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Survey of Wading Bird Utilization Of the Upper St. Johns River Basin 1998–2000

Final Report

by

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Executive Summary

The St. Johns River Water Management District (District) is acquiring and restoring vast acreages of the historic St. Johns River floodplain in south central Florida. Goals of this land acquisition program are to enhance flood protection, restore and preserve environmentally sensitive lands, improve water quality, and protect public water supplies. To date, the total area encompassed under this program exceeds 240,000 acres; of this total area, greater than 160,000 acres are currently wetlands or will be restored to wetlands. Included in this total area is nearly 120,000 acres of wetlands that are within the boundaries of the Upper St. Johns River Basin Project. Wetland restoration objectives of the District focus on restoring the natural forces that shaped the historic system (e.g. hydrology, nutrients, and fire) rather than restoring pristine structure.

With the increase in the acreage of the historic floodplain flooded and the enhancement of existing wetlands, conditions for fish and wildlife populations are expected to improve. For many species, however, historical population data that can be used to assess this change is lacking. Of particular concern is the status of wading bird populations within the basin and how they are responding to restoration. Wading birds are important because they are considered to be good indicators of the productivity and overall health of the ecosystem and because many are listed as either threatened, endangered, or species of special concern. In addition, public interest in wading birds is high. This study is part of a long-term effort to monitor wading bird populations within the Upper basin. Hoffman (1996) reported wading bird abundance and colony size and distribution data from 1993 to 1995. This report summarizes aerial wading bird surveys of the Upper St. Johns River Basin conducted from 1998 to 2000.

The study area includes the St. Johns River marshes and lakes from the Florida Turnpike south of Blue Cypress Lake, north to SR 46 northwest of Titusville. The study area was divided into 5 strata to aid in density calculations. Wading bird colony surveys were flown monthly from March – August 1998 and from February - August in 1999 and 2000. Systematic transect surveys to estimate wading bird abundance were flown in April, June, and August in each of these years.

From 1998-2000, wading birds continued to utilize major colony sites reported by Hoffman (1996), however, colony site fidelity decreased over time. For example, in 1998 and 1999, over 50% of the sites utilized for nesting were previously active in 1993 - 1995. In 2000, however, nesting fidelity fell, with only 43% of historic nesting locations used. Size of colonies varied during the survey period and among the strata. Colonies consisting of less than 300 nests were most numerous although several colonies containing over 1,000 nests were located. Colony sites were most numerous in the southern part of the basin.

The highest number of nests was found in June, but nesting peaked at different times of the year according to species. Great Egret, Great Blue Heron, and Wood Stork nests peaked in March - April, while other species peaked in June. Peak Cattle Egret nesting normally occurred later, in June - July. The total number of wading bird nests,

estimated by adding the peaks for each species, ranged from 14071 in 1998 to 7330 in 2000. Cattle Egret were the most abundant nesters, while Great Blue Heron were least abundant. The numbers of Great Egrets, Wood Storks, and Great Blue Herons increased in both numbers and as a percentage of the total number of nests between 1998 and 2000, while the numbers of nests of small dark herons, Snowy Egret and Cattle Egret declined. Although White and Glossy Ibis were encountered on the systematic transect surveys, none were found nesting in the Upper Basin.

Great Egret nests were most abundant in cypress, either in isolated stands or mixed with red maple or sawgrass, but were also found in cabbage palm/wax myrtle stands. Wood Storks, Cattle Egrets, and small dark herons preferred cabbage palm/wax myrtle stands and Brazilian pepper mixed with other shrubs. Willow was the preferred nesting substrate for Snowy Egret and Tricolored Heron. Similar to the results reported by Hoffman (1996), borrow pit islands provided extremely important nesting habitat for most species. Wood storks were only found nesting on borrow pit islands. Numbers of birds nesting in borrow pit colonies fluctuated presumably in response to water levels in the marsh. Higher numbers of nests in borrow pit colonies occurred during years when water levels in the marsh were low.

Total wading bird population estimates ranged from a minimum of 8,040 in April 2000 to a maximum of 77,560 in August 1999. Generally, most wading birds were observed in the southern reaches of the basin. Most wading birds were found utilizing three predominant habitat types: vegetated marsh (shallow areas in the with over 75% emergent vegetation less than 1 foot high); ponds (depression in the marsh that is deeper than surrounding area); and open water (Deeper areas, usually lakes or reservoirs, that contained < 25% emergent vegetation).

The Upper Basin continues to provide important habitat for wading birds for both nesting and foraging. In general, the numbers of wading birds observed in this study increased over the numbers reported by Hoffman (1996). As wetland areas in the basin continue to be reflooded, numbers of wading birds in the basin are expected to continue to increase. Other ecologically positive trends observed in this data include a decline in Cattle Egret nests and an increase in Wood Storks as a proportion of the total number of nesting birds.

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INTRODUCTION

The St. Johns River Water Management District (District) is acquiring and restoring vast acreages of the historic St. Johns River floodplain in south central Florida. Goals of this land acquisition program are to enhance flood protection, restore and preserve environmentally sensitive lands, improve water quality, and protect public water supplies. To date, the total area encompassed under this program exceeds 240,000 acres; of this total area, greater than 160,000 acres are currently wetlands or will be restored to wetlands. Included in this total area is nearly 120,000 acres of wetlands that are within the boundaries of the Upper St. Johns River Basin Project. Wetland restoration objectives of the District focus on restoring the natural forces that shaped the historic system (e.g. hydrology, nutrients, and fire) rather than restoring pristine structure.

With the increase in the acreage of the historic floodplain reflooded and the enhancement of existing wetlands, conditions for fish and wildlife populations are expected to improve. For many species, however, historical population data that can be used to assess this change is lacking. Of particular concern is the status of wading bird populations within the basin and how they are responding to restoration. Wading birds are important because they are considered to be good indicators of the productivity and overall health of the ecosystem and because many are listed as either threatened, endangered, or species of special concern. In addition, public interest in wading birds is high.

Aerial colony and foraging transect surveys were conducted over the entire Upper Basin of the St. Johns River Marsh, both in restored and unrestored areas from January - August in 1993 – 1995 (Hoffman 1996). In this study monthly surveys of wading birds utilizing the Upper Basin were conducted from March through August during 1998, 1999, and 2000. This project had two main tasks; to locate wading bird colonies and estimate the number of nests within each colony and to estimate the total population of wading birds.

METHODS

Wading bird abundance and nest distribution data in the Upper St. Johns River Basin were collected by the St. Johns River Water Management District (District) from 1993 to 1995 (Hoffman 1996). In 1998, the District contracted with Earth's Millennium to conduct additional surveys for 3 years. To ensure data were comparable, methods used here were identical to those described by Hoffman (1996). However, due to restricted funding, systematic wading bird distribution surveys were flown every other month while colony surveys were flown monthly during the nesting season (February - August).

This report summarizes survey results collected in 1998, 1999, and 2000 and is grouped into two main sections. The first section describes colony survey methods and results. Several colonies located adjacent to, but outside the study area were also surveyed. Estimates of the numbers of active nests are given for each species. Appendixes I and II include detailed colony information. The second section of this report describes the results of the systematic surveys and provides population estimates for wading birds found within each stratum. Appendixes III and IV provide detailed information about results of the systematic surveys.

The study area includes the St. Johns River marshes and lakes from the Florida Turnpike south of Blue Cypress Lake, north to SR 46 northwest of Titusville (Figure 1). The study area was divided into 5 sections (strata) to aid in density calculations. These strata also were useful in describing variation in wading bird use of different stretches of the river's marshes. The strata are numbered from I toV from upstream (south) to downstream (north). Stratum I extends from the Florida Turnpike south of SR 60 downstream to Fellsmere Grade. Stratum II runs from the Fellsmere Grade north to U.S. 192. Stratum III stretches from 192 to just north of Lake Winder. Stratum IV runs north from Lake Winder to SR 528. Finally, Stratum V extends from SR 528 north to SR 46.

Due to the limitations of aerial surveys, abundance and nesting estimates of only nine species of wading birds were considered useful for analysis. Five of these species are either state or federally listed (Table 1). Aerial surveying for these species can be difficult. For example, juvenile Little Blue Herons and Snowy Egrets are both white birds which are relatively the same size and can be confused with one another if they are standing in the marsh. If flying, it is slightly easier to distinguish between the two species because leg color is different. There is also a surveyor bias toward white birds, since darker ones (Great Blue Heron, Little Blue Heron, Tricolored Heron, and Glossy Ibis) are not as easily observed. Nevertheless, aerial surveys allow greater spatial coverage and are more cost effective than ground surveys. To overcome some of the difficulties in identification, if the observer could not accurately identify the species, then it was categorized as either a small white heron or small dark heron. Two other wading bird species, Roseate Spoonbill (*Ajaia ajaja*) and Reddish Egret (*Egretta rufescens*), were counted when encountered but are rare in the marshes. Other waders that utilize the

marsh, but cannot be effectively surveyed aerially include, Least Bittern (*Ixobrychus exilis*), American Bittern (*Botaurus lentiginosus*), Black-crowned Night Heron (*Nycticorax nycticorax*), Yellow-crowned Night Heron (*Nyctunassa violacea*) and Green Heron (*Butorides virescens*).

The same project personnel were involved in data collection and composition for each survey. Camille Sewell, M.S., and Sandra Scott, M.S. were the primary observers and data recorders during colony and transect surveys. Katrina Taylor, who operated the GPS receiver and called out latitude/longitude positions to be recorded, also assisted with colony observations. Larry Huston with Citrus Grove Aviation piloted all of the flights. Camille Sewell and Katrina Taylor compiled data.

Table 1. Species of wading birds surveyed in the Upper St. Johns River Basin and the abbreviations used in this report.

Species	Scientific Name	Abbr.	Federal (f) and State (s) Status
Great Egret	*Ardea albus*	GE	
Snowy Egret	*Egretta thula*	SE	Species of Special Concern/s
Cattle Egret	*Bubulcus ibis*	CE	
Tricolored Heron	*Egretta tricolor*	TH	Species of Special Concern/s
Little Blue Heron	*Egretta caerula*	LBH	Species of Special Concern/s
Great Blue Heron	*Ardea herodias*	GBH	
White Ibis	*Eudocimus albus*	WI	Species of Special Concern/s
Glossy Ibis	*Plegadis falcinellus*	GI	
Wood Stork	*Mycteria americana*	WS	Endangered/f,s
Small White Heron		SWH	
Small Dark Heron		SDH	

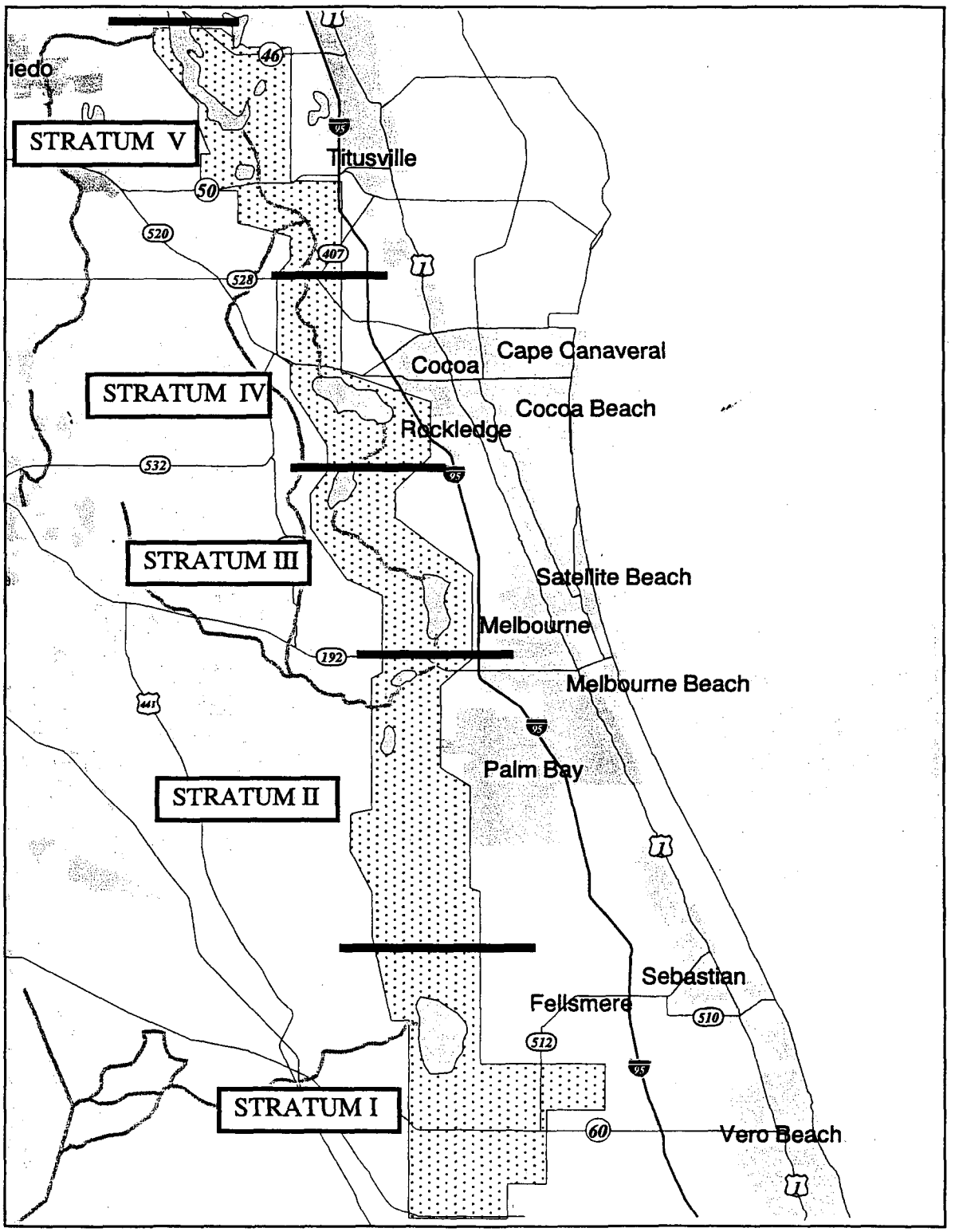

Figure 1. Upper St. Johns River Basin wading bird study area.

