

A Visitor Assessment of Florida National Scenic Trail Visitors on Florida Division of Forestry Lands



Compiled at
University of Florida
School of Forest Resources and Conservation

Taylor V. Stein, Ph.D.
Associate Professor
Principal Investigator

Introduction to the Project

From the summer of 2003 through the summer of 2008, researchers from the University of Florida studied visitors on the Florida National Scenic Trail (FNST). The Trail traverses almost the whole state from Pensacola to Big Cypress National Preserve. Researchers studied visitors to the Trail on public lands throughout the state with the cooperation of every type of public land agency. This includes the National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, US Army Corps of Engineers, U.S. Department of Defense, Florida Division of Forestry, Florida Fish and Wildlife Conservation Commission, Florida State Parks, and Florida's water management districts (Northwest Florida, Suwannee River, St. Johns River, Southwest Florida, and South Florida).

The project consisted of two main parts: to count visitors and to understand who they are and why they use the Trail. In order to count visitors, mechanical counters (either infrared or pressure sensitive pads) were placed along the FNST near trailheads. This gave researchers 24 hour monitoring capabilities. Each site had a counter installed for one or more years, so seasonal fluctuations could be studied. The data were analyzed monthly and cleaned to correct for counts triggered by wildlife or meteorological events. This

produced fairly reliable counts for each section of the Trail that was monitored. In some instances, counters were not installed. Instead, different sampling strategies were used that included visual monitoring, permits, and other strategies.

A questionnaire was also administered to better understand the recreation habits and motivations of visitors to the FNST. Trained surveyors questioned visitors about their demographics, desired experiences, and other recreation activities involved in while on the Trail. This portion of the study was also completed in areas all over the State and on lands representing all the different types of land management agencies in Florida.

The following report is a summary of the results of both portions of the study for the Florida Division of Forestry (FDOF) lands where the study was conducted. Some areas only had visitor counting done and no questionnaires administered. Also, it should be noted that the survey sample size was sometimes small in the lower use areas. The sample size is noted above the results summary. Hopefully, this report will help the FDOF personnel better understand the recreation habits of visitors to their lands



Little Big Econ State Forest

Visitor Counter Data

Counter type:

- Barr St.: Trail Master Eye
- Black Hammock: Personal Observations

Counter related problems and solutions:

- Both monitor and transmitter of the unit were vandalized in December 2007 causing data loss from Dec. 1, 2007 to

Jan. 15, 2008. New unit was reinstalled immediately at a nearby location when incident was noticed during monthly site visit.

Trail conditions throughout the year:

- The trail condition was very good throughout the year.

Table 1. FNST Visitation at Little Big Econ State Forest, June 2007-May 2008

Access Pt.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	TOTAL
Barr St.	315	333	146	135	233	415	259	239	561	585	413	381	4,129
Lockwood*	12	7	11	5	23	30	30	38	42	41	29	21	287
Monthly Total	326	339	157	139	255	445	289	277	602	625	442	402	4,298

*Estimation calculated from access point averages

Black Hammock:

Estimated Foot Traffic: 7,716

Estimated Other Traffic: 10,380

Total Estimated Traffic: 18,096

Total FNST Trail Estimation for all of Little Big Econ St. Forest:

Barr St: 4,129

Lockwood: 287

Black Hammock: 18,096

Total Estimated Visits: 22,512

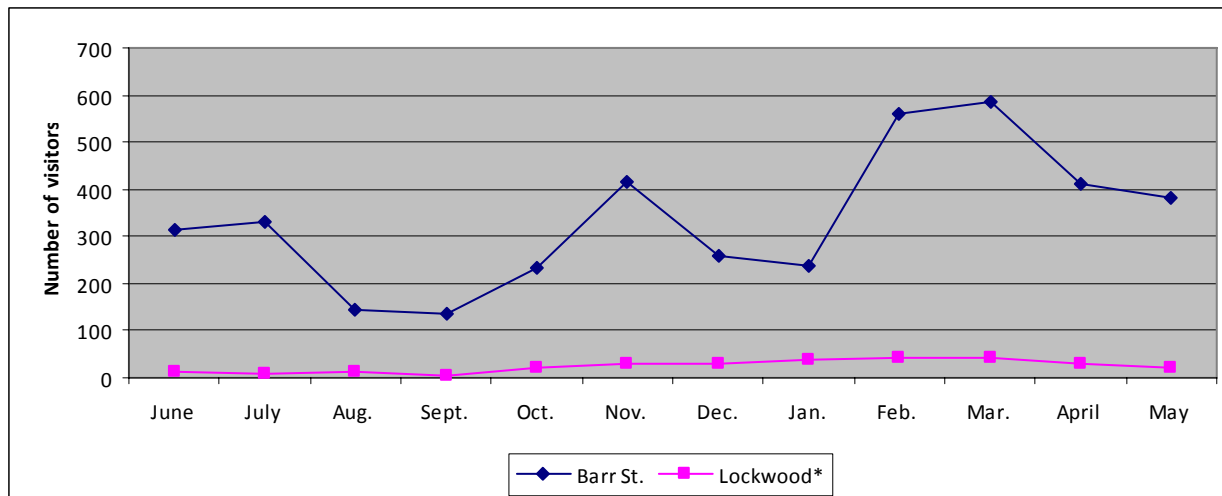


Figure 1. FNST Visitation at Little Big Econ State Forest, June 2007-May 2008

*Estimate calculated from access point averages

Questionnaire Results

(n= 73); Questionnaire was administered from June 2007 to May 2008.

