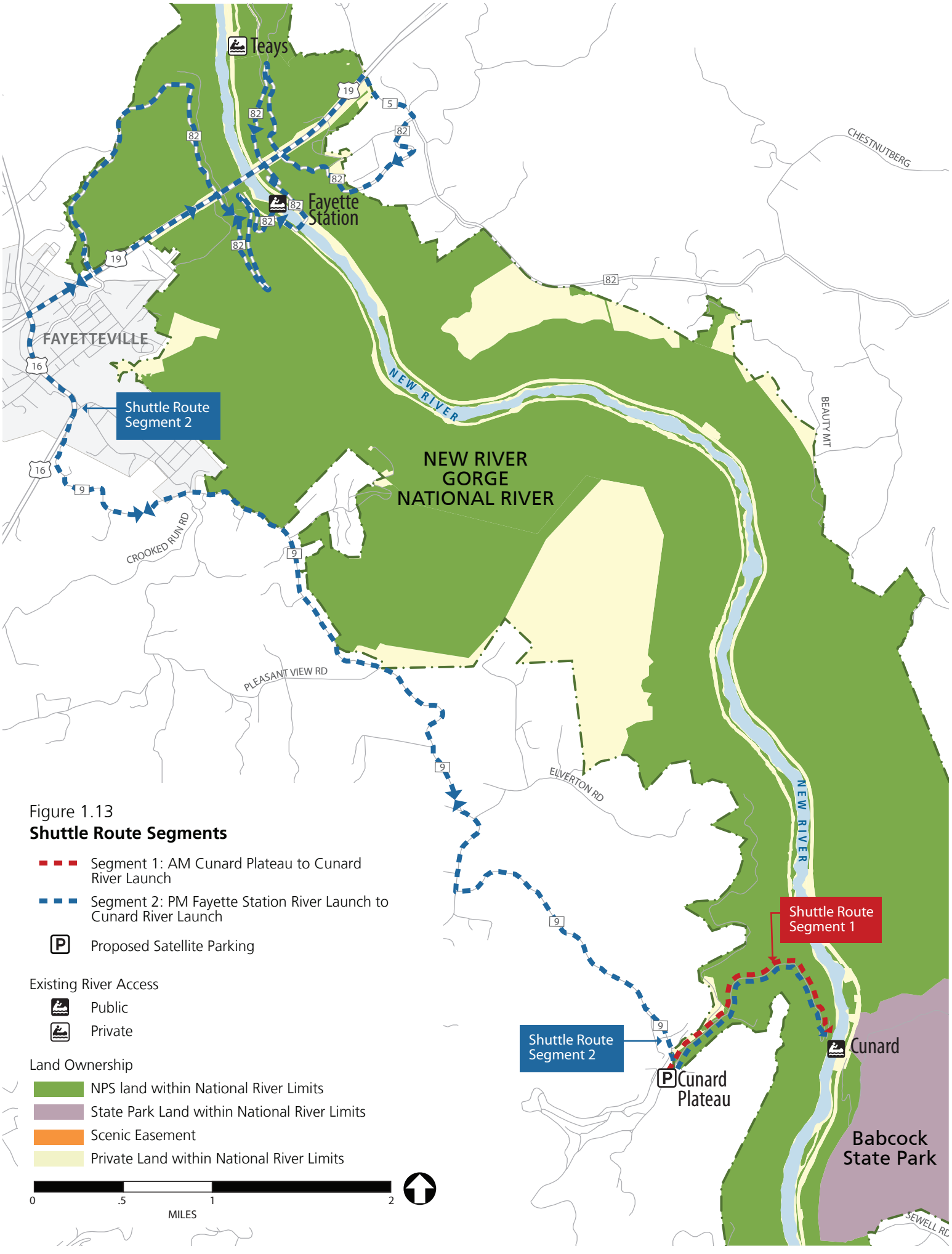
Teays
Fayette Station
FAYETTEVILLE
Shuttle Route Segment 2
NEW RIVER GORGE NATIONAL RIVER
NEW RIVER
CHESTNUTBERG
BEAUTY MT
CROOKED RUN RD
PLEASANT VIEW RD
ELVERTON RD
Shuttle Route Segment 1
Shuttle Route Segment 2
Cunard
Cunard Plateau
Babcock State Park
SEWELL RD
Figure 1.13
Shuttle Route Segments
Segment 1: AM Cunard Plateau to Cunard River Launch
Segment 2: PM Fayette Station River Launch to Cunard River Launch
Proposed Satellite Parking
Existing River Access
Public
Private
Land Ownership
NPS land within National River Limits
State Park Land within National River Limits
Scenic Easement
Private Land within National River Limits
0
.5
1
2
MILES

Table 1.30 Shuttle Service Characteristics – AM Cunard Plateau to River/PM Fayette Station to Cunard

Cunard/Fayette Station Shuttle – Summary (14 weekends from Memorial Day through Labor Day)

Days	Hours of Operation	Shuttle Vehicle	Frequency	Daily Vehicle Hours	Days per Year
AM Cunard Plateau Satellite Parking to Cunard River Access					
Saturday/Sunday	8:00 to 11:30 am	50-passenger bus w/ box trailer	45 minutes (5 trips/AM)	3.5 hours (+.75 hours from home each way)	30
PM Fayette Station to Cunard Shuttle					
Saturday/Sunday	12:00 to 7:00 pm	50-passenger bus w/ box trailer	105 minutes (4 trips/PM)	8 hours (+.75 hours to home each way)	30

Cunard/Fayette Station Shuttle – Schedule/Ridership (14 weekends from Memorial Day through Labor Day)

Time	Paddler Demand	Shuttle Vehicle	Headway (minutes)	Average Wait Time to Board Shuttle (minutes)
AM Cunard Rim to River Shuttle				
8:00 am	20	44-pass bus w/ trailer	NA	NA
8:45 am	20	44-pass bus w/ trailer	45 minutes	22.5 minutes
9:30 am	30	44-pass bus w/ trailer	45 minutes	22.5 minutes
10:15 am	35	44-pass bus w/ trailer	45 minutes	22.5 minutes
11:00 am	25	44-pass bus w/ trailer	45 minutes	22.5 minutes
PM Fayette Station to Cunard Shuttle				
12:30 pm	25	44-pass bus w/ trailer	NA	NA
2:30 pm	40	44-pass bus w/ trailer	2 hours	1 hour
4:30 pm	40	44-pass bus w/ trailer	2 hours	1 hour
6:30 pm	25	44-pass bus w/ trailer	2 hours	1 hour

AM Cunard Rim to River Shuttle – Travel Times
(14 weekends from Memorial Day through Labor Day)

After leaving Cunard Plateau…	Stop 1 Cunard River Drop-Off	Stop 2 Cunard Plateau Pick-Up
AM Cunard Plateau to River Shuttle		
Miles	1.7	1.7
Average Speed (mph)	20	20
Travel Time (minutes)	5	5
Stop Time	25	10
Cumulative Running Time (minutes)	30	45

PM Fayette Station to Cunard Shuttle – Travel Times
(14 weekends from Memorial Day through Labor Day)

After Leaving Fayette Station…	Stop 1 at Cunard Plateau Drop-Off	Stop 2 at Cunard River Drop-Up	Stop 3 at Fayette Station Pick-Up
PM Fayette Station to Cunard Shuttle			
Miles	11.3	1.7	17.0
Average Speed (mph)	26	20	24
Travel Time (minutes)	27	5	43
Stop Time (minutes)	7	7	19
Signal Time (minutes)	6	0	6
Cumulative Running Time (minutes)	40	52	120

- **Shuttle Service Characteristics and Estimated Ridership**

One bus would operate daily for 3.5 hours in the morning and for 7.5 hours in the afternoon, carrying approximately 130 paddlers in the morning and 130 paddlers in the afternoon. Table 1.23 provides a summary of service characteristics.

- **Paddler Shuttle Ownership and Operation**

The NPS proposes that the paddler shuttles at New River Gorge NR (during summer weekends) and at the Gauley River NRA (during Gauley Season) (see section 2.4.6 Expanded Shuttle Alternative below) be operated jointly. Annual operations would commence at New River Gorge NR on Memorial Day weekend and continue through Labor Day weekend, offering shuttle services on Saturdays and Sundays only. Commencing the weekend after Labor Day, shuttle operations would shift to the Gauley River NRA, where they would continue through the six- or seven-week Gauley Season, offering shuttle services on Saturdays and Sundays only.

In terms of shuttle operation, the NPS further proposes that the shuttle be operated through a turn-key service contract in which a contractor owns (or leases) and operates the shuttle vehicle. There are three primary reasons in support of this proposed operations structure:

- The proposed service requires that drivers work shifts only on weekends during a 21- to 22-week season. A contractor is more likely to be able to hire drivers to work these difficult hours and operate the vehicle at other locations when not being used than the NPS.

- In terms of ownership, the fluctuation in need for the vehicle for the proposed service would require the purchase and maintenance of a vehicle that be used for only 44 days a year, leaving it unused for the remaining 321 days a year.
- In general a non-NPS-owned, non-NPS-operated service contract would have the least impact on park operations would probably be the most feasible option.

For the shuttle financial analysis provided in section 1.5.2 below, this study assumes a turn-key service contract using GSA lease rates and operating costs.

- **Capital Investments to Support Shuttle Operations**

Paddler Shuttle Vehicle. Assuming joint operations as described above, one paddler shuttle vehicle would be used for both shuttles operating at New River Gorge NR and at the Gauley River NRA. In recommending an appropriate shuttle vehicle, a number of factors should be considered, such as vehicle requirements (based on amenity preferences, road and operating conditions, and capacity, and other factors), and fuel type and availability.

For the purposes of the service, this study recommends a medium-duty shuttle with capacity for up to 44 passengers, interior luggage rack, and durable seating options. A non-low floor vehicle is recommended due to the terrain. A likely vehicle meeting specifications (see appendix C) would be a diesel capable 44 adult type D front engine work bus. In terms of providing access to visitors with disabilities, it is recommended that the shuttle vehicle have a wheelchair lift and restraint system. However, NPS would continue to provide two handicapped parking spaces at the Cunard river access and four handicapped spaces at the Fayette Station river access. Only a few handicapped private paddlers requiring wheelchairs paddle the river; those who do generally do not paddle with a wheelchair in their boats. They plan their river trips with family and friends to take advantage of river level parking.

In addition to the shuttle vehicle, a box trailer with capacity for up to 50 small kayaks would be needed.

A specific vehicle and trailer are not recommended at this time because the NPS proposes to enter into a contract with a private entity to provide shuttle service if and when it is appropriate to do so. The findings of this analysis are for purposes of informing the terms of the future contract with an operator.

Appendix C provides more detail on the shuttle vehicle identification analysis.

Shuttle Stops. As described above, shuttle stops would be located at the Fayette Station river access and at the Cunard river access,

Capital investments needed to support shuttle operations at the Fayette Station river access would include:

- development of a shuttle pick-up along the existing access road to the private paddler river access
- closure of the Cole Lot to private paddler parking (with restoration in native grasses); future use of the Cole Lot would be limited to CSX railroad maintenance vehicles and staging/overflow parking during special events.

These actions would be implemented in conjunction with other actions needed to address existing management concerns at Fayette Station (table 1.24 and figure 1.14).

Table 1.31 Cunard/Fayette Station Shuttle (Fayette Station River Access Alternative 5) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.	1a. Shuttle system would operate on peak days. No action. The Cole Lot would be restored (native grasses) with potential for occasional use for staging/overflow and access to CSX right-of-way.
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Shuttle system would operate on peak days.
	1e. One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Portions of the day-use area below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854' contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. Development would be contained to area of existing disturbance.

Table 1.32 Cunard/Fayette Station Shuttle Alternative – Fayette Station River Access Enhancements (Fayette Station Alternative 5) (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• two-lane bridge would reduce potential for conflicts associated with the existing one-way bridge with two-way traffic • pedestrian walkway from the day-use to private/outfitter parking would reduce hazards associated with vehicular and pedestrian cross traffic
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns • additional management would be required to inform visitors requiring use of the mandatory shuttle
	• facilitates access to the river for all visitors	• satellite parking and shuttle would increase likelihood of available parking for private paddlers and river access

Table 1.32 Cunard/Fayette Station Shuttle Alternative – Fayette Station River Access Enhancements (Fayette Station Alternative 5) (Retained) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
	• relieves congestion at river access sites	• satellite parking at Cunard and shuttle would relieve congestion at river access site
	• relieves congestion on roads accessing river access sites	• satellite parking at Cunard and shuttle would relieve congestion on WV Route 82
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• shuttle would ensure that private paddlers would be able to paddle the river as planned • day-use visitors would likely continue to have difficulty finding parking during peak weekends
	• reduces potential for visitor conflicts	• by guaranteeing access to the river the shuttle would reduce conflicts among private paddlers seeking parking during busy weekends
	• avoids/minimizes impacts to forest resources	• development would occur within the existing disturbed area and would require minimal forest clearing (.01 acre)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would occur within the existing disturbed area and would have no impact on rare plant communities and rare/endangered species
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• potential for partnership with shuttle service provider that would: – enhance the visitor experience for private paddlers – increase the efficiency of travel for private paddlers by eliminating the need for multiple vehicles for each paddling party
Implementation Considerations	• can be built with relative ease and efficiency	• development would occur within the existing disturbed area and would require minimal earthwork/ construction of retaining walls
	• not likely to require unusual recurring maintenance investment	• improvements would not require unusual recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

Private Paddler River Access

Outfitted Paddler River Access

Outfitted Paddler Equipment Vehicle Parking

Ranger River Access

Shuttle Pick-up

Expanded Changing Facilities

2 Universal Access Parking Spaces

to Cunard

Perpetual Reserved Right for Wildwater Cemetery

15 Private Paddler Parking Spaces

6 Outfitted Paddler Bus Parking Spaces

Two-Lane Bridge with Pedestrian Walkway

12 Flex Parking Spaces (Private Paddler and Day-Use)

Existing Site Development

ACE Retained Right to Launch at Day-Use Beach

Observed Approximate Limit of Flooding at New River Flows of 80k to 100k cfs

Restored Area (native grasses) with potential for occasional use for staging/overflow and access to CSX right-of-way

Segment 2
PM Fayette Station River Access to Cunard River Access

SR 82

Wolf Creek

840 850 860 870 880 890 894 900 910 920 930 854

Figure 1.14
Fayette Station
Alternative 5: Private Paddler Shuttle Option (Retained)

Program Elements

- No Pedestrian CSX Crossing
- No Traffic Signal
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: 29
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities
- Segment 2: PM Fayette Station River Launch to Cunard River Access

Forest Cover

Ownership

Non-Federal

0 125 250 1″=125′

SCALE OF FEET

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Capital investments needed to support shuttle operations at the Cunard river access would include:

- development of a shuttle drop-off at the end of the exiting private paddler parking area
- modifications as proposed for Cunard alternative 1 (figure 1.11 above), with the exception that no additional private paddler parking would be added at the end of the existing private paddler parking area or along the Fisherman's Access Road

These actions would be implemented in conjunction with other actions needed to address existing management concerns at Cunard (table 1.25 and figure 1.15).

New satellite parking would also be developed on the Cunard plateau. NPS has identified two potential sites (figure 1.16). Each site would be capable of parking 68 cars with circulation space for a shuttle AM pick-up (for paddlers launching at Cunard) and PM drop-off (for paddlers returning from Fayette Station) (figures 1.17 and 1.18).

Table 1.33 Cunard/Fayette Station Shuttle (Cunard River Access Alternative 1a) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Steep terrain limits the area available for visitor facilities. Demand for river access during peak periods in the small space diminishes the visitor experience due to crowding. Visitors feel rushed as outfitters seek to move paddlers safely through the sequence of launching activities as quickly as possible to make room for others.	1a. Implementation of a paddler shuttle would reduce congestion by diverting cars to a satellite parking facility on the rim.
	1b. Facilities are located above the river requiring paddlers to carry equipment down to the river from the parking and staging area, diminishing the visitor experience, slowing the launching process, and creating visitor safety hazards.	1b. no action
	1c. The sidewalk along the perimeter of the outfitted paddler parking area is too narrow for groups carrying rafts, increasing the potential for visitor injuries particularly during congested morning conditions.	1c. no action
	1d. The outfitted paddler raft slide is long and very steep, increasing the potential for visitor injuries on steps particularly during congested morning conditions.	1d. no action
	1e. The supply of designated private paddler parking spaces is not adequate to meet demand on peak days, creating congestion and safety hazards on peak days.	1e. Additional parking would be provided at the existing private paddler parking area and along Fishermans Access Road.
	1f. There is no suitable staging area for private paddlers, causing some to illegally use the handicapped parking space at the comfort station for staging.	1f. An area adjacent to the vault toilets and at the current universal access parking space would be designated as private paddler staging areas. The universal access parking place would be relocated.
	1g. Families and other less-experienced visitors who paddle the upper New River take out at Cunard. Paddlers have to carry rafts up steps using the steep raft slide, increasing the potential for visitors particularly when they are tired at the trip end.	1g. no action
Park Operations	2a. Launching is difficult because trailers must be backed down the Fisherman Access Road.	2a. No action. Topography would require retaining walls over 5’ to establish turning radius required for vehicles with trailers.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining expansion potential.	3b. New development would not occur in uphill areas susceptible to slides.

Table 1.34 Cunard/Fayette Station Shuttle Alternative (Cunard River Access Enhancements) (Cunard Alternative 1a with Rim Parking Site 2 or 3) (Retained) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• no action
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns • additional management would be required to inform visitors requiring use of the mandatory shuttle
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand)
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate private paddler parking at different locations at the river access site and by diverting private paddler vehicles to satellite parking on the rim
	• relieves congestion on roads accessing river access sites	• generally would reduce congestion by diverting private paddler vehicles to satellite parking on the rim • expanding parking would likely relieve congestion on the Cunard Access Road by reducing pull-off roadside parking by private paddlers who cannot find designated parking spaces
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• shuttle would ensure that private paddlers would be able to paddle the river as planned
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • staging areas would provide private paddlers with space to stage near the river access
	• avoids/minimizes impacts to forest resources	• development would require minimal clearing within the existing disturbed area (0.1 acre) • development of satellite parking would require clearing of old field vegetation (site is not forested)
	• avoids/minimizes/or has no potential to impact on rare plant communities and rare/endangered species	• development would have no direct impact on rare plant communities and rare/endangered species
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• development at the river access would occur within the existing disturbed area and would require minimal earthwork • development of satellite parking would require demolition of one single-family home

Table 1.34 Cunard/Fayette Station Shuttle Alternative (Cunard River Access Enhancements) (Cunard Alternative 1a with Rim Parking Site 2 or 3) (Retained) – Performance Summary (continued)

Evaluation Criteria	Performance Summary
• not likely to require unusual recurring maintenance investment	• improvements would not likely require unusual recurring maintenance
• responds to known stakeholder concerns	• actions to reduce congestion would not respond to outfitter concerns
• responds to known visitor concerns	• private paddler concerns would be addressed

Figure 1.15
Cunard
Alternative 1a: River Access

Program Elements

- Private Paddler Parking Spaces: 17
- Private Paddler Staging Areas: 2
- Private Paddler Vehicle with Trailer Parking Spaces: 4
- Shuttle Drop-off

Area of Additional Disturbance

Tree Cover

Rare Plant Communities

Sycamore - Ash Floodplain Forest

Ownership

Non-Federal

0 125 250 1"= 125'
SCALE OF FEET

4 Private Paddler Vehicle with Trailer Parking Spaces

Shuttle Drop-off

1 Universal Access Parking Space

Private Paddler Staging Area (Temporary Parking)

Private Paddler Vehicle-Trailer Staging Area

Fisherman Access Rd

Cunard Access Road

Segment 1
AM Cunard Plateau to Cunard River Access

Segment 2
PM Fayette Station River Access to Cunard River Access

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Figure 1.16
Cunard Plateau Satellite Parking Site Alternatives – Existing Conditions

Natural Resources
Forest Cover

Ownership (within NERI Authorized Boundary)
Federal
Non-Federal

NERI Authorized Boundary

0 50 100 200
SCALE OF FEET

Cunard Access Road
to Cunard
NERI Authorized Boundary
Rim Parking Alternative 3 (dismissed)
Existing Structure
Driveway
Driveway
Rim Parking Alternative 2
Existing Structure
Existing Structure
Brooklyn Loop
Rim Parking Alternative 3
Existing Structure
Cunard Road

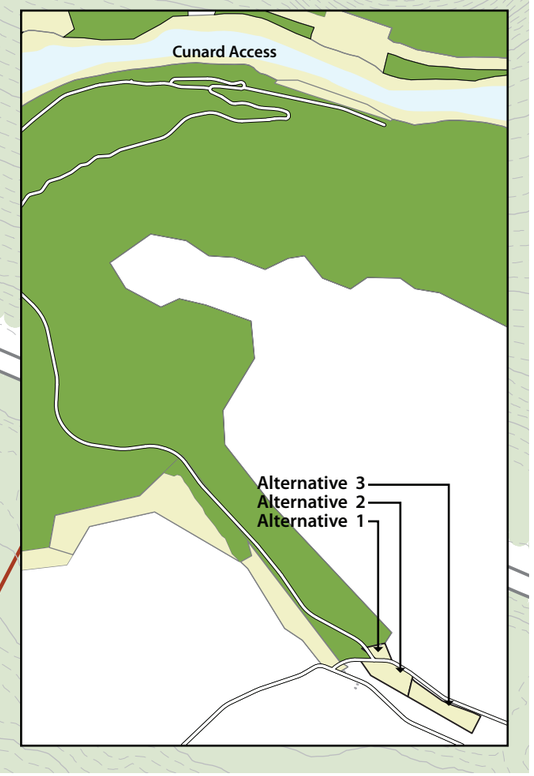

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Figure 1.17
Cunard
Rim Parking Alternative 2 (Retained)

Program Elements
- Private Paddler Parking Spaces: 68

Segment 1: AM Cunard Plateau to Cunard River Access

Segment 2: PM Fayette Station River Launch to Cunard River Access

Natural Resources

Forest Cover

Ownership (within NERI Authorized Boundary)

Federal

Non-Federal

NERI Authorized Boundary

0 50 100 200
SCALE OF FEET

Cunard Access Road

to Cunard

NERI Authorized Boundary

Segment 1: AM Cunard Plateau to Cunard River Access

Segment 2
PM Fayette Station River Access to Cunard River Access

68 Private Paddler Parking Spaces (for illustrative purposes to show capacity)

Shuttle Pick-up/ Drop-off

Brooklyn Loop

Cunard Road

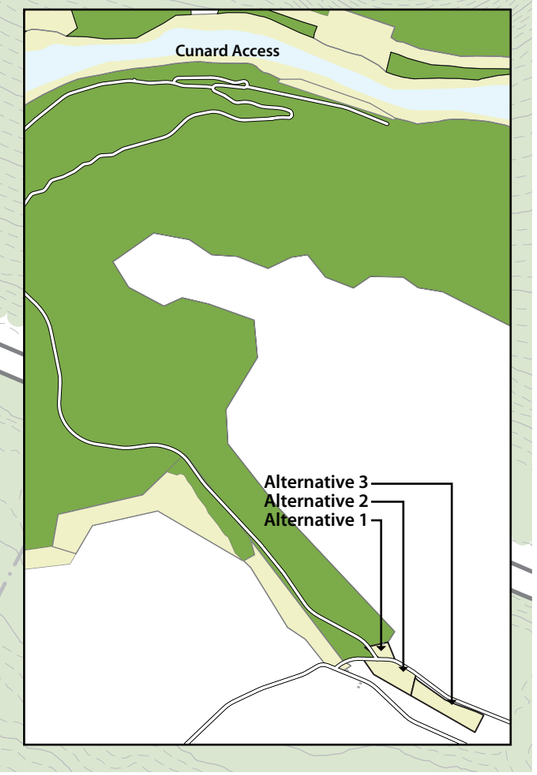

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Figure 1.18
Cunard
Rim Parking Alternative 3 (Retained)

Program Elements
- Private Paddler Parking Spaces: 68

Segment 1: AM Cunard Plateau to Cunard River Access

Segment 2: PM Fayette Station River Launch to Cunard River Access

Natural Resources

Forest Cover

Ownership (within NERI Authorized Boundary)

Federal

Non-Federal

NERI Authorized Boundary

0 50 100 200
SCALE OF FEET

Cunard Access Road

to Cunard

NERI Authorized Boundary

Segment 1
AM Cunard Plateau to Cunard River Access

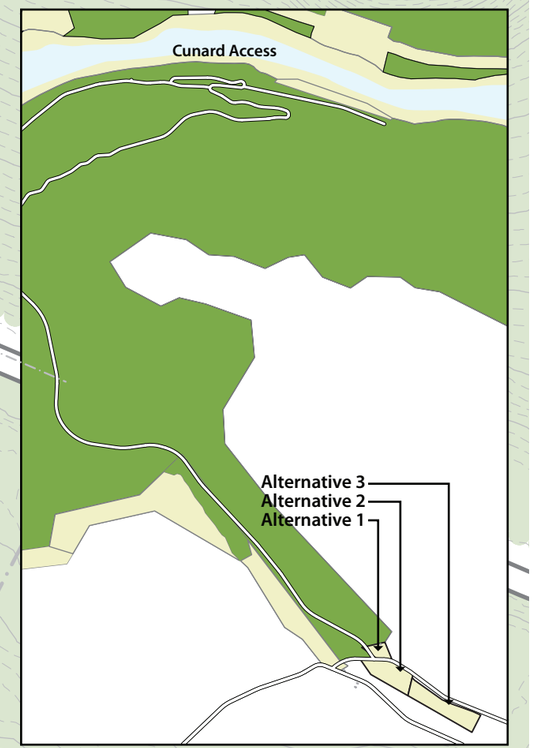
Segment 2
PM Fayette Station River Access to Cunard River Access

Brooklyn Loop

68 Private Paddler Parking Spaces (for illustrative purposes to show capacity)

Shuttle Pick-up/ Drop-off

Cunard Road



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1.5 ALTERNATIVES CONSIDERED BUT DISMISSED

1.5.1 Evaluation Framework

As noted in section 1.4 above, this alternative transportation feasibility study (ATFS) has evaluated numerous options for transportation management actions to address visitor congestion at the existing river access sites at the park. The development of options considered:

- physical changes at existing river access sites to alleviate congestion
- development of new facilities at Brooklyn and/or Surprise
- development of a shuttle system serving Fayette Station and Cunard
- passenger rail service from Thurmond to Cunard

Initially the planning team considered a wide range of alternatives. Evaluation of the alternatives eliminated many from further consideration. Criteria used for the analysis were based upon the following evaluation criteria:

- project purposes
  - enhance the visitor experience
  - enhance visitor safety
  - facilitate park operations
  - enhance mobility and accessibility within the parks
  - improve roadway conditions on public roads adjoining the parks
- NPS programmatic goals of resource protection and partnership building
- practical implementation considerations, including constructability, recurring maintenance needs, and public acceptance

Table 1.17 above lists the objectives and criteria for each goal which the planning team used to evaluate the alternatives.

Table 1.35 below lists the alternatives dismissed from further considered based upon the evaluation.

The following sections 1.5.2 through 1.5.5 summarize each dismissed alternative. A concept plan illustrates each alternative, a table summarizes how the alternative responds to management concerns, and text summarizes the reasons why the alternative was dismissed.

Table 1.35 Summary of Alternatives Considered but Dismissed – Reasons for Dismissal

Access	Alternative	Primary Reasons for Dismissing the Alternative
Fayette Station	Alternative 1a	• existing levels of congestion would continue • no legal CSX crossing • excessive grading and construction of high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.1 acre) (plus 0.06 acre rare sycamore-ash floodplain forest)
	Alternative 1b	• existing levels of congestion would continue • no legal CSX crossing • excessive grading and construction of high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.1 acre) no rare community impact)
	Alternative 3a	• existing levels of congestion would continue • excessive grading and construction of high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (no rare community impact)
Cunard	Alternative 2	• existing levels of congestion would continue • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.4 acre) (no rare community impact)
	Alternative 3	• existing levels of congestion would continue • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (1 acre) (plus 0.05 acre rare sycamore-ash floodplain forest)
Brooklyn	Alternative 3	• access to the river would continue at existing ramp which is steep and requires vehicles with trailers to maneuver around sharp turns • access to the river would not facilitate use by outfitted paddler equipment vehicles and buses • clearing outside existing disturbed area (0.2 acre rare sycamore-ash floodplain forest) • road widening would demolish a segment of a cultural resource (retaining wall associated with tipple) • expanded parking would pose potential affect to cultural resource (remnant coke ovens)
	Alternative 4	• access to the river would continue at existing ramp which is steep and requires vehicles with trailers to maneuver around sharp turns • access to the river would not facilitate use by outfitted paddler equipment vehicles and buses • clearing outside existing disturbed area (0.1 acre)(plus 0.2 acre rare sycamore-ash floodplain forest) • road widening would demolish a segment of a cultural resource (retaining wall associated with tipple)

Table 1.35 Summary of Alternatives Considered but Dismissed – Reasons for Dismissal

Access	Alternative	Primary Reasons for Dismissing the Alternative
		• expanded parking would pose potential affect to cultural resource (remnant coke ovens) • excessive grading and construction of high retaining walls
Surprise – Fisherman's Paradise	Alternative 1a	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (plus 0.6 acre rare sycamore-ash floodplain forest)
	Alternative 1b	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (plus 0.3 acre rare sycamore-ash floodplain forest)
	Alternative 1c	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (1 acre) (plus 0.3 acre rare sycamore-ash floodplain forest)
Surprise – Beach	Alternative 2a	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (plus 0.4 acre rare sycamore-ash floodplain forest)
	Alternative 2b	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (plus 0.3 acre rare sycamore-ash floodplain forest)
	Alternative 2c	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (1 acre) (plus 0.1 acre rare sycamore-ash floodplain forest)
Surprise – Birch Bank	Alternative 3a	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (plus 0.3 acre rare sycamore-ash floodplain forest)
	Alternative 3b	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.3 acre) (plus 0.2 acre rare sycamore-ash floodplain forest)

Table 1.35 Summary of Alternatives Considered but Dismissed – Reasons for Dismissal

Access	Alternative	Primary Reasons for Dismissing the Alternative
	Alternative 3c	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (1 acre) (plus 0.1 acre rare sycamore-ash floodplain forest)
Surprise – Tripartite	Alternative 4	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.4 acre) (plus 0.2 acre rare sycamore-ash floodplain forest)
Surprise – Tripartite with Shuttle	Alternative 5	• unsafe river launch conditions • excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • clearing outside existing disturbed area (0.5 acre) (plus 0.2 acre rare sycamore-ash floodplain forest)

1.5.2 Fayette Station Alternatives (Dismissed)

- **Fayette Station Alternative 1a (Dismissed)**

Table 1.36 Fayette Station River Access Alternative 1a (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.	1a. No action. The Cole Lot would be restored (native grasses) with potential for occasional use for staging/overflow and access to CSX right-of-way.
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Day-use and private paddler parking lots would be expanded.
	1e. One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Portions of the day-use area below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854'contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. Development would largely be contained to area of existing disturbance. Development would extend to areas of Sycamore-Ash Floodplain Forest.

Table 1.37 Fayette Station Alternative 1a (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with potential vehicular and pedestrian cross traffic in many locations • use of the Cole Lot without a legal CSX crossing or provision of an alternative pedestrian travel route would continue to constitute a safety hazard
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking

Table 1.37 Fayette Station Alternative 1a (Dismissed) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
		demand (providing for 80% of peak day demand) • expanding parking would increase the potential for available day-use visitor parking on busy days
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• use of Cole lot would better distribute traffic within the access site
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • day-use visitors would be more likely to have their desired experience
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• additional private paddler parking construction would require clearing of trees (0.1 acre) outside the existing disturbed area
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• relocation of outfitted paddler bus parking would require clearing of rare sycamore-ash floodplain forest (.06 acre)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• additional private paddler parking construction would require partial removal of an existing retaining wall, earthwork, and construction of an 8’ retaining wall • additional outfitted paddler parking development would require fill and construction a 6’ retaining wall • two-lane bridge with pedestrian walkway would require bridge and abutments removal, new bridge abutments, and construction of prefabricated bridge
	• not likely to require unusual recurring maintenance investment	• excessive grading and construction of high retaining walls subject to slide damage and likely requiring recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

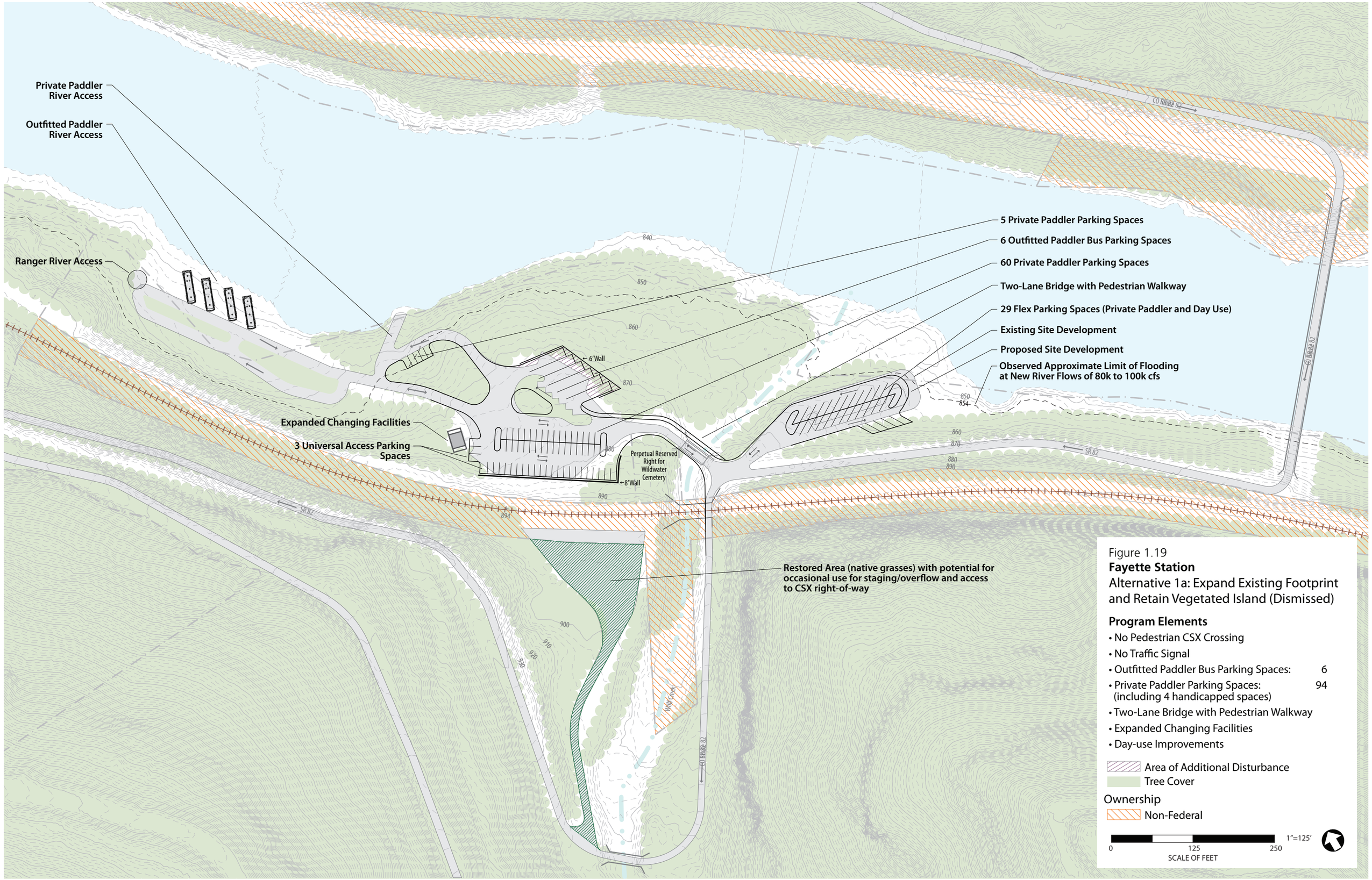

Figure 1.19

Fayette Station

Alternative 1a: Expand Existing Footprint and Retain Vegetated Island (Dismissed)

Program Elements

- No Pedestrian CSX Crossing
- No Traffic Signal
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: (including 4 handicapped spaces) 94
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities
- Day-use Improvements

Area of Additional Disturbance

Tree Cover

Ownership

Non-Federal

0 125 250 SCALE OF FEET

1"=125'

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- **Fayette Station Alternative 1b (Dismissed)**

Table 1.38 Fayette Station River Access Alternative 1b (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.	1a. No action. The Cole Lot would be restored (native grasses) with potential for occasional use for staging/overflow and access to CSX right-of-way.
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Day-use and private paddler parking lots would be expanded.
	1e. One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Portions of the day-use area below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854' contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.

Table 1.39 Fayette Station Alternative 1b (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with potential vehicular and pedestrian cross traffic in many locations • use of the Cole Lot without a legal CSX crossing or provision of an alternative pedestrian travel route would continue to constitute a safety hazard
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand) • expanding parking would increase the potential for available day-use visitor parking on busy days

Table 1.39 Fayette Station Alternative 1b (Dismissed) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• use of Cole lot would better distribute traffic within the access site
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • day-use visitors would be more likely to have their desired experience • removal of the tree island within the existing parking area would remove shade and detract from the visual setting
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• additional private paddler parking construction would require clearing of trees (0.1 acre) (tree island within the existing parking area)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• NA
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• additional private paddler parking construction would require partial removal of existing retaining wall, earthwork, and construction of an 8’ retaining wall • two-lane bridge with pedestrian walkway would require bridge and abutments removal, new bridge abutments, and construction of prefabricated bridge
	• not likely to require unusual recurring maintenance investment	• excessive grading and construction of high retaining walls subject to slide damage and likely requiring recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

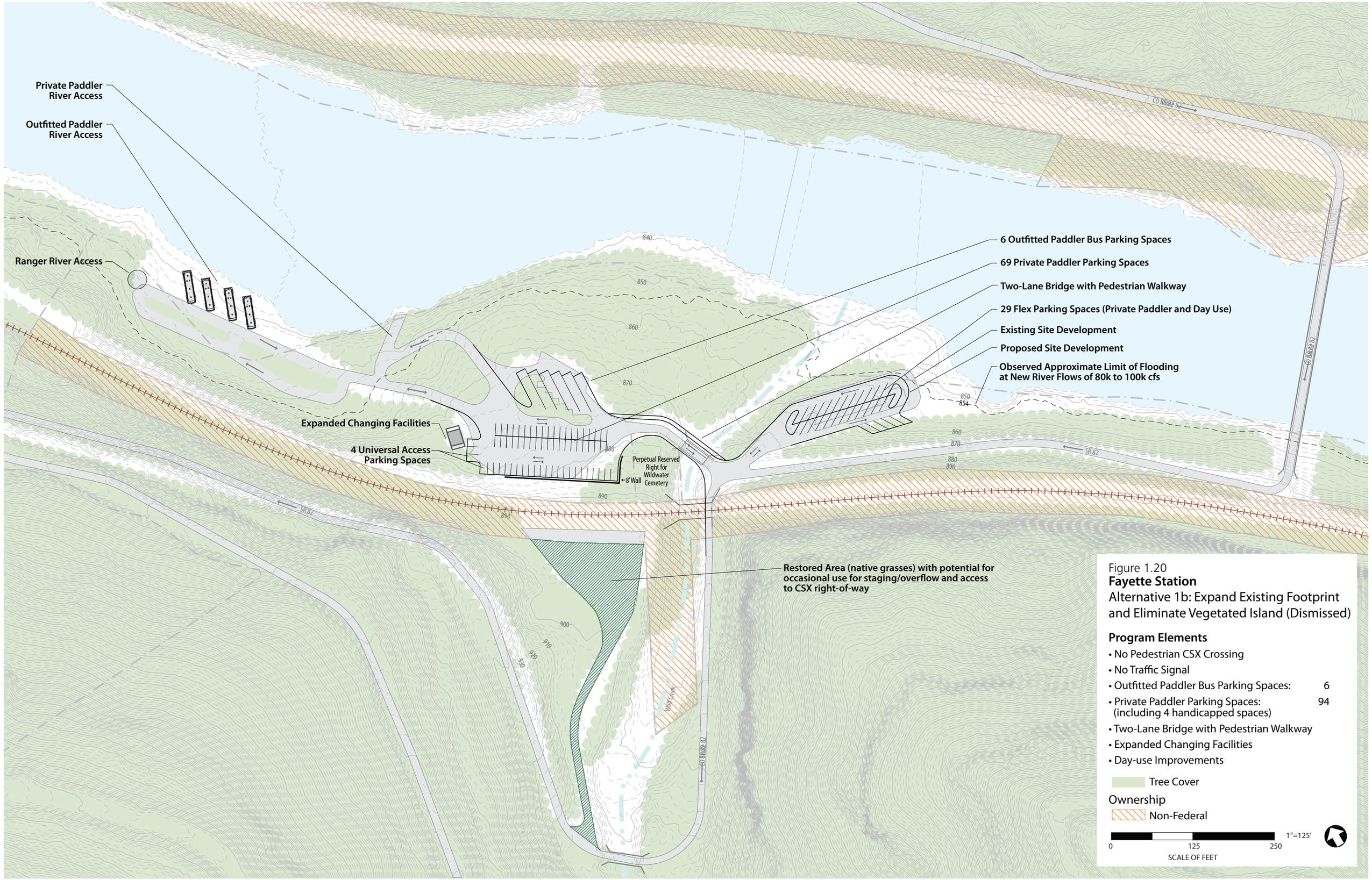

Figure 1.20

Fayette Station

Alternative 1b: Expand Existing Footprint and Eliminate Vegetated Island (Dismissed)

Program Elements

- No Pedestrian CSX Crossing
- No Traffic Signal
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: (including 4 handicapped spaces) 94
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities
- Day-use Improvements

Tree Cover

Ownership

Non-Federal

0 125 250 1"=125'

SCALE OF FEET

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- **Fayette Station Alternative 3a (Dismissed)**

Table 1.40 Fayette Station River Access Alternative 3a (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. This forces paddlers to park in the Cole Lot. Poor pedestrian access to the river from the Cole Lot makes it attractive for visitors to risk illegally crossing the active CSX rail line, creating safety hazards.	1a. No action. The Cole Lot would be restored (native grasses) with potential for occasional use for staging/overflow and access to CSX right-of-way.
	1b. Tired outfitted paddlers complain about having to walk uphill to get to outfitter buses.	1b. No action. The lower beach is only open to equipment-carrying vehicles from 6 am to 6 pm (as per NPS River Access and Launch Ramp Areas Operational Guidelines).
	1c. On peak days paddlers have to wait for fairly long periods to use changing facilities and restrooms.	1c. Changing facilities would be expanded to accommodate peak day use.
	1d. On peak days parking is not available for other day-use visitors (fisherman, picnickers, sightseers).	1d. Day-use and private paddler parking lots would be expanded and the Cole Lot would include 52 parking spots for overflow parking.
	1e. One-way traffic along the bridge to the outfitted and private paddler area parking create a confusing circulation pattern.	1e. The existing bridge would be removed and replaced by a two-lane bridge with pedestrian access.
Park Operations	2a. Launching boats at the NPS ranger launch is difficult due to lack of space for backing trailers.	2a. No action. Topography, rugged terrain, and outfitted paddler access limit space.
	2b. Portions of the day-use area below the 854'contour are susceptible to flooding.	2b. Day-use parking would be reconfigured to areas higher than the 854' contour.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.

Table 1.41 Fayette Station Alternative 3a (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with potential vehicular and pedestrian cross traffic in many locations
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand) • expanding parking would increase the potential for available day-use visitor parking on busy days
	• relieves congestion at river access sites	• generally would reduce congestion by providing adequate parking at different locations at the river access site

Table 1.41 Fayette Station Alternative 3a (Dismissed) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
NPS Programmatic Objectives	• relieves congestion on roads accessing river access sites	• use of Cole lot would better distribute traffic within the access site
	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • day-use visitors would be more likely to have their desired experience
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• additional private paddler parking construction would require clearing of trees (0.3 acre) largely outside of the existing disturbed area along the perimeter of the Cole Lot
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• NA
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• additional private paddler parking construction would require significant earthwork and 12’ retaining wall, and culvert to address swale removal • tunnel would require significant earthwork, partial removal of existing retaining wall, and construction of two 24’ retaining walls • two-lane bridge with pedestrian walkway would require bridge and abutments removal, new bridge abutments, and construction of prefabricated bridge
	• not likely to require unusual recurring maintenance investment	• excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance
	• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
	• responds to known visitor concerns	• private paddler concerns would be addressed

Private Paddler River Access

Outfitted Paddler River Access

Ranger River Access

Expanded Changing Facilities

5 Private Paddler Parking Spaces

18 Private Paddler Parking Spaces

6 Outfitted Paddler Bus Parking Spaces

Two-Lane Bridge with Pedestrian Walkway

29 Flex Parking Spaces (Private Paddler and Day Use)

Existing Site Development

Proposed Site Development

Observed Approximate Limit of Flooding at New River Flows of 80k to 100k cfs

Perpetual Reserved Right for Wildwater Cemetery

Tunnel (14' high, 8' cover)

Ramped Driveway @ 10% slope with Walls 2'- 24' High

52 Private Paddler Parking Spaces or 6 Outfitter Paddler Bus Parking Spaces

CO Rte 82

SR 82

Wolf Creek

Figure 1.21

Fayette Station

Alternative 3a: Expanded Cole Lot Parking with Vehicular Tunnel (Dismissed)

Program Elements

- Below Grade Vehicular Tunnel
- No Traffic Signal
- Outfitted Paddler Bus Parking Spaces: 6
- Private Paddler Parking Spaces: (including 4 handicapped spaces) 94
- Two-Lane Bridge with Pedestrian Walkway
- Expanded Changing Facilities
- Day-use Improvements

Area of Additional Disturbance

Tree Cover

Ownership

Non-Federal

0 125 250 SCALE OF FEET

1"=125'

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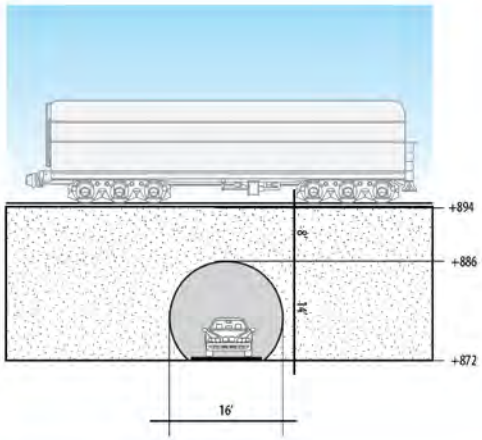
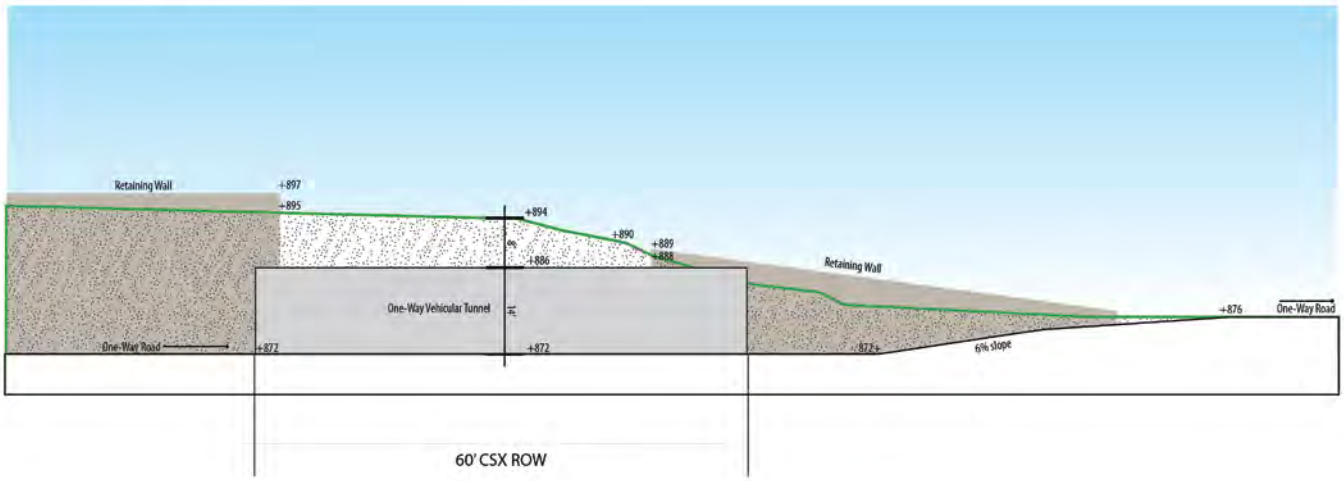


Figure 1.22
Fayette Station Alternative 3a
Vehicular Tunnel Section



1.5.3 Cunard Alternatives (Dismissed)

- **Cunard Alternative 2 (Dismissed)**

Table 1.42 Cunard River Access Alternative 2 (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Steep terrain limits the area available for visitor facilities. Demand for river access during peak periods in the small space diminishes the visitor experience due to crowding. Visitors feel rushed as outfitters seek to move paddlers safely through the sequence of launching activities as quickly as possible to make room for others.	1a. The upstream launch on the BSA property would distribute outfitted paddlers to two launches and alleviate congestion during peak hours
	1b. Facilities are located above the river requiring paddlers to carry equipment down to the river from the parking and staging area, diminishing the visitor experience, slowing the launching process, and creating visitor safety hazards.	1b. The river access road would provide outfitted paddler vehicles to drop equipment and passengers off at the river (the road would require walls over 5’).
	1c. The sidewalk along the perimeter of the outfitted paddler parking area is too narrow for groups carrying rafts, increasing the potential for visitor injuries particularly during congested morning conditions.	1c. A striped pedestrian walkway would be at the same grade as the parking area. The curb and gutter would be removed and relocated to the opposite side of the sidewalk.
	1d. The outfitted paddler raft slide is long and very steep, increasing the potential for visitor injuries on steps particularly during congested morning conditions.	1d. The river access road would provide outfitted paddler vehicles to pick-up equipment and passengers at the river (the road would require retaining walls over 5’).
	1e. The supply of designated private paddler parking spaces is not adequate to meet demand on peak days, creating congestion and safety hazards on peak days.	1e. Additional parking would be provided at the existing private paddler parking area and along Fishermans Access Road.
	1f. There is no suitable staging area for private paddlers, causing some to illegally use the handicapped parking space at the comfort station for staging.	1f. An area adjacent to the vault toilets and at the current handicap parking space would be designated as private paddler staging areas. The handicap parking spot would be relocated.
	1g. Families and other less-experienced visitors who paddle the upper New River take out at Cunard. Paddlers have to carry rafts up steps using the steep raft slide, increasing the potential for visitors particularly when they are tired at the trip end.	1g. The river access road would provide outfitted paddler vehicles to pick-up equipment and passengers at the river (the road would require walls over 5’).
Park Operations	2a. Launching is difficult because trailers must be backed down the Fisherman Access Road.	2a. The river access road would allow vehicles with trailers to drive down to the river and continue along the same road to the outfitted paddler staging area without backing the vehicle back up the road (the road would require walls over 5’).
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining expansion potential.	3b. New development would not occur in uphill areas susceptible to slides.