COLONY SURVEYS

Methods

Wading bird colony surveys were flown monthly from March – August 1998 and in February - August in 1999 and 2000. Survey dates are listed in Appendix II. Three observers flew in a Cessna 172 aircraft over the St. Johns Marsh at an altitude of 800 feet to locate new wading bird nesting colony sites. Observers looked for either birds flying into/out of particular areas, a large concentration of birds perched in vegetation, or a noticeable amount of guano on vegetation. Once new colony sites were found, the plane descended and circled the colony at 500 to 200 feet. Number of nests, species type, nest stage, and nesting substrate type was recorded on data sheets. Using a hand-held Garmin III GPS unit, the latitude/longitude location was recorded. Colony sites that were previously located in 1993 - 1995 were also visited and inspected along with those sites that were surveyed in the previous month or those discovered during the monthly systematic transect surveys.

Previous colonies located between 1993 and 1995 are numbered from 1 – 59, while new colonies discovered in 1998, 1999, and 2000 are numbered higher than 59. Data were entered into Excel spreadsheets. Original colonies #9, #40, and #67 were combined for some of the analyses and called colony #9 since they were very similar in species composition and located within the same impoundment within 300 yards of one another. Cattle Egrets and unidentifiable small white herons were combined into one category (small white heron) for some of the data analyses. Peak nesting numbers were calculated by totaling the highest monthly count for each species. Size classes of colonies were utilized to compare colony size among strata and between years. Size classes used were similar to those used by the Florida Game and Fresh Water Fish Commission (Runde et al, 1991).

Colony Survey Trends

Trends in Nesting Site Fidelity- Colony site fidelity differed over time and area. Wading birds continued to utilize historic nesting sites during this study period, although it appeared that fidelity decreased by the end of the study. For example, in 1998 and 1999, over 50% of the sites utilized for nesting were previously active in 1993 - 1995 (Table 2). In 2000, however, nesting fidelity fell, with only 43% of historic nesting locations used. During this study period, strata III and IV had the highest colony site fidelity, since 66% of colonies found in 1998 - 2000 were also previously used in 1993 - 1995. Fidelity in Stratum V was lowest at 28%.

Trends in Nesting Abundance

Size of colonies also varied during the survey period and among the strata. Colonies consisting of less than 300 nests were most numerous (Table 2). During the survey period, Strata II, III, and IV all had colonies that contained over 1,000 nests. There were no colonies found in Stratum V with over 25 nests.

Table 2. Number of wading bird colonies grouped by historical status and size class found in the St. Johns River Upper Basin during March - August for 1998 - 2000 (P = previous found in 1993 - 1995, N = new colonies found in 1998, 1999, or 2000; A = 1-25 nests, B = 26 - 300 nests, C = 301 - 600 nests, D = 601 - 999 nests, E = 1,000 + nests).

	Historical Status		# in Size Class					
Year	# P	# N	A	B	C	D	E	Total
1998	21	21	20	10	5	3	4	42
1999	14	13	11	4	9	2	1	27
2000	11	12	5	11	2	3	2	23

Trends in Nesting Distribution- Colony sites were unevenly distributed throughout the study area during the survey period (Figures 2, 3 & 4). Colony sites were more numerous in the southern part of the basin. For example, 42% of the nesting sites were located in Stratum I during the survey period, while Stratum IV only contained 6% of the total colony sites.

Trends in Nesting Seasonality- The highest number of nests typically were found in June (Figure 5). Peak nesting did vary according to species (Table 3). Great Egret and Great Blue Heron nesting peaked in March – April, while Wood Stork peak nesting was variable. Cattle Egret nesting normally peaked in June - July, while all other species peaked in June.

Wading Bird Colony Species Composition- The proportion of species nesting in the Upper Basin varied (Table 4). Small white heron comprised the highest percentage of nesting birds, while Great Blue Heron were generally found in lower proportions. Great Egret, Wood Stork, and Great Blue Heron showed an increase in proportions by 2000, while proportions of small dark heron and birds identifiable as Snowy Egret declined.

Species Colony Location Preference- Preference for nesting locations varied according to species. Great Egret consistently favored Stratum I for nesting. Large colonies of Great Egret were found in Fort Drum marsh and near Blue Cypress Lake. Wood Storks favored the borrow pits found in Stratum III, in fact these were the only locations where Wood Storks were found nesting near the Upper Basin. Snowy Egret were located in scattered mixed small heron colonies in Strata I, II, and III. Small white heron, including Cattle Egret, were typically found in borrow pit colonies of Stratum III or in larger colonies in willow thickets in Stratum II. Small dark heron favored using fence row colonies located in Stratum I. Great Blue Heron often nested singly, but when in groups preferred cypress forests in Stratum V near Lake Harney or in Stratum I, in a borrow pit in Ft Drum Marsh Conservation Area just north of SR60.

Although White and Glossy Ibis were encountered on the systematic transect surveys, none were found nesting in the Upper Basin.

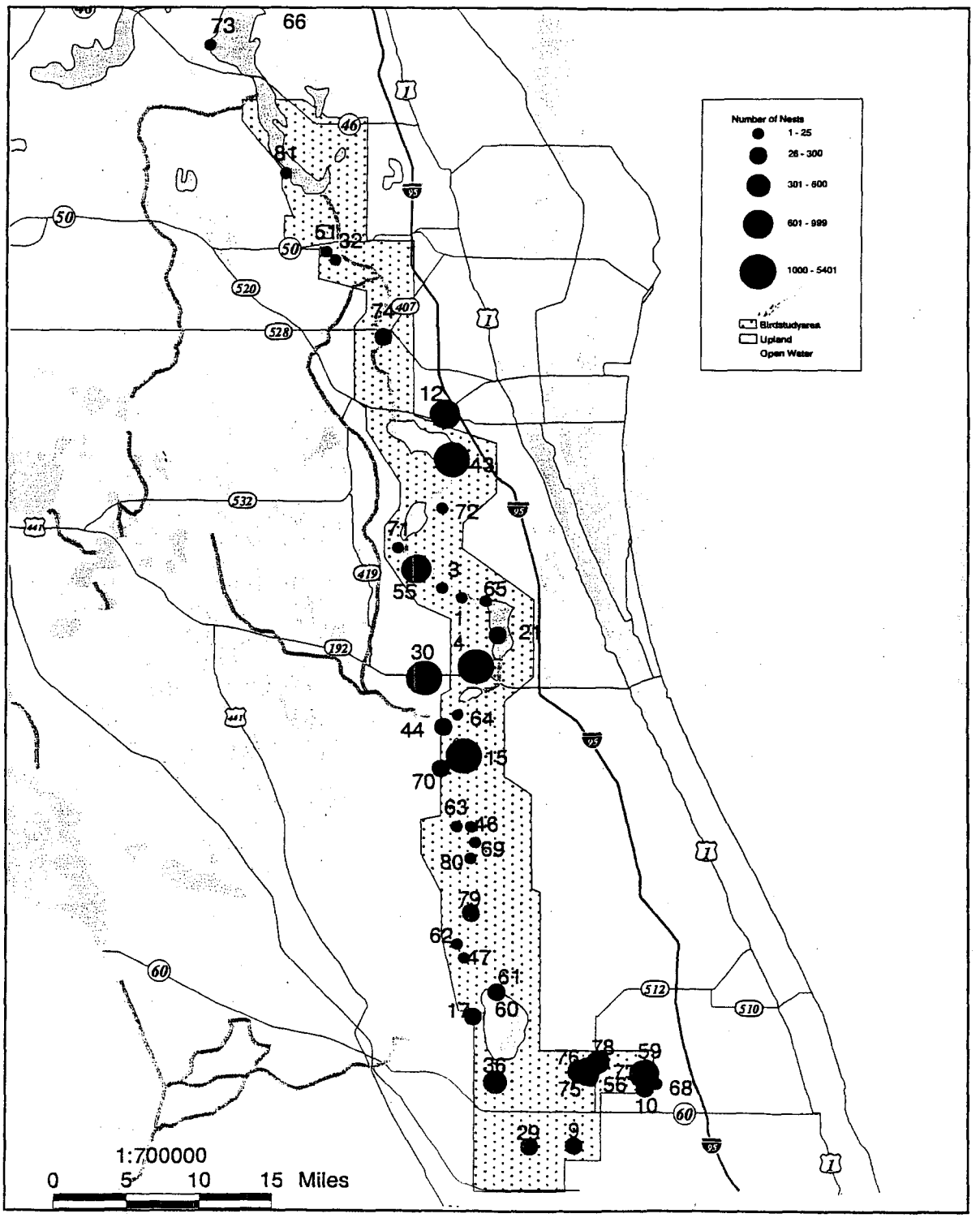

Figure 2. Distribution of wading bird colony sites within the Upper St. Johns River Basin between March and August 1998.

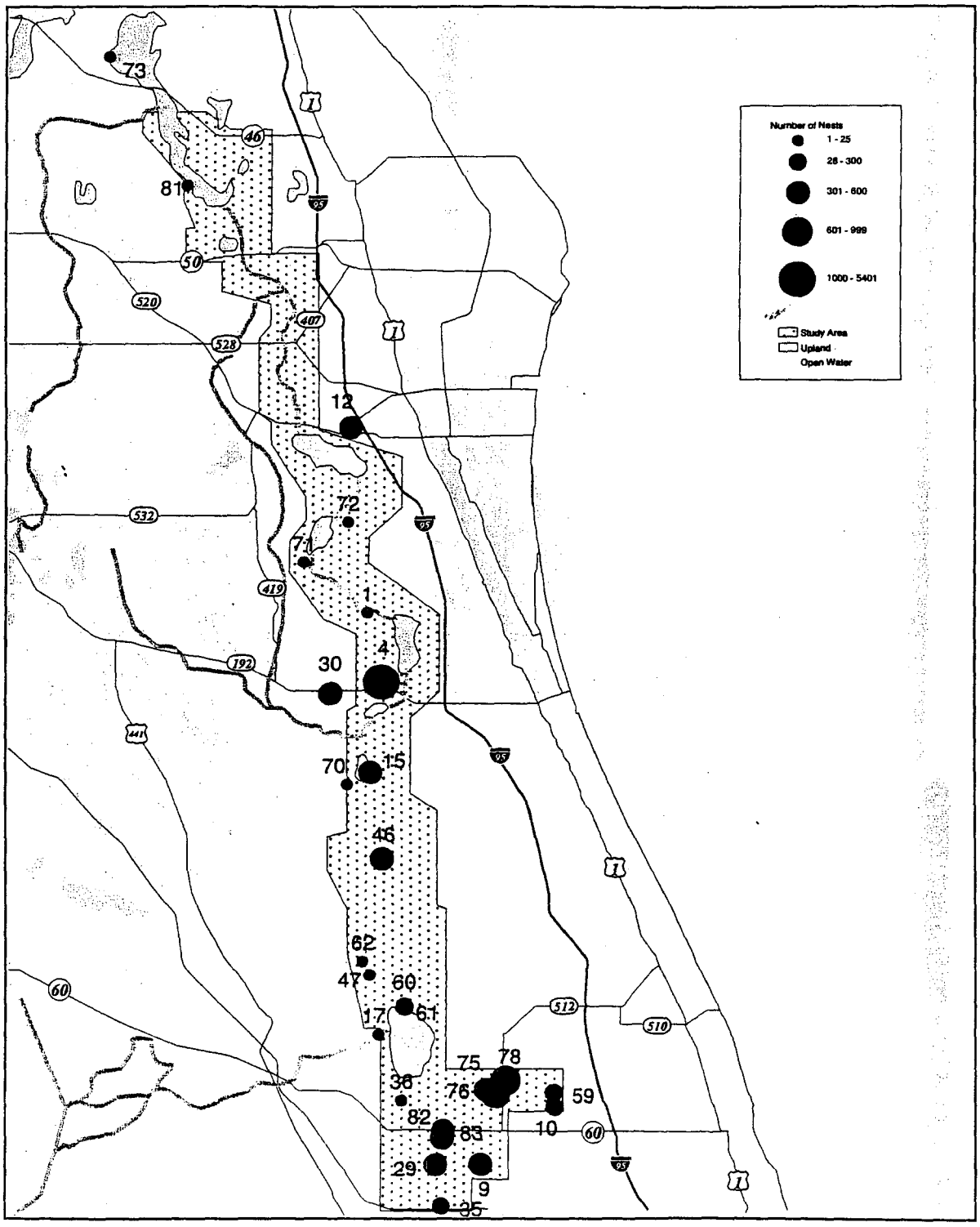

Figure 3. Distribution of wading bird colony sites within the Upper St. Johns River Basin between March and August 1999.