Surveys were conducted at the following access points:

- Barr Street
- Black Hammock (Cross Seminole Trail)

Socio-Demographics

67% of the respondents were male
 77% of the respondents were married
 67% of respondents had a college degree or beyond
 80% were employed outside of the home
 23% of respondents were between 40-49 years old
 22% of respondents were between 50-59 years old
 91% of respondents were white
 32% of respondents reported an annual household income of \$100,000 or more annually

Trip Characteristics

77% of visitors had visited the trail before
 49% of visitors had visited the trail 2-6 times within the past year
 46% of visitors spent a few hours along the trail
 37% of visitors traveled 1-2 miles along the trail
 36% of visitors traveled 3-5 miles along the trail

44% of visitors rated their experience a 10 out of 10

58% of visitors stated that hiking/walking was their primary activity for the day
 34% of visitors stated that viewing scenery was their secondary reason for visiting the trail
 40% of visitors were with family
 44% of visitors learned about the trail because they lived nearby and saw it
 90% of visitors lived within 30 miles of the trail

Motivations

Enjoy Nature (mean = 2.92)
 Escape (mean = 2.91)
 Reduce Stress (mean = 2.89)

Destination Attractors & Settings

Good environmental quality of air, water, and soils (mean = 2.85)
 Wilderness and undisturbed nature (mean = 2.82)
 A chance to see wildlife/birds (mean = 2.78)
 Travel on dirt/grass trails (mean = 2.68)
 Travel on loop trails (mean = 2.45)
 Encounter fewer than 6 groups per day (mean = 2.43)
 Travel in areas untouched by humans (mean = 2.63)

Etoniah State Forest

Visitor Counter Data

Counter type:

- Diamond Traffics Eye

Counter related problems and solutions:

- There is no single problem throughout the study year.

Trail conditions throughout the year:

- Good. One time prescribed burn in August 2008 nearby did not affect on trail use.

Table 2. FNST Visitation within Etoniah State Forest, June 2007-May 2008

Access Pt.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	TOTAL
Holloway	8	8	17	12	13	41	17	51	21	36	27	9	260
Tinsley/Longleaf*	12	7	11	5	10	13	8	16	9	15	11	5	119
Monthly Total	20	15	28	17	23	54	25	67	30	51	38	14	379

