Appendix D:
Recreational Carrying Capacity Study at the Lake Okeechobee and the Okeechobee Waterway

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Recreational Carrying Capacity Study at the Lake Okeechobee and the Okeechobee Waterway

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Completed by USACE
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1.0 Purpose

The Recreation Carrying Capacity Study will evaluate the ability of the Project to accommodate existing and future recreation uses, and assess whether these uses are suitable given the potential effects on recreational, environmental, and social resources. Carrying capacity can be defined as the amount and type of use that an area can sustain over a given period of time. Carrying capacity can protect users' experiences by preventing overcrowding, which causes deterioration of natural attribute and impedes each user's ability to move freely and to fully enjoy the natural setting without undue stress and distraction.

2.0 Regional Recreation Resources

2.1 Area Recreation

As the second largest lake entirely within the United States, Lake Okeechobee is a very unique recreation destination. There is an abundance of recreation in the area including the nationally-renowned Fisheating Creek. In addition to the Florida Trail – also known as the Lake Okeechobee Scenic Trail to cyclists, there are quite a few other hiking trails nearby. Other recreational lakes in the area include: Lake George, a 12-mile long by 6-mile wide central Florida lake on the border of Ocala National Forest; Lake Seminole, also known as the Jim Woodruff Reservoir near the junctures of the Florida, Georgia and Alabama state lines; Lake Kissimmee in central Florida just below Walt Disney World, connects the seventh largest lake, Lake Tohopekaliga, to the north and Lake Okeechobee to the south through a series of rivers and canals. Numerous parks and other outdoor opportunities abound in the area.

2.2 Other Corps Projects in the Area:

Competing recreation facilities in the market area are typically located near the coast where population is concentrated. On both east and west coasts, saltwater-oriented and urban facilities provide recreation opportunities for both residents and tourist, and visitation to these far exceeds visitation to other regional facilities. Recreation areas that compete with project's facilities for visitation are shown in Figure 1. They include several wildlife management areas, State parks and recreation areas, a National Park and several aquatic preserve. Many of these areas accommodate activities such as camping, picnicking, hiking, bird watching, canoeing, etc. Private campgrounds, although not fully inventoried in Figure 1, are numerous and will continue to develop. The majority are located near the State wildlife management areas and close to Lake Okeechobee. These campgrounds primarily provide seasonal residence for tourists during the winter months.

2.3 Project Description

Lake Okeechobee and the Okeechobee Waterway are located in central and southern Florida. The 451,000 acre lake and 154 mile long waterway extends from the Atlantic Ocean at Stuart, to Gulf of Mexico at Fort Meyers. The waterway runs through Lake Okeechobee and consists of the Caloosahatchee River to the west of the lake and St. Lucie Canal east of the lake. The easterly limit of the system lies on the Intracoastal Waterway near Stuart, Florida. From that point, it passes westerly through the St. Lucie River, the South Fork of the St. Lucie River, and into the St. Lucie Canal system. The system enters the St. Lucie Lock at statute mile 15.1, passes Indiantown at mile 28.1, and reaches Port Mayaca Lock at mile 39. From Port Mayaca Lock, the Waterway takes two distinct routes across Lake Okeechobee to the town of Clewiston, mile 65. Route 1 travels across open water while Route 2, known as the Rim Canal, follows the southern shore, passing the towns

of Canal Point, Pahokee, Belle Glade, and Lake Harbor. From Clewiston, the Waterway continues 13 miles along the shoreline, reaching the Moore Haven Lock at mile 78. The Waterway continues on a three mile run of canal from Moore Haven to Lake Hicpochee, then along the Caloosahatchee River to Ortona Lock, at mile 93.5. Proceeding westerly past the towns of La Belle, Denaud, Alva, through the W. P. Franklin Lock at mile 121.4, and past Olga, Tice, and the City of Fort Myers, it reaches the Caloosahatchee River estuary and terminates approximately one mile offshore of Estero Island.

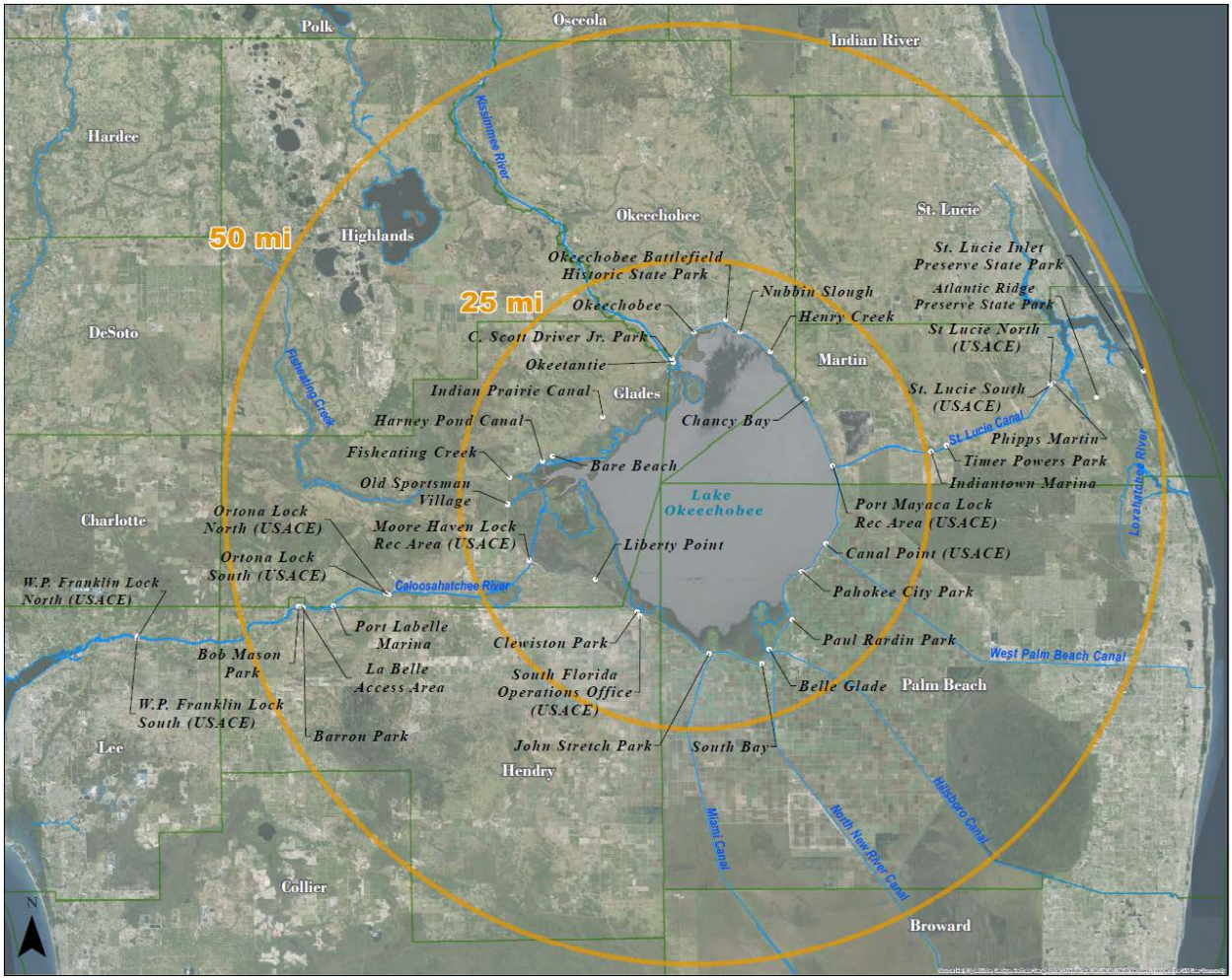

Figure 1: Region of Influence and the Lake Okeechobee Recreation Areas. The Inner Circle displays a 25 mile radius, and the outer circle displays 50 mile radius

2.3.1 Recreation Areas

Lake Okeechobee and Okeechobee Waterway have abundance of recreation in the area including W.P Franklin Lock & Dam North and South Recreation Areas, Ortona Lock & Dam North and South Recreation Areas, Port Mayaca Lock & Dam Recreation Areas North and South, and St. Lucie Lock & Dam North and South Recreation Areas. There are three Corps managed campgrounds with 109 campsites (including 16 boat-in sites) at W. P. Franklin North, Ortona South and St. Lucie South. Project-wide, there are 22 recreation areas managed by other agencies located at: Pahokee City Park, Jaycee Park in Okeechobee, Okee-Tantie near Buckhead Ridge, Clewiston City Park, Torry Island in Belle Glade, Nubbin Slough, Harney Pond Canal, Henry

Creek, Bare Beach (Dyess Ditch Canal) near Lakeport, Fisheating Creek, Paul Rardin Park near Belle Glade, South Bay, LaBelle, Phipps County Park near St. Lucie Lock & Dam, Barron Park in LaBelle, Alva, Liberty Point (Uncle Joe's Fish Camp), Indiantown Marina, Buckhead Ridge, Clewiston Marina, Chancy Bay and Moore Haven. There are five Corps managed boat ramps at W. P. Franklin North and South recreation areas, Port Mayaca, Ortona North recreation area and St. Lucie South recreation area.

2.4 Influence of Other Recreational Projects

The influence of competing projects was considered in developing the visitation for Lake Okeechobee and the Okeechobee Waterway. Per capita visitation assumptions were carefully considered for future estimates.

3.0 Visitation Profile

In general, Lake Okeechobee is visited predominantly by local residents. Peak recreation season is from December to April. Visitations is concentrated during weekends in both peak and non-peak seasons. The Carrying Capacity discusses Lake Okeechobee visitation patterns in detail. Overall project visitation was examined from 2002 to 2012.

3.1 Project Visitation

Project visitation and area population for years 2002 through 2012 are displayed in **Error! Reference source not found.** below. Population includes the following six counties in Florida: Glades, Hendry, Lee, Martin, Okeechobee, and Palm Beach. The 2010 census data shows that the population for these counties is 2,177,226.

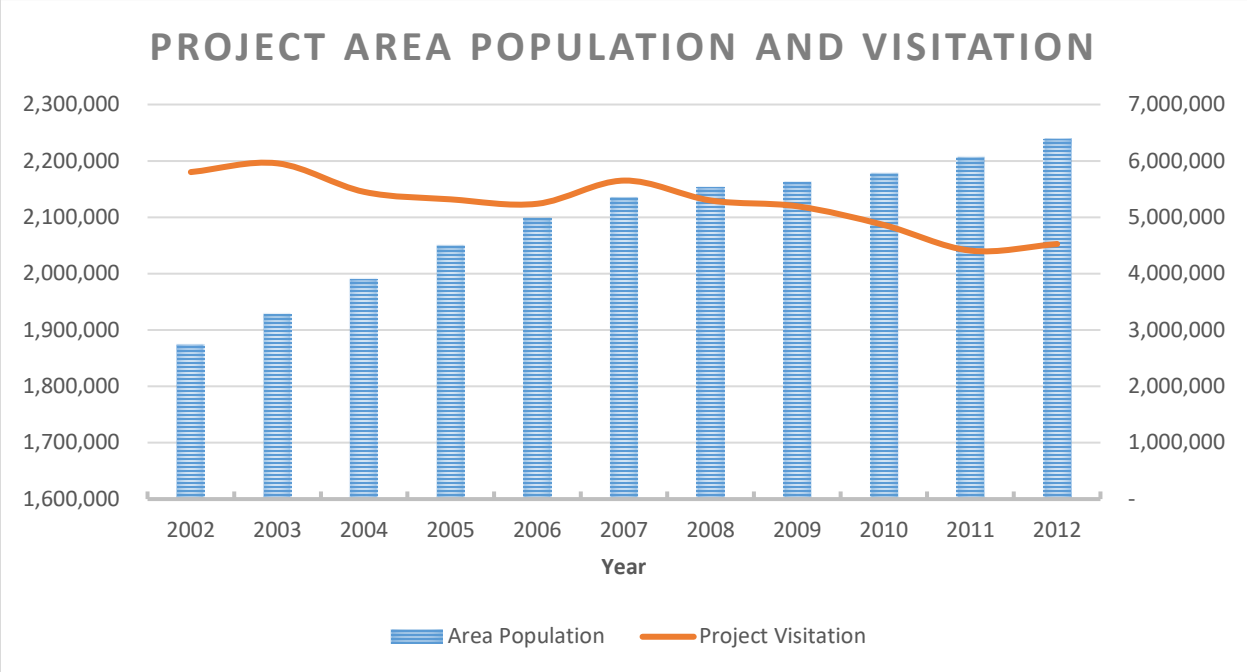

Figure 2: Project Area Population and Visitation
Source: USACE, BEBR University of Florida, and U.S. Census Bureau, Population Division 2015

3.2 Per Capita Use Rate

Visitation data and population data for the area were used for the years 2002 through 2012 to determine the current per capita visitation rate for the region of influence. The average per capita rate is 2.56. It is expected that, in the future, visitation will increase along with population growth. For the Okeechobee project, using the average use rate to project future demand is justified. **Error! Reference source not found.** presents the project area population data, visitation data and per capita use rates.

Table 1: Per Capita Use Rate 2002-2012

Year	Area Population	Project Visitation	Per Capita Use Rate
2002	1,874,779	5,801,398	3.094444
2003	1,928,569	5,956,322	3.088467
2004	1,989,979	5,450,428	2.738937
2005	2,049,119	5,317,387	2.594963
2006	2,098,133	5,239,658	2.497295
2007	2,134,659	5,650,728	2.647134
2008	2,152,736	5,297,710	2.460919
2009	2,161,701	5,194,887	2.403148
2010	2,177,226	4,862,858	2.233511
2011	2,205,883	4,408,069	1.998324
2012	2,238,099	5,447,038	2.433779

Source: Visitation data was obtained from IWR VERS

Population between 2015 and 2045 is displayed below in 5-year increments. An additional 905,000 people are expected to be added over the next 30 years.

Table 2: Area population through 2045

Year	Projected Population
2015	2,285,000
2020	2,480,000
2025	2,656,100
2030	2,811,400
2035	2,951,200
2040	3,074,500
2045	3,190,000

Source: University of Florida, Bureau of Economic and Business Research

Because visitation is closely tied to population growth, it is worthwhile examining a range of projected future demand and how that will affect the project. Future demand (use) will be compared to existing parking space supply to determine if there is adequate parking for foreseeable future at the project.

3.3 Project Site Area and Visitation

Table 3 displays the project site areas (PSA) for each of the six counties. In all, there are thirty five PSAs distributed in six counties, of which 9 are managed by USACE.