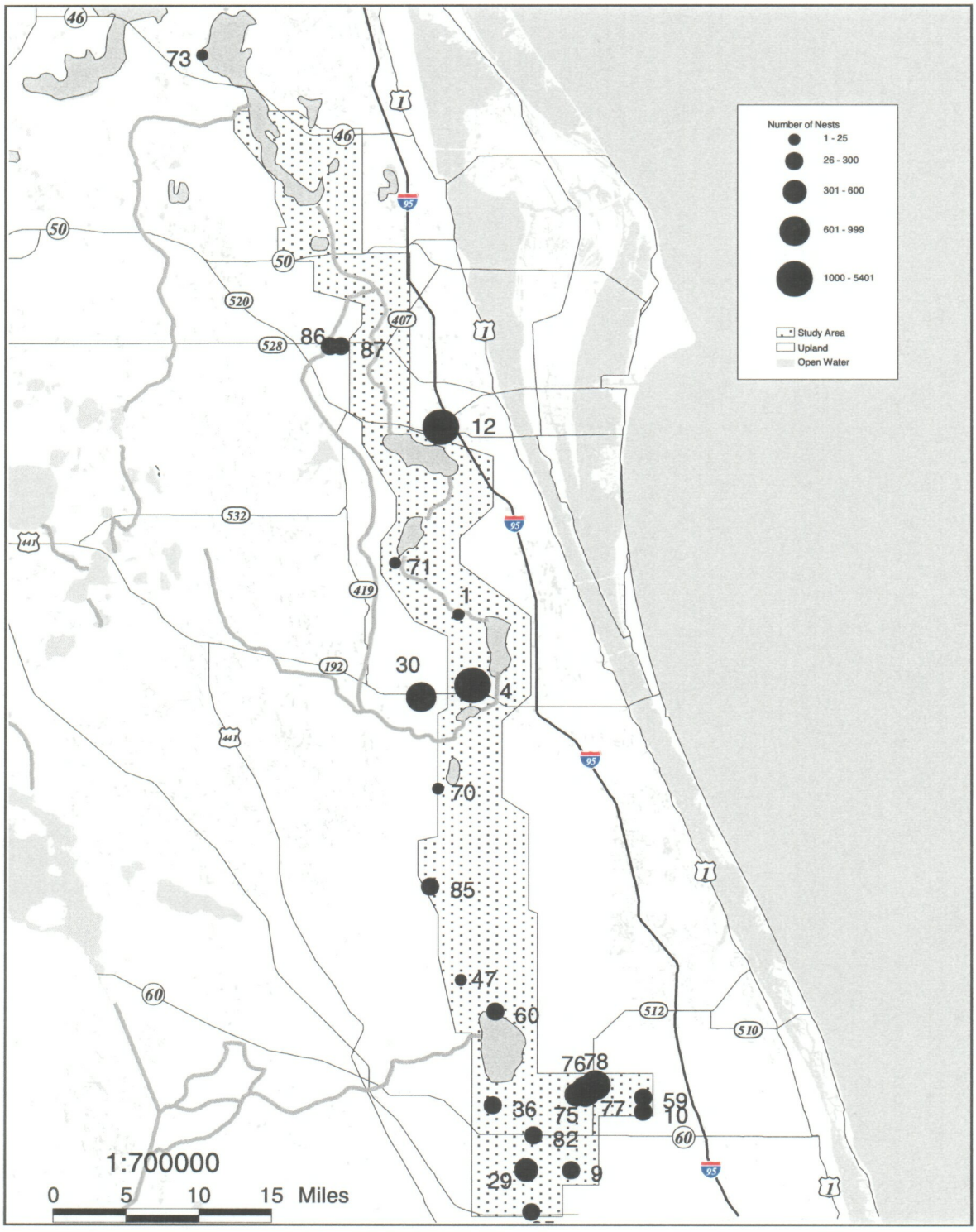

Figure 4. Distribution of wading bird colony sites within the Upper St. Johns River Basin between March and August 2000.

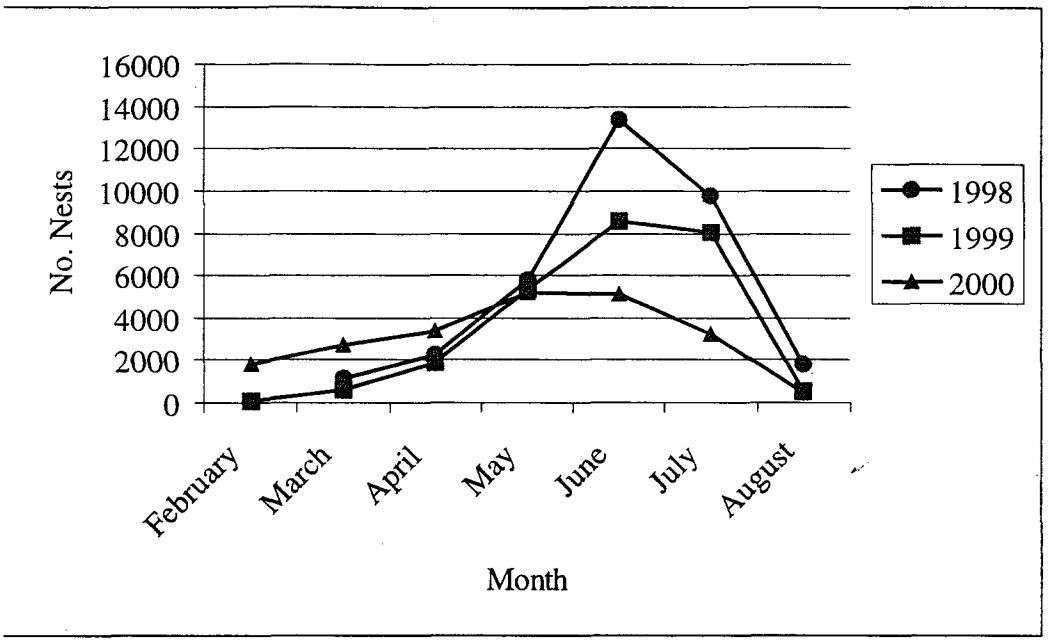

Figure 5. Monthly total wading bird nests counted the Upper St. Johns River Basin 1998 - 2000.

Table 3. Peak number of wading bird species nests counted in the Upper St. Johns River Basin March - August, 1998 - 2000. See Table 1 for abbreviations.

	Species											
	GE		WS		SE		SWH		SDH		GBH	
Year	Month	Peak #	Month	Peak #	Month	Peak #	Month	Peak #	Month	Peak #	Month	Peak #
1998	Apr	1410	June	760	June	2780	June	7250	June	1760	April	111
1999	Apr	705	Mar	420	May	510	July	7780	June	645	April	46
2000	Mar	1572	Apr	850	Mar	20	June	4305	June	500	March	83

Table 4. Proportion of species nesting in the Upper St. Johns River Basin March - August, 1998 - 2000. See Table 1 for abbreviations. Total Number is summed across species from Table 3.

		Species					
Year	Total #	GE	WS	SE	SWH	SDH	GBH
1998	14071	10.02%	7.39%	19.76%	51.52%	12.51%	0.79%
1999	10106	6.98%	4.16%	5.05%	76.99%	6.38%	0.46%
2000	7330	21.45%	11.60%	0.27%	58.78%	6.82%	1.13%

Table 5. Preferred strata for species nesting in the Upper St. Johns River Basin March - August, 1998 - 2000. See Table 1 for abbreviations.

	Species					
	GE	WS	SE	SWH	SDH	GBH
Year	stratum	stratum	stratum	stratum	stratum	stratum
1998	I	III	II	II	III	V
1999	I	III	III	III	I	V
2000	I	III	I	III	I	I

Nesting Substrate- Wading birds were found nesting in willow, red maple, and in solitary stands of cypress or cypress mixed with sawgrass. Stands of Brazilian pepper mixed with willow or wax myrtle were being used as colony sites in disturbed areas along old fence-rows that were not completely submerged. Mixed stands of cabbage palm and wax myrtle occurring in borrow pits were also used as nesting sites, in fact the highest mean number of wading bird nests was encountered in the cabbage palm/wax myrtle mixture. Willow was the preferred nesting substrate in the marshes. During the study period, Great Blue Heron nested most frequently in either cypress or red maple (Table 6). Great Egret nests were most abundant in some form of cypress, either in isolated stands or mixed with red maple or sawgrass but were also found in cabbage palm/wax myrtle stands. Wood Storks, small white heron, and small dark heron also preferred cabbage palm/wax myrtle found in borrow pits. Willow was the preferred nesting substrate for Snowy Egret and Tricolored Heron.

Table 6. Average peak number of nests classified by nesting substrate for species in the Upper St. Johns River Basin during March - August, 1998 - 2000. See Table 1 for abbreviations.

Substrate	Species								
	GE	SE	SWH	WS	TCH	LBH	SDH	GBH	Total
Willow	59	314	471	0	67	7	210	2	1130
Cypress/Sawgrass	139	13	27	0	0	0	0	4	183
Cypress/Red Maple	118	20	0	0	0	0	0	21	159
Cabbage Palm/ Wax Myrtle	246	291	2275	400	20	20	254	4	3510
Cypress	446	49	133	37	20	0	66	38	789
Brazilian Pepper/mix	216	60	2193	283	0	7	250	10	3019

Monthly Colony Survey Details- Detailed accounts of monthly wading bird nesting activity is described in Appendix I of this report.

TRANSECT SURVEYS

Methods

Systematic transect surveys were flown in the months of April, June, and August for 1998, 1999, and 2000. Surveys required one to one and one-half days to complete. Three observers in a Cessna 172 aircraft flew 62 east-west transects at 80kt over the St. Johns Marsh Upper Basin at an altitude of 200 feet to survey wading birds that were utilizing the study area. As the aircraft flew each east-west transect line, observers looked for and counted wading birds that were either standing, flying, or roosting. Observers recorded on data sheets the species, number of individuals, habitat type, behavior, and longitude of all wading birds seen in bands 150m wide on each side of the transect. A Garmin III GPS receiver was used to record bird locations. Habitat was classified into 9 types (Table 7). Habitat type was not recorded for each observation, especially when birds were numerous in flocks and it became difficult to record all of the information. Transect survey dates and transect survey lines are listed in Appendix II.

Data were entered into Excel spreadsheets. Densities, population estimates, variance estimates, and 95% confidence intervals were calculated using the following formulas:

Population Estimate = Y = Birds counted/0.15

$\text{Var}(Y) = (N(N-n) / n)(S_y^2 - 2R\,S_{zy} + R^2 S_z^2)$

where

N = the number of transects flown divided by percent coverage

n = the number of transects flown

S_y^2 = the variance in numbers of birds in the transects

S_z^2 = the variance in areas covered in the transects

S_{zy} = the covariance between birds counted and area per transect

R = the observed density in the strips censured

Ninety-five percent confidence intervals = $Y + t_{0.05,\,61\text{d.f.}}$ [s/sqn]

where

t = 1.99

s = the square root of the variance

sqn = the square root of n = 7.874008 (n = 62)

To compare bird use between transects, each transect area was converted to square kilometers. Densities were calculated as the number of birds per square kilometer for each transect. To compare use between strata, the transect areas within each stratum were summed and densities were calculated as number of birds per square kilometer for each stratum. To compare overall use between years, densities were calculated as the number of birds within the total transect areas.

Table 7. Habitat type utilized by wading birds in the Upper St. Johns River Basin.

Habitat Type	Description
Vegetated Marsh	Shallow area in the marsh that contains over 75% emergent vegetation less than 1 foot high
Open Marsh	Shallow area in the marsh that contains between 75% - 25% emergent vegetation less than 1 foot high
Pond	Depression in the marsh that is deeper than surrounding area
Ditch	Shallow, man-made channel in the marsh - < 3m wide
River	Natural river channel
Canal	Deep, man-made channel in the marsh - >3m wide
Open Water	Deeper areas, usually lakes or reservoirs, that contained < 25% emergent vegetation
Pasture	Open fields that are, typically, not flooded
Grove	Citrus grove that contains trees and ditches

Results

Trends in Abundance and Distribution- During the study period, there was no definitive trend in populations of wading birds utilizing the Upper Basin. The estimated population of wading birds fluctuated between years and months (Table 8). The highest number of birds estimated using the marsh occurred in August 1999 at 77,560 birds, while the lowest numbers were found in April 2000 at 8,040. Generally, most wading birds were found in Strata I & II.

Habitat Use- Most wading birds were found utilizing three predominant habitat types during the survey period (Table 9). A higher proportion of wading birds was found in vegetated marsh, followed by ponds and open water.