Table 1.43 Cunard Alternative 2 (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with ascending/descending steep stairs to existing river access would remain
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand)
	• relieves congestion at river access sites	• management actions would generally reduce congestion by providing adequate private paddler parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• expanding parking would likely relieve congestion on the Cunard Access Road by reducing pull-off roadside parking by private paddlers who cannot find designated parking spaces
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • staging areas would provide private paddlers with space to stage near the river access
	• avoids/minimizes impacts to forest resources	• river access road would require clearing of trees (0.3 acres) outside the existing disturbed area • river access road turnaround would require clearing of trees (0.1 acres) outside the existing disturbed area
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• NA
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• river access road would require excavation to reach a stable foundation (surface is coal fines and sand) • river access road would require significant earthwork (cut and fill) and construction of retaining walls up to 15’ • river access road turnaround would require earthwork and construction of 25’ retaining walls
	• not likely to require unusual recurring maintenance investment	• excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance

Table 1.43 Cunard Alternative 2 (Dismissed) – Performance Summary (continued)

Evaluation Criteria	Performance Summary
	• river access road would be located along a steep bank and be susceptible to washouts and landslides
• responds to known stakeholder concerns	• actions to reduce congestion would respond to outfitter concerns
• responds to known visitor concerns	• private paddler concerns would be addressed

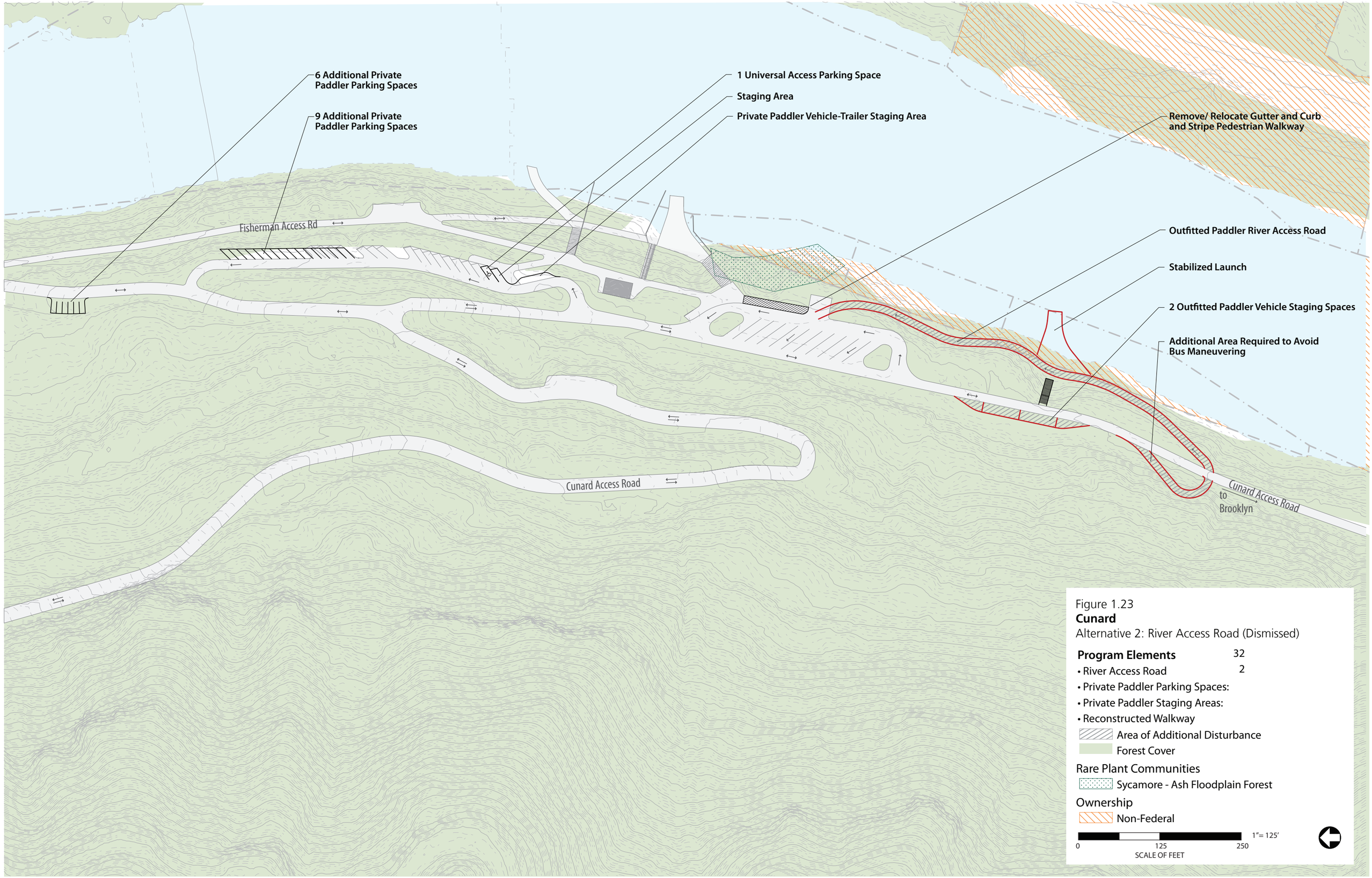


Figure 1.23
Cunard
Alternative 2: River Access Road (Dismissed)

Program Elements	32
• River Access Road	2
• Private Paddler Parking Spaces:	
• Private Paddler Staging Areas:	
• Reconstructed Walkway	

Area of Additional Disturbance
Forest Cover

Rare Plant Communities
Sycamore - Ash Floodplain Forest

Ownership
Non-Federal

0 125 250 1"= 125'
SCALE OF FEET

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Remove/ Relocate Gutter and Curb and Stripe Pedestrian Walkway

Stabilized Launch

Fill

Cut

Wall (varies 2-14')

Wall (varies 2-6')

2 Outfitted Paddler Bus Staging Spaces

Existing Site Development

Proposed Site Development

25' Wall

Additional Area Required to Avoid Bus Maneuvering

Cunard Access Road

Cunard Access Road

5% slope

10% slope

15% slope

10-15% slope

± 980

Figure 1.24
Cunard
Alternative 2 (Enlargement):
River Access Road (Dismissed)

Program Elements
- River Access Road 2
- Outfitted Paddler Bus Staging Areas:
- Reconstructed Walkway

Cut
Fill
Area of Additional Disturbance
Forest Cover

Ownership
Non-Federal

1"= 50'
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Cunard River Access

- **Cunard Alternative 3 (Dismissed)**

Table 1.44 Cunard River Access Alternative 3 (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Steep terrain limits the area available for visitor facilities. Demand for river access during peak periods in the small space diminishes the visitor experience due to crowding. Visitors feel rushed as outfitters seek to move paddlers safely through the sequence of launching activities as quickly as possible to make room for others.	1a. The upstream launch would distribute outfitted paddlers to two launches and alleviate congestion during peak hours
	1b. Facilities are located above the river requiring paddlers to carry equipment down to the river from the parking and staging area, diminishing the visitor experience, slowing the launching process, and creating visitor safety hazards.	1b. The river access road would provide outfitted paddler vehicles to drop equipment and passengers off at the river (the road would require walls over 5’).
	1c. The sidewalk along the perimeter of the outfitted paddler parking area is too narrow for groups carrying rafts, increasing the potential for visitor injuries particularly during congested morning conditions.	1c. A striped pedestrian walkway would be at the same grade as the parking area. The curb and gutter would be removed and relocated to the opposite side of the sidewalk.
	1d. The outfitted paddler raft slide is long and very steep, increasing the potential for visitor injuries on steps particularly during congested morning conditions.	1d. The river access road would provide outfitted paddler vehicles to pick-up equipment and passengers at the river (the road would require walls over 5’).
	1e. The supply of designated private paddler parking spaces is not adequate to meet demand on peak days, creating congestion and safety hazards on peak days.	1e. Additional parking would be provided at the existing private paddler parking area and along Fishermans Access Road.
	1f. There is no suitable staging area for private paddlers, causing some to illegally use the handicapped parking space at the comfort station for staging.	1f. An area adjacent to the vault toilets and at the current handicap parking space would be designated as private paddler staging areas. The handicap parking spot would be relocated.
	1g. Families and other less-experienced visitors who paddle the upper New River take out at Cunard. Paddlers have to carry rafts up steps using the steep raft slide, increasing the potential for visitors particularly when they are tired at the trip end.	1g. The river access road would provide outfitted paddler vehicles to pick-up equipment and passengers at the river (the road would require walls over 5’).
Park Operations	2a. Launching is difficult because trailers must be backed down the Fisherman Access Road.	2a. The river access road would allow vehicles with trailers to drive down to the river and continue along the same road to the outfitted paddler staging area without backing the vehicle back up the road (the road would require walls over 5’).
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining expansion potential.	3b. New development would not occur in uphill areas susceptible to slides.

Table 1.45 Cunard Alternative 3 (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with ascending/descending steep stairs to existing river access would remain
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would likely be reduced due to reduced congestion and safer pedestrian circulation patterns
	• facilitates access to the river for all visitors	• expanding parking would meet private paddler parking demand (providing for 80% of peak day demand)
	• relieves congestion at river access sites	• management actions would generally reduce congestion by providing adequate private paddler parking at different locations at the river access site
	• relieves congestion on roads accessing river access sites	• expanding parking would likely relieve congestion on the Cunard Access Road by reducing pull-off roadside parking by private paddlers who cannot find designated parking spaces
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned
	• reduces potential for visitor conflicts	• availability of additional private paddler parking would generally reduce the potential for conflicts among paddlers • expanding parking would likely reduce conflicts between private paddlers and day-use visitors
	• avoids/minimizes impacts to forest resources	• river access road would require clearing of trees (0.1 acre) outside the existing disturbed area • river access road would require clearing of rare sycamore-ash floodplain forest (0.05 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• NA
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• river access road would require excavation to reach a stable foundation (surface is coal fines and sand) • river access road would require significant earthwork (cut and fill) and construction of retaining walls up to 15’ • river access road would eliminate drainage swale and require culvert • river access road would require partial reconstruction of stairs and stabilized launch

Table 1.45 Cunard Alternative 3 (Dismissed) – Performance Summary (continued)

Evaluation Criteria	Performance Summary
• not likely to require unusual recurring maintenance investment	• excessive grading and construction of very high retaining walls subject to slide damage and likely requiring recurring maintenance • river access road would be located along a steep bank and be susceptible to washouts and landslides
• actions to reduce congestion would meet some outfitter concerns	• actions to reduce congestion would respond to outfitter concerns
• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full	• private paddler concerns would be addressed

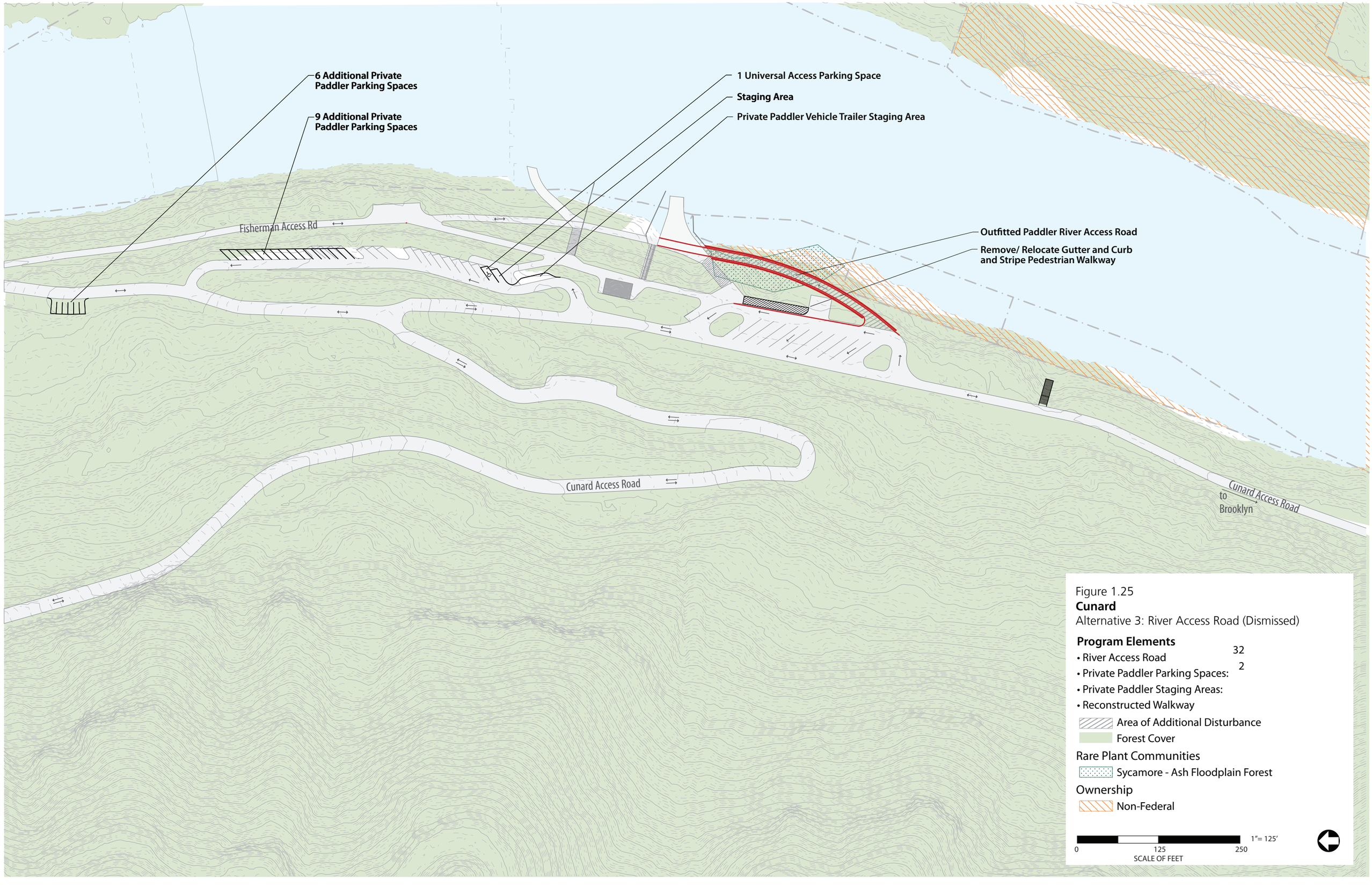

Figure 1.25
Cunard
Alternative 3: River Access Road (Dismissed)

Program Elements

• River Access Road	32
• Private Paddler Parking Spaces:	2
• Private Paddler Staging Areas:	
• Reconstructed Walkway	

Area of Additional Disturbance
Forest Cover

Rare Plant Communities
Sycamore - Ash Floodplain Forest

Ownership
Non-Federal

0 125 250
SCALE OF FEET
1"= 125'

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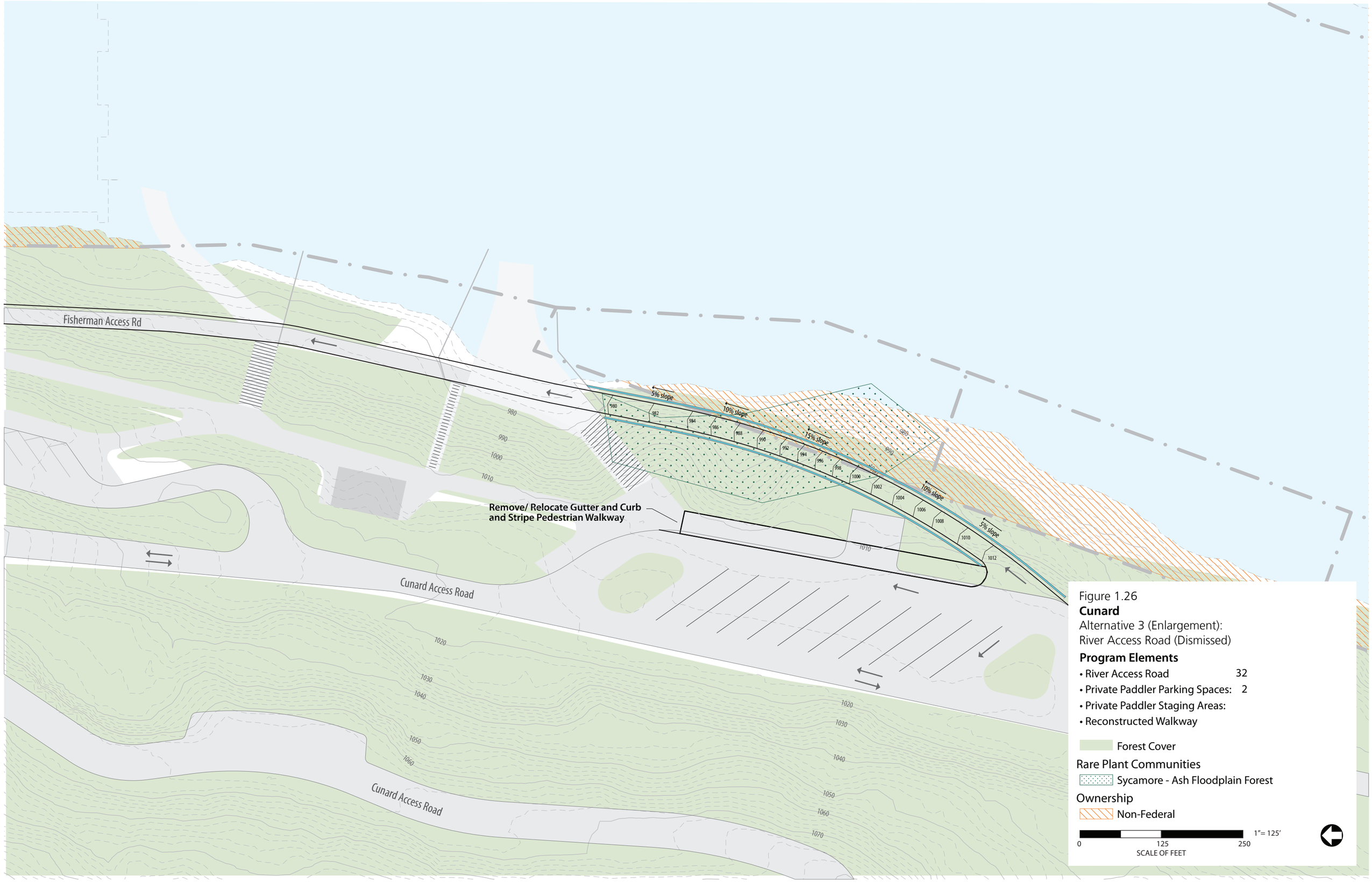

Figure 1.26
Cunard
Alternative 3 (Enlargement):
River Access Road (Dismissed)

Program Elements

- River Access Road 32
- Private Paddler Parking Spaces: 2
- Private Paddler Staging Areas:
- Reconstructed Walkway

Forest Cover

Rare Plant Communities

Sycamore - Ash Floodplain Forest

Ownership

Non-Federal

1"= 125'

0 125 250

SCALE OF FEET

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1.5.4 Brooklyn Alternatives (Dismissed)

- **Brooklyn Alternative 3 (Dismissed)**

Table 1.46 Brooklyn River Access Alternative 3 (under study for expansion) (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The existing ramp with boat slide does not work well. The sharp turn on the approach and the steep slope make it very difficult to launch boats.	1a. No action. The existing launch would not be improved.
	1b. Primitive campsites are very close to the launch site and interfere with parking for fishermen and paddlers.	1b. No action. The existing campsites would not be relocated.
	1c. Primitive campsites are poorly drained and are often inundated with water.	1c. No action. The existing campsites would not be relocated.
	1d. Primitive camping must continue to be accommodated at the site.	1d. Primitive camping would remain at Brooklyn.
	1e. Fishermen, hikers, and bikers frequently use the site and must be accommodated in future planning.	1e. Trailhead parking for hikers, bikers, and fishermen would remain at Brooklyn.
	1f. Better access is needed for disabled fishermen.	1f. New river launch and parking would enable fishing access for disabled fishermen.
Park Operations	2a. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining facility expansion and posing potential recurring management challenges if facilities are expanded.	2a. New development would largely be contained to areas of existing development and the historic rail grade.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Numerous cultural resources on the site (both remnants and historic locations) must be protected from potential adverse effects associated with any future development of larger river access facilities.	3b. New development would be designed around cultural resources.

Table 1.47 Brooklyn Alternative 3 (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with the existing steep ramp remain • hazards associated with two-way traffic on one-lane access road remain
	• reduces enforcement and management needs during peak periods	• enforcement and management needs would increase during peak periods would continue due to increased visitor use

Table 1.47 Brooklyn Alternative 3 (Dismissed) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
	• facilitates access to the river for all visitors	access to the river would continue at the existing ramp which is steep and requires vehicles with trailers to maneuver around sharp turns • expanding parking at Brooklyn would help meet parking demand on peak days (providing overflow parking from Cunard) • addition of a river launch at Brooklyn would provide needed fishing access for disabled fishermen
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by diverting use to an enhanced access at Brooklyn
	• relieves congestion on roads accessing river access sites	• vehicular congestion in Cunard outfitter parking area would increase due to through traffic going to Brooklyn
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • campsites would remain in an area that is poorly drained and often inundated with water • expanded road/turnaround would eliminate trailhead parking for the Southside Junction Trail
	• reduces potential for visitor conflicts	• parking expansion would reduce potential for conflicts related to inadequate parking • potential for conflicts between campers and paddlers would increase due to increased day-use
	• avoids/minimizes impacts to forest resources	• NA
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• expanding parking would require clearing of rare sycamore-ash floodplain forest (0.2 acre)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• expanded parking and road widening would likely have an adverse effect on cultural resources (remnant coke ovens and retaining walls associated with a tipple)
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• expanded parking would require areas of fill
	• not likely to require unusual recurring maintenance investment	• improvements would not likely require unusual recurring maintenance
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• private paddler concerns would be addressed

Figure 1.27
Brooklyn
Alternative 3: Private Paddler Access with Camping (Dismissed)

Program Elements

• Parking Spaces:	10 car/5 vehicle-trailer
• Campsite Parking Spaces	5
• Campsites	5

Area of Existing Disturbance

Natural Resources

Forest Cover

Rare Plant Community – Sycamore-River Birch Riverscour Woodland

State Rare Plants – *Cardamine flagellifera*

Cultural Resources

Cultural Resource Site – Remnant Remaining

Cultural Resource Site – No Remnant Remaining

Existing Site Development
Proposed Site Development
10 Car Spaces /5 Pull-Through Spaces for Cars with Trailers
Restrooms
5 Campsite Parking Spaces
Fill
5 Campsites
Typical Pull-off Passing Slot
Mile Post
to Cunard
17% slope
28% slope
Gate
Expanded Roadway for Trailer Maneuvering
Southside Junction Trail (to Thurmond)

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SCALE OF FEET
1"= 100'

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- **Brooklyn Alternative 4 (Dismissed)**

Table 1.48 Brooklyn River Access Alternative 4 (under study for expansion) (Dismissed) – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. The existing ramp with boat slide does not work well. The sharp turn on the approach and the steep slope make it very difficult to launch boats.	1a. No action. The existing launch would not be improved.
	1b. Primitive campsites are very close to the launch site and interfere with parking for fishermen and paddlers.	1b. No action. The existing campsites would not be relocated.
	1c. Primitive campsites are poorly drained and are often inundated with water.	1c. No action. The existing campsites would not be relocated.
	1d. Primitive camping must continue to be accommodated at the site.	1d. Primitive camping would remain at Brooklyn.
	1e. Fishermen, hikers, and bikers frequently use the site and must be accommodated in future planning.	1e. Trailhead parking for hikers, bikers, and fishermen would remain at Brooklyn.
	1f. Better access is needed for disabled fishermen.	1f. New river launch and parking would enable fishing access for disabled fishermen.
Park Operations	2a. Steep slopes potentially susceptible to slides occur along the uphill perimeter of the site, constraining facility expansion and posing potential recurring management challenges if facilities are expanded.	2a. New development would largely be contained within areas of existing development and the historic rail grade.
Resource Protection	3a. Rare plant communities adjoin launch facilities and are susceptible to direct and indirect visitor use impacts.	3a. New development would largely be contained to areas of existing disturbance and would not occur in areas of rare plant communities.
	3b. Numerous cultural resources on the site (both remnants and historic locations) must be protected from potential adverse effects associated with any future development of larger river access facilities.	3b. New development would be designed around cultural resources.

Table 1.49 Brooklyn Alternative 4 (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with the existing steep ramp remain • hazards associated with two-way traffic on one-lane access road remain
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would continue
	• facilitates access to the river for all visitors	• access to the river would continue at the existing ramp which is steep and requires vehicles with trailers to maneuver around sharp turns • expanding parking at Brooklyn would help meet parking demand on peak days (providing overflow parking from Cunard) • addition of a river launch at Brooklyn would provide needed fishing access for disabled fishermen

Table 1.49 Brooklyn Alternative 4 (Dismissed) – Performance Summary (continued)

	Evaluation Criteria	Performance Summary
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by diverting use to an enhanced access at Brooklyn
	• relieves congestion on roads accessing river access sites	• vehicular congestion in Cunard outfitter parking area would increase due to through traffic going to Brooklyn
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would have a greater chance of finding parking, enabling them to paddle the river as planned • campsites would remain in an area that is poorly drained and often inundated with water • expanded road/turnaround would eliminate trailhead parking for the Southside Junction Trail
	• reduces potential for visitor conflicts	• parking expansion would reduce potential for conflicts related to inadequate parking • potential for conflicts between campers and paddlers would increase due to increased day-use
	• avoids/minimizes impacts to forest resources	• outfitted paddler bus staging would require clearing of trees (0.1 acre) outside the existing disturbed area
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• expanding parking would require clearing of rare sycamore-ash floodplain forest (0.2 acre)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• expanded parking and road widening would likely have an adverse effect on cultural resources (remnant coke ovens and retaining walls associated with a tipple)
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• expanded parking would require areas of fill • outfitted paddler bus staging would require earthwork and construction of 10’ retaining walls
	• not likely to require unusual recurring maintenance investment	• excessive grading and construction of high retaining walls subject to slide damage and likely requiring recurring maintenance
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• private paddler concerns would be addressed

Figure 1.28
Brooklyn
Alternative 4: Split Private and Outfitted Paddler Access (Dismissed)

Program Elements

• Parking Spaces:	10
• Campsite Parking Spaces	5
• Outfitted Paddler Bus Parking Spaces	4
• Campsites	5

Natural Resources

- Forest Cover
- Rare Plant Community – Sycamore-River Birch Riverscour Woodland
- State Rare Plants – *Cardamine flagellifera*

Cultural Resources

- Cultural Resource Site – Remnant Remaining
- Cultural Resource Site – No Remnant Remaining

Restroom
5 Campsite Parking Spaces
5 Campsites
4 Outfitted Paddler Bus Parking Spaces
Outfitted Paddler Bus Drop-off
10 Private Paddler Parking Spaces
Fill
Existing Site Development
Proposed Site Development
Expanded Roadway for Trailer Maneuvering
Mile Post
to Cunard
6' Wall
28% slope
17% slope
Gate
Southside Junction Trail (to Thurmond)
0
100
200
SCALE OF FEET
1" = 100'

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1.5.5 Surprise Alternatives (Dismissed)

The recently completed *New River Gorge National River General Management Plan/Environmental Impact Statement* (GMP) (NPS 2011a and 2009a) indicates that NPS will explore development of a potential river access on the New River at Surprise if certain conditions occur. Relevant GMP management actions included the following (NPS 2009a, page 2-147):

> *At Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by:*
>
> - *adding parking for private paddlers at Cunard*
> - *adding new private paddler parking along the Fisherman's Trail access road*
> - *implementing an alternative transportation system (ATS) composed of a concession-based shuttle that would operate on Cunard Road, picking up and dropping off riders at a satellite parking area on the rim (at the site of the proposed Cunard boundary adjustment); the shuttle would primarily serve private paddlers and other visitors – outfitted paddlers would continue to ride to and from the river access on outfitter-operated buses*
> - *expanding parking for fishermen and private boaters at Brooklyn*
> - *if after making the above-listed improvements at Cunard and Brooklyn, visitor crowding issues during peak visitation days are still not adequately addressed, then the NPS would consider adding a new river access at Surprise, including – as appropriate and as practicable – extension of Cunard Road and electrical service beyond Brooklyn and development of a river launch, drop-off areas and parking facilities (for outfitted paddlers and private paddlers), comfort/changing stations, picnicking facilities, and water supply*

To evaluate the feasibility of a potential river access at Surprise, the NPS has explored the New River corridor from the base of Red Ash Island to Surprise Rapids. The feasibility analysis focused on finding river launch sites where water conditions, river bottom, and river bank conditions are suitable for a safe public access facility. It also focused on evaluating the potential for development of land-based public

access facilities adjoining possible river launch sites (roads, parking facilities, and other visitor facilities).

Appendix A presents findings of the feasibility analyses, summarized as follows:

- **No Suitable River Access Sites in the Surprise River Access Study Area**
  Most of the river bank between Red Ash Island and Surprise Rapid is unsuitable for the development of new river access areas either because of the presence of river cobble or strong currents. The three areas with any potential for development were closely evaluated and all have serious limiting factors. The control point identified as Beach is the smallest area with the steepest slopes. The site at the bottom of Red Ash Island (Birch) is inadequate in size and subject to strong currents at high river flows. The site locally referred to as Fisherman's Paradise is inaccessible at low river flows and perhaps located too close to Surprise Rapid at high river flows.

- **Surprise Corridor is Generally Unsuitable for River Access Development**
  The Surprise corridor is generally unsuitable for development of roads, parking, and visitor facilities needed to support a new public river access. Steep slopes characterize the entire corridor; extensive grading and retaining wall construction would be required to accommodate facilities. Active slide areas would threaten access roads to the Fisherman's Paradise, Beach, and Lower Red Ash Island river launch sites, and would be a particular problem for the Fisherman's Paradise river launch site. Construction of river launch sites would likely have a major adverse impact on several rare plant communities present along the length of the corridor between the Southside Junction Trail and the river.

Despite not finding any suitable river launch sites, the planning team evaluated alternatives for land-based facilities in the Surprise corridor. This was done for illustrative purposes to determine if it would even be possible to develop the necessary land-based facilities if a suitable river launch site existed (which one does not). The three best (though unsuitable) river launch sites identified through the reconnaissance – Beach, Birch, and Fisherman's Paradise – were used to anchor alternatives for land-based facilities. Three alternatives were considered for each launch site, generating a total of nine alternatives. Following is an overview of each alternative, including a summary of why each has been dismissed from further study.

- **Surprise Alternative 1a Fisherman's Paradise (drop-off at river level/parking along road) (Dismissed)**

Table 1.50 Surprise River Access Alternative 1a (Fisherman's Paradise)(under study for development) Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.) 1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river. 1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround. 1d. Active slide areas pose safety risks to visitors.	1a. River access would be established at Fisherman's Paradise. The access would be inaccessible at low river flows and located too close to the Surprise Rapid at high river flows for paddlers to prepare for the rapid. 1b. A staging area would be established at the river access site and require 15' retaining walls. Visitors would access the launch by path or steep stairs. 1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls). 1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented. 2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides. 2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor: 3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor. 3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites. 3d. Remnant cultural resources include several house foundations along the river bank.	3a. No action. River access would require development in areas characterized by rare plant communities. 3b. No action. River access would require development in areas of rare riverscour woodland and floodplain. 3c. No action. River access would require development in areas of Blue Ridge Bittergrass. 3d. Development would occur in areas absent of remnant cultural resources.

Table 1.51 Surprise Alternative 1a (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.51 Surprise Alternative 1a (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.3 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.6 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.2-mile river access road would require significant earthwork (cut and fill) with retaining walls over 5’ high • river access at low flow use would require dredging • staging at river access site would require 15’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnabout would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

15′ Retaining Wall
Outfitted Paddler Staging Area
Access Road (10 % slope)
5 Jon Boat Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
14 Private Paddler Spaces
Stairs
2 Outfitted Paddler Equipment Vehicle Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
Vault Toilet
Turnaround
20′ Retaining Wall
6 Private Paddler Spaces
2 Spaces for NPS and WVDNR Patrol Boats
990
1030
1030
990
1000
1010
1020
1030
20.6
20.7
20.8
20.9
21
21.1
21.2
21.3
Surprise Rapids
Southside Junction Trail (to Thurmond)
to Brooklyn
to Red Ash Island

Outfitter Paddler Equipment Truck Space

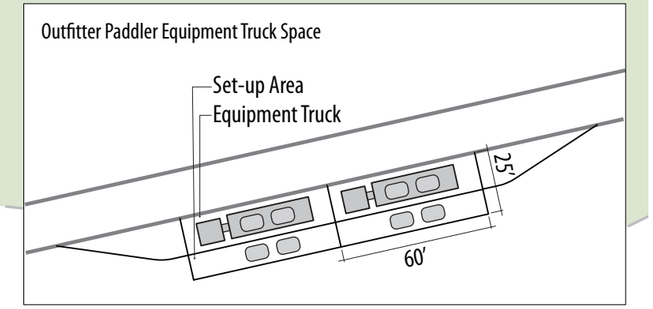

Figure 1.29
Surprise Corridor - Fisherman's Paradise
Alternative 1a (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

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- **Surprise Alternative 1b (Fisherman's Paradise) (walk down to river/parking along road) (Dismissed)**

Table 1.52 Surprise River Access Alternative 1b (Fisherman's Paradise) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Fisherman's Paradise. The access would be inaccessible at low river flows and located too close to the Surprise Rapid at high river flows for paddlers to prepare for the rapid.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 10' retaining walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potentia for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access path and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. No action. River access would require development in areas of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.53 Surprise Alternative 1b (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and

		pedestrian cross traffic in many locations
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.3 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.3 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low flow use would require dredging • staging at river access site would require 10’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

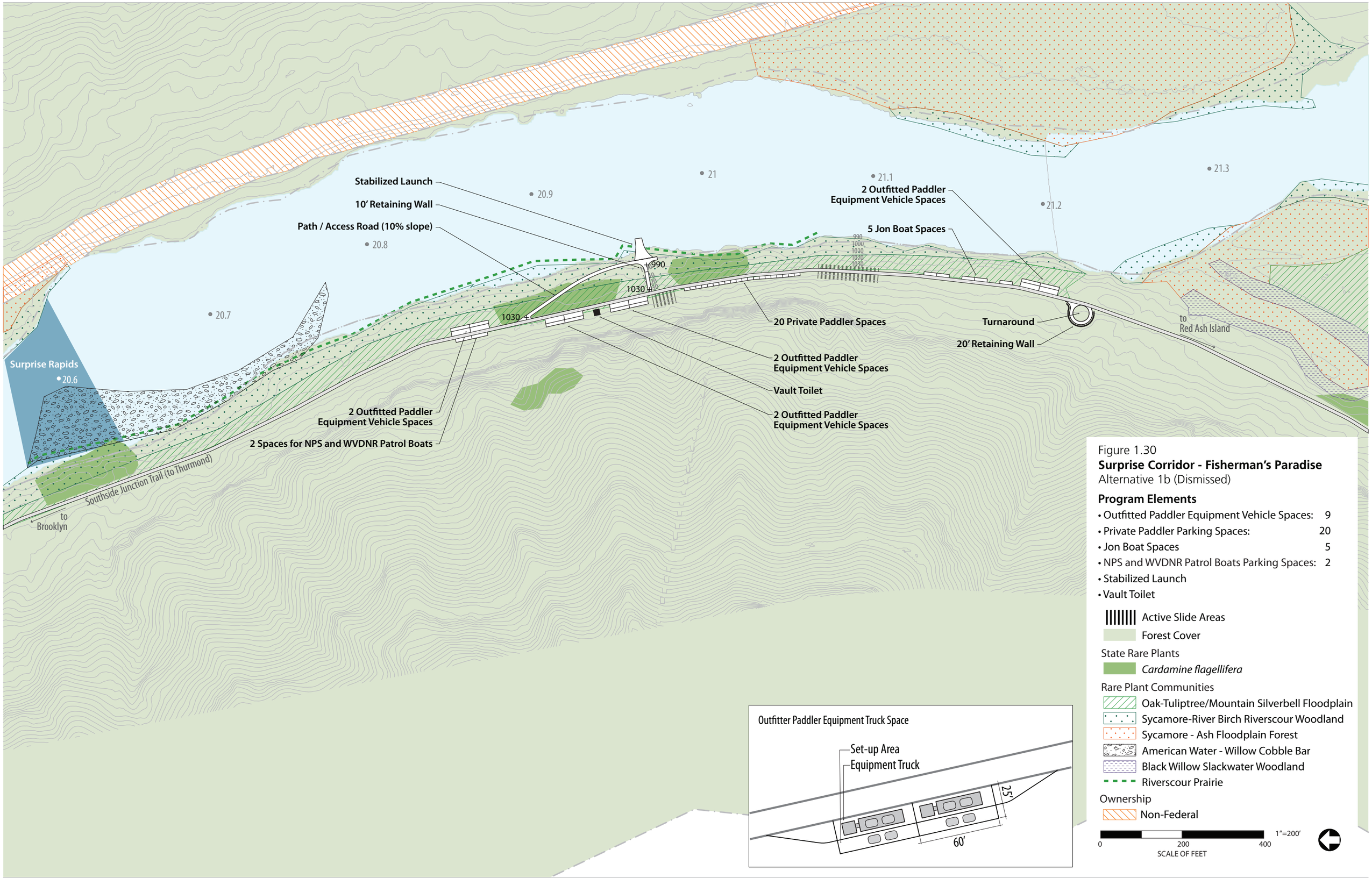

Figure 1.30
Surprise Corridor - Fisherman's Paradise
Alternative 1b (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

1″=200′
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SCALE OF FEET

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- **Surprise Alternative 1c (Fisherman's Paradise) (drop-off at river level/outfitter parking in one lot) (Dismissed)**

Table 1.54 Surprise River Access Alternative 1c (Fisherman's Paradise)(under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Fisherman's Paradise. The access would be inaccessible at low river flows and located too close to the Surprise Rapid at high river flows for paddlers to prepare for the rapid.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 10' retaining walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potentia for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access path and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides. The outfitted paddler equipment vehicle parking would require 50' walls.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. No action. River access would require development in areas of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.55 Surprise Alternative 1c (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (1 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.3 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low flow use would require dredging • staging at river access site would require 10’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnabout would require significant earthwork and 20’ retaining walls • commercial outfitter vehicle parking would require significant earthwork and 50’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

Path / Access Road (10% slope)

Stabilized Launch

10′ Retaining Wall

Stairs

9 Private Paddler Parking Spaces

11 Private Paddler Parking Spaces

Vault Toilet

50′ Wall

9 Outfitted Paddler Equipment Vehicle Spaces

2 Spaces for NPS and WVDNR Patrol Boats

Turnaround

20′ Retaining Wall

5 Jon Boat Spaces

to Red Ash Island

Surprise Rapids

20.6

20.7

20.8

20.9

21

21.1

21.2

21.3

990

1030

Southside Junction Trail (to Thurmond)

to Brooklyn

Outfitter Paddler Equipment Truck Space

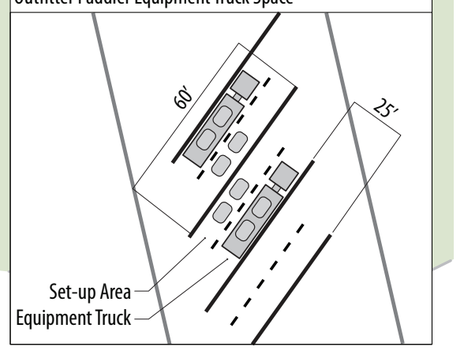

Figure 1.31
Surprise Corridor - Fisherman's Paradise
Alternative 1c (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas

Forest Cover

State Rare Plants

Cardamine flagellifera

Rare Plant Communities

Oak-Tuliptree/Mountain Silverbell Floodplain

Sycamore-River Birch Riverscour Woodland

Sycamore - Ash Floodplain Forest

American Water - Willow Cobble Bar

Black Willow Slackwater Woodland

Riverscour Prairie

Ownership

Non-Federal

0 200 400 SCALE OF FEET

1″=200′

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- **Surprise Alternative 2a (Beach) (drop-off at river level/parking along road) (Dismissed)**

Table 1.56 Surprise River Access Alternative 2a (Beach) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Beach. The access pool is small and shallow at both high and low flow.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 30' retaining walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potentia for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. No action. River access would require development in areas of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.57 Surprise Alternative 2a (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.3 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.4 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.2-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 30’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

Path / Access Road (10% slope)
Stabilized Launch
Outfitted Paddler Staging Area
30' Retaining Wall
Stairs
20 Private Paddler Parking Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
Vault Toilet
2 Outfitted Paddler Equipment Vehicle Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
2 Spaces for NPS and WVDNR Patrol Boats
1 Outfitted Paddler Equipment Vehicle Space
Turnaround
20' Retaining Wall
2 Outfitted Paddler Equipment Vehicle Spaces
5 Jon Boat Spaces
990 ±
1030 ±
1030
1030 ±
20.6
20.7
20.8
20.9
21
21.1
21.2
21.3
Surprise Rapids
Southside Junction Trail (to Thurmond)
to Brooklyn
to Red Ash Island

Figure 1.32
Surprise Corridor - Beach
Alternative 2a (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

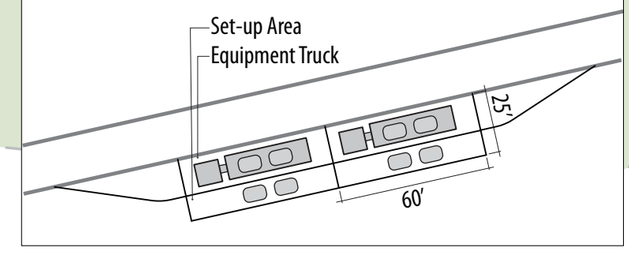
State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

1"=200'
0 200 400
SCALE OF FEET

Outfitter Paddler Equipment Truck Space



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- **Surprise Alternative 2b (Beach) (walk down to river/parking along road) (Dismissed)**

Table 1.58 Surprise River Access Alternative 2b (Beach) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Beach. The access pool is small and shallow at both high and low flow.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 20' retaining walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access path and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. No action. River access would require development in areas of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.59 Surprise Alternative 2b (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.59 Surprise Alternative 2b (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.3 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.3 acres) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 30’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

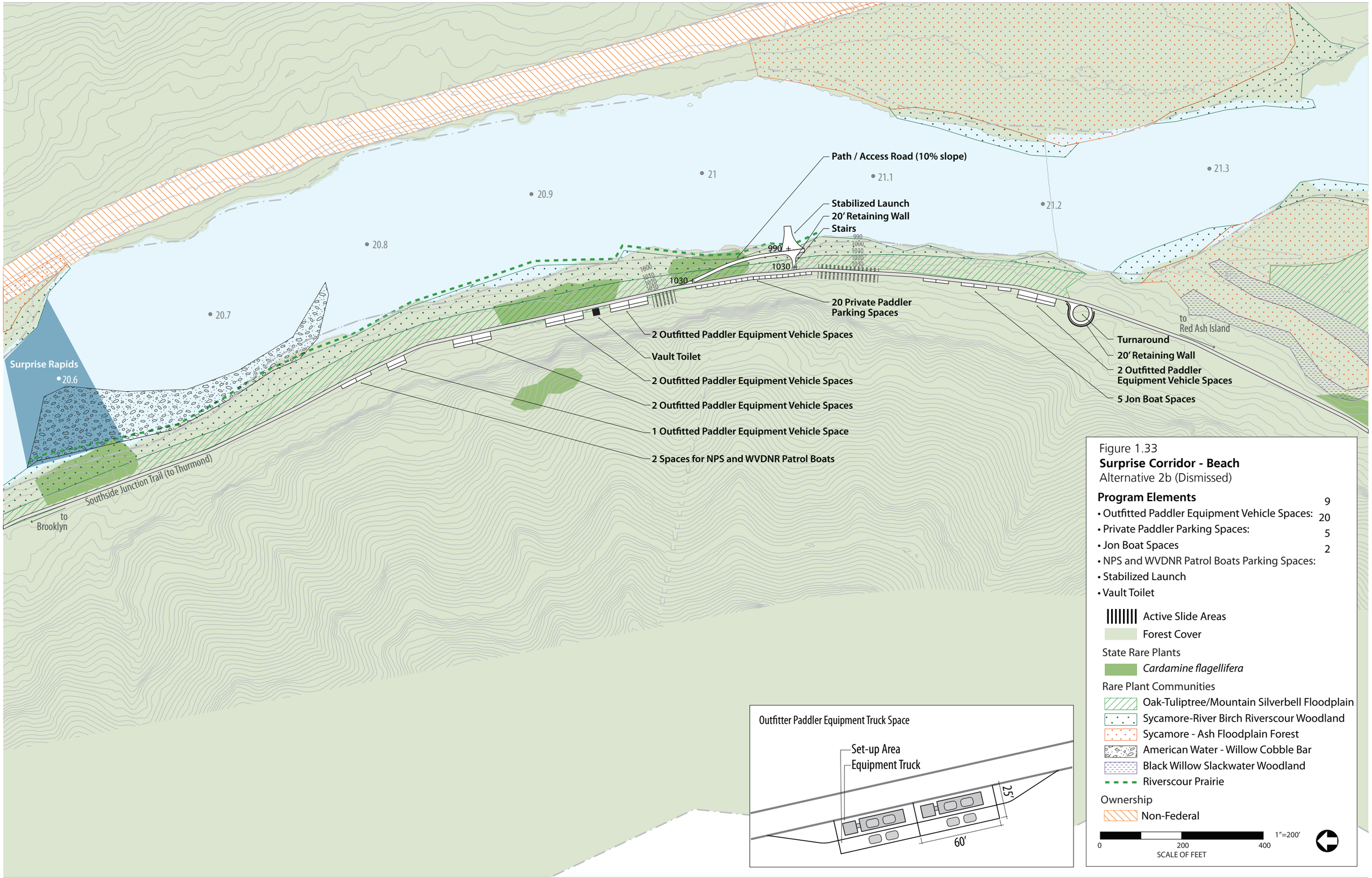

Figure 1.33
Surprise Corridor - Beach
Alternative 2b (Dismissed)

Program Elements 9

- Outfitted Paddler Equipment Vehicle Spaces: 20
- Private Paddler Parking Spaces: 5
- Jon Boat Spaces 2
- NPS and WVDNR Patrol Boats Parking Spaces:
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

0 200 400 SCALE OF FEET 1"=200'

Outfitter Paddler Equipment Truck Space

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- **Surprise Alternative 2c (Beach) (drop-off at river level/outfitter parking in one lot) (Dismissed)**

Table 1.60 Surprise River Access Alternative 2c (Beach) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Beach. The access pool is small and shallow at both high and low flow.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 20' retaining walls. The outfitted paddler equipment vehicle parking would require 35' walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 35' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access path and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. No action. River access would require development in areas of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.61 Surprise Alternative 2c (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.61 Surprise Alternative 2c (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (1 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.1 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 30’ retaining wa • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls • commercial outfitter vehicle parking would require significant earthwork and 35’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

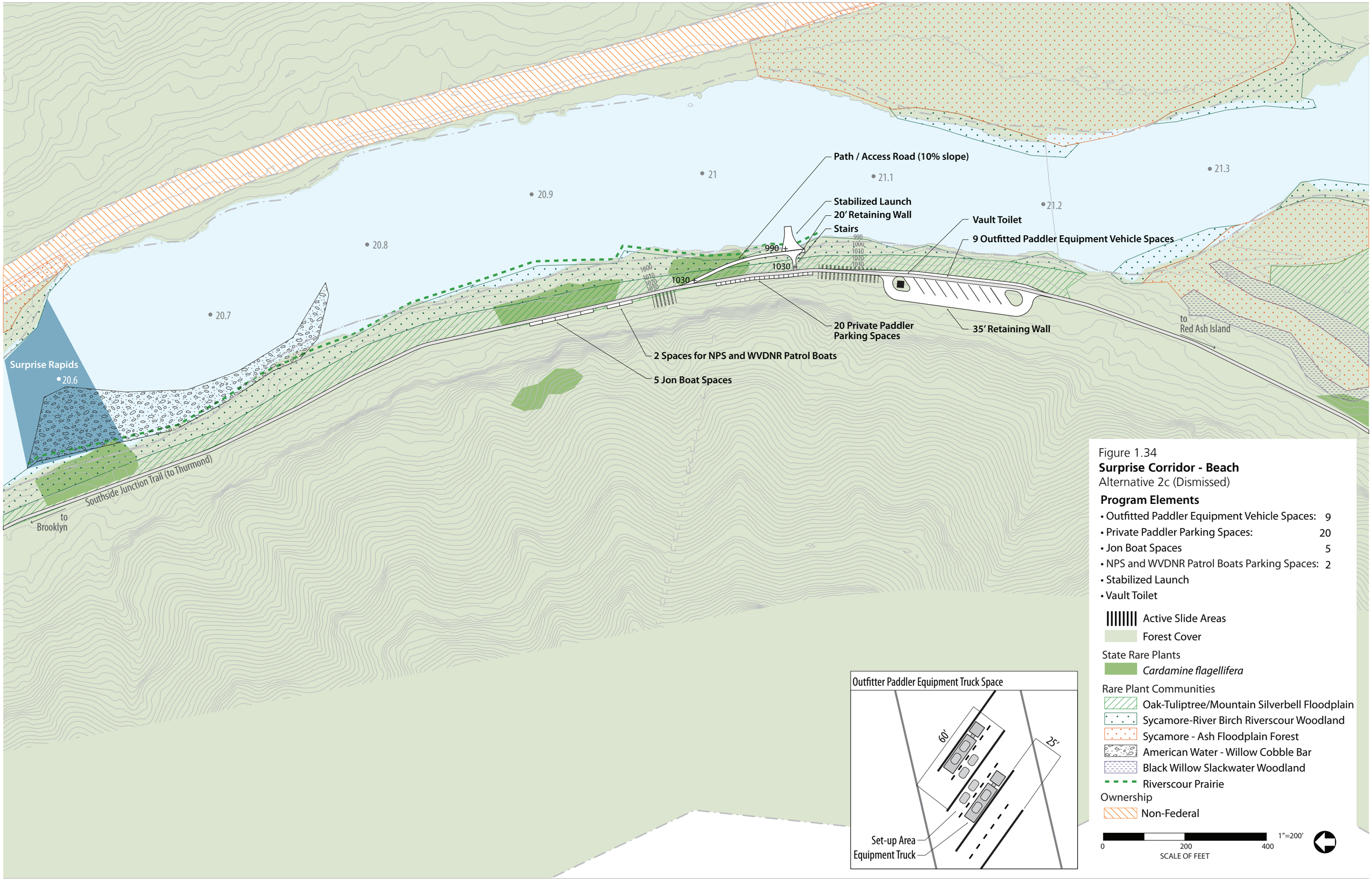

Figure 1.34
Surprise Corridor - Beach
Alternative 2c (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

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- **Surprise Alternative 3a (Birch Bank) (drop-off at river level/parking along road) (Dismissed)**

Table 1.62 Surprise River Access Alternative 3a (Birch Bank) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Birch Bank. The access pool is small and subject to strong currents at high flow and there is no current in the pool at low flow.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 30' retaining walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. River access would be established in areas absent of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.63 Surprise Alternative 3a (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.63 Surprise Alternative 3a (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.3 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.3 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, and sycamore-river birch riverscour woodland)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.2-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 30’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

2 Spaces for NPS and WVDNR Patrol Boats

Stabilized Launch

Stairs

Access Road (10% slope)

20 Private Paddler Parking Spaces

7 Outfitted Paddler Equipment Vehicle Spaces

5 Jon Boat Spaces

Turnaround

20' Retaining Wall

2 Outfitted Paddler Equipment Vehicle Spaces

Vault Toilet

Surprise Rapids

20.6

20.7

20.8

20.9

21

21.1

21.2

21.3

990

1035

1600

1610

1020

1030

To Red Ash Island

Southside Junction Trail (to Thurmond)

to Brooklyn

Figure 1.35
Surprise Corridor - Birch Bank
Alternative 3a (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas

Forest Cover

State Rare Plants

Cardamine flagellifera

Rare Plant Communities

Oak-Tuliptree/Mountain Silverbell Floodplain

Sycamore-River Birch Riverscour Woodland

Sycamore - Ash Floodplain Forest

American Water - Willow Cobble Bar

Black Willow Slackwater Woodland

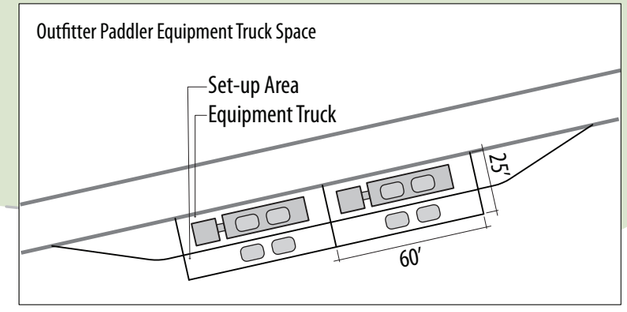
Riverscour Prairie

Ownership

Non-Federal

0 200 400 SCALE OF FEET 1"=200'

Outfitter Paddler Equipment Truck Space



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- **Surprise Alternative 3b (Birch Bank) (walk down to river/parking along road) (Dismissed)**

Table 1.64 Surprise River Access Alternative 3b (Birch Bank) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Birch Bank. The access pool is small and subject to strong currents at high flow and there is no current in the pool at low flow.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 25' retaining walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 30' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. River access would be established in areas absent of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.65 Surprise Alternative 3b (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.65 Surprise Alternative 3b (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.3 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.2 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, and sycamore-river birch riverscour woodland)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 25’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

Path / Access Road (10% slope)

2 Spaces for NPS and WVDNR Patrol Boats

20 Private Paddler Parking Spaces

7 Outfitted Paddler Equipment Vehicle Spaces

5 Jon Boat Spaces

Stabilized Launch

25′ Retaining Wall

Stairs

Turnaround

20′ Retaining Wall

2 Outfitted Paddler Equipment Vehicle Spaces

Vault Toilet

Surprise Rapids

Southside Junction Trail (to Thurmond)

to Brooklyn

to Red Ash Island

Figure 1.36
Surprise Corridor - Birch Bank
Alternative 3b (Dismissed)

Program Elements 9
- Outfitted Paddler Equipment Vehicle Spaces: 20
- Private Paddler Parking Spaces: 5
- Jon Boat Spaces 2
- NPS and WVDNR Patrol Boats Parking Spaces:
- Stabilized Launch
- Vault Toilet

Active Slide Areas

Forest Cover

State Rare Plants

Cardamine flagellifera

Rare Plant Communities

Oak-Tuliptree/Mountain Silverbell Floodplain

Sycamore-River Birch Riverscour Woodland

Sycamore - Ash Floodplain Forest

American Water - Willow Cobble Bar

Black Willow Slackwater Woodland

Riverscour Prairie

Ownership

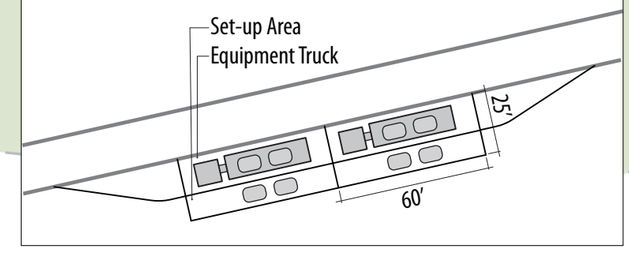
Non-Federal

1″=200′

0 200 400

SCALE OF FEET

Outfitter Paddler Equipment Truck Space



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- **Surprise Alternative 3c (Birch Bank) (drop-off at river level/outfitter parking in one lot) (Dismissed)**

Table 1.66 Surprise River Access Alternative 3c (Birch Bank) (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Birch Bank. The access pool is small and subject to strong currents at high flow and there is no current in the pool at low flow.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. A staging area would be established at the river access site and require 25' retaining walls. The outfitted paddler equipment vehicle parking would require 30' walls. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 30' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	3a. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	3b. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. River access would be established in areas absent of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.67 Surprise Alternative 3c (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane road • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.67 Surprise Alternative 3c (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • paddlers arrive later in the morning would have to walk further distances to river access
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (1 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.1 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, and sycamore-river birch riverscour woodland)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 25’ retaining walls • parking would require significant earthwork and retaining walls up to 20’ • commercial outfitter vehicle parking would require significant earthwork and 50’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

Stabilized Launch
25' Retaining Wall
Stairs
Path / Access Road (10% slope)
9 Outfitted Paddler Equipment Vehicle Spaces
30' Wall
Vault Toilet
20 Private Paddler Parking Spaces
2 Spaces for NPS and WVDNR Patrol Boats
5 Jon Boat Spaces
+ 990
+ 1035
+ 1035
20.6
20.7
20.8
20.9
21
21.1
21.2
21.3
Surprise Rapids
Southside Junction Trail (to Thurmond)
to Brooklyn
to Red Ash Island

Figure 1.37
Surprise Corridor - Birch Bank
Alternative 3c (Dismissed)

Program Elements
- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

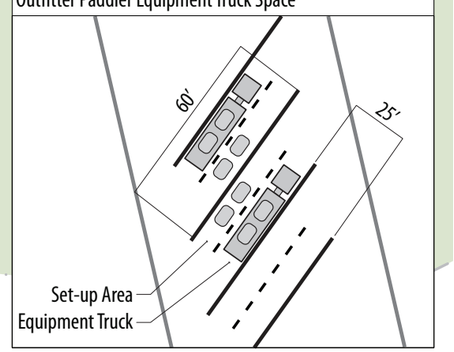
State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

0 200 400 SCALE OF FEET
1"=200'

Outfitter Paddler Equipment Truck Space



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- **Surprise Alternative 4 Tripartite (Dismissed)**

Table 1.68 Surprise Alternative 4 (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.) 1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river. 1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround. 1d. Active slide areas pose safety risks to visitors.	1a. River access would be established at Fishman's Paradise, Beach, and Birch Bank. The river access sites would function best at moderate flows. 1b. River access would be established at three sites and visitor use would be distributed among the sites. Visitors would access the launch by path or steep stairs. 1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls). 1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented. 2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides. 2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor: 3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor. 3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites. 3d. Remnant cultural resources include several house foundations along the river bank.	3a. No action. River access would require development in areas characterized by rare plant communities. 3b. No action. River access would require development in areas of rare riverscour woodland and floodplain. 3c. No access. Development at Fisherman's and Beach would occur in areas of Blue Ridge Bittergrass. 3d. Development would occur in areas absent of remnant cultural resources.