Table 3: County and Project Site Area

County		**Project Site Area (PSA)**
Glades		C. Scott Driver Jr. Park
		Okee-Tantie
		Indian Prairie Canal
		Harney Point Canal
		Bare Beach
		Fisheating Creek
		Old Sportsman Village
		Moore Haven Lock Rec Area (USACE)
		Ortona Lock North (USACE)
		Ortona Lock South (USACE)
		Liberty Point
Hendry		Bob Mason Park
		Barron Park
		LA Belle Access Area
		Port Labelle Marina
		Clewiston Park
Lee		W. P. Franklin Lock North (USACE)
		W.P. Franklin Lock South (USACE)
Martin		St. Lucie North (USACE)
		St. Lucie South (USACE)
		Phipps Martin
		Timer Powers Park
		Indiantown Marina
		Chancy Bay
Okeechobee		Okeechobee
		Okeechobee Battlefield Historic State Park
		Nubbin Slough
		Henry Creek
Palm Beach		Port Mayaca Lock (USACE)
		Canal Point (USACE)
		Pahokee City Park
		Paul Rardin Park
		Belle Glade
		South Bay
		John Stretch Park

Below are historic visitation records from 2002 through 2012 for each project site area (PSA) for which data was available. For FY11, data was not available for the month of October; and data was missing for St. Lucie North from October 2010 to June 2011.