Species Composition - The proportion of species utilizing the marsh changed during the survey period (Table 10). Great Egret dominated the proportion of birds utilizing the Upper Basin in April 1999 and 2000. During June and August, Cattle Egret and small white heron had the highest proportions of all birds in the marsh. Populations of Great Blue Heron, Great Egret, Tricolored Heron, and Little Blue Heron declined from April to August. Glossy Ibis were observed in higher proportions during April. The highest proportion of Wood Storks and White Ibis found utilizing the marsh occurred in June 1998.

Monthly Transect Survey Details- Detailed accounts of wading bird distribution recorded during the transect surveys is described in Appendix III and IV of this report.

Table 8. Estimated population of wading birds found in the Upper St. Johns River Basin in 1998 - 2000 classified by stratum.

		Stratum I		Stratum II		Stratum III		Stratum IV		Stratum V		
Month	Year	#	Rank	#	Rank	#	Rank	#	Rank	#	Rank	Total
April	1998	2480	3	5093	1	3093	2	1087	4	1033	5	12787
	1999	10920	1	1026	4	880	5	1213	3	2333	2	16373
	2000	3440	1	1580	2	920	4	840	5	1260	3	8040
June	1998	21527	1	10287	5	10667	4	12187	3	20073	2	74741
	1999	6500	2	12827	1	1300	5	2867	4	4353	3	27847
	2000	4373	1	3187	3	2747	4	2013	5	3273	2	15593
August	1998	20800	2	24420	1	2940	5	3727	4	10213	3	62073
	1999	57547	1	6853	2	4727	4	2700	5	5733	3	77560
	2000	9587	2	14060	1	1840	4	280	5	5940	3	31707

Table 9. Proportion (%) of wading birds utilizing habitat types in the Upper St. Johns River Basin.

Habitat Type	Aug 1998	Aug 1999	Aug 2000	Jun 1998	Jun 1999	Jun 2000	Aug 1998	Aug 1999	Aug 2000	Average Use
Vegetated Marsh	57	2	33	36	52	13	88	25	47	39
Open Marsh	4	10	6	16	1	1	1	0	0	4
Pond	29	1	27	18	34	37	9	62	47	29
Ditch	10	1	9	4	2	6	1	10	3	5
River	0	2	3	0	0	2	0	0	0	0.7
Canal	0	0	1	0	0	0	0	1	0	0.2
Open Water	0	66	21	25	11	29	3	5	3	18
Pasture	0	18	0	0	0	11	0	7	0	4
Grove	1	0	0	1	0	0	0	0	0	0.2

Table10. Species composition of estimated number of wading birds utilizing the Upper St. Johns River Basin in 1998 - 2000. See Table 1 for abbreviations.

	Month	April		June		August	
Species	Year	#	%	#	%	#	%
GE	1998	3860	30.19%	12007	16.07%	5813	9.37%
	1999	9693	59.20%	6007	21.57%	5533	7.18%
	2000	2673	33.25%	3753	24.07%	2567	8.10%
WS	1998	253	1.98%	4133	5.53%	100	0.16%
	1999	313	1.91%	40	0.14%	47	0.06%
	2000	293	3.65%	127	0.81%	0	0.00%
GI	1998	467	3.65%	1227	1.64%	13	0.02%
	1999	273	1.67%	0	0.00%	0	0.00%
	2000	33	0.41%	0	0.00%	0	0.00%
WI	1998	1073	8.39%	21507	28.78%	9567	15.41%
	1999	273	1.67%	300	1.08%	13	0.02%
	2000	533	6.63%	60	0.38%	1427	4.50%
SE	1998	340	2.66%	1940	2.60%	227	0.37%
	1999	267	1.63%	33	0.12%	20	0.03%
	2000	520	6.47%	0	0.00%	13	0.04%
CE	1998	4760	37.23%	13287	17.78%	34533	55.63%
	1999	1540	9.41%	15507	55.69%	65033	84.36%
	2000	2333	29.02%	5147	33.01%	17460	55.07%
SWH	1998	1520	11.89%	19960	26.71%	11020	17.75%
	1999	2040	12.46%	5667	20.35%	6520	8.46%
	2000	973	12.11%	5480	35.14%	10153	32.02%
TCH	1998	27	0.21%	53	0.07%	7	0.01%
	1999	20	0.12%	0	0.00%	0	0.00%
	2000	13	0.17%	0	0.00%	0	0.00%
LBH	1998	273	2.14%	487	0.65%	313	0.50%
	1999	307	1.87%	13	0.05%	7	0.01%
	2000	33	0.41%	7	0.04%	27	0.08%
SDH	1998	20	0.16%	1813	2.43%	293	0.47%
	1999	747	4.56%	147	0.53%	220	0.29%
	2000	293	3.65%	433	2.78%	120	0.38%
GBH	1998	193	1.51%	547	0.73%	140	0.23%
	1999	900	5.50%	133	0.48%	167	0.22%
	2000	367	4.56%	627	4.02%	160	0.50%

Conclusion

This study documents that wading birds, including endangered, threatened, and special concern species, continued to utilize the Upper St. Johns River Basin for nesting, foraging, and roosting during 1998 - 2000. Both the transect and colony survey offer different types of information and both are equally valuable. While transect surveys provide information on wading bird use within marshes, they are a snapshot which reflect conditions in the marsh on a single day. Abundance and availability of food varies with changes in hydrology, weather, and recent foraging pressure, and wading birds readily respond to good quality feeding conditions in the area (Bancroft and Sawicki 1992, Kushlan 1978, Kushlan 1986, Ogden et al 1978, Sewell et al 1996). Although transect surveys allow the manager to see what is occurring in the marsh on one day, by conducting these surveys over a long term, managers may be able to gain better insight into the quality of the marshes. One expects that if birds begin to move into certain restored areas, then the quality of habitat must be suitable. The colony surveys reflect the quality of the area on a longer temporal basis. If food is available throughout the nesting season in consecutive years and if nesting substrate remains suitable, then birds will continue to nest at certain colony sites year after year (Custer and Osborn 1978, Fredrick 1989, Kushlan et al 1975, Ogden 1994).

Strictly from empirical observations, it was evident that conditions in the Upper Basin marshes were changing during the survey period. Vegetative and hydrological changes that occurred in the Upper Basin more than likely affected wading bird behavior during the study period. Wading birds are nomadic and readily respond to dynamic changes in the mosaic patterns within wetlands (Bildstein 1990, Hoffman et al 1994, Rosier 1993, Sewell and Swain 1995). An abundance of wading birds in an area indicates that conditions within that area are providing suitable habitat for the birds' daily activities, primarily foraging, nesting, roosting, and avoidance of predators. If over time, the quality of habitat remains suitable for wading birds, then populations will increase. If, however, habitat conditions decline, even if for short periods, then so will wading bird abundance (Hoffman et al 1990, Kushlan 1986). Thus, wading bird abundance aids managers in determining conditions within regional marsh ecosystems.

Data collected during the study period indicated that wading bird populations between 1998 and 2000 may have been declining. Interesting trends occurred with birds utilizing colony sites within the Upper Basin as well as those birds that were found during the transect surveys. Further examination of nesting patterns and population trends for Upper St. Johns River Basin wading birds during 1998 - 2000 as well as patterns found in 1993 - 1995 are discussed below.

Wading Bird Nesting

There continues to be nesting fidelity in several areas throughout the Upper Basin. This study found that historical colony sites were the most favored locations for nesting during 1998, however in 1999 and 2000, wading bird preference shifted to new colony locations. Colony sites used between 1993 – 1995 (Hoffman 1996) had higher numbers of nests than new colony sites established in 1998 - 2000. During the 1998 - 2000 survey period, at least one colony each season in the study area contained over 1,000 nests from May - August. 1998 was the peak year for nesting in the Upper Basin (Figure 6). Studies during 1993 - 1995 and in this study indicated that peak nesting normally occurred in June.

It appears that species composition of nesting birds is changing in the Upper Basin. In 1993, small white heron comprised a significant proportion (over 88%) of birds nesting in the marsh. Since 1993, however, the number of small white heron (primarily Cattle Egret) has decreased, while the number of other species has increased (Table 11). One possibility for the Cattle Egret's decline is that they prefer to utilize open pastureland for foraging. As more pastures are flooded, in an effort to restore the Upper St. Johns River Basin, there is less available habitat in which Cattle Egret can forage. An increase in the proportion of Great Egret occurred from 1993 to 2000 from a low of 5% to a high of 21% of the total nesting population. The proportion of Wood Storks nesting in the study area stayed constant at 2% during 1993 - 1995, but increased during the 1998 - 2000 study period to 12% by 2000. Wood Storks are tactile feeders and need areas that funnel prey. Perhaps Wood Storks are finding more suitable habitat, especially canals and ditches, to forage in since the restoration has taken place.

Preference for colony nesting substrate and colony type has also changed over time. Borrow pits, where fill dirt is removed creating islands and moats, has been a favored location for Upper St. Johns River Basin wading birds to nest. Wading birds historically have utilized borrow pits in and surrounding the marsh (Table 12). However, during this study period more birds moved from willow colonies normally found along the edges of lakes or canals, or sometimes in the middle of the marsh, to borrow pit colonies. For example, in 1998 a higher proportion of wading birds nested in willow or cypress colonies in the marsh compared to borrow pit colonies. By 2000, the proportion of birds using borrow pit colonies increased dramatically. During the study period, water levels were lower than normal, especially in 2000. Perhaps wading birds were finding refuge in borrow pit colonies since all of them are surrounded by water and are less accessible to predators.

The size and distribution of colonies in the Upper Basin fluctuated, both from 1993 - 1995 and during this study period (Table 13). A higher number of colonies was consistently found in Stratum I during both study periods. Colonies with between 601 and 999 nests were also consistently found in Stratum I. Size class fluctuated within Stratum II. Stratum II lost 2 colonies that had over 1000 nests each over the study period. Stratum V had smaller colonies (1 - 25 nests) compared to the other strata. Large colonies (> 600 nests) were usually found in Strata III and IV.

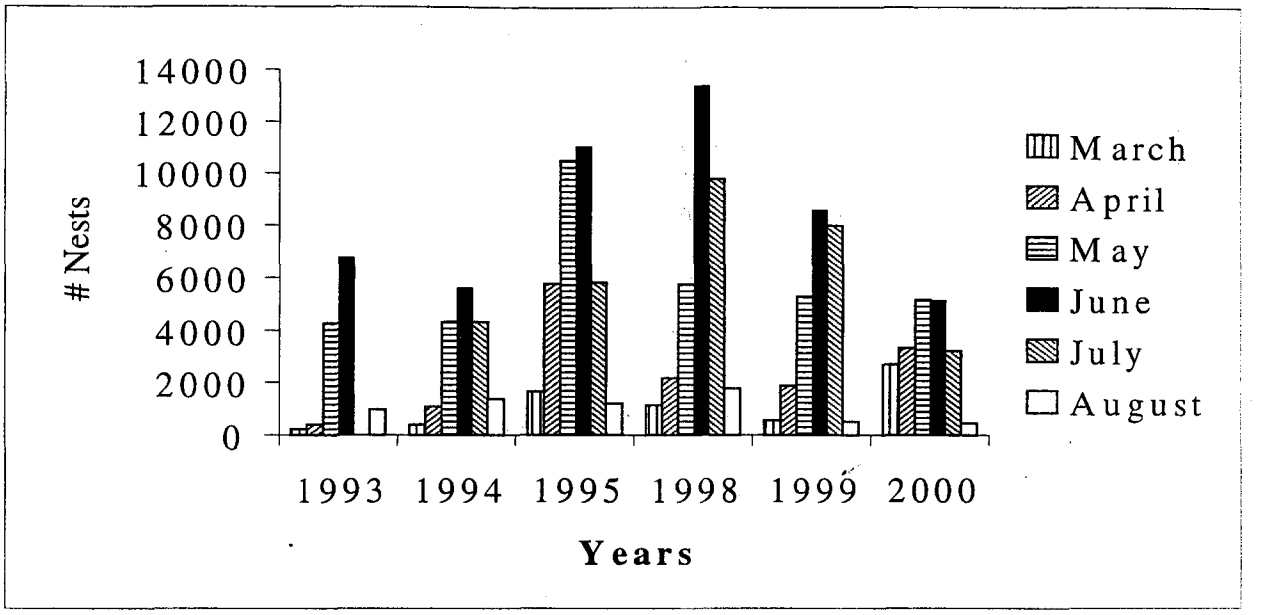

Figure 6. Monthly totals of wading bird nests counted in 1993 - 1995* and 1998 - 2000 in the Upper St. Johns River Basin. * (from Hoffman 1996)

Table 11. Peak number of wading bird species nests counted in the Upper St. Johns River Basin during 1993 - 1995* and 1998 - 2000.