Table 1.69 Surprise Alternative 4 (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane access road remain • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations • hazards associated with the existing steep ramp remain (Brooklyn)
	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required

Table 1.69 Surprise Alternative 4 (Dismissed) – Performance Summary (continued)

	• facilitates access to the river for all visitors	• access to the river would continue to be limited to the existing steep ramp which requires sharp turns (Brooklyn)
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full • access to the river would continue to be limited to the existing steep ramp which requires sharp turns (Brooklyn)
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.4 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.2 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• shuttle staging spaces would pose potential affect to cultural resource (remnant coke ovens) (Brooklyn)
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• expanded parking would require areas of fill (Brooklyn) • outfitted paddler bus staging would require earthwork and 10’ retaining walls (Brooklyn) • 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high (Surprise) • river access at low and high flow conditions would require dredging (Surprise) • staging at river access site would require 25’ retaining walls (Surprise) • parking would require significant earthwork and retaining walls up to 20’ (Surprise) • vehicular turnaround would require significant earthwork and 20’ retaining walls (Surprise)
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank an be susceptible to washouts and landslides (Surprise) • parking would be susceptible to active slides (Surprise) • river access at low and high flow conditions would require dredging (Surprise)
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

Figure 1.38a

Surprise Corridor

Alternative 4: Tripartite Access with Brooklyn to Surprise Shuttle for Private Paddlers (downstream section) (Dismissed)

Program Elements

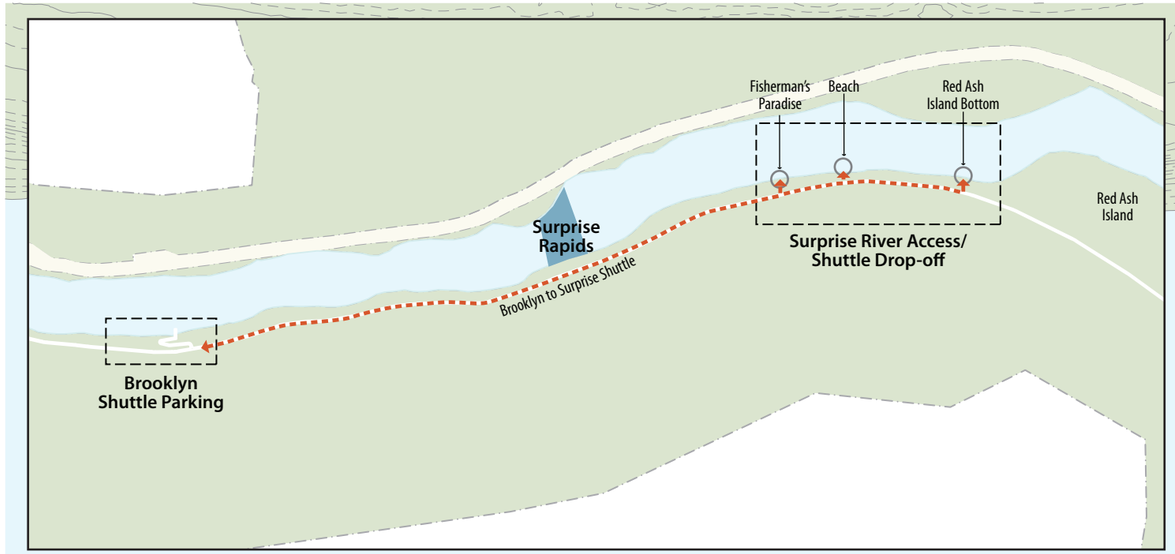
• Outfitted Paddler Equipment Vehicle Spaces	4
• Private Paddler Parking Spaces	20
• Trailhead Parking Spaces	8
• Campsite Parking Spaces	10
• Campsites	5
• Vault Toilet	

Natural Resources

- Forest Cover
- Rare Plant Community – Sycamore-River Birch Riverscour Woodland
- State Rare Plants – *Cardamine flagellifera*

Cultural Resources

- Cultural Resource Site – Remnant Remaining
- Cultural Resource Site – No Remnant Remaining



2 Shuttle Spaces
Vault Toilet
2 Shuttle Spaces
Mile Post
to Cunard
Gate
8 Trailhead Parking Spaces
5 Camp Sites
10 Camp Parking Spaces
Vault Toilet
20 Private Paddler/Shuttle Parking Spaces
Southside Junction Trail (to Thurmond)

0 100 200 SCALE OF FEET 1"= 100'

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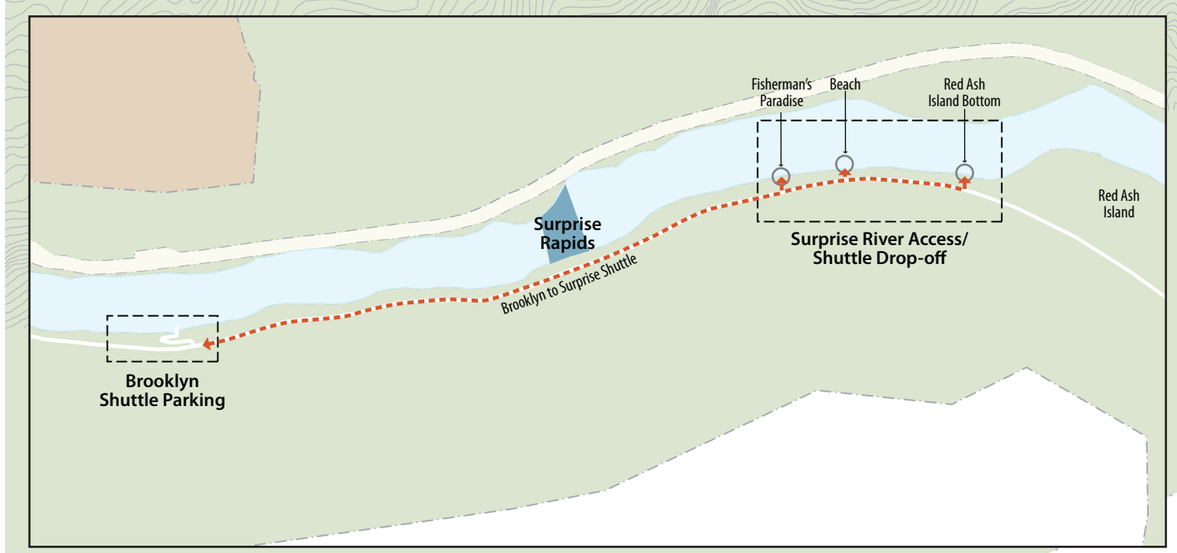
Stabilized Launch
Stabilized Launch
Stabilized Launch
10′ Retaining Wall
Path / Access Road (10% slope)
20.9
21
21.1
21.2
21.3
20.8
20.7
990
1000
1010
1020
1030
2 Outfitted Paddler Equipment Vehicle Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
2 Outfitted Paddler Equipment Vehicle Spaces
1 Outfitted Paddler Equipment Vehicle Spaces
Turnaround
20′ Retaining Wall
to Red Ash Island
Surprise Rapids
20.6
Southside Junction Trail (to Thurmond)
to Brooklyn



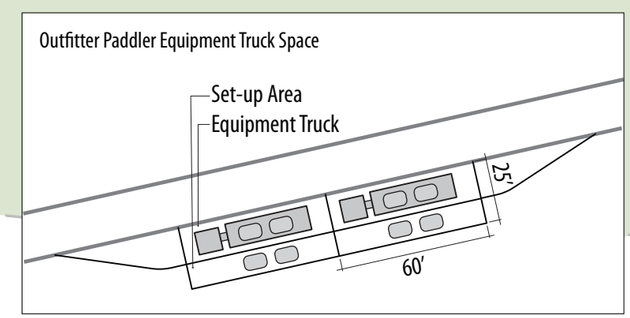


Figure 1.38b
Surprise Corridor
Alternative 4: Tripartite Access with Brooklyn to Surprise Shuttle for Private Paddlers (upstream section)

Program Elements
- Shuttle Equipment Vehicle Spaces: 9
- Stabilized Launches: 3

Active Slide Areas
Forest Cover

State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

1″=200′
0 200 400
SCALE OF FEET

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- **Surprise Alternative 5 Tripartite/Private Paddler Shuttle (Dismissed)**

Table 1.70 Surprise River Access Alternative 5 (under study for development) (Dismissed) – Actions in Response to Existing Site Conditions and Potential Management Concerns (if developed)

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Most of the river bank in the Surprise corridor is unsuitable for development of a safe river access due to strong currents and/or poor accessibility during low flows. (Three potential launch sites while having serious limitations have been retained for further study as potential access sites.)	1a. River access would be established at Fishman's Paradise, Beach, and Birch Bank. The river access sites would function best at moderate flows.
	1b. Steep terrain limits the availability of level areas needed for visitor facilities that would support a safe high quality visitor experience while accessing the river.	1b. River access would be established at three sites and visitor use would be distributed among the sites. Visitors would access the launch by path or steep stairs.
	1c. Steep terrain limits the possibility to expand the Southside Junction Trail to a two-way road. The road would require pull-offs and a vehicular turnaround.	1c. Pull-offs would be located along the road and a vehicular turnaround would be located upstream of the river access and parking (the turnaround would require 20' retaining walls).
	1d. Active slide areas pose safety risks to visitors.	1d. Visitor facilities would be distributed away from areas of active slide but would still be susceptible to slides.
Park Operations	2a. Steep slopes potentially susceptible to slides occur throughout the corridor, constraining the potential for new facility development and posing potential recurring facility management challenges. Several active slide areas have been documented.	2a. No action. The river access road and outfitted and private paddler parking areas would require retaining walls and earthwork susceptible to slides.
	2b. Development of a new access site in the Surprise corridor would require relocation of the Through Park Connector.	2b. The Through Park Connector would be relocated to follow a bench closer to the rim.
Resource Protection	3a. Rare plant communities characterize most of the river bottom and shoreline habitat in the Surprise corridor:	1c. No action. River access would require development in areas characterized by rare plant communities.
	3b. Rare riverscour woodland and floodplain forest adjoin the river along the entire length of the Surprise Corridor.	2c. No action. River access would require development in areas of rare riverscour woodland and floodplain.
	3c. Blue Ridge Bittergrass – designated rare by the state of West Virginia occurs in the vicinity of the Fisherman's and Beach potential launch sites.	3c. No access. Development at Fisherman's and Beach would occur in areas of Blue Ridge Bittergrass.
	3d. Remnant cultural resources include several house foundations along the river bank.	3d. Development would occur in areas absent of remnant cultural resources.

Table 1.71 Surprise Alternative 5 (Dismissed) – Performance Summary

	Evaluation Criteria	Performance Summary
Project Purpose	• addresses existing and potential safety hazards	• hazards associated with two-way traffic on one-lane access road remain • hazards associated with visitors ascending/descending steep stairs to river access • hazards associated with potential vehicular and pedestrian cross traffic in many locations

Table 1.71 Surprise Alternative 5 (Dismissed) – Performance Summary (continued)

	• reduces enforcement and management needs during peak periods	• enforcement and management needs during peak periods would be required
	• facilitates access to the river for all visitors	• makes additional access available on Lower New
	• relieves congestion at river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
	• relieves congestion on roads accessing river access sites	• congestion at Cunard would be reduced by dispersing demand for river access
NPS Programmatic Objectives	• increases likelihood that visitors have their desired experience	• paddlers arriving later in the morning would continue to be unable to paddle the river if parking is full
	• reduces potential for visitor conflicts	• one-lane road and parking distributed along roadway would create potential for conflicts associated with congestion and limited parking at river access site
	• avoids/minimizes impacts to forest resources	• river access, parking, and related facilities would require clearing of trees (0.5 acre)
	• avoids/minimizes/or has no potential to impact to rare plant communities and rare/endangered species	• river access, parking, and related facilities would require clearing of rare plant communities (0.2 acre) (*Cardamine flagellifera*, oak-tuliptree/mountain silverbell floodplain, sycamore-river birch riverscour woodland, and riverscour prairie)
	• avoids/minimizes/or has no potential to affect known or suspected cultural resources	• NA
	• provides an opportunity to partner with local agencies and organizations that might enhance the visitor experience and/or cost efficiency of travel between river access sites	• opportunities for partnering would not be enhanced
Implementation Considerations	• can be built with relative ease and efficiency	• 0.1-mile river access road would require significant earthwork (cut and fill) with walls over 5’ high • river access at low and high flow conditions would require dredging • staging at river access site would require 25’ retaining walls (Surprise) • parking would require significant earthwork and retaining walls up to 20’ • vehicular turnaround would require significant earthwork and 20’ retaining walls
	• not likely to require unusual recurring maintenance investment	• river access road would be located along a steep bank and be susceptible to washouts and landslides • parking would be susceptible to active slides • river access at low and high flow conditions would require dredging
	• responds to known stakeholder concerns	• responds to outfitter interest in additional river access on the lower New River
	• responds to known visitor concerns	• NA

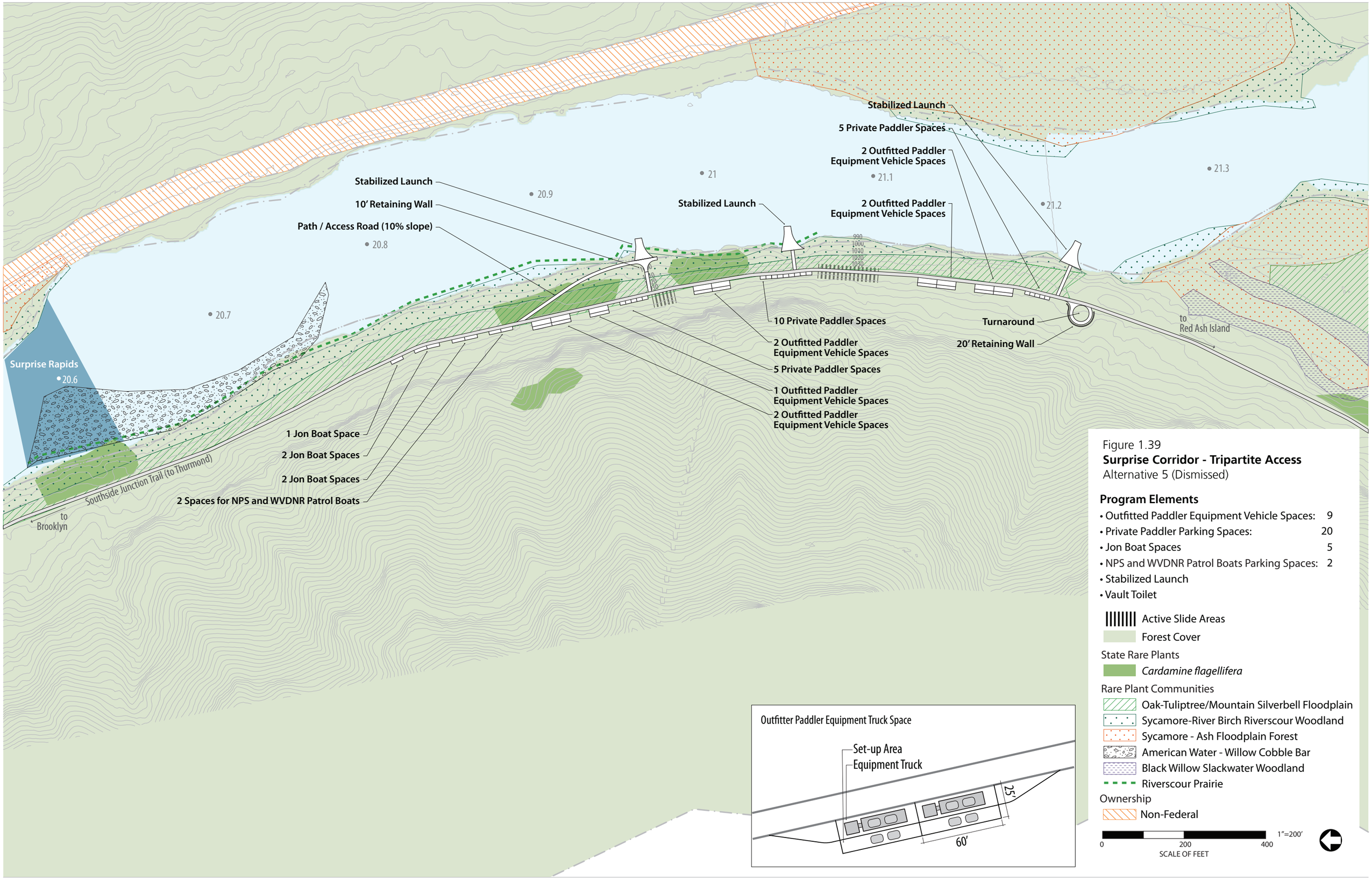

Figure 1.39
Surprise Corridor - Tripartite Access
Alternative 5 (Dismissed)

Program Elements

- Outfitted Paddler Equipment Vehicle Spaces: 9
- Private Paddler Parking Spaces: 20
- Jon Boat Spaces 5
- NPS and WVDNR Patrol Boats Parking Spaces: 2
- Stabilized Launch
- Vault Toilet

Active Slide Areas
Forest Cover

State Rare Plants
Cardamine flagellifera

Rare Plant Communities
Oak-Tuliptree/Mountain Silverbell Floodplain
Sycamore-River Birch Riverscour Woodland
Sycamore - Ash Floodplain Forest
American Water - Willow Cobble Bar
Black Willow Slackwater Woodland
Riverscour Prairie

Ownership
Non-Federal

0 200 400 1"=200'
SCALE OF FEET

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1.5.6 Southside Junction to Cunard Rail Alternative (Dismissed)

The recently completed *New River Gorge National River General Management Plan* (GMP) (NPS 2011a) includes a commitment to consider return of the historic Southside Junction railroad corridor to active use for purposes of providing visitor transportation between Cunard and Southside Junction. This alternative would include: clearing a 50-foot wide right-of-way for 7 miles along the historic rail grade; drainage improvements; placement of fresh ballast and new rails; development of a small station, tail tracks, and maintenance facility at Southside Junction; development of stops at Cunard and Brooklyn; and reconstruction of approximately one mile of the Cunard to Brooklyn Administrative Road (which could only be done with retaining walls as high as 50') (figure 1.40). It would also require relocation of Southside Junction Trail to the upper bench following another old railroad right-of-way for approximately 9.5 miles.

NPS has eliminated this alternative from further consideration due to potential adverse environmental impacts. New River Gorge National River lies at the core of a globally significant forest, contains the most diverse flora of any river gorge in central and southern Appalachia, and provides essential habitat for endangered mammals and rare birds and amphibians (NPS 2009a and 2009b). Related fundamental resources and values found in the park include (NPS 2009a and b):

- a rare expanse of unfragmented and varied forest types
- diverse mosaic of habitats occurring over a large elevational gradient that supports forty identified plant communities containing at least 1,342 species and 54 rare plants
- abundant and diverse breeding populations of birds that spend part of their lives in the tropics but depend upon the unfragmented forest in the park for breeding, especially wood warblers, vireos, and thrushes

The area from Rush Run to the bottom of Red Ash Island is one of only three areas in the park where the New River is connected to the upland forest of the gorge rim, rather than interrupted by highways or railroads. This rare, unfragmented "river to rim" condition is found along only 16.6 of the 106 miles (16%) of the New River shoreline within the park. The Rush Run to lower Red Ash Island segment includes 3.5 miles of this unique habitat condition. The area also provides critical foraging habitat for the federally endangered Virginia big-eared and Indiana bat.

Reestablishment of rail service from Southside Junction would require clearing a 50' right-of-way through this area creating a massive fragmenting feature. This would likely result in a major adverse impact on the park's unfragmented forest and related critical habitats.

NPS has also dismissed the rail alternative because of impacts in the vicinity of the Cunard public river access and impacts on operations at Cunard. Maintaining road access to Brooklyn would necessitate rebuilding the road adjacent to the railroad right-of-way. Adjoining terrain is so steep in the Cunard area that construction of both the road and railroad is not feasible. Furthermore, construction of the rail alternative would adversely affect operations at the Cunard river access by encroaching on the already tightly designed parking and staging area used by outfitters and outfitted paddlers. Private paddlers arriving by train would also experience congestion due to lack of adequate staging space near the train unloading area. Overall this alternative is more likely to increase congestion problems at Cunard during peak days.

In addition to the potential adverse effects of the rail alternative on park resources, preliminary cost estimates suggest that the alternative would be prohibitively expensive. The estimated cost of rail construction, not including train equipment or stations and ancillary visitor facilities, is approximately $15 million. The advantages offered to the visitor experience by this alternative would not warrant the investment, especially given the likely adverse impacts on the park's natural and cultural resources.

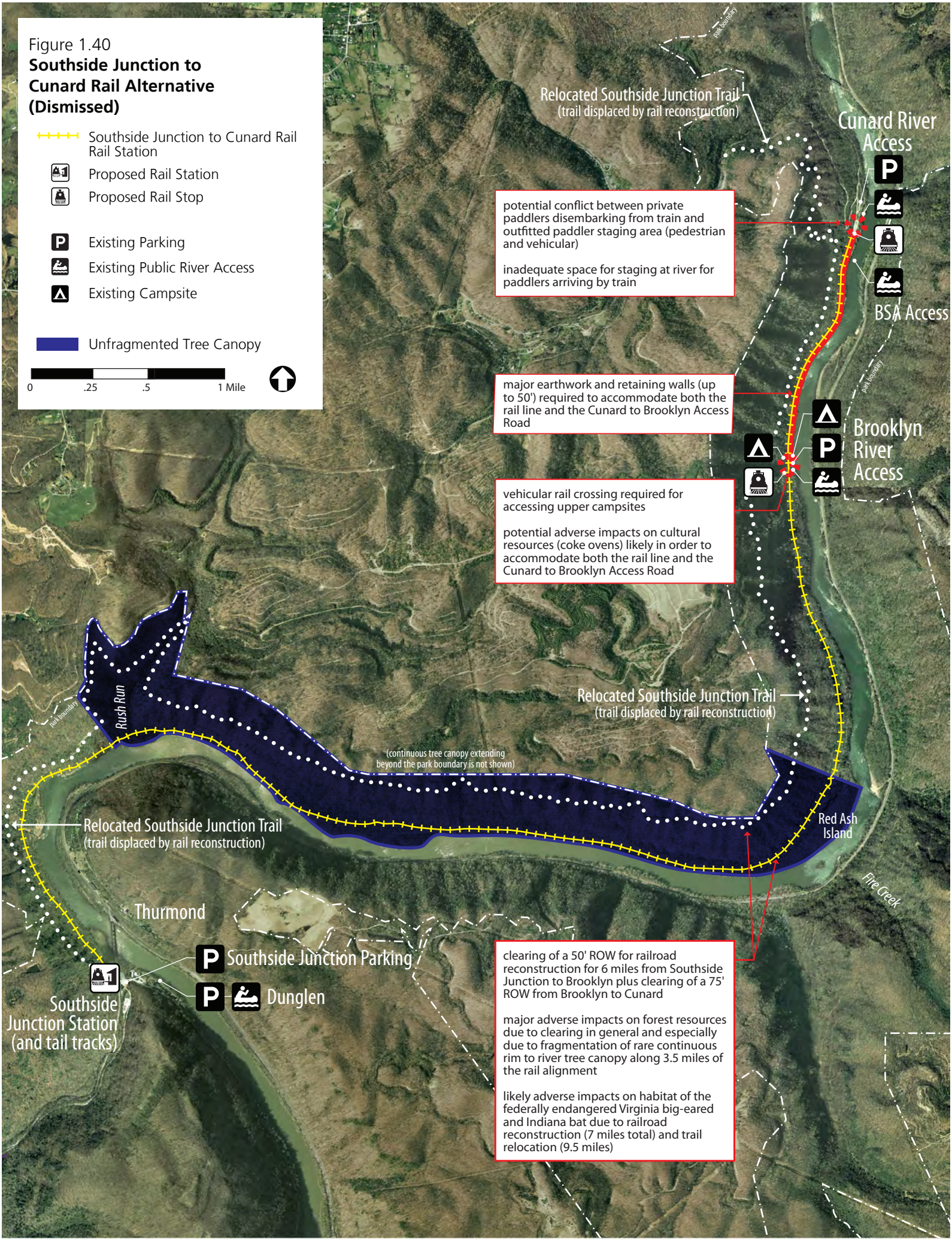


Figure 1.40
Southside Junction to Cunard Rail Alternative (Dismissed)
Southside Junction to Cunard Rail Rail Station
Proposed Rail Station
Proposed Rail Stop
Existing Parking
Existing Public River Access
Existing Campsite
Unfragmented Tree Canopy
0
.25
.5
1 Mile
park boundary
Relocated Southside Junction Trail
(trail displaced by rail reconstruction)
Cunard River Access
BSA Access
potential conflict between private paddlers disembarking from train and outfitted paddler staging area (pedestrian and vehicular)
inadequate space for staging at river for paddlers arriving by train
major earthwork and retaining walls (up to 50') required to accommodate both the rail line and the Cunard to Brooklyn Access Road
Brooklyn River Access
vehicular rail crossing required for accessing upper campsites
potential adverse impacts on cultural resources (coke ovens) likely in order to accommodate both the rail line and the Cunard to Brooklyn Access Road
Rush Run
Relocated Southside Junction Trail
(trail displaced by rail reconstruction)
(continuous tree canopy extending beyond the park boundary is not shown)
Red Ash Island
Fire Creek
Relocated Southside Junction Trail
(trail displaced by rail reconstruction)
Thurmond
Southside Junction Parking
Dunglen
Southside Junction Station (and tail tracks)
clearing of a 50' ROW for railroad reconstruction for 6 miles from Southside Junction to Brooklyn plus clearing of a 75' ROW from Brooklyn to Cunard
major adverse impacts on forest resources due to clearing in general and especially due to fragmentation of rare continuous rim to river tree canopy along 3.5 miles of the rail alignment
likely adverse impacts on habitat of the federally endangered Virginia big-eared and Indiana bat due to railroad reconstruction (7 miles total) and trail relocation (9.5 miles)

1.6 ONE-TIME COSTS FOR RIVER ACCESS SITE ENHANCEMENTS

Table 1.72 shows estimated one-time costs for construction of river access enhancements for each of the alternatives retained for study in section 1.4 above. The costs are provided as an estimate of the relative costs of the alternatives. The following statements apply to the cost estimates:

- the costs are presented as estimates (in 2012 dollars) and are not appropriate for budgeting purposes
- the estimates presented have been developed using NPS and industry standards to the extent available
- specific costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations
- actual costs to the NPS will vary depending on if and when the actions are implemented, and on contributions by partners and volunteers
- inclusion of alternatives in this alternative transportation feasibility study does not guarantee that funding or staffing for recommended actions will be available
- the implementation of the recommended actions will depend on future NPS funding levels and service-wide priorities

Table 1.72 Estimated One-Time Costs for River Access Site Enhancements Retained for Detailed Analysis (NERI) ($2012)

River Access Site Enhancement Alternative	Building Demolition	Special Construction	Site Preparation	Site Improve-ments	Total Base Cost	Base Cost with Mark-Up[1]	CSX Crossing	Land Acquisition	Total Cost
Fayette Station 1c	$0	$20,000	$41,441	$519,586	$581,027	$1,179,194	$250,000	NA	$1,429,194
Fayette Station 2b	$0	$20,000	$33,791	$462,649	$516,441	$1,048,116	$250,000	NA	$1,298,116
Fayette Station 2c	$0	$20,000	$33,949	$554,981	$608,930	$1,235,824	$0	NA	$1,235,824
Fayette Station 4b	$0	$20,000	$35,553	$466,831	$522,384	$1,060,179	$2,093,777	NA	$3,153,956
Cunard 1	$0	$0	$6,132	$279,617	$285,749	$579,927	NA	NA	$579,927
Brooklyn 1	$0	$45,000	$23,867	$424,374	$493,241	$1,001,032	NA	NA	$1,001,032
Brooklyn 2	$0	$45,000	$28,615	$359,669	$433,284	$879,349	NA	NA	$879,349
Cunard/Fayette Station Shuttle 1a	$10,000	$20,000	$31,113	$649,667	$710,779	$1,442,527	$0	$20,000	$1,462,527
Fayette Station 5	$0	$20,000	$25,144	$494,130	$539,274	$1,094,457	$0	NA	$1,094,457
Cunard 1a	$0	$0	$674	$17,411	$18,085	$36,703	NA	NA	$36,703
Cunard Rim 2 Parking	$10,000	$0	$5,295	$138,126	$153,421	$311,367	NA	$20,000	$331,367
Cunard/Fayette Station Shuttle 1b	$10,000	$20,000	$30,504	$675,645	$736,148	$1,494,013	$0	$20,000	$1,514,013
Fayette Station 5	$0	$20,000	$25,144	$494,130	$539,274	$1,094,457	$0	NA	$1,094,457
Cunard 1a	$0	$0	$674	$17,411	$18,085	$36,703	NA	NA	$36,703
Cunard Rim 3 Parking	$10,000	$0	$4,686	$164,104	$178,789	$362,853	NA	$20,000	$382,853

[1] ***Mark-Ups***:

Published Location Factor	*-4 (RS Means, Charleston, WV)*
Project Remoteness Factor	*7%*
Federal Wage Rate Factor	*10% within NPS guidance*
Design Contingency Factor	*10% reasonable for a design/build contract*
Taxes	*included in unit costs*
Standard General Conditions	*10% within NPS guidance*
Government General Conditions	*10% within NPS guidance*
Bonds and Permits	*included in general conditions*
Overhead	*15%*
Profit	*10%*
Contracting Method Adjustments	*10% design/build contract – 8(a) Hubzone*
Inflation Escalation	*0% assume start of construction to be May 2013 at approximately 2 months duration*

2. Gauley River National Recreation Area

2.1 VISITATION AND VISITOR USE

2.1.1 Overview

The mission of the Gauley River NRA is to protect the area's rugged natural features and scenic and cultural values while providing opportunities for water and land based recreational activities compatible with the laws governing NPS. Today, recreation activities within the NRA's authorized limits generally include whitewater paddling, hunting, trapping, fishing, camping, hiking, biking, wildlife watching, climbing, picnicking, and sightseeing. These activities occur on land owned by the NPS, as well as on land that is still in private ownership. ATV riding also occurs within the limits of the NRA, although it currently is not permitted on land owned by NPS.

Visitor use at the NRA is generally constrained by lack of public access to both the Gauley River and the Meadow River. Public river access to the Gauley River for boating is possible from launching areas at the Tailwaters river access site located at the base of Summersville Dam, from Mason Branch and Woods Ferry on the middle Gauley, and from Upper Swiss on the lower Gauley (figure 2.1). There is no public river access for boating to the Meadow River. The few state roads to the river edge that are within the NRA are generally impassable to cars and trucks. Many private roads exist – some that are old logging roads and others recently built by whitewater outfitters – but these are not always open for public use. Rough trails and old logging roads on NPS property provide access to the river in some locations, but trail condition and terrain limit their use to visitors in good physical condition.

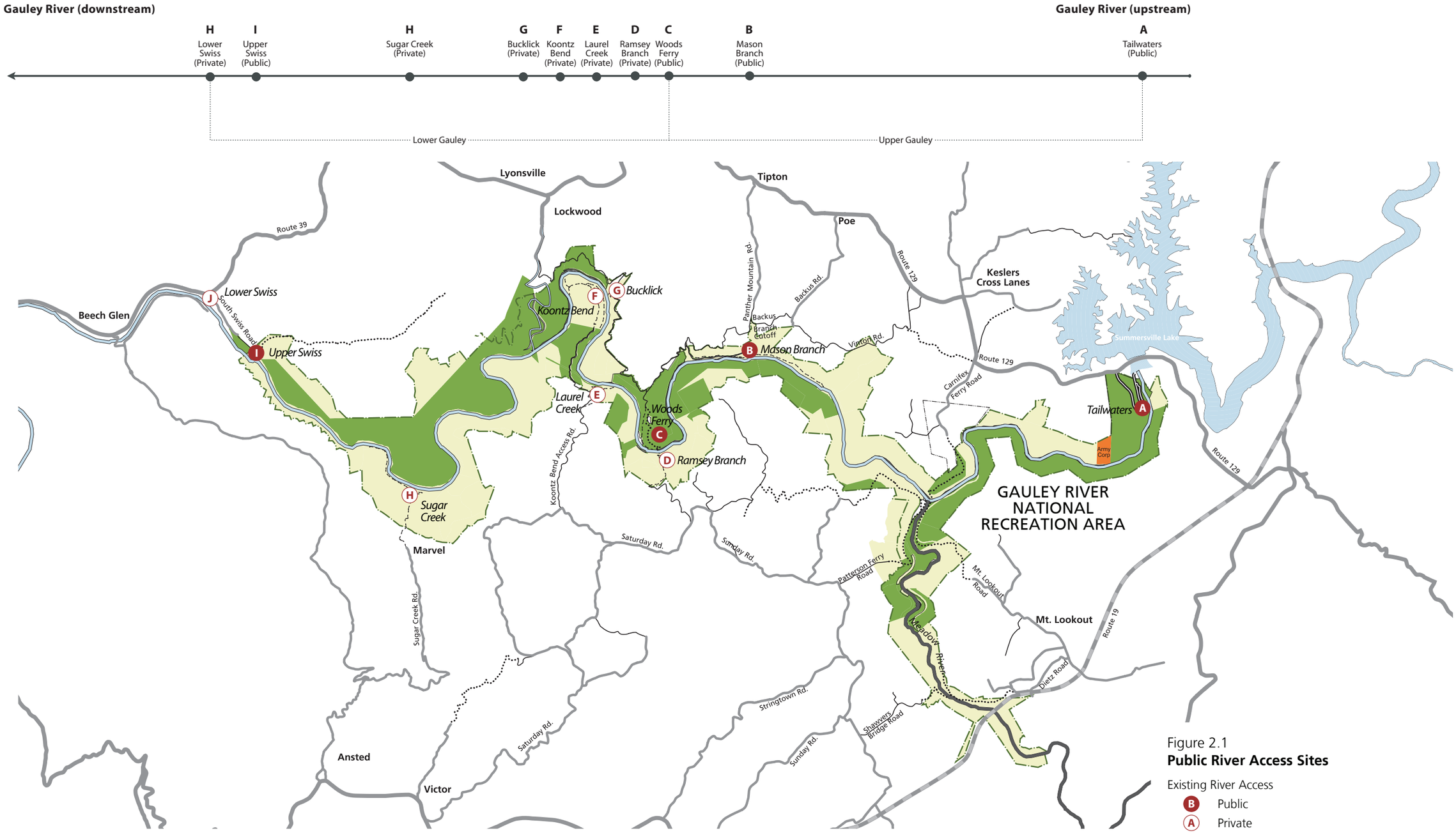
The vast majority of visitors to the Gauley River NRA visit the Tailwaters area at the base of Summersville Lake Dam. Fishermen, hunters, campers, sightseers and whitewater boaters visit Tailwaters throughout the year. Whitewater paddlers compose the greatest percentage of visitors, concentrating use on Fridays, Saturdays, Sundays, and Mondays during the six-week Gauley Season commencing each year on the first Friday after Labor Day. Some summertime whitewater use also occurs, although it is very limited due to low water flows.

Visitation at Tailwaters increased from 1993 (when visitor counts began) to 2001 (table 2.1). In the years from 1993 to 2000, visitation increased by 130 percent growing from approximately 195,000 in 1993 to 253,000 in 2000 (NPS 1993 to 2000).

Table 2.1 Tailwaters Monthly Visitation (2009 to 2011)

Month	2009 Total Recreation Visits		2010 Total Recreation Visits		2011 Total Recreation Visits	
	Visits (#)	Percent of Total	Visits (#)	Percent of Total	Visits (#)	Percent of Total
January	793	1	1,130	1	1,115	1
February	4,835	4	1,190	1	3,188	3
March	4,860	4	4,748	4	4,948	5
April	4,595	4	3,413	3	3,413	3
May	5,725	5	6,965	6	7,325	7
June	10,378	9	9,135	9	10,780	10
July	11,955	11	10,703	10	9,270	8
August	9,570	8	8,745	8	9,480	9
September	39,983	35	37,598	35	37,173	34
October	17,120	15	20,043	19	19,448	18
November	2,493	2	2,738	3	2,815	3
December	878	1	815	1	825	1

Source: NPS, 2009, 2010, 2011 Visitation Estimates


Gauley River (downstream)
Gauley River (upstream)
H Lower Swiss (Private)
I Upper Swiss (Public)
H Sugar Creek (Private)
G Bucklick (Private)
F Koontz Bend (Private)
E Laurel Creek (Private)
D Ramsey Branch (Private)
C Woods Ferry (Public)
B Mason Branch (Public)
A Tailwaters (Public)
Lower Gauley
Upper Gauley
Lyonsville
Lockwood
Tipton
Poe
Keslers Cross Lanes
Beech Glen
Route 39
Lower Swiss
South Swiss Road
Upper Swiss
Bucklick
Koontz Bend
Panther Mountain Rd.
Backus Rd.
Backus Branch Cutoff
Mason Branch
Vinton Rd.
Route 129
Summersville Lake
Laurel Creek
Woods Ferry
Ramsey Branch
Carnifex Ferry Road
Tailwaters
Army Corp
Koontz Bend Access Rd.
Sugar Creek
Marvel
Saturday Rd.
Sunday Rd.
GAULEY RIVER NATIONAL RECREATION AREA
Patterson Ferry Road
Mt. Lookout Road
Mt. Lookout
Route 19
Meadow River
Dietz Road
Stringtown Rd.
Shawvers Bridge Road
Sugar Creek Rd.
Ansted
Victor
Figure 2.1
Public River Access Sites
Existing River Access
B Public
A Private
Land Ownership
NPS land within National Recreation Area
Private Land within National River Limits
0
1 mile
5 miles
10 miles
National Park Service
US Department of the Interior

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Since 2000 visitation has generally dropped, although there was a small visitation increase in 2011.

In 2011 general approximately 52 percent of the Tailwaters visitation occurs during September and October, 36 percent occurs during the warmer months (April through August), and 12 percent occurs during colder months (November through March) (table 2.1).

2.1.2 Whitewater Paddling

The Gauley River attracts whitewater enthusiasts from all over the world to paddle what many believe is the most challenging whitewater in the eastern United States. In the 25.5-mile section of the Gauley between Summersville Dam at US 19 and Swiss, there are 56 rapids rated Class III or better. Historically, paddling the river was dependent upon adequate flows to enable safe navigation – generally above 2,400 cfs (cubic feet per second) for rafting and 800 cfs for kayaking on the upper Gauley. Paddling was "hit or miss" for both outfitters and kayakers who planned trips to the river not knowing if adequate flows would be available

In 1986 Congress passed the Water Resources Development Act establishing what is today known as "Gauley Season." This Act stated that the Army Corps of Engineers during the fall flood control drawdown period would provide releases from Summersville Dam for whitewater recreation in the 26-mile tailwater segment of the Gauley below the dam. These releases were required to be over a 20-day (now 22-day) period at a minimum flow of 2,500 cfs at times suitable for whitewater recreation. The 22 days commence on the first weekend after Labor Day and continue over six weekends each year. Water releases begin around 7:00 AM and continue until about 2:00 PM on each of the 22 days.

Since creation of "Gauley Season" the Gauley River has become one of the east's most heavily paddled rivers, enjoyed by private paddlers as well as by visitors paddling on guided trips with licensed outfitters. This growth has occurred largely as a result of the fixed paddling season created by planned releases. It is also the result of direct marketing efforts by whitewater outfitters, as well as publicity brought to the wild rivers of southern West Virginia as a result of designation of the New River National River in 1978, the Gauley River National Recreation Area in 1988, and the Bluestone National Scenic River in 1988.

Table 2.2 Whitewater Paddling Visitation Trends (Gauley Season – 1984, 1991, 2003, 2010)

Paddlers	1984 Paddlers[1]	1991[2]		2003		2010	
		Paddlers	Change since 1984 (%)	*Paddlers*	Change since 1991 (%)	Paddlers	Change since 2003 (%)
Outfitted Paddlers	19,745	52,113	+264%	45,471[3]	-13%	27,596	-39%
Private Paddlers	3,484	7,203	+207%	8,900[4]	+124%	12,691	+143%
Total Paddlers	**23,229**	**59,316**	**+255%**	**54,371**	**-8%**	**40,287**	**-26%**

Source: 1. WV DNR 1985; 2. WV DNR 1991; 3. WV DNR 2003a; 4. derived from NPS 2003b

Since 1984, whitewater use on the Gauley has grown by 2.3 times, growing from 23,000 paddlers during Gauley Season in 1984 to 54,000 paddlers in 2003 (table 2.2). With assured releases each year, a number of outfitters in the late 80s and early 90s acquired land along the river and developed private river access facilities. Many also initiated marketing efforts to attract visitors to both the Gauley and the New Rivers. Their success is evidenced in the number of outfitted paddlers on the river during Gauley Season, which grew by 2.8 times from 1984 to 2003 (table 2.2). Simultaneously the number of private paddlers jumped by two times, as word spread among the kayakers that controlled releases on the Gauley were guaranteed each fall.

Today, outfitted paddler visitation has slowed from its peak in the mid-90s, while private paddler visitation remains steady but varies greatly with weather and water levels. Over the past ten years, the number of outfitted paddlers during Gauley Season initially declined steadily but more recently has leveled off (table 2.2). In contrast, private paddling visitation has grown tremendously, primarily as a result of the growing national interest in kayaking, doubling from 7,203 during Gauley Season in 1991, to 15,300 in 2002. But private paddler visitation declined dramatically to 9,074 in 2003 and 7,823 in 2004 because of hurricanes, subsequent high water, and even the cancellation of water releases in 2004 (table 2.2). Private paddler visitation rebounded to 12,691 in 2010. From 2003 to 2010 outfitted paddlers strongly declined (-39%) while private paddlers increase by 143%. River access remains the biggest challenge for both the outfitters and private paddlers. Lack of access and the poor condition of roads and developed facilities are issues throughout the NRA. Some outfitters have solved the commercial river access problem by acquiring property along the river, improving old access roads, and in some instances building new roads. Many of these roads remain rough, difficult to travel, and very slow going particularly for equipment trucks and passenger buses.

Commercial outfitters own Ramsey Branch, Koontz Bend, Bucklick, Laurel Creek and Sugar Creek. They generally restrict access during Gauley Season but generally allow public access during other times of the year. Many outfitters who do not own property along the river have entered into leases and special agreements whereby they are allowed to use private property for access onto and off of the river.

Access dramatically increased in 2008 when the NPS acquired the Mason Branch and Woods Ferry accesses and again in 2011 when the NPS acquired the Upper Swiss access.

- **Outfitted Whitewater Paddling Visitor Experience and Visitation**

On average approximately 61,000 people paddle the Gauley River each year with an outfitter (table 2.3). A typical outfitted trip on a busy Saturday during Gauley Season may include up to 10 boats, each with 6 to 8 customers and a guide, kept as close together on the river as possible. Visitors can choose from a variety of trips, including day and overnight trips. The more challenging stretch of Class V rapids in the upper Gauley is the most popular trip, beginning at Tailwaters and ending below Sweets Falls. The Lower Gauley section is less difficult to navigate and attracts less experienced visitors, traveling typically from Woods Ferry to Swiss. Some visitors – but not many – paddle the entire upper and Lower Gauley with an outfitter in one day. Some do two Upper Gauley trips in one day – completing what

Table 2.3 Outfitted Paddlers Annual Visitation (1993 through 2008)

Year	Upper Gauley* Visitors (trips)	Lower Gauley* Visitors (trips)	Total Visitation (trips)	Ratio of Upper to Lower Gauley Visitors
1994	37,223	21,614	58,847	1.7
1995	43,082	22,356	65,438	1.9
1996	41,391	21,377	62,768	1.9
1997	39,403	20,783	60,186	1.9
1998	41,634	23,455	65,089	1.8
1999	38,018	21,114	59,132	1.8
2000	38,915	23,478	62,393	1.7
2001	35,911	24,029	59,940	1.5
2002	36,259	22,242	58,501	1.6
2003	31,905	24,064	55,969	1.3
2007	30,519	16,268	46,187	1.9
2008	27013	14,624	41,637	1.8

* *Upper Gauley = Tailwaters to below Sweets Falls; Lower Gauley = Below Sweets Falls to Swiss*

Source: NPS 1992h; WV DNR 2003a

is known in the trade as a "double upper." The Middle Gauley section is generally considered best for visitors fairly new to whitewater and is used for training and easy going trips where the rapids are generally all Class I, II and III.

Based upon WV DNR's visitation records since 1994, approximately ninety percent (90 percent) of the 61,000 outfitted visitors who paddle the river each year do so during Gauley Season. During this 22-day period of scheduled releases about 38,000 people choose the upper Gauley trip, almost twice as many as choose the lower Gauley trip during the same period. In contrast, during spring and summer most outfitted paddlers (70 percent) are on the lower Gauley. Flows in the summer are highly unpredictable, making the lower Gauley more attractive because it can be navigated at much higher and much lower river flows. The Middle Gauley – from Mason Branch to Peters Creek – has the potential for being the most heavily used in summer. In the late fall and winter, almost no one is on the river.

Upper Gauley Outfitted Trips. The maximum number of people who can paddle the upper Gauley on a single day on outfitted trips during Gauley Season is controlled by the WV DNR. Current licensing practices of WV DNR limit the daily number of outfitted paddlers on the upper Gauley to 3,180. The intent of this limit is to control crowding and congestion on the river, to enhance visitor safety, to protect natural resources, and to generally enhance visitor satisfaction with the recreation experience on the river. Daily outfitted paddler visitation on the upper Gauley is generally well below this limit, estimated at an average of 1,750 during Gauley Season during the ten year period from 1994 through 2003 (WV DNR 2002a). On only a few days in the past ten years – typically on Saturdays in September – have the number of outfitted paddlers reached the daily limit.

All visitors who paddle the upper Gauley with an outfitter access the river from NPS launch facilities at Tailwaters. Visitors ride in buses from outfitter base camps to Tailwaters where they assemble with their guides and equipment, receive instructions, and then get onto the river. The first outfitted trip arrives at Tailwaters at about 7:00 AM. On peak days during Gauley Season, there is a steady flow of buses arriving and leaving Tailwaters during the morning hours. By noon, most trips are on the river and "double-uppers" are beginning their second run. By 5:00 PM most Upper Gauley trips are off the river, leaving via river access facilities at Mason Branch, Woods Ferry, and Ramsey Branch. Very few use Bucklick, Laurel Creek, or Koontz Bend. The buses that drop off visitors at Tailwaters travel to the

middle Gauley exit points, pick up the visitors and equipment and return them to their respective base camps. Only a few outfitted trips each day travel the entire Gauley from Tailwaters to a take-out on the lower Gauley (Sugar Creek, Upper Swiss or Jodie).

Lower Gauley Outfitted Trips. Approximately 22,000 visitors paddle the lower Gauley each year with outfitters (Table 2.2). Eighty percent of these trips occur during Gauley Season and 20 percent occur during the summer months. Occasionally outfitters will try a trip at other times of the year if flow conditions are suitable.

Outfitted trips on the lower Gauley generally access from the same set of river access points used for exiting Upper Gauley trips, with Woods Ferry and Ramsey Branch receiving the heaviest use. Visitors travel by bus from base camps to the various put-ins and get onto the river. They then travel the lower Gauley to take-out locations at Upper Swiss, Sugar Creek, or Jodie, where they are met by equipment trucks and buses. Most paddlers are off the river by 5:00 PM, although some trips do not exit until as late as 7:00 PM. The last 2.5 miles of this trip upstream of Jodie have few rapids and visitors generally consider this river segment slow and less interesting.

Middle Gauley Outfitted Trips. Few outfitters currently offer Middle Gauley trips. The stretch of river from Mason Branch to Bucklick has just two rapids greater than Class II difficulty. At normal Gauley season flows most outfitters may start beginner rafters on this section but then combine the trip with the Lower Gauley with more Class III-IV+ rapids. Some outfitters do consider the Middle Gauley an option for low water summertime trips and are beginning to see an increase in visitor interest in whitewater trips during this period.

Meadow River Outfitted Trips. The Meadow River from US 19 to the Gauley is too difficult for most paddlers and is renowned for its dangerous undercut rock. No outfitters offer trips on this stretch of the Meadow or have plans to do so in the future. A few outfitters offer occasional, but rare, middle Meadow trips, originating at points upstream and outside of the NRA and then taking out at the US 19 bridge.

Table 2.4 Private Paddlers Gauley Season Visitation

Year	Upper Gauley[1] Visitors	Lower Gauley[1] Visitors	Total Visitation (trips)	Ratio of Upper to Lower Gauley Visitors
1984[2]	not available	not available	3,484	not available
1991[3]	4,887	2,316	7,203	2.11
2002[4]	10,215	5,118	15,333	2.00
2003[5]	6,132	2,942	9,074	2.08
2004[5]	5,364	2,459	7,823	2.18
2010[5]	8,058	4,633	12,691	1.74

[1]*Upper Gauley = Tailwaters to below Sweets Falls; Lower Gauley = Below Sweets Falls to Swiss*

Source: 2. WV DNR 1985; 3. NPS 1992h; 4. NPS 2002e; 5. NPS 2003b; NPS 2010b

Private Whitewater Paddling Visitation and Visitor Experience

Private paddlers float the Gauley in a variety of boats including kayaks, canoes, shredders, duckies (inflatable kayaks) and specially designed watercraft. Very little data are available describing the patterns of visitor use by private paddlers. Surveys completed in 1984, 1991, and 2002 indicate that the number of private paddlers grew steadily, increasing by an average of 7 percent per year from 1991 through 2002 (table 2.4). In 2003 and 2004 the number of private paddlers decreased significantly (table 2.4). High rainfall in the summer of 2003 increased flows in many smaller rivers in the east, drawing paddlers away from the Gauley. In addition, Hurricane Isabel – which passed through the area on Gauley Festival weekend – likely prevented some paddlers from attending the event and high water levels kept others off the river. In 2004, severe weather and flooding lead to the cancellation of several water releases. Private paddler visitation was not counted for the 2005-2009 seasons. In 2010 private paddler visitation rebounded to nearly 12,700 paddlers, even with reduced flows on the Sunday of Gauley Festival Weekend (to conduct rescue operations) and a standard 22-day season with the last weekend overlapping with the Bridge Day festival.

Private paddlers generally account for 10 percent of the total paddlers and 35 percent of all boats on the river. During Gauley Festival weekend private boater use increases to 20 percent of the total paddlers and 55 percent of the boats on the river.

Private paddlers generally travel in small groups, running the upper, middle, and/or lower Gauley sections of the river, preferring to run the upper Gauley over the

lower Gauley at a 2:1 ratio (table 2.4). Kayakers often will run one rapid or a set of rapids several consecutive times, or stay in one area and "surf" one rapid.

Public access for private paddlers is available only at NPS facilities at Tailwaters at the base of Summersville Dam. At the base of the dam there are a limited number of parking spaces available on a first-come-first-served basis. During Gauley Season once these are filled, private paddlers must use a satellite NPS parking facility on the Tailwaters plateau, and ride a free NPS shuttle bus down to the river. Once at the river there is limited staging area space for people to assemble their gear and make trip preparations.

Private paddlers generally use the NPS river access facilities at Mason Branch and Woods Ferry. Those using Mason Branch as a take-out for upper Gauley trips usually utilize the NPS river shuttle that is provided on Saturdays and Sundays, transporting paddlers and equipment from the river up to the Legg Field parking area. Private paddlers can also use the NPS river access facilities at Woods Ferry.

A few of the most experienced and skilled private paddlers will paddle the lower Meadow River from the US 19 bridge to the confluence. Extremely dangerous Class VI rapids occur on this stretch of the river so it is rarely used. More often, people paddle the upper Meadow above US 19 and take out at the US 19 bridge. No public access is available. Paddlers generally park their cars just off the US 19 shoulder, and carry their equipment to or from the river. Most hike on land owned by WV DOT within the US 19 right-of-way.

2.2 PARK ACCESS

2.2.1 Road Access

- **Regional Road Access**

Visitors to the Gauley River NRA use a number of interstate highways to go to southern West Virginia, where they connect to smaller US roads and/or state roads that take them to Fayette and Nicholas County. I-79 provides access from Pennsylvania and western Maryland. Visitors from Baltimore, Washington and Virginia arrive in West Virginia on I-64. Those coming from Ohio and Charleston, WV, use I-64/77.

Connecting roads from the interstate system that provide access to the general area of the Gauley River NRA include US 19, US 60, SR 129, and SR 39.

- **US 19** is the primary regional access route. It runs north-south, providing a four-lane limited access connection from I-79 (near Sutton) to I-64/77 (near Beckley). It passes over Summersville Lake and crosses through the NRA on a bridge over the Meadow River. It connects to SR 129 that provides access to Tailwaters. It also has intersections with many small state roads that enter the NRA along Gauley River left and Meadow River left in Fayette County and along Meadow River left in Nicholas County. US 19 is also the major commercial corridor serving visitors to the NRA. A number of outfitter base camps are accessed directly from US 19 or on rural collector roads which intersect US 19.
- **US 60** provides a connection from I-64/77 to US 19 and on to I-64 near Lewisburg. It passes through Gauley Bridge, where visitors can turn north on SR 39 to access the NRA on Gauley River right or to go to Tailwaters (from SR 129). It also passes through Ansted, a gateway community to the lower Gauley (Sugar Creek access on river left)
- **SR 129** connects US 19 with SR 39. It provides the only access to Summersville Lake and the Tailwaters river access. The stretch between the Tailwaters Access Road and Poe is heavily used by both outfitted and private paddlers who shuttle between Tailwaters and river right access points that are reached from Panther Mountain Road.
- **SR 39** connects Gauley Bridge and Summersville, intersecting SR 129 west of Poe at Drennen. Outfitters and private paddlers use this road to travel from Tailwaters and the middle Gauley river access sites and the Lower and Upper Swiss river access sites.