3.3.1 Bare Beach

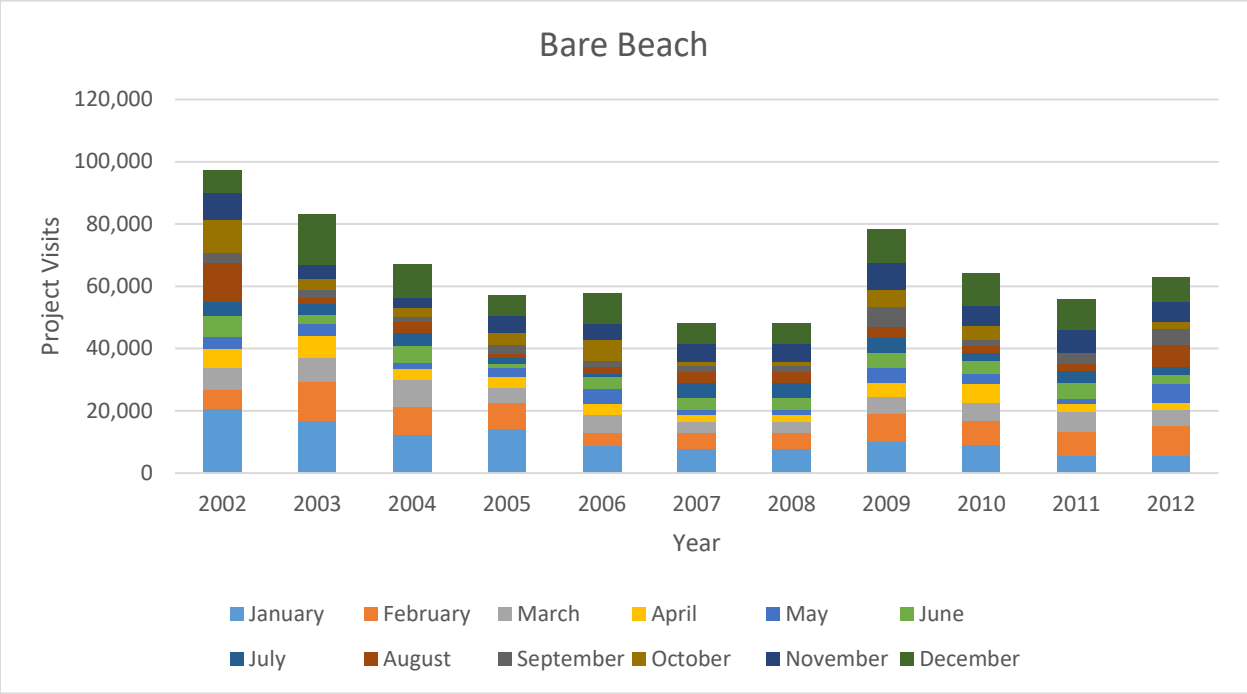

Figure 3: Bare Beach Visitation

3.3.2 Canal Point

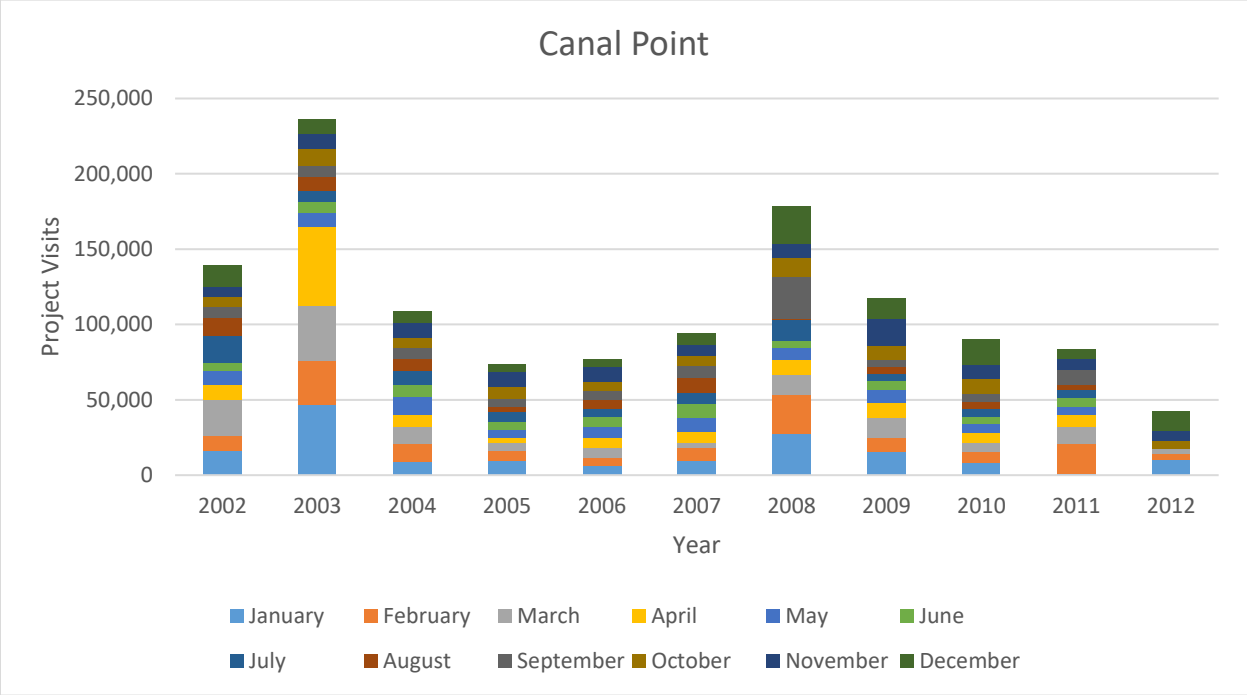

Figure 4: Canal Point Visitation

3.3.3 Chancy Bay

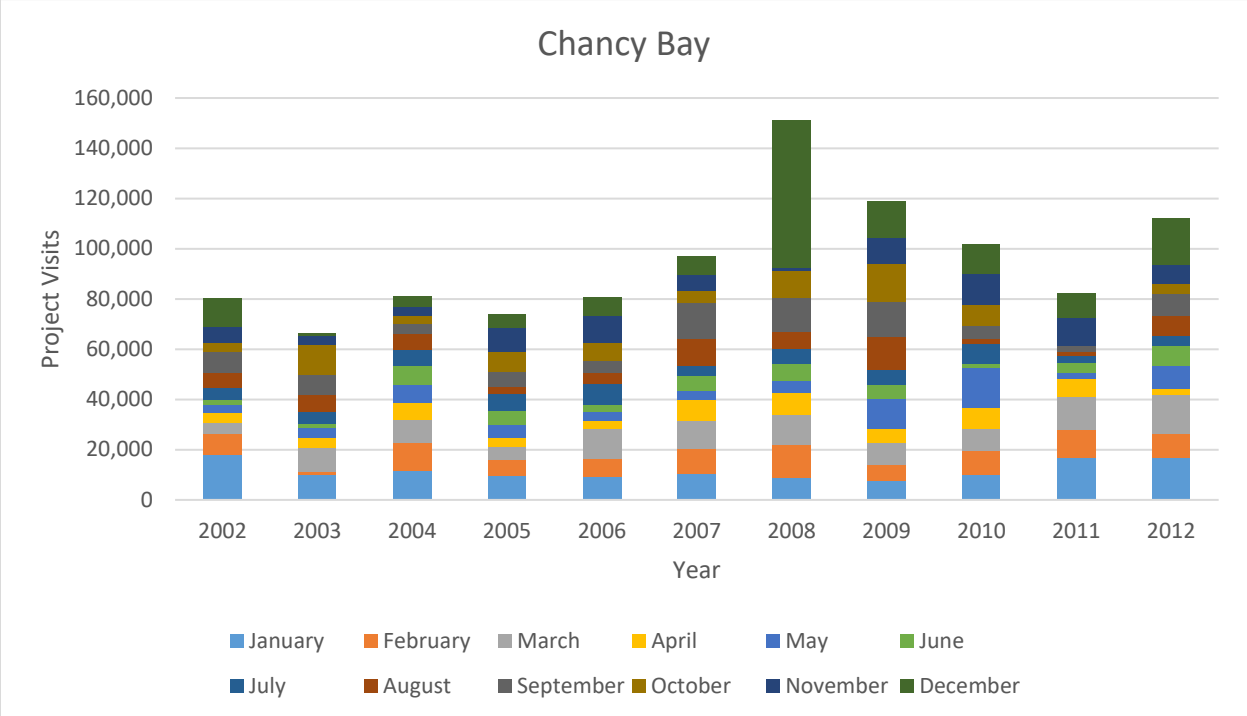

Figure 5: Chancy Bay Visitation

3.3.4 Clewiston Marina

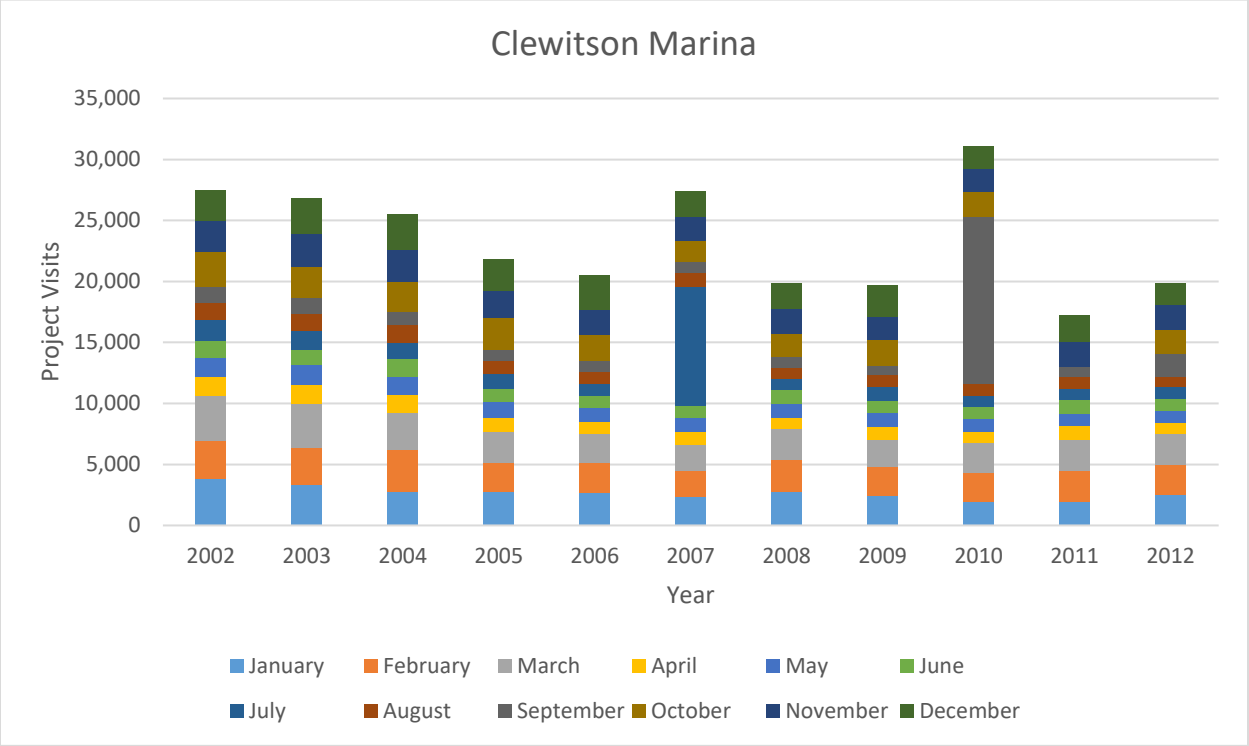

Figure 6: Chancy Bay Visitation

3.3.5 Clewiston Park

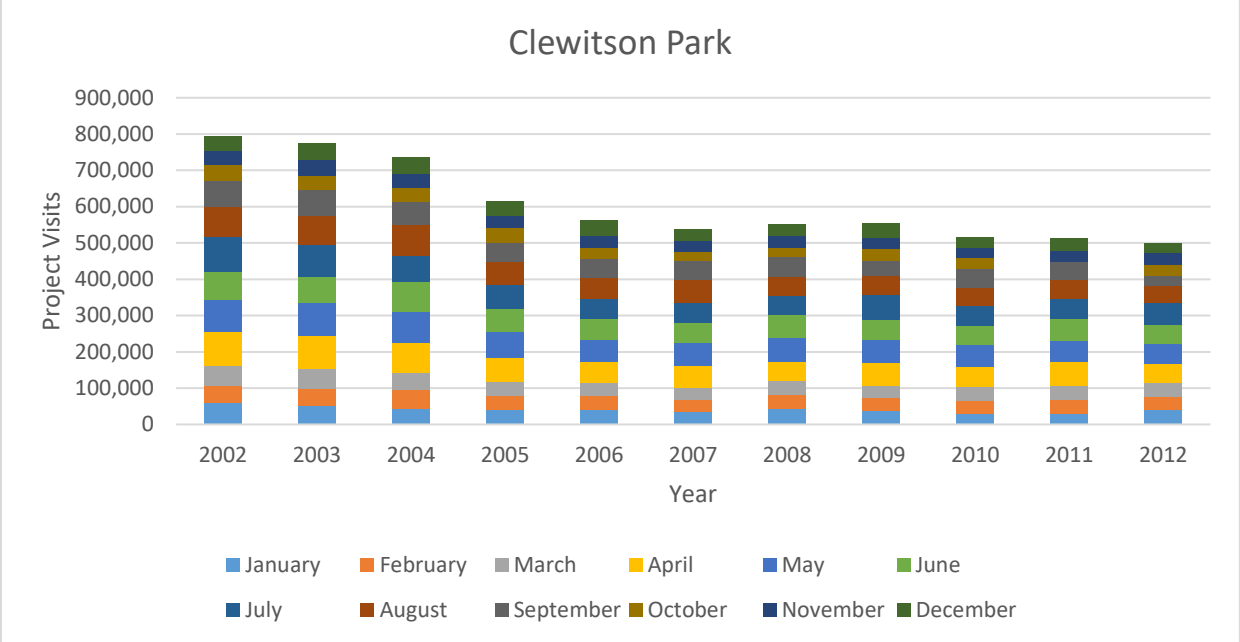

Figure 7: Clewiston Park Visitation

3.3.6 Fisheating Creek

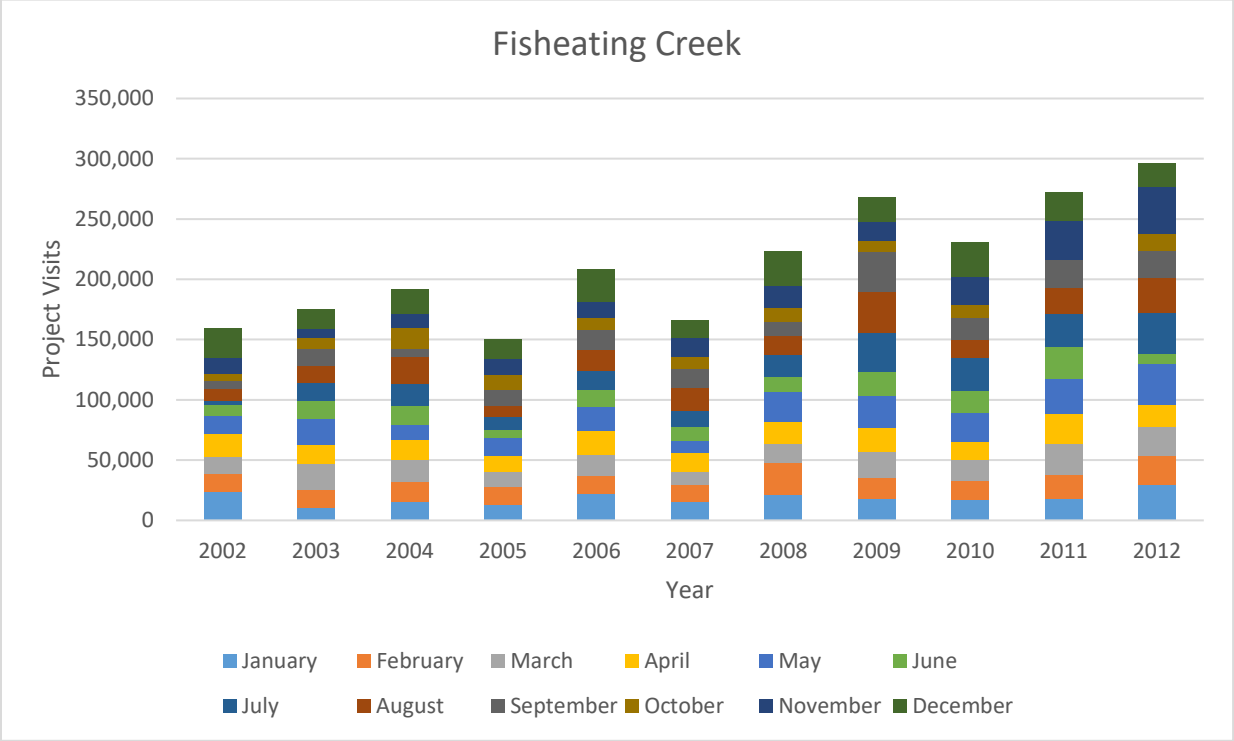

Figure 8: Fisheating Creek Visitation

3.3.7 Franklin North

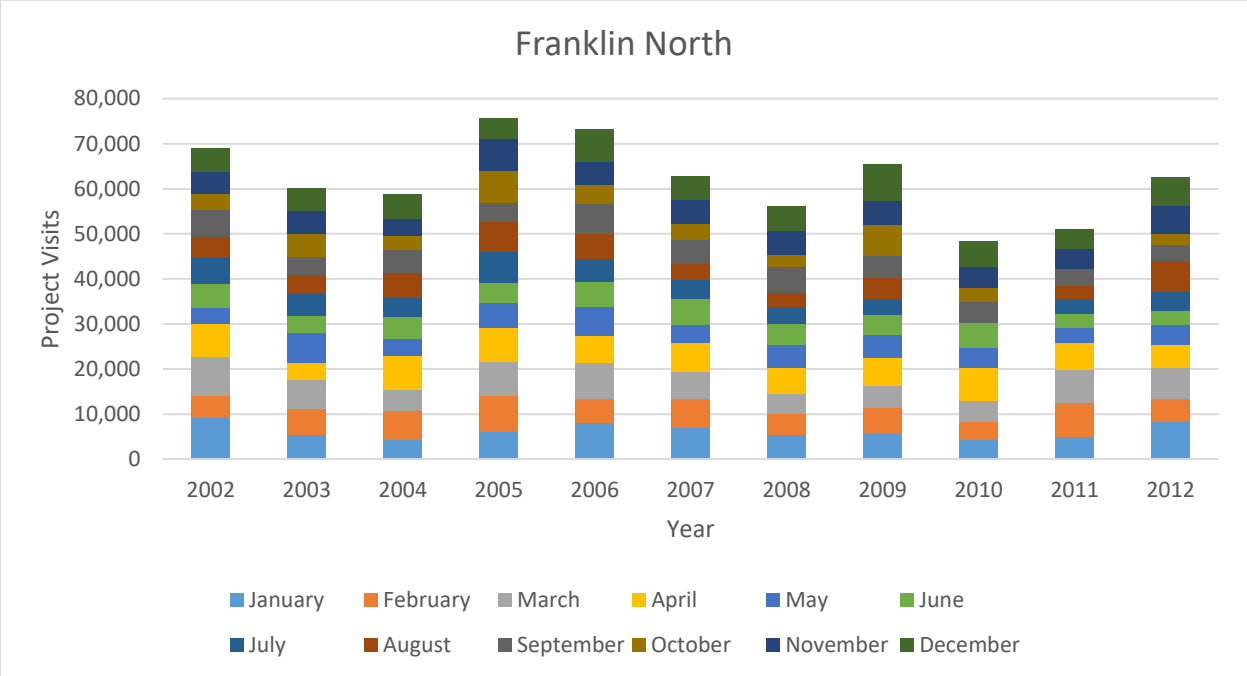

Figure 9: Franklin North Visitation

3.3.8 Franklin South

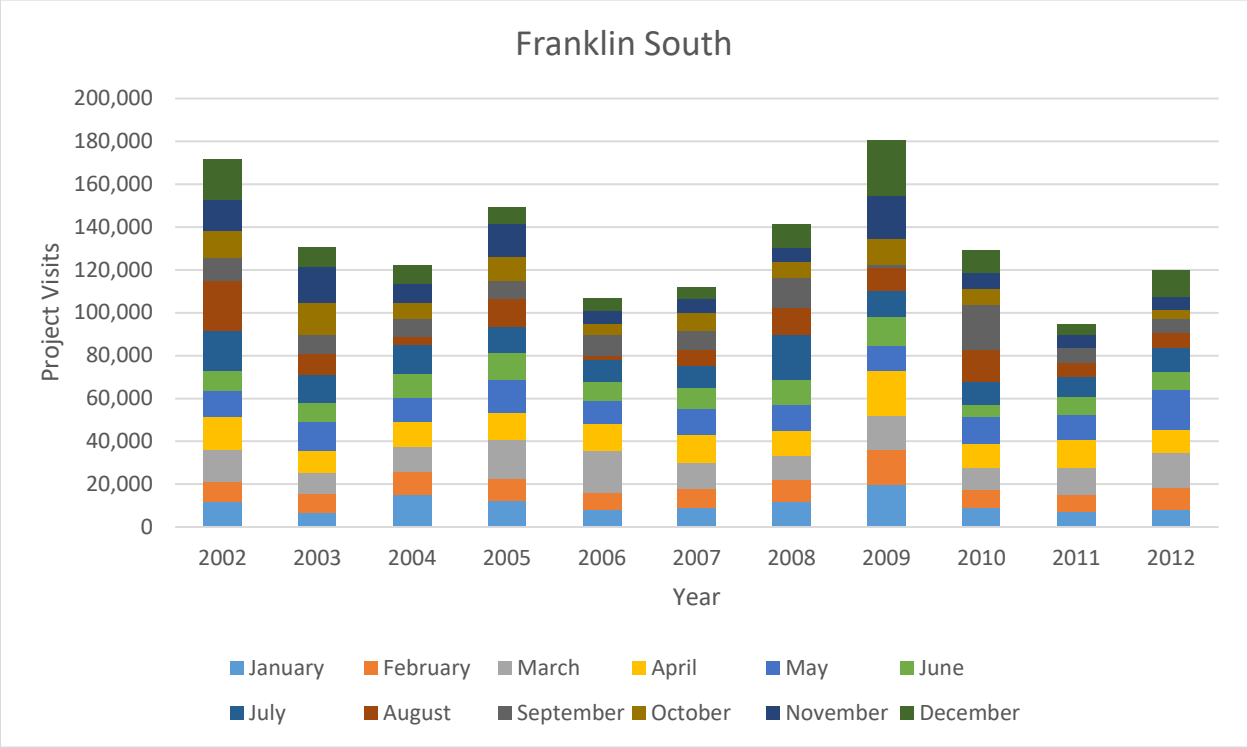

Figure 10: Franklin South Visitation

3.3.9 Harney Pond

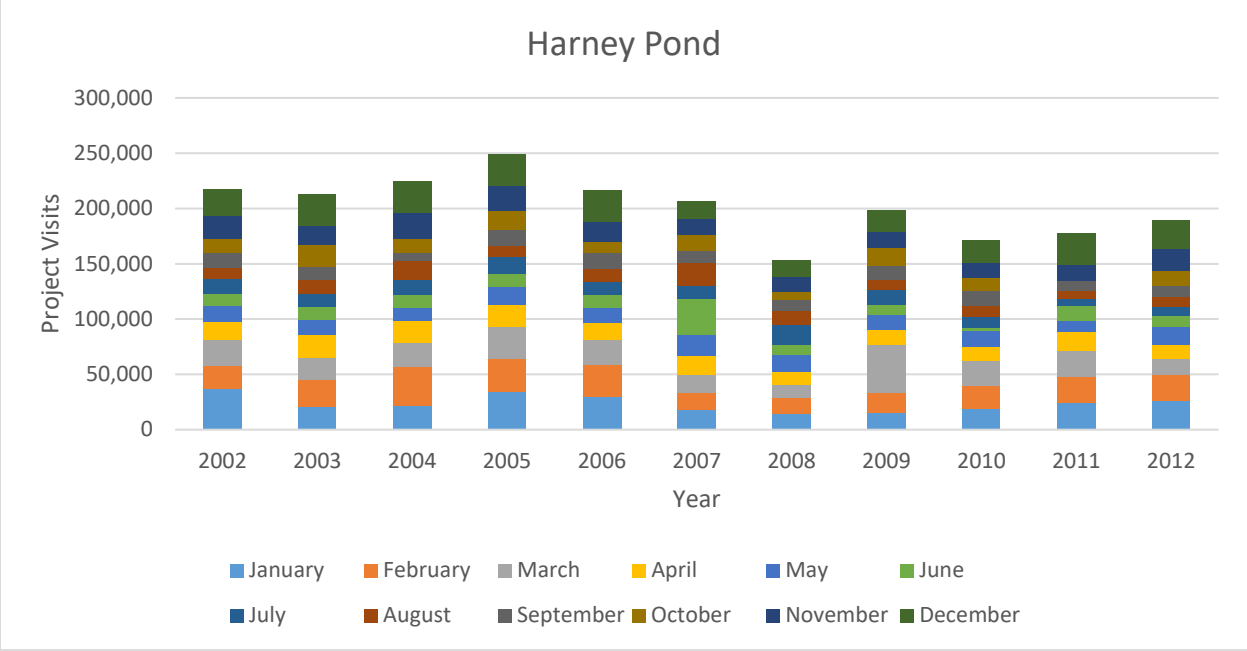

Figure 11: Harney Pond Visitation

3.3.10 Henry Creek

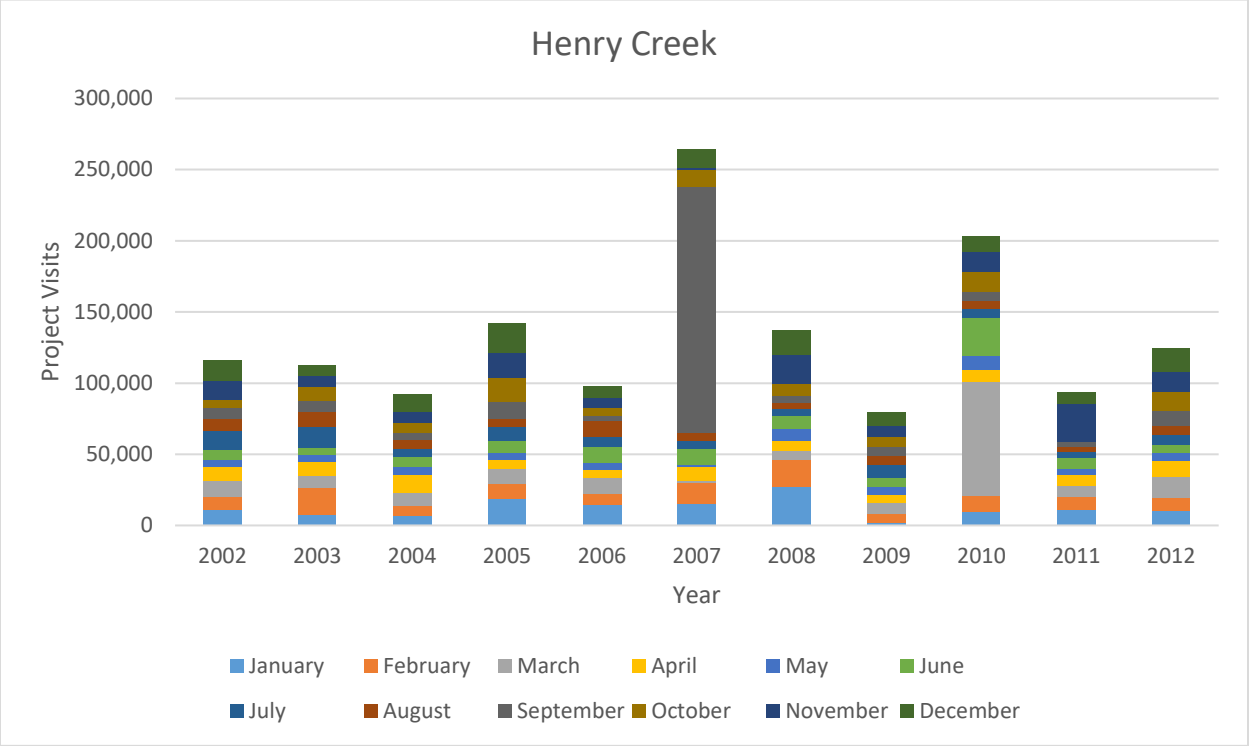

Figure 12: Henry Creek Visitation

3.3.11 Indian Prairie

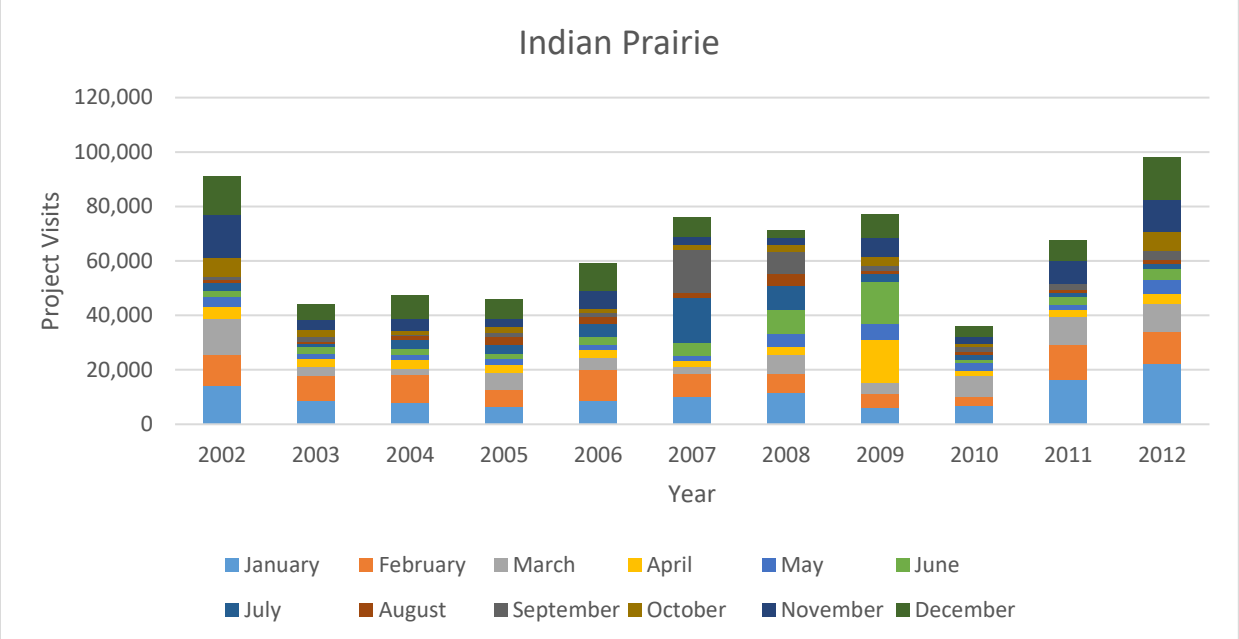

Figure 13: Indian Prairie Visitation

3.3.12 John Stretch Park

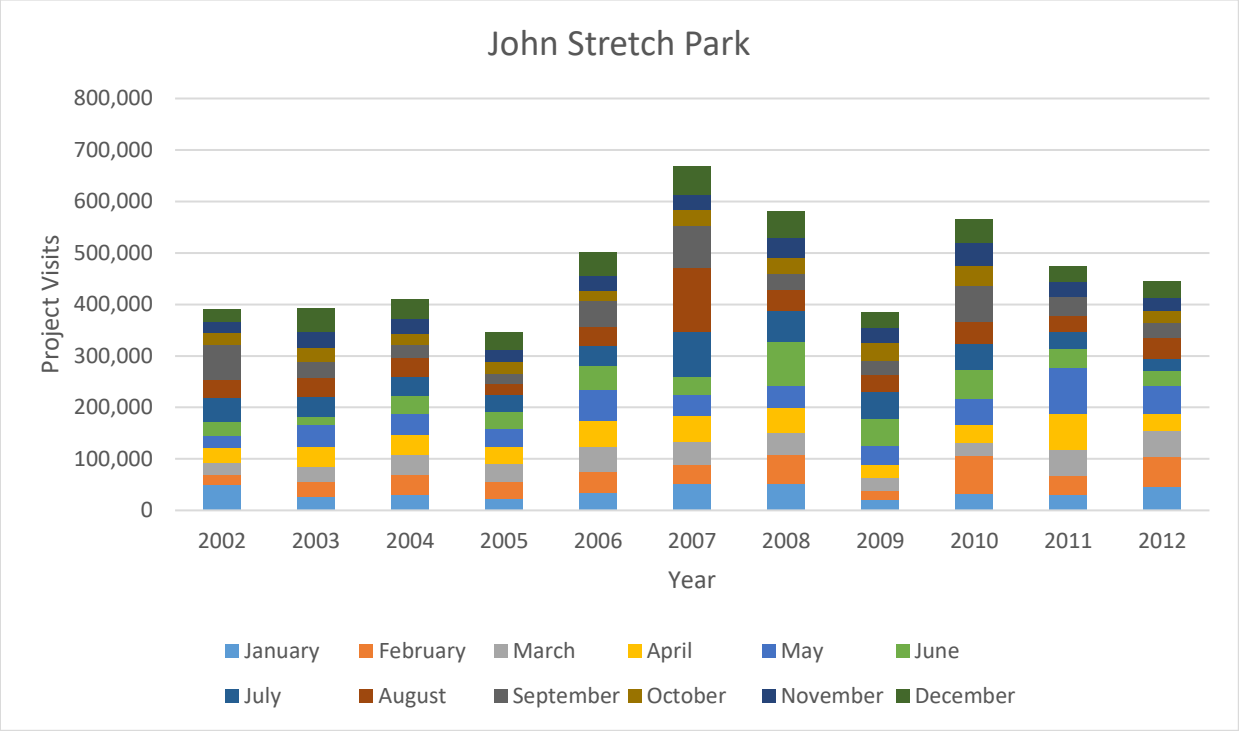

Figure 14: John Stretch Park Visitation

3.3.13 Lake Okeechobee Scenic Trail

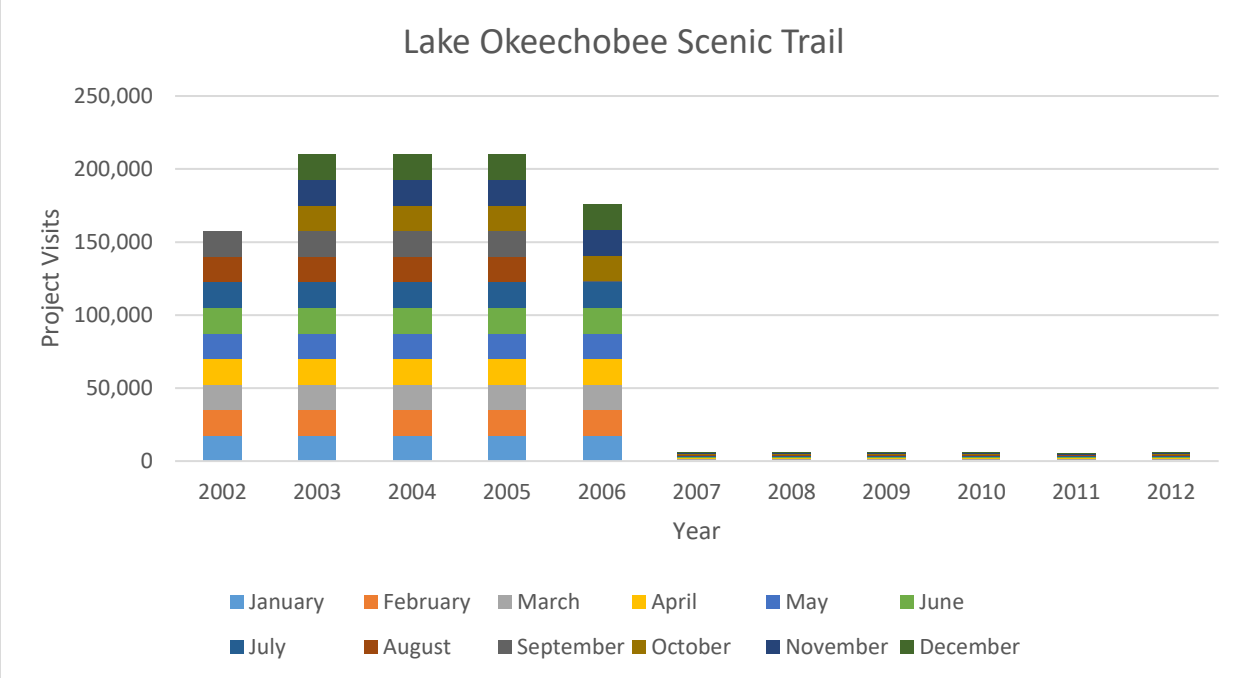

Figure 15: Lake Okeechobee Scenic Trail Visitation

3.3.14 Liberty Point

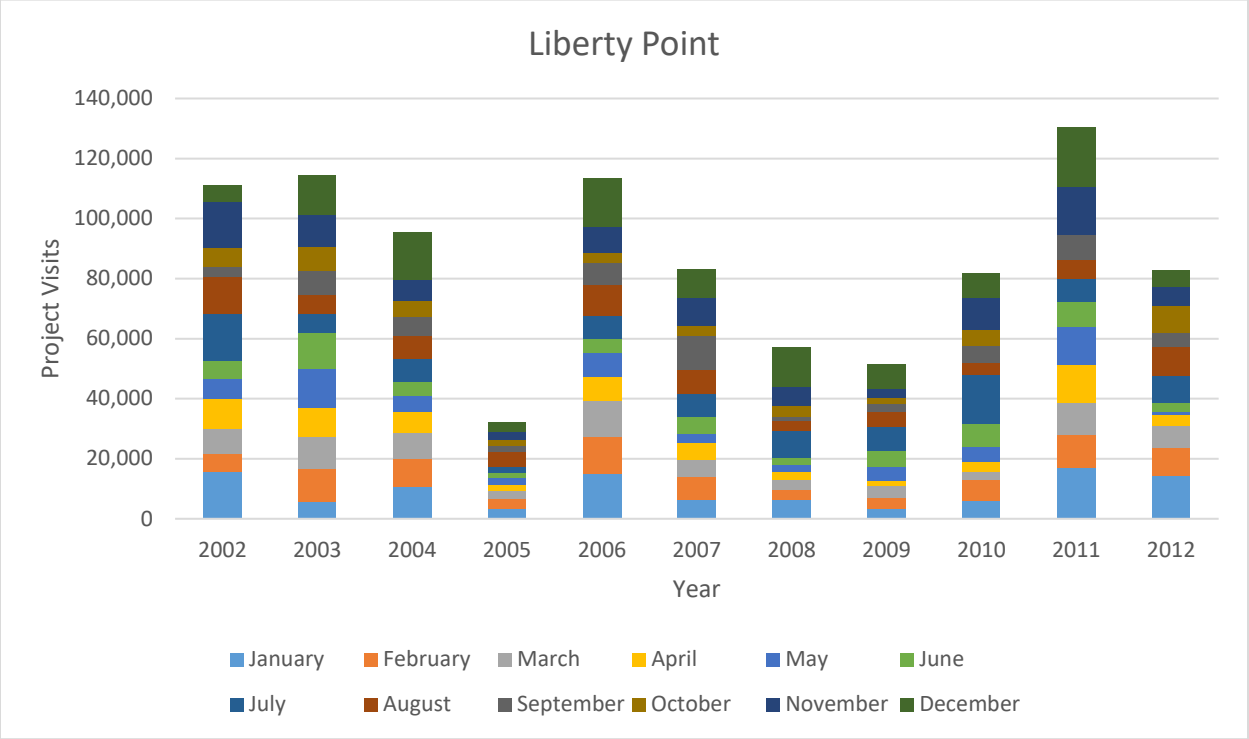

Figure 16: Liberty Point Visitation

3.3.15 Nubbin Slough

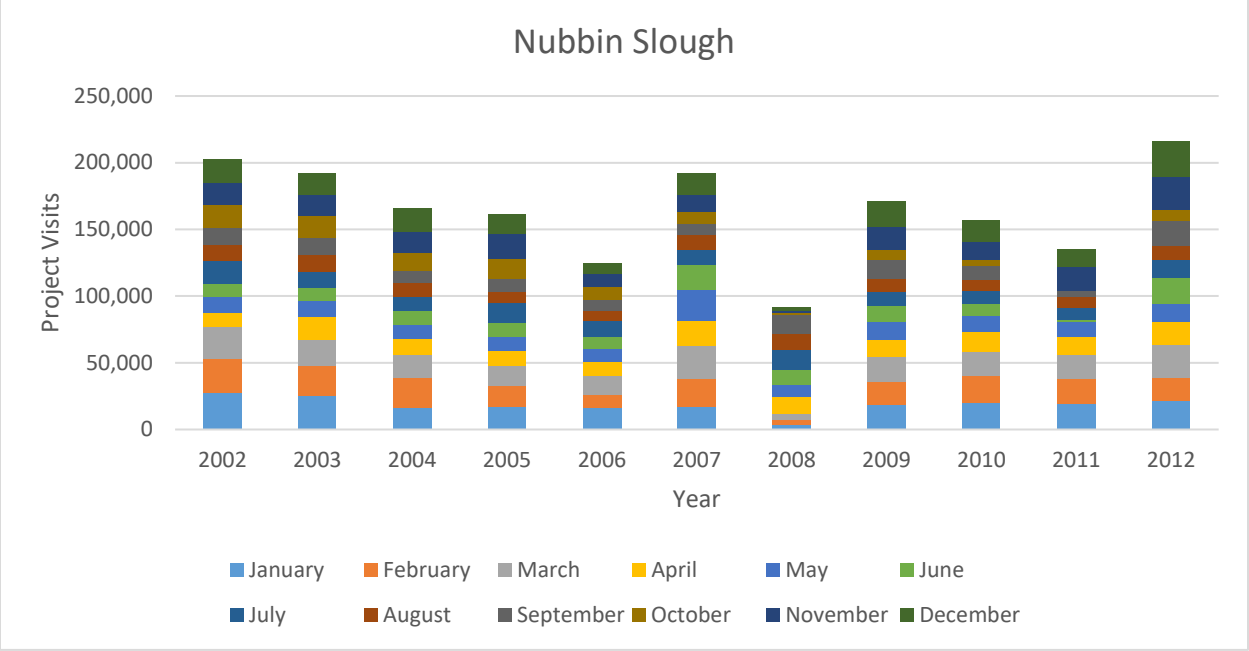

Figure 17: Nubbin Slough Visitation

3.3.16 Okeechobee

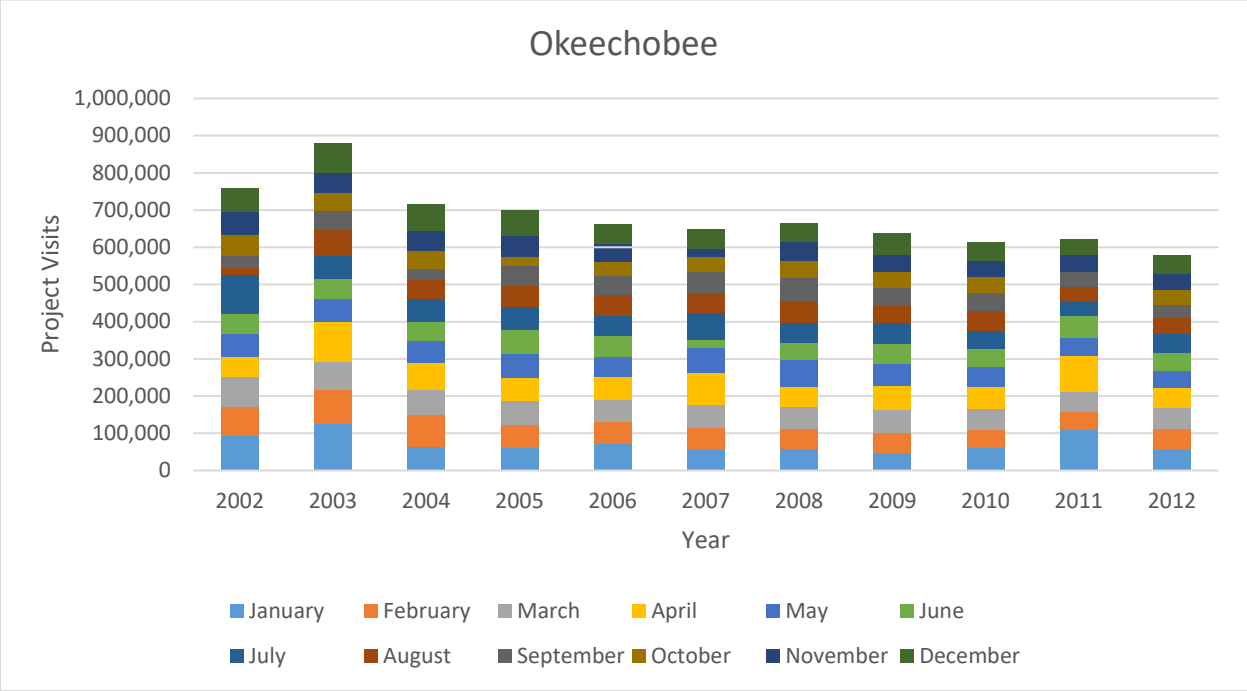

Figure 18: Okeechobee Visitation

3.3.17 Okee-Tantie

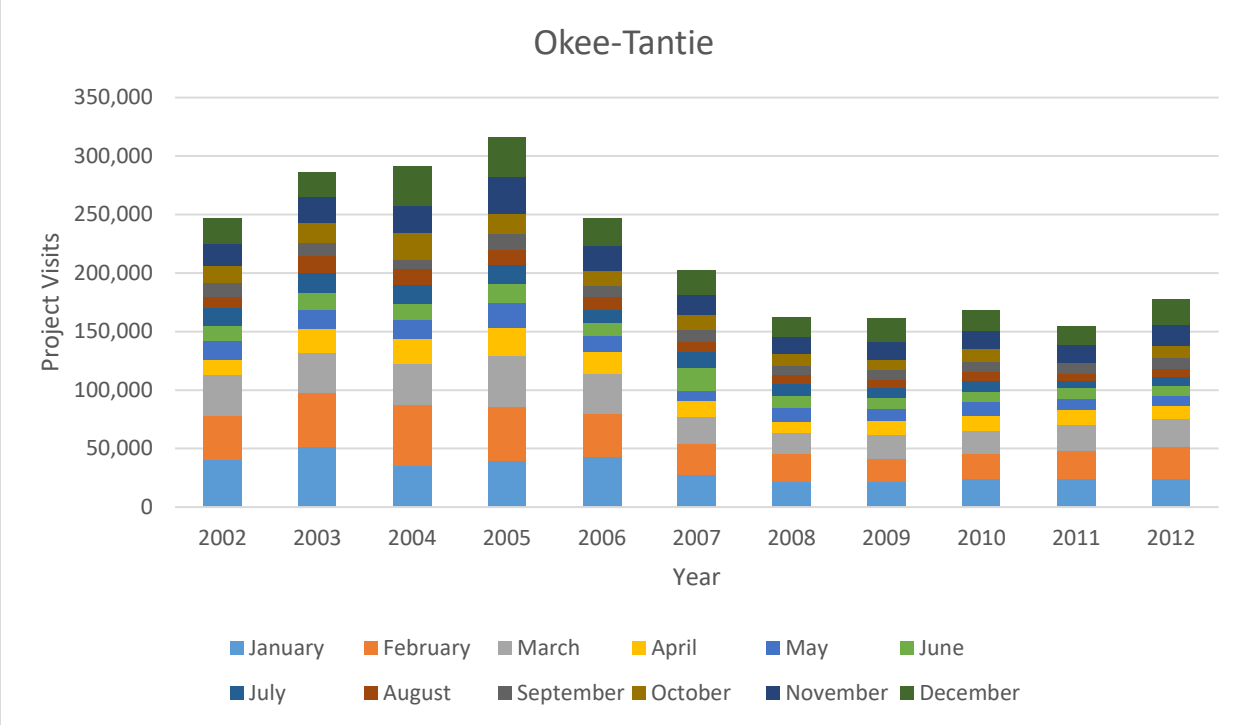

Figure 19: Okee-Tantie Visitation

3.3.18 Pahokee City Park

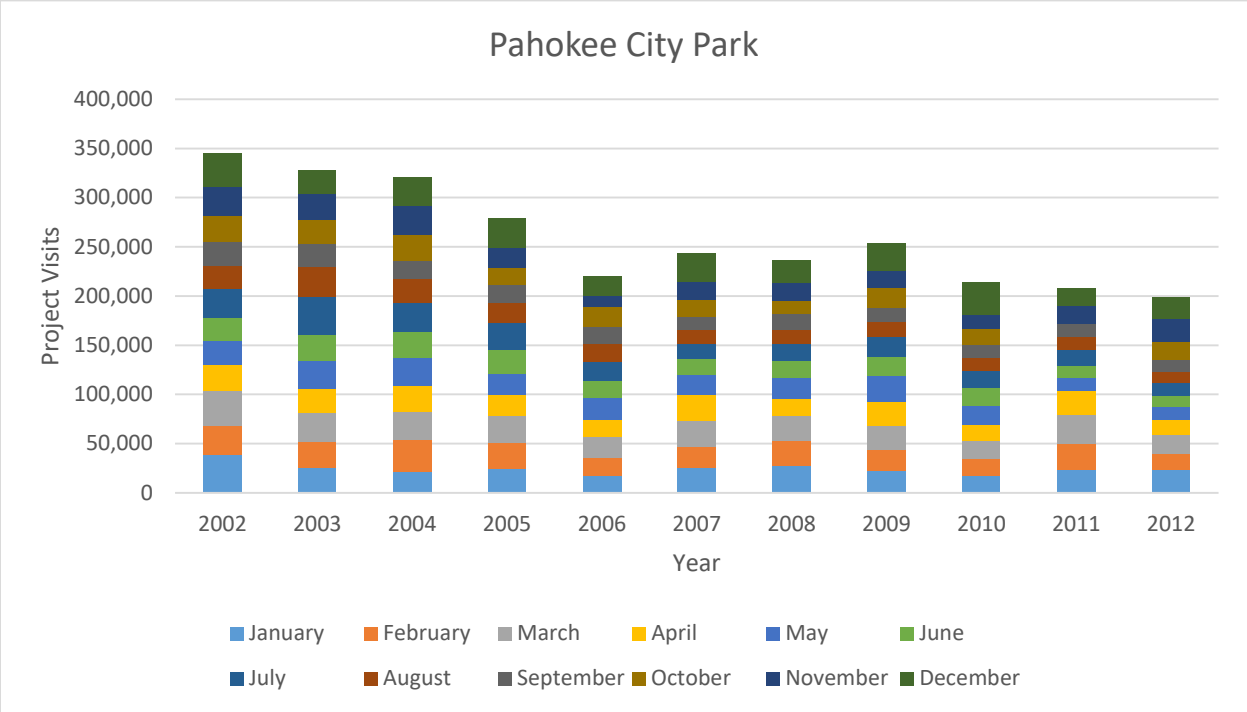

Figure 20: Pahokee City Park Visitation

3.3.19 Port Mayaca N.

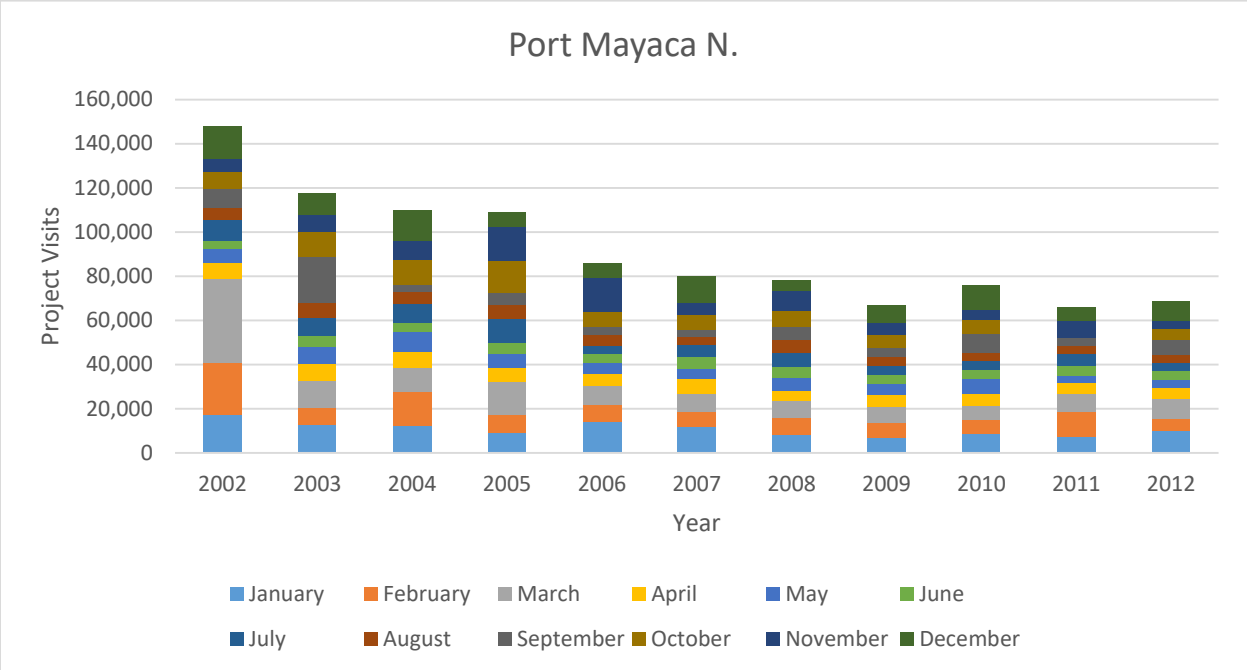

Figure 21: Port Mayaca N. Visitation

3.3.20 Port Mayaca S.

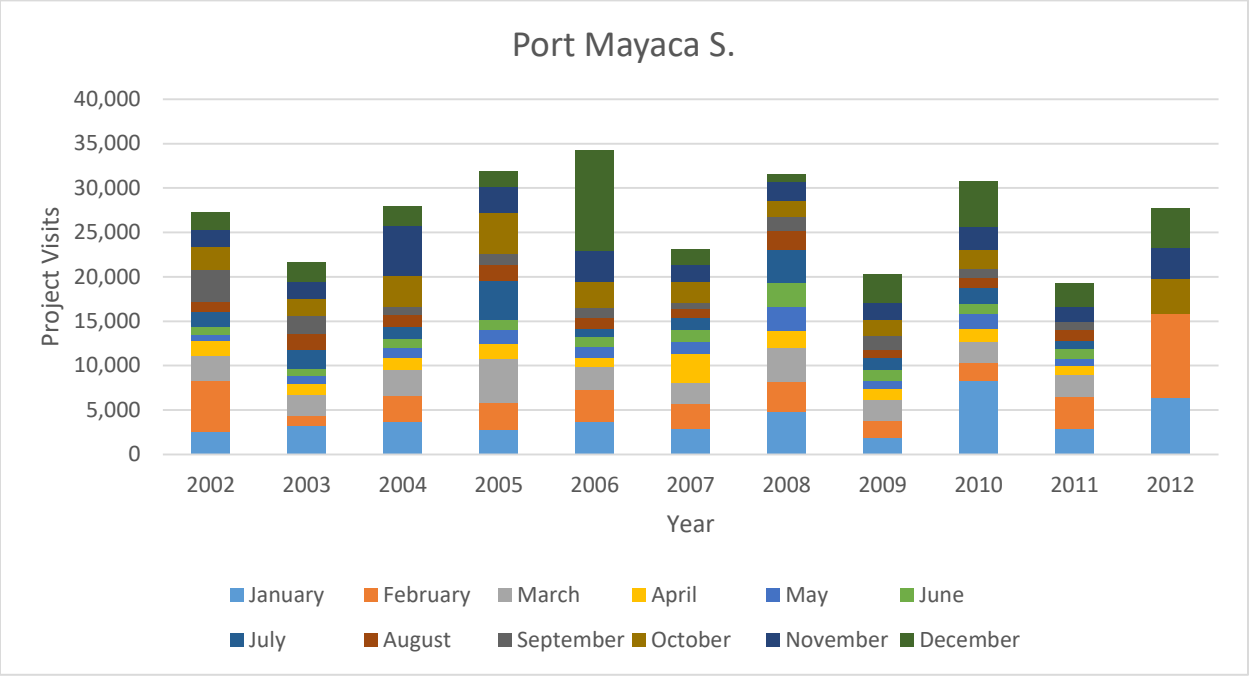

Figure 22: Port Mayaca S. Visitation

3.3.21 Rardin Park

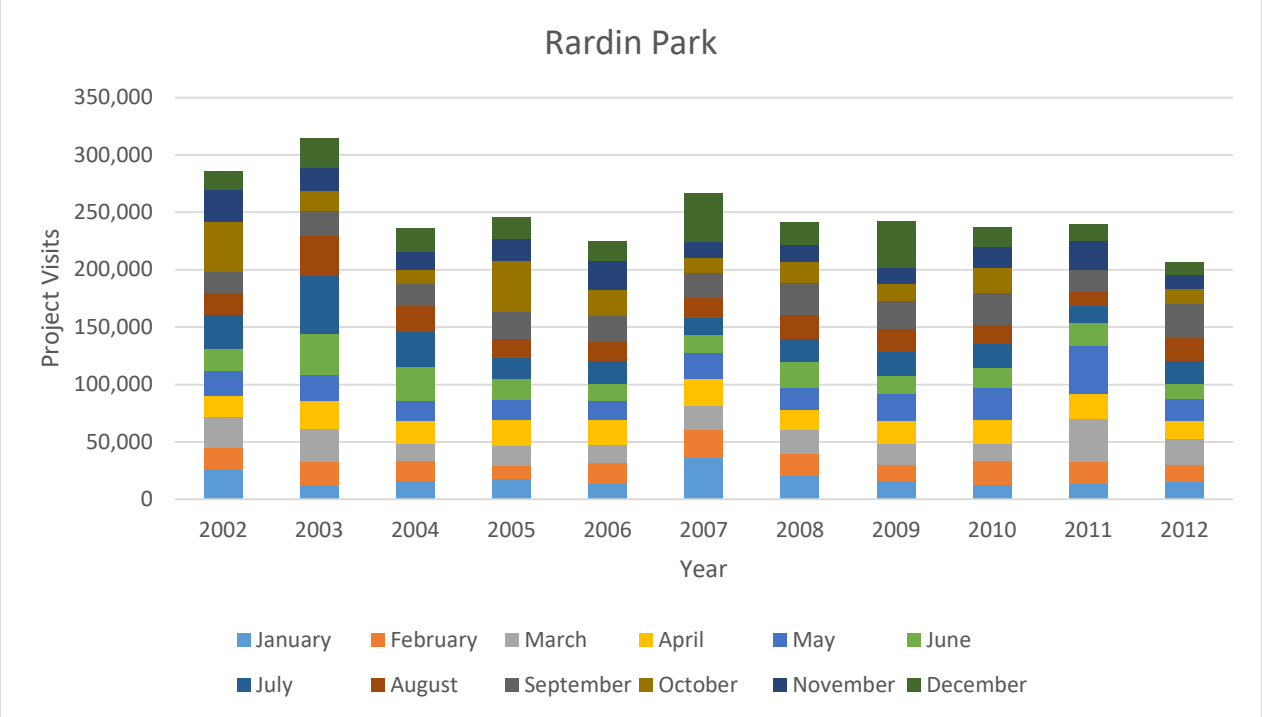

Figure 23: Rardin Park Visitation

3.3.22 South Bay

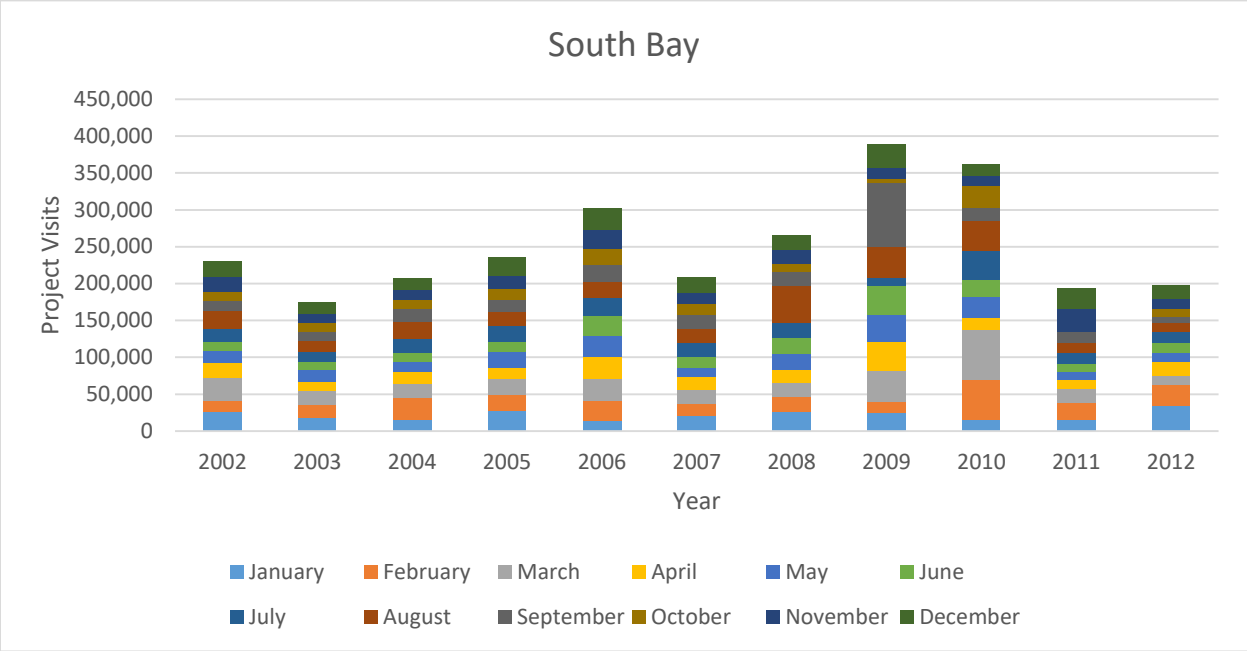

Figure 24: South Bay Visitation

3.3.23 Alva Access

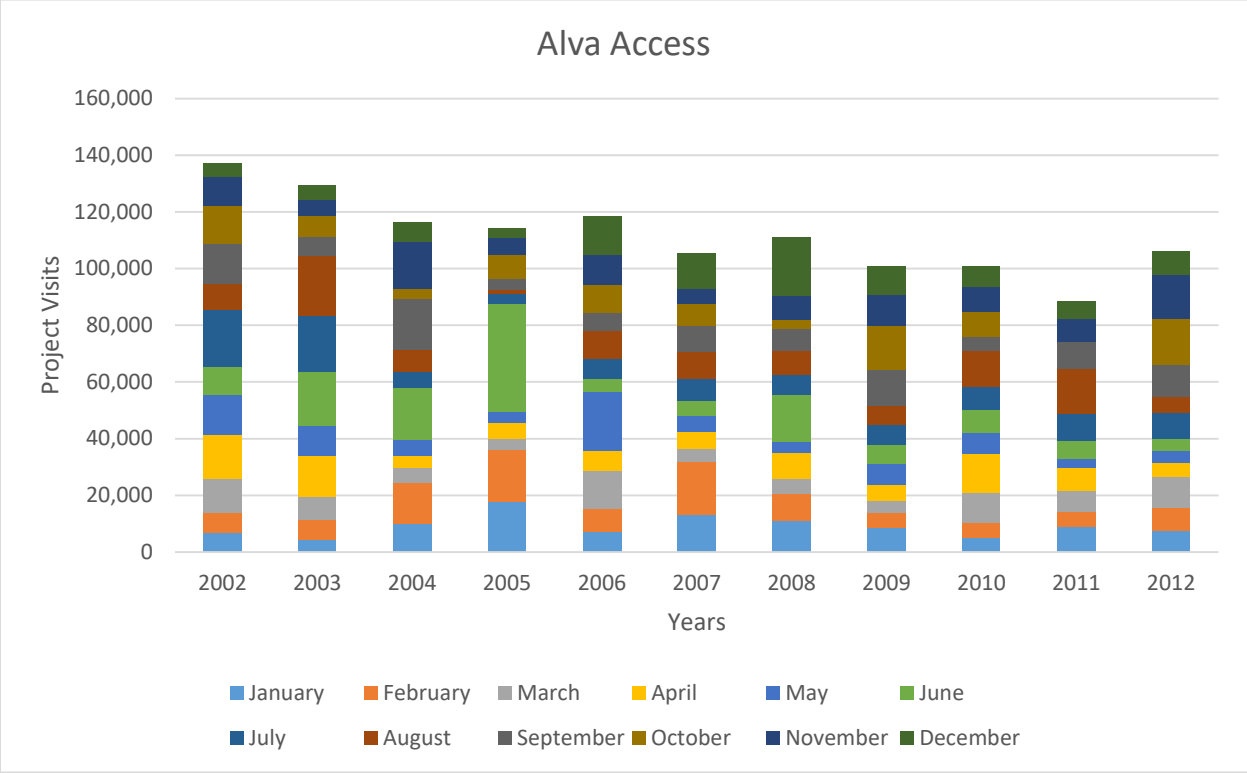

Figure 25: Alva Access Visitation

3.3.24 Barron Park

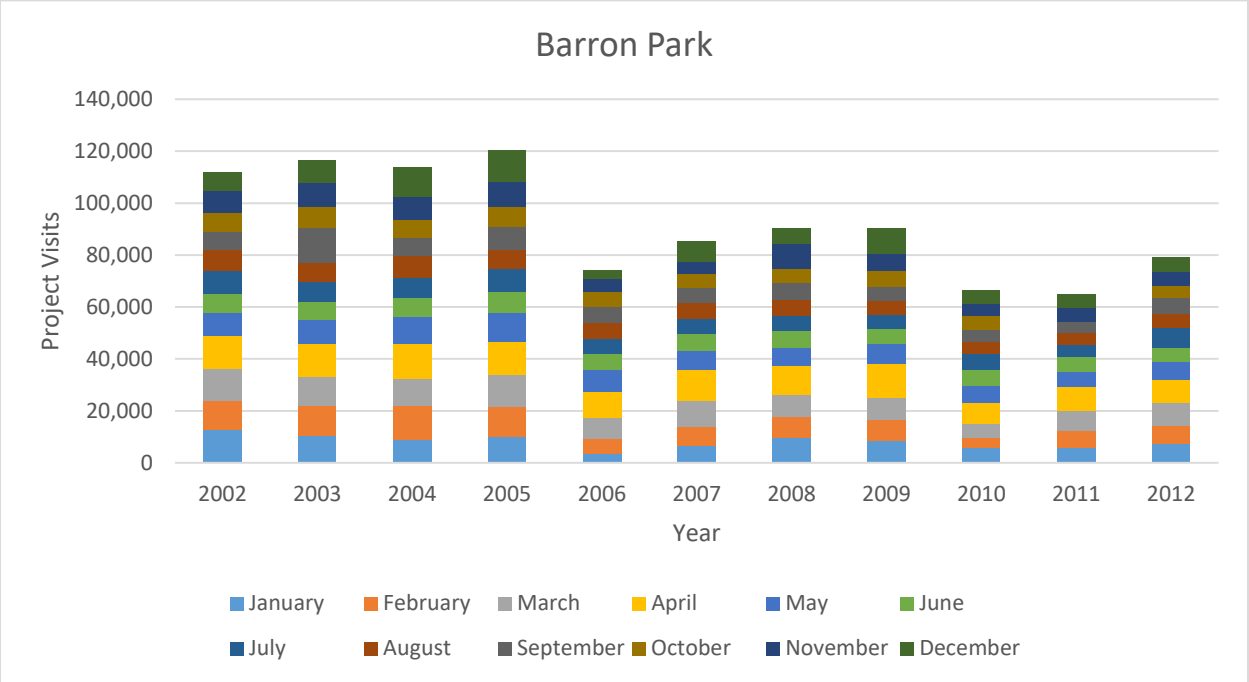

Figure 26: Barron Park Visitation

3.3.25 Indiantown Marina

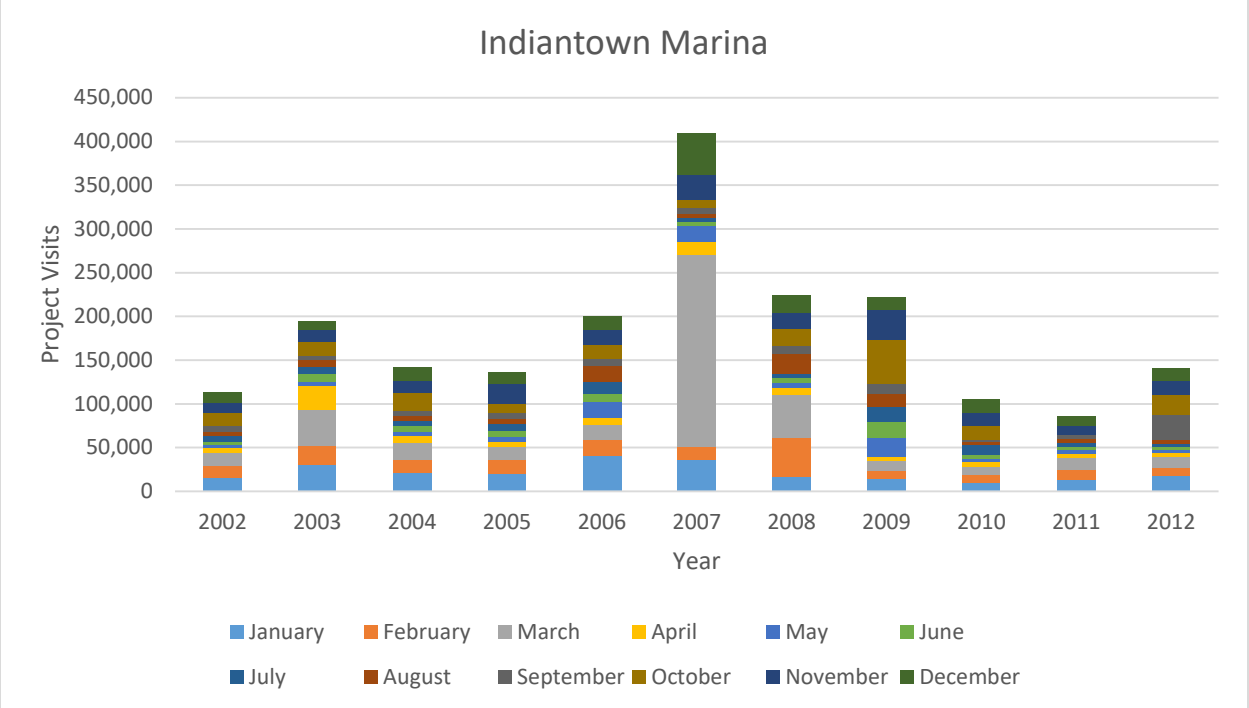

Figure 27: Indiantown Marina Visitation

3.3.26 Moore Haven East

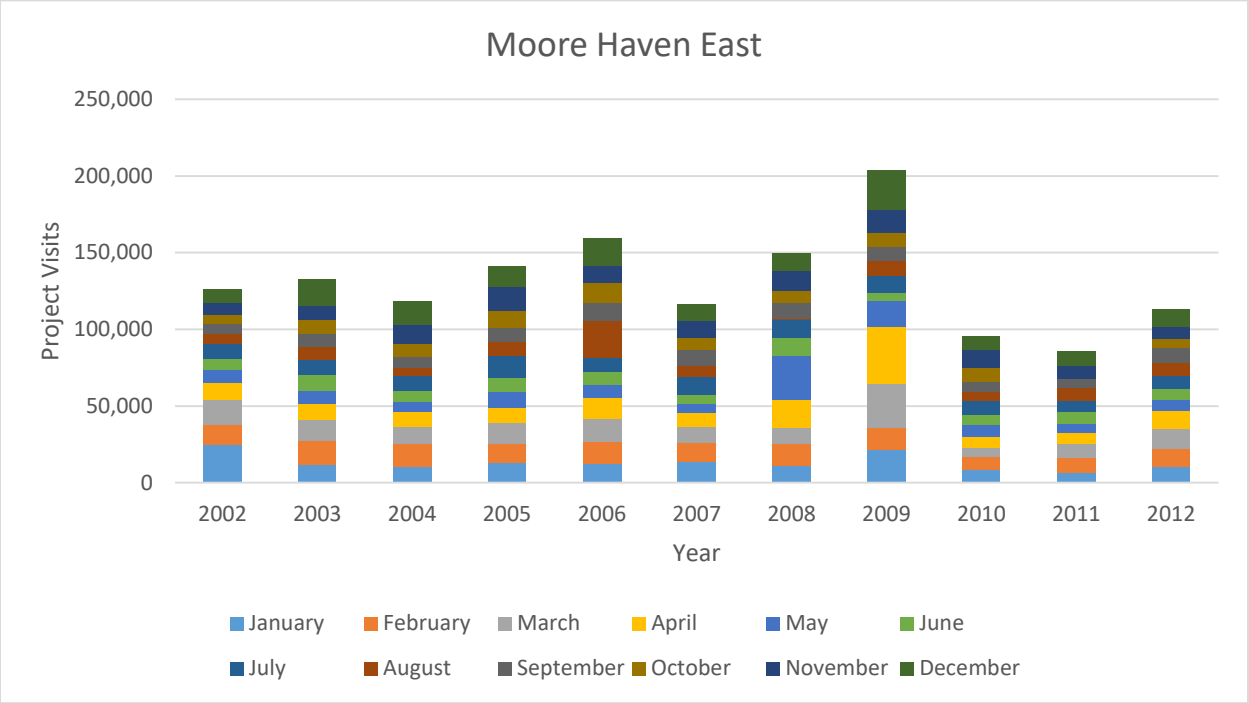

Figure 28: Moore Haven East Visitation

3.3.27 Moore Haven West

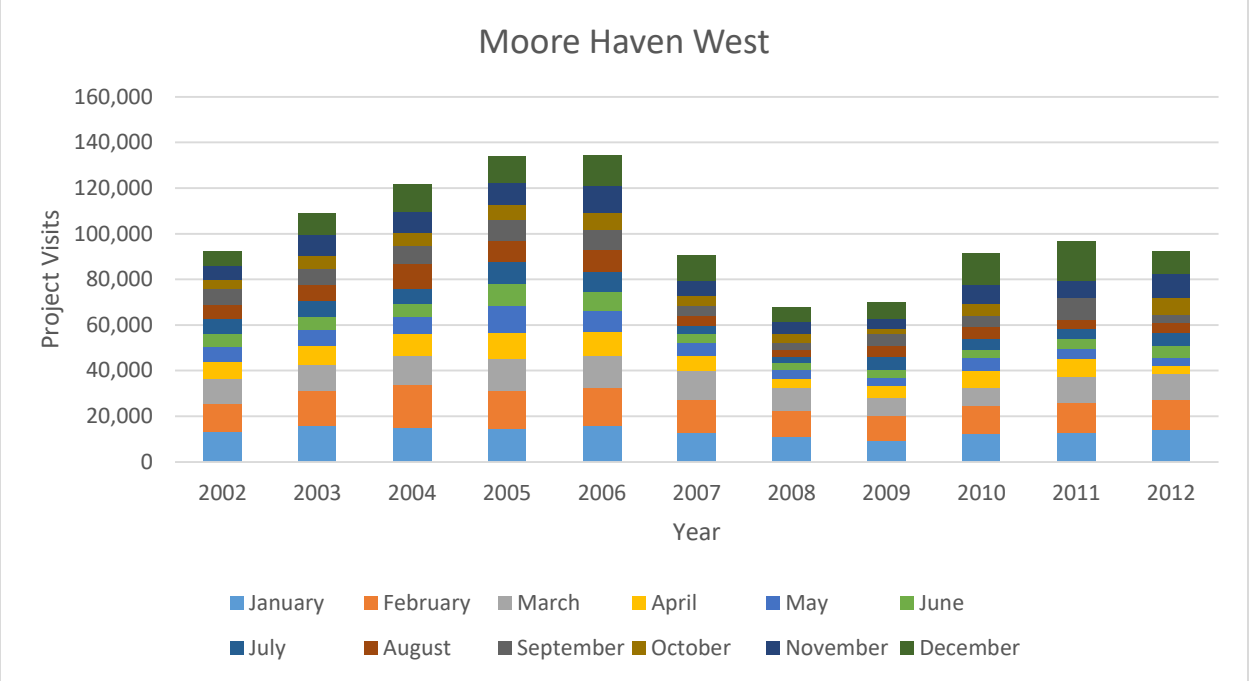

Figure 29: Moore Haven West Visitation

3.3.28 Ortona North

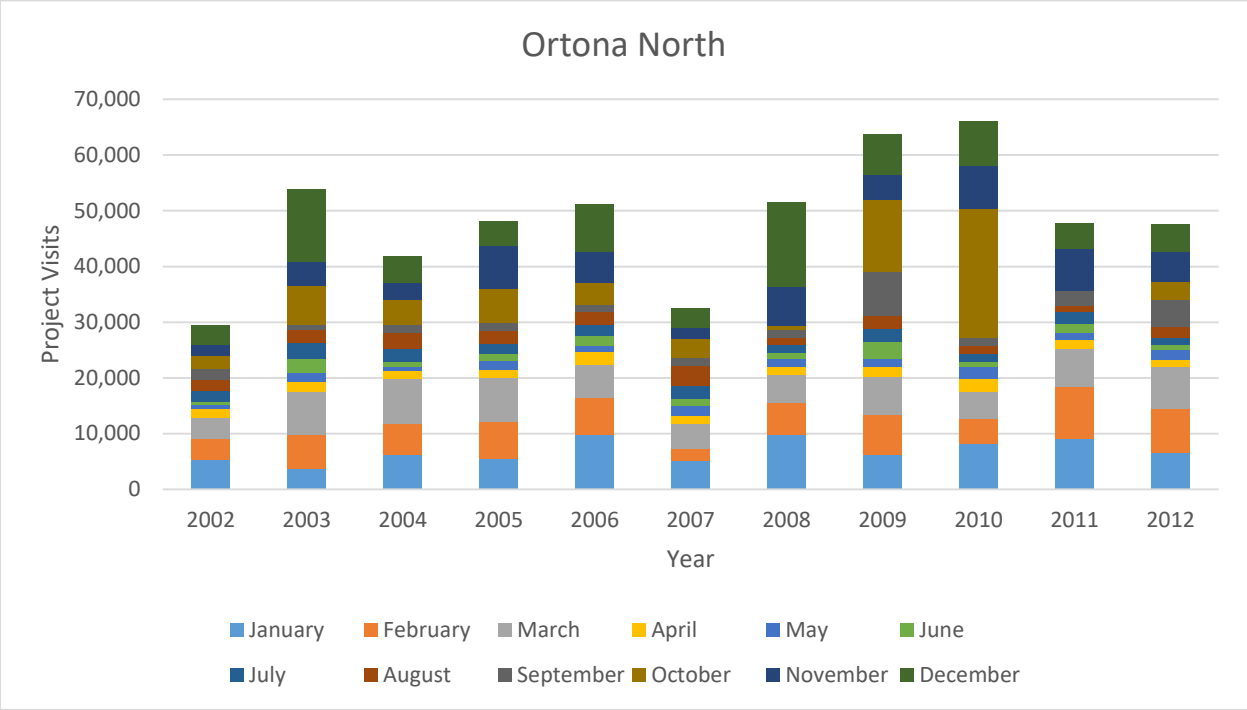