	1993		1994		1995		1998		1999		2000	
Species	#	%	#	%	#	%	#	%	#	%	#	%
GBH	31	0	49	1.0	57	0	111	1.0	46	1.0	83	1.0
GE	350	5.0	420	7.0	1540	12.0	1410	10.0	705	8.0	1572	21.0
SE	130	2.0	330	5.0	1460	11.0	2780	20.0	510	6.0	20	0
SWH	6000	89.0	5000	83.0	9800	74.0	7250	51.0	7780	74.0	4305	59.0
SDH	150	2.0	150	2.0	180	1.0	1760	13.0	645	7.0	500	7.0
WS	110	2.0	90	1.0	296	2.0	760	5.0	420	5.0	850	12.0
Total	6771		6039		13333		14071		10106		7330	

* (from Hoffman 1996)

Table 12. Numbers of wading bird nests found in borrow pit colonies versus other types during the 1993 - 1995 and 1998 - 2000 studies. * Majority of nests were Cattle Egret

Year	# Borrow Pit Colonies	Peak # Nests	# Other Colony Types	Peak # Nests
1993	3	1130	21	*6370
1994	6	5200	19	2000
1995	4	2000	37	*12000
1998	7	3790	36	*9952
1999	8	8151	19	2126
2000	11	6900	10	573

Table 13. Size class and distribution of Upper St. Johns River Basin wading bird colonies during 1993 - 1995 and 1998 - 2000 classified by Stratum (N = peak nesting/# nests, A= 1 - 25, B = 26- 300, C = 301 - 600, D = 601 - 999, E = 1,000+).

		# colonies in size class					
Stratum	Year	A	B	C	D	E	Total
I	1993	3	3	2	1	0	9
	1994	3	9	0	1	0	13
	1995	5	7	3	1	0	16
	1998	5	7	2	1	0	15
	1999	2	7	3	2	0	14
	2000	1	7	1	2	0	11
II	1993	0	0	0	0	3	3
	1994	0	1	0	0	0	1
	1995	1	4	1	0	0	6
	1998	4	3	0	0	1	8
	1999	1	1	1	0	0	3
	2000	1	1	0	0	0	2
III	1993	2	1	1	1	0	5
	1994	1	0	0	0	1	2
	1995	2	2	0	0	1	5
	1998	5	1	0	2	1	9
	1999	3	1	0	0	1	5
	2000	2	0	1	0	1	4
IV	1993	1	2	1	0	0	4
	1994	0	0	1	0	1	2
	1995	3	1	2	0	1	7
	1998	0	1	1	0	1	3
	1999	0	0	1	0	0	1
	2000	0	0	0	1	0	1
V	1993	1	0	0	0	0	1
	1994	1	0	2	0	0	3
	1995	3	0	0	0	1	4
	1998	5	0	0	0	0	5
	1999	2	0	0	0	0	2
	2000	1	2	0	0	0	3

A definite trend becomes apparent upon examining the six survey years (Figure 7). A gradual increase in the number of wading bird colonies located in the Upper Basin occurred from 1993 - 1995 with more larger colonies forming. No surveys were conducted in 1996 or 1997, but it appears that 1998 was the peak year during the 2 survey periods since it had the greatest number of colonies as well as the greatest number of large colonies (> 600 nests each) for both survey periods.

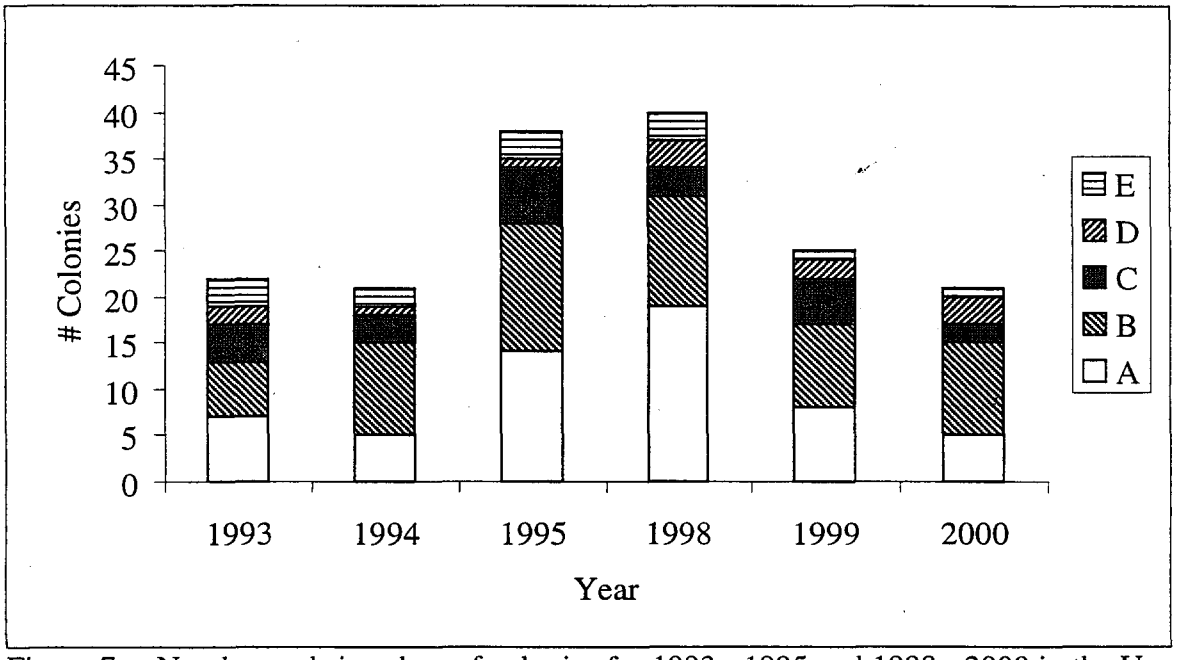

Figure 7 . Number and size class of colonies for 1993 - 1995 and 1998 - 2000 in the Upper St. Johns River Basin.

Systematic Surveys-

This study found that wading birds utilizing the Upper St. Johns River Basin were not evenly dispersed throughout the survey area. A higher proportion of birds were encountered in Strata I and II, even though the largest colonies were found in Stratum III (Table 14). This suggest that birds nesting in Strum III may have been flying south to Strata I & II to forage. Stratum II had the highest use for birds in 1993 - 1995. During 1998 - 2000, use fluctuated between Strata I and II. Thus, wading birds utilizing the Upper St. Johns River Basin preferred the southern end, or the headwaters, as opposed to northern areas. The uneven distribution may be due to less reliable sources of food in the northern Upper Basin. Empirical observations indicated that much of the northern area dried out more quickly than the southern strata.

During both study periods, 1993 - 1995 and 1998 - 2000, April had the lowest number of birds utilizing the marsh. Although more birds were nesting in June, there was no trend in bird use of the marsh in June. Numbers of birds utilizing the marsh peaked in either June or August (Table 15).

Table 14. Stratum with the peak number of wading birds using the Upper St. Johns River Basin during 1993 - 1995*, 1998, 1999 and 2000.

Month	Year					
	1993	1994	1995	1998	1999	2000
April	II	II	II	II	I	I
June	II	II	II	I	II	I
August	I	II	II	II	I	II

* (from Hoffman 1996)

Table 15. Seasonal wading bird populations versus nesting populations in the Upper St. Johns River Basin.

	April	June	August
1993 # Use	14373	22426	63106
# Nest	415	6060	1000
1994 # Use	14807	36720	19573
# Nest	1100	6000	1400
1995 # Use	20853	51213	25793
# Nest	5700	10900	1200
1998 # Use	12787	74741	62073
# Nest	2188	13386	1710
1999 # Use	16373	27847	77560
# Nest	1891	8560	500
2000 # Use	8040	15593	31707
# Nest	5160	5125	470

Wading bird utilization in the Upper St. Johns River Basin can be compared to other wetland areas. For example, densities reported here are somewhat lower than those found in other east central Florida freshwater marshes (Table 16). Frederick and McGehee (1992) calculated a mean of 63.95 birds/ km^2 in a natural marsh west of the St. Johns, compared to this study's 31.72 birds/ km^2. In east central Florida coastal marshes, Sewell et al (1997) found that in altered, managed marshes densities were higher than those found in this study. In contrast, two artificially constructed east central freshwater marshes had mean densities about 10 - 20% lower than those found in this study (Frederick and McGehee 1994). Densities in the northern Everglades (Conservation Area 1) were also lower (Hoffman 1990, Nelson and Theriot 1999). Densities in both natural and artificial wetlands in Italy, again, were lower than those recorded in this study (Fasola 1986).

Table 16. Wading bird density in different wetland classes and landscapes that can be compared to densities found in the Upper St. Johns River Basin.

Wetland Class	Location	Reference	Surrounding Landscape	Method	Scale	Density
Restored	C Florida	This Study	freshwater marsh	Aerial	km^2m	31.72
Natural	C Florida	Frederick & McGehee 1992	freshwater marsh	Aerial	km^2m	63.95
Artificial	C Florida	Frederick & McGehee 1992	mine pits	Aerial	km^2m	18.73
Artificial	C Florida	Frederick & McGehee 1994	rural	Aerial	km^2m	26.62
Natural	S Florida	Hoffman et al. 1990	freshwater marsh	Aerial	km^2p	10.90
Natural	S Florida	Nelson & Theriot 1998	freshwater marsh	Aerial	km^2p	29.68
Altered	C Florida	Sewell et al. 1997	coastal marsh	Aerial	km^2m	69.05
Artificial	N Italy	Fasola 1986	agriculture+	Ground	km^2m	13.30
Artificial	N Italy	Fasola 1986	agriculture^X	Ground	km^2m	13.40
Natural	N Italy	Fasola 1986	agriculture-	Ground	km^2m	15.40

* Densities have been converted.

+ rice fields, ^{X} canals, - marsh, m mean, p peak

Future Studies: These studies provided both colony and systematic aerial transect surveys to assess wading bird populations in the Upper St. Johns River Basin. Aerial studies are very valuable in that they allow the researcher access to hard to reach areas. Future studies should always include aerial surveys. There are several disadvantages, however, to aerial surveys. First, many of the darker-colored birds, Little Blue Heron, Tricolored Heron, Green Heron and night herons are undercounted since they are difficult to see. Second, it is sometimes difficult to separate Snowy Egret from Cattle Egret, especially when fledglings are active in the colony. Third, it is difficult to get an exact latitude/longitude coordinate for colonies, especially from an airplane since it cannot hover over an area like a helicopter can. To improve survey accuracy, it may be feasible to survey some colonies on the ground using a watercraft.

Both wading bird utilization/population and colony/nesting surveys should be continued in the Upper Basin of the St. Johns Marsh. Transect surveys allow the manager to determine distribution of birds utilizing the marsh, thus pinpointing areas in the marsh that are the most productive. Future studies should include transect surveys conducted every other month and should include plotting individual locations of birds on maps to see where the largest concentrations occur within each Strata. Colony surveys should be continued monthly during the nesting season to help determine long-term trends in the marsh ecosystem.

Water levels within the marshes are the key to wading bird success. To understand what is occurring in each marsh unit and why wading birds are using some areas more than others,

water level data must be collected and analyzed. If these data have been collected for 1993 - 1995 and 1998 - 2000, then they should be overlaid onto the wading bird data to determine which water level regime the birds prefer. Future studies should always include water level analysis.

Behavior and habitat data were collected in both studies. Further analysis of these data should ensue as well. If future wading bird studies ensue, then it would be wise to include habitat use as a criterion in data collection. Observers should be strict in noting the particular micro-habitat that the bird is using. In other words, record for example ditches and the size and whether the bird was on the edge or in the middle.

Criteria need to be established for reporting changes in colony locations; species composition; and determining peak numbers. Since wading birds are nomadic, colony locations may move from a particular site, but will remain in the same general location. If it is evident that species composition and site preference are similar, then the colonies should not be renamed. A maximum move distance of .25 to .50 miles should be established before renaming the colony. Since some species appear similar from the air, species are often grouped into one category such as small white or small dark heron. Determining the population status of listed species such as, the Snowy Egret, Little Blue Heron, and Tri-colored Heron is important, so grouping of these individual species should be avoided if possible. For this report and Hoffman's report (1996), peak nesting was determined for each species by counting the highest number of nests found in a particular month. Peak nesting can also be determined by examining each colony and the progression of species that have the highest number of nests for that colony for a particular month. These totals can then be summed for each individual colony to arrive at peak nesting numbers.

Restored areas and marsh units within the Upper St. Johns River Basin are important to wading bird populations in East Central Florida. As development occurs along the east coast, these marshes will have a more significant role in maintaining wading bird populations. It is imperative that wading bird researchers and habitat managers communicate with one another around the state to better determine the status of statewide wading bird populations. The Annual Florida Wading Bird Symposium, first held at Archbold Biological Station in November 2000, was an excellent way to disseminate wading bird information. In addition, Maria Minno has created a terrific web page for the Florida Wading Bird Group at http://www.flmnh.ufl.edu/wadingbirds. This web site is extremely beneficial in distributing statewide wading bird information and should continue to be maintained and utilized.

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Appendix I
Monthly Colony Survey Data

Table I -1. Results of the March 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, n= tending nest).