*Estimation calculated with access point averages

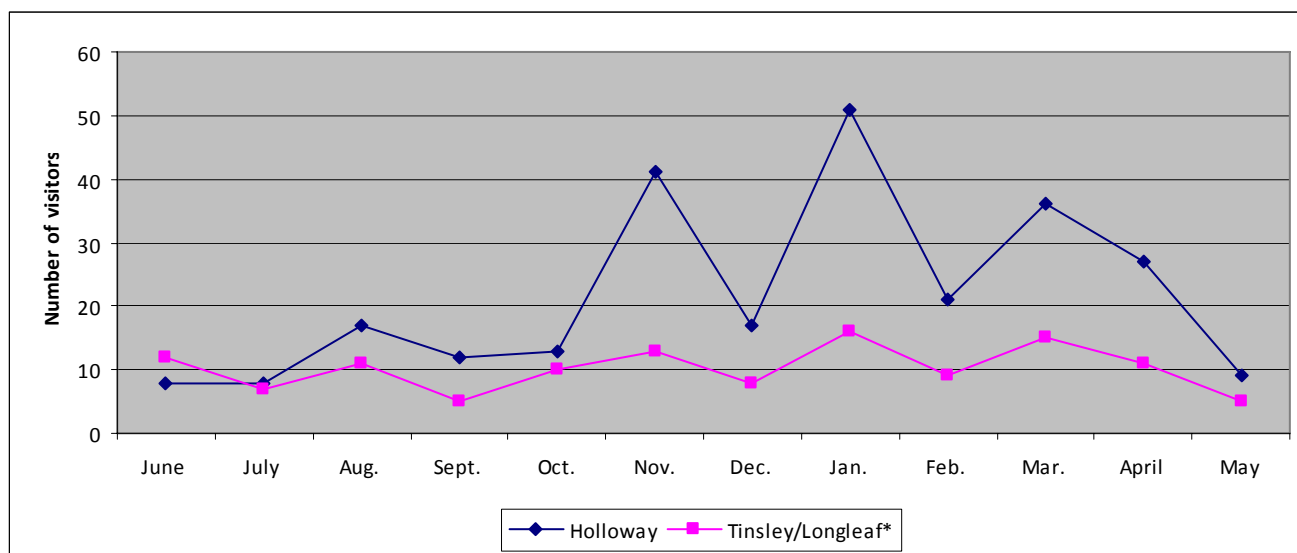


Figure 2. FNST Visitation within Etoniah State Forest, June 2007-May 2008

*Estimation calculated with access point averages

Table 3. Comparison of FNST Visitation at Etoniah State Forest

Study Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	TOTAL
2003-2004	0	0	0	0	28	22	2	25	2	23	20	9	132
2007-2008	20	15	28	17	23	54	25	67	30	51	38	14	379

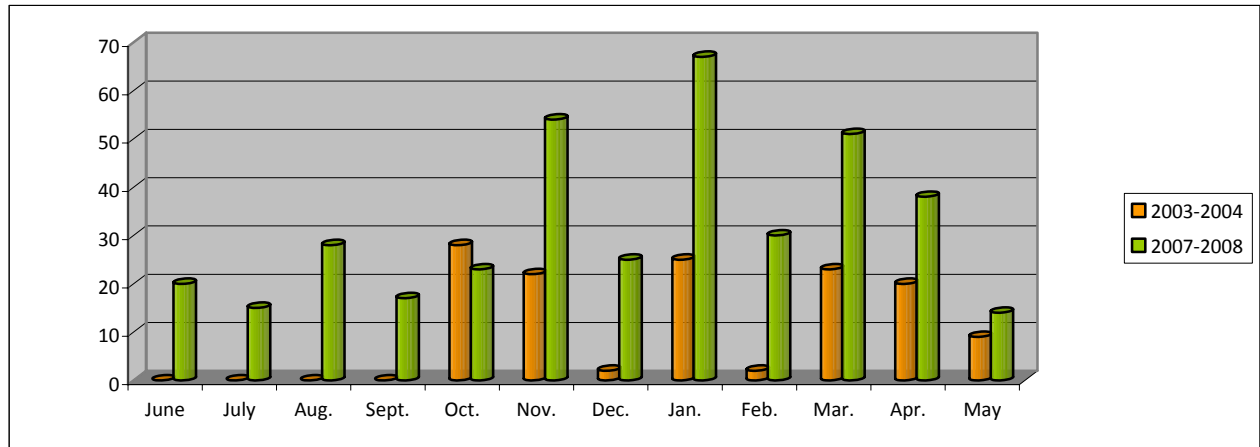


Figure 3. Comparison of FNST Visitation at Etoniah State Forest

Blackwater River State Forest

Visitor Counter Data

Counter Type:

- A Diamond Traffic Infrared eye was installed at Juniper Creek (Red Rock).
- Hurricane Lake and Deaton Bridge were observed and access point averages were applied accordingly.

Counter-related problems and solutions:

- There were no reported problems with the counter equipment throughout the study year.

Trail condition throughout the year:

- Trail was in good condition throughout the year.

Trail Use Estimates

Preliminary research performed in 2001-2002 indicated that Blackwater River State Forest was a high use site, receiving more than 1000 visitors/ year to the Florida Trail. The estimate was correct, with Blackwater's 2005-2006 research season calculated summer use being 732 and fall/spring use being 1974 for a total annual use of 2,706. The highest use month was February with an estimated 339 FT visits. The lowest use month was June with an estimated 86 FT visits.

Table 4. Use of the Florida Trail in the Blackwater River State Forest, June 2005-May 2006

	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	TOTAL
Red Rock	36	32	133	41	131	70	88	64	149	88	112	36	996
*Hurricane Lake CG	25	48	94	70	53	63	75	76	95	95	88	73	855
*Deaton Bridge	25	48	94	70	53	63	75	76	95	95	88	73	855
Monthly Total	86	128	321	181	237	196	238	216	339	278	288	182	2,706

*= Access point that was not monitored. Use level was estimated and an access point average was applied.