Figure 30: Ortona North Visitation

3.3.29 Ortona South

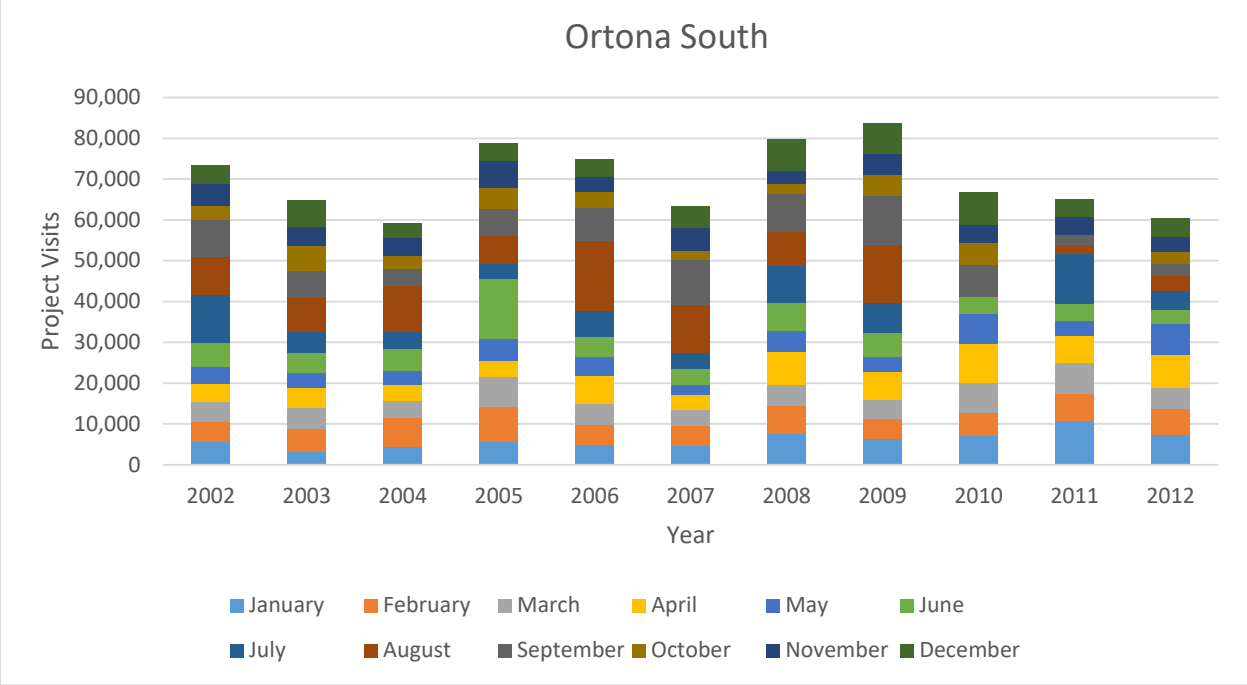

Figure 31: Ortona South Visitation

3.3.30 St. Lucie North

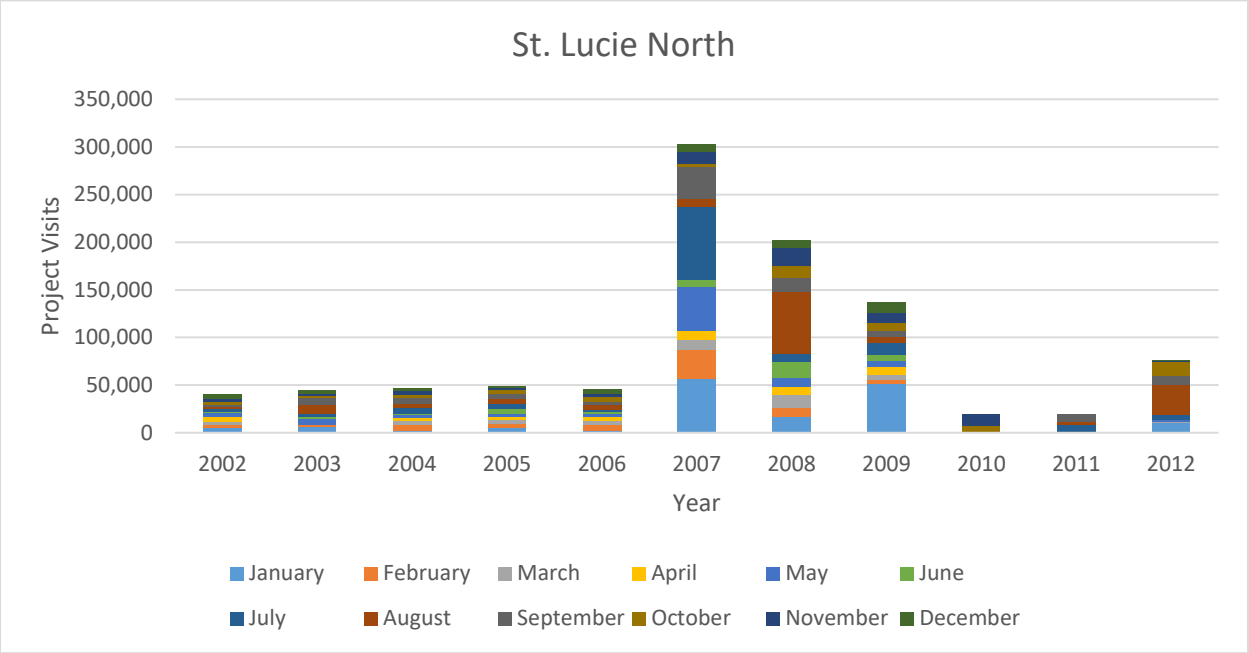

Figure 32: St. Lucie North Visitation

3.3.31 St. Lucie South

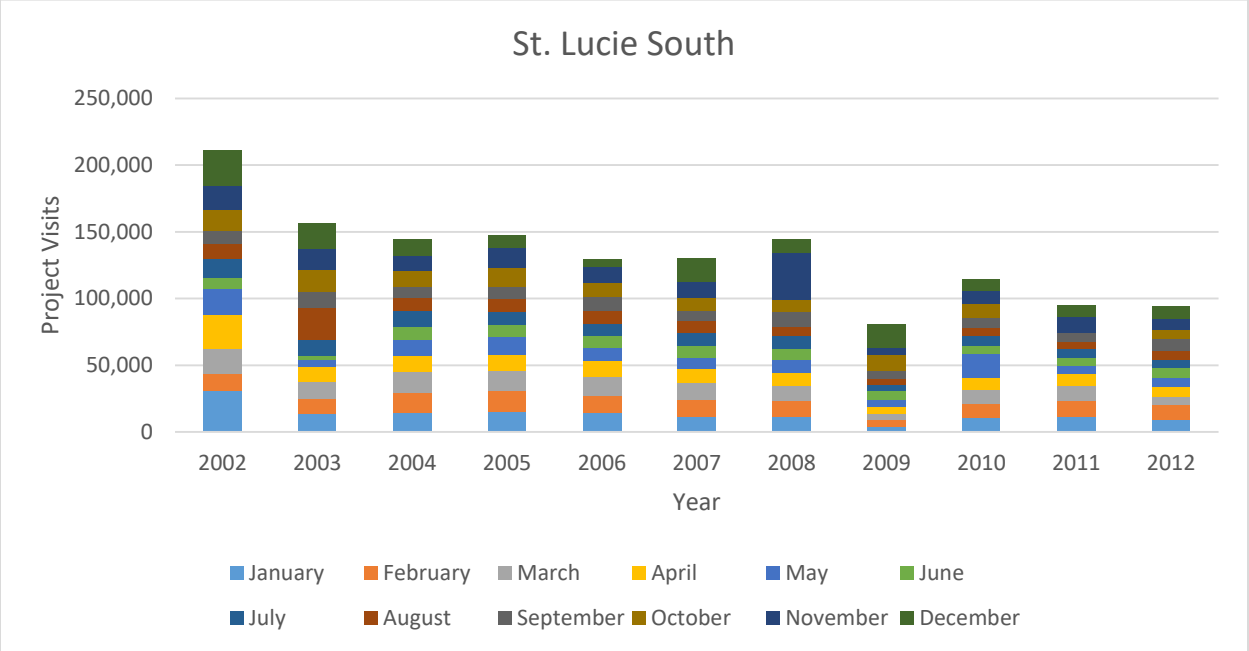

Figure 33: St. Lucie South Visitation

4.0 Recreation Carrying Capacity

Recreation carrying capacity evaluates the ability of Lake Okeechobee and the Okeechobee Waterway to accommodate existing and future recreation uses, and assess whether these uses are suitable given the potential effects on recreational, environmental, and social resources. It is important to establish the carrying capacity of the project so that there are appropriate parking and facilities and the quality of the recreation experience is maintained. Recreation carrying capacity can be analyzed several ways. For this analysis the parking spaces and general visitation data were used to establish general recreation carrying capacity. In order to determine the peak season weekend day visitation, the visitation for January, February, March, April, and December is summed. 2010 is used as a base year. Design load is calculated as the number of peak season visits multiplied by the percent of visitation occurring on weekends divided by the number of peak season weekend days. The tables show the values used to establish the 2010 design load.

Table 4: Base Year Design Load

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Visits	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	2,179,185.00	4,862,858	45%	21	50%	42	25,943

Using this method, the projected values for 2020, 2025, 2030, 2035, and 2040 are calculated.

Table 5: Future Year Design Load Project-wide

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Visits	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	2,179,185	4,862,858	45%	21	50%	42.00	25,943
2020	2,856,960	6,348,800	45%	21	50%	42.00	34,011
2025	3,059,827	6,799,616	45%	21	50%	42.00	36,427
2030	3,225,263	7,197,184	45%	21	50%	42.00	38,396
2035	3,399,782	7,555,072	45%	22	50%	44.00	38,634
2040	3,541,824	7,870,720	45%	22	50%	44.00	40,248

In order to determine the parking demand at the project, the design load is used with assumptions for turnover rate (calculated as hours the project is open divided by the average day use hours per person), persons per vehicle, and existing parking. The values for Day Use hours and Visitors per Vehicle were pulled from a 1993 VERS survey. For more informed calculations a survey would need to be conducted at the Project. Parking demand is displayed below.

Table 6: Existing and Parking Demand Project-wide

Year	Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010	25,943	2.3	5	2.1	2,368	2,784	416
2020	34,011	2.3	5	2.1	3,104	2,784	-320