Col #	Strat #	Hist. Status	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
9	I	P	20	40								60	n	CS	Reservoir
40	I	P	80									80	n	CS	Reservoir
36	I	P	20	40								60	n	CWR	Air Boat Trail
17	I	P	100									100	n	CR	North of Blue Cypress Boat Ramp
60	I	N	8								2	10	n	CR	NNE of Blue Cypress
61	I	N	60								4	64	n	C	North East of Blue Cypress
47	I	P									5	5	n	C	S Edge of Reservoir
62	I	N									5	5	n	C	NW Edge of Reservoir
46	II	P		15							1	16	n	C	West of Main Canal
63	II	N									1	1	n	C	West Edge
44	II	P	250									250	n	C	
64	II	N									1	1	n	C	In River
30	III	P	100	80			110			80	5	375	n	C	Borrow Pit
65	III	N									3	3	n	C	South of Channel
1	III	P									13	13	n	C	
3	III	P									6	6	n	C	South of Channel
43	IV	P		20						60	4	84	n	W	South of Lake Poinsett
66	V	N									1	1	n	C	East side of Lake Harney
Totals			638	195	0	0	110	0	0	140	51	1134			

Table I - 2. Results of the April 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat	Hist	Species									TTL	Nest	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
68	I	N									2	2	N	C	
9	I	P	20	40								60	N	CS	Resevior
67	I	N	40								2	42	N	CS	
29	I	P	150									150	N	C	North of Turnpike
40	I	P	90								5	95	N	CS	Resevior N of Turnpike
36	I	P	80									80	N	RW	E of Airboat Trail
17	I	P	150									150	N	CR	North of Blue Cypress Boat Ramp
61	I	N	80								7	87	N	CR	NE of Blue Cypress
47	I	N									7	7	N	C	S Edge of Resevior
62	I	P									3	3	N	C	NW Edge of Resevior
46	II	P									3	3	N	C	N of Airboat Trail
69	II	N									3	3	N	C	
70	II	N									16	16	N	C	W Edge of Resevior
15	II	P			200							200			Roost? Lake Helen Blazes
44	II	P	200									200	N	CR	Green
30	III	P	400				200	40	40		10	690	N	M	
65	III	N									2	2	N	C	S of River
1	III	P									5	5	N	C	S of River
3	III	P									8	8	N	C	S of River
71	III	N									6	6	N	C	S of River
72	III	N								7		7	N	W	N of Lake Widner
43	IV	P		20						60	4	84	N	W	S of Lake Poinsett
12	IV	P	200				60					260	N	CP	Borrow Pit
51	V	P									3	3	N	C	N of Puzzle
73	V	N									25	25	N	CR	SW Side of Lake Harney
Totals			1410	60	200	0	260	40	40	67	111	2188			

Table I - 3. Results of the May 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Stat.	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
67	I	N	20									20	N	CS	Reservoir
29	I	P	100	40				60				200	N	C	
40	I	P	50								4	54	N	CS	Reservoir
10	I	P		40	40				30			110	N	W	Silver Spring
36	I	P	30	40				100	20			190	N	W	E of Arsenal
17	I	P	90									90	N	CR	N of Boat ramp
61	I	P	80								5	85	N	W	
47	I	N									7	7	N	C	Reservoir W. Edge
62	I	P									2	2	N	C	
46	II	P									4	4	N	W	
63	II	N									2	2	N	R	
70	II	N									16	16	N	C	
15	II	P		500	1050			100	300			1950	N	W	Huge colony 2 Acres Lk Helen
44	II	P	200									200	Y	C	Jane Green
30	III	P	60	150		80			100			390	N	CP/M	
4	III	P	50	200	100	200			200			750	N	CP/M	
65	III	P									2	2	N	C	
1	III	P									5	5	N	C	
3	III	P									7	7	N	C	
55	III	P		300	300						4	604	N	W	
71	III	P									4	4	N	C	
72	III	N							20			20	N	W	
43	IV	N		200	100			100	400			800	N	W	

Table Cont. Next Page

Table I - 3. (cont.) Results of the May 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Stat.	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
12	IV	P	80				110			30		220	N	CP/M	
74	IV	N								20		20	N	W	
51	V	P									3	3	N	C	
73	V	N									20	20	N	CR	
Total			760	1470	1590	0	390	360	0	1120	85	5775			

Table I - 4. Results of the June 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist Stat	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
67	I	N									1	1	Fledged	CS	1.5 Acres
40	I	P	10									10	N	CS	1.5 Acres
29	I	P	80	50								130	F	C	2-3 Fledglings per nest 3Acres
36	I	P		250						50		300	N	W	300 x 50
10	I	P										0	V	W	No Birds Photo #25& 24 FIRE
75	I	N		200	300					100		600	N	W	
76	I	N		100	200							300	N	Pepper	
56	I	P				20						20	Roosting		
59	I	P		200	400					100		700	N	C	
77	I	N			60							60	N	W	
78	I	N		80	300					60		440	N	W	
17	I	P	200									200	Young	CR	1/2 Acre
61	I	P	40									40	Young	W	1 Acre
47	I	P									2	2	Young	C	1/4 Acre
79	II	N			50							50	N	W	1/4 Acre
80	II	N			20							20	N	W	Donut 1/8 Acre
46	II	P									4	4	Young	C/M	
63	II	P									2	2	Young	R	1/4 Acre
70	II	N								10	16	26	Y/N	C	2 Acres Photo #27 & 28
15	II	P		1000	4000					300	1	5301	N	W	6 Acres
44	II	P	200									200	Young	C	2-3 Fledge per nest 6 Acres
64	II	P										0	V		No Nests
30	III	P	60	150	200	150				100		660	Young	CP/M	
4	III	P	50	300	200	500				200		1250	Young	CP/M	2-3 Fledge per nest (Woodstorks)

Table Cont. Next Page

Table I - 4 (cont.)- Results of the June 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist Stat	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
21	III	P		60						30		90	N	W	1/8 Acre
65	III	P										0	Young	C	Fledged 1/4 Acre
1	III	P										0	Young	C	Fledged 1/4 Acre
3	III	P										0	Young	C	Most Fledged 1/4 Acre
55	III	P		200	400					150	1	751	N	W	1 Acre Photo # 26
71	III	P										0	Young	C	Most Young Fledged 1 left 1/4 Acre
72	III	P								20		20	N	W	1/10 Acre
42	IV	P										0	V		No Birds Only 2 Nests
12	IV	P	40			100	110			200		450	Young	CP/M	1/2 Acre
74	IV	P								40		40	N	W	1/8 Acre
32	V	P									4	4	Y	C	South of River
51	V	P										0	Young	C	1/4 Acre Young fledged
81	V	N									15	15	Young	C	
73	V	N										0	Young	CR	4 Acres
43	V	N		200	1000			100		400		1700	N	W	3 Acres Lk Poinsett
Totals			680	2790	7130	120	760	100	0	1760	46	13386			

Table I - 5. Results of the July 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest, Y = tending Young).

Col #	Strat #	Hist. Stat.	Species								TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
40	I	P	80									80	N	CS	Young Fledged/Birds Roosting
29	I	P	80									80	F	C	Young Fledged/Birds Roosting
36	I	P		50	300					80		430	Y	W	Photo 21
75	I	N			160					40		200	N	W	1/8 acre
76	I	N		40	400					150		590	Y	Pepper	
59	I	P		200	400					100		700	Y	C	
77	I	N		50	200					150		400	Y	W	
78	I	N		40	150					80		270	Y	W	
17	I	P												CR	Colony Finished/Birds Roosting
61	I	P												W	Colony Finished/Birds Roosting
47	I	P												C	Colony Finished/Birds Roosting
79	II	N													Colony Finished
80	II	N												W	Colony Finished
46	II	P												C/M	Colony Finished
63	II	P												R	Colony Finished
70	II	N									2	2	Y	C	
15	II	P		1000	4000					300		5300	Y	W	2-3 Young per nest
44	II	P	20									20		C	Colony Burned/Birds Roosting
30	III	P		100	300		20			100		520	Y	CP/M	
4	III	P		200	600		40			100		940	Y	CP/M	
21	III	P		20						40		60		W	Very Dry
65	III	P										0		C	Colony Finished
1	III	P										0		C	Colony Finished

Table Cont. Next Page

Table I - 5 (cont.) Results of the July 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest, Y = tending Young).

Col #	Strat #	Hist. Stat.	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
3	III	P										0		C	
55	III	P												W	Vacant
72	III	P												W	Couldn't Find
12	IV	P		50	50		50			40		190	Y	CP/M	1/2 Acre
74	IV	P												W	Couldn't Find
32	V	P									1	1	Y	C	Very Dry
Totals			180	1750	6560	0	110	0	0	1180	3	9783			

Table I - 6. Results of the August 1998 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Stat.	Species										Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	WI	LBH	SDH	GBH	TTL			
36	I	P				60						60	FLG	W & BP	
59	I	P				200						200	FLG	W & BP	Photo #10
76	I	N				80				20		100	FLG	W & BP	
75	I	N				40						40	FLG	W & BP	
78	I	N				400				60		460	FLG	W & BP	
77	I	N				50						50	FLG	W & BP	
70	II	N										0		Willow	Colony finished
15	II	P										0		Willow	Colony finished
30	III	P			50							50	FLG	Willow	Photo #14
4	III	P			350					50		400	FLG	Willow	
21	III	P										0		Willow	Colony not found
43	IV	P		300						100		400	FLG	Willow	Lake Poinset
12	IV	P								10		10	FLG	Willow	Colony finished
Totals				300	400	830				240		1770			

Table I -7. Results of the February 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, n= tending nest).

Col #	Strat #	Hist. Status	Species										TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH				
67	I	N										1	1	N	CS	Reservoir
29	I	P	30										30	N	C	
60	I	N	25									1	26	N	CR	NNE of Blue Cypress
61	I	N										7	7	N	C	NE of Blue Cypress
47	I	P										7	7	N	C	S Edge of Resevior
62	I	N										1	1	N	C	NW Edge of Resevior
46	II	P										2	2	N	C	West of Main Canal
70	II	N										1	1	N	C	
30	III	P	3										3	R	C	Roosting/Borrow Pit
1	III	P										3	3	N	C	
12	IV	P					30						30	R	CP/M	Roosting/Poss.
TTL			58	0	0	0	30	0	0	0	0	23	111			

Table I - 8. Results of the March 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, n= tending nest).

Col #	Strat #	Hist. Status	Species										TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH				
40	I	P	60									0	60	N, B	C	Resevior N of Turnpike
67	I	N										1	1	N	CS	Reservoir
29	I	P	120										120	N	C	
36	I	P	10										10	N	RW	E of Airboat Trail
17	I	P	20										20	R	CR	North of Blue Cypress Boat
60	I	N	45									6	51	N	CR	NNE of Blue Cypress
61	I	N										7	7	N	C	NE of Blue Cypress
47	I	P										7	7	N	C	S Edge of Resevior
70	II	N										7	7	N	C	
30	III	P	60				25				1	0	86	N	CP/M	Borrow Pit
4	III	P	20				60					7	87	N,B	CP/M	Borrow Pit
1	III	P										3	3	N	C	
71	III	N										5	5	N	C	S of River
12	IV	P	100				70						170	N	CP/M	Borrow Pit
73	V	N										17	17	N	CR	SW Side of Lake Harney
TTL			435	0	0	0	155	0	0	0	1	60	591			

Table I - 9. Results of the April 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Status	Species									TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	W	WI	TCH	LBH	SDH	GBH				
9	I	P	175									175	N	CS	Reservoir
40	I	P	50								0	50	N, B	C	Reservoir N of Turnpike
67	I	N									1	1	N	CS	Reservoir
35	I	P								40	3	43	N	C	Just N. of Turnpike
29	I	P	300									300	N	C	Fort Drum
10	I	P		40						30		70	N	W	Silver Spring
59	I	P	80								1	81	N	C	Ansen East
76	I	N		40						20		60	N	M/BP	Garcia
75	I	N		50	20					20		90	N	M/BP	Garcia
78	I	N			220							220	N	M/BP	Garcia
60	I	N										15	N	CR	NNE of Blue Cypress
47	I	P									7	7	N	C	S Edge of Reservoir
70	II	N									10	10	N	C	
30	III	P	40	40		80					0	160	N	CP/M	Borrow Pit
4	III	P		120		22				40	1	381	N,B	CP/M	Borrow Pit
1	III	P									1	1	N	C	
71	III	N									4	4	N	C	S of River
12	IV	P	60	40		12						220	N	CP/M	Borrow Pit
72	III	P									1	1	N	C	
73	V	N									17	17	N	CR	SW Side of Lake Harney
TTL			705	330	240	42	0	0	0	150	46	1906			

Table I - 10. Results of the May 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Status	Species										TTL	Nest Stage	Habitat	
			GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH				
9	I	P	175										175	N	CS	Reservoir
40	I	P	50									0	50	N, B	C	Reservoir N of Turnpike
35	I	P			150							1	151	N	C	Just N. of Turnpike
29	I	P	150										150	N	C	Fort Drum
10	I	P		10							10		10	N	W	Silver Spring
76	I	N			380								380	N	M/BP	Garcia
75	I	N			400						50		450	N	M/BP	Garcia
78	I	N			500						50		550	N	M/BP	Garcia
47	I	P										3	3	N	C	S Edge of Receiver
70	II	N										2	2	N	C	
15	II	P			250								250	N	W	Lake Helen Blazes
30	III	P			150							1	151	N	CP/M	Borrow Pit
4	III	P		30	200		200				100		2600	N,B	CP/M	Borrow Pit
12	IV	P		20			50				50		300	N	CP/M	Borrow Pit
81	V	N										8	8	N	C	
73	V	N										11	11	N	CR	SW Side of Lake Harney
TTL			375	51	383	0	250	0	0	0	260	26	5241			

Table I - 11. Results of the June 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Status	Species											TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	WI	TCH	LBH	SWH	SDH	GBH				
9/40	I	P	170											170	N	CS	Reservoir/2 young per nest
82	I	N		100								100		200	N, B	W	Reservoir N of Turnpike
35	I	P		80								20		100	N	W	Just N. of Turnpike
29	I	P	150											150	N	C	Fort Drum/1 young per nest
10	I	P									25	25		50	N	W	Silver Spring/young SDH
83	I	N									400	100		500	N	C	Ansen East
76	I	N									400	50		450	N	M/BP	Garcia
75	I	N									600	100		700	N	M/BP	Garcia
78	I	N									600	100		700	N	M/BP	Garcia
46	II	P			300									300	N	W	HWY 60
15	II	P			420									420	N	W	Lake Helen Blazes
30	III	P									250			250	N	CP/M	Borrow Pit
4	III	P					20				4000	100		4120	N,B	CP/M	Borrow Pit
12	IV	P					200				200	50		450	N	CP/M	Borrow Pit
TTL			320	180	720	0	220	0	0	0	6475	645	0	8560			

Table I - 12. Results of the July 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest, Y = tending Young).