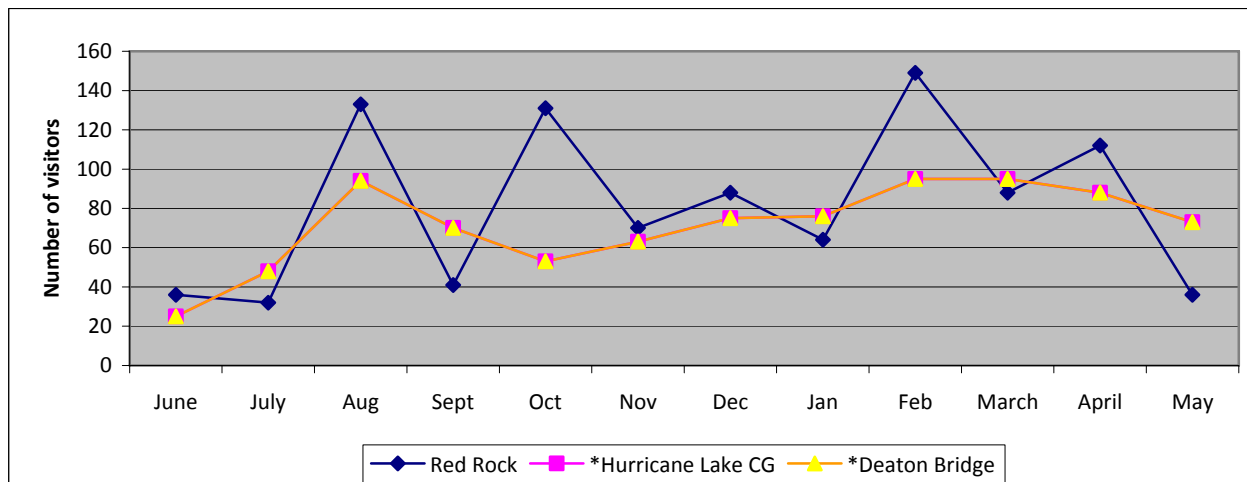


Figure 4. Use of the Florida Trail at Blackwater River State Forest, June 2005- May 2006

Questionnaire Results

(n= 6); Questionnaire was administered from June 2005 to May 2006.

Survey Sites

- Surveys were conducted at Juniper Creek (Red Rock)/Jackson Trail Trailheads

Participant Demographics

- Age
 - 50% of participants were between the ages of 40-49 years old
 - 25% of participants were between the ages of 50-59 years old
 - 25% of participants were between the ages of 60-69 years old
- Gender
 - 67% were female
 - 34% were male

Use History & Knowledge

- 50% knew they were hiking on the FNST
- 67% have hiked the FNST before
- 34% of returning visitors have visited the trail at least twice within the past year

Participant Trip Characteristics

- 84% of visitors entered and exited from the same trailhead

- 84% of visitors spent a few hours or less along the FNST
- 67% of participants traveled in groups of 2-3 people
- 67% of participants traveled with family
- Participants visited the FNST to hike, view scenery, and view cultural resources

Participant Trip Experience

- 84% of visitors rated their experience as a 7 or higher with 10 being a perfect experience
- Reasons why the participants trip was not a ten included
 - Lack of access to the river
 - The area was not the participants preferred scenery
 - The participant(s) did not enjoy the road walks
 - There was a lack of interpretive information along the trail as well as about the trail
- Some suggested improvements for this segment of trail included:
 - Increased water availability
 - Better shelters for backpackers
 - More interpretive information along the trail as well as about the trail

Twin Rivers State Forest

Visitor Counter Data

Counter Type:

- Ellaville: Diamond Traffics infrared eye.
- Mill Unit and Black Unit were visually monitored and access points were applied.

Counter-related problems and solutions:

- Counter worked well throughout the year.

Trail condition throughout the year:

- Trail was in good condition throughout the year.

Trail Use Estimates

Preliminary research conducted in 2001-2002 indicated that Twin Rivers was a medium use site, receiving between 366-999 visitors/ year. Research conducted in 2005-2006 indicated that Twin Rivers was a high use site, receiving over 1000 trail visits/ year. Twin Rivers received an estimated 1036 trail visits in 2005-2006. The highest use month was March with an estimated 119 FT visits and the lowest use month was June with an estimated 34 FT visits.

Table 5. Use of the Florida Trail at Twin Rivers State Forest, June 2005- May 2006

	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	TOTAL
Ellaville	8	47	78	87	70	34	76	69	78	93	91	87	400
* <i>Mill Unit</i>	13	6	11	1	14	11	6	13	4	13	11	6	62
* <i>Black Unit</i>	13	6	11	1	14	11	6	13	4	13	11	6	62
Monthly Total	34	59	100	89	98	56	88	95	86	119	113	99	524

*= Access point that was not monitored. Use level was estimated and an access point average was applied.