- **Local Road Access to River Right**

Aside from roads serving the Tailwaters, Mason Branch, and Woods Ferry river accesses, there are no safe passable public roads providing vehicular access to

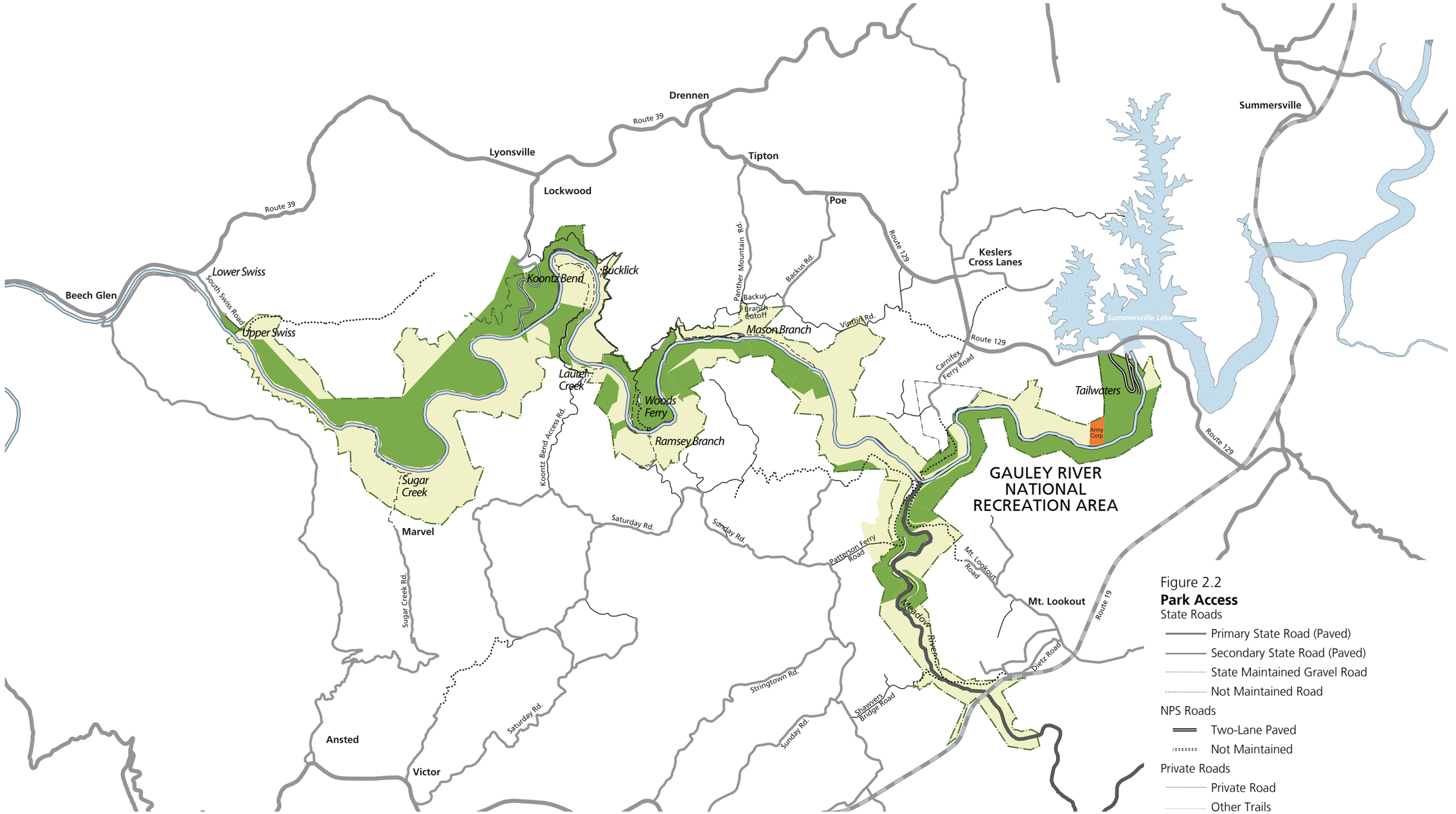

Figure 2.2

Park Access

State Roads

- Primary State Road (Paved)
- Secondary State Road (Paved)
- State Maintained Gravel Road
- Not Maintained Road

NPS Roads

- Two-Lane Paved
- Not Maintained

Private Roads

- Private Road
- Other Trails

Land Ownership

- NPS land within National Recreation Area
- Private Land within National River Limits

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either the Gauley River or the Meadow River. All car, bus and truck access to the river edge begins on state roads, but must end on roads on private property (table 2.5 and figure 2.2).

Upper Gauley. Tailwaters Access Road (owned by NPS) is the primary road access to the upper Gauley on river right. It is a public road open for use by all visitors. On peak visitation days during Gauley Season NPS rangers control traffic flow and occasionally close the road when facilities at the river access are filled, forcing latecomers to use a remote parking facility and ride a free shuttle to the river.

Middle Gauley. NPS roads at Woods Ferry and Mason Branch provide the only safe vehicular access to the river edge on the middle Gauley (river right). Panther Mountain Road (SR 22) – from SR 39 near Lockwood to SR 129 near Tipton – is the primary public road used to access park or private roads that connect to the river. Panther Mountain Road (SR 22) begins as a paved road, but quickly transitions to a one-lane gravel road following the rim of the river gorge. It provides connections to park roads that lead to public river access sites at Mason Branch and Woods Ferry and to a private road that leads to the privately owned river access site at Bucklick. From the Woods Ferry river access site a private road continues on to the privately owned river access site at Sweets Falls.

Both outfitters and private paddlers heavily use Panther Mountain Road during Gauley Season. Many outfitters take short cuts from SR 129 to Panther Mountain Road (SR 22) using Vinton Road (SR 22/1) and Backus Branch Road/Backus Cut-Off (SR 11/1). Local residents complain about the volume of paddler vehicles using local roads in these areas during Gauley Season, claiming that vehicles speed, causing dust and noise.

Three roads that are no longer passable to cars and trucks once provided vehicular access to the middle Gauley on river right. These include two state roads – Old Woods Ferry Road (SR 22/2) and Carnifex Ferry Road (SR 23) – and an old logging road now owned by NPS that once provided vehicular access to Peters Creek.

Lower Gauley. In the lower Gauley, South Swiss Road provides a connection to private roads that access the Lower Swiss and Upper Swiss river access sites. State maintenance of South Swiss Road ends at Laurel Creek. From there to Lockwood, South Swiss Road is in poor condition and can only be used by four-wheel drive vehicles. The paved portion of South Swiss Road from Swiss to Laurel Creek that provides access to the Upper Swiss river access site is heavily used by outfitters and

private paddlers. It is a one-lane road, with narrow shoulders, that is in poor surface condition.

Table 2.5 State Roads Accessing the Gauley River NRA (see figure 2.2)

Road Name	WV State Route #	Relationship to River Access Sites	Road Surface
Nicholas County			
Panther Mountain Road	SR 22	Provides access along the plateau rim from Tipton on SR 129 to Lockwood on SR 39; connects to private roads that provide access to Mason Branch, Sweets Falls, Woods Ferry, and Bucklick river accesses; also connects to an old logging road on NPS property that is impassable to cars and trucks, but provides hiking access to Peters Creek	Blacktop (one-lane) to gravel-maintained
Carnifex Ferry	SR 23 (was SR 24)	Provides access to Carnifex Ferry Battlefield State Park; at the park the road becomes impassable to cars and trucks; ROW continues to the river	Blacktop (one-lane) to gravel-maintained to not maintained
Woods Ferry Road	SR 22/2	Old state road right-of-way from Panther Mountain Road to river at Old Woods Ferry; not passable to cars or trucks; lower section used with Dragan Road to provide hiker access to the river	Not maintained
South Swiss Road	SR19/25	Connects to a private road that accesses Upper Swiss river access	Blacktop (one-lane) to gravel maintained
Vinton Road	SR 22/1	Connects from SR 129 to Backus Branch Road; no river access	Gravel maintained
Backus Branch Road and Backus Branch Cut-off	SR 11/1	Connects from SR 129 to Panther Mountain Road on plateau; no river access	Blacktop (one-lane) to gravel maintained
Mount Lookout Road	SR 24	Provides access to the confluence area from Meadow River right; state maintenance ends where black top ends; ROW continues for 2 miles to the USGS gauging station and the river near the confluence of the Gauley and the Meadow	Blacktop to not maintained
Underwood Road	SR 24/9	Provides access from US 19 to Mount Lookout Road and to Dietz Road	Blacktop (two-lane)
Dietz Road	SR 24/11	Provides access along ridgetop above Meadow River right	Blacktop (one-lane)
Shawvers Bridge Road (Nicholas County)	SR 24/3	Not maintained state road from Dietz Road to the Meadow River (historical connection to Shawvers Bridge Road in Fayette County (SR4/4))	Gravel maintained to not maintained
Fayette County			
Sunday Road	SR 4	Provides access from US19/SR60 to Shawvers Bridge Road and to Patterson Ferry Road (see below)	Blacktop (one-lane)

Shawvers Bridge Road (Fayette County)	SR 4/4	Provides access to Meadow River at Shawvers Bridge; passable to four wheel drive vehicles only within NRA	Gravel maintained

Table 2.5 State Roads Accessing the Gauley River NRA (see figure 2.2) (continued)

Road Name	WV State Route #	Relationship to River Access Sites	Road Surface
Patterson Ferry Road (Gracie White Road)	SR 4/6	Provides access to the confluence of the Gauley and Meadow from Meadow River left; passable to four wheel drive vehicles only within NRA	Gravel maintained to not maintained
Richmond Chapel Road	SR 3/2	Loop road to and from Leander on the plateau; no connections to roads accessing the river	Gravel maintained
Woods Ferry Road	SR 3/9	Connects to a private road that provides access to Ramsey Branch river access; private road passable to cars, trucks and buses	Gravel maintained
Koontz Bend Access Road	SR 3/3	Connects to a private road that provides access to Koontz Bend river accesses and to a private road that provides access to Laurel Creek river access; private road passable to cars, trucks and buses	Gravel maintained
Sugar Creek Road	SR 60/4	Connects to a private road near Marvel that provides access to Sugar Creek river access; private road passable to cars, trucks and buses	Paved (one-lane) to gravel maintained

Source: WV SRC 1937 and 1933

- **Local Road Access to River Left**

Upper Gauley. (See text above for Local Road Access to River Right)

Middle Gauley. There are no passable public roads that provide access to river left or the Meadow River in either Nicholas County or Fayette County.

In Nicholas County, Mount Lookout Road (SR 24) is passable but is not maintained past the point where the pavement ends. Shawvers Bridge Road (SR 24/3) is passable but is blocked to vehicles.

In Fayette County Saturday Road (SR 3) and Sunday Road (SR 4) provide connections from US19/SR 60 to the small rural roads along the plateau. With the exception of Shawvers Bridge Road SR 4/4), each of these – Patterson Ferry Road (SR 4/6), Woods Ferry Road (SR3/9), and Koontz Bend Access Road (SR 3/3) – end well before the rivers, connecting to private roads that continue on to the river edge. Shawvers Bridge Road (SR 4/4) – which historically went to the Meadow and crossed over to join the Nicholas County section of Shawvers Bridge Road (SR 24/3) – no longer goes beyond the former CSX Railroad right-of-way.

Lower Gauley. Sugar Creek Road (SR 60/4) ends just beyond Marvel, connecting to a private road that continues on to the Gauley River at Sugar Creek.

2.2.2 Parking

Developed public parking in the NRA occurs at the Tailwaters, Mason Branch, Woods Ferry, and Upper Swiss river access sites.

- **Public Parking**

Tailwaters. At the beginning of the NPS owned access road to Tailwaters is a small parking lot used by hunters. At the bottom of the road at the river edge is a large parking area (for approximately 100 vehicles) used by campers, hikers, fisherman, and whitewater rafters and kayakers. Capacity of the river edge parking area is adequate to meet demand except for a few days during Gauley Season. On those days the NPS offers a free shuttle that takes private boaters and their equipment to the river edge from the upper parking area.

Mason Branch. NPS provides visitor parking for approximately 25 vehicles at the Mason Branch river access. Parking is adequate to meet demand except for Fridays, Saturdays, and Sundays during Gauley Season. Overflow parking is provided at Legg Field on the rim. On those days the NPS offers a free shuttle that takes private boaters and their equipment to and from the river edge. Alternatively, some paddlers use a trail to reach Legg Field. The trail is narrow and steep and very difficult to follow when carrying a boat or equipment. It is not an official NPS trail and is partially on private land.

Woods Ferry. NPS provides visitor parking for approximately 60 vehicles at the Woods Ferry river access. Parking is adequate to meet demand at most times, although demand frequently exceeds capacity during Gauley Season.

Upper Swiss. NPS provides visitor parking for approximately 100 vehicles at the Upper Swiss river access. Parking is generally adequate to meet demand at most times, although demand frequently exceeds capacity during Gauley Season.

- **Private Parking**

Numerous private parking areas are on private land in the park. Owners of these parking areas restrict private boaters from using these parking areas during Gauley

Season, but private boaters are generally allowed to use them during the rest of the year.

Sites on river right include Bucklick and Lower Swiss. Bucklick is located along a short access road that goes down to the river from Panther Mountain Road; there is very little room for expansion of the parking area due to the extreme topography of the area and the steep and narrow access road that precludes a high volume of vehicles. Lower Swiss is an informal parking area in a large field located off Old Swiss Road near the Lower Swiss river access site.

Sites on river left include Ramsey Branch, Laurel Creek, Koontz Bend, and Sugar Creek.

2.2.3 Hiking, Biking, and Equestrian Access

Visitors hike and bike on the network of old trails and roads present throughout the NRA. No new trails have as yet been built by NPS. Fishermen and hikers heavily use the Fisherman's Trail at Tailwaters that goes from the parking area to just below the spillway on river right. They also use Fisherman's Trail from Carnifex Ferry Battlefield State Park down to Pillow Rock Rapid. Hikers and mountain bikers heavily use portions of the former CSX Railroad right-of-way on NPS lands. Another popular hike, largely on public land goes from Carnifex Ferry Battlefield State Park down to the Gauley River on river right. Very little horseback riding currently occurs on public land in the park.

Popular hiking and biking trails include:

- the trail to Carnifex Ferry using Patterson Ferry Road along the Meadow River (river left) (a state road)
- the trail to Carnifex Ferry from Mt. Lookout Road along the Meadow River (river right) (a state road)
- the trail along the Meadow River (river right) from US 19 to Carnifex Ferry (discontinuous)
- portions of the former CSX Railroad right-of-way
- the trail to Old Woods Ferry following Dragan Road and the Old Woods Ferry Road (NPS woned)
- the trail to Mason Branch from Legg Field
- the trail to Peter's Creek from Junkyard Overlook (NPS owned)

- the trail from Panther Mountain Road to Bucklick

There is some equestrian use of these trails, as well.

Conceptual Trail Planning Subsequent to the GARI GMP. Since 1996 the NPS has completed additional preliminary trail planning and is considering a trail concept that includes the following trails (NEPA compliance has not been completed and funding is not available at this time):

- The Through Park Trail would be the primary trail in the park. It would be composed of two major sections:
  - Through Park Trail – Meadow River Rail Trail. The Meadow River Rail Trail would follow the existing rail trail from the park's upstream boundary on the Meadow River, through the Carnifex Tunnel, and continue downstream to join the Gauley River Rail Trail.
  - Through Park Trail – Gauley River Rail Trail. The Gauley River Rail Trail would follow the existing rail trail passing through the Koontz Bend Tunnel and continuing over the Gauley River on the railroad trestle bridge at Peters Creek. Improvements would include grading and leveling of the crushed stone base, provisions for solar-powered low level lighting in the tunnel, and safety improvements to the railroad trestle (installation of solid decking and secure side barriers). The existing 8' rail bed width plus shoulders would be retained.
- Upland trails would provide hiking opportunities on the plateaus above the river.
  - In the lower Gauley on river right, visitors would be able to hike the Beech Flats Trail from the park boundary in the area of Peters Creek to the Upper Swiss Trailhead. This trail would follow a combination of old mining, logging, and gas well roads. From the Beech Flats Trail visitors could reach the Through Park Trail by dropping down to the river via the Norfolk – Beech Flats Trail.

- In the middle and lower Gauley on river left, visitors would be able to hike from the Koontz Bend Tunnel for 5.5 miles on a new upland trail to the Sugar Creek river access.

In the future the NPS will also work with partners to develop trail connections to New River Gorge National River. A connection to New River via Ansted would likely begin from Sugar Creek. A connection to New River via Babcock would likely begin from the Meadow River Left Segment of the Through Park Trail.

Visitors using trails in the park would park at trailhead parking facilities, as well as at most major and minor river accesses where a connection to a park trail occurs. Trailheads for two trails would be developed outside of major and minor river access sites:

- Peters Creek (Peters Creek Trail)
- Beech Flats Road (3 sites along the Beech Flats Connector Trail)
- facilities at each location including a gravel parking area for ten cars with signage informing visitors regarding the park trail system and appropriate safety precautions

2.3 GAULEY RIVER – EXISTING PUBLIC RIVER ACCESS

2.3.1 Tailwaters (figure 2.3)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Tailwaters is the only major river access on the upper Gauley. Existing facilities are spread out along the bench above the river in a long narrow gravel parking and staging area. NPS has designated functional areas that provide approximately 20 outfitted paddler equipment truck parking and staging spaces, 98 private paddler parking spaces, an outfitted paddler bus drop-off area, an outfitted paddler staging area, a small picnic area, two raft launch sites, a kayak launch site, and a comfort/changing station. At the downstream end of the bench is a campground with 18 camp sites and a vault toilet. Along the access road, is a satellite parking area with capacity for approximately 210 vehicles

Parking and Staging Area Demand/Capacity. At Tailwaters during the busiest Gauley Season weekends there is inadequate parking for private paddlers. On those occasions, NPS provides a free equipment shuttle from the satellite parking area to the river access. Once parking capacity is reached, NPS closes the access road to incoming traffic and diverts it to the satellite parking area. Paddlers park, load their boats onto the shuttle, and then walk down to the river where they meet the shuttle and unload their boats.

Table 2.6 Tailwaters River Access – Existing Parking Demand/Capacity

	Peak Weekend Parking Demand	Existing Capacity
Outfitted Paddler Equipment Truck Parking and Staging	13	20
Private Paddler Parking (at river level)	98	98
Private Paddler Parking (on plateau)	75	210

Natural Resources. The Tailwaters river access occupies a portion of the river bench used as a staging area for construction of the Summersville Dam. The site has been heavily disturbed in the past. Young trees and scrubby vegetation

characterizes the perimeter of the site. Riparian plant species have become reestablished along the steep river bank.

Cultural Resources. There are no historic structures, cultural landscapes, or potential for intact archeological sites at the Tailwaters river access site.

Non-Federal Land Ownership and Retained Rights. The Tailwaters river access site is entirely in federal ownership by the NPS. There are no retained rights.

- **GMP Actions**

The *Gauley River National Recreation Area GMP/EIS* (NPS 1996a) recommends that the upper Gauley put-in remain at Tailwaters. It also recommends that the existing campground be relocated 0.25 mile downstream.

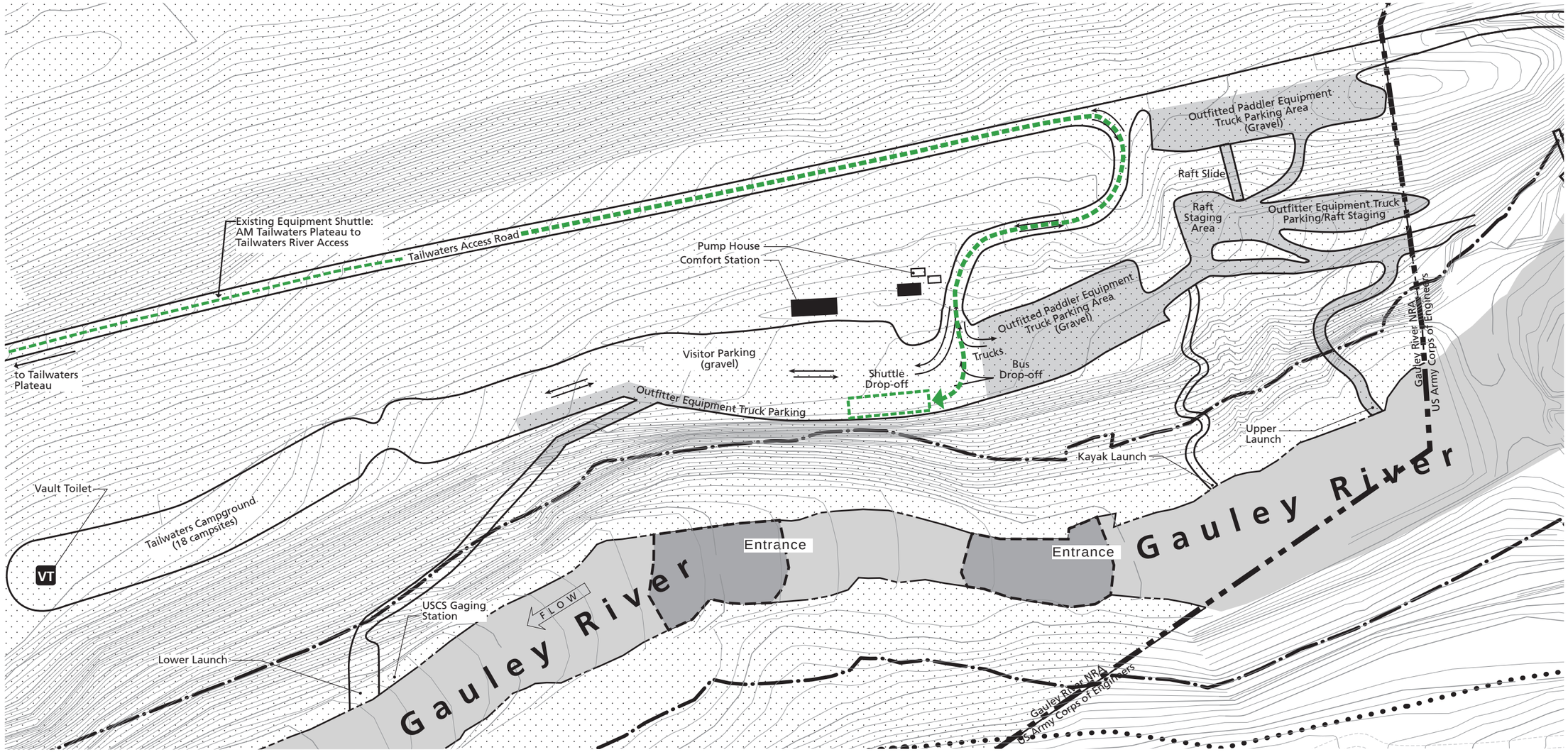
- **Management Concerns**

Table 2.7 summarizes existing management concerns at the Tailwaters river access.

Table 2.7 Tailwaters River Access – Existing Management Concerns

	Existing Management Concerns (during Gauley Season)	
Visitor Experience	1a.	Pedestrian and vehicular flows are not well separated, resulting in cross traffic and pedestrian/vehicle conflicts throughout the site.
	1b.	Parking for private paddlers at the river's edge is inadequate to meet demand.
	1c.	Space is inadequate for private paddler staging.
	1d.	Private paddler access to the lower launch (via the gauging station road) is congested.
	1e.	Campsites do not provide a quality camping visitor experience.
Park Operations	1a.	NPS staff required during Gauley Season to manage traffic and parking.

Tailwaters River Access



Legend

Areas used during Gauley Season for Outfitter Paddler Equipment and Paddler Staging

Traffic flow during Gauley Season

Parking

Available Spaces: off Season - 201 spaces

Available Spaces: Gauley Season - 98 spaces

Figure 2.3
Tailwaters:
Existing Conditions

1 acre

1/4 acre

Key Map

National Park Service
US Department of the Interior

0 50 100 150 200 1/8 mile

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2.3.2 Mason Branch (figure 2.4)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Located at the end of a one-lane paved road off Panther Mountain Road, Mason Branch is one of two public river accesses on the middle Gauley. The site is approximately 2.2 acres in size, with a layout that creates problems for maneuvering buses and outfitter equipment trucks. At the river there are two river launches with gravel areas where private paddlers and outfitters stage. An upper lot is reserved for private paddlers.

Parking and Staging Area Demand/Capacity. Mason Branch currently has parking for about 25 private paddlers and five equipment trucks. Demand exceeds capacity every weekend day during Gauley Season. Those arriving too late to get a space at the river park on the plateau at Legg Field, a privately owned parcel whose owners have an agreement with American Whitewater (a private non-profit organization) from year-to-year to allow private paddlers to park. The Janie's Falls Trail provides a walking connection from the river via another private landowner's property. That landowner also continues to allow paddler's to use the trail.

Table 2.8 Mason Branch River Access – Existing Parking Demand/Capacity

	Peak Weekend Parking Demand	Existing Capacity
Outfitted Paddler Equipment Truck Parking and Staging	5	5
Private Paddler Parking (at river level)	25	25
Private Paddler Parking (on plateau)	70	172

Natural Resources. Mason Branch has been heavily disturbed in the area adjacent to the river where access occurs. A small tributary stream flows through the site. There are no rare plants within the immediate footprint of the access site. Much of the area immediately below the site along the river is wetland. The site floods frequently washing gravel into the river.

Cultural Resources. There are no historic structures, cultural landscapes, or potential for intact archeological sites at the Mason Branch river access site.

Non-Federal Land Ownership and Retained Rights. The Mason Branch river access site is entirely in federal ownership by the NPS. There are no retained rights.

- **GMP Actions**

The *Gauley River National Recreation Area GMP/EIS* (NPS 1996a) recommends development of two river access sites in the middle Gauley, including parking for outfitted paddlers and private paddlers. NPS acquired the Woods Ferry site for this purpose.

- **Management Concerns**

Table 2.9 summarizes existing management concerns at the Mason Branch river access.

Table 2.9 Mason Branch River Access – Existing Management Concerns

	Existing Management Concerns (during Gauley Season)
Visitor Experience	1a. Pedestrian and vehicular flows are not well separated, resulting in cross traffic and pedestrian/vehicle conflicts throughout the site. 1b. Private paddlers need designated staging sites at the river's edge. 1c. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. 1d. Existing river launches are in poor condition.
Resource Protection	3a. Resource damage occurs along the perimeter of existing river launches and access roads where visitors park illegally.

Figure 2.4
Mason Branch - Existing Condition

Area of Existing Disturbance

Natural Resources
Forest Cover

Ownership
Non-Federal

0 100 200
SCALE OF FEET

Existing Equipment Shuttle Pick-Up:
PM Mason Branch River Access to Mason Branch Plateau (Legg Field)

to Mason Branch Plateau (Legg Field)

Trail to Legg Field

Private paddler parking

Private paddler loading and unloading area

Shuttle pick-up

Loading and unloading for outfitted and private vehicles with trailers

River Launch

FLOW

GAULEY RIVER

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2.3.3 Woods Ferry (figure 2.5)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Woods Ferry is the second of two public river access sites on the middle Gauley. It is heavily used for a take-out by those paddling the upper Gauley, as well as a put-in for a middle/lower Gauley trip. The site is a long gravel parking area between the river and the steep canyon walls. There is one stabilized river launch for putting in rafts and two areas where kayaks can be launched, including two sandy beaches. NPS recently constructed two vault toilets and a small changing facility.

Parking and Staging Area Demand/Capacity. Woods Ferry currently has parking for about 60 private paddlers and six equipment trucks. Additional outfitter trucks are accommodated on the adjoining downstream turnaround which remains in private ownership by an outfitter. Parking demand exceeds capacity every weekend day during Gauley Season. Those arriving too late to get a space at the river, park at a pull-out along the access road or along the access road.

Table 2.10 Woods Ferry – Existing Parking Demand/Capacity

	Peak Weekend Parking Demand	Existing Capacity
Outfitted Paddler Equipment Truck Parking and Staging	6	6
Private Paddler Parking (at river level)	60	60
Private Paddler Parking (satellite)	75	30

Natural Resources. Woods Ferry has been heavily disturbed in the area adjacent to the river where access occurs. There is a high concentration of rare plants, including populations of federally protected V. spirea in the riparian zone/floodplain area. Much of the area immediately below the site along the river is wetland.

Cultural Resources. There are no historic structures, cultural landscapes, or potential for intact archeological sites at the Woods Ferry river access site.

Non-Federal Land Ownership and Retained Rights. The previous owners of the Woods Ferry tract have retained ownership of 5.5 acres at the water's edge for their own use. They have also retained a 50-foot wide right-of-way easement over

the existing road providing access to the 5.5 acres for the purpose of ingress, egress, and regress, along with the right to maintain the existing gravel road.

- **GMP Actions**

The *Gauley River National Recreation Area GMP/EIS* (NPS 1996a) recommends development of two river access sites in the middle Gauley, including parking for outfitted paddlers and private paddlers. NPS acquired the Woods Ferry site for this purpose.

- **Management Concerns**

Table 2.11 summarizes existing management concerns at the Woods Ferry river access.

Table 2.11 Woods Ferry River Access – Existing Management Concerns

	Existing Management Concerns (during Gauley Season)
Visitor Experience	1a. Private paddlers need designated staging sites at the river's edge. 1b. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. 1c. Steep terrain and wetlands limit the availability of level areas for expansion of visitor facilities at the river's edge. 1d. Existing launch is too small to accommodate both outfitted and private paddlers.
Park Operations	2a. NPS staff required during Gauley Season to manage traffic and parking.
Resource Protection	3a. Resource damage occurs along the perimeter of existing river launches and access roads where visitors park illegally. 3b. Disturbed areas around parking areas, along roads, and adjoining the river launch are in need of restoration.

Figure 2.5
Woods Ferry - Existing Conditions

Area of Existing Disturbance

Natural Resources
Forest Cover

Ownership
Non-Federal

0 150 300
SCALE OF FEET

to Woods
Ferry Plateau

Lost Paddle Road

Old Woods Ferry Trail

Private paddler parking

Vault toilet

X 1014.9

X 1002.7

Outfitted paddler
equipment vehicle
parking

Vault toilet

Old Woods Ferry Trail

River access

GAULEY RIVER

FLOW

ENDER WAVES
RAPID

1220 1210 1200 1190 1180 1170 1160 1150 1140 1130 1120 1110 1080 1070 1060 1050 1040 1030 1020 1010 1000 990 1030 1020 1010 1000 990

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2.3.4 Upper Swiss (figure 2.6)

- **Existing Conditions**

Existing Facilities, Access, and Visitor Use. Upper Swiss is accessed from South Swiss Road via an at-grade crossing of an active freight line. The narrow unpaved road is in poor condition. The road opens out into a large rectangular pasture, lined with trees. The road continues along the edge of the pasture to a beach at the river that is used as the only public take-out on the lower Gauley. There are no developed facilities.

Parking and Staging Area Demand/Capacity. The field at Upper Swiss has a design capacity of about 115 cars, if parking is well organized, which it typically is not. At the river's edge there is capacity for about six equipment trucks or cars with trailers. During crowded Gauley Season weekends as many as 150 cars park at the site on a single day.

Table 2.12 Upper Swiss – Existing Parking Demand/Capacity

	Peak Weekend Parking Demand	Existing Capacity
Outfitted Paddler Equipment Truck Parking and Staging	6	6
Private Paddler Parking (at river level)	150	115
Private Paddler Parking (on plateau)	NA	NA

Natural Resources. Until its acquisition by the NPS a few years ago, the Upper Swiss site was used a hayfield or pasture. During Gauley Season the owner allowed private paddlers to park in the field and use the beach area as a take-out. There are no rare plants or rare plant communities in the upland area that is pastureland. The entire riparian area, including the mouth of Laurel Creek, is characterized by rare American sycamore-tuliptree-sweetgum floodplain forest. Much of the area immediately below the site along the river is wetland.

Cultural Resources. There are no historic structures or cultural landscapes. Site reconnaissance is needed to determine the potential for intact archeological sites at the Upper Swiss river access site.

Non-Federal Land Ownership and Retained Rights. The Upper Swiss river access site is entirely in federal ownership by the NPS. There are no retained rights.

- **GMP Actions**

The *Gauley River National Recreation Area GMP/EIS* (NPS 1996a) recommends development of a new river access site on the Lower Gauley, including parking for outfitted paddlers and private paddlers with picnicking facilities, a comfort station, and trails. NPS recently acquired the Upper Swiss site for this purpose.

- **Management Concerns**

Table 2.13 summarizes existing management concerns at the Upper Swiss river access.

Table 2.13 Upper Swiss River Access – Existing Management Concerns

	Existing Management Concerns (during Gauley Season)
Visitor Experience	1a. Roadway conditions at the river access entrance are poor. 1b. Beach is difficult to access in high flow conditions. 1c. Railroad makes bus access to Upper Swiss impassable.
Park Operations	2a. Field parking is haphazard.
Resource Protection	3a. Riverbank is susceptible to erosion. 3b. Resource damages occurs at the river access loading area.

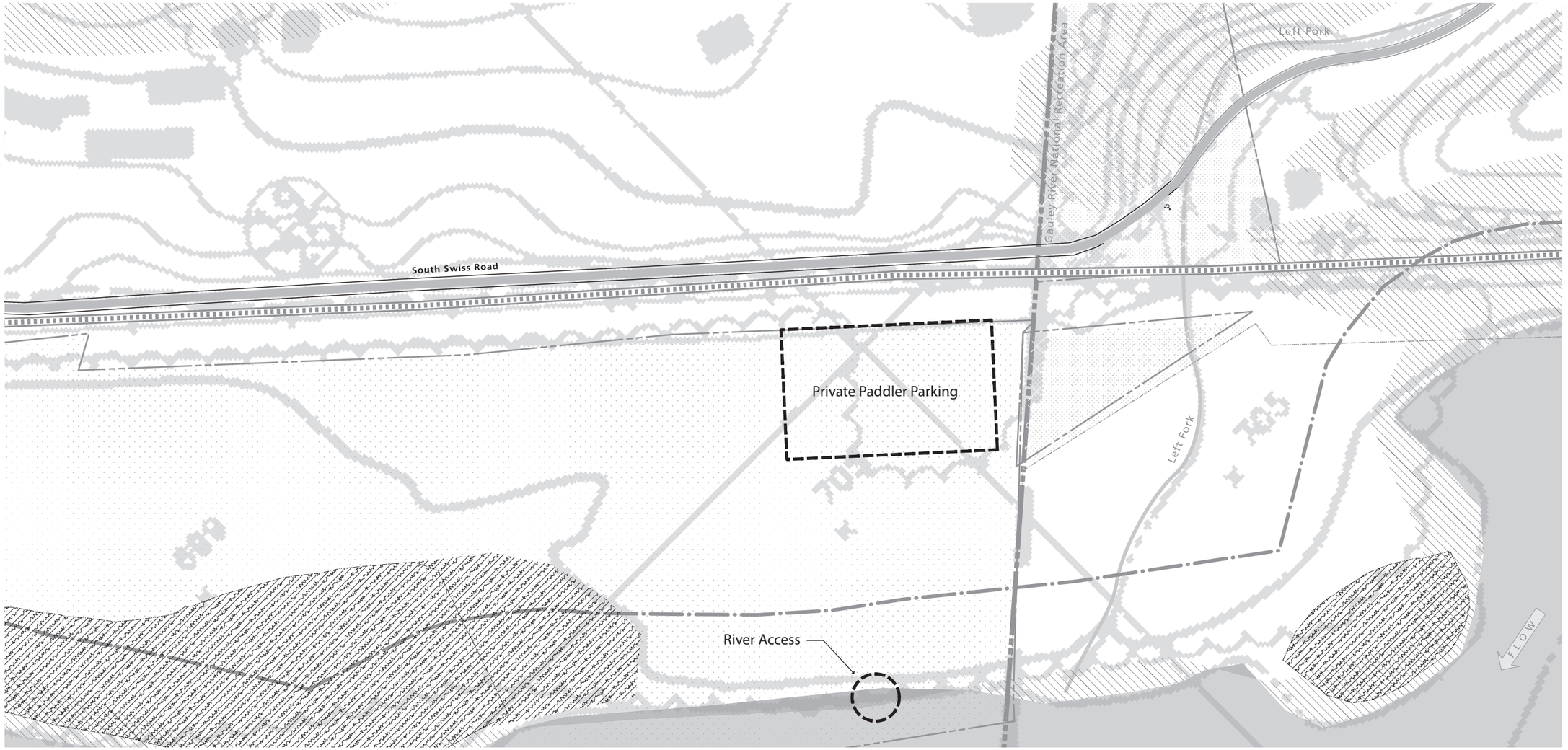


Figure 2.6
Upper Swiss:
Existing Conditions

Land Ownership
- NPS-Owned Land
- NRA Boundary
- Parcel Boundary

Road and Trail Access
- Public Use Park Road
- Public Use Park Road/Trail
- Administrative Park Road
- Administrative Park Road/Trail
- State Road
- State Road/Trail
- Upland / Connector Trail
- Through Park Trail

Facilities
- VC Visitor Center
- CS Comfort Station
- VT Vault Toilet
- O Operations Facility
- P Parking
- SP Satellite Parking
- Picnic
- Overlook
- Universal Access
- Fishing
- Trails
- Climbing
- I Interpretive Feature
- Biking
- Hunting & Trapping

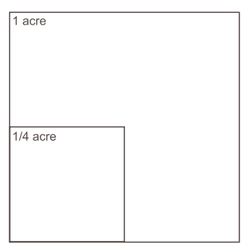
River Access
- Public River Access
- Emergency Vehicle Access

River Lunch Stop
- Developed River Lunch Stop
- Primitive River Lunch Stop
- Undeveloped River Lunch Stop

Camping
- Family Camping
- Group Camping
- River Group Camping
- Minimum Development Camping
- Backcountry Camping (Locations to be determined)

Restoration
- Restoration Area
- 100' River Setback Line

Existing Features
- Mine Feature
- Gas Well
- Wetland
- River
- Approx. Extent of Rapids
- Steep Slopes (>15%)
- Existing Gravel or Distrubed Area



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2.4 RIVER ACCESS SITE ENHANCEMENT ALTERNATIVES

This alternative transportation feasibility study has evaluated numerous options for transportation management actions to address visitor congestion at the existing river launch sites at the park. The evaluation of options considered:

- physical changes at existing river access sites to alleviate congestion
- development of a shuttle serving the four GARI river accesses during Gauley Season

The planning team developed one alternative concept for each river access to alleviate congestion and described two shuttle alternatives.

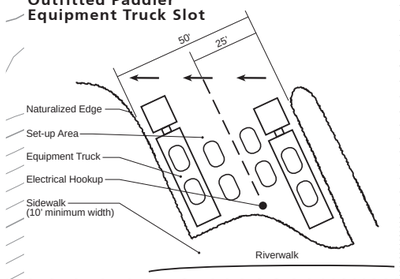
The following sections 2.4.1 through 2.4.5 summarize each alternative. A concept plan illustrates each alternative and a table summarizes the actions included in the concept plan which address management concerns. Capital cost estimates are summarized section 2.5 below.

2.4.1 Tailwaters

Table 2.14 Tailwaters Proposed Changes – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Pedestrian and vehicular flows are not well separated, resulting in cross traffic and pedestrian/vehicle conflicts throughout the site.	1a. Pedestrian walkways would establish clear pedestrian/vehicle circulation patterns.
	1b. Parking for private paddlers at the river's edge is inadequate to meet demand.	1b. Reorganizing existing parking and providing overflow parking on peak days would increase parking capacity.
	1c. Space is inadequate for private paddler staging.	1c. Designated staging spaces would provide clear areas for private paddlers to unload.
	1d. Private paddler access to the lower launch (via the gauging station road) is congested.	1d. The trail would provide additional distribute private paddler use to the river access site.
	1e. Campsites do not provide a quality camping visitor experience.	1e. Campsites would be relocated downstream.
Park Operations	2a. NPS staff required during Gauley Season to manage traffic and parking.	2a. Numerous design modifications made to address existing pedestrian/circulation issues, to increase parking capacity, and to provide staging areas for private paddlers.

Outfitted Paddler Equipment Truck Slot



Program Elements
Major Public River Access
Outfitted Paddler Truck Parking: 13 slots
Parking: 100 spaces (including 5 universal access spaces)

← direction of traffic flow during fall Gauley season

Possible Future Outfitted Paddler Truck Slots
(gravel)
10 11 12 13
Upper Terrace Gathering Area
Possible Service Connection to Hydro Plant
Existing Paved Tailwaters Public Park Use Road
Existing Pump House
Existing Comfort Station
PAVED ENTRANCE ROAD
Approximate end of pavement
S S S S S
1 2 3 4 5 6 7 8 9
PEDESTRIAN RIVERWALK
drop-off
Existing Trail / Kayak Access
Outfitted Paddler Truck Slots (see inset) (25'x50')
Upper Access Ramp
Existing Vault Toilet
Lower Terrace Gathering Area
Expanded Shuttle: PM Upper Swiss to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Tailwaters Plateau to Tailwaters River Access
Equipment and Limited Paddler Shuttle: AM Tailwaters Plateau to Tailwaters River Access
Expanded Shuttle: AM Mason Branch Plateau (Legg Field) to Tailwaters River Access
Entrance
Entrance
GAULEY RIVER
(Existing Road)
Combined lower access ramp, handicapped fishing access, and administrative park road
FLOW
To Initiation Rapids
New Trail / Kayak Access
Gauging Station

Figure 2.7a
Tailwaters Proposed Changes to Reduce Congestion

Land Ownership
- NPS-Owned Land
- NRA Boundary
- Parcel Boundary

Road and Trail Access
- Public Use Park Road
- Public Use Park Road/Trail
- Administrative Park Road
- Administrative Park Road/Trail
- State Road
- State Road/Trail
- Upland / Connector Trail
- Through Park Trail

Facilities
- VC Visitor Center
- CS Comfort Station
- VT Vault Toilet
- O Operations Facility
- P Parking
- SP Satellite Parking
- Picnic
- Overlook
- Universal Access
- Fishing
- Trails
- Climbing
- I Interpretive Feature
- Biking
- Hunting & Trapping

River Access
- Public River Access
- Emergency Vehicle Access

River Lunch Stops
- Developed River Lunch Stops
- Primitive River Lunch Stops
- Undeveloped River Lunch Stops

Camping
- Family Camping
- Group Camping
- River Group Camping
- Minimum Development Camping
- Backcountry Camping (Locations to be determined)

Restoration
- Restoration Area
- 100' River Setback Line

Existing Features
- Mine Feature
- Gas Well
- Wetland
- River
- Approx. Extent of Rapids
- Steep Slopes (>15%)
- Existing Gravel or Disturbed Area

1 acre
1/4 acre

National Park Service
US Department of the Interior

0 50 100 150 200 1/8 mile

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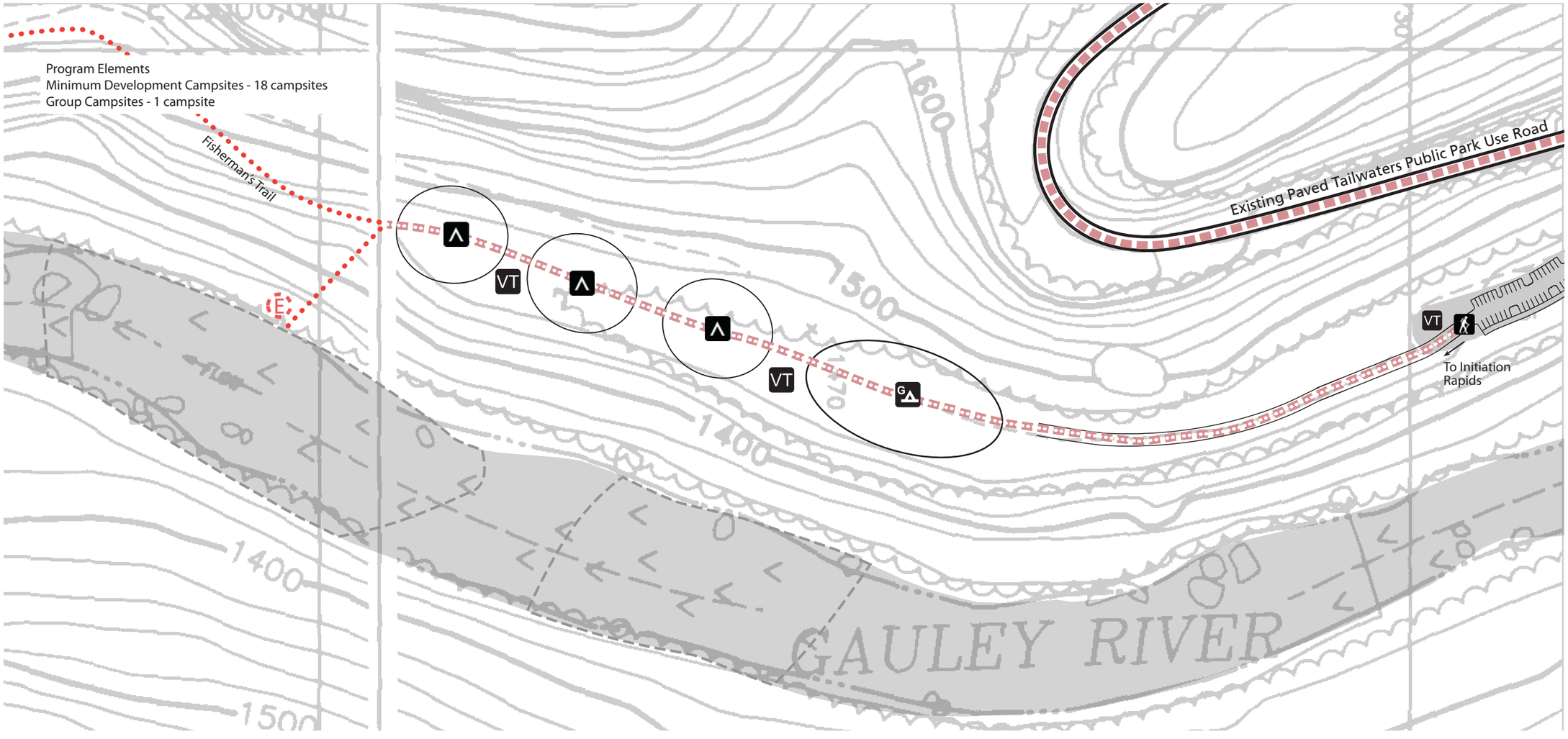


Figure 2.7b
Tailwaters Proposed Changes to Reduce Congestion

Land Ownership
- NPS-Owned Land
- NRA Boundary
- Parcel Boundary

Road and Trail Access
- Public Use Park Road
- Public Use Park Road/Trail
- Administrative Park Road
- Administrative Park Road/Trail
- State Road
- State Road/Trail
- Upland / Connector Trail
- Through Park Trail

Facilities
- VC Visitor Center
- CS Comfort Station
- VT Vault Toilet
- O Operations Facility
- P Parking
- SP Satellite Parking
- Picnic
- Overlook
- Universal Access
- Fishing
- Trails
- Climbing
- I Interpretive Feature
- Biking
- Hunting & Trapping

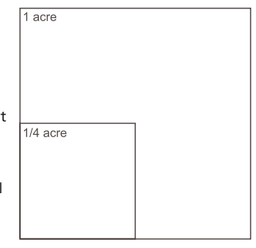
River Access
- Public River Access
- Emergency Vehicle Access

River Lunch Stop
- Developed River Lunch Stop
- Primitive River Lunch Stop
- Undeveloped River Lunch Stop

Camping
- Family Camping
- G Group Camping
- RG River Group Camping
- Minimum Development Camping
- Backcountry Camping (Locations to be determined)

Restoration
- Restoration Area
- 100' River Setback Line

Existing Features
- Mine Feature
- Gas Well
- Wetland
- River
- Approx. Extent of Rapids
- Steep Slopes (>15%)
- Existing Gravel or Disturbed Area



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0 50' 100' 150' 200' 1/4mile

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Mason Branch River Access

2.4.2 Mason Branch

Table 2.15 Mason Branch Proposed Changes – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Pedestrian and vehicular flows are not well separated, resulting in cross traffic and pedestrian/vehicle conflicts throughout the site. 1b. Private paddlers need designated staging sites at the river's edge. 1c. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days. 1d. Existing river launches are in poor condition.	1a. The path for private boats would establish a pedestrian connection between the private paddler parking and river edge. 1b. Staging areas would provide loading and unloading areas for private paddler vehicles (with and without trailers). 1c. Legg Field would provide 172 additional spaces on peak days. 1d. Launch upgrades would enhance access to river.
Resource Protection	3a. Resource damage occurs along the perimeter of existing river launches and access roads where visitors park illegally.	3a. Designated staging areas would provide private paddlers access to the river launch. Legg Field would provide overflow parking.

Figure 2.8

Mason Branch - Proposed Changes to Reduce Congestion

Program Elements

- Major Public River Access
- Outfitted Paddler Equipment Vehicle Parking: 4 spaces
- Private Paddler Parking: 17 spaces (including 1 universal access spaces)
- Satellite Parking: 172 spaces (at Legg Field)

Area of Existing Disturbance

Natural Resources

Forest Cover

Ownership

Non-Federal

0 150 300

SCALE OF FEET

to Mason Branch Plateau (Legg Field)

Trail to Legg Field

Equipment and Limited Paddler Shuttle: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)

Expanded Paddler Shuttle: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)

Path for private paddlers

Loading and unloading area

Universal access space

Vault toilet

Shuttle pick-up

Loading and unloading for outfitted and private paddler vehicles with trailers

Stabilized launch

Maintain existing gravel river launch

GAULEY RIVER

FLOW

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Woods Ferry River Access

2.4.3 Woods Ferry

Table 2.16 Woods Ferry Proposed Changes – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Private paddlers need designated staging sites at the river's edge.	1a. Outfitted and private paddlers would load and unload at the river access site.
	1b. The supply of designated private paddler parking spaces near the river is not adequate to meet demand on peak days.	1b. Satellite parking at Upper Woods Ferry would provide an additional 72 private paddler spaces.
	1c. Steep terrain and wetlands limit the availability of level areas for expansion of visitor facilities at the river's edge.	1c. Satellite parking at Upper Woods Ferry would provide an additional 72 private paddler spaces.
	1d. Existing launch is too small to accommodate both outfitted and private paddlers.	1d. The existing launch would be expanded and there would be a path from the parking area to give private paddlers access to the beach.
Park Operations	2a. NPS staff required during Gauley Season to manage traffic and parking.	2a. Numerous design modifications made to address existing pedestrian/circulation issues, to increase parking capacity, and to provide staging areas for private paddlers.
Resource Protection	3a. Resource damage occurs along the perimeter of existing river launches and access roads where visitors park illegally.	3a. Designated staging areas would provide private paddlers access to the river launch. Expanded road would accommodate parallel parking. Upper Woods Ferry would provide additional overflow parking.
	3b. Disturbed areas around parking areas, along roads, and adjoining the river launch are in need of restoration.	3b. Disturbed areas around parking areas would be restored.

Figure 2.9

Woods Ferry - Proposed Changes to Reduce Congestion

Program Elements

- Major Public River Access
- Outfitted Paddler Equipment Vehicle Parking: 7 spaces
- Private Paddler Parking: 72 spaces (including 3 universal access spaces)

Area of Existing Disturbance

Natural Resources

Forest Cover

Ownership

Non-Federal

0 150 300

SCALE OF FEET

to Woods Ferry Plateau

Lost Paddle Road

Expanded Paddler Shuttle: PM Upper Swiss to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Woods Ferry River Access to Tailwaters River Access

Old Woods Ferry Trail

Private paddler parking

Vault toilet

Private paddler parking

Private paddler path to sandy beach

X 1014.9

GAULEY RIVER

FLOW

ENDER WAVES RAPID

Outfitted and private loading and unloading

Shuttle drop-off

Vault toilet

Old Woods Ferry Trail

X 1002.7

Expand road to accomodate parallel parking

Expanded launch

990

1000

1010

1020

1030

1040

1050

1060

1070

1080

1100

1110

1120

1130

1140

1150

1160

1190

1200

1210

1220

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Upper Swiss River Access

2.4.4 Upper Swiss

Table 2.17 Upper Swiss Proposed Changes – Actions in Response to Existing Management Concerns

	Existing Management Concerns	Actions in Response Existing Management Concerns
Visitor Experience	1a. Roadway conditions at the river access entrance are poor. 1b. Beach is difficult to access in high flow conditions. 1c. Railroad makes bus access to Upper Swiss impassable.	1a. Culverts would improve road conditions and access. 1b. Stablized launches would provide access at both high and low flow conditions. 1c. Railroad crossing improvements would provide bus access to Upper Swiss.
Park Operations	2a. Field parking is haphazard.	2a. Established parking patterns would maximize parking capacity and reduce confusion.
Resource Protection	3a. Riverbank is susceptible to erosion. 3b. Resource damages occurs at the river access loading area.	3a. Stabilized launch would concentrate use along the riverbank. eliminate 3b. Establishing clear loading and unloading spaces would establish clear areas for parking.