Col #	Strat #	Hist. Status	Species										TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH				
9&40	I	P	60			80							140		CS	Reservoir/Fledglings
35	I	P				120							120	N	W	Just N. of Turnpike
29	I	P									60		60	N	C	Fort Drum/Juvenile
10	I	P				30							30	N	W	Silver Spring/yng SDH
82	I	N				450							450	N	W	Hwy 60
76	I	N				400							400	N	M/BP	Garcia
75	I	N				600							600	N	M/BP	Garcia
78	I	N				500					100		600	N	M/BP	Garcia
15	II	P			420								420	N	W	Lake Helen Blazes
30	III	P			80								80	N	CP/M	Borrow Pit
4	III	P			4000	1000							5000	N,B	CP/M	Borrow Pit
12	IV	P	10			100	10						120	N	CP/M	Borrow Pit
TTL			70		4500	3280	10	0	0	0	160	0	8020			

Table I - 13. Results of the August 1999 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist. Status	Species										TTL	Nest Stage	Habitat	Comments
			GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GB				
76	I	N				90							90	roost	M/BP	Garcia
75	I	N				110							110	roost	M/BP	Garcia
78	I	N				60							60	roost	M/BP	Garcia
15	II	P				25							25	roost	W	Lake Helen Blazes
30	III	P				150							150	roost	CP/M	Borrow Pit
4	III	P				500							500	N	CP/M	Borrow Pit
TTL			0	0	0	935	0	0	0	0		0	935			

Table I -14. Results of the February 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, n= tending nest).

Col #	Strat #	Hist. Stat.	Species									TTL	Nest Stage	Habitat
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH			
40 & 9	I	P	160								1	161	ON	C/S
35	I	P									25	25	ON	BP,W
29	I	P	400									400	ON	C
36	I	P	30									30	ON	W,C
60	I	N	130								13	143	ON	C
47	I	P									3	3	ON	C
85	II	N	40									40	ON	C
70	II	N									8	8	ON	C
30	III	P	60									60	ON	BP
4	III	P	300				200					500	ON	M/BP
71	III	N									12	12	ON	C
12	IV	P	250				70					320	ON	BP/CP
73	V	N									20	20	ON	C
86	V	N	40								1	41	ON	W
87	V	N	4									4	ON	W
Total			1414	0	0	0	270	0	0	0	83	1767		

Table I -15. Results of the March 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, n= tending nest).

Col #	Strat #	Hist. Status	Species									TTL	Nest Stage	Habitat	Com-ments
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH				
40 & 9	I	P	160								5	165	ON	C, S	
35	I	P		10							25	35	ON	BP,W	
29	I	P	400									400	ON	C	
36	I	P	30									30	ON	W,C	
60	I	N	200								15	215	ON	C	
47	I	P									8	8	ON	C	
85	II	N	60									60	ON	C	
70	II	N									15	15	ON	C	
30	III	P	150	10					10			170	ON	BP	
4	III	P	300				500			20	5	825	ON	M,BP	
1	III	P									8	8	ON	C	
71	III	N										0	ON	C	
73	V	N	Did not check										ON	C	
86	V	N	60						20		2	82	ON	W	
87	V	N	12									12	ON	W	
12	IV	P	200			100	350			20		670	ON	BP, CP	
Total			1572	20	0	100	850	0	30	40	83	2695			

Table I - 16. Results of the April 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist Stat.	Species									TTL	Nest Stage	Habitat
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH			
9	I	P	180									180	ON	C, S
35	I	P			80						5	85	ON	BP,W
29	I	P	150									150	ON	C
82	I	N				50				10		60	ON	C
59	I	P	40									40	ON	C
36	I	P	20									20	ON	W,C
10	I	P	50									50	ON	W
75	I	N				230						230	ON	M,BP
76	I	N				80						80	ON	M,BP
77	I	N				200						200	ON	M,BP
60	I	N	50								8	58	ON	C
47	I	P									5	5	ON	C
85	II	N	20									20	ON	C
70	II	N									0	0	Done	C
30	III	P	50			100	100			50		300	ON	BP
1	III	P									6	6	ON	C
4	III	P	100			400	500			200	0	1200	ON	M,BP
12	IV	P	200			100	250					550	ON	BP, CP
73	V	N									10	10	ON	C
86	V	N	40			50				10		100	ON	W
87	V	N	10									10	ON	W
Total			910	0	80	1210	850	0	0	270	34	3354		

Table I - 17. Results of the May 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist Stat.	Species									TTL	Nest Stage	Habitat
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH			
9	I	P	30									30	ON	C, S
35	I	P				80				10	5	95	ON	BP,W
29	I	P	0									0	finished	C
82	I	N			80							80	ON	BP
59	I	P										0	finished	C
36	I	P	5									5	ON	W,C
10	I	P	15									15	ON	W
75	I	N				250						250	ON	M,BP
76	I	N				80						80	ON	M,BP
77	I	N				120				100		220	ON	M,BP
78	I	N				200						200	ON	M,BP
60	I	N										0	finished	C
47	I	P										0	finished	C
85	II	N										0	finished	C
30	III	P				400	50			100		550	ON	BP
1	III	P									0	0	finished	C
4	III	P				2500	300			100	0	2900	ON	M,BP
12	IV	P	100			200	300					600	ON	BP, CP
73	V	N										0	finished	C
86	V	N	30			70						100	ON	W
87	V	N	10		25							35	ON	W
Total			190	0	105	3900	650	0	0	310	5	5160		

Table I - 18. Results of the June 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist Stat.	Species									TTL	Nest Stage	Habitat
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH			
9	I	P	60									60	Juv.	C, S
35	I	P				70						70	ON	BP,W
82	I	N				90						90	ON	BP
76	I	N				300				100		400	ON	M,BP
77	I	N				550				200		750	ON	M,BP
78	I	N				700				200		900	ON	M,BP
30	III	P				400						400	ON	BP
4	III	P				1600	60					1660	ON	M,BP
12	IV	P				500	200					700	ON	BP, CP
86	V	N				70						70	ON	W
87	V	N				25						25	ON	W
TTL			60	0	0	4305	260	0	0	500	0	5125		

Table I - 19. Results of the July 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest, Y = tending Young).

Col #	Strat #	Hist Stat	Species									TTL	Nest Stage	Beha. Hab.
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH			
35	I	P				170						170	Juv, R	BP,W
76	I	N				80						80	Juv, R	M,BP
77	I	N				500						500	Juv, R	M,BP
78	I	N				140						140	Juv, R	M,BP
30	III	P				600						600	Juv, R	BP
4	III	P				1600						1600	Juv, R	M,BP
12	IV	P				50						50	Juv, R	BP, CP
86	V	N				70						70	Juv, R	W
87	V	N				40						40	Juv, R	W
Total			0	0	0	3250	0	0	0	0	0	3250		

Table I - 20. Results of the August 2000 wading bird nesting colony survey in the Upper Basin of the St. Johns Marsh (Col. = colony, Strat. = stratum, Hist. = Historical/1993 - 1995, P= previous, N= new, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron, TTL= Total, N = tending nest).

Col #	Strat #	Hist Stat.	Species									TTL	Nest Stage	Habitat
			GE	SE	CE	SWH	WS	TCH	LBH	SDH	GBH			
35	I	P				70						70	Y	BP,W
4	III	P				400						400	Y	M,BP
TTL			0	0	0	470	0	0	0	0	0	470		

Appendix II

Wading Bird Survey Dates

Transect Survey Lines

And

Main Colony Location Table

Table II - 1. Colony (C) and Transect (T) aerial flight survey dates conducted from 1998 - 2000.

Survey Date	Time	Weather
03/15/98 C	8:00 a.m. - 4:00 p.m.	sunny and cool (60° to 72° f.), breezy (10 - 15 mph)
04/14/98 C & T	8:00 a.m. - 4:00 p.m.	sunny and warm (68° to 80° f.), slight breeze (10 mph)
05/12/98 C	8:00 a.m. - 4:00 p.m.	sunny and warm (74° to 85° f.) and windy (20mph)
06/15/98 T	8:00 a.m. - 4:00 p.m.	sunny and hot (82° to 90° f.) with slight breeze
06/16/98 C & T	8:00 a.m. - 4:00 p.m.	sunny and hot (82° to 92° f.) with calm winds
07/11/98 C	8:00 a.m. - 4:00 p.m.	sunny and warm (78° to 90° f.) and windy (20mph)
08/08/98 T	8:00 a.m. - 4:00 p.m.	sunny and hot (82° to 90° f.) with slight breeze
08/09/98 C & T	8:00 a.m. - 2:00 p.m.	sunny, hot (82° to 92° f.) and windy (10 - 15 mph)
02/13/99 C	8:30 a.m. - 1:30 p.m.	cloudy, cool (62°f.) and windy (15 - 20 mph).
03/12/99 C	8:30 a.m. - 1:30 p.m.	sunny and cool (62°f.)
04/19/99 T	9:00 a.m. - 4:00 p.m.	cloudy and cool (64° to 78° f.), slight breeze (10 mph).
04/20/99 C & T	8:30 a.m. - 3:30 p.m.	sunny and cool (62°f.)
05/15/99 C	8:30 a.m. - 3:30 p.m.	sunny and warm (82 - 88°f.)
06/16/99 C & T	8:30 a.m. - 3:30 p.m.	sunny and warm (82 - 88°f.)
06/17/99 T	9:00 a.m. - 12:00 p.m.	(82° to 88° f.) with thunderstorms in the afternoon
06/18/99 T	9:00 a.m. - 12:00 p.m.	(82° to 88° f.) with thunderstorms in the afternoon
07/17/99 C	8:30 a.m. - 12:30 p.m.	partly cloudy and warm (84°f.), light 5mph east wind
08/19/99 C & T	8:30 a.m. - 3:30 p.m.	sunny and warm (78 - 86°f.).
02/26/00 C	8:30 a.m. - 12:30 p.m.	cloudy, cool (70°f.) with a light wind (6 mph)
03/25/00 C	8:30 a.m. - 12:30 p.m.	cloudy and cool (72°f.) with a northwest wind (6 mph).
04/16/00 C & T	7:30 a.m. - 5:00 p.m.	partly cloudy and mild (74 - 80°f.)
05/23/00 C	1:00 p.m. - 5:00 p.m.	sunny and hot (90°f.) with a west wind (10 mph)
06/17/00 C & T	7:30 a.m. - 5:00 p.m.	partly cloudy and warm (80°f.) with a southeast wind
07/22/00 C	8:00 a.m. - 12:00 p.m.	partly cloudy and warm (80°f.) with a light wind
08/12/00 C & T	7:30 a.m. - 5:00 p.m.	stormy and warm (88°f.) with a southeast wind

Table II - 2. Transect survey lines used for aerial wading bird surveys in the Upper St. Johns River Basin during 1998 - 2000.