2025	36,427	2.3	5	2.1	3,325	2,784	-541
2030	38,396	2.3	5	2.1	3,504	2,784	-720
2035	38,634	2.3	5	2.1	3,526	2,784	-742
2040	40,248	2.3	5	2.1	3,673	2,784	-889

Source: USACE, 2016.
Note: Data was pulled from 1993 VERS Surveys

The analysis of parking demand and supply shows that by 2020 there is likely adequate parking for the foreseeable future. This outcome assumes that visitation will grow at 2.59 per cent annually.

The analysis further looked at parking in high-density use areas for selected PSAs. The results show that, for some PSAs, current and future parking demand exceeds parking supply during the high season-December to April. The biggest shortage of public parking identified so far is around Nubbin Slough, Clewiston Park and Alva Access. **Error! Reference source not found.** through Table 18 present the parking analysis for selected PSAs.

Table 7: Future Year Design Load Project-Alva Access

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	41,629	100,924	41%	21	50%	42	496
2020	40,332	103,416	39%	21	50%	42	480
2025	43,196	110,759	39%	21	50%	42	514
2030	45,722	117,235	39%	21	50%	42	544
2035	47,995	123,065	39%	22	50%	44	545
2040	50,001	128,207	39%	22	50%	44	568

Table 8: Existing and Parking Demand - Alva Access

Year	Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010	496	4.50	2.7	2.0	92	11	-81
2020	480	4.50	2.7	2.0	89	11	-78
2025	514	4.50	2.7	2.0	95	11	-84
2030	544	4.50	2.7	2.0	101	11	-90
2035	545	4.50	2.7	2.0	101	11	-90
2040	568	4.50	2.7	2.0	105	11	-94

Table 9: Future Year Design Load Project - Clewiston Park

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	186,988	516,157	36%	21	50%	42	2226
2020	194,525	511,909	38%	21	50%	42	2316
2025	208,338	548,259	38%	21	50%	42	2480
2030	220,520	580,315	38%	21	50%	42	2625
2035	231,485	609,172	38%	22	50%	44	2631
2040	241,157	634,623	38%	22	50%	44	2740

Table 10: Existing and Parking Demand – Clewiston Park

Year	Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010	2,226	3.56	3.37	1.9	348	166	-182
2025	2,480	3.56	3.37	1.9	387	166	-221
2030	2,625	3.56	3.37	1.9	410	166	-244
2035	2,631	3.56	3.37	1.9	411	166	-245
2040	2,740	3.56	3.37	1.9	428	166	-262

Table 11: Future Year Design Load Project - Fisheating Creek

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	93,581	230,927	0.41	21	50%	42	1,114
2020	103,416	258,540	0.4	21	50%	42	1,231
2025	110,759	276,898	0.4	21	50%	42	1,319
2030	117,235	293,088	0.4	21	50%	42	1,396
2035	123,065	307,663	0.4	22	50%	44	1,398
2040	128,207	320,517	0.4	22	50%	44	1,457

Table 12: Existing and Parking Demand – Fisheating Creek

Year	Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010	1,114	1.91	6.28	2.7	66	27	-39
2020	1,231	1.91	6.28	2.7	73	27	-46
2025	1,319	1.91	6.28	2.7	78	27	-51
2030	1,396	1.91	6.28	2.7	82	27	-55
2035	1,398	1.91	6.28	2.7	82	27	-55