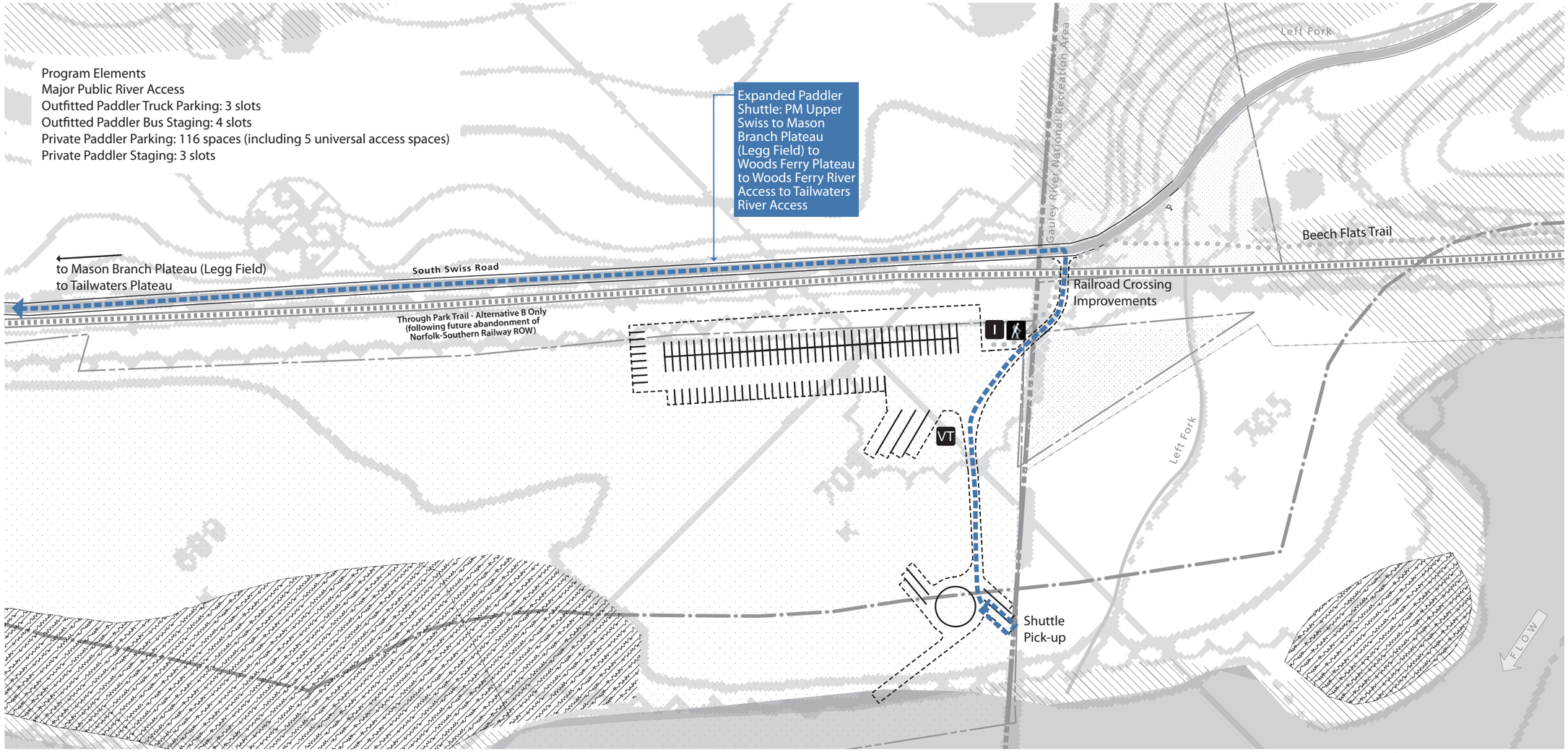

Figure 2.10
Upper Swiss Proposed Changes to Reduce Congestion

Land Ownership
- NPS-Owned Land
- NRA Boundary
- Parcel Boundary

Road and Trail Access
- Public Use Park Road
- Public Use Park Road/Trail
- Administrative Park Road
- Administrative Park Road/Trail
- State Road
- State Road/Trail
- Upland / Connector Trail
- Through Park Trail

Facilities
- VC Visitor Center
- CS Comfort Station
- VT Vault Toilet
- O Operations Facility
- P Parking
- SP Satellite Parking
- Picnic
- Overlook
- Universal Access
- Fishing
- Trails
- Climbing
- I Interpretive Feature
- Biking
- Hunting & Trapping

River Access
- Public River Access
- Emergency Vehicle Access

River Lunch Stop
- Developed River Lunch Stop
- Primitive River Lunch Stop
- Undeveloped River Lunch Stop

Camping
- Family Camping
- Group Camping
- River Group Camping
- Minimum Development Camping
- Backcountry Camping (Locations to be determined)

Restoration
- Restoration Area
- 100' River Setback Line

Existing Features
- Mine Feature
- Gas Well
- Wetland
- River
- Approx. Extent of Rapids
- Steep Slopes (>15%)
- Existing Gravel or Distrubed Area

1 acre
1/4 acre

Key Map

0 50 100 150 200 1/8 mile

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2.4.5 Equipment and Limited Paddler Shuttle Alternative

For many years, the NPS has operated free morning and afternoon equipment shuttles for private paddlers on Gauley Season weekends at Tailwaters and Mason Branch, respectively. NPS is now considering an enhanced shuttle that would retain the equipment shuttle and add to it limited paddler transportation. The existing shuttle routes would remain in place (as described below). A 15-passenger van would be added to enable some paddlers to ride rather than walk to the river access or plateau satellite parking facility. Following is a description of the existing shuttle routes that would be retained in this alternative, the anticipated service characteristics based on existing levels of shuttle use, and required capital investments to implement the shuttle alternative.

- **Shuttle Routes (figure 2.11)**

AM Shuttle: Tailwaters Plateau to Tailwaters River Access (figure 2.12). At Tailwaters a morning shuttle would continue to run from the plateau near Summersville Dam down to the Tailwaters river access. Shuttle operation would begin in the morning once private paddler parking at the river is filled and continue until 12:30 pm. Paddlers arriving by car would continue to be diverted to a satellite parking area along the Tailwaters access road where they would park and load their equipment onto the shuttle. The shuttle would carry up to 15 passengers, requiring most paddlers to continue to walk along the access road edge to the river access below, a distance of approximately 0.8 mile. The shuttle vehicle would transport the boats to the shuttle drop-off at the Tailwaters river access where most paddlers would meet and unload it.

PM Shuttle: Mason Branch River Access to Mason Branch Plateau (Legg Field) (figure 2.13). The shuttle serving Tailwaters in the morning would continue to move to Mason Branch in the early afternoon. There it would provide a shuttle for equipment only from the Mason Branch river access to the Mason Branch Plateau at Legg Field. Most paddlers coming off the river would continue to load their equipment onto the shuttle and then walk up to Legg Field via the Janie's Falls Trail; up to 15 paddlers could ride in the shuttle on each of its trips. The shuttle would transport the boats to the shuttle drop-off at Legg Field where paddlers would meet and unload it. The paddlers using this shuttle typically began their trip at Tailwaters and are returning to a second vehicle left earlier at Legg Field.

- **Shuttle Service Characteristics and Estimated Use**

During the high Gauley Season (the first three weekends), one shuttle vehicle would continue to operate daily at Tailwaters in the morning (for 3.5 hours) and at Mason Branch in the afternoon (for 4.5 hours). Table 2.18 provides a summary of service characteristics. Later in the Gauley Season the number of paddlers using the shuttle would drop significantly depending upon weather conditions.

AM Shuttle: Tailwaters Plateau to Tailwaters River Access. Shuttle hours of operation would generally continue to be from 10:00 am to 12:30 pm at Tailwaters. The shuttle would generally depart the satellite parking area every 30 minutes, making five trips on a busy day. It would transport approximately 140 boats and 75 paddlers on the busier Gauley Season weekends. Additional trips earlier in the day could sometimes be needed on Gauley Festival weekend if the weather is warm and clear and more private paddlers arrive at Tailwaters prior to 10:30 am. Shuttle demand would drop off markedly during the last two weekends of Gauley Season when the days are shorter and cooler.

PM Shuttle: Mason Branch River Access to Mason Branch Plateau (Legg Field). Shuttle hours at Mason Branch would continue to be from 12:30 pm to 5:00 pm. The shuttle would depart the Mason Branch river access every 45 minutes, making six trips on a busy day. It would transport up to 140 boats and 60 paddlers on the busier Gauley Season weekends. Shuttle demand would drop off markedly during the last two weekends of Gauley Season when the days are shorter and cooler.

Generally NPS opens the Mason Branch access road to private vehicles later in the afternoon once outfitted paddler traffic has ended. This effectively eliminates the need for the shuttle after that time because private paddlers can then leave their boats at the river with a member of their party and hike up to Legg Field to get their party's vehicle.

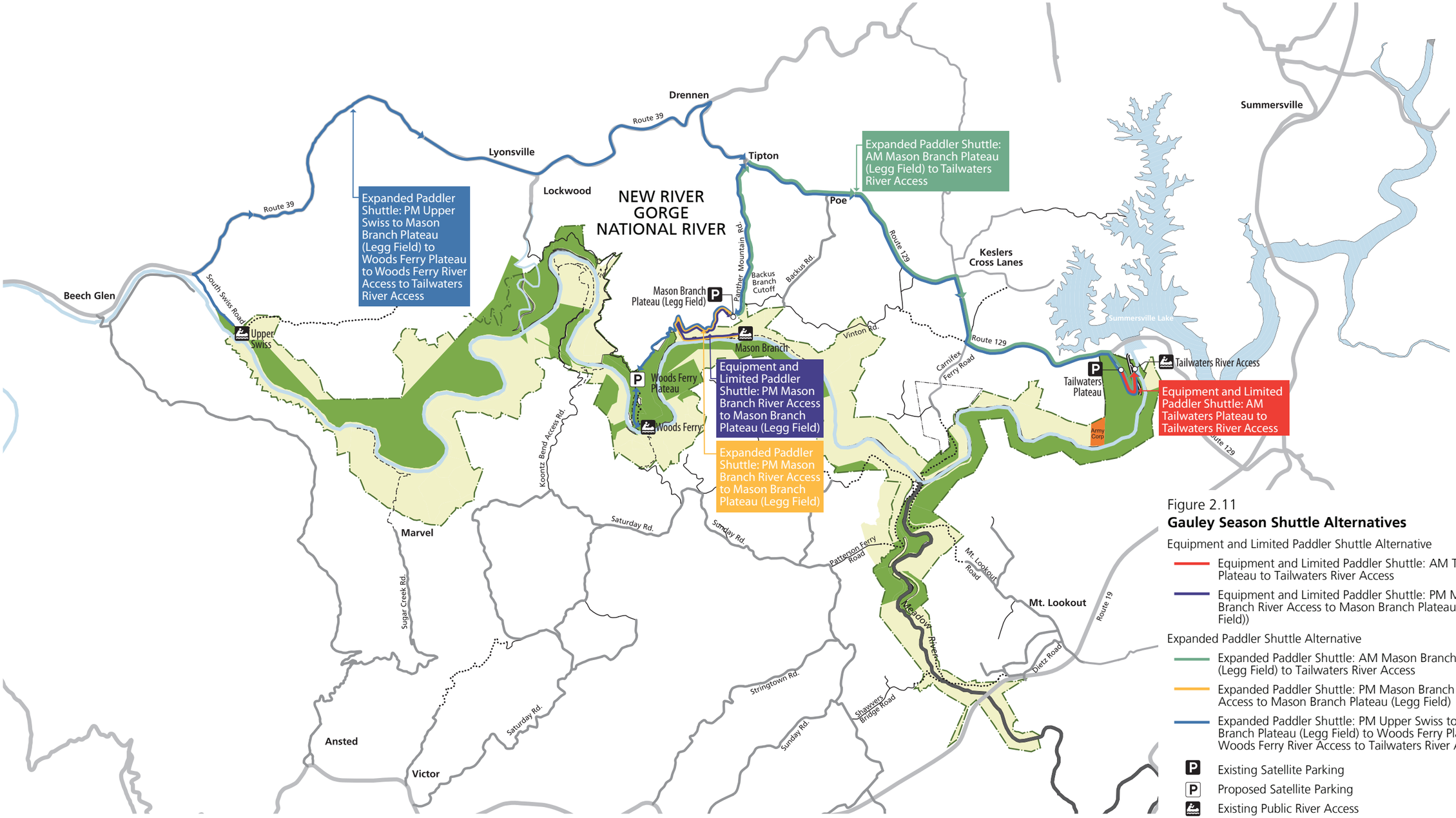

Figure 2.11
Gauley Season Shuttle Alternatives

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Figure 2.12
Equipment and Limited Paddler Shuttle: AM Tailwaters Plateau to Tailwaters River Access
Equipment and Limited Paddler Shuttle: AM Tailwaters Plateau to Tailwaters River Access
Existing Satellite Parking
Existing Public River Access
0
400
800
1"= 400'
WV Route 128
Tailwaters River Access
Shuttle Drop-off
Shuttle Pick-up
Tailwaters Access Road
Equipment and Limited Paddler Shuttle: AM Tailwaters Plateau to Tailwaters River Access


To Tailwaters
Panther Mountain Rd
P
Mason Branch Plateau (Legg Field)
To Woods Ferry
Janie's Falls Trail
Mason Branch Access Rd
Existing Public River Access
Figure 2.13
Shuttle Alternatives: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)
Existing Shuttle: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)
Expanded Paddler Shuttle: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)
Existing Satellite Parking
Existing Public River Access
0
100
200
400 Feet
Panther Mountain Rd
Equipment and Limited Paddler Shuttle: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)
Expanded Paddler Shuttle: PM Mason Branch River Access to Mason Branch Plateau (Legg Field)
To Tailwaters
Shuttle Pick-up
P
Satellite Parking
Janie's Falls Trail (to Mason Branch River Access)
To Mason Branch/ Woods Ferry

Table 2.18 Equipment and Limited Paddler Shuttle Alternative – Shuttle Service Characteristics

HIGH GAULEY SEASON – Shuttle Summary
(1st three weekends Gauley Season[1], including Gauley Festival)

Days	Hours of Operation	Shuttle Vehicle	Frequency	Daily Vehicle Hours	Days per Year
AM Tailwaters Plateau to River Shuttle					
Saturday/Sunday	10:00 to 12:00 am (last trip leaving the plateau at noon)	15-passenger van with box trailer	30 minutes (6 trips/AM)	9:00 am to 6:00 pm daily (inc. pm shuttle below and travel to/from home)	6 days high season (plus 6 to 8 days low season with lower use)
PM Mason Branch River to Plateau (Legg Field) Shuttle					
Saturday/Sunday	1:00 to 5:00 pm (last trip leaving Mason Branch at 4:15 pm)	15-passenger van with box trailer	60 minutes (4 trips/PM)	(included in am shuttle above)	6 days high season (plus 6 to 8 days low season with lower use)

[1] *Service on Saturday and Sunday during the six-week Gauley Season commencing on the Saturday after Labor Day.*

HIGH GAULEY SEASON – Shuttle Schedule and Use
(1st three weekends Gauley Season[1], including Gauley Festival)

Time	Boats Transported	Shuttle Vehicle	Headway (minutes)	Average Wait Time to Board Shuttle (minutes)
AM Tailwaters Plateau to River Shuttle				
10:00 am	20	15-pass van w/trailer	NA	NA
10:30 am	30	15-pass van w/trailer	30 minutes	15 minutes
11:00 am	40	15-pass van w/trailer	30 minutes	15 minutes
11:30 am	30	15-pass van w/trailer	30 minutes	15 minutes
12:00 pm	20	15-pass van w/trailer	30 minutes	15 minutes
PM Mason Branch River to Plateau (Legg Field) Shuttle				
1:00 pm	20	15-pass van w/trailer	NA	NA
1:15 pm	25	15-pass van w/trailer	45 minutes	22.5 minutes
2:00 pm	25	15-pass van w/trailer	45 minutes	22.5 minutes
2:45 pm	25	15-pass van w/trailer	45 minutes	22.5 minutes
3:30 pm	25	15-pass van w/trailer	45 minutes	22.5 minutes
4:15 pm	20	15-pass van w/trailer	45 minutes	22.5 minutes

HIGH GAULEY SEASON – AM Tailwaters Plateau to Tailwaters River Access Shuttle – Travel Times
(1st three weekends Gauley Season[1], including Gauley Festival)

After Leaving Tailwaters Plateau…	Stop 1 Tailwaters River Access	Stop 2 Tailwaters Plateau
AM Tailwaters Plateau to River Shuttle		
Miles	0.8	0.8
Average Speed (mph)	20	20
Travel Time (minutes)	3	3
Stop Time	9 (at TW river)	15 (on plateau)
Cumulative Running Time (minutes)	18	30

HIGH GAULEY SEASON – PM Mason Branch River Access to Mason Branch Plateau (Legg Field) Shuttle – Travel Times
(1st three weekends Gauley Season[1], including Gauley Festival)

After Leaving Mason Branch River Access…	Stop 1 Legg Field Drop-Off	Stop 2 Mason Branch Pick-Up
PM Mason Branch River to Plateau (Legg Field) Shuttle		
Miles	2.4	2.4
Average Speed (mph)	20	20
Travel Time (minutes)	7	7
Stop Time	10 (at Legg Field)	21 (at Mason Br)
Cumulative Running Time (minutes)	17	45

- **Shuttle Ownership and Operation**

NPS would own and operate the equipment and limited paddler shuttle. Seasonal maintenance staff would operate the shuttle vehicle.

- **Capital Investments to Support Shuttle Operations**

Shuttle Vehicle. Shuttle equipment currently in use for the existing GARI equipment shuttle includes an NPS-owned pick-up truck and open flat-bed utility trailer with sides. There is no capacity for carrying passengers.

For the purposes of the level of shuttle service proposed in the equipment and limited paddler shuttle alternative, this study recommends acquisition of a 15-

passenger van. A flex-fuel vehicle is recommended due to poor availability of (or lack of) alternative fuels in the park vicinity. In terms of providing access to visitors with disabilities, it is not recommended that the shuttle vehicle have a wheelchair lift and restraint system. NPS will continue to provide handicapped parking spaces at all river accesses. Very few handicapped private paddlers requiring wheelchairs paddle the river; those who do generally do not paddle with a wheelchair in their boats. They plan their river trips with family and friends to take advantage of river level handicapped parking.

In addition to the shuttle vehicle upgrade, a trailer upgrade to a box trailer with capacity for up to 40 small kayaks is desirable.

Appendix B provides more detail on the shuttle vehicle identification analysis.

Shuttle Stops. Shuttle drop-off/pick-up locations at Tailwaters, Mason Branch, and Woods Ferry (at the river and on the plateau) are already in use for shuttle operations. They could sustain anticipated use associated with implementation of the equipment and limited paddler shuttle alternative without improvements in addition to those recommended in this study to alleviate congestion (see figures 2.3, 2.4, and 2.5). At Upper Swiss – where there is no existing shuttle – the shuttle pick-up could easily be accommodated by the proposed river access concept without additional capital investment (see figure 2.6).

Maintenance Facility. Shuttle equipment would be stored and maintained at NPS's Burnwood Maintenance Facility on US Route 19 at New River Gorge National River, approximately 15 miles from the Tailwaters River Access. Adequate space is available to accommodate the shuttle vehicle and trailer without additional capital investment.

Satellite Parking and Trail Access. The proposed satellite parking facility at the Mason Branch plateau (Legg Field) is privately owned, as is the land across which paddlers hike (via the Janie's Falls Trail) to reach Legg Field. For many years, American Whitewater has negotiated permission for use of Legg Field for parking by private paddlers during Gauley Season. At this time, this arrangement is anticipated to continue indefinitely. Similarly, the owner of the Janie's Falls Trail allows paddlers to cross his property and is anticipated to continue to do so indefinitely. Consequently no capital investment is deemed necessary now for land or easement acquisition.

2.4.6 Expanded Shuttle Alternative

The expanded GARI shuttle would increase capacity to transport paddlers and would expand the shuttle routes. Following is a description of the expanded shuttle routes and shuttle service.

- **Shuttle Routes (figure 2.11 above)**

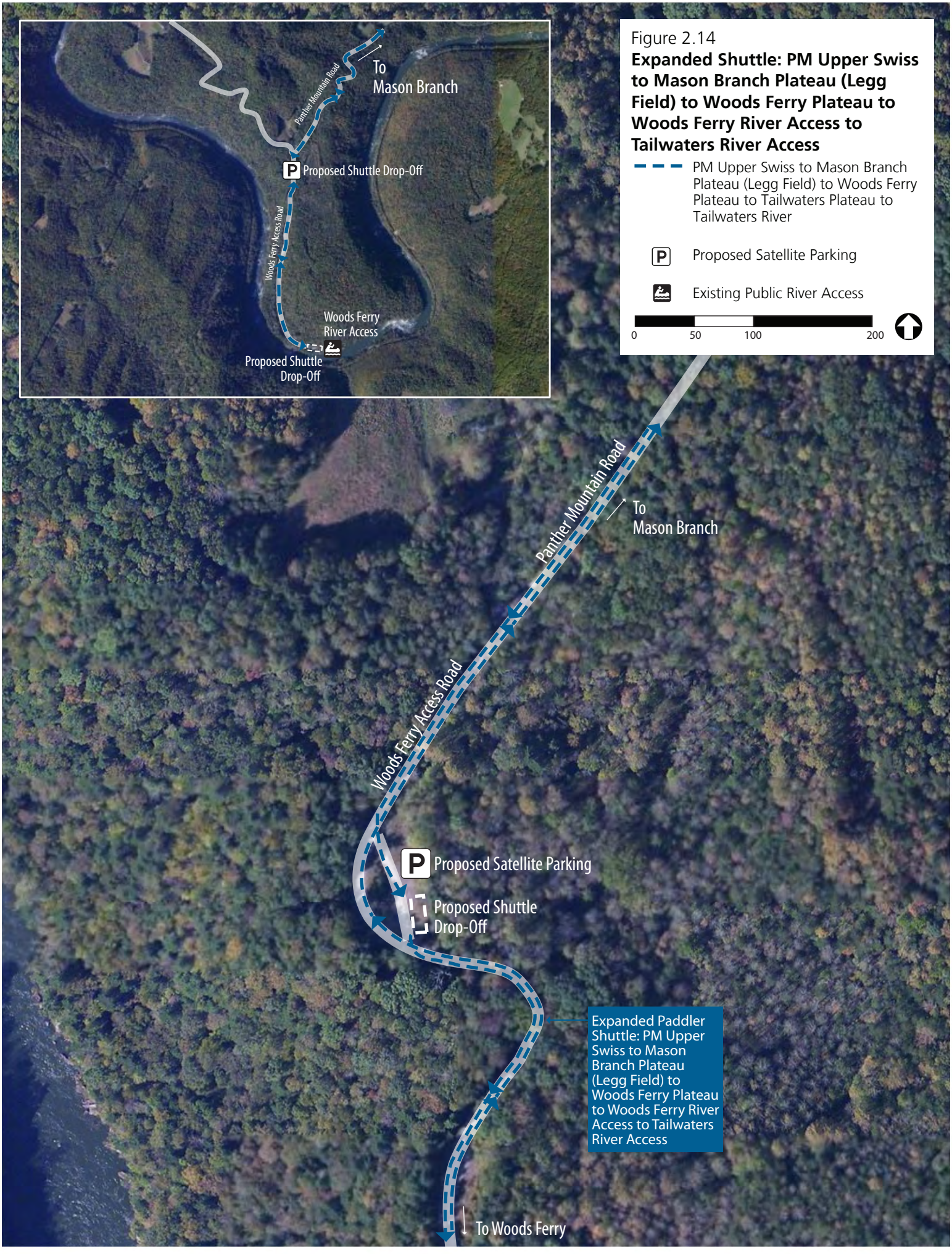
AM Shuttle: Mason Branch Plateau (Legg Field) to Tailwaters River Access (figure 2.12 above). In the morning a passenger/equipment shuttle would pick up private paddlers at Legg Field on the plateau above Mason Branch. The shuttle would transport paddlers and their boats to the Tailwaters river access. This would serve paddlers doing the most popular Upper Gauley trip.

PM Shuttle: Mason Branch River Access to Mason Branch Plateau (Legg Field) (figure 2.13 above). The shuttle serving the Legg Field to Tailwaters route in the morning would move to Mason Branch in the early afternoon. There it would pick up paddlers coming off the river from Tailwaters and take them to their vehicles on the Mason Branch Plateau at Legg Field. Most of these paddlers would be those who rode the morning shuttle; a few would have parked a second vehicle at Tailwaters.

PM Shuttle: Upper Swiss River Access to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Woods Ferry River Access to Tailwaters River Access (figure 2.14). In the late afternoon the shuttle serving Mason Branch would drive to the Upper Swiss river access on the Lower Gauley. There it would pick up paddlers coming off the river, most of whom began their trip at either Woods Ferry or Mason Branch later in the day; some would have paddled from Tailwaters earlier in the day. From Upper Swiss the shuttle would carry paddlers back to the Middle Gauley, dropping them at Mason Branch Plateau (Legg Field), Woods Ferry Plateau, and the Woods Ferry river access. From Woods Ferry, the shuttle would drive back to the Tailwaters river access.

- **Equipment Shuttle Service Characteristics and Estimated Use**

During the high Gauley Season (the first three weekends), one shuttle vehicle would operate daily from Legg Field to Tailwaters in the morning (for 3.5 hours), at Mason Branch in the afternoon (for 4.5 hours), and for one long run at the end of the


To
Mason Branch
Panther Mountain Road
Proposed Shuttle Drop-Off
Woods Ferry Access Road
Woods Ferry
River Access
Proposed Shuttle
Drop-Off
Figure 2.14
Expanded Shuttle: PM Upper Swiss to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Woods Ferry River Access to Tailwaters River Access
PM Upper Swiss to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Tailwaters Plateau to Tailwaters River
Proposed Satellite Parking
Existing Public River Access
0
50
100
200
Panther Mountain Road
To
Mason Branch
Woods Ferry Access Road
Proposed Satellite Parking
Proposed Shuttle
Drop-Off
Expanded Paddler Shuttle: PM Upper Swiss to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Woods Ferry River Access to Tailwaters River Access
To Woods Ferry

day/early evening from Upper Swiss to Tailwaters (via Mason Branch Plateau (Legg Field) and Woods Ferry). Table 2.19 provides a summary of service characteristics.

AM Shuttle: Mason Branch Plateau (Legg Field) to Tailwaters River Access. Shuttle hours of operation from Legg Field to Tailwaters would be from 8:00 am to 1:00 pm. The shuttle would depart every 75 minutes making four trips each morning. It would transport approximately 140 paddlers and boats on the busier Gauley Season weekends. Demand for each shuttle would drop off increasingly during the last three weekends of Gauley Season when the days are shorter and cooler.

PM Shuttle: Mason Branch River Access to Mason Branch Plateau (Legg Field). Shuttle hours at Mason Branch would continue to be from 12:30 pm to 5:00 pm, as for the existing equipment shuttle. The schedule would also be the same. However because of the larger bus, the shuttle would transport up to 140 paddlers and boats on the busier Gauley Season weekends. Shuttle demand would drop off increasingly during the last three weekends of Gauley Season when the days are shorter and cooler.

PM Shuttle: Upper Swiss River Access to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Woods Ferry River Access to Tailwaters River Access. At Upper Swiss one shuttle would run at the end of the day carrying passengers to parking facilities on the middle and upper Gauley. The shuttle would depart at 6:00 pm making a 1 hour and 45 minute 33-mile trip to Tailwaters, with three intermediate stops.

- **Shuttle Ownership and Operation**

The NPS proposes that the paddler shuttles at the Gauley River NRA (during Gauley Season) and at New River Gorge NR (during summer weekends) (see section 1.4.4 Cunard/Fayette Station Shuttle Alternative above) and be operated jointly. Annual operations would commence at New River Gorge NR on Memorial Day weekend and continue through Labor Day weekend, offering shuttle services on Saturdays and Sundays only. Commencing the weekend after Labor Day, shuttle operations would shift to the Gauley River NRA, where they would continue through the six- or seven-week Gauley Season, offering shuttle services on Saturdays and Sundays only.

Table 2.19 Expanded Shuttle Alternative – Shuttle Service Characteristics

HIGH GAULEY SEASON – Shuttle Summary
(1st three weekends Gauley Season[1], including Gauley Festival)

Days	Hours of Operation	Shuttle Vehicle	Frequency	Daily Vehicle Hours	Days per Year
AM Mason Branch Plateau (Legg Field) to Tailwaters River Access Shuttle					
Saturday/Sunday	8:00 am to 1:00 pm (last trip leaving Legg Field at plateau at 11:45 am)	50-passenger bus w/box trailer	30 minutes (6 trips/AM)	7:00 am to 9:30 pm daily (inc. pm shuttles below and travel to/from home)	6 days high season (plus 6 to 8 days low season with lower use)
PM Mason Branch River Access to Mason Branch Plateau (Legg Field) Shuttle					
Saturday/Sunday	1:00 to 5:00 pm (last trip leaving Mason Branch river access at 4:15 pm)	50-passenger bus w/ box trailer	60 minutes (4 trips/PM)	(included in am shuttle above)	6 days high season (plus 6 to 8 days low season with lower use)
PM Upper Swiss River Access to Mason Branch Plateau (Legg Field) to Tailwaters River Access Shuttle					
Saturday/Sunday	6:00 pm (leaving Legg Field at 5:00 pm for one pick-up at Upper Swiss at 6:00 pm)	50-passenger bus w/ box trailer	NA (only 1 trip/day)	(included in am shuttle above)	6 days high season (plus 6 to 8 days low season with lower use)

[1] *Service on Saturday and Sunday during the six-week Gauley Season commencing on the Saturday after Labor Day.*

HIGH GAULEY SEASON – Shuttle Schedule and Use
(1st three weekends Gauley Season[1], including Gauley Festival)

Time	Paddlers	Shuttle Vehicle	Headway (minutes)	Average Wait Time to Board Shuttle (minutes)
AM Mason Branch Plateau (Legg Field) to Tailwaters River Access				
8:00 am	32	44-pass bus w/trailer	NA	NA
9:15 am	44	44-pass bus w/trailer	75 minutes	37.5 minutes
10:30 am	44	44-pass bus w/trailer	75 minutes	37.5 minutes
11.45 am	20	44-pass bus w/trailer	75 minutes	37.5 minutes
PM Mason Branch River to Plateau (Legg Field) Shuttle				
1:00 pm	20	44-pass bus w/trailer	NA	NA
1:15 pm	25	44-pass bus w/trailer	45 minutes	22.5 minutes
2:00 pm	25	44-pass bus w/trailer	45 minutes	22.5 minutes
2:45 pm	25	44-pass bus w/trailer	45 minutes	22.5 minutes
3:30 pm	25	44-pass bus w/trailer	45 minutes	22.5 minutes
4:15 pm	20	44-pass bus w/trailer	45 minutes	22.5 minutes
PM Upper Swiss River Access to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Tailwaters River Access				
6:00 pm	44	44-pass bus w/trailer	NA	NA

HIGH GAULEY SEASON – AM Mason Branch Plateau (Legg Field) to Tailwaters River Access Shuttle – Travel Times
(1st three weekends Gauley Season[1], including Gauley Festival)

	Stop 1 Tailwaters River Access	Stop 2 Mason Branch Plateau (Legg Field)
AM Tailwaters Plateau to River Shuttle		
Miles	10.8	10.8
Average Speed (mph)(on the road)	26	26
Travel Time (minutes)	23.5	23.5
Stop Time	13 (at TW river)	15 (at Legg Field)
Cumulative Running Time (minutes)	36.5	75

HIGH GAULEY SEASON – PM Mason Branch River Access to Mason Branch Plateau (Legg Field) Shuttle – Travel Times
(1st three weekends Gauley Season[1], including Gauley Festival)

	Stop 1 Mason Branch Plateau (Legg Field)	Stop 2 Mason Branch Pick-Up
PM Mason Branch River to Plateau (Legg Field) Shuttle		
Miles	2.4	2.4
Average Speed (mph)(on the road)	20	20
Travel Time (minutes)	7	7
Stop Time	10 (at Legg Field)	21 (at Mason Br)
Cumulative Running Time (minutes)	17	45

HIGH GAULEY SEASON – PM Upper Swiss River Access to Mason Branch Plateau (Legg Field) to Woods Ferry Plateau to Woods Ferry River Access to Tailwaters River Access – Travel Times
(14 weekends from Memorial Day through Labor Day)

After Leaving Upper Swiss River Access…	Stop 1 Mason Branch Plateau (Legg Field)	Stop 2 Woods Ferry Plateau	Stop 3 Woods Ferry River Access	Stop 4 Tailwaters River Access
AM Upper Swiss to Woods Ferry Plateau to Mason Branch Plateau to Tailwaters (One-Way)				
Miles	15.1	2.9	0.5	14.1
Average Speed (mph)(on the road)	30	20	20	25
Travel Time (minutes)	30	9	2	33
Stop Time	10 (at Legg Field)	10 (at WF plateau)	10 (at WF river)	10 (at TW river)
Cumulative Running Time (minutes)	40	59	71	114

In terms of shuttle operation, the NPS further proposes that the shuttle be operated through a turn-key service contract in which a contractor owns (or leases) and operates the shuttle vehicle. There are three primary reasons in support of this proposed operations structure:

- The proposed service requires that drivers work shifts only on weekends during a 21- to 22-week season. A contractor is more likely to be able to hire drivers to work these difficult hours and operate the vehicle at other locations when not being used than the NPS.
- In terms of ownership, the fluctuation in need for the vehicle for the proposed service would require the purchase and maintenance of a vehicle that be used for only 44 days a year, leaving it unused for the remaining 321 days a year.
- In general a non-NPS-owned, non-NPS-operated service contract would have the least impact on park operations would probably be the most feasible option.

For the shuttle financial analysis provided in section 1.5.2 above, this study assumes a turn-key service contract using GSA lease rates and operating costs.

- **Capital Investments to Support Shuttle Operations**

Shuttle Vehicle. Assuming joint operations as described above, one paddler shuttle vehicle would be used for both shuttles operating at New River Gorge NR and at the Gauley River NRA. In recommending an appropriate shuttle vehicle, a number of factors should be considered, such as vehicle requirements (based on amenity preferences, road and operating conditions, and capacity, and other factors), and fuel type and availability.

For the purposes of the service, this study recommends a medium-duty shuttle with capacity for up to 44 passengers, interior luggage rack, and durable seating options. A non-low floor vehicle is recommended due to the terrain. A likely vehicle meeting specifications (see appendix C) would be a diesel capable 44 adult type D front engine work bus. In terms of providing access to visitors with disabilities, it is recommended that the shuttle vehicle have a wheelchair lift and restraint system. However, NPS would continue to provide two handicapped parking spaces at the Cunard river access.

2.5 ONE-TIME COSTS FOR RIVER ACCESS SITE ENHANCEMENTS

Table 2.20 shows estimated one-time costs for construction of river access enhancements for each of the alternatives retained for study in section 1.4 above. The costs are provided as an estimate of the relative costs of the alternatives. The following statements apply to the cost estimates:

- the costs are presented as estimates (in 2012 dollars) and are not appropriate for budgeting purposes
- the estimates presented have been developed using NPS and industry standards to the extent available
- specific costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations
- actual costs to the NPS will vary depending on if and when the actions are implemented, and on contributions by partners and volunteers
- inclusion of alternatives in this alternative transportation feasibility study does not guarantee that funding or staffing for recommended actions will be available
- the implementation of the recommended actions will depend on future NPS funding levels and service-wide priorities

Table 2.20 Estimated One-Time Costs for River Access Site Enhancements Retained for Detailed Analysis (GARI) (2012$)

River Access	Total Factored Net Construction Cost	Total Project Cost	Low Range (-15%)	High Range (+30%)
Tailwaters	$1,288,620	$1,948,393	$1,656,134	$2,532,911
Mason Branch	$354,950	$479,183	$407,306	$622,938
Woods Ferry	$309,254	$417,493	$354,869	$542,741
Upper Swiss	$575,595	$777,053	$660,495	$1,010,169
Equipment and Limited Paddler Shuttle[1]	$0	$0	$0	$0
Expanded Shuttle[1]	$0	$0	$0	$0

1 Shuttle stops can be accommodated within the footprint of the recommended actions for Tailwaters, Mason Branch, Woods Ferry, and Upper Swiss at no additional cost.

3. Findings

3.1 RIVER ACCESS SITE ENHANCEMENTS – RECOMMENDED ACTIONS

Findings of this alternative transportation feasibility study support recommended enhancements to reduce congestion at river access sites at New River Gorge National River and at Gauley River National Recreation Area. Some enhancements are recommended for development, if and when funding is available, and some are recommended for further study, as follows.

New River Gorge National River

- Recommended for Implementation (if and when funding is available)
  - Fayette Station Alternative 1c (figure 1.6)
  - Cunard Alternative 1 (figure 1.10)
- Recommended for Further Study
  - Brooklyn Alternative 1 (figure 1.11) or Brooklyn Alternative 2 (figure 1.12)

Gauley River National Recreation Area

- Recommended for Implementation (if and when funding is available)
  - Mason Branch Proposed Changes to Reduce Congestion (figure 2.8)
  - Woods Ferry Proposed Changes to Reduce Congestion (figure 2.9)
  - Upper Swiss Proposed Changes to Reduce Congestion (figure 2.10)
- Recommended for Further Study
  - Tailwaters Proposed Changes to Reduce Congestion (figures 2.7a and 2.7b)

Preliminary one-time cost estimates for the recommended actions are included for sites at New River Gorge National River in section 1.6 above and for Gauley River National Recreation Area in section 2.5 above. Next steps for implementation with respect to NEPA compliance are summarized in appendix D.

3.2 SHUTTLES – RECOMMENDED ACTIONS

3.2.1 GARI Equipment and Limited Paddler Shuttle

- **Shuttle Description**

Findings of this alternative transportation feasibility study also support a recommendation to immediately enhance the shuttle service offered at Gauley River National Recreation Area during Gauley Season, if funding can be obtained for purchase of the required shuttle vehicle and improved trailer. The enhanced shuttle would provide for equipment transport in combination with a limited passenger shuttle. The shuttle would be composed of an AM shuttle from Tailwaters Plateau to Tailwaters River access using a 15-passenger van towing an enclosed box trailer. This would offer some paddlers an opportunity to ride to the river access while many would continue to walk on peak weekends. In the afternoon the shuttle would move to Mason Branch where it would take equipment and some paddlers up to the plateau at Legg Field. Many paddlers would continue to walk via the Janie's Falls Trail.

- **First Year Costs**

Table 3.1 shows anticipated one-time costs associated with the GARI equipment and limited paddler shuttle. Included are one-time costs for required capital investments to support shuttle operation (see section 2.4.5 above), including the shuttle vehicle and trailer. No one-time costs for shuttle stops, satellite parking, or signage are shown. Shuttle stops could be accommodated at existing river access sites without additional capital investment; they could also be accommodated at enhanced river access sites as proposed in this alternative transportation feasibility study (see figures 2.7a, 2.8, 2.9, and 2.10). Satellite parking would continue to be located on the Mason Branch Plateau at Legg Field, which is privately-owned and made available for public parking during Gauley Season through an agreement between the landowner and American Whitewater. Similarly the owner of the Janie's Falls Trail (used by private paddlers to reach Legg field from the Mason Branch river access) would continue to allow the public to use the trail during Gauley Season.

Table 3.1 Estimated Shuttle First Year Costs – GARI Equipment and Limited Paddler Shuttle ($2012)

Shuttle Alternative	Driver Costs	Fuel Costs	Mainte-nance Cost	Shuttle Vehicle	Trailer	Shuttle Stops	Satellite Parking	Signage	Total
First Year Costs	$3,780	$451	$1,082	$38,294[1]	$5,000	$0	$0	$0	$48,607

1 GSA Auto Source (15-passenger van with increased power engine 1(IBE) and ethanol flexible fuel (EBS) fuel)

- **Annual Costs and Life Cycle Costs**

Tables 3.2 and 3.3 show estimated recurring costs and life cycle costs, respectively for the GARI equipment and limited paddler shuttle. Costs are based on 14 days of operation per year during Gauley Season weekends and do not reflect the cost of operating the vehicle for other park operations during the remainder of the year.

Table 3.2 Estimated Shuttle Annual Costs – GARI Equipment and Limited Paddler Shuttle

Shuttle Alternative	Driver Cost	Fuel Cost	Maintenance Cost	Marketing Costs	Total
Annual Costs	$3,780	$451	$1,082	$0	$5,313

1 Costs calculated using "Bus lifecycle cost model for federal land management agencies", US DOT 2011.

Table 3.3 Estimated Shuttle Life Cycle Costs – GARI Equipment and Limited Paddler Shuttle

Year	Operations and Maintenance	Miles Driven	Engine Overhaul	Transmission Overhaul	Total Costs per Year	Cumulative Costs
Year 1 O&M	$4,862	1,442			$4,862	
Year 1	$43,156	1,442			$43,156	$43,163
Year 2	$5,007	2,884	$0	$0	$5,007	$48,163
Year 3	$5,158	4,326	$0	$0	$5,158	$53,320
Year 4	$5,312	5,768	$0	$0	$5,312	$58,633
Year 5	$5,472	7,210	$0	$0	$5,472	$64,104
Year 6	$5,636	8,652	$0	$0	$5,636	$69,740
Year 7	$5,805	10,094	$0	$0	$5,805	$75,545

1 Costs calculated using "Bus lifecycle cost model for federal land management agencies", US DOT 2011.

3.2.2 Joint Shuttle Serving both Parks

Findings of this study also support a recommendation to explore the potential for a turn-key contract to provide a joint paddler shuttle service at both parks. In this model the contractor would own (or lease) and operate the shuttle service. Seasonal operations would commence at New River Gorge National River on Memorial Day weekend and continue through Labor Day weekend, offering shuttle service on Saturdays and Sundays only. Commencing the weekend after Labor Day, shuttle operations would shift to the Gauley River National Recreation Area, where they would continue through the six- or seven-week Gauley Season, offering shuttle services on Saturdays and Sundays only. One bus with capacity for 44 passengers towing an enclosed box trailer for boats would compose the shuttle.

At New River Gorge National River private paddler parking at river level at Cunard and Fayette Station would be adequate to meet all of the private paddler parking demand on weekdays but only 20 percent of the demand on weekends from Memorial Day weekend through Labor Day weekend. On weekends once parking at the river level at Cunard and Fayette Station is filled, private paddlers would be directed to a satellite parking facility on the Cunard plateau. A shuttle would transport them from the plateau to the river. In the afternoon, the same shuttle would pick them up at Fayette Station and take them back to their cars at Cunard. The shuttle would be “mandatory” for those arriving in the morning at Fayette Station or Cunard once all designated private paddler parking spaces are filled.

At Gauley River National Recreation Area) the shuttle would move from Tailwaters, to Mason Branch to Upper Swiss over the course of the day on weekends during Gauley Season. In the morning a passenger/equipment shuttle would pick up private paddlers at Legg Field on the plateau above Mason Branch. The shuttle would transport paddlers and their boats to the Tailwaters river access. This would serve paddlers doing the most popular Upper Gauley trip. In the late afternoon the shuttle serving Mason Branch would drive to the Upper Swiss river access on the Lower Gauley. There it would pick up paddlers coming off the river, most of whom began their trip at either Woods Ferry or Mason Branch later in the day; some would have paddled from Tailwaters earlier in the day. From Upper Swiss the shuttle would carry paddlers back to the Middle Gauley, dropping them at Mason Branch Plateau (Legg Field), Woods Ferry Plateau, and the Woods Ferry river access. From Woods Ferry, the shuttle would drive back to the Tailwaters river access. In

the late afternoon the shuttle serving Mason Branch would drive to the Upper Swiss river access on the Lower Gauley. There it would pick up paddlers coming off the river, most of whom began their trip at either Woods Ferry or Mason Branch later in the day; some would have paddled from Tailwaters earlier in the day. From Upper Swiss the shuttle would carry paddlers back to the Middle Gauley, dropping them at Mason Branch Plateau (Legg Field), Woods Ferry Plateau, and the Woods Ferry river access. From Woods Ferry, the shuttle would drive back to the Tailwaters river access.

- **First Year Costs**

Table 3.4 shows anticipated one-time costs associated with a joint shuttle that would serve both parks. Included are one-time costs for the required capital investments to support shuttle operation, including the shuttle vehicle, shuttle stops, satellite parking, and signage.

Table 3.4 Estimated Shuttle First Year Costs – Joint Shuttle Serving both Parks ($2012)

Shuttle Alternative	Driver Costs	Fuel Cost	Mainte-nance Cost	Shuttle Vehicle	Trailer	Shuttle Stops	Satellite Parking	Signage	Total
GARI Expanded Shuttle	$6,090	$2,710	$4,743	$104,053[1]	$5,000	$0	$0	$4,000	$126,596
NERI Cunard/Fayette Station Shuttle w/ Cunard Rim parking	$11,700	$3,793	$6,638	same vehicle as GARI shuttle	same trailer as GARI trailer	$21,653 (Fayette Station)[2] $36,703 (Cunard)[3]	$331,367 (rim alt 2) $382,853 (rim alt 3)	$3,000	$414,854 (w/rim alt 2) $466,340 (w/rim alt 3)

1 GSA FY 2013 Alternative Fuel Purchasing Guide (44-adult diesel work bus with enhanced engine)
2 Estimate is only for shuttle stop; does not include Cole Lot restoration, bridge replacement, and comfort station enhancements included in Fayette Station alternative 5.
3 Estimate is only for shuttle stop and replacement of displaced private paddler parking spaces at the river level

- **Annual Costs and Life Cycle Costs**

Tables 3.5 and 3.6 show estimated annual costs and life cycle costs, respectively for the GARI equipment and limited paddler shuttle. Costs are based on:

- 30 days of operation per year at New River Gorge National River during summer weekends from Memorial Day through Labor Day and do not reflect the cost of operating the vehicle for other park operations during the remainder of the year

- 14 days of operation per year at Gauley River National River during Gauley Season weekends

Table 3.5 Estimated Shuttle Annual Costs – Joint Shuttle Serving both Parks[1]

Shuttle Alternative	Driver Cost	Fuel Cost	Maintenance Cost	Marketing Costs	Total
GARI Expanded Shuttle	$6,090	$2,710	$4,743	$0	$13,543
NERI Cunard/Fayette Station Shuttle w/ Cunard Rim parking	$11,700	$3,793	$6,638	$500	$22,631

1 Costs calculated using "Bus lifecycle cost model for federal land management agencies", US DOT 2011.

Table 3.6 Estimated Shuttle Life Cycle Costs – Joint Shuttle Serving both Parks

Year	Operations and Maintenance	Miles Driven	Engine Overhaul	Transmission Overhaul	Total Costs per Year	Cumulative Costs
Year 1 O&M	$29,671	9,104			$29,671	
Year 1	$525,947	9,104			$525,947	$525,947
Year 2	$30,045	18,208	$0	$0	$30,045	$555,992
Year 3	$30,946	27,312	$0	$0	$30,946	$586,938
Year 4	$31,875	36,416	$0	$0	$31,875	$618,813
Year 5	$32,831	45,520	$0	$0	$32,831	$651,644
Year 6	$33,816	54,624	$0	$0	$33,816	$685,460
Year 7	$34,831	63,728	$0	$0	$34,831	$720,291
Year 8	$35,876	72,832	$0	$0	$35,876	$756,167
Year 9	$36,951	81,936	$0	$0	$36,951	$793,118
Year 10	$38,060	91,040	$0	$0	$38,060	$831,138
Year 11	$39,202	100,144	$0	$0	$39,202	$870,380
Year 12	$39,378	109,248	$0	$0	$39,378	$909,758

1 Costs calculated using "Bus lifecycle cost model for federal land management agencies", US DOT 2011.

3.3 NEPA COMPLIANCE – PATHWAY DETERMINATION FOR RECOMMENDED ACTIONS

As part of the Alternative Transportation Feasibility Study the planning team completed initial tasks required for the recommended actions to comply with NEPA, NPS Director's Order 12, Section 7, and Section 106 compliance for the recommended enhancements. Appendix D includes:

- a summary of the scoping process to date for each recommended enhancement
- a brief summary of existing environmental conditions at each park for typical NEPA impact topics
- findings of an initial environmental analysis for each recommended enhancement to support preliminary determination of the NEPA pathway
- a preliminary NEPA pathway determination for each recommended enhancement

The NEPA pathway for each recommended enhancement was identified as follows:

New River Gorge National River

- Recommended for Implementation (if and when funding is available)
  - Fayette Station Alternative 1c – categorical exclusion 18
  - Cunard Alternative 1 – categorical exclusion 18
- Recommended for Further Study
  - Brooklyn Alternative 1 or Brooklyn Alternative 2 – environmental assessment

Gauley River National Recreation Area

- Recommended for Implementation (if and when funding is available)
  - Mason Branch Proposed Changes to Reduce Congestion – categorical exclusion 18
  - Woods Ferry Proposed Changes to Reduce Congestion – categorical exclusion 18
  - Upper Swiss Proposed Changes to Reduce Congestion – categorical exclusion 18
- Recommended for Further Study
  - Tailwaters Proposed Changes to Reduce Congestion – environmental assessment

Appendix E provides a scope of work for an environmental assessment (EA) for those actions for which the NEPA pathway determination concludes that an EA is likely required.

3.4 A NEW RIVER ACCESS SITE AT SURPRISE (DISMISSED)

The recently completed *New River Gorge National River General Management Plan/Environmental Impact Statement* (GMP) (NPS 2011a and 2009a) indicates that NPS will explore development of a potential river access on the New River at Surprise if certain conditions occur. To evaluate the feasibility of a potential river access at Surprise, the NPS has explored the New River corridor from the base of Red Ash Island to Surprise Rapids. The feasibility analysis focused on finding river launch sites where water conditions, river bottom, and river bank conditions are suitable for a safe public access facility. It also focused on evaluating the potential for development of land-based public access facilities adjoining possible river launch sites (roads, parking facilities, and other visitor facilities).

Findings of the feasibility analyses (addressed in more detail in appendix A) are summarized as follows:

- **No Suitable River Access Sites in the Surprise River Access Study Area**

  Most of the river bank between Red Ash Island and Surprise Rapid is unsuitable for the development of new river access areas either because of the presence of river cobble or strong currents. The three areas with any potential for development were closely evaluated and all have serious limiting factors. The control point identified as Beach is the smallest area with the steepest slopes. The site at the bottom of Red Ash Island (Birch) is inadequate in size and subject to strong currents at high river flows. The site locally referred to as Fisherman's Paradise is inaccessible at low river flows and perhaps located too close to Surprise Rapid at high river flows.

- **Surprise Corridor is Generally Unsuitable for River Access Development**

  The Surprise corridor is generally unsuitable for development of roads, parking, and visitor facilities needed to support a new public river access. Steep slopes characterize the entire corridor; extensive grading and retaining wall construction would be required to accommodate facilities. Active slide areas would threaten access roads to the Fisherman's Paradise, Beach, and Lower Red Ash Island river launch sites, and would be a particular problem for the

Fisherman's Paradise river launch site. Construction of river launch sites would likely have a major adverse impact on several rare plant communities present along the length of the corridor between the Southside Junction Trail and the river.

Despite not finding any suitable river launch sites, the planning team evaluated alternatives for land-based facilities in the Surprise corridor. This was done for illustrative purposes to determine if it would even be possible to develop the necessary land-based facilities if a suitable river launch site existed (which one does not). The three best (though unsuitable) river launch sites identified through the reconnaissance – Beach, Birch, and Fisherman's Paradise – were used to anchor alternatives for land-based facilities. Three alternatives were considered for each launch site, generating a total of nine alternatives. Each alternative has been dismissed from further study.

3.5 CUNARD TO SOUTHSIDE JUNCTION RAIL ALTERNATIVE (DISMISSED)

The recently completed *New River Gorge National River General Management Plan/Environmental Impact Statement* (GMP) (NPS 2011a and 2009a) includes a commitment to consider return of the historic Southside Junction railroad corridor to active use for purposes of providing visitor transportation between Cunard and Southside Junction.

The area from Rush Run to the bottom of Red Ash Island is one of only three areas in the park with the New River is connected to the upland forest of the gorge rim, rather than interrupted by highways or railroads. This rare, unfragmented "river to rim" condition is found along only 16.6 of the 106 miles (16%) of the New River shoreline within the park. The Rush Run to lower Red Ash Island segment contains almost one-third of this unique habitat condition. The area also provides critical foraging habitat for the federally endangered Virginia big-eared and Indiana bat. Reestablishment of rail service from Southside Junction would require clearing a 50 right-of-way through this area. This would likely result in a major adverse impact on the park's unfragmented forest and related critical habitats. As a result NPS has dismissed this alternative from further consideration.

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Appendix A:
Potential New Public River Access on the New River near Surprise
SITE RECONNAISSANCE FINDINGS

INTRODUCTION

The recently completed *New River Gorge National River General Management Plan/Environmental Impact Statement* (GMP) (NPS 2011a and 2009a) indicates that NPS will explore development of a potential river access on the New River at Surprise if certain conditions occur. Relevant GMP management actions included the following (NPS 2009a, page 2-147):

> *At Cunard existing problems with inadequate parking for private paddlers on peak visitation days would be alleviated by:*
>
> - *adding parking for private paddlers at Cunard*
> - *adding new private paddler parking along the Fisherman's Trail access road*
> - *implementing an alternative transportation system (ATS) composed of a concession-based shuttle that would operate on Cunard Road, picking up and dropping off riders at a satellite parking area on the rim (at the site of the proposed Cunard boundary adjustment); the shuttle would primarily serve private paddlers and other visitors – outfitted paddlers would continue to ride to and from the river access on outfitter-operated buses*
> - *expanding parking for fishermen and private boaters at Brooklyn*
> - *if after making the above-listed improvements at Cunard and Brooklyn, visitor crowding issues during peak visitation days are still not adequately addressed, then the NPS would consider adding a new river access at Surprise, including – as appropriate and as practicable – extension of Cunard Road and electrical service beyond Brooklyn and development of a river launch, drop-off areas and parking facilities (for outfitted paddlers and private paddlers), comfort/changing stations, picnicking facilities, and water supply*

To evaluate the feasibility of a potential river access at Surprise, the NPS has explored the New River corridor from the base of Red Ash Island to Surprise Rapids. The feasibility analysis focused on finding river launch sites where water conditions, river bottom, and river bank conditions are suitable for a safe public access facility. It also focused on evaluating the potential for development of land-based public access facilities adjoining possible river launch sites (roads, parking facilities, and other visitor facilities).

RIVER LAUNCH SITE RECONNAISSANCE

During the summer of 2011 NPS staff completed a reconnaissance of the New River corridor from the base of Red Ash Island to Surprise Rapids for purposes of identifying sites where a new public access site could be developed.

Reconnaissance Goals

- natural resources – minimize impacts to aquatic and forest habitat and species
- visitor experience – provide for safe and pleasant visitor entry onto the river between Red Ash Island and Surprise
- cultural resources – minimize impacts to cultural resources

Reconnaissance Objectives

- facility must function between 2ft and -2ft @ Fayette Station gage and enable visitors to safely enter/exit boats at water's edge or with little need for wading across river bottom with slick or hazardous surface
- facility must serve as a put-in for the Lower New and enable visitors to easily carry boats from staging areas to water's edge and serve as a take-out for the Upper New and enable visitors to carry boat from water's edge to reloading areas
- facility must be sized to allow 15-17 commercial Lower New trip launches per hour (approximately 450-700 commercial paddlers per hour, assuming about 30-40 guests per trip). Site may require 2 or 3 ramps to allow launching of 5-8 trips simultaneously, as now happens at Cunard
- facility must address potential year round use by non-commercial paddlers (up to 240 paddlers per day) and fishermen/campers
- provide adequate space for rafts to collect for instructions prior to entering the main channel/first rapid
- facility must allow NPS/WVDNR to use trailers to launch and retrieve patrol watercraft
- avoid or minimize river bottom disturbance for construction and ongoing maintenance

River Launch Site Requirements:

Essential Requirements

- river bank/bottom composition (i.e., sand, mud, river cobble) and absence of cobble or riverscour prairie vegetation
- pool size (approximate acreage of open water)
- area of low stream gradient with little or no current (rate current as none, low 1 to 2 mph, medium 3 to 5 mph, high >5mph)
- water depth (at known water level, measure depth of water @ 10 feet from waterline, assuming need for depth of 1 foot to float rafts)

Additional Requirements

- distance to main river channel and presence of open channel [distance in feet]
- proximity to nearest rapid [distance in feet]
- stream bank topography [slope- moderate slopes of 12-15%/ 7-8 degrees is preferred for launch ramps]

River Reconnaissance Work Plan

- **Determine River Bank/Bottom Composition.** Using aerial photography and vegetative mapping identify and then field truth the location of river cobble and riverscour prairie vegetation communities. These areas are characterized as wide, shallow, and rocky stream terraces that are unsuitable for development as a river access site and are often dry at low river flows. These cobble bar areas would be eliminated from further consideration.
- **Evaluate pool size, stream gradient, water depth, additional requirements.** With assistance of the NPS river patrol, field truth the remaining shoreline, prioritizing areas with pools and little or no current. Use GPS to identify and map control points. Then evaluate site requirements at each site.
- **Photograph control points.** With assistance of the NPS river patrol, obtain panoramic images of the river and river bank.
- **Conduct Inventory at various Water Levels.** With assistance of the NPS river patrol, conduct river reconnaissance within the primary commercial range (2ft and -2ft @ Fayette Station) and at higher levels (up to 10-12 ft) to determine potential durability and functionality of facility at normal seasonal high flows.