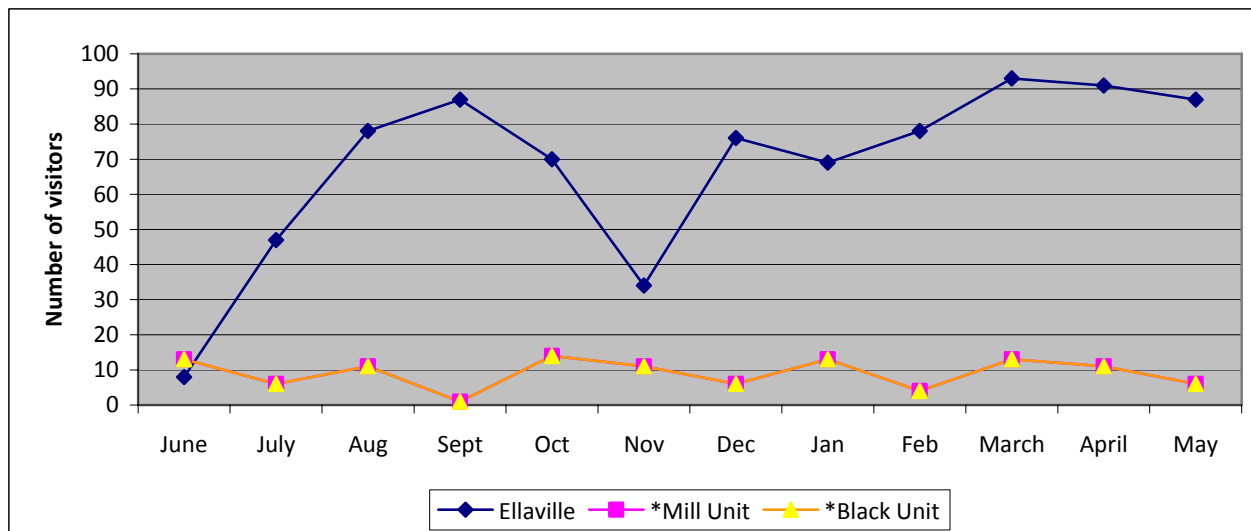


Figure 5. Use of the Florida Trail at Twin River State Forest, June 2005-May 2006

Questionnaire Results

(n= 3); Questionnaire was administered from June 2006 to May 2006.

Participant Demographics

- Age
 - 67% of participants were between the ages of 30-39 years old
 - 34% of participants were between the ages of 40-49 years old
- Gender
 - 67% were male
 - 34% were female

Use History & Knowledge

- 67% of the participants knew they were hiking on the FNST
- None of the participants had hiked the FNST before

Participant Trip Characteristics

- 67% of visitors did not enter and exit from the same trailhead
- 100% of visitors spent a few hours or less along the FNST
- 67% of participants traveled in pairs
- 67% of participants traveled with family or with a significant other
- Participants visited the FNST to hike/walk, view scenery, and hunt

Participant Trip Experience

- 67% of visitors rated their experience as a 7 or higher with a 10 being a perfect experience
- Reasons why the participants trip was not a ten included
 - Lack of blazes
 - Did not enjoy road walks
- Some suggested improvements for this segment of trail included:
 - Better trail maintenance and blazing

Withlacoochee State Forest & Rail Trail

Visitor Counter Data

Counter Type:

- Richloam fire tower: Diamond Traffics infrared eye.
- Hog Island: Diamond Traffics infrared eye
- River Junction was visually monitored.

Counter-related problems and solutions:

- There were no counter problems throughout the study period.

Trail condition throughout the year:

- The trail condition at both sites was good throughout the year. The one exception was Richloam was very wet in June.

Trail Use Estimates

The Withlacoochee State Forest received an estimated 17,403 visitors to the FNST in 2005-2006. The majority (11,516) of these visitors (66%) were bikers or users other than hikers on the Withlacoochee Rail Trail. The lowest use access point was Hog Island and the highest use access point besides the Rail Trail was the Richloam Fire Tower.

Table 6. Use of the Florida Trail at the Withlacoochee State Forest, June 2005-May 2006

	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	TOTAL
Richloam	355	283	192	145	138	138	82	46	100	174	102	105	1,860
Hog Island	68	55	76	69	133	97	30	15	31	10	42	37	663
*River Junction	63	75	76	95	95	88	73	25	48	94	70	53	855
\`With. RT Foot													2,509
\`With. RT Other													11,516
Monthly Total	131	130	152	164	228	185	103	40	79	104	112	90	17,403

*= Access point that was not monitored. Use level was estimated and an access point average was applied. Withlacoochee RT is an observation site that was not monitored monthly, so only annual data is given.