2040	1,457	1.91	6.28	2.7	86	27	-59

Table 13: Year Design Load Project - Harney Pond

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	95,801	171,355	0.56	21	50%	42	1140
2020	85,318	155,124	0.55	21	50%	42	1016
2025	91,376	166,139	0.55	21	50%	42	1088
2030	96,719	175,853	0.55	21	50%	42	1151
2035	101,529	184,598	0.55	22	50%	44	1154
2040	105,770	192,310	0.55	22	50%	44	1202

Table 14: Existing and Parking Demand – Harney Pond

Year		Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010		1140	1.55	7.74	2.3	64	276	212
2020		1016	1.55	7.74	2.3	57	276	219
2025		1088	1.55	7.74	2.3	61	276	215
2030		1151	1.55	7.74	2.3	65	276	211
2035		1154	1.55	7.74	2.3	65	276	211
2040		1202	1.55	7.74	2.3	68	276	208

Table 15: Future Year Design Load Project- Nubbin Slough

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	89,258	157,324	0.57	21	50%	42	1,063
2020	109,621	206,832	0.53	21	50%	42	1,305
2025	117,405	221,519	0.53	21	50%	42	1,398
2030	124,270	234,471	0.53	21	50%	42	1,479
2035	130,449	246,130	0.53	22	50%	44	1,482
2040	135,899	256,413	0.53	22	50%	44	1,544

Table 16: Existing and Parking Demand – Nubbin Slough

Year	Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010	1,063	4.5	2.67	2.03	196	83	-113
2020	1,305	4.5	2.67	2.03	241	83	-158
2025	1,398	4.5	2.67	2.03	258	83	-175
2030	1,479	4.5	2.67	2.03	273	83	-190
2035	1,482	4.5	2.67	2.03	274	83	-191
2040	1,544	4.5	2.67	2.03	285	83	-202

Table 17: Future Year Design Load - St. Lucie South

Year	Peak Season (Dec-April)	Annual Visits	Ratio of Peak Season to Annual Visits	Weekends in Peak Season	Percent of Visitation Occurring on Weekends	Number of Weekend Days	Design Load
2010	49,489	114,738	43%	21	50%	42	589
2020	46,537	103,416	45%	21	50%	42	554
2025	49,842	110,759	45%	21	50%	42	593
2030	52,756	117,235	45%	21	50%	42	628
2035	55,379	123,065	45%	22	50%	44	629
2040	57,693	128,207	45%	22	50%	44	656

Table 18: Existing and Parking Demand - St. Lucie South

Year	Design Load	Day Use Hours per Visitor	Turnover (12/Day Use Hours per Visitor)	Visitors per Vehicle	Parking Space Demand	Existing Parking Space Supply	Net Differences
2010	589	1.83	6	2.07	43	101	58
2020	554	1.83	6	2.07	41	101	60
2025	593	1.83	6	2.07	44	101	57
2030	628	1.83	6	2.07	46	101	55
2035	629	1.83	6	2.07	46	101	55
2040	656	1.83	6	2.07	48	101	53

5.0 Boating Density Analysis

A boating density analysis was undertaken to evaluate the possible need for adding additional slips at the Lake Okeechobee.

5.1 Methodology

The methods used to complete this study will draw, in part, on the information and data gathered from other sources. This will include utilization of established Recreation Opportunity Spectrum (ROS) classifications, utilization of current boater density safety standards, utilization of current optimum carrying capacities for outdoor recreation activities, best management practices (BMPs), environmental considerations for development, and other industry standards. This information and data will be correlated to existing recreation facilities relative to current recreation use. The below standards are used to evaluate the boating density.