Reconnaissance Findings

- **Field Data Collection**

Field data were collected on three days in August/September 2011 at various sites between the Dunglen river access (RM 26.2) and the Cunard river access (RM 19.0), a length of approximately 7.2 miles. Inventory control points and river accesses are identified in table 1 (control points noted in CAPS). For the purposes of this study, river mile 0.0 on the New River begins at the confluence with the Gauley River and will be noted as (RM 0.0). Specifically the area for potential development of a "Surprise River Access" was approximately 0.70 miles in length beginning at the bottom of Red Ash Island (RM 21.22) and ending the bottom of the Surprise Rapid cobble bar (RM 20.52). The inventory was first conducted on August 12, 2011 (when the river flow was -1.64 feet @ Fayette Station (1500 cfs)), then on August 22, 2011 (when the river flow was -0.9 feet @ Fayette Station (2000 cfs)), and finally on September 12, 2011 (when the river flow was 1.5 feet @ Fayette Station (4100 cfs)). Fisherman's Paradise was also observed on July 27, 2011 (when the river flow was 0.5 feet @ Fayette Station (3170 cfs)).

- **Areas Ruled Out Due to Unfavorable Conditions – River Cobble Bars and Areas with Strong Currents (0.63 mi of 0.70 mi total)**

As noted in the inventory work plan, areas identified as river cobble bars or having strong current would be eliminated from further consideration. The river cobble bars consist of large loose rock covered with sensitive vegetation that is usually slick and hazardous to walk on. Areas along the bank subject to strong currents (>2 mph current) create difficult conditions for boat launching and long-term maintenance of a ramp.

River cobble bars are part of a vegetation map class identified as steep riparian edge and generally consist of several riparian community types in the Sycamore-Ash Floodplain Forest. The American Water-willow Cobble Bar is a community dominated by a low density of specialized emergent or aquatic plants exposed during low flows. Cobble bars were identified upstream of the potential development area for approximately 0.78 miles at Red Ash Island, within the potential development area for 0.09 mi from RM 20.95 – 21.04 upstream of ROCKCOVE and for 0.39 mi from RM 20.52 – 20.91 from RKCV2 to the bottom of Surprise. The **length of cobble bars totals 0.09+0.39=0.48 mi**, which is most of the 0.70-mile length of study area.

An area with strong river current with a **length of 0.15 mi** was identified in the study area from RM 21.05 – 21.20 (control points CUR1 to BEACH). Even at the lowest river flows observed (-1.6 ft or 1500 cfs) the current in this reach was approximately 3 mph. At the highest flow observed (1.5 ft or 4100 cfs), CUR1 had 7 mph current which slowed to 3+ mph at SYCFLAG, 3 mph at BEACH, and remained at 3 mph all the way to the entrance to ROCKCOVE.

- **Areas of Potential Access (0.06 mi of 0.70 at three sites)**
  - BIRCH – Bottom of Red Ash Island – RM 21.22-21.21= 0.01mi
  - BEACH – RM 21.05-21.04=0.01mi
  - ROCKCOVE – RKCV2 – also known as "Fisherman's Paradise" – RM 20.95-20.91= 0.04mi
- **Site Specific Conditions at Areas of Potential Access from -1.6ft or (1500 cfs) to 1.5 ft @ Fayette Station (4100 cfs)**

BIRCH - Lower Red Ash Island - RM 21.22 – located at the downstream end of the Red Ash Island slough, river bank is mixture of river cobble and large rock, pool at lowest flow is about 100ft long and 50ft out to current, there is no current in the pool but site is located at the base of a Class I rapid with about 5-6mph current, water depth 10ft out is 6ft. Bank is very steep- 56%/30 degree slope. As the river level rises to 1.5ft, the pool becomes smaller, about 60ft long and 40ft out, to a stronger 7 mph current. P-1 is the location along the Southside Trail that would serve as the potential vehicle access and parking area. P-1 has a small clearing and wide out currently large enough for 3-4 cars and has several mature birch trees

BEACH - RM 21.05 – River bank is a sandy beach about 85ft long, pool is about 85ft long and 15ft out to 2-3mph current, water depth 10 ft out is >5ft. Sandy beach is sparsely covered with riparian vegetation, slope on beach is strong at 28%/ 16 degrees but slope beyond sand is extreme at 75%/ 37 degrees. At a river level of 1.5ft, the pool is smaller and the adjacent current is 3 mph. P-2 is the location along the Southside Trail that would serve as the

Table A.1 **Inventory Control Points** (in all CAPS) **and Existing River Accesses** (in bold)

Location Name	River Mile (RM)	Notes
Teays – private commercial access	11.0	owned and used majority of outfitters, but not all, as primary take-out for full-day trips on Lower New
Fayette Station – NPS commercial access	12.0	Class VI Mtn River – Rivermen – Songer and ACE – NARR – Wildwater use this take-out for express trips on Lower New; River Expeditions, New Gauley, WV Adventures, Cantrell, and Alpine use this take-out for both express and full-day trips on Lower New
NPS-PVT – Cunard – NPS private boater access	18.85	
NPS-COM – Cunard – NPS commercial access	18.90	primary put-in for all outfitters (except ACE) for low water trips on Lower New
ACE – Cunard – private commercial access	18.99	owned by ACE outfitter
Cunard	19.0	
RIVEXP – Cunard – private commercial access	19.03	owned by River Expeditions outfitter
Brooklyn – NPS fisherman access	20.00	Wooden john boat slide, camping, trailhead parking
"Surprise River Access Study Area"	"20.52-21.22"	20.52-21.22 = **0.70 mi length of study area**
RKCV2 – CB1 – CB11 – Surprise Rapid cobble bar	20.91-20.52	**20.52-20.91 = 0.39 mi American willow cobble bar**
Surprise Rapid	20.6	20.50-20.65 = 0.15 mi approximate length of rapid
RKCV2 – ROCKCOVE – Fisherman's Paradise	20.91-20.95	potential access – inaccessible to rafts at low flows (<0.5ft @FS or 3200cfs), adjacent to sensitive habitat, very close proximity to Surprise Rapid, especially at high flows
ROCKCOVE to SEDGE	20.95-21.04	**20.95-21.04 = 0.09 mi American willow cobble bar**
P-3	20.96	potential vehicle access and parking area
BEACH	21.05-21.04	potential access – approx. 85 ft of sandy beach, adjacent to sensitive habitat, extremely steep bank (75%/ 37 degree slope)
P-2	21.06	potential vehicle access and parking area
SYCFLAG	21.12	
ROCK	21.15	large rock extending into river
CUR 1	21.20	**21.05 – 21.20 = 0.15 mi strong river current**
BIRCH – Bottom of Red Ash Island	21.22-21.21	potential access – very small pool area, approx. 60x40ft with steep bank (56%/30 degree slope), adjacent to sensitive habitat, subject to strong river currents, especially at high flows (7 mph @ base of Class I rapid)
P-1	21.22	potential vehicle access and parking area
BEACH 1 – BEACH 2 – Red Ash beach	21.55-21.50	approx. 200-ft sand beach, popular lunch stop for boaters
Top of Red Ash Island	22.00	**21.22 – 22.00 = 0.78 mi Red Ash Island cobble bar/beach**
HYLT – Fire Creek Hylton	22.06	former lunch stop and Red Ash town site
ACE Beach – private commercial access	25.2	owned by outfitter ACE – NARR – Wildwater
Dunglen – NPS river access	26.2	limited commercial use
Stone Cliff – NPS river access, gravel pull-thru (downstream) and concrete ramp	27.64 gravel 27.70 concrete	primary put-in for all outfitters (except ACE and Class VI Mtn River) for trips on Lower New at normal flows

potential vehicle access and parking area. P-2 is narrow and much higher in elevation above the river than either P-1 or P-3 and currently provides barely enough room for a vehicle to turn-around.

ROCKCOVE - RKCV2 Fisherman's Paradise - RM 20.95 – located about 0.3 miles upstream of Surprise Rapid, river bank is a sandy beach and some river cobble, about 150ft long. Cove with no current is cut-off from river by cobble bar about 100ft out from high water mark, water depth 10ft out is less than 1ft. At a river level of -1.6ft, no open water channel exists that would allow rafts to launch on the beach and paddle out into the main channel. Slope on beach is strong at 26%/ 15 degrees and steeper beyond high water mark. The control point at RKCV2 is a large sycamore located about 45 ft downstream of the edge of the sandy beach, from this tree it is about 20 ft to open water and marks the beginning of a cobble bar which extends downstream to the bottom of Surprise Rapid.

At a river level of -0.9ft the beach area is still inaccessible from the main channel due to rocks. The site remained inaccessible to rafts at 0.5ft. However, at a river level of 1.5ft, the rocks are covered and there is a 3 mph current at the entrance to the cove, with slight current under an overhanging tree along the beach, the water depth 10ft out is about 1.5ft. A storm event on September 7, 2011 raised the river level to more than 9ft (about 20,000 cfs) and inundated the vegetation surrounding the large sycamore at control point RKCV2 and leaving a coating of very slick mud. Most of the sandy beach at that water level would have been under water, and the compressed vegetation observed on September 12, 2011 indicated that the current was strong and substantial. At these high river levels the strong current leading into Surprise Rapid would likely provide paddlers with very little time to prepare for the large Class III rapid.

P-3 is the location along the Southside Trail that would serve as the potential vehicle access and parking area. P-3 is flagged and has an eroded but existing road down to an existing campsite large enough for several tent sites and a few parked cars. The P-3 bench is lower in elevation than the Southside Trail but above the normal high water mark.

- **Existing River Access Site Conditions**

Dunglen – RM 26.2 – Located upstream of Thurmond townsite, the site has a concrete ramp. The river bank is generally cobble and gravel, vegetation is maple/birch/sycamore, pool size is greater than 4 acres with no current across the ramp. Water depth 10ft out is 1ft, slope is moderate at 14%/ 8 degrees, distance to nearest rapid is several hundred yards.

ACE Beach – RM25.2 – Located downstream of Arbuckle Creek, this private river access consists of gravel laid on top of a fiber mat. The area is frequently covered with flood debris (woody and trash) following normal highwater events and has a very gentle slope (5%/ 3 degrees). The river bank is gravel, vegetation is birch/willow, pool size is greater than 3 acres with little or no current at the ramp, water depth 10ft out is 1.5-2ft., and distance to nearest rapid is approximately 100 yds upstream.

Brooklyn – RM 20.00 – Located approximately 0.6 miles downstream of Surprise Rapid in large pool, the site has a developed wooden john boat slide. The river bank is sand/gravel/rock, vegetation is large sycamores and birch, pool size is >5 acres with little or no current at the ramp. Water depth 10ft out is >2.5 ft, slope is very strong at 32%/ 18 degrees, distance to nearest rapid is >0.2 miles.

Cunard – approximately RM 19.0 – Located upstream of Coal Run (RL), and in pool approximately 0.2 miles upstream of Glade Creek (RR) and the nearest rapid. The river bank is generally steep, gravel/rock, vegetation is large sycamores and birch. The pool size is >5 acres with no current at the ramp, water depth 10ft out is >2 ft.

River Expeditions – RM 19.03 – River bank is rocky, with bare soil and tree roots. Large flat area at base of wooden steps is worn free of vegetation, has received high amount of use by local fishermen/campers.

ACE – RM 18.99 – River bank is rocky, with bare soil and tree roots, also has metal steps/raft slide which extend into river.

NPS – commercial ramp – RM 18.90 – River bank has been covered with a woven matt of flagstone block anchored to the bank. The slope of the lower landing is approximately 27%/15 degrees, slope of steps is 63%/ 32 degrees.

NPS- private boater ramp – RM 18.85 – River bank has been covered with a woven matt of flagstone block anchored to the bank.

Conclusions

- **No Suitable River Access Sites in the Surprise River Access Study Area –**

Most of the river bank between Red Ash Island and Surprise Rapid is unsuitable for the development of new river access areas either because of the presence of river cobble or strong currents. The three areas with any potential for development were closely evaluated and all have serious limiting factors. The control point identified as BEACH is the smallest area with the steepest slopes. The site at the bottom of Red Ash Island (BIRCH) is inadequate in size and subject to strong currents at high river flows. The site locally referred to as Fisherman's Paradise is inaccessible at low river flows and perhaps located too close to Surprise Rapid at high river flows.

Related Impacts

- **Converting the Southside Trail into a River Access Road**

This will lead to heavier use and impacts of lunch stops/campsites, which previously were only used by commercial outfitters during normal river flows and walk-in camper/fishermen; will likely result in a loss of trail length since the Southside Trail would be difficult in places to relocate alongside the road due to the steep slopes and cliff line. Currently the Southside Trail is a very popular hiking/biking trail and is bound by cliffs in some areas such that development of a two-lane may be very difficult.

- **Motor Vehicle Use**

The area upstream of Brooklyn currently is free of vehicles. Increasing vehicle traffic to Brooklyn or especially upstream of Brooklyn may degrade the visitor experience for hikers, bikers, boaters, and campers in that area. The area is zoned as Backcountry in the NERI GMP and generally managed to limit or preclude the addition of new fragmenting features such as roads and parking lots.

- **Fishermen Access**

Fishermen have long wished for access to the Fire Creek pool. Opening the road to the bottom of Red Ash Island might result in more camping/fishing use in the former Fire Creek Hylton area (former Red Ash town site) and increase impacts to historic resources.

- **Surprise Access**

Many private boaters will be interested in using the Surprise Access at river levels of 1.5ft to 10ft (Fayette Station gage) just for the opportunity to run Surprise Rapid and still use the relatively easy Cunard shuttle route. Parking facilities and river access facilities will also need to meet the non-commercial boater demand.

Surprise Corridor Existing Conditions (Land-Based) (see figure A.1)

Existing Conditions

- **Natural Resources**

Floodplains. Shoreline areas subject to flooding along the Cunard site are limited due to the steep river banks. Accurate floodplain mapping is not available. Empirical data indicate that the floodplain is narrow, as it is at the Brooklyn and Cunard river access sites.

Steep Slopes. Slopes in excess of 15% characterize most of the corridor.

Rare Plant Communities. The following globally rare plant communities are known to occur in the Surprise corridor.

- Sycamore-River Birch Riverscour Woodland (Global Rank G3)
- Sycamore-Ash Floodplain Forest (Global Rank G1)
- Oak-Tuliptree/Mountain Silverbell Floodplain (Global Rank G1)

- Lizard's Tail Backwater Slough (Global Rank G3)

The communities are found within the steep riparian zone between the old railroad grade and the river, and most are generally an acre or two in size.

The following state rare plants have been documented within the project area:

- Bitter cress (Cardamine flagellifera) (State Rank S2, Global Rank G3) RM 20.6, 20.9 – 21.0
- Neotoma magister

- **Hazards**

Two active slide areas are present in the corridor:

- Brooklyn Coal Refuse Pile (RM 20.1 – 20.25) – a several acre unconsolidated, perched gob pile that is prone to failure; potentially threatens any structure placed below it
- River Mile 20.9 – 21.0 (Fisherman's Paradise) – an active slide area that failed in 2001 completely blocking the old railroad grade; the slide has been very active during the past ten years; potentially threatens any structure placed below it

- **Cultural Resources**

Field investigations have not been completed to document the occurrence of historic or prehistoric archeological resources in the corridor. Remnants of a few residential structures occur near the river in some areas. Field study would be needed to document the potential significance of these sites if development of a new river access site is proposed.

- **Existing Facilities, Access, and Visitor Use**

No developed visitor facilities are available in the Surprise Corridor. Access is by foot or bicycle from Brooklyn or Southside Junction via the Southside Junction Trail.

- **Non-Federal Land Ownership and Retained Rights**

The Surprise corridor is entirely in federal ownership. There are no retained rights.

Conclusions

The Surprise corridor is generally unsuitable for development of roads, parking, and visitor facilities needed to support a new public river access. Steep slopes characterize the entire corridor; extensive grading and retaining wall construction would be required to accommodate facilities. Active slide areas would threaten access roads to the Fisherman's Paradise, Beach, and Lower Red Ash Island river launch sites, and would be a particular problem for the Fisherman's Paradise river launch site. Construction of river launch sites would likely have a major adverse impact on several rare plant communities present along the length of the corridor between the Southside Junction Trail and the river.

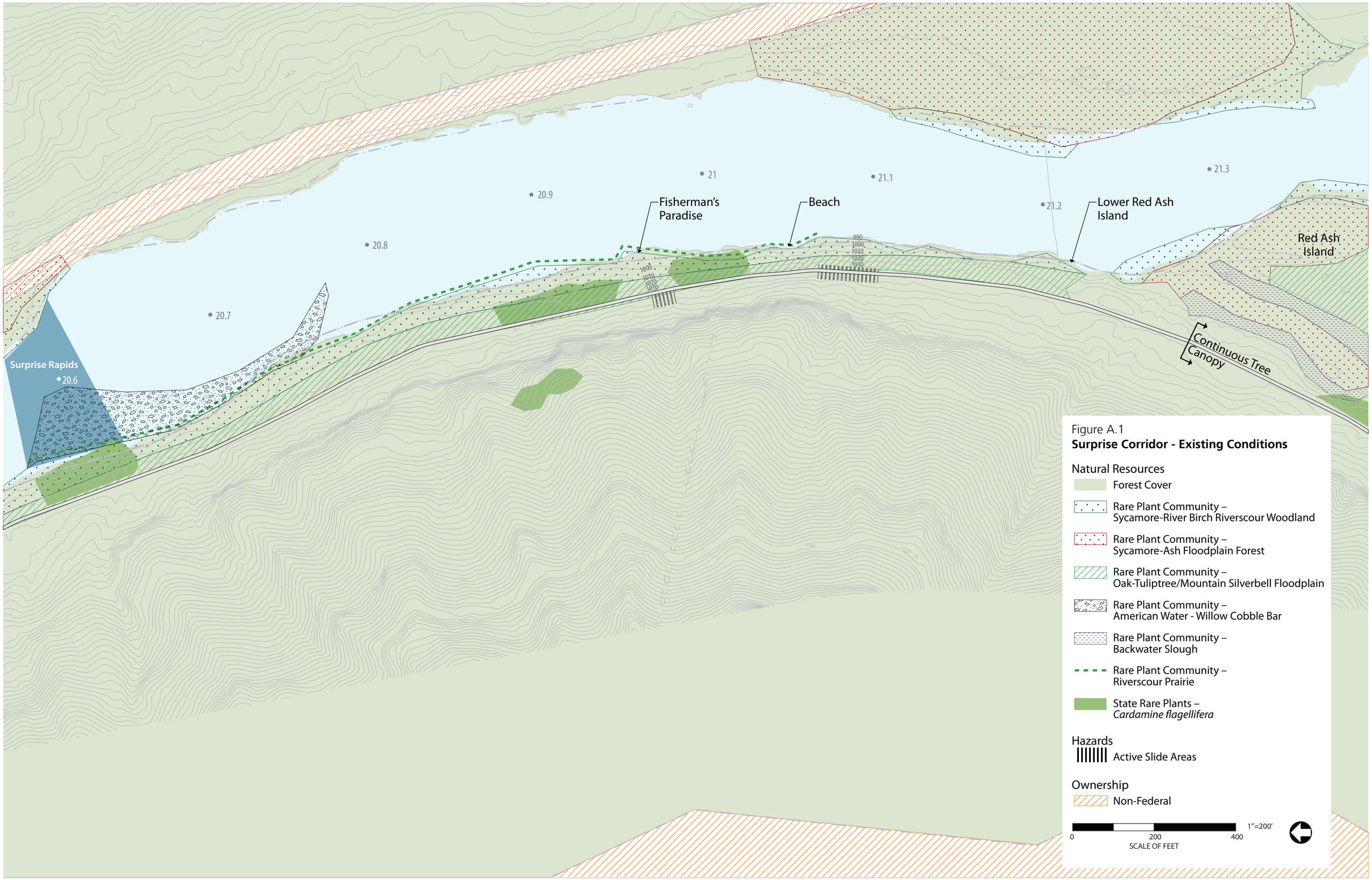

Figure A.1
Surprise Corridor - Existing Conditions

Natural Resources

- Forest Cover
- Rare Plant Community – Sycamore-River Birch Riverscour Woodland
- Rare Plant Community – Sycamore-Ash Floodplain Forest
- Rare Plant Community – Oak-Tuliptree/Mountain Silverbell Floodplain
- Rare Plant Community – American Water - Willow Cobble Bar
- Rare Plant Community – Backwater Slough
- Rare Plant Community – Riverscour Prairie
- State Rare Plants – *Cardamine flagellifera*

Hazards

- Active Slide Areas

Ownership

- Non-Federal

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Appendix B:
GARI Equipment and Limited Paddler Shuttle –
VEHICLE IDENTIFICATION ANALYSIS

Appendix B summarizes the considerations in identifying a suitable vehicle type for the proposed equipment and limited paddler shuttle under consideration at the Gauley River National Recreation Area. In this shuttle alternative the NPS would own, operate, and maintain the vehicle. Factors to be considered in identifying the appropriate vehicle generally include vehicle requirements, fuel type, and availability.

VEHICLE REQUIREMENTS

Vehicle requirements include preferences for certain amenities as well as mechanical and operational characteristics necessary for certain road and operating conditions or capacity. Table B.1 summarizes vehicle requirements for the proposed equipment and limited paddler shuttle based on the assumptions made about service characteristics and discussion with the NPS on preferences.

Table B.1 GARI Equipment and Limited Paddler Shuttle Vehicle Requirements

Characteristics	Duty Cycle Notes		Vehicle Requirements
Passenger Capacity	AM Tailwaters Plateau to Tailwaters River Access	up to 15 paddlers/trip	Capacity for 15 paddlers seated.
	PM Mason Br River to Rim	up to 15 paddlers/trip	
Speed Limits and Road Surfaces	Tailwaters Access Road Mason Branch Access Road Panther Mountain Road	20 mph paved 20 mph gravel 25 mph gravel	Because of the low average speed, low-range gearing is desirable to extend the life of the vehicle transmission. However, the vehicle should be able to travel at highway speeds (approximately 55 mph. Due to frequent rough gravel route segments, higher quality suspension and high traction tire treads are required.
Wear and Tear	Total annual VMT = 1,442		Light-duty vehicle is appropriate.
Route Characteristics	Routes are narrow, winding, with tight curves. Long stretches of one-lane roads with frequent passing of cars and other buses. Frequent to medium to steep gradients. Vehicle would need to navigate through crowded parking lots.		No physical size restrictions, but smaller turn radius preferred for parking lot maneuvering may be favorable. Because the vehicle would operate on public roads, it must pass all pertinent federal motor vehicle safety standards.
Fuel Capacity	Vehicle(s) may travel up to 103 miles per day.		Range should approximately 200 miles of low-speed, frequent stop travel.
Environmental Operating Conditions	Warm weather operations. Average daily high temperature over 80 degrees Fahrenheit.		Open windows preferable to air conditioning.

Table B.1 GARI Equipment and Limited Paddler Shuttle Vehicle Requirements

Characteristics	Duty Cycle Notes	Vehicle Requirements
Standees	Passengers would not stand.	Standees not permitted.
Baggage Accommodation	Passengers carrying paddling gear. Box trailer needed for small kayaks and rafts.	Assume 15 seats for passengers holding gear transported in small kayaks. Equipment box trailer required (for up to 50 kayaks and paddles for 15 paddlers).
Accessibility and Floor Height	Vehicle does not need to accommodate occasional paddlers who are mobility impaired or who may be using a wheelchair.	None. (Accessibility requirements met by providing designated handicapped parking at river access sites.)
Public Announcement System	Short on-board safety and interpretive orientation to the parks is desirable, either recorded or live.	Hands-free head-set if the driver is speaking, or recorded messages may be used. Audio must be clearly audible to passengers.
Fuel Type	See alternative fuel discussion.	
Interior Accommodations	Users would have wet and sandy clothing, shoes, bags, paddles, life vests, and other equipment.	Easily cleanable surfaces and flooring that would prevent slippage when wet (potential ability to be able to hose down entire interior).
Seating Configuration		Forward–facing.
Driver Workstation	Vehicles would operate fairly continuously through the day.	Driver workstation ergonomics should be optimized for safety and comfort.
Interior Sound Level		<65 dBA
Doors		2 (plus rear)
Tow Points		Front and rear
Exterior Appearance		No preference.
Exhaust Temperature		No preference.
Transmission		No preference.

ALTERNATIVE FUELS AND FUEL CAPACITY

There is very limited access to alternative fuels for use in a shuttle vehicle in the park vicinity. Currently flex-fuel technology is the only alternative fuel technology available and in use by the NPS for park passenger vehicles and trucks. Hybrid electric vehicles (HEV), engine propane fuel (EPF), and compressed natural gas (CNG) are generally not in use in the region. Ethanol (E_{85} or E_{95}), hydrogen power, and plug-in hybrid electric vehicles that meet the passenger load requirements are not commercially available.

VEHICLE AVAILABILITY

NPS is required to purchase fleet vehicles through the General Services Administration (GSA). The GSA's vehicle purchasing portal Auto Choice offers a web-based ordering process which provides for vehicle selection, configuration, selection of options, etc. Within Auto Choice, the planning team has identified the following option as most closely matching the requirements outlined above (at the time this alternative transportation feasibility study was completed):

- 15-passenger van with increased power engine 1 (IBE) and ethanol flexible fuel (EBS)

CONCLUSION

For the purposes of the service, this study recommends a light-duty shuttle with capacity for up to 15 passengers. A non-low floor vehicle is recommended due to the terrain. A flex-fuel vehicle is recommended due to poor availability of (or lack of) alternative fuels in the park vicinity.

Appendix C:
Joint NERI/GARI Paddler Shuttle –
VEHICLE IDENTIFICATION ANALYSIS

Appendix C summarizes the considerations in identifying a suitable vehicle type for the proposed joint paddler shuttle under consideration at New River Gorge National River (NERI) (Cunard/Fayette Station shuttle alternative) and the Gauley River National Recreation Area (GARI) (expanded shuttle alternative). Because NPS proposes to enter into a contract with a private entity to provide shuttle service if and when it is appropriate to do so, the findings of this analysis are for purposes of informing the terms of the future contract with an operator. Factors to be considered include vehicle requirements, fuel type, and availability.

VEHICLE REQUIREMENTS

Vehicle requirements include preferences for certain amenities as well as mechanical and operational characteristics necessary for certain road and operating conditions or capacity. Table C.1 summarizes vehicle requirements for the proposed NERI and GARI paddler shuttles based on the assumptions made about service characteristics and discussion with the NPS on preferences.

Table C.1 Joint NERI/GARI Equipment and Paddler Shuttle Vehicle Requirements

Characteristics	Duty Cycle Notes		Vehicle Requirements
Passenger Capacity	**NERI Shuttle**		
	AM Cunard Rim to River	up to 35 paddlers/trip	Capacity for 44 paddlers seated.
	PM Fayette to Cunard	up to 40 paddlers/trip	
	GARI Shuttle		
	AM Legg Field to Tailwaters	up to 44 paddlers/trip	
	PM Mason Br River to Rim	up to 30 paddlers/trip	
	PM U Swiss to Mason Branch to Woods Ferry to Tailwaters	up to 44 paddlers/trip	
Speed Limits and Road Surfaces	**NERI Shuttle**		
	Cunard Access Road	20 mph gravel	Because of the low average speed, low-range gearing is desirable to extend the life of the vehicle transmission. However, the vehicle should be able to travel at highway speeds (approximately 55 mph. Due to frequent rough gravel route segments, higher quality suspension and high traction tire treads are required.
	WV SR 82	20 mph paved	
	US 19	40 mph paved	
	US 16	30 mph paved	
	WV SR 9	30 mph paved	
	WV SR 5	25 mph paved	
	GARI Shuttle		
	Tailwaters Access Road	20 mph paved	
	Mason Branch Access Road	20 mph gravel	
	Woods Ferry Access Road	20 mph gravel	
	South Swiss Road	20 mph paved	
	WV Route 39	40 mph paved	

Table C.1 Joint NERI/GARI Equipment and Paddler Shuttle Vehicle Requirements

Characteristics	Duty Cycle Notes	Vehicle Requirements
	Panther Mountain Road 25 mph gravel WV Route 129 40 mph paved	
Wear and Tear	Total annual VMT = 5,317 for NERI + 3,792 for GARI	Medium-duty vehicle is appropriate.
Route Characteristics	Routes are narrow, winding, with tight curves. Long stretches of one-lane roads with frequent passing of cars and other buses. Frequent to medium to steep gradients. Vehicle would need to navigate through crowded parking lots.	No physical size restrictions, but smaller turn radius preferred for parking lot maneuvering may be favorable. Because the vehicle would operate on public roads, it must pass all pertinent federal motor vehicle safety standards.
Fuel Capacity	Vehicle(s) may travel up to 271 miles per day.	Range must exceed 200 miles of low-speed, frequent stop travel.
Environmental Operating Conditions	Warm weather operations. Average daily high temperature over 80 degrees Fahrenheit.	Open windows preferable to air conditioning.
Standees	**NERI Shuttle** AM Cunard Rim to River 5 minutes PM Fayette to Cunard 33 minutes **GARI Shuttle** AM Legg Field to Tailwaters 24 minutes PM Mason Br River to Rim 11 minutes PM U Swiss to Tailwaters to Mason Branch Plateau 30 minutes to Woods Ferry Plateau 39 minutes to Tailwaters NA	Standees permitted.
Baggage Accommodation	Passengers carrying paddling gear. Box trailer needed for small kayaks and rafts.	Luggage racks and trailer required. Equipment box trailer (for up to 50 kayaks).
Accessibility and Floor Height	Vehicle does not need to accommodate occasional paddlers who are mobility impaired or who may be using a wheelchair.	None. (Accessibility requirements met by providing designated handicapped parking at river access sites.)
Public Announcement System	Short on-board safety and interpretive orientation to the parks is desirable, either recorded or live.	Hands-free head-set if the driver is speaking, or recorded messages may be used. Audio must be clearly audible to passengers.
Fuel Type	See alternative fuel discussion.	
Interior Accommodations	Users would have wet and sandy clothing, shoes, bags, paddles, life vests, and other equipment.	Easily cleanable surfaces and flooring that would prevent slippage when wet (potential ability to be able to hose down entire interior).
Seating Configuration		Forward–facing.
Driver Workstation	Vehicles would operate fairly continuously through the day.	Driver workstation ergonomics should be optimized for safety and comfort.
Interior Sound Level		<65 dBA
Doors		2
Tow Points		Front and rear
Exterior Appearance		No preference.
Exhaust Temperature		No preference.
Transmission		No preference.

ALTERNATIVE FUELS AND FUEL CAPACITY

There is very limited access to alternative fuels for use in a shuttle vehicle in the park vicinity. Currently flex-fuel technology is the only alternative fuel technology available and in use by the NPS for park passenger vehicles and trucks. Hybrid electric vehicles (HEV), engine propane fuel (EPF), and compressed natural gas (CNG) are generally not in use in the region. Ethanol (E_{85} or E_{95}), hydrogen power, and plug-in hybrid electric vehicles that meet the passenger load requirements are not commercially available.

VEHICLE AVAILABILITY

The party entering into the contract with NPS for providing shuttle services would be responsible for acquiring/providing the appropriate shuttle vehicle through a manufacturer or supplier. A likely vehicle meeting the specifications would be a diesel capable 44 adult type D front engine work bus.

CONCLUSION

For the purposes of the service, this study recommends a medium-duty shuttle with capacity for up to 44 passengers, interior luggage rack, durable seating options. A non-low floor vehicle is recommended due to the terrain. Customization with wheelchair lift and restraint system is desirable but may not be financially feasible or warranted due to lack of demand from handicapped paddlers with wheelchairs. A flex-fuel vehicle is recommended due to poor availability of (or lack of) alternative fuels in the park vicinity.

Appendix D:
River Access Site Recommended Enhancements –
ENVIRONMENTAL COMPLIANCE

INTRODUCTION

Findings of this alternative transportation feasibility study support recommended enhancements to reduce congestion at river access sites at New River Gorge National River and at Gauley River National Recreation Area. Some enhancements are recommended for development, if and when funding is available, and some are recommended for further study, as follows.

New River Gorge National River

- Recommended for Implementation (if and when funding is available)
  - Fayette Station Alternative 1c (figure 1.6)
  - Cunard Alternative 1 (figure 1.10)
- Recommended for Further Study
  - Brooklyn Alternative 1 (figure 1.12) or Brooklyn Alternative 2 (figure 1.13)

Gauley River National Recreation Area

- Recommended for Implementation (if and when funding is available)
  - Mason Branch Proposed Changes to Reduce Congestion (figure 2.8)
  - Woods Ferry Proposed Changes to Reduce Congestion (figure 2.9)
  - Upper Swiss Proposed Changes to Reduce Congestion (figure 2.10)
  - Equipment and Limited Paddler Shuttle (figure 2.11)
- Recommended for Further Study
  - Tailwaters Proposed Changes to Reduce Congestion (figure 2.7)

Joint Project at New River Gorge National River and Gauley River National Recreation Area

- Recommended for Further Study
  - Cunard/Fayette Station Shuttle (figure 1.14)
  - Expanded Shuttle (figure 2.11)

This appendix to the alternative transportation feasibility study includes a summary of the initial tasks completed to meet the requirements for NEPA, NPS Director's Order 12, Section 7, and Section 106 compliance for the recommended enhancements. It includes:

- a summary of the scoping process to date for each recommended enhancement
- a brief summary of existing environmental conditions at each park for typical NEPA impact topics
- findings of an initial environmental analysis for each recommended enhancement to support preliminary determination of the NEPA pathway
- a preliminary NEPA pathway determination for each recommended enhancement

Appendix E provides a scope of work for an environmental assessment (EA) for those actions for which the NEPA pathway determination concludes that an EA is likely required.

SCOPING PROCESS

NPS initiated project scoping during the fall of 2009 when the planning team convened for the first time to observe visitor activities, roadways conditions, and park operations at the Gauley River National Recreation Area during Gauley Season. Internal and external scoping has occurred since that time through numerous visits to river access sites at each park, planning team workshops, and stakeholder and public scoping meetings. Following is a summary of events:

- Site Visits
  - On Saturday and Sunday, October 4 and 5, 2009 the NPS planning team and contractor design team spent the day visiting river access sites at Tailwaters, Mason Branch, Woods Ferry, and Upper Swiss at the Gauley River National Recreation Area. The team observed conditions at river access sites and along roads leading to access sites, talked with park staff on-site about operational issues, and spent time with visitors to learn about their experiences getting onto and off the river.
  - On June 14, 2012, NPS rangers and the contractor design team spent the day conducting a reconnaissance of the Brooklyn to Red Ash Island corridor assessing suitability of potential sites for development of a proposed new river access at Surprise.
  - On June 15, 2012, NPS rangers and the contractor design team spent the day visiting the Tailwaters, Mason Branch, Woods Ferry, and Upper Swiss river access sites on the Gauley River.
  - On June 16, 2012, the contractor design team floated the New River from Cunard to Fayette Station with NPS rangers.
  - On June 18, NPS rangers and the contractor design team visited the Fayette Station and Cunard river access sites on a busy summer Saturday. The design team observed conditions at the river access sites, talked with park staff on-site about operational issues, and spent time with visitors to learn about their experiences getting onto and off the river.
- Planning Team Workshops
  - On June 16, 2012, the NPS planning team and contractor design team met for a full day to review operational issues at the river access sites at both parks.
  - On February 8, 2012 the NPS planning team and contractor design team met for a full day to review alternatives for reducing congestion at river access sites at both parks.
  - On April 25, 2012 the NPS planning team and contractor design team met again for a full day to refine alternatives for reducing congestion at river access sites at both parks.
- Stakeholder Meeting
  - On June 2011, the NPS planning team and contractor design team met with representatives of the West Virginia Professional River Outfitters Association (WVPRO) to discuss operational issues and management actions needed to reduce congestion at the river access sites at Fayette Station and Cunard on the New River and at the four public access sites on the Gauley River.
- Public Scoping Meeting
  - On December 18, 2012, the NPS planning team and contractor design team conducted a public scoping meeting to review the proposed alternatives for reducing congestion at the river access sites. Eleven members of the public attended including representatives of WVPRO, state-licensed commercial river outfitters, West Virginia Rivers Coalition, West Virginia Water, and American Whitewater.

Project scoping identified a wide range of issues and concerns relevant to management and operations of the public river access sites on the lower New River and on the Gauley River. Management concerns for each site were compiled and organized in a series of management concerns tables (see tables 1.12, 1.14, 1.16, 2.9, 2.11, 2.13, and 2.15 above). These summaries were used to guide design of the alternatives for river access enhancements.

ENVIRONMENTAL ANALYSIS OF RECOMMENDED ACTIONS – NEW RIVER GORGE NATIONAL RIVER

Physiography, Geology and Soils

Existing Conditions. *NPS Management Policies* (NPS 2006) require NPS to preserve geologic processes, to preserve geologic features from adverse effects of human activity, and to preserve park soil resources by preventing, to the extent possible, unnatural erosion, physical removal, or contamination of soils.

New River Gorge is the most prominent physiographic feature at New River Gorge National River. The gorge is formed by the New River as it cuts through the Appalachian Plateau from the city of Hinton to Hawks Nest State Park. The gorge cuts through several geologic formations, composed predominantly of sandstones and shales of the Pennsylvanian and the Mississippian Periods. Outstanding geologic features include prominent sandstone cliffs, rock cities, house-size boulders, rock overhangs, and spheroidal weathered shales. Today there are 115 abandoned coal mines in the park, most of which are unreclaimed (Yuill 1988); there is currently no active mining in the park. In 2006 there were ten active natural gas wells listed with the WV DEP Office of Oil and Gas within the park (Clare 2006). Silt loam soils underlie most of the park (USDA 1975 and 1984).

Environmental problems associated with abandoned mine lands include: unstable highwalls producing rock fall, unstable piles of mine waste and mine benches eroding contaminants, and acid mine drainage directly from portals and from large pile of mine waste. Disturbances resulting from human activities have historically contributed to landslides. Many historic and recent landslides in the lower gorge are found below an outpouring of water from abandoned deep mines and are also associated with spoil and refuse piles from strip and deep mining (Remo 1999). Many small slides in the park have occurred along roads where construction has required cutting into steep slopes, creating unstable slopes and exposing loose soil and rock to runoff.

Impact Topic Likely to be Dismissed. The shuttle alternative would use existing or enhanced river access sites for operations. No new construction would be required. As a result the physiography, geology, and soils impact topic would likely be dismissed from future NEPA compliance required for implementation of the shuttle alternative. It would be retained for the other alternatives.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – site disturbance during construction of a shuttle stop within the existing disturbed area at Cunard and Fayette Station, site disturbance during construction of satellite parking on the Cunard Plateau

Floodplains

Existing Conditions. Executive Order 11988, "Floodplain Management," requires federal agencies to examine project impacts on floodplains and the potential risk involved in having facilities within floodplains.

Despite general flow moderation in the New River due to Bluestone Dam, infrequent highly localized severe flooding continues to occur on the river and its tributaries. During major storm events flooding on tributary streams can cause extensive soil erosion, restructure stream channels, severe sedimentation often due to mass-movement events located below old mine sites, and alluvial fans at the mouth of some tributaries. The U.S. Geological Survey in cooperation with the NPS has studied the frequency and magnitude of flooding in the park on the New River and portions of Wolf Creek, Craig Branch, Manns Creek, Dunloup Creek, and Mill Creek (Wiley et al. 1994). This study revealed the following general characteristics of the river's floodplain:

- between Hinton and Meadow Creek the river has a floodplain on one bank that is approximately 1,500 feet wide
- between Meadow Creek and Sewell the river lacks a distinct floodplain
- between Sewell and Fayette there is no floodplain because the streambanks are the valley walls

Impact Topic Likely to be Dismissed. The shuttle alternative would not require additional development within the floodplain. Shuttle equipment would not be exposed to flood damage. No enhancement would occur in the floodplain at the Fayette Station. As a result the floodplains impact topic would likely be dismissed from future NEPA compliance required for implementation of enhancements at Fayette Station and the shuttle alternative. It would be retained for the other alternatives.

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – construction of facilities at the river's edge subject to damage by floodwaters

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – construction of facilities at the river's edge subject to damage by floodwaters

Water Quality

Existing Conditions. The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, establishes national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, control, and abate water pollution. *NPS Management Policies* (NPS 2006) provide for the preservation, use and quality of waters in national parks.

Baseline water quality data and ongoing monitoring of the New River indicate that water quality in the New River is generally satisfactory for water contact recreation such as swimming, boating, and fishing (Wilson et al. 2006) although it is adversely impacted by fecal coliform contamination, sedimentation, acidic runoff, trace metals, and trace chemical elements (Purvis et al. 2002). Because of occasional fecal coliform concentrations in excess of water quality standards the state of West Virginia has designated the river as impaired for its entire length in the park (WVDNR 2006). Fecal coliform contamination is a problem in the New River at the mouths of polluted tributaries and for some distance downstream of polluted tributaries. Probable human-caused sources of the contamination include residential and municipal development, wastewater discharge, farming, livestock grazing, and recreational use. Mine land runoff and metals contamination do not significantly affect the New River main stem because of dilution.

Lack of adequate and proper treatment for domestic waste is the most pressing and pervasive water resource issue at the park. The problem is most pressing in streams tributary to the New River. Several areas near the park have relatively high concentrations of households without septic systems or sewer service. In many instances existing septic systems do not function properly. In communities with sewage treatment plants, sewer lines

feeding those plants are frequently broken. Agricultural and urban runoff is the primary source of non-point pollution in the park's streams and rivers of the parks. Numerous active and abandoned coal mines in or near the park pose existing and potential environmental problems for park water resources. Reduction in water temperature and the potential to elevate dissolved oxygen downstream of the dam is the primary water quality issue related to Bluestone Dam.

Impact Topic Likely to be Dismissed. The shuttle alternative would use existing or enhanced river access sites for operations. No new construction would be required at or near the water. As a result the water quality impact topic would likely be dismissed from future NEPA compliance required for implementation of the shuttle alternative. It would be retained for the other alternatives.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in Wolf Creek and the New River

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in the New River, conversion of a soft launch to a stabilized launch by placement of approximately 3500 square feet of interlocking concrete blocks

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in the New River, conversion of a soft launch to a stabilized launch by placement of approximately 3500 square feet of interlocking concrete blocks

Wetlands

Existing Conditions. All wetlands in units of the national park system are protected and managed in accordance with Executive Order 11990, "Protection of Wetlands"; NPS Director's Order 77-1,"Wetland Protection", and its accompanying handbook (NPS 2002d); and *NPS Management Policies* (NPS 2006a). This guidance requires the NPS to protect and enhance natural wetland values, and requires the examination of impacts on wetlands. It is NPS policy to avoid affecting wetlands and to minimize impacts when they are unavoidable.

Wetlands in New River Gorge National River generally include the following:

- permanently flooded riverine and lacustrine wetlands within the channel of the New River
- numerous scattered temporarily or seasonally flooded wetlands within the floodplain of the New River, including riverine wetlands, palustrine forested wetlands, palustrine scrub-shrub deciduous wetlands, and palustrine emergent wetlands
- numerous scattered permanently and semi-permanently flooded palustrine wetlands in diked/impounded and excavated areas generally located in upland areas that have been mined
- a few scattered palustrine forested wetlands, palustrine scrub-shrub deciduous wetlands, and palustrine emergent wetlands in upland areas

Impact Topic Likely to be Dismissed. The recommended enhancements to reduce congestion at river access would not occur in or near wetlands. As a result the wetlands impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Vegetation

Existing Conditions. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006) state that it is NPS policy is to protect the abundance and diversity of natural resources.

New River Gorge National River is located within an expanse of mixed-mesophytic forest that is the largest remaining area of midatlantic forest in the world, making it a globally significant resource (Ritters et al. 2000). Within the park the continuous span of mixed-deciduous forest (composed of both oak-hickory and mixed-mesophytic forest types) is approximately 60 miles (96.6 km) long by 2 miles (3.2 km) wide, one of the largest in the nation (Ritters et al. 2000). Approximately 84 percent of the land cover is forested and 65 percent of the forestland is interior forest (Ritters et al. 2000). By comparison, only 45 percent of the forestland in West Virginia would be classified as interior forest (based on the same scale of analysis) (WV Gap Analysis Program 2003).

Significant expanses of the park's forest remain largely unfragmented by roads, trails, utility corridors, or developed land uses. These large blocks of unfragmented forest are largely intact natural landscapes and are of high conservation priority because they contain a diversity of plant species and support a significant community of forest-interior birds. Many rare vegetation communities are included with the large unfragmented forest blocks. Plant communities in the park are generally young (<75 years old), reflecting past land use disturbance and natural disturbance regimes (e.g., flooding, landslides) (Fortney et al. 1995). Almost all the park was heavily impacted by logging, mining, and other human development in the late 1800s through the 1900s. Extensive canopy disturbance resulted in an increase in cover by early successional and shade tolerant tree species.

Riparian areas cover a small area within the park but contribute significantly to its overall biological diversity. They are some of the most diverse, dynamic, and complex biophysical habitats in the terrestrial environment (Naiman et

Table D.1 Vegetation Associations Likely to be Globally and/or West Virginia State Rare

Community Name	Association	Global Rank	West Virginia Rank
Riparian Communities			
Black Willow Slackwater Woodland	*Salix nigra – Betula nigra / Schoenoplectus (pungens, tabernaemontani)* Wooded Herbaceous Vegetation	GNA	SNR
Juniper–Virginia Pine Flatrock Woodland	*Juniperas virginiana* var. *virginiana – Pinus virginiana – Quercus stellata / Amelanchier stolonifera / Danthonia spicata – Melica mutica* Woodland	G2	S1
Lizardtail Backwater Slough	*Peltandra virginica – Saururus cernuus – Carex crinita / Climacium americanum* Herbaceous Vegetation	G2?	SNR
Oak–Tulip Poplar/Silverbell Floodplain Forest	*Quercus (alba, rubra, velutina) / Halesia tetraptera* Forest	GNR	SNR
Riverscour Prairie	*Andropogon gerardii – Panicum virgatum – Baptisia australis* Herbaceous Vegetation	G2 G3	SNR
Sycamore–Ash Floodplain Forest	*Platanus occidentalis – Fraxinus pennsylvanica / Carpinus caroliniana / Verbesina alternifolia* Forest	GNR	SNR
Sycamore–River Birch Riverscour Woodland	*Platanus occidentalis – (Betula nigra, Salix* spp.) Temporarily Flooded Woodland	GNR	SNR

G2 – Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
G3 – Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent or widespread declines, or other factors.
G4 – Apparently secure globally – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
GNA – Not applicable – A conservation status rank is not applicable because the species is not a suitable target for conservation activities.
GNR – Global rank not yet assessed. **S1** – Critically imperiled in state – 5 or fewer occurrences. **SNR** – State rank not yet assessed.
Source: Vanderhoorst 2007

al. 1993). Fifteen riparian associations are classified in the park. Probable reasons for high diversity of species and communities in riparian zones include abundant seed sources, abundant moisture and nutrients, and strong environmental gradients created by variation in flooding intensity and periodicity as affected by elevations (Vanderhoorst 2007). Successional dynamics of riparian and headwater wetland communities in the park are quite different from those of upland communities (Vanderhoorst 2007). Riparian communities are maintained by a disturbance regime of periodic floods. Flooding can maintain open canopies by removing individual trees or large events can remove entire patches of vegetation. Especially ephemeral riparian vegetation associations include riverscour prairie, riverscour annuals, and lizardtail backwater slough. Successional dynamics and extent of many headwater wetlands are controlled by beaver.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – clearing of the tree island at the center of the existing paddler parking area, potential for very limited clearing of small trees at the perimeter of the existing disturbed area

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – potential for very limited clearing of small trees at the perimeter of the existing disturbed area

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – clearing of rare sycamore river birch riverscour woodland for expansion of the existing river access site

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – clearing of upland trees during construction of satellite parking on the Cunard Plateau

Aquatic Wildlife

Existing Conditions. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006) state that it is NPS policy is to protect the abundance and diversity of natural resources.

A variety of habitat types in the New River support a diversity of fish. Biological surveys indicate that from 72 (NPSpecies 2003) to 90 (Purvis et al. 2002) species of fish are present in the park. The most common species within the New River are bigmouth chub (*Nocomis platyrhynchus*), spotfin shiner (*Cyprinella spiloptera*), silver shiner (*Notropis photogenis*), mimic shiner (*Notropis volucellus*), bluntnose minnow (*Pimephales notatus*), channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictis livaris), and smallmouth bass* (Lobb et al. 1987, Purvis et al. 2002). Small tributaries contain brook trout (*Salvelinus fontinalis*), rosyside dace (*Clinostomus funduloides*), blacknose dace (*Rhinichthys atractulus*), creek chub (*Semotilus atromaculatus*), mottled sculpin (*Cottus bairdii*), and fantail darter (*Etheostoma flabellare*).

The New River drainage has a native fish fauna that is distinct from those of the rest of the Ohio River system (Jenkins et al. 1994). The fauna are composed of relatively few native species with a high proportion of these species being endemic (species with their native range restricted to a certain geographic area) (Lincoln et al. 1982). The high rate of species native only to the area is primarily due to the isolation of the New River from neighboring river systems by Kanawha Falls (Sheldon 1988).

The New River watershed has an unusually high number of nonnative fish. Forty-seven species of fish in the New River watershed are native and 43 are nonnative (Purvis et al. 2002).

The New River within the park is one of the most important warm-water fisheries in West Virginia and is one of the most heavily fished areas in the eastern United States (Purvis et al. 2002, Jones et al. 2003). The New River contains excellent warm-water fish habitat, with a pool-riffle geomorphic structure, abundant cover, and generally good chemical quality.

Primary management concerns related to aquatic wildlife include:

- Nonnative fish generally threaten native fish assemblages through competition for habitat and food (Mahan 2004).
- The direct application of Bti by West Virginia to control black fly larva in the New River reduces black fly populations within the park and may detrimentally affect the availability of food (black flies and macroinvertebrates) for foraging fish, including smallmouth bass (Mahan 2004).
- Poor water quality caused by inadequately treated wastewater, agricultural runoff, and runoff from urban areas in the New River and its tributaries threatens native, nonnative, and game fish populations (Mahan 2004).

Impact Topic Likely to be Dismissed. The shuttle alternative would use existing or enhanced river access sites for operations. No new construction would be required. As a result the aquatic wildlife impact topic would likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – potential for very localized short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – potential for very local short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – potential for local short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Terrestrial Wildlife

Existing Conditions. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006) state that it is NPS policy is to protect the abundance and diversity of natural resources.

The park contains 91.5 percent (54 of 59 species) of the mammalian species known to occur in West Virginia and 77 percent (17 of 22 species) of the mammalian species of special concern in West Virginia. The population of white-tailed deer in the park vicinity (WV DNR District IV) is approximately 33 deer per square mile of available deer habitat (WV DNR 2003). The black bear population in West Virginia is generally growing. The majority of the population increase is centered in the southern part of the state, including Raleigh, Fayette, Boone, and Kanawha Counties. The park contains globally significant populations of Allegheny woodrats (*Neotoma magister*), a federally designated species of special concern that is in decline throughout the rest of its range in the eastern United States (Balcom et al. 1996). The park contains a regionally significant assemblage of bats that includes 10

species that have been documented through various study methods. Bats in the park use abandoned mine portals as roosting sites and cliffs for foraging (Johnson 2003). Ten species of small mammals (mice, voles, shrews, and moles) have been trapped in the park (Buhlmann et al. 1987).

Currently 233 species of birds are known to occur in the park (NPSpecies 2003). This represents 74.4 percent (125 of 168 species) of the species found in West Virginia and 42 percent (25 of 59 species) of the species identified as state species of special concern (WV Gap Analysis Program 2003). Of the 233 species found in the park, approximately 93 were detected during breeding season and therefore may nest in the park (Pauley et al. 1997). The park is globally significant in providing critical habitat for neotropical migratory birds (neotropical migrants), especially the wood warblers (Family Parulidae). These species depend upon unfragmented mixed deciduous forests with well-developed canopies and gap dynamics (e.g., tree falls) in place. Thirteen species of raptors have been documented in the park.

Thirty-eight species of reptiles have been documented in the park (NPSpecies 2003). Approximately 79.5 percent (31 of 39 species) of the reptiles of West Virginia are predicted to occur in the park and 62 percent (10 of 16) of the reptile species of special concern are predicted to occur in the park.

Continuous forest, abandoned mine portals, and river/stream systems of the park provide habitat for a diverse, nationally significant assemblage of amphibians. Forty-eight species of amphibians have been documented in the park (NPSpecies 2003).

Major management concerns related to terrestrial wildlife include:

- loss of forest habitat and forest fragmentation
- deer over browsing
- exotic insects and/or diseases
- poor water quality
- invasive species

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – permanent loss of terrestrial habitat due to clearing of the tree island at the center of the existing paddler parking area and very limited clearing of small trees at the perimeter of the existing disturbed area

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – potential for minor loss of terrestrial habitat due to very limited clearing of small trees at the perimeter of the existing disturbed area

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – permanent loss of terrestrial habitat due to clearing of trees for expansion of the existing river access site

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – potential for minor loss of terrestrial habitat due to very limited clearing of small trees at the perimeter of the existing disturbed area for the Cunard and Fayette Station shuttle stops, permanent loss of terrestrial habitat due to clearing of trees for development of satellite parking on the Cunard Plateau

Rare, Threatened, and Endangered Species

Existing Conditions. The Endangered Species Act (1973), as amended, requires an examination of project impacts on all federally-listed threatened or endangered species. NPS policy also requires examination of the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species.