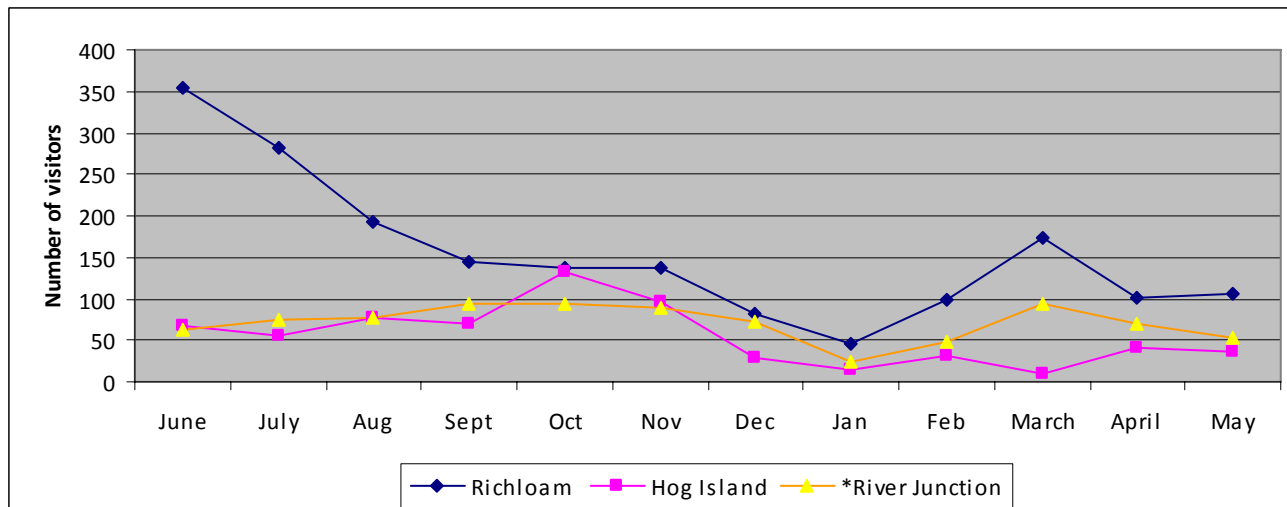


Figure 6. Use of the Florida Trail in the Withlacoochee State Forest, June 2005-May 2006

* The Withlacoochee Rail Trail is not included in this figure

Questionnaire Results

(n= 25); Questionnaire was administered from June 2005 to May 2006.

Participant Demographics

- Age
 - 10% of participants were between the ages of 70-79 years old
 - 25% of participants were between the ages of 60-69 years old
 - 20% of participants were between the ages of 50-59 years old
 - 35% of participants were between the ages of 40-49 years old
 - 10% of participants were between the ages of 18-39 years old
- Gender
 - 56% were male
 - 44% were female

Use History & Knowledge

- 60% of the participants knew they were hiking on the FNST
- 72% of the participants had hiked this section of the FNST before
- 80% of returning visitors have visited the trail more than 12 times in the past year

Participant Trip Characteristics

- 68% of visitors did enter and exit from the same trailhead
- 83% of visitors spent a few hours or less along the FNST
- 39% of participants traveled alone and 31% traveled in pairs
- 43% of participants traveled with family or friends
- Participants visited the FNST to hike/walk, view scenery, and bird watch

Participant Trip Experience

- 100% of visitors rated their experience as a 7 or higher with a 10 being a perfect experience
- Reasons why the participants trip was not a ten included
 - Difficult terrain (hills)
 - Weather (hot)
 - Worried about hunters
- Some suggested improvements for this segment of trail included:
 - Better trail maintenance and blazing
 - Increase water availability
 - Better maps
 - Better enforcement of rules (foot traffic only Hog Island to River Junction)

Seminole State Forest

Background

Seminole State Forest was classified as a medium use sight, receiving an estimated 366-999 FNST visitors annually. Data collected from trail counters confirmed this preliminary estimate, showing a total of 865 annual pedestrian visits. However, hurricane damage was severe at this site, requiring the FNST to be closed to the public from September 3 – December 1, 2004, possibly inhibiting the number of annual visits to the trail.

Estimation of Visitors

One trail counter (infrared eye) was initially installed at the south end of Seminole State Forest. In December, counter complications forced researchers to uninstall the infrared eye and install a pressure pad. However, the pressure pad was vandalized repeatedly and eventually had to be removed at the end of March and replaced with another infrared eye.

In addition to the counter at the south end of the forest, another counter was installed at the north end of the trail as well.

Table 7. Seminole State Forest Pedestrian Visitor Use Estimates, June 2004-May 2005

	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	TOTAL
SR 46	62	59	59	0	0	0	39	70	52	81	100	126	648
SR 44	15	5	12	0	0	0	15	22	60	47	23	18	217
Monthly Total	77	64	71	0	0	0	54	92	112	128	123	144	865