Table 19: Water Recreation Opportunity Spectrum Classification Summary and Associated Boating Density Standard

Setting (Classification)	**Generalized Description Summary of the Recreation Experiences by WROS Class**	**Standard (Acres per Boat)**
Urban	Limited opportunities to see, hear, or smell the natural resources exist due to the extensive level of development, human activity, and natural resource modification. Meeting other visitors is expected, and socializing with family and friends is important. There is probability for a diverse range of visitors and activities, including groups and special events. Convenience is central and dominant.	1-10
Suburban	Limited or rare opportunities to see, hear, or smell the natural resources exist due to the widespread and prevalent level of development, human activity, and natural resource modification. Meeting other visitors is expected, and socializing with family and friends is important. There is probability for a diverse range of visitors and activities. Convenience is central and dominant.	10-20
Rural Developed	Occasional or periodic opportunities to see, hear, or smell the natural resources exist due to the common and frequent level of development, human activity, and natural resource modification. Brief periods of solitude are likely, although the presence of other visitors is expected. There is probability for a diverse range of visitors and activities. Moderate levels of comfort and convenience are expected.	20-50
Rural Natural	Frequent opportunities exist to see, hear, or smell the natural resources due to an occasional or periodic level of development, human activity, and natural resource modification. Independence and freedom with a moderate level of management presence are important. There is probability for a diverse range of visitors and activities, although experiences tend to be more resource-dependent. Comfort and convenience are not important or expected.	50-110

Setting (Classification)	Generalized Description Summary of the Recreation Experiences by WROS Class	Standard (Acres per Boat)
Semi-primitive	Widespread and prevalent opportunities exist to see, hear, or smell the natural resources due to a rare or minor level of development, human activity, and natural resource modification. Solitude through the lack of contact with other visitors and managers is important. Opportunities exist for more adventure-based enthusiasts and overnight visitors. Sensations of challenge, adventure, risk, and self-reliance are important.	110-480