Numerous rare, threatened, and endangered species are known to occur in the park. No federally-designated plant species are known to occur within the park. Species designated extremely rare and critically imperiled in the state of West Virginia include 19 plant species, 2 mammal species (small-footed myotis and Rafinesque's big-eared bat), and 2 mussel species (purple wartyback and pocketbook mussel). The status and distribution of many of these species and their essential habitats within the park are largely unknown.

No federally-designated plant species are known to occur within the park. However two federally-designated plant species are suspected although their presence has not yet been confirmed by resource managers. Virginia spirea (*Spiraea virginiana*) is a federally threatened, disturbance-adapted shrub occurring on steeply-slope riparian sites that was found historically along the New River below Hawks Nest Dam in the 1960s (Mahan 2004). Running buffalo clover (*Trifolium stoloniferum*) is a federally endangered species that has reportedly been found on the Cotton Hill floodplain in the park (Mahan 2004). Two state-designated plant species are under consideration for federal listing as threatened or endangered. Steele's meadow rue (*Thalictrum steeleanum*) is found in three locations in the park on well-drained slopes with relatively open understory. Bittercress (*Cardamine clematitis*) may be present on the New River floodplain near Stone Cliff, although there is uncertainty as to whether the species present is actually *Cardamine flagellifera*; both *Cardamine* species are southern Appalachian endemics that reach their northern limit in West Virginia and are found only within the park in West Virginia.

Two mammal species are federally-designated as endangered and one species is federally-designated as a species of special concern. The federally-endangered Indiana bat (*Myotis sodalis*) and the Virginia big-eared bat (*Cornynorhinus townsendii*) use abandoned mine portals as roosting sites and cliffs for foraging. The park contains stable, healthy, globally significant populations of Allegheny woodrats (*Neotoma magister*), a federally designated species of special concern that is in decline throughout the rest of its range in the eastern United States (Balcom et al. 1996). The federally endangered northern flying squirrel (Glaucomy volans fuscus), is predicted to occur in the park but never documented (WV Gap Analysis Program 2003).

The Cheat Mountain salamander (*Plethodon nettingi*), a federally listed threatened species, is predicted to occur in the park (WV GAP 2003). However it has not been documented and the appropriate habitat (boreal forests) is not present in the park.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – construction could have minor indirect impacts on rare sycamore-river birch riverscour woodland and rare sycamore-ash-floodplain forest adjacent to the existing disturbed area

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – construction could have minor indirect impacts on rare sycamore-ash-floodplain forest adjacent to the existing disturbed area

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – clearing of rare sycamore river birch riverscour woodland for expansion of the existing river access site

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – field reconnaissance would be needed to determine occurrences of rare, threatened, or endangered species at the Cunard Plateau satellite parking site

Scenic Resources

Existing Conditions. The topography of New River Gorge, the waters that shaped it, the forest that blankets it, and the remnants of past human settlement hidden within it, combine to create a scenic landscape that is New River Gorge National River. Collectively these are the park's scenic resources that provide the visual context for the park and that define the dramatic and extraordinary views that visitors experience. Briefly summarized these scenic resources include:

- the **New River** – flowing for 53-miles through the park, at times wide and tranquil and frequently violent and turbulent
- the **New River Gorge** – cut by the New River through the rocks of the Appalachian Plateau, wide and pastoral in the south while in the north narrow and treacherous reaching a depth of almost 1,000 feet with frequent near vertical cliff walls
- the expanse of **unfragmented forest** – stretching out through the gorge and on the Allegheny Plateau, composed of a near continuous span of mixed deciduous forest with very few roads, trails, utility corridors, or modern developed land uses
- the **scenic cultural landscapes** – the places scattered throughout the gorge where people once lived and worked, providing a glimpse into the park's early settlement years of the late 18th and early 19th centuries and the industrial era of the late 19th and early 20th centuries when coal mining, lumbering, and railroading dominated the gorge
- the **tributary streams of the New River** – including mountain streams flowing through deeply incised rocky channels with numerous picturesque waterfalls and rock formations

In addition to these scenic resources the New River Bridge itself – owned and maintained by the WV Division of Highways – is a major scenic attraction in the park that most visitors seek to view by either driving across it, by passing beneath it, or by viewing it from an overlook.

Visitors also experience dramatic and extraordinary views of scenic resources from three primary types of vantage points within the park:

- from the river or river banks while paddling or fishing the New River
- from trails and roads while exploring the park by foot, bicycle, horse, or vehicle
- from overlooks and points of interest

Impact Topic Likely to be Dismissed. Recommended enhancements to reduce congestion at the Fayette Station and Cunard river access sites would occur within existing disturbed areas. As a result the scenic resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions at these sites and for the shuttle alternative. It would likely be retained for the Brooklyn river access site.

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Potential for Project Impacts – clearing of rare sycamore river birch riverscour woodland and replacement with a major river access would locally impact the scenic setting of the Southside Trail corridor at Brooklyn

Ecologically Critical and Unique Natural Areas

Existing Conditions. CEQ NEPA Regulations (40 CFR 1508.27(3)) require federal agencies to assess the effects of their actions on ecologically critical areas. Ecologically critical places and unique natural features in the park include habitats of rare, threatened or endangered species. These habitat areas should be addressed in this GMP/EIS under the "" impact topic.

Ecologically critical places in the park also include the aquatic habitat of the New River, which has been designated "Resource Category 1" by the US Fish and Wildlife Service pursuant to its mitigation policy (46 CFR 7656-7663).

Impact Topic to be Addressed under Another Topic. Impacts of the recommended actions to reduce congestion at river access sites should be addressed under the impact topics for "endangered or threatened plants and animals and habitat" and for "water quality".

Air Quality

Existing Conditions. The 1963 Clean Air Act, as amended (42 USC 74-1 *et seq.*) requires federal land managers to protect park air quality. *NPS Management Policies* (NPS 2006a) address the need to analyze air quality during park planning.

Review of air quality data for the New River Gorge National River region reveals the following:

- New River Gorge National River is designated an air quality attainment area and a Class II Clean Air Area. This designation establishes a limit on the allowable increase in sulfur dioxide and particulate matter concentrations, effectively preventing additional pollutant-emitting industrial development in the park vicinity. Because the park is within a Class II Clean Air Area, NPS is not required to conduct air quality or visibility monitoring within the park.
- The closest ambient air quality monitors to the park are located in Greenbrier County (for daily maximum hourly ozone – O_3), Charleston (for monthly average sulfur dioxide – SO_2), and Beckley (for particulates – $PM_{2.5}$). Concentrations of ozone, sulfur dioxide and particulates recorded from 2000 to 2003 at these monitors revealed concentrations below the National Ambient Air Quality Standards (Aldehoch 2003).
- Monitoring data recorded in Babcock State Park since 1983 indicate that sulfate concentrations and atmospheric deposition of sulfate have decreased over the past 20 years, there has been no overall trend in concentration and deposition of nitrate, and there has been a slight increase in concentration and deposition of ammonium (Mahan 2005). Monitoring data recorded in Eggleston since 1989 show a slight increase in dry nitrogen deposition and no trend in dry sulfur deposition (Mahan 2005).

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have local short-term negligible adverse impacts on air quality caused by fugitive dust from soil erosion and disturbance during construction and maintenance of park facilities. These impacts would be mitigated through requirements for contractors and NPS maintenance personnel to apply water and dust control agents at construction sites. The actions would have local long-term negligible adverse impacts on air quality caused by increased local traffic during peak visitation periods.

Shuttle alternatives would have a local long-term minor beneficial impact on air quality by reducing vehicles miles travelled by private paddlers, thereby reducing auto emissions.

As a result the air quality impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Natural Visibility

Existing Conditions. Natural visibility enhances the extent to which visitors can experience the park's scenic resources. At New River Gorge natural visibility remains quite high despite problems with regional haze elsewhere in the state. Photographic monitoring data collected at Grandview from 1995 to 2000 indicate that summer exhibits the poorest visibility, with slight, moderate, and considerable haze intensities occurring 43 percent, 20 percent, and 17 percent of the time, respectively (Mahan 2005). Visibility is best in winter, with slight, moderate, and considerable haze intensities occurring 64 percent, 4 percent, and 1 percent of the time, respectively (Mahan 2005). (Weather concealed views the remainder of the year.)

Data from regional haze monitoring sites nearest to the park have revealed similar findings. The nearest sites – located at Dolly Sods Wilderness Area (WV), James River Wilderness Area (VA), and Linville Gorge Wilderness Area (NC) – exhibit patterns of poorer visibility in summer and higher visibility in winter and spring. Reduced visibility at these sites is generally the result of extinction (the light lost over distance due to scattering and absorption of gases) due to increases in ammonium sulfate (Aldehoch 2003).

Under the Clean Air Act, as amended (42 USC 74-1 *et seq.*), Congress has established a national goal for visibility to prevent any future impairment and to remedy any manmade impairment of visibility in Class I areas resulting from manmade air pollutants. As this time, New River Gorge National River is not designated a Class I area under the Clean Air Act. Consequently the park is not subject to the regional haze rule adopted pursuant to the Clean Air Act (40 CFR Part 51, July 1, 1999) and is not included in the national visibility monitoring program known as the Interagency Monitoring of Protected Visual Environments (IMPROVE) program.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have local short-term negligible impacts on visibility caused by fugitive dust from soil erosion and disturbance during construction and maintenance of park facilities. These impacts would be mitigated through requirements for contractors and NPS maintenance personnel to apply water and dust control agents at construction sites.

Shuttle alternatives would have a local long-term negligible impact on visibility by reducing vehicles miles travelled by private paddlers, thereby reducing auto emissions.

As a result the natural visibility impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Lightscape and Night Skies

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to preserve to the greatest extent possible, the natural darkness and other components of the natural lightscape. The natural lightscape is composed of the natural resources and values that exist in the absence of human-caused light.

Lightscape and night sky baseline assessment information is not available for New River Gorge National River. However predictive modeling of night sky conditions at the park in 1992 revealed a 5.72 mean Shaaf Class for the entire park and a Shaaf Class of 6 in 76.4 percent of the park (Albers et al. 2001). This indicates that in 1992 most of the park was characterized by relatively pristine night sky conditions (Shaaf Class 7 = pristine) and that artificial lighting from nearby developed areas affected a relatively small portion of the park.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have long-term negligible impacts on the park's lightscape and night skies. No new lighting would be added at any river access sites. As a result the lightscape and night skies impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Soundscapes

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to preserve, to the greatest extent possible, the natural soundscapes of parks. These encompass all the natural sounds that occur in parks, including the physical capacity for transmitting those natural sounds and the interrelationships among park natural sounds of different frequencies and volumes. The NPS is also required to restore to the natural condition wherever possible those park soundscapes that have become degraded by unnatural sound (noise), and to protect natural landscapes from unacceptable impacts.

Measurements of baseline acoustic conditions are not available for New River Gorge National River. In general natural ambient sound levels are very low in most areas of the park, except in the New River vicinity where high levels of natural sounds emanate from rapidly moving water. Human-made sounds originating in the park emanate from park operations, visitor activities, and traffic on park roads. Where land within the park remains in private ownership human-made sounds are associated with various residential landowner activities. Other extraneous sound generators in the park include traffic on public roads – particularly I-64 and US Route 19 – and train traffic on the CSX Corporation's rights-of-way.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have short-term negligible impacts on the park's natural soundscape. Construction activities associated with planned new or modified facilities or transportation projects would generate temporary unwanted construction-related sound that would be direct and short-term in nature and concentrated in areas near construction sites. In accordance with normal construction practice, noise-generating construction equipment would be equipped with effective noise control devices. All equipment would be properly maintained to ensure that no additional unwanted sound would be generated. The park would further prevent and/or minimize unwanted construction sound by managing its intensity, frequency, magnitude, and duration in any one place on any particular day.

Shuttle alternatives would have a local long-term negligible impact on the park's natural soundscape by reducing vehicles miles travelled by private paddlers, thereby reducing ambient noise levels.

As a result the natural soundscape impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Prime Farmland and Unique Soils

Existing Conditions. CEQ NEPA Regulations (40 CFR 1508.27) require federal agencies to assess the impacts of their actions on soils classified by the US Natural Resources Conservation Service (NRCS) as prime farmland or unique soils. Prime farmlands are defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Unique farmlands are lands other than prime farmland that are used for the production of specific high value food and fiber crops.

The NRCS has classified several soil series within the park are as prime farmland; no soil series within the park are classified by the NRCS as unique soils. Prime farmland soils include the following soil types: Lily loam (LlB), Gilpin silt loam (GaB and GlB), Shouns silt loam (ShB), Meckesville (McB), Kanawha fine sandy loam (Ka), Ashton fine sandy loam (As), Pope (Po), and Rayne silt loam (RaB). These soils occur on small nearly level areas on ridgetops and on the floodplain and terraces of the New River generally upstream of Meadow Creek. Agricultural use in these areas is limited to a number of small farms along River Road in the vicinity of Sandstone Falls. Many areas have been irreversibly converted to nonagricultural uses or severely disturbed as a result of railroad development and mining-related activities.

Impact Topic Likely to be Dismissed. The recommended enhancements to reduce congestion at river access would not occur in areas of prime farmland soils. As a result the prime farmland and unique soils impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Hazardous or Toxic Contaminants

Existing Conditions. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) regulates the cleanup of hazardous or toxic contaminants at closed or abandoned sites. The Resource Conservation and Recovery Act (RCRA) requires an inventory of all potentially hazardous sites located on federally owned or operated land.

Potential sources of hazardous materials and toxics in the park include accidental releases by such means as train derailments, tanker-truck highway accidents, and spraying of herbicides along railroad rights-of-way, as well as leachate and runoff from landfills and industrial sites. Trains on the CSX main line as well as trucks and other vehicles on state and federal highways routinely transport chemicals, coal, and a variety of other potentially toxic substances through the park and across the river on bridges. Numerous incidences of derailments and spills have occurred over the years most of which spilled coal, except one which spilled sulfated mercury (Purvis et al. 2002). Leachate from the abandoned Fayette County Landfill, located at the head of Rush Run, may be leaking into ground and/or surface waters in the park (Mott 1995). Collection basins are installed around the facility to trap surface runoff, but reportedly over flow on a regular basis. The park has not received data from ground or surface water monitoring associated with the site (Mott 1995). Another 20 active or abandoned landfills exist in the area that could be draining leachate toward the park (Purvis et al. 2002). Illegal roadside dumping of trash also occurs within the park and may move down-slope to tributary drainages (Mott 1995).

Impact Topic Likely to be Dismissed. Recommended actions to reduce congestion at river access sites are not expected to involve construction activities or location of public recreation facilities on sites that are potentially hazardous or have toxic contaminants. Prior to construction of new facilities at the park, site specific investigations will be required to support written certification that hazardous or toxic contaminants are not present. If development site investigations indicate the presence of hazardous or toxic contaminants that would pose a threat to the health of visitors or NPS staff, then NPS will remediate the site prior to proceeding with construction. As a result the hazardous or toxic contaminants impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Archeological Resources

Existing Conditions. The National Historic Preservation Act (16 USC 470, *et seq.*), NEPA, the NPS Organic Act, *NPS Management Policies* (NPS 2006), DO-12 *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2001a), and DO-28 *Cultural Resources Management Guideline* (NPS 1998) require consideration of impacts on cultural resources either listed in, or eligible to be listed in, the *National Register of Historic Places.*

Archeological investigations conducted since the late 1800s have documented 355 prehistoric archeological sites within the park or within one kilometer of the park boundary (Pollack and Crothers 2005). Archeologists have conducted limited excavations at only a few sites. Most sites have not been evaluated for eligibility for inclusion in the National Register of Historic Places. Currently, although several are identified as significant archeological resources (Fuerst 1981) none are nominated to or have formally been determined eligible for the National Register. In general the prehistoric sites tend to occur in five geologic and physiographic settings within the park (Pollack and Crothers 2005):

- large floodplains and relatively flat slopes close to water with old alluvial and colluvial deposits
- cliff-forming Raleigh and Nuttall sandstone members of the New River Formation
- upland settings associated with ridgetops, overlooks, and the level landforms at stream junctures
- major tributary valleys of the New River
- some features of the New River, such as major falls and shoals may have attracted prehistoric groups

Many of the park's cultural resources are the ruins of the New River communities – mostly "ghost towns" today – where the thousands of miners and their families worked and lived in the gorge during its industrial heyday from 1880 to 1930. These communities and related industrial sites now abandoned and generally in ruins, are largely

archeological sites. Because they post-date the arrival of Europeans in the New World and are supported by documentary records, they are historic archeological sites. With few exceptions these historic archeological resources are complexes or localities – rather than individual sites – where clusters of domestic and industrial sites related to mining, railroading, lumbering, and farming can be found (Marshall 1981; Unrau 1996; Workman et al. 2005; Stahlgren et al. 2007).

NPS has completed preliminary inventories and field studies for many of the park's historic site complexes. The most comprehensive is the recently completed *Historic Resource Study* (Workman et al. 2005) that included a literature review, additional research, and field reconnaissance of 34 site complexes in the park. Findings from this study concluded that all of the sites likely contain historic archeological resources, although they vary dramatically in terms of the potential significance of the resources. Three (3) site complexes were found to be potentially nationally significant, possessing a high level of integrity, and intrinsically important to the mission of the park: Nuttallburg, Thurmond, and Babcock State Park (Workman et al. 2005). Twenty-four (24) sites were found to be potentially significant on the regional or local level and/or to lack high integrity; they may be intrinsically important to the mission of the park. Seven (7) sites were found to be of lower potential significance and integrity and are not important to the park's mission. Many other smaller sites with potential for intact archeological resources occur throughout the park – including community sites as well as individual sites. Sites have been documented only through limited archival research and field survey.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a remote potential for affecting archeological resources

Cunard – Alternative 1.

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a remote potential for affecting archeological resources

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a potential for affecting historic archeological resources associated with the Brooklyn Mine

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – site disturbance during construction of shuttle stops at Cunard and Fayette Station within existing disturbed area has a remote potential for affecting archeological resources, site disturbance of parking at the Cunard Rim has remote potential for archeological resources

Existing Conditions. The National Historic Preservation Act (16 USC 470, *et seq.*), NEPA, the NPS Organic Act, *NPS Management Policies* (NPS 2006), DO-12 *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2001a), and DO-28 *Cultural Resources Management Guideline* (NPS 1998) require consideration of impacts on cultural resources either listed in, or eligible to be listed in, the *National Register of Historic Places.*

DO-28, *"Cultural Resource Management Guideline"* (NPS 1998) defines a cultural landscape as "…a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions."

The park's cultural landscapes are the geographic areas – including both cultural and natural resources – that are associated with the historic events and activities in the park's past and/or with the people who have lived and

worked in the park and that are integral to its significance. A cultural landscape inventory of historic properties currently owned by the NPS identified 13 cultural landscapes representative of four of the park's five historic contexts (NPS 2005a). Of these 13 sites ten retain the integrity needed to convey their significance as cultural landscapes: Kaymoor Mine and Kaymoor, Nuttallburg Mining Complex and Nuttallburg, Thurmond, Cochran Farm, Harrah Homestead, Richmond-Hamilton Farm, Trump-Lilly Farm, Vallandingham House, Camp Brookside, and Grandview.

Impact Topic Likely to be Dismissed. Cultural landscapes are not present at or near the sites of recommended enhancements to reduce congestion at river access sites. As a result the cultural landscapes impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Historic Structures

Existing Conditions. The National Historic Preservation Act (16 USC 470, *et seq.*), NEPA, the NPS Organic Act, *NPS Management Policies* (NPS 2006), DO-12 *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2001a), and DO-28 *Cultural Resources Management Guideline* (NPS 1998) require consideration of impacts on cultural resources either listed in, or eligible to be listed in, the *National Register of Historic Places.*

Buildings and structures found in the park are a reflection of its industrial, cultural, and building arts heritage, as well as the rugged terrain of the gorge. Notable historic structures include industrial structures related to coal mining and railroading and the communities that housed the people who worked the mines, cut the timber, and operated the railroad. Notable structures also include the farmsteads and community buildings built in the gorge by settlers and their descendants prior to and during the period of industrialization.

Structures on the park's List of Classified Structures (NPS 2006b) all evidence local and state significance, except for one – the Nuttallburg Coal Mining Complex and Town Historic District – which has been determined by the West Virginia State Historic Preservation Officer and the Keeper of the National Register to be of national significance. Further documentation could, however, reveal that some additional sites have national significance.

Four historic districts wholly or partially within the park are listed on the National Register of Historic Places: Hinton Historic District, Thurmond Historic District, Kaymoor Historic District, and Nuttallburg Coal Mining Complex and Town Historic District.

Individual properties listed on or determined eligible for the National Register of Historic Places and the more significant individual structures within the historic districts include:

- St. Colman's Roman Catholic Church
- Prince Brothers General Store (Berry Store)
- Hinton Depot
- Thurmond Depot
- Thurmond Commercial Row
- Glen Jean Bank

Many other structures are found throughout the park that are significant for their association with the events and lives of people who have lived in the gorge, for their ability to inform our understanding of the park's history, or that are excellent examples of a particular type, period, or method of construction.

Impact Topic Likely to be Dismissed. Recommended enhancements to reduce congestion at the Fayette Station and Cunard river access sites would occur within existing disturbed areas. At Fayette Station and Cunard there are no historic structures that would be affected. At Brooklyn there are remnants of historic structures which could be affected. As a result the historic structures impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions at Brooklyn and Cunard and for the shuttle alternative. It would likely be retained for the Brooklyn river access site.

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a potential for affecting remnants of historic structures associated with the Brooklyn Mine

Ethnographic Resources

Existing Conditions. In *NPS-28 Cultural Resources Management Guideline* (NPS 1998) NPS defines ethnographic resources as any "site, structure, object, landscape or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it."

The recent ethnographic resource overview and assessment for the park identified five groups of traditionally associated people and groups (Hufford et al 2006), including: Euro-American frontier family descendants, African American individuals and groups, descendants of immigrant miners, and federally recognized Shawnee Tribes.

Comprehensive studies have not been completed in the park area to identify its specific traditional ethnographic cultural and natural resources. However, the recently completed *Ethnographic Overview and Assessment of the New River Gorge National River* (Hufford et al. 2006) concluded that there are places within the park boundaries that have great significance for the park's traditionally associated people and groups. The ethnographic resource identified as vital is the landscape of the mixed mesophytic forest and associated forests in association with the collective memory – the stories – that animate and are animated by the landscape (Hufford et al. 2006). It is possible that this landscape today forms one of the most intact examples of a community forest and watershed to be found in North America (Hufford et al. 2006).

The assessment also concluded that additional traditional use studies are needed to analyze traditional resource use and management regimes in order to assess the effects of management decisions on traditional users (Hufford et al 2006).

Impact Topic Likely to be Dismissed. Ethnographic resources are not present at or near the sites of recommended enhancements to reduce congestion at river access sites. As a result the ethnographic resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Museum Collections

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to collect, protect, preserve, provide access to, and use objects, specimens, and archival and manuscript museum collections in the disciplines of archeology, ethnography, history, biology, geology, and paleontology to aid understanding among park visitors, and to advance knowledge in the humanities and sciences. The museum collections at New River Gorge National River pertain to the areas of history, archives, archeology, and natural history. The *House Report 109-80* (NPS 2008) and the *Collection Management Plan, New River Gorge National River* (NPS 2004) provides recommendations related to collection documentation, archives and manuscript collections, archeological collections, collections storage, museum environment, security and fire protection, staffing, and programming and funding sources.

Impact Topic Likely to be Dismissed. None of the recommended actions to reduce congestion at river access sites would potentially affect the park's museum collections. As a result the museum collections impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Visitor Use and Visitor Experience

Existing Conditions. Existing visitor use and visitor experience conditions at the park are summarized above in section 1.1, Visitation and Visitor Use, of this alternative transportation feasibility study.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Cunard – Alternative 1

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access, would potentially alter patterns of use at other river access sites, and would generally enhance the visitor experience for outfitted and private paddlers

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – a shuttle would alter the ways in which visitors access and use the existing river access, would potentially alter patterns of use at other river access sites, and would generally enhance the visitor experience for outfitted and private paddlers

Visitor Safety

Existing Conditions. *NPS Management Policies* (NPS 2006) require NPS to provide a safe and healthful environment for visitors and employees, recognizing that the recreational activities of some visitors – such as whitewater boaters and rock climbers visiting the park – may be of a high-adventure type.

Impact Topic Likely to be Dismissed. Recommended actions to reduce congestion at river access sites would enhance visitor safety by addressing numerous existing minor safety issues at Fayette Station, Cunard, and Brooklyn. As a result the visitor safety impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended.

Park Access

Existing Conditions. Access to the park via alternative modes of transportation is summarized above in section 1.2, park access, of this alternative transportation feasibility study.

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access the site

Cunard – Alternative 1

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access the site

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access the existing river access and will potentially alter patterns of use at other river access sites

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – a shuttle would alter the ways in which visitors access the existing river access and will potentially alter patterns of use at other river access sites

Park Operations

Existing Conditions. NPS currently experiences a number of park operations issues at the Fayette Station, Cunard, and Brooklyn river access sites, described above in sections 1.3.1, 1.3.2, and 1.3.3, respectively

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Cunard – Alternative 1

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Cunard/Fayette Station Shuttle Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – a shuttle would address many of the park operations issues caused by congestion at the river access sites

Regional and Local Economy

Existing Conditions. Historically the coal industry has driven the region's economy. Although it continues to be the driving force in the economy, communities throughout the region have experienced dramatic job and population losses since the 1960s when the coal industry began its decline across the state of West Virginia. Today the post-coal regional economy is shifting to one based not only on coal but on destination tourism and retirement living.

The region's appeal as a tourism destination has been growing over the past 35 years. Its natural beauty and the opportunities for outdoor recreation are the major attractions to vacationers and adventurers. The region has long marketed itself as having "America's Best Whitewater". Southern West Virginia offers many other types of outdoor activities as well – hiking, rock climbing, fishing, hunting, birding, mountain biking, skiing, and ATV riding. Extensive public lands are available for visitor use, such as the Monongahela National Forest, Babcock State Park, Hawks Nest State Park, Pipestem State Park, numerous state wildlife management areas, and three units of the national park system – the Gauley River National Recreation Area, Bluestone National River, and New River Gorge National River.

In recent years the coal heritage stories told at the historic coal-boom era towns and abandoned industrial sites throughout the region are attracting visitors interested in Appalachian cultural and industrial history. Most of the southern West Virginia region is within the National Coal Heritage Area authorized by Congress in 1996, recognizing it as a distinctive landscape that tells a nationally important story.

Scenic touring is another component of the region's tourism economy. Two National Scenic Byways attract visitors to the area – the Midland Trail and the Coal Heritage Trail. The New River Gorge Bridge – the highest bridge in North America – is a scenic attraction and the site of the annual Bridge Day, which draws more than 100,000 visitors to the area each October.

The two primary visitor service hubs in the region are Beckley and Fayetteville. Beckley is home to Tamarack, a showcase for West Virginia's art, crafts, music, and food. Beckley also contains a large concentration of hotels, restaurants, shopping and other visitor services. The Fayetteville area has become a major lodging, dining, and shopping destination for whitewater enthusiasts because of its close proximity to the renowned whitewater stretches of the New River and the Gauley River – considered by paddlers to be among the most challenging whitewater in the United States.

In 2006 approximately 165,899 people lived in the four-county area surrounding the park (U.S. Census). The population base has not been growing – its growth rate from 1990 to 2006 was just 0.1 percent, and its population has not grown at all since 2000. Population is dispersed throughout the area, with few population centers. Beckley, the largest city is located in Raleigh County and had a 2000 population of 17,254. The next largest community, Oak Hill is in Fayette County and had 7,272 residents in 2006.

The four-county area's population is fairly old – three of the counties have median ages of about 39.5 years and the fourth, Summers County, has a median age of 43.4 years. These figures exceed the state (38.9 years) and national (35.3 years) median figures. Despite the older median age, there is a strong base of younger residents. About 30 percent of the area's population is under the age of 25. But those over the age of 55 represent 26 percent of all residents, leaving small numbers of people in the middle of the age profile.

The four-county area contains few minority residents. More than 92 percent of residents are White. About six percent are Black, and less than one percent are Asian, American Indian, other races, or multiracial. Those of Hispanic origin compose less than one percent of the area's population.

Educational attainment is low in all four counties. Seventy percent of adults over the age of 25 have high school diplomas and just 11 percent have degrees from four-year colleges.

As of June 2007, the area's labor force contained 67,730 workers, representing about 41 percent of the area's total population. The unemployment rate at that time was 4.6 percent, down significantly from 7.4 percent at the beginning of 2004. Fayette County's unemployment rate has fallen sharply in recent years, from 8.4 percent at the beginning of 2004 to 4.9 percent as of June 2007.

Labor and unemployment vary somewhat by season in the area. At the seasonal peak in July, 2006 there were 68,620 people in the area's labor force compared with about 64,240 in January of that year. Fayette County, where the summertime labor force grows by about 2,000 people, is most affected by the season. Unemployment varies with the season as well, typically peaking in January or February and bottoming out in September or October.

More than half of the area's jobs are in services, leisure, and hospitality and retail trade – industries that do not generally pay well. Another 20 percent of jobs are in the government sector, indicating that the area is heavily dependent on public spending. The natural resources and mining sector – once the dominant employer in the area – now only accounts for six percent of jobs in the four-county area.

Employment in the area is heavily concentrated in Raleigh County, where 58 percent of the jobs in the four counties are located. Beckley and the surrounding area clearly forms the economic heart of the area and, outside of other locations along the U.S. 19 corridor, economic opportunity is very limited. Raleigh County has shown the most job growth since 2000, adding more than 1,300 jobs from 2000 to 2006. Though Fayette County lost more than 750 jobs from 2000 to 2006, most of the job losses occurred in the manufacturing sector early in the decade. Since 2001 Fayette County has rebounded, adding approximately 500 jobs. Employment growth included a 67 percent growth in the natural resources and mining sector and a doubling of jobs in the financial activities (which

includes real estate), indicative of the influx of developers, realtors, and lenders. During the same period in Fayette County there was stagnation in the leisure and hospitality sector, the county's largest employment sector.

The four-county area's income levels are quite low, with 48 percent of households in the area earning less than $25,000 per year. The area's median household income as of 2000 was about $26,000, compared with $29,700 for West Virginia and $42,000 for the United States as a whole. Just 22 percent of the resident base earns over $50,000 per year and only 9 percent earns over $75,000 per year. In 2000, 20.0 percent of the area's residents were living below the poverty line (US Census figure).

Fayette Station – Alternative 1c

Existing Site Conditions – (see section 1.3.1 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Cunard – Alternative 1

Existing Site Conditions – (see section 1.3.2 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Brooklyn – Alternatives 1 and 2

Existing Site Conditions – (see section 1.3.3 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Cunard/Fayette Station Alternative

Existing Site Conditions – (see section 1.3.1, 1.2.3, and 1.3.3 above)

Actions with Potential Impacts – shuttles would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Communities

Existing Conditions. New River Gorge National River – located in the heart of the southern West Virginia region – encompasses portions of Summers, Raleigh, and Fayette Counties and adjoins Nicholas County. Several larger communities within or near the park are gateways to the park. In addition are numerous small communities and settlement areas within the park, some of which function also function as gateways to the park. Fayetteville is the closest gateway community to the river sites where enhancements are proposed.

Impact Topic Likely to be Dismissed. Recommended actions to reduce congestion at river access sites would enhance not likely effect gateway communities in the park vicinity, except indirectly through potential beneficial impacts on tourism as noted above for the "regional and local economy" impact topic. As a result the communities impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended.

Environmental Justice

Existing Conditions. Executive Order 12891, "General Actions to Address Environmental Justice in Minority Populations and Low Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse health or environmental impacts of their programs and policies on minorities or low-income populations or communities as defined in the Environmental Protection Agency's *Draft Environmental Justice Guidance* (July 1996).

According to the most recent US Census data (U.S. Census 2000), minority and low-income populations as defined in E.O. 12891 reside in Summers, Raleigh, and Fayette Counties, in the vicinity of New River Gorge National River.

Impact Topic Likely to be Dismissed. The recommended actions to reduce congestion at river access sites are not directed at minority/low income populations nor are any of the potential effects of the actions anticipated to have disproportionate effects on minority/low income populations. No issues or concerns specific to minority and low income populations were identified as a result of public scoping. For these reasons the environmental justice impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Indian Trust Resources

Existing Conditions. Secretarial Order 3175 requires that any anticipated impacts to Indian Trust Resources from a proposed project or action be explicitly addressed in environmental documents. There are no Indian Trust resources within the boundaries of New River Gorge National River. None of the land within the park is held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians.

Impact Topic Likely to be Dismissed. The Indian Trust Resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Indian Sacred Sites

Existing Conditions. The Native American Graves Protection Act (25 U.S.C. 3001 et seq.) and Executive Order 13007, "Indian Sacred Sites" require managers of federal lands to avoid adversely affecting the physical integrity of Indian sacred sites. Because there are no federally-recognized Indian Tribes associated with New River Gorge National River, there are no sacred sites as defined by Executive Order 13007 within the boundaries of New River Gorge National River.

Impact Topic Likely to be Dismissed. The Indian Sacred Sites impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Wilderness

Existing Conditions. The Wilderness Act of 1964 established the National Wilderness Preservation System to include federal lands found through wilderness eligibility assessment and study to possess wilderness characteristics. The Act mandates a policy for the enduring protection of wilderness resources for public use and enjoyment. Based on the findings of the Wilderness Eligibility Assessment for New River Gorge National River– completed in coordination with this GMP planning process – the NPS has determined that all park lands within the current park boundary do not meet the primary eligibility criteria for wilderness designation and are therefore ineligible for further wilderness study.

Impact Topic Likely to be Dismissed. The wilderness impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Wild and Scenic River Resources

Existing Conditions. The Wild and Scenic Rivers Act establishes a system of rivers that possess outstanding scenic, recreational, geological, cultural, or historic values, and maintains their free-flowing conditions for future generations.

The New River has been found to possess several characteristics making it eligible for inclusion in the National Wild and Scenic Rivers System, including wildlife, cultural, recreational, and geological outstandingly remarkable values. The New River, however, has not been recommended as suitable for inclusion in the National Wild and Scenic Rivers System nor designated a Wild and Scenic River.

Impact Topic Likely to be Dismissed. The wild and scenic river resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Climate Change

Existing Conditions. Predictive climate change information for West Virginia and specifically for the geographic area of New River Gorge National River is limited. The effects of climate change in the state are expected to be variable based on elevation and other factors. Generally, it can be anticipated that climate change induced effects will include increased average temperatures and higher precipitation. Considering that the majority of West Virginia is forested, the most substantial changes can be expected to occur to the forest vegetation and the species and biological processes that depend upon them. State-specific and regional predictions related to climate change and its potential environmental effects are discussed below.

Climate change will affect New River Gorge National River and areas of the northeast United States resulting in direct impacts to the ecosystem, agriculture, forestry, fishing, tourism, and other outdoor activities, such as recreation dependent on water quantity and snowfall. Historic climate trends in the northeast show an overall decrease in the number of average days with snow on the ground, an increase in average temperature, and varying changes in precipitation depending on the specific area of the region. Computer models designed to predict trends in climatic condition suggest that the recently observed trends will continue. These trends are expected to result in warmer winters and longer and hotter summers. Some models project more frequent occurrence of intense extreme weather events. These changing conditions could result in intensified flood events, changes in stream flow, more frequent and severe storm damage, and increased fire activity.

Environmental impacts of climate change in the northeast could manifest in a multitude of ways. A change in average temperatures of even 4.5 degrees over the next century could change the forested habitats of the region. The extensive forests of the northeast which provide important roles in carbon storage, wildlife habitat function, tourism, and forest-dependent industries could be affected significantly. Climate models suggest that one of the region's major forest types – maple/beech/birch – is very likely to be completely displaced by more southern forest types. With the changing climatic factors and subsequent environmental components it is projected that forest pest species and weedy plant species will be better suited to take advantage of the changing conditions and place further pressure on these important habitats. More severe weather patterns could lead to changing river and stream flows, lead to increased erosion, and create challenges for management of recreational activities and park facility functions. Climate change could also affect the visitors' park experience in a variety of ways, including:

- changing character of fall foliage with a change in the forest type
- changes in wildlife activities, such as fishing and bird watching
- longer summer season
- shorter winter recreation season
- changes in river hydrology affecting river recreation and aquatic resources
- increasing frequency and intensity of severe storms

Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown. Much depends on the rate at which temperature will continue to rise and whether global emissions of greenhouse gases can be mitigated before serious ecological thresholds are reached. Climate change science is a rapidly advancing field and new information is being collected and released continually. Because the drivers of climate change are largely outside park control, the NPS alone does not have the ability to prevent climate change from happening. The full extent of climate change impacts to resources and visitor experience is not known, nor do managers and policy makers yet agree on the most effective response mechanisms for minimizing impacts and adapting to change.

The recently completed GMP (NPS 2011a and 2009a) general management identifies concerns upon which individual parks should focus:

- external changes affecting internal resources and management (how a park is different now, and how it might be different in the future as a result of global climate change)
- internal decision-making and how it affects external/global process such as a park's individual contribution to climate changing factors such as our carbon footprint and what park managers are doing to reduce it (see Energy Requirements and Conservation Potential below)
- educating park visitors on the topic of climate change and bringing together groups to address issues in a meaningful way to address potential impacts at a local and national level

More specifically at New River Gorge National River the NPS would work directly on climate change issues by participating in the Climate Friendly Parks (CFP) program to learn more about the issues the NPS faces and utilize the Climate Leadership In the Parks (CLIP) tool with the goal of identifying, quantifying, and reducing the park's greenhouse gas emissions. An additional component of the park's response to climate change would be education. While incorporating the best scientific knowledge available the park would develop interpretive materials and programs to explain to the public how climate change is affecting the national parks and changes that scientists expect in the future, as well as to highlight steps underway by the NPS to reduce greenhouse gas emissions. It would become increasingly important for NPS to develop strategies to incorporate current and emerging knowledge about the potential affects at the local level while working with visitors and communities to be as prepared as possible to address them.

Impact Topic Likely to be Dismissed. The climate change issues presented above and the general framework of how the park would move forward to address them would be applied when designing and operating the proposed enhancements at river access sites to reduce congestion on the New River. As a result the climate change impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Energy Requirements and Conservation Potential

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to conduct its activities in ways that use energy wisely and economically. The recently completed GMP (NPS 2011a and 2009a) further commits the NPS to managing the park in this fashion.

All new facility development, whether it is a new building, a renovation, or an adaptive reuse of an existing facility, must include improvements in energy efficiency and reduction in greenhouse gas emissions for both the building envelope and the mechanical systems that support the facility. Maximum energy efficiency is to be achieved. Energy-efficient construction projects are encouraged and are to be used whenever possible as an educational opportunity for the visiting public. All projects that include visitor services facilities must incorporate Leadership in Energy and Environmental Design (LEED) standards to achieve a silver rating.

For all new park facilities vehicles, and equipment are to be operated and managed to minimize consumption of energy, water, and nonrenewable fuels. Full consideration is to be given to the use of alternative fuels. Alternative transportation programs and the use of bio-based fuels are encouraged, where appropriate. Renewable sources of energy and new developments in energy-efficiency technology, including products from the

recycling of materials and waste, are to be used where appropriate and cost-effective over the life cycle. However, energy efficiencies are not to be pursued if they will cause adverse impacts on park resources and values.

Impact Topic Likely to be Dismissed. Because of these commitments to energy conservation and sustainability, the energy requirements and conservation potential impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Natural and Depletable Resources

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to apply principles for sustainable design throughout the national park system. Sustainability is the concept of living within the environment with the least impact on the environment. The objectives of sustainability within the NPS are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting and to maintain and encourage biodiversity; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use.

Impact Topic Likely to be Dismissed. Through use of sustainable design concepts all recommended actions to reduce congestion at river access sites would conserve natural resources and would not result in a substantial loss of natural or depletable resources. Therefore the natural and depletable resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

ENVIRONMENTAL ANALYSIS OF RECOMMENDED ACTIONS – GAULEY RIVER NATIONAL RECREATION AREA

Physiography, Geology and Soils

Existing Conditions. *NPS Management Policies* (NPS 2006) require NPS to preserve geologic processes, to preserve geologic features from adverse effects of human activity, and to preserve park soil resources by preventing, to the extent possible, unnatural erosion, physical removal, or contamination of soils.

Rugged river canyon topography with steep slopes and cliffs characterizes much of the park. Logging, mining, railroad building, and agriculture have disturbed soils and altered natural topography throughout much of the park. In recent years road-building and improvements for river accesses built on private land within the park's authorized limits have disturbed sites along the Gauley River that are now used for private river access. Despite these activities, there are areas of relatively undisturbed soils within the park. DCP Alternative B and C would include visitor activities and facilities that would involve ground-disturbing activities in some of these undisturbed areas. Some soils would require special planning and design to address seasonally high water, poor drainage, high erodibility, and bedrock at or close to the ground surface.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. As a result the physiography, geology, and soils impact topic would likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area at the river access, clearing of vegetation to construct 18 campsites, 1 group site, and 2 vault toilets for the relocated Tailwaters campground

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area

Floodplains

Existing Conditions. Executive Order 11988, "Floodplain Management," requires federal agencies to examine project impacts on floodplains and the potential risk involved in having facilities within floodplains. The 100-year floodplain includes all of the low ground along the shoreline of the Gauley and Meadow Rivers, generally up to the elevation of the railroad beds that occur along a portion of both rivers. DCP Alternatives B and C would include facilities that would be located in the 100-year floodplain.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations and would not require additional development within the floodplain. Shuttle equipment would not be exposed to flood damage. No enhancement would occur in the floodplain at the Tailwaters river access. As a result the floodplains impact topic would likely be dismissed from future NEPA compliance required for implementation of enhancements at Tailwaters and both shuttle alternative. It would be retained for the other alternatives.

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – enhancement of water dependent existing facilities within the floodplain, construction of facilities at the river's edge subject to damage by floodwaters

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – enhancement of water dependent existing facilities within the floodplain, construction of facilities at the river's edge subject to damage by floodwaters

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – enhancement of water dependent existing facilities within the floodplain, construction of facilities at the river's edge subject to damage by floodwaters

Water Quality

Existing Conditions. The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, establishes national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters, to enhance the quality of water resources, and to prevent, control, and abate water pollution. *NPS Management Policies* (NPS 2006) provide for the preservation, use and quality of waters in national parks. DCP Alternatives B and C include visitor activities and facilities that would affect the use of water resources and water quality in the park.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. As a result the water quality impact topic would likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in the Gauley River at the Tailwaters river access and at the relocated campground site

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in the Gauley River and a small tributary stream

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in the Gauley River

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – exposure of unstabilized soils during construction with potential for erosion and sedimentation in the Gauley River

Wetlands

Existing Conditions. All wetlands in units of the national park system are protected and managed in accordance with Executive Order 11990, "Protection of Wetlands"; NPS Director's Order 77-1,"Wetland Protection", and its accompanying handbook (NPS 2002d); and *NPS Management Policies* (NPS 2006a). This guidance requires the NPS to protect and enhance natural wetland values, and requires the examination of impacts on wetlands. It is NPS policy to avoid affecting wetlands and to minimize impacts when they are unavoidable.

Wetlands at the Gauley River National Recreation Area generally include the following:

- small wetland pockets along the shorelines of the Gauley River and Meadow River
- on the Tailwaters plateau, wetlands that have developed in small depressions and tire tracks in areas previously disturbed by construction of the Summersville Dam and Summersville Hydroelectric Project

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – relocation of the Tailwaters campground downstream on the river bench could occur in or near wetlands developed in depressions in areas previously disturbed by construction of Summersville Dam

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – potential for impacts to wetlands along the Gauley River shoreline that adjoin the river access site

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – potential for impacts to wetlands along the Gauley River shoreline that adjoin the river access site

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – potential for impacts to wetlands along the Gauley River shoreline that adjoin the river access site

Vegetation

Existing Conditions. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006) state that it is NPS policy is to protect the abundance and diversity of natural resources.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. As a result the vegetation impact topic would likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – potential for very limited clearing of small trees at the perimeter of the existing disturbed area at Tailwaters, clearing of trees for development of the relocated Tailwaters campground

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – potential for very limited clearing of small trees at the perimeter of the existing disturbed area

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – potential for very limited clearing of small trees at the perimeter of the existing disturbed area

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – potential for very limited clearing of small trees at the perimeter of the existing disturbed area

Aquatic Wildlife

Existing Conditions. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006) state that it is NPS policy is to protect the abundance and diversity of natural resources.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. As a result the aquatic wildlife impact topic would

likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – potential for localized short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – potential for localized short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – potential for localized short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – potential for localized short-term impacts on aquatic habitats due to erosion and sedimentation during construction

Terrestrial Wildlife

Existing Conditions. The National Environmental Policy Act requires federal agencies to assess the impacts of their actions on components of affected ecosystems. *NPS Management Policies* (NPS 2006) state that it is NPS policy is to protect the abundance and diversity of natural resources.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. As a result the terrestrial wildlife impact topic would likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – potential for minor loss of terrestrial habitat due to very limited clearing of small trees at the perimeter of the existing disturbed area and clearing of trees for development of the relocated Tailwaters campground

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – potential for minor loss of terrestrial habitat due to very limited clearing of small trees at the perimeter of the existing disturbed area

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – potential for minor loss of terrestrial habitat due to very limited clearing of small trees at the perimeter of the existing disturbed area

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – potential for minor loss of terrestrial habitat due to very limited clearing of small trees at the perimeter of the existing disturbed area

Rare, Threatened, and Endangered Species

Existing Conditions. The Endangered Species Act (1973), as amended, requires an examination of project impacts on all federally-listed threatened or endangered species. NPS policy also requires examination of the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species. The West Virginia Natural Heritage Program has identified occurrences of 24 listed plant, animal, bird, fish and insect species within the park. Several of these species occur in riparian areas at Tailwaters, Mason Branch, and Woods Ferry.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. Rare, threatened, and endangered species are also not present within or adjacent to the area of existing disturbance at Tailwaters, Mason Branch, or Upper Swiss. As a result the rare, threatened, and endangered species impact topic would likely be dismissed from future NEPA compliance required for river access enhancements at Tailwaters, Mason Branch, or Upper Swiss or for implementation of both shuttle alternatives. It would be retained only for Woods Ferry.

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – construction could have direct and/or indirect impacts on state rare plants in the riparian area, particularly Virginia spirea

Scenic Resources

Existing Conditions. Scenic resources are integral to a high quality outdoor recreational experience and are one of the reasons that the Gauley River and Meadow River and their adjacent canyons were designated as an park. The park has a heavily wooded, enclosed, steep and wild character. Since the area is centered on rivers and river use, views from the river are important. Views of the river from roadways surrounding the area are also very important, especially at Summersville Dam where most visitors first see the river and recreation area. Scenic resources are also important in any use areas, trails, river accesses, or scenic roads within the park.

Impact Topic Likely to be Dismissed. Recommended enhancements to reduce congestion river access sites would occur within existing disturbed areas. As a result the scenic resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions at all four river access sites and for the two shuttle alternatives.

Ecologically Critical and Unique Natural Areas

Existing Conditions. CEQ NEPA Regulations (40 CFR 1508.27(3)) require federal agencies to assess the effects of their actions on ecologically critical areas. Ecologically critical places and unique natural features in the park include habitats of rare, threatened or endangered species. These habitat areas should be addressed in this GMP/EIS under the “” impact topic.

Impact Topic to be Addressed under Another Topic. Impacts of the recommended actions to reduce congestion at river access sites should be addressed under the impact topic for “endangered or threatened plants and animals and habitat”.

Air Quality

Existing Conditions. The 1963 Clean Air Act, as amended (42 USC 74-1 *et seq.*) requires federal land managers to protect park air quality. *NPS Management Policies* (NPS 2006a) address the need to analyze air quality during park planning.

Portions of Nicholas and Fayette Counties encompassing the park are designated under the Clean Air Act as an air quality attainment area and a Class II Clean Air Area. This designation establishes a limit on the allowable increase in sulfur dioxide and particulate matter concentrations, effectively preventing additional pollutant-emitting industrial development in the vicinity of the park. Because the park is within a Class II Clean Air Area, NPS is not required to conduct air quality or visibility monitoring within the park.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have local short-term negligible adverse impacts on air quality caused by fugitive dust from soil erosion and disturbance during construction and maintenance of park facilities. These impacts would be mitigated through requirements for contractors and NPS maintenance personnel to apply water and dust control agents at construction sites. The actions would have local long-term negligible adverse impacts on air quality caused by increased local traffic during peak visitation periods.

Shuttle alternatives would have a local long-term minor beneficial impact on air quality by reducing vehicles miles travelled by private paddlers, thereby reducing auto emissions.

As a result the air quality impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Natural Visibility

Existing Conditions. Natural visibility enhances the extent to which visitors can experience the park's scenic resources. At New River Gorge (approximately 25 miles south of the Gauley River) natural visibility remains quite high despite problems with regional haze elsewhere in the state. Photographic monitoring data collected at Grandview from 1995 to 2000 indicate that summer exhibits the poorest visibility, with slight, moderate, and considerable haze intensities occurring 43 percent, 20 percent, and 17 percent of the time, respectively (Mahan 2005). Visibility is best in winter, with slight, moderate, and considerable haze intensities occurring 64 percent, 4 percent, and 1 percent of the time, respectively (Mahan 2005). (Weather concealed views the remainder of the year.)

Data from regional haze monitoring sites nearest to the park have revealed similar findings. The nearest sites – located at Dolly Sods Wilderness Area (WV), James River Wilderness Area (VA), and Linville Gorge Wilderness Area (NC) – exhibit patterns of poorer visibility in summer and higher visibility in winter and spring. Reduced visibility at these sites is generally the result of extinction (the light lost over distance due to scattering and absorption of gases) due to increases in ammonium sulfate (Aldehoch 2003).

Under the Clean Air Act, as amended (42 USC 74-1 *et seq.*), Congress has established a national goal for visibility to prevent any future impairment and to remedy any manmade impairment of visibility in Class I areas resulting from manmade air pollutants. As this time, the Gauley River National Recreation Area is not designated a Class I area under the Clean Air Act. Consequently the park is not subject to the regional haze rule adopted pursuant to the Clean Air Act (40 CFR Part 51, July 1, 1999) and is not included in the national visibility monitoring program known as the Interagency Monitoring of Protected Visual Environments (IMPROVE) program.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have local short-term negligible impacts on visibility caused by fugitive dust from soil erosion and disturbance during construction and maintenance of park facilities. These impacts would be mitigated through requirements for contractors and NPS maintenance personnel to apply water and dust control agents at construction sites.

Shuttle alternatives would have a local long-term negligible impact on visibility by reducing vehicles miles travelled by private paddlers, thereby reducing auto emissions.

As a result the natural visibility impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Lightscape and Night Skies

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to preserve to the greatest extent possible, the natural darkness and other components of the natural lightscape. The natural lightscape is composed of the natural resources and values that exist in the absence of human-caused light.

Lightscape and night sky baseline assessment information is not available for Gauley River National Recreation Area. However predictive modeling of night sky conditions at the park in 1992 revealed a 5.72 mean Shaaf Class for the entire park and a Shaaf Class of 6 in 76.4 percent of the park (Albers et al. 2001). This indicates that in 1992 most of the park was characterized by relatively pristine night sky conditions (Shaaf Class 7 = pristine) and that artificial lighting from nearby developed areas affected a relatively small portion of the park.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have long-term negligible impacts on the park's lightscape and night skies. No new lighting would be added at any river access sites. As a result the lightscape and night skies impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Soundscapes

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to preserve, to the greatest extent possible, the natural soundscapes of parks. These encompass all the natural sounds that occur in parks, including the physical capacity for transmitting those natural sounds and the interrelationships among park natural sounds of different frequencies and volumes. The NPS is also required to restore to the natural condition wherever possible those park soundscapes that have become degraded by unnatural sound (noise), and to protect natural landscapes from unacceptable impacts.

Measurements of baseline acoustic conditions are not available for Gauley River National Recreation Area. In general natural ambient sound levels are very low in most areas of the park, except in the New River vicinity where high levels of natural sounds emanate from rapidly moving water. Human-made sounds originating in the park emanate from park operations, visitor activities, and traffic on park roads. Where land within the park remains in private ownership human-made sounds are associated with various residential landowner activities. Other extraneous sound generators in the park include traffic on public roads.

Impact Topic Likely to be Dismissed. All the recommended enhancements to reduce congestion at river access sites would have short-term negligible impacts on the park's natural soundscape. Construction activities associated with planned new or modified facilities or transportation projects would generate temporary unwanted construction-related sound that would be direct and short-term in nature and concentrated in areas near construction sites. In accordance with normal construction practice, noise-generating construction equipment would be equipped with effective noise control devices. All equipment would be properly maintained to ensure that no additional unwanted sound would be generated. The park would further prevent and/or minimize unwanted construction sound by managing its intensity, frequency, magnitude, and duration in any one place on any particular day.

Shuttle alternatives would have a local long-term negligible impact on the park's natural soundscape by reducing vehicles miles travelled by private paddlers, thereby reducing auto emissions.

As a result the natural soundscape impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Prime Farmland and Unique Soils

Existing Conditions. CEQ NEPA Regulations (40 CFR 1508.27) require federal agencies to assess the impacts of their actions on soils classified by the US Natural Resources Conservation Service (NRCS) as prime farmland or unique soils. Prime farmlands are defined as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Unique farmlands are lands other than prime farmland that are used for the production of specific high value food and fiber crops.

Areas of prime farmland and statewide important soils occur in several locations within the park including among others, the Upper Swiss River access site and the Mason Branch Plateau satellite parking facility at Legg Field.

Impact Topic Likely to be Dismissed. Recommended enhancements to reduce congestion at the Tailwaters, and Woods Ferry river access sites would not occur on prime farmland and unique soils. As a result the prime farmland and unique soils impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions at these sites as well as for the two shuttle alternatives. It would likely be retained for the Mason Branch and Upper Swiss river access sites.

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts –satellite parking would occur on prime farmland soils at Legg Field.

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – parking would occur on prime farmland soils at the Upper Swiss field.

Hazardous or Toxic Contaminants

Existing Conditions. The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) regulates the cleanup of hazardous or toxic contaminants at closed or abandoned sites. The Resource Conservation and Recovery Act (RCRA) requires an inventory of all potentially hazardous sites located on federally owned or operated land.