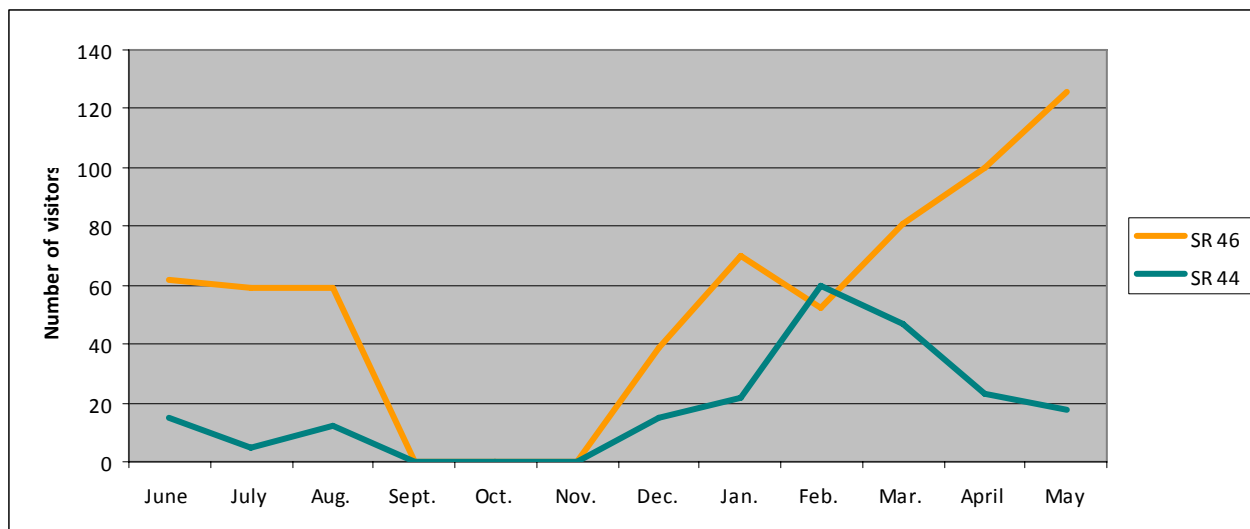


Figure 7. Seminole State Forest Visitor Use Estimates, June 2004-May 2005

Questionnaire Results

(n= 3); Questionnaire was administered from June 2004 to May 2005.

Pedestrian Demographic and Trip Characteristics

One survey session was completed during the summer season and eight were completed during the fall/spring season. From these, 3 people were observed exiting the trail and interviewed. The results from these interviews are presented below.

Table 8. Onsite Exit Interview: Participant Demographics and Group

Characteristic	Answer	Valid Percent (%)
Participant Age	60-69 years old	0.0
	50-59 years old	33.3
	40-49 years old	0.0
	30-39 years old	33.3
	18-29 years old	33.3
Gender of participant	Male	66.7
	Female	33.3
Number of males per group	0	0.0
	1	100.0
Number of females per group	0	50.0
	1	50.0
Group Size	1	66.7
	2	33.3
Group Type	Alone	66.7
	Significant Other	33.3
	Family/Friends	0.0

n=3

Table 9. On-site Exit Interview: FNST Use and Knowledge

Characteristic	Answer	Valid Percent (%)
First time user	Yes	0.0
	No	100.0
Number of times the participant has used the FNST in the past 12 months	2-6 times	33.3
	More the 12 times	33.3
Did the participant enter and exit the FNST from the same location	Yes	66.7
	No	33.3
Time spent on the FNST	1 hour or less	0.0
	A few hours	100.0
	Half a day	0.0
Distance the participant lives from the FNST	30 miles or less	100.0
	31-60 miles	0.0
Did the participant know they were on the FNST	Yes	100.0
	No	0.0

n=3

Table 10. Participant Activities

Variable	n	Activity	Valid Percent (%)
Activity 1	3	Hiking/Walking	66.7
		Jogging/Running	33.3
Activity 2	2	View Scenery	50.0
		Backpacking	50.0
Activity 3	1	Camping	100.0

Table 11. Onsite Exit Interview: Participants FNST Experience

Variable	Activity	Valid Percent (%)
Participant FNST rating on a scale of 1-10 with 10 being a perfect experience	10	0.0
	9-8	66.7
	7-6	33.3
	5 or less	0.0
Reason why the experience was not a 10	Lack of Wildlife	66.7
	No Response	33.3

n=3

Table 12. Onsite Exit Interview: Suggested Improvements

Suggested improvements	Answer	Valid Percent (%)
Extend the length of permits	1	33.3
Less motorized use through the forest	1	33.3
No Recommendations	1	33.3

n=3

Pine Log State Forest

Background

Preliminary research performed in 2001-2002 indicated that the FNST section located in Pine Log State Forest was estimated to be a low use stretch of trail, receiving 365 visits or less annually. Despite the number of hurricanes and the tropical storm that passed through the panhandle in 2004, this section of trail had little damage and minor flooding causing a temporary trail closure of two and a half weeks.

Estimation of Visitors

A pressure pad was initially installed at the Sand Pond Campground trailhead in early June to collect information on trail visits. Due to counter complications, the pressure pad was removed in March and replaced with an infrared eye in the same location. Estimates from the counter are presented below.