Primitive	Extensive opportunities abound to see, hear, or smell the natural resources due to the rare and very minor level of development, human activity, and natural resource modification. Solitude and lack of the site, sound, and smells of others are important. Opportunities are plentiful for human-powered activities (e.g., canoeing, fly-fishing, backpacking, etc.). Sensations of solitude, peacefulness, tranquility, challenge, adventure, risk, testing skills, orienteering, and self-reliance are important.	480-3,200

Source: TVA, Accessed 2016

5.2 Existing Facilities

As shown in Table 20, currently there are three marinas which have 247 wet slips. There are also a number of boat ramps located at the Corps operated recreation areas with a total of 1,062 spaces for boat trailer parking.

5.3 Analysis

To determine the appropriate classification for each condition, the usable surface area of Lake Okeechobee was calculated as well as the boating utilization assumptions. The tables below display the inputs used for this analysis. The average Recreation Season (Dec – April) weekend day was used as the decision criteria for the boating density classification based on full pool surface acres of 363,568 or 466.67 square miles.

Table 20: Boating Facilities

Estimated Boating Units- Total	
Adjusted Private Access Boating Units	0
Commercial Wet Slips	247
Commercial Dry Slips	5
Subtotal Boating Units	252
	Parking Spaces for Boating Units
Public Ramp Parking	1062
Private Community Ramp Parking	0
Subtotal Parking Spaces	1062

Source: USACE Data, 2016

Table 21: Boating Utilization

Estimated % Boating Units In Use			
	Recreation Season (Dec – April)	Recreation Season (Dec – April)	Peak Holiday
	Weekday%	Weekend Day %	Summer %
Commercial Wet & Dry Slips	10%	40%	10%
Public/Private Ramp Parking	40%	80%	20%

Source: USACE Park Rangers

5.4 Boating Density Classification

Based on the analysis of the existing facilities assumption, an average of 372.66 acres per boat in use would classify the setting as semi-primitive during average Recreation Season (Dec – April) weekend days. Recreation Season weekday conditions would be classified as primitive with approximately 807.93 acres per boat in use and 1,530 acres per boat in use for peak summer holidays. Refer to

Table 199 above for detailed Generalized Description Summary of the Recreation Experiences by WROS Class.

Table 22: Boating Density Classification

	Ave. Fall to Spring (Dec - April)	**Ave. Fall to Spring (Dec – April)**	**Peak Holiday**
	Weekday	Weekend Day	Summer
	Existing	Existing	Existing
Est Boating Units in Use	450	975.6	237.60
Surface Acres Per Boating Unit	807.93	372.66	1,530.17
Classification	Primitive	Semi-primitive	Primitive

Source: USACE, 2016