Impact Topic Likely to be Dismissed. Recommended actions to reduce congestion at river access sites are not expected to involve construction activities or location of public recreation facilities on sites that are potentially hazardous or have toxic contaminants. Prior to construction of new facilities at the park, site specific investigations will be required to support written certification that hazardous or toxic contaminants are not present. If development site investigations indicate the presence of hazardous or toxic contaminants that would pose a threat to the health of visitors or NPS staff, then NPS will remediate the site prior to proceeding with construction. As a result the hazardous or toxic contaminants impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Archeological Resources

Existing Conditions. The National Historic Preservation Act (16 USC 470, *et seq.*), NEPA, the NPS Organic Act, *NPS Management Policies* (NPS 2006), DO-12 *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2001a), and DO-28 *Cultural Resources Management Guideline* (NPS 1998) require consideration of impacts on cultural resources either listed in, or eligible to be listed in, the *National Register of Historic Places.*

Widely scattered evidence of hunters and gatherers from the Archaic Period has been documented in the park. Sites include rock shelter camps in the vicinity of Craigsville and Summersville Dam.

Impact Topic Likely to be Dismissed. The two shuttle alternatives would use existing or enhanced river access sites for operations. No new construction would be required. As a result the archeological resource impact topic

would likely be dismissed from future NEPA compliance required for implementation of either shuttle alternative. It would be retained for the other alternatives.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a remote potential for affecting archeological resources

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a remote potential for affecting archeological resources

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a remote potential for affecting archeological resources

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – site disturbance during construction within existing disturbed area has a potential for affecting archeological resources

Cultural Landscapes

Existing Conditions. The National Historic Preservation Act (16 USC 470, *et seq.*), NEPA, the NPS Organic Act, *NPS Management Policies* (NPS 2006), DO-12 *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2001a), and DO-28 *Cultural Resources Management Guideline* (NPS 1998) require consideration of impacts on cultural resources either listed in, or eligible to be listed in, the *National Register of Historic Places.*

DO-28, *"Cultural Resource Management Guideline"* (NPS 1998) defines a cultural landscape as "…a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions."

NPS has not completed a cultural landscape inventory for the park. No cultural landscapes have been documented within the park. During final design of new facilities at the park site specific investigations will be required to demonstrate compliance with cultural resource protection legislation and guidelines, including identification of cultural landscapes, and documentation of impacts and measures, if needed, to mitigate potentially adverse effects on cultural landscapes. These activities will include consultation with the West Virginia State Historic Preservation Officer (SHPO) to assess potential effects to cultural landscapes if presently unforeseen resources are identified in the vicinity of development sites.

Impact Topic Likely to be Dismissed. Cultural landscapes are not present at or near the sites of recommended enhancements to reduce congestion at river access sites. As a result the cultural landscapes impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Historic Structures

Existing Conditions. The National Historic Preservation Act (16 USC 470, *et seq.*), NEPA, the NPS Organic Act, *NPS Management Policies* (NPS 2006), DO-12 *Conservation Planning, Environmental Impact Analysis and Decision Making* (NPS 2001a), and DO-28 *Cultural Resources Management Guideline* (NPS 1998) require consideration of impacts on cultural resources either listed in, or eligible to be listed in, the *National Register of Historic Places.*

A number of sites and structures of potential historic significance occur in the park. Most are related to one of five themes evident in the park, including early settlements, railroads, lumbering, coal mining, Civil War, and transportation.

Impact Topic Likely to be Dismissed. Historic structures are not present at or near the sites of recommended enhancements to reduce congestion at river access sites. As a result the cultural landscapes impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Ethnographic Resources

Existing Conditions. In *NPS-28 Cultural Resources Management Guideline* (NPS 1998) NPS defines ethnographic resources as any "site, structure, object, landscape or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it." The recent ethnographic resource overview and assessment for the park identified five groups of traditionally associated people and groups (Hufford et al 2006). The assessment also concluded that additional traditional use studies are needed to analyze traditional resource use and management regimes in order to assess the effects of management decisions on traditional users (Hufford et al 2006). During final design of facilities proposed in the park, site specific investigations would be completed to assess the potential impacts of proposed actions on traditional use patterns of the associated groups. Measures to mitigate impacts would be identified and included in project design.

The recent ethnographic resource overview and assessment for the park identified five groups of traditionally associated people and groups (Hufford et al 2006), including: Euro-American frontier family descendants, African American individuals and groups, descendants of immigrant miners, and federally recognized Shawnee Tribes.

Comprehensive studies have not been completed in the park area to identify its specific traditional ethnographic cultural and natural resources. However, the recently completed *Ethnographic Overview and Assessment of the New River Gorge National River* (Hufford et al. 2006) concluded that there are places within the park boundaries that have great significance for the park's traditionally associated people and groups. The ethnographic resource identified as vital is the landscape of the mixed mesophytic forest and associated forests in association with the collective memory – the stories – that animate and are animated by the landscape (Hufford et al. 2006). It is possible that this landscape today forms one of the most intact examples of a community forest and watershed to be found in North America (Hufford et al. 2006).

The assessment also concluded that additional traditional use studies are needed to analyze traditional resource use and management regimes in order to assess the effects of management decisions on traditional users (Hufford et al 2006).

Impact Topic Likely to be Dismissed. Ethnographic resources are not present at or near the sites of recommended enhancements to reduce congestion at river access sites. As a result the ethnographic resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Museum Collections

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to collect, protect, preserve, provide access to, and use objects, specimens, and archival and manuscript museum collections in the disciplines of archeology, ethnography, history, biology, geology, and paleontology to aid understanding among park visitors,

and to advance knowledge in the humanities and sciences. The museum collections at Gauley River National Recreation Area pertain to the areas of history, archives, archeology, and natural history. The *House Report 109-80* (NPS 2008) and the *Collection Management Plan, New River Gorge National River* (NPS 2004) provides recommendations related to collection documentation, archives and manuscript collections, archeological collections, collections storage, museum environment, security and fire protection, staffing, and programming and funding sources. Many of these recommendations also apply to the Gauley River National Recreation Area, whose collections are jointly managed with the New River Gorge National River collections.

Impact Topic Likely to be Dismissed. None of the recommended actions to reduce congestion at river access sites would potentially affect the park's museum collections. As a result the museum collections impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Visitor Use and Visitor Experience

Existing Conditions. Existing visitor use and visitor experience conditions at the park are summarized above in section 2.1, Visitation and Visitor Use, of this alternative transportation feasibility study.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Shuttle Alternatives

Existing Site Conditions – (see sections 2.3.1 through 2.3.4 above)

Actions with Potential Impacts – shuttle alternatives would alter the ways in which visitors access and use the existing river access and would generally enhance the visitor experience for outfitted and private paddlers

Visitor Safety

Existing Conditions. *NPS Management Policies* (NPS 2006) require NPS to provide a safe and healthful environment for visitors and employees, recognizing that the recreational activities of some visitors – such as whitewater boaters and rock climbers visiting the park – may be of a high-adventure type.

Impact Topic Likely to be Dismissed. Recommended actions to reduce congestion at river access sites would enhance visitor safety by addressing numerous existing minor safety issues at Tailwaters, Mason Branch, Woods

Ferry, and Upper Swiss. As a result the visitor safety impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended.

Park Access

Existing Conditions. Access to the park via alternative modes of transportation is summarized above in section 2.2, park access, of this alternative transportation feasibility study.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and usethe existing river access

Shuttle Alternatives

Existing Site Conditions – (see sections 2.3.1 through 2.3.4 above)

Actions with Potential Impacts – site enhancements would alter the ways in which visitors access and use the existing river access, diversion of trips onto shuttles will reduce VMTs on local roads reducing congestion and safety hazards during Gauley Season

Park Operations

Existing Conditions. NPS currently experiences a number of park operations issues at the Tailwaters, Mason Branch, Woods Ferry, and Upper Swiss river access sites, described above in sections 2.3.1, 2.3.2, 2.3.3, and 2.3.5, respectively

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – site enhancements would address most of the existing park operations issues

Shuttle Alternatives

Existing Site Conditions – (see sections 2.3.1 through 2.3.4 above)

Actions with Potential Impacts – the equipment and limited paddler shuttle would require use of seasonal maintenance staff to operate the shuttle vehicle and rangers to manage visitors using the shuttle, the shuttles would address many of the operations issues caused by congestion at the river accesses

Regional and Local Economy

Existing Conditions. Over the past two decades both Nicholas and Fayette Counties have experienced a decline in population. In 2010 the total population of Nicholas County was 26,233 – 2.0 percent lower than the 1990 population and 6.7 percent lower than the 1980 population (US Department of Commerce). The total population of Fayette County was 46,039 – 4.0 percent lower than the 1990 population and 20.4 percent lower than the 1980 population (US DC 2003). This followed a period of exceptional growth for both counties during the 1970s. Neighboring counties also showed similar population trends, significantly gaining population throughout the 1970s, losing population through the 1980s, and stabilizing throughout the 1990s.

Despite the decline in population over the last twenty years, the regional employment base has grown and the unemployment rate has decreased. From 1980 to 1990 much of the region experienced a decline in population as well as jobs. Despite these population and job losses, the region's employment base increased overall since 1980 (WVU 2003). Most of the job loss in Nicholas and Fayette Counties during the 1980s was in the mining, construction, and manufacturing industries. In 1980 there were 5,427 mining, construction, and manufacturing jobs in Nicholas County. In 1990 this number dropped to 2,931, with the majority of the job losses occurring in the mining industry. In 1980 in Fayette County, there were 4,227 mining, construction, and manufacturing jobs. This number fell to 2,771 in 1990 with the job losses spread throughout the three sectors.

Tourism is quickly becoming one of West Virginia's most important industries. Direct spending by tourists was $3.1 billion in 2002 (WVTC 2002). Visiting the State's parks and historic sites, sightseeing, hiking, biking, hunting, and fishing are the most popular activities for West Virginia tourists. In addition, adventure, heritage, and nature-based tourism are rapidly growing niche markets in West Virginia. The Gauley River NRA provides visitors with all of these activities as well as adventure- and nature-based tourism.

The Gauley River NRA is within a day's drive of several major markets such as Cleveland, Pittsburgh, Washington, D.C., Baltimore, Columbus, Richmond, and Charlotte. In addition, there are many close in-state markets such as Charleston, Beckley, Wheeling, and Huntington. The highest percentage of West Virginia travelers comes from the Charleston-Huntington area (8.6 percent) followed by Washington D.C. (7.2 percent), Wheeling-Steubenville (6.1 percent), Pittsburgh (5.6 percent), Columbus (4.6 percent), Richmond-Petersburg (4.0 percent), Cleveland (3.8 percent), and Baltimore (3.6 percent).

Summersville, Fayetteville, and Ansted serve as gateway communities to the Gauley River NRA. Visitors to the NRA have a direct and indirect positive economic impact on these communities by spending tourist dollars in local businesses. The US 19 corridor between Fayetteville and Summersville has many hotels, motels, restaurants, retail centers, campgrounds, and commercial whitewater outfitters that serve NRA visitors and that rely on tourism to area parks and attractions. Many of the whitewater outfitters on the Gauley River have lodging, camping, restaurants, and retail stores in the US 19 corridor. Businesses and community groups in small communities on the

Gauley NRA access roads – particularly SR 39 and SR 129 – also benefit from paddler purchases, mostly during Gauley Season.

Tailwaters Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.1 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Mason Branch Proposed Changes to Reduce Congestion

Existing Site Conditions. (see section 2.3.2 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Woods Ferry Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.3 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Upper Swiss Proposed Changes to Reduce Congestion

Existing Site Conditions (see section 2.3.4 above)

Actions with Potential Impacts – site enhancements would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Shuttle Alternatives

Existing Site Conditions – (see sections 2.3.1 through 2.3.4 above)

Actions with Potential Impacts – shuttles would generally enhance the visitor experience for outfitted and private paddlers thereby encouraging tourism due to increased potential for repeat visits and positive reports on the New River experience that could induce others to visit the area

Communities

Existing Conditions. The area around the Gauley River NRA in Fayette and Nicholas Counties is primarily rural, composed of a mix of forest, farms, parks, rural residential developments, rural communities, and incorporated places. Summersville in Nicholas County, is the largest incorporated settlement in close proximity to the NRA. Other larger nearby communities include Fayetteville, Ansted, and Gauley Bridge.

Summersville is the Nicholas County seat, with a downtown center composed of government, institutional and commercial uses, surrounded by residential neighborhoods. Commercial development along the major roads radiates from the city center providing services for local residents. The US 19 corridor along the city's eastern edge has become a major commercial corridor with developments by several large hotel and retail chains. These developments provide accommodations and restaurant services for tourists, as well as offer retail services for the residents of Summersville and surrounding communities.

From south of Summersville to Fayetteville the US 19 corridor is composed of a mix of undeveloped land, parkland, small highway commercial and retail centers, commercial whitewater outfitter base camps, and sites recently cleared and graded for sale as commercial development sites. Summersville Lake, the largest lake in West Virginia, lies between the NRA and Summersville. Along the lake's shore are recreational lands and single-family residences.

Land uses along the major state roads around the Gauley River NRA – SR 39, SR 129, and SR 60 – alternate from small rural communities, to clusters of single-family residences, to farmland, fields and woodland. Occasional industrial uses occur, such as the coal cleaning plant on SR 39 in Lockwood. Rural communities along SR 39 include Enon, Gilboa, Zela, Drennen, Lockwood, Lyonsville, Swiss, Jodie, Belva and Gauley Bridge. Rural communities from US 19 to SR 39 include Keslers Cross Lanes, Poe, and Tipton. Rural communities along SR 60 between Gauley Bridge and US 19 include Hico, Mountain Cove, Victor, and Chimney Corner. Ansted is located between Victor and Hawks Nest State Park.

Impact Topic Likely to be Dismissed. Recommended actions to reduce congestion at river access sites would enhance not likely effect gateway communities in the park vicinity, except indirectly through potential beneficial impacts on tourism as noted above for the "regional and local economy" impact topic. As a result the communities impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended.

Environmental Justice

Existing Conditions. Executive Order 12891, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health or environmental impacts of their programs and policies on minorities or low-income populations or communities as defined in the Environmental Protection Agency's *Draft Environmental Justice Guidance* (July 1996).

Minority and low-income populations as defined in E.O. 12891 reside in both Fayette and Nicholas Counties in the vicinity of the park. In Fayette County, 16.4 percent of families and 21.3 percent of individuals live below the poverty level (U.S. Census 2010b). In Nicholas County, 14.3 percent of families and 18.7 percent of individuals live below the poverty level (U.S. Census 2010). Both counties have small minority populations, accounting for less than 10 percent of the total population (U.S. Census 2010a).

Impact Topic Likely to be Dismissed. The recommended actions to reduce congestion at river access sites are not directed at minority/low income populations nor are any of the potential effects of the actions anticipated to have disproportionate effects on minority/low income populations. No issues or concerns specific to minority and low income populations were identified as a result of public scoping. For these reasons the environmental justice impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Indian Trust Resources

Existing Conditions. Secretarial Order 3175 requires that any anticipated impacts to Indian Trust Resources from a proposed project or action be explicitly addressed in environmental documents. There are no Indian Trust resources within the boundaries of Gauley River National Recreation Area. None of the land within the park is held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians.

Impact Topic Likely to be Dismissed. The Indian Trust Resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Indian Sacred Sites

Existing Conditions. The Native American Graves Protection Act (25 U.S.C. 3001 et seq.) and Executive Order 13007, "Indian Sacred Sites" require managers of federal lands to avoid adversely affecting the physical integrity of Indian sacred sites. Because there are no federally-recognized Indian Tribes associated with Gauley River National Recreation Area, there are no sacred sites as defined by Executive Order 13007 within the boundaries of the park.

Impact Topic Likely to be Dismissed. The Indian sacred sites impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Wilderness

Existing Conditions. The Wilderness Act of 1964 established the National Wilderness Preservation System to include federal lands found through wilderness eligibility assessment and study to possess wilderness characteristics. The park does not include any land within the National Wilderness Preservation System designated pursuant to the Wilderness Act of 1964.

Impact Topic Likely to be Dismissed. The wilderness impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Wild and Scenic River Resources

Existing Conditions. The Wild and Scenic Rivers Act establishes a system of rivers that possess outstanding scenic, recreational, geological, cultural, or historic values, and maintains their free-flowing conditions for future generations. The Gauley River was found eligible for listing in 1983. In 1988 Congress considered designating it a wild and scenic river but instead chose to protect and preserve its scenic, recreational, geological, fish and wildlife resources by designating the Gauley River National Recreation Area.

Impact Topic Likely to be Dismissed. The wild and scenic river resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions to reduce congestion at the park's river access sites.

Climate Change

Existing Conditions. Predictive climate change information for West Virginia and specifically for the geographic area of the park is limited. The effects of climate change in the state are expected to be variable based on elevation and other factors. Generally, it can be anticipated that climate change induced effects will include increased average temperatures and higher precipitation. Considering that the majority of West Virginia is forested, the most substantial changes can be expected to occur to the forest vegetation and the species and biological processes that depend upon them. State-specific and regional predictions related to climate change and its potential environmental effects are discussed below.

Climate change will affect the park and areas of the northeast United States resulting in direct impacts to the ecosystem, agriculture, forestry, fishing, tourism, and other outdoor activities, such as recreation dependent on water quantity and snowfall. Historic climate trends in the northeastern United States show an overall decrease in the number of average days with snow on the ground, an increase in average temperature, and varying changes in precipitation depending on the specific area within the region. Computer models designed to predict trends in climatic condition suggest that the recently observed trends will continue. These trends are expected to result in warmer winters and longer and hotter summers. Some models project more frequent occurrence of intense extreme weather events. These changing conditions could result in intensified flood events, changes in stream flow, more frequent and severe storm damage, and increased fire activity.

Environmental impacts of climate change in the northeast could manifest in a multitude of ways. A change in average temperatures of even 4.5 degrees over the next century could change the forested habitats of the region. The extensive forests of the northeast which provide important roles in carbon storage, wildlife habitat function, tourism, and forest-dependent industries could be affected significantly. Climate models suggest that one of the region's major forest types – maple/beech/birch – is very likely to be completely displaced by more southern forest types. With the changing climatic factors and subsequent environmental components it is projected that forest pest species and weedy plant species will be better suited to take advantage of the changing conditions and place further pressure on these important habitats. More severe weather patterns could lead to changing river

and stream flows and increased erosion, and create challenges for management of recreational activities and park facility functions. Climate change could also affect the visitors' park experience in a variety of ways, including:

- changing character of fall foliage with a change in the forest type
- changes in wildlife activities, such as fishing and bird watching
- longer summer season
- shorter winter recreation season
- changes in river hydrology affecting river recreation and aquatic resources
- increasing frequency and intensity of severe storms

Climate change is a far-reaching and long-term issue that will affect the park, its resources, visitors, and management beyond the scope of this DCP/EA and its timeframe. Although some effects of climate change are considered known or likely to occur, many potential impacts are unknown. Much depends on the rate at which temperature will continue to rise and whether global emissions of greenhouse gases can be mitigated before serious ecological thresholds are reached. Climate change science is a rapidly advancing field and new information is being collected and released continually. Because the drivers of climate change are largely outside park control, the NPS alone does not have the ability to prevent climate change from happening. The full extent of climate change impacts to resources and visitor experience is not known, nor do managers and policy makers yet agree on the most effective response mechanisms for minimizing impacts and adapting to change.

With these pressing challenges there are three general management concerns upon which individual parks should focus:

- external changes affecting internal resources and management (how a park is different now, and how it might be different in the future as a result of global climate change)
- internal decision-making and how it affects external/global process such as a park's individual contribution to climate changing factors such as our carbon footprint and what park managers are doing to reduce it
- educating park visitors on the topic of climate change and bringing together groups to address issues in a meaningful way to identify potential impacts at a local and national level

More specifically at the park the NPS would work directly on climate change issues by participating in the Climate Friendly Parks (CFP) program to learn more about the issues the NPS faces and utilize the Climate Leadership In the Parks (CLIP) tool with the goal of identifying, quantifying, and reducing the park's greenhouse gas emissions. The park would need to continue to assess the effects that climate change is already having on the park ecosystems, as well as effects scientists expect to see in the future. Many of the indicators being used in the NPS vital signs monitoring program would be useful in documenting changes in the park's ecosystem with climate change. The CLIP tool and other programs that are developed as NPS continues to improve understanding of this challenge would assist with taking action to reduce emissions of greenhouse gases, including emissions associated with facilities, visitation, and business practices. As the park learns more concerning the specific impacts of climate change managers would formulate adaptive management strategies and actions that may enhance the resilience of the ecosystem. Examples could include working with other land management agencies to ensure that migration corridors are established or enhanced that would facilitate the opportunity for bird and other mobile species to move northward or to higher elevations while the southern regions continue to warm and forest environments change and biomes shift with the changing climate.

An additional component of the park's response to climate change would be education. While incorporating the best scientific knowledge available the park would develop interpretive materials and programs to explain to the public how climate change is affecting the national parks and changes that scientists expect in the future, as well as to highlight steps underway by the NPS to reduce greenhouse gas emissions. It would become increasingly important for NPS to develop strategies to incorporate current and emerging knowledge about the potential

effects at the local level while working with visitors and communities to be as prepared as possible to address them.

Impact Topic Likely to be Dismissed. The climate change issues presented above and the general framework of how the park would move forward to address them would be applied when designing and operating the proposed enhancements at river access sites to reduce congestion on the Gauley River. As a result the climate change impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Energy Requirements and Conservation Potential

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to conduct its activities in ways that use energy wisely and economically. The recently completed GMP (NPS 2011a and 2009a) further commits the NPS to managing the park in this fashion.

All new facility development, whether it is a new building, a renovation, or an adaptive reuse of an existing facility, must include improvements in energy efficiency and reduction in greenhouse gas emissions for both the building envelope and the mechanical systems that support the facility. Maximum energy efficiency is to be achieved. Energy-efficient construction projects are encouraged and are to be used whenever possible as an educational opportunity for the visiting public. All projects that include visitor services facilities must incorporate Leadership in Energy and Environmental Design (LEED) standards to achieve a silver rating.

For all new park facilities vehicles, and equipment are to be operated and managed to minimize consumption of energy, water, and nonrenewable fuels. Full consideration is to be given to the use of alternative fuels. Alternative transportation programs and the use of bio-based fuels are encouraged, where appropriate. Renewable sources of energy and new developments in energy-efficiency technology, including products from the recycling of materials and waste, are to be used where appropriate and cost-effective over the life cycle. However, energy efficiencies are not to be pursued if they will cause adverse impacts on park resources and values.

Impact Topic Likely to be Dismissed. Because of these commitments to energy conservation and sustainability, the energy requirements and conservation potential impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

Natural and Depletable Resources

Existing Conditions. *NPS Management Policies* (NPS 2006a) require the NPS to apply principles for sustainable design throughout the national park system. Sustainability is the concept of living within the environment with the least impact on the environment. The objectives of sustainability within the NPS are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting and to maintain and encourage biodiversity; to operate and maintain facilities to promote their sustainability; and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use.

Impact Topic Likely to be Dismissed. Through use of sustainable design concepts all recommended actions to reduce congestion at river access sites would conserve natural resources and would not result in a substantial loss of natural or depletable resources. Therefore the natural and depletable resources impact topic would likely be dismissed from future NEPA compliance required for implementation of the recommended actions.

NEPA PATHWAY DETERMINATION

Table D.2 Recommended River Access Site Enhancements – NEPA Pathway Determination

New River Gorge National River		
River Access Site	**NEPA Pathway**	**Findings Supporting Determination**
Brooklyn	environmental assessment	Enhancements would include construction of park roads, parking, and visitor facilities within previously disturbed or developed areas (some of which are now revegetated by forest) including: – clearing of woodland, much of which is rare sycamore- river birch riverscour woodland – expansion of existing access roads and development of new access roads – expansion of existing informal parking areas to include 4 outfitted paddler equipment truck slots, 5 jon boat parking spaces, 20 private paddler parking spaces, 8 day-use parking spaces, and 10 campsite parking spaces – development of a new enlarged river launch to accommodate boat trailers – construction of retaining walls and associated earthwork along expanded and new roads and the river launch – relocation of 5 existing campsites – construction of two vault toilets The enhancements have the potential to affect cultural resources. The proposed enhancements at Brooklyn are under consideration in lieu of development of a new river access at Surprise, as proposed for consideration in the recently completed NERI GMP/EIS (ROD 2.10.12). Findings of this alternative transportation feasibility study have concluded that a suitable new river access site is not available in the Surprise corridor and that the Brooklyn site has the potential for development as a major river access.
Cunard	categorical exclusion 18	Enhancements would include construction of minor structures within previously disturbed or developed areas, including: – development of additional parking along existing roads (17 spaces) – development of additional outfitted paddler bus parking along an existing road (2 spaces) – development of a bus turnaround circle, including earthwork and retaining wall construction and minor clearing of trees within the existing disturbed area – installation of two inclined raft lifts – reconfiguration of an existing sidewalk and gutter – replacement of steps descending from the parking area to the river – stabilization of an existing soft river launch site (approximately 3500 sf) The scope of these enhancements is similar to the scope of recommended management actions in the recently completed NERI GMP/EIS (ROD 2.10.12).
Fayette Station	categorical exclusion 18	Enhancements would include construction of minor structures within previously disturbed or developed areas, including: – reconfiguration of existing parking area for outfitted paddler buses and private paddlers, including some retaining wall construction and associated earthwork and minor clearing of trees within the existing disturbed area – reconfiguration of the existing day-use parking area, including some retaining wall construction and associated earthwork

New River Gorge National River (continued)		
River Access Site	**NEPA Pathway**	**Findings Supporting Determination**
		– replacement of an existing one-lane bridge (over Wolf Creek) with a two- – lane bridge (with a pedestrian walkway) – organization of parking at the existing Cole Lot to accommodate 32 spaces – minor expansion of the existing changing/comfort station – development of a legal pedestrian crossing of the CSX Corporation's railroad right-of-way The scope of these enhancements is similar to the scope of recommended management actions in the recently completed NERI GMP/EIS (ROD 2.10.12).
Gauley River National Recreation Area		
River Access Site	**NEPA Pathway**	**Findings Supporting Determination**
Tailwaters	environmental assessment	Enhancements would include construction of park roads, parking, and visitor facilities within previously disturbed or developed areas including: – relocation of the existing Tailwaters 18-site campground downstream along the river bench to a previously disturbed site, including improvements to approximately ½ mile of the existing bench road and construction of 18 new campsites, 1 group campsite, and 2 vault toilets – conversion of the existing Tailwaters campground to 90 private paddler parking spaces – reconfiguration of the remaining existing parking area to enhance circulation, provide an additional 10 private paddler parking spaces, 5 universal access parking spaces, a staging area for private paddlers, designated slots for 13 outfitted paddler equipment trucks, and a staging area for outfitted paddler groups – construction of an additional private paddler trail from the parking area to the gauging station
Mason Branch	categorical exclusion 18	Enhancements would include construction of minor structures within previously disturbed or developed areas, including: – reconfiguration (with enhancements) of the existing parking area to provide 17 delineated private paddler parking spaces and minor clearing of trees within the existing disturbed area – reconfiguration (with enhancements) of the existing staging area at the river to provide designated areas for four outfitted paddler equipment trucks and minor clearing of trees within the existing disturbed area – designation of one universal access parking space – development of a formal path for private paddlers from the existing private paddler parking area to the river (along an existing informal trail) – stabilization of the existing river launch (approximately 3500 sf)
Woods Ferry (exclusive of satellite parking)	categorical exclusion 18	Enhancements would include construction of minor structures within previously disturbed or developed areas, including: – reconfiguration (with enhancements) of the existing parking area to provide 69 delineated private paddler parking spaces and 3 universal access parking space – reconfiguration (with enhancements) of the existing outfitter equipment truck parking area to provide designated slots for seven outfitted paddler equipment trucks – expansion of the existing access road to accommodate parallel parking

Gauley River National Recreation Area (continued)		
River Access Site	**NEPA Pathway**	**Findings Supporting Determination**
		– development of a formal path from the existing private paddler parking – area to the river (along an existing informal trail) – expansion of the existing stabilized launch to accommodate two boats at one time (approximately +3500 sf), with minor clearing of trees within the existing disturbed area
Upper Swiss	categorical exclusion 18	Enhancements would include construction of minor structures within previously disturbed or developed areas, including: – organization of the field used for parking to provide 111 delineated private paddler parking spaces, 5 universal access parking spaces, and 4 outfitted paddler bus staging slots – organization of the area now used for river access and staging to provide designated slots for 3 outfitted paddler equipment trucks and 2 private paddler staging slots, including minor clearing of trees within existing disturbed area – construction of a vault toilet – stabilization of the railroad crossing and enhancements to the entrance road for a distance of approximately 100' after the crossing – stabilization of the existing soft river launch (approximately 3500 sf)
Equipment and Limited Paddler Shuttle	categorical exclusion 18	Enhancements would include expansion of the existing equipment shuttle to include a limited paddler shuttle. Actions would include: – acquisition of a 15-passenger van and enclosed equipment trailer for use during Gauley Season weekends, operating up to 14 days per year and driving approximately 1,450 miles per year – shuttle travel on existing roads, following routes used by the existing equipment shuttle – shuttle stops at the Tailwaters plateau and river access site using existing equipment shuttle stops (no improvements required)
Joint Project at New River Gorge National River and Gauley River National Recreation Area		
River Access Site	**NEPA Pathway**	**Findings Supporting Determination**
Joint Shuttle	environmental assessment	Enhancements at NERI and GARI would provide a joint equipment and passenger shuttle that would operate at NERI during summer months at NERI and at GARI during the fall Gauley Season. Actions would include: – contracting with a shuttle service provider who would operate a 50-passenger bus with an enclosed equipment trailer for transporting paddlers and boat, operating 28 days per year and driving approximately 9,100 miles per year – development of shuttle stops at Fayette Station and Cunard river access sites (within the existing disturbed area) – use of existing shuttle stops or existing staging locations at GARI river access sites – acquisition of land on the Cunard plateau and construction of parking for approximately 70 private paddlers

SCOPE OF SERVICES

TASK ORDER NO. XXX

Contract No. GS - xxx

Park Name

Project Name

PMIS xxx

ENVIRONMENTAL ASSESSMENT, FLOODPLAIN STATEMENT OF FINDINGS, SECTION 106 COMPLIANCE

I. SCOPE

The work consists of preparing a draft Environmental Assessment (EA), Floodplain Statement of Findings (FSOF), and Section 106 for three NPS reviews, making appropriate revisions to the EA in response to NPS review comments, preparing a revised EA for public review, and preparing the appropriate decision document (i.e., either a Finding of No Significant Impact [FONSI] or Notice of Intent [NOI]). It is anticipated this effort will result in a FONSI. If an NOI is needed, a sample will be provided.

The Contractor shall provide all materials, supplies, supervision, coordination, and management necessary to complete the work. The Contractor shall perform all necessary technical analyses, edit the documents, prepare graphics, and perform other work as required to produce the products as specified in this Scope of Services (SOS).

II. CONFIDENTIALITY

The information developed under this task order is the property of the U. S. Government and shall be kept in strict confidence.

III. PERFORMANCE PERIOD

The work of this task order shall be provided following issuance of the delivery/task order, proceed in accordance with the schedule for submittals, and be completed no later than **xxx.**

IV. PROJECT IDENTIFICATION

A. PMIS Number: xxx

Project Title: xxx

B. Project Location: xxx

V. POINTS OF CONTACT

A. Contractual

Contracting Officer (CO): **xxx**

Contract Specialist (CS): **xxx**

B. Technical

Project Manager (PM): **xxx**

xxx (COR): xxx

VI. STANDARD SERVICES

Comply with standard services according to **xxx** and the requirements of this task order.

VII. DATA AND MATERIALS TO BE PROVIDED BY NPS

The NPS will provide:

A. Completed Environmental Screening Form

B. PMIS Project Statement

C. Preliminary Project Drawings

D. Information about the Purpose and Need for Action

E. Information about Alternatives

F. Consultation Results

VIII. PROJECT DESCRIPTION

An EA and FSOF will be completed for the proposed project to expand the Brooklyn River Access at New River Gorge National River. The project includes…xxx

The construction design will be provided by **xxx**

Project Background

xxx

IX. SCOPE OF SERVICE REQUIREMENTS

All work performed shall comply with applicable laws, regulations and NPS policies and guidelines. The EA shall conform to all applicable NPS requirements including, but not limited to, those specified in Director's Order #12 and the "*Conservation Planning, Environmental*

Impact Analysis, and Decision Making" Handbook. Director's Order 12, along with other guidance, can be found at http://planning.nps.gov/ in the tools section.

NPS will initiate and conduct consultations with other agencies and organizations in accordance with the requirements of the Endangered Species Act, the National Historic Preservation Act (NHPA), and/or other applicable laws. The Contractor shall use information provided by the NPS regarding compliance with these laws as well as information from other agencies (i.e. state natural resource management agencies, and state natural heritage inventories) for inclusion and analysis in the EA.

NHPA 106 compliance shall be accomplished separate but parallel to the National Environmental Policy Act (NEPA) compliance. To that end a stand-alone Assessment of Effect (AoE) shall be prepared by the Contractor.

The Contractor shall describe impacts to cultural resources, in the impact analysis of the EA, which are consistent with the regulations of the Council on Environmental Quality that implement NEPA. These impact analyses shall comply with the requirements of both NEPA and Section 106 of the NHPA. In accordance with the Advisory Council on Historic Preservation regulations implementing Section 106 of the NHPA (36 CFR 800, Protection of Historic Properties), impacts to cultural resources were identified and evaluated by: (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Properties; (3) applying the criteria of adverse effect to affected national register-eligible or listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Recommendations regarding additional compliance/permits such as 404 permits, etc. shall be brought to the attention of the Contracting Officer's Technical Representative (COR) as early in the process as possible. Work on these tasks is **not** included as part of this SOS.

The Contractor shall maintain an Administrative Record. The Administrative Record shall be chronological, organized and complete. See C-EA Supplemental Guidance, Enclosure A, Administrative Record Guidance and Checklist regarding what should comprise the Administrative Record.

All Compliance Documents, including the Administrative Record, shall be prepared in formats specified by the Denver Service Center [Denver Service Center Editing Reference Manual (January, 2005), http://www.nps.gov/dsc/c_business/Editing Ref Manual_Jan 05.pdf].

All documents to be placed on the internet should be compliant with NPS Director's Order #70: Internet and Intranet Publishing, http://www.nps.gov/policy/DOrders/DOrder70.html.

All public review Compliance Documents shall be prepared in Planning, Environmental and Public Comments (PEPC) compatible formats and sizes for posting on the PEPC system. Documents shall be in pdf format and in components no larger than five (5) megabytes. Documents larger than five (5) megabytes must be split into appropriate sized and formatted portions.

Submit all deliverables to:

xxx

X. QUALITY CONTROL

The Contractor is responsible for quality control, which includes ensuring the technical accuracy and completeness of the compliance documents prior to submission to the park. The Contractor's quality control efforts shall ensure that all draft and final deliverables have been reviewed for consistency, professional and copy quality, technical adequacy and readability. Quality control review shall ensure appropriate impact analyses with sufficient support and rationale for impact intensity conclusions.

All work shall be technically and legally defensible and in full compliance with the requirements of the NEPA of 1969, as amended; the Council on Environmental Quality Regulations (40 CFR 1500-1508); and the National Park Service NEPA Compliance Guideline (DO-12). In addition, the Environmental Assessment shall be consistent with the Annotated Environmental Assessment Outline (See C-EA Supplemental Guidance, Enclosure B). Where deviations from the outline may be appropriate, discuss with the COR prior to document preparation.

XI. TASKS AND DELIVERABLES

A. Environmental Assessment (EA) Meetings, Schedule, Mailing list, Research/Data Collection & Administrative Record - Tasks and Deliverables

The Contractor should expect that all park reviews, unless otherwise stated, will take ten (10) working days.

1. Kick-off Meeting and Coordination

The Contractor shall take part in a kick-off meeting via teleconference with the park to initiate the EA/FSOF process. The NPS will specify the date and time for this meeting. NPS will provide all pertinent material to the Contractor at least seven (7) days in advance of the meeting. The Contractor shall become familiar with the information provided by the NPS in preparation for the meeting. The purpose of this phone call is to develop a communication protocol, review scope of work for additional questions, and answer questions on information provided, and to identify roles and responsibilities, including consultation with the West Virginia State Historic Preservation Office, Native American tribes, and U.S. Fish and Wildlife Service. The COR will prepare the agenda for this meeting. The Contractor shall be responsible for providing copies of written meeting notes to all participants within seven (7) days following the meeting subject to two (2) revisions.

Deliverables: Kickoff meeting notes/summaries - draft and final copies in electronic format only.

2. Project Schedule

The Contractor shall develop and maintain a detailed project schedule. The initial draft schedule shall be submitted not later than two (2) weeks after the kick-off meeting. The schedule shall include the deliverables as identified in the scope of services, review periods for NPS, and other important **milestones** as identified below in deliverables section. The Contractor shall make the necessary changes to the draft schedule to produce a final schedule. The Contractor shall be

responsible for updating the schedule on a quarterly basis and upon the request of NPS, to reflect changes to the overall project schedule.

> ***Deliverables:*** The initial detailed project schedule (in electronic format only, similar to MS Project) shall be submitted to the COR within fourteen (14) calendar days of the Kick-off meeting. The project schedule shall be updated every ninety (90) calendar days and submitted to the COR in electronic format only.

3. Project Mailing List

The Contractor shall coordinate with the park staff to develop and maintain a project mailing list that includes federal, state, and local agency contacts, THPO's and Native American Indian Tribal officials and interested members of the public. Contractor shall assume the project mailing list will consist of approximately 100 addressees (agencies, organizations, and individuals combined).

> ***Deliverables:*** The Contractor shall provide one (1) electronic copy in MS Word format to the COR via e-mail. The Contractor shall assume up to two revisions.

4. Administrative Record

The Contractor shall maintain a chronological, organized and complete Administrative Record and submit this record to the PM at the conclusion of this task/delivery order. See Enclosure A of the Environmental Assessment Supplemental Guidance at: http://workt1ow.den.nps.gov/I 0 PublicForms/public forms.htm for guidance on what should be included in the Administrative Record.

> ***Deliverables***: The Contractor shall provide an interim electronic Administrative Record every ninety (90) calendar days beginning ninety (90) days after the issuance of this task order and the complete Administrative Record, in hard copy, within thirty (30) calendar days after the decision document has been signed.

5. Site Visit

The Contractor shall participate in an initial site visit for the project at the park. The PM or technical representative will coordinate with the park to determine the dates and times for the site visit. The Contractor shall prepare a list of NEPA - and NHPA - related agenda items prior to the site visit. The agenda items will be incorporated into the overall site visit agenda.

The Contractor shall provide a project area map to facilitate discussion during the site visit. The map shall be in sufficient detail to illustrate park units and boundaries, and other information relevant to this project. During this site visit, the Contractor shall gather information from park staff and other sources regarding the affected environment, park resources, visitor experience, and other data required to prepare the EA. It is anticipated the initial site visit will take four (4) days, including travel days.

The Contractor shall take representative GPS geo-referenced photographs, including a photo log, during the site visit to be used in documents throughout the EA process. The Contractor shall take detailed notes during the entire meeting. Notes shall be in the form of a meeting summary and not a meeting transcription. The Contractor shall be responsible for providing copies of written

meeting notes to all participants within seven (7) days following the meeting subject to one (1) review by NPS.

Deliverables: Site visit NEPA and NHPA related agenda, project area map, photographs, photo log and meeting summary - draft in electronic format only. Site visit agenda and project area map should be provided in hard copy format during the site visit.

6. Project Status Meetings

The Contractor shall participate in monthly project status meetings with park personnel via conference call to discuss (1) project schedule and budget; (2) progress of individual tasks; (3) problems encountered and options for their resolution; and (4) project milestones. The Contractor shall prepare the agenda for these meetings at least one full day before the meeting and provide written project status meeting notes. The meeting notes shall document discussion and decisions related to each agenda topic. The 1st draft notes shall be submitted to the COR within seven (7) calendar days of meeting completion. Final meeting notes shall be due seven (7) calendar days after comments by NPS are returned to the Contractor. Meeting notes shall be recorded in PEPC.

Deliverables: Project status meeting agendas and meeting notes/summaries - draft and final copies in electronic format only. The Contractor should assume up to two (2) reviews by NPS.

7. Research and Data Collection

The Contractor shall gather information from park staff and other existing sources including drawings, survey data and background information regarding the proposed action, affected environment, park resources, visitor experience, and other data required to prepare the EA and FSOF.

The need for additional field surveys and studies shall be identified by the Contractor. The NPS shall determine if a modification to the contract shall be needed to complete the work.

Deliverables: The Contractor shall submit a detailed list of information/data that has been gathered as well as a list of additional information/data needs and submit an electronic copy of both lists to the COR.

B. Environmental Assessment (EA)/Floodplain Statement of Finding (FSOF) Preparation

1. EA/FSOF Outline

The Contractor shall prepare an annotated outline of the documents in accordance with the format and requirements of D0-12. The outline shall be annotated with subheadings to facilitate discussion of preliminary content of the EA. An example of an NPS EA outline will be provided to the Contractor. The Contractor shall assume two (2) revisions.

Deliverable: The Contractor shall provide one (1) electronic copy in Adobe Acrobat (pdf) format, with lines numbered on each page, and one (1) electronic copy in MS

Word format, with lines numbered on each page, to the COR via e-mail. The Contractor shall assume two (2) revisions.

2. Purpose and Need

The Contractor shall prepare the purpose and need chapter per DO-12 guidelines for internal review. This section briefly summarizes the agency's proposed action, followed by a concise explanation of the project's purpose and need. The "purpose" of the project is a statement of goals and/or objectives that the NPS intends to fulfill by taking action (not the reason for preparing the EA). The "need" describes the conditions prompting the NPS to consider action and explains why the NPS is proposing the action at this time.

Deliverable: The Contractor shall provide one (1) electronic copy in Adobe Acrobat (pdf) format, with lines numbered on each page, and one (1) electronic copy in MS Word format, with lines numbered on each page, to the COR via e-mail. The Contractor shall assume two (2) revisions.

3. Impact Topics Retained for Further Analysis

The Contractor shall submit a list of Impact Topics Retained for Further Analysis and those dismissed from further analysis to the NPS for review and approval.

Deliverable: The Contractor shall provide one (1) electronic copy in Adobe Acrobat (pdf) format, with lines numbered on each page, and one (1) electronic copy in MS Word format, with lines numbered on each page, to the COR via e-mail. The Contractor shall assume two (2) revisions.

4. Draft Alternatives

The Contractor shall use the data collected under item A.7 (above) and information discussed during the Kick-off and Site Visit meetings to develop draft alternatives for the proposed project. The alternatives shall include a “no action alternative” and up to three (3) action alternatives. This does not include alternatives considered but dismissed. The draft alternatives will be subject to two (2) NPS reviews.

Deliverable: The Contractor shall provide one (1) electronic copy in Adobe Acrobat (pdf) format, with lines numbered on each page, and one (1) electronic copy in MS Word format, with lines numbered on each page, to the COR via e-mail. The Contractor shall assume two (2) revisions.

5. EA/FSOF 1st Draft

The Contractor shall prepare preliminary draft documents for review and approval. The draft EA/FSOF shall be consistent with Enclosure C of the Environmental Assessment Supplemental Guidance http://workflow.den.nps.gov/10_PublicForms/ public_forms.htm. The park will provide the July 6, 2010, Interim Guidance for Impairment Determinations in NPS NEPA Documents upon award to the Contractor. The draft SOF shall be consistent with Director’s Order #77-2: Floodplain Management and the National Park Service Procedural Manual 77-2: Floodplain Protection. The SOF shall be included as an appendix to the EA. The contractor shall

discuss with the COR prior to document preparation where deviations from the outline may be appropriate.

Deliverable: The Contractor shall provide one (1) electronic copy in Adobe Acrobat (pdf) format, with lines numbered on each page, and one (1) electronic copy in MS Word format, with lines numbered on each page, to the COR.

6. EA/FSOF 2nd Draft

Deliverable: The Contractor shall prepare a 2nd Draft for review that has been revised to address review comments provided on the 1st Draft. The Contractor shall also submit a track changes version of the revisions from the first review to the COR electronically.

7. EA/FSOF 3rd Draft

Deliverable: The Contractor shall prepare a third review draft that has been revised to address review comments provided on the 2nd Draft. The Contractor shall also submit a track changes version of the revisions from the second review to the COR electronically.

8. Scoping Press Release, Information Request and Scoping Notification Letters

Deliverable: The Contractor shall prepare a draft scoping press release, information request and scoping notification letters to federal, state, and local agencies, for review by NPS. The Contractor should assume two (2) revisions to each document. The Contractor shall also submit a track changes version of the revisions from the 1st review to the COR electronically.

9. EA Transmittal Letter

Deliverable: The Contractor shall prepare an EA transmittal letter after the NPS receives the Regional Director's permission to print, to be included with each copy of the EA. The Contractor shall assume two (2) revisions.

10. EA/FSOF Public Review

Deliverables: The Contractor shall prepare an EA for public review that has been revised to address comments provided on the three previous drafts and that incorporate Section 106 documentation/AoE/DoE. The Contractor shall also submit a track changes version of the revisions from the third review to the COR. The Contractor shall post the final EA/FSOF as a pdf electronic copy to PEPC. The document file shall be no larger than 5 MB. If the document is larger than 5 MB, then it shall be broken into chapters or multiple documents with no single file larger than 5MB. The Contractor shall also provide in one (1) electronic copy in Adobe Acrobat (pdf) format, with lines numbered on each page, and one (1) electronic copy in MS Word format to the COR.

11. Public Comment Analysis and Response Using PEPC

The Contractor shall access and use the NPS on-line environmental planning tool, Planning, Environment, and Public Comment (PEPC), which shall be used for project planning,

compliance tracking, comment analysis and response, and public communication efforts. Planning, Environment and Public Comment Database (PEPC) training is available for untrained individuals at: http://pepc.eppley.org/.

Deliverables:

a. The Contractor specified personnel shall complete the computer-based training in order to be assigned a user profile for the project and an access password. PEPC training shall be completed prior to the kick off meeting.

b. The Contractor shall be responsible for entering all public and agency correspondence (documents) into PEPC. For estimation purposes, the Contractor shall assume one hundred (100) documents (e-mails, faxes, hard copy letters, etc.) containing twenty five (25) comments (select pieces of the correspondence copied into the comment field from the correspondence text) would be generated during both the scoping and EA review periods, including those comments received at the public meetings.

c. The Contractor shall prepare a public comment summary report upon completion of the public scoping period. This report requires an analysis and summary of public scoping comments (Note: This is not a report that is generated in PEPC). The Contractor shall assume two (2) revisions.

d. The Contractor shall develop a draft coding structure for public comments on the EA/FSOF (scoping comments do not need to be coded). Upon review and approval of coding structure, the Contractor shall code comments, identify representative quotes (comments), and prepare concern statements. For estimation purposes, the Contractor should assume of the twenty five (25) comments entered into the comment field, fifteen (15) would be substantive comments, and ten (10) would be non-substantive. All comments in PEPC receive a code, but only substantive comments receive a concern statement and a response. The Contractor shall assume that of the 15 substantive comments, five to ten (5-10) concern statements shall be developed by the Contractor and entered into PEPC. The concern statements represent the summary of the substantive issues for each topic (code).

e. Within ten (10) days after close of the EA public comment period, the Contractor shall produce a draft Content Analyses Report for review and approval by the NPS. This final report would contain all coded comments, (both substantive and non-substantive), representative quotes for coded comments, concern statements, and demographic reports. The appendix of the report shall contain copies of letters, emails, faxes that were received during the comment period from all entities (government, organizations, businesses, etc.) excluding those received from individual commenters (non-affiliated). The Contractor shall assume one (1) revision.

f. The Contractor shall prepare up to thirty (30) draft responses to assigned concern statements, and where necessary, as a result of public comments, prepare text changes for insertion into the final EA/FSOF. Per 516 DM 1.3, all responses to comments must be in sufficient detail to demonstrate NPS has fully considered

public input and provide a response that explains why the comment was not incorporated into the EA/FSOF decision making or if the text/decision has changed indicate how and where the reader can find this information in the document text.

g. The Contractor shall, upon completion of NPS review of the assigned draft comment responses, discuss comments on those responses with NPS and prepare final responses, including text changes, if necessary.

1. Project Organization Using PEPC

The Contractor shall upload all drafts and final documents to the PEPC site with a logical file folder structure.

Deliverables: The draft file folder structure for the PEPC site shall be presented to the COR for review and approval.

2. FONSI 1st Draft

The Contractor, in coordination with the COR, shall prepare the draft FONSI for review that includes identification of any substantive comments on the public review EA and NPS responses.

Deliverables: The draft FONSI shall be provided to the COR for review and approval.

3. FONSI 2nd Draft

The Contractor shall prepare a 2nd draft FONSI that has been revised to address review comments provided on the 1st draft.

Deliverables: The 2nd draft FONSI and a track changes version of the revisions from the first review shall be provided to the COR.

4. FONSI 3rd Draft

The Contractor shall prepare a 3rd draft that has been revised to address review comments provided on the 2nd draft.

Deliverables: The 3rd draft FONSI and a track changes version of the revisions from the 2nd review shall be provided to the COR.

5. Final FONSI

Deliverables: The Contractor shall prepare a final FONSI that has been revised to address comments provided on all three previous drafts. The Contractor shall also submit a track changes version of the revisions from the 3rd review to the COR.

C. National Historic Preservation Act (NHPA) Section 106 Compliance

With the assistance of the Contractor, the NPS will consult with State and Tribal Historic Preservation Officers, the Advisory Council for Historic Preservation and Native American

Indian Tribes regarding the effects of the preferred alternative as outlined in 36 CFR 800 in compliance with Section 106 of the National Historic Preservation Act.

1. Section 106 Letters and Documentation

Deliverables: The Contractor shall prepare letters to the State Historic Preservation Officer, Tribal Historic Preservation Officers, Tribes and the Advisory Council on Historic Preservation to initiate Section 106 consultation in accordance with 36 CFR 800.3. These letters shall include:

- Text that describes and a map that depicts the Area of Potential Effect (APE) of the proposed Undertaking as defined in 36 CFR 800.16(D);
- Identify historic properties within the APE in accordance with 36 CFR 800.4;
- A Determination of Eligibility (DoE) for all historic properties within the APE in accordance with 36 CFR 800.4(C);
- An Assessment of Effect (AoE) of the proposed undertaking in accordance with 36 CFR 800.5;
- If it is determined there will be an adverse effect on Historic Properties the Section 106 Consultation Letters shall also include a description of alternatives or modifications to the proposed undertaking and an evaluation of those alternatives or modifications that would avoid, or minimize effects to Historic Properties, or the proposed mitigation efforts in accordance with 36 CFR 800.6.

The Contractor shall assume two (2) revisions to each document. The Contractor shall revise and finalize consultations letter per NPS review and comments.

2. Environmental Assessment Cultural Resource Impact Analysis

Deliverables: The Contractor shall summarize the Section 106 Compliance process, including the consultation efforts, in the EA and in the FONSI.

Compliance Deliverables Format

Paper Format: 8 1/2” x 11” white bond paper (if applicable, 11" x 17" paper shall be fan-folded). Draft submissions shall be single staple bound. Final submission shall be plastic comb bound with a cover page, numbered pages, and page-dividers (as appropriate). Use cover-stock for cover and back page.

Electronic Format: All CD ROMs shall be formatted single session; finalized disk; Joliet or ISO 9660 Level 2 file system and clearly labeled (electronically printed) with the following project information:

- park four-letter alpha code
- PMIS number
- deliverable items (i.e. environment assessment, FONSI, etc.)

- project title
- location within park
- date submitted (i.e. December 14, 2013)
- name of contractor

XII. PRELIMINARY PROJECT SCHEDULE

The Contractor shall be responsible for developing the actual project schedule. The project schedule shall be developed to ensure deliverables are completed as quickly as possible. The Contractor should assume 10-day park reviews, though flexibility will be needed to account for team member schedules.

TASK	START/FINISH
A. EA Meetings, Schedule, Mailing List, etc.	
1. Kick-off Meeting and Coordination	
2. Project Schedule	
3. Project Mailing List	
4. Administrative Record	
5. Site Visit	
6. Project Status Meetings	
7. Research and Data Collection	
B. EA/FSOF Preparation	The following includes the date of submittal and the completion of reviews:
1. EA/FSOF Outline	
2. Purpose and Need	
3. Impact Topics Retained for Further Analysis	
4. Draft Alternatives	
5. EA/FSOF 1st Draft	
6. EA/FSOF 2nd Draft	
7. EA/FSOF 3rd Draft	

8. Scoping Press Release, Information Request and Scoping Notification Letters	
9. EA Transmittal Letter	
10. EA/FSOF Public Review Draft	
Permission to Print	
EA/FSOF Public Review	
11. Public Comment Analysis and Response Using PEPC	
11a. PEPC Training	
11b. Entering Correspondence	
11c. Public Comment Summary Report	
11d. Draft Coding Structure for Public Review Comments	
11e. Content Analyses Report	
11f. Draft Responses to Comments	
11g. Final Responses to Comments	
12. Project Organization Using PEPC	
13. FONSI 1st Draft	
14. FONSI 2nd Draft	
15. FONSI 3rd Draft	
16. Final FONSI	
C. NHPA Section 106 Compliance	
1. Consultation letters	
2. Assessment of Effect	

XIII. FEE AND PAYMENT:

(Modify below depending on contractor source.)

Comply with fee and payment requirements per the IDIQ Contract, Section G, or according to the GSA schedule and as stated herein. (CO Officer should delete the above instruction that does not apply.)

The Contractor shall be paid for travel and lodging in accordance with IDIQ contract, Section G or according to the GSA schedule. Travel costs and all other direct costs shall be included in the firm fixed price for the work. (CO should delete the above instruction that does not apply.)

The Government obligation for performance of this task order beyond this phase is contingent upon the Government's needs and availability of funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise for performance under this contract beyond the amount that has been authorized through the issuance of written task orders.

The sum of $xxx is obligated as the Firm Fixed Price total task order amount for the furnishing of all supplies and services required to accomplish all services required under this task order, and shall be allocated as follows:

TOTAL COMPLIANCE SERVICES $xxx

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NEW RIVER GORGE NATIONAL RIVER
GAULEY RIVER NATIONAL RECREATION AREA

2012