Table 13. Pine Log State Forest Visitor Estimates, June 2004-May 2005

	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	Total
Campgrounds	19	19	14	20	75	92	58	38	103	87	101	108	734

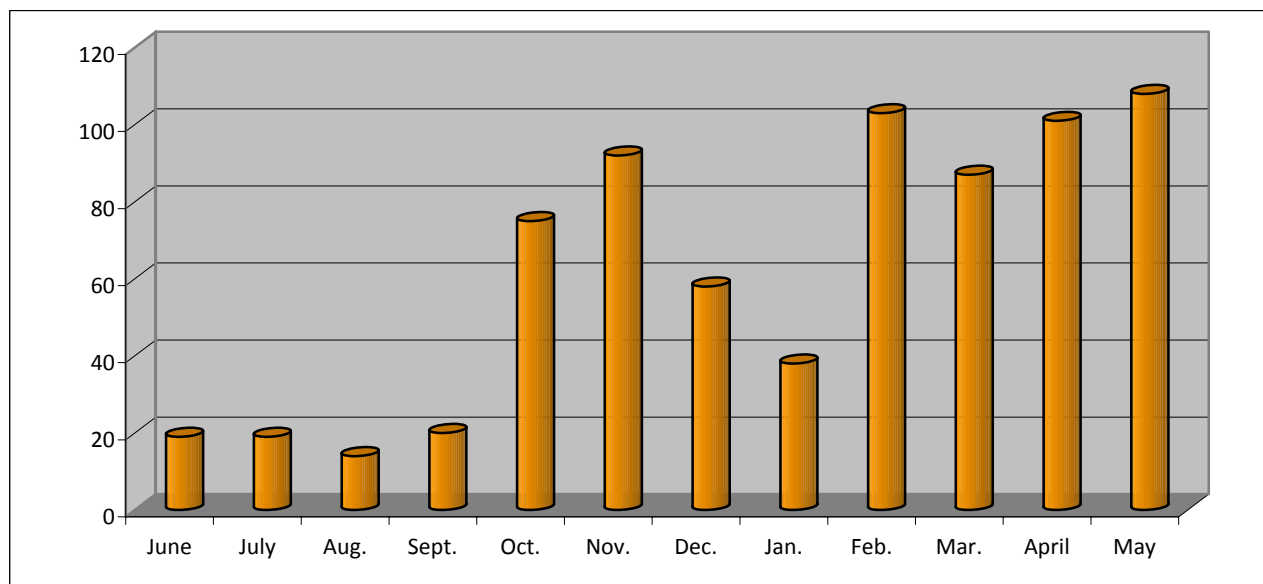


Figure 8. Pine Log State Forest Visitor Use Estimates, June 2004-May 2005

Pedestrian Demographic and Trip Characteristics

All summer survey periods were canceled due to hurricanes moving through the area. Four survey periods were conducted during the fall/spring

season to gather information on FNST user characteristics. Only one participant was observed during these sessions and interviewed from June 2004 to May 2005.

Table 16. Onsite Exit Interview: Participant Demographics and Group

Characteristic	Answer	Valid Percent (%)
Participant Age	60-69 years old	0.0
	50-59 years old	0.0
	40-49 years old	0.0
	30-39 years old	0.0
	18-29 years old	0.0
	No Answer	100.0
Participant Gender	Male	100.0
	Female	0.0
Number of males per group	0	0.0
	1	100.0
	2	0.0
Number of Females per group	0	0.0
	1	100.0
Group Size	1	0.0
	2	100.0
Group Type	Alone	0.0
	Significant Other	100.0

n=1

Table 14. On-site Exit Interview: FNST Use and Knowledge

Characteristic	Answer	Valid Percent (%)
First time user	Yes	0.0
	No	100.0
Number of times the participant has used the FNST in the past 12 months	2-6 times	100.0
	More the 12 times	0.0
Did the participant enter and exit the FNST from the same location	Yes	0.0
	No	100.0
Time spent on the FNST	1 hour or less	100.0
	A few hours	0.0
	Half a day	0.0
Distance the participant lives from the FNST	30 miles or less	100.0
	31-60 miles	0.0
	61-180 miles	0.0
	Out of State	0.0
Did the participant know they were on the FNST	Yes	100.0
	No	0.0

Table 15. Participant Activities

Characteristic	Answer	Valid Percent (%)
Participant FNST rating on a scale of 1-10 with 10 being a perfect experience	10	0.0
	9-8	0.0
	7-6	100.0
	5 or less	0.0
Reason why the experience was not a 10	No reason in particular	100.0
	Not well blazed	0.0

Acknowledgements

Over the course of the study, many University of Florida students and staff contributed to data collection, analysis, and reporting of the Visitor Assessment. In particular, we thank Rachel Albritton, Julie Clark, Josh Cucinella, Christine Denny, Sunny Kil, Ashleigh Powell, Willy Thelosen, Timia Thompson, Annie Oxarart, and Bin Wan for the many hours they devoted to the project.

We are also indebted to the Florida Trail Association for the continual guidance and support over the years, and we especially acknowledge Deborah Stuart-Kent and Kent Wimmer for always providing the time and energy to assist us with the project. Finally, the Visitor Assessment would not have been possible without Michelle Mitchell and Mark Warren from the National Forests in Florida who provided the all important funding but also the motivation and guidance throughout the project.