TRANSECT	LATITUDE	LONGITUDE	SPACING	LENGTH (KM)
11	27° 33′ 48″	80° 43′ 53″	--	9.1
12	27° 34′ 46″	80° 43′ 53″	0.96′	9.1
13	27° 35′ 43″	80° 43′ 06″	0.96′	9.8
14	27° 36′ 47″	80° 43′ 06″	1.06′	9.8
15	27° 37′ 49″	80° 43′ 23″	1.03′	9.9
16	27° 39′ 17″	80° 42′ 01″	1.48′	11.5
17	27° 40′ 47″	80° 40′ 21″	1.49′	18.9
18	27° 41′ 32″	80° 40′ 42″	0.75′	19.1
19	27° 42′ 50″	80° 44′ 37″	1.30′	6.6
20	27° 44′ 05″	80° 45′ 04″	1.25′	8.4
21	27° 45′ 15″	80° 45′ 01″	1.07′	8.3
22	27° 46′ 19″	80° 45′ 15″	1.08′	8.7
23	27° 47′ 24″	80° 45′ 14″	1.08′	9.1
24	27° 48′ 31″	80° 45′ 24″	1.12′	9.8
25	27° 49′ 53″	80° 45′ 40″	1.37′	10.9
26	27° 51′ 02″	80° 44′ 38″	1.14′	10.2
27	27° 51′ 45″	80° 45′ 50″	1.68′	10.3
28	27° 53′ 26″	80° 47′ 02″	1.68′	10.3
29	27° 54′ 52″	80° 46′ 40″	1.44′	11
30	27° 56′ 04″	80° 46′ 26″	1.20′	11.9
31	27° 56′ 58″	80° 46′ 26″	0.90′	11.1
32	27° 57′ 48″	80° 46′ 27″	0.84′	10.9
33	27° 59′ 01″	80° 46′ 41″	1.21′	8.5
34	28° 00′ 24″	80° 46′ 15″	1.38′	7.5
35	28° 01′ 48″	80° 46′ 35″	1.41′	9.6
36	28° 02′ 36″	80° 47′ 00″	0.79′	10.3
37	28° 03′ 45″	80° 46′ 34″	1.15′	7.4
38	28° 04′ 41″	80° 46′ 26″	0.93′	7.7
39	28° 05′ 37″	80° 45′ 47″	0.94′	6.4
40	28° 06′ 12″	80° 45′ 44″	0.58′	6.2
41	28° 07′ 06″	80° 45′ 51″	0.91′	9.3
42	28° 08′ 02″	80° 45′ 21″	0.93′	10
43	28° 09′ 27″	80° 45′ 33″	1.42′	9.5
44	28° 10′ 23″	80° 46′ 47″	0.92′	13.9
45	28° 11′ 24″	80° 48′ 10″	1.03′	11.9
46	28° 12′ 39″	80° 50′ 51″	1.25′	3.6
47	28° 14′ 06″	80° 50′ 35″	1.44′	7
48	28° 15′ 25″	80° 50′ 45″	1.32′	3.4
49	28° 16′ 37″	80° 50′ 37″	1.20′	3.8
50	28° 17′ 44″	80° 47′ 25″	1.11′	7.2
51	28° 18′ 50″	80° 48′ 43″	1.10′	11.5
52	28° 19′ 42″	80° 49′ 20″	0.87′	11.6
53	28° 20′ 47″	80° 50′ 50″	1.08′	11.7
54	28° 21′ 57″	80° 52′ 27″	1.18′	5.8
55	28° 23′ 28″	80° 52′ 34″	1.51′	4.8
56	28° 25′ 06″	80° 52′ 59″	1.63′	5.3
57	28° 26′ 07″	80° 53′ 04″	1.02′	8.3
58	28° 26′ 50″	80° 53′ 21″	0.72′	8.8
59	28° 28′ 05″	80° 52′ 50″	1.25′	7.4
60	28° 29′ 17″	80° 51′ 55″	1.20′	6.6
61	28° 30′ 23″	80° 52′ 47″	1.10′	8.4
62	28° 31′ 30″	80° 54′ 04″	1.11′	11.7
63	28° 32′ 47″	80° 54′ 56″	1.29′	12
64	28° 33′ 54″	80° 55′ 00″	1.12′	11.8
65	28° 34′ 57″	80° 55′ 23″	1.05′	12.3
66	28° 36′ 05″	80° 55′ 40″	1.13′	13.9
67	28° 37′ 10″	80° 56′ 36″	1.08′	13.8
68	28° 38′ 10″	80° 56′ 38″	1.00′	13.5
69	28° 39′ 22″	80° 57′ 43″	1.20′	11.8
70	28° 40′ 42″	81° 00′ 30″	1.34′	7.4
71	28° 41′ 41″	80° 59′ 45″	0.97′	8.9
72	28° 42′ 45″	81° 00′ 11″	1.07′	6.4

Table II - 3. Colony locations for aerial wading bird surveys in the Upper St. Johns River Basin during 1998 - 2000.

	UTM Coordinates		Degrees/Minutes/Seconds	
Colony no.	North	East	Latitude	Longitude
1	3116405.7	520172.4	281023.52	804740.23
3	3117565.3	517983.5	281101.32	804900.44
4	3108420.8	517774.0	280603.94	804642.03
9	3053543.6	532753.3	273628.49	804019.71
10	3060088.9	540757.3	273619.70	804005.11
12	3137712.0	518247.0	282156.01	804849.64
15	3097985.9	520479.2	280024.90	804730.14
17	3068242.9	521480.2	274418.24	804655.43
21	3112121.4	524220.2	280804.04	804512.11
29	3053844.7	527495.5	273629.91	804316.89
30	3107043.3	516047.4	280519.47	805011.97
35	3048778.0	528380.7	273345.18	804245.03
36	3060688.2	523766.9	274012.58	804532.44
43	3132480.6	519050.4	281905.96	804820.43
44	3101407.8	518249.2	280216.22	804851.06
46	3088112.2	521816.7	275503.95	804641.82
47	3074967.6	520483.6	274756.84	804731.41
51	3156284.2	504846.1	283159.96	805701.69
55	3119724.2	515121.9	281211.60	805045.30
56	3061103.0	534738.0	274025.21	803851.92
59	3061710.9	540716.3	274044.35	803513.61
60	3071395.3	524298.5	274600.51	804512.25
61	3071088.1	524167.1	274550.54	804517.07
62	3076518.0	519694.0	274847.27	804800.18
63	3089949.7	519673.1	275603.78	804800.14
64	3102794.3	519775.8	280301.20	804755.60
65	3116104.9	522888.9	281013.58	804600.63
66	3184309.5	498372.3	284710.67	810100.05
68	3060611.1	542084.1	274008.46	803423.82
69	3089871.7	521311.3	275601.16	804700.20
70	3096605.2	517928.4	275940.16	804903.61
71	3122260.0	513109.6	281334.09	805159.01
72	3126868.6	517950.3	281603.65	804901.14
73	3179948.6	491737.1	284448.87	810504.68
74	3146532.7	511359.1	282642.93	805302.38
75	3061650.9	534322.5	274043.04	803907.03
76	3062017.4	533358.7	274055.04	803942.18
77	3062412.4	534040.8	274107.82	803917.23
78	3062992.4	534766.9	274126.60	803850.66
79	3080051.3	521249.4	275042.01	804703.10
80	3086237.2	521289.9	275403.04	804701.22
81	3165289.2	500207.2	283652.61	805952.38
82	3057399.3	528592.7	273825.35	804237.55
83	3056543.0	528479.8	273757.53	804240.76
85	3085530.1	517104.3	275340.28	804934.36
86	3146970.3	505901.3	282657.28	805623.03
87	3146992.6	507137.0	282657.98	805537.60

Appendix III

Tables of Total Number and Density of Wading Birds

Counted in 1998, 1999, and 2000

on Systematic Transect Surveys

in the Upper St. Johns River Basin

Table III- 1a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	11	0	0	0	0	0	0	0	0	0	2	13
1	12	14	0	1	0	0	0	0	0	0	0	2	17
1	13	8	0	2	0	0	0	0	0	0	0	1	11
1	14	16	2	43	0	0	2	0	0	0	0	0	63
1	15	32	4	6	0	0	7	0	0	0	0	1	50
1	16	4	3	0	0	0	0	0	0	1	0	1	9
1	17	7	3	3	0	0	0	0	0	0	0	0	13
1	18	5	1	2	0	0	1	0	0	0	0	0	9
1	19	0	0	0	0	0	0	0	0	0	0	0	0
1	20	3	0	0	0	0	5	0	0	0	0	0	8
1	21	2	1	2	2	0	0	0	0	0	0	0	7
1	22	0	4	25	0	0	0	0	0	1	0	0	30
1	23	4	1	43	0	0	3	0	0	0	0	0	51
1	24	6	0	75	7	0	2	0	0	0	0	1	91
Total		112	19	202	9	0	20	0	0	2	0	8	372

Table III - 1b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	4.76
1	12	5.13	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	6.23
1	13	2.72	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	3.74
1	14	5.44	0.68	14.63	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.00	21.43
1	15	10.77	1.35	2.02	0.00	0.00	2.36	0.00	0.00	0.00	0.00	0.34	16.84
1	16	1.16	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.29	2.61
1	17	1.23	0.53	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29
1	18	0.87	0.17	0.35	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	1.57
1	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	20	1.19	0.00	0.00	0.00	0.00	1.98	0.00	0.00	0.00	0.00	0.00	3.17
1	21	0.80	0.40	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81
1	22	0.00	1.53	9.58	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	11.49
1	23	1.47	0.37	15.75	0.00	0.00	1.10	0.00	0.00	0.00	0.00	0.00	18.68
1	24	2.04	0.00	25.51	2.38	0.00	0.68	0.00	0.00	0.00	0.00	0.34	30.95

Table III- 2a. Total number of wading birds counted within Stratum II of the St. Johns River Marsh Upper Basin in the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	5	2	8	123	0	0	0	2	0	0	0	140
2	26	7	1	1	1	0	72	0	0	0	0	1	83
2	27	10	0	62	2	0	10	30	0	1	0	1	116
2	28	14	1	5	0	0	0	0	0	0	0	0	20
2	29	17	0	1	10	0	0	0	0	0	1	0	29
2	30	5	1	0	5	0	0	0	0	0	0	0	11
2	31	3	0	100	0	0	0	0	0	1	0	2	106
2	32	4	1	10	0	0	4	40	0	1	0	0	60
2	33	5	1	0	0	0	10	0	0	0	0	0	16
2	34	10	0	0	0	0	0	0	0	1	0	0	11
2	35	59	0	0	20	0	0	0	0	0	0	4	83
2	36	45	0	0	0	2	0	0	0	0	0	1	48
2	37	7	0	20	1	0	0	0	0	0	0	0	28
2	38	12	0	1	0	0	0	0	0	0	0	0	13
Total		203	7	208	162	2	96	70	2	4	1	9	764

Table III - 2b. Number of wading birds per km^2 within Stratum II of the St. Johns River Marsh Upper Basin from the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	1.53	0.61	2.45	37.61	0.00	0.00	0.00	0.61	0.00	0.00	0.00	42.81
2	26	2.29	0.33	0.33	0.33	0.00	23.53	0.00	0.00	0.00	0.00	0.33	27.12
2	27	3.24	0.00	20.06	0.65	0.00	3.24	9.71	0.00	0.32	0.00	0.32	37.54
2	28	4.53	0.32	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
2	29	5.15	0.00	0.30	3.03	0.00	0.00	0.00	0.00	0.00	0.30	0.00	8.79
2	30	1.40	0.28	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.08
2	31	0.90	0.00	30.03	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.60	31.83
2	32	1.22	0.31	3.06	0.00	0.00	1.22	12.23	0.00	0.31	0.00	0.00	18.35
2	33	1.96	0.39	0.00	0.00	0.00	3.92	0.00	0.00	0.00	0.00	0.00	6.27
2	34	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	4.89
2	35	20.49	0.00	0.00	6.94	0.00	0.00	0.00	0.00	0.00	0.00	1.39	28.82
2	36	14.56	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.32	15.53
2	37	3.15	0.00	9.01	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.61
2	38	5.19	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.63

Table III- 3a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	15	0	0	26	0	0	0	0	0	0	0	41
3	40	5	0	0	1	1	1	0	0	0	0	0	8
3	41	0	0	0	1	0	0	0	0	0	0	0	1
3	42	0	1	26	0	0	0	0	0	0	0	0	27
3	43	19	3	10	0	0	2	0	0	0	0	0	34
3	44	19	0	0	0	0	20	0	0	1	0	1	41
3	45	26	0	0	2	2	5	0	0	0	0	4	39
3	46	4	0	147	1	0	7	0	0	1	0	0	160
3	47	12	1	0	3	1	1	0	0	0	0	0	18
3	48	1	0	0	0	0	0	0	0	0	0	0	1
3	49	22	0	60	1	10	0	0	0	0	0	0	93
Total		123	5	243	35	14	36	0	0	2	0	5	463

Table III - 3b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	7.81	0.00	0.00	13.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.35
3	40	2.69	0.00	0.00	0.54	0.54	0.54	0.00	0.00	0.00	0.00	0.00	4.30
3	41	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
3	42	0.00	0.33	8.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.00
3	43	6.67	1.05	3.51	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	11.93
3	44	4.56	0.00	0.00	0.00	0.00	4.80	0.00	0.00	0.24	0.00	0.24	9.83
3	45	7.28	0.00	0.00	0.56	0.56	1.40	0.00	0.00	0.00	0.00	1.12	10.92
3	46	3.70	0.00	136.11	0.93	0.00	6.48	0.00	0.00	0.93	0.00	0.00	148.15
3	47	5.71	0.48	0.00	1.43	0.48	0.48	0.00	0.00	0.00	0.00	0.00	8.57
3	48	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
3	49	19.30	0.00	52.63	0.88	8.77	0.00	0.00	0.00	0.00	0.00	0.00	81.58

Table III- 4a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	7	3	37	0	0	2	0	0	0	0	0	49
4	51	3	1	0	1	0	3	0	0	0	0	1	9
4	52	4	0	0	0	0	0	0	0	0	2	0	6
4	53	1	1	0	0	0	0	0	0	2	0	0	4
4	54	12	1	16	4	1	0	0	0	2	0	0	36
4	55	10	1	0	0	0	0	0	0	0	0	1	12
4	56	21	0	0	0	20	0	0	0	0	0	2	43
4	57	2	0	0	1	0	0	0	0	0	0	0	3
4	58	0	0	0	1	0	0	0	0	0	0	0	1
Total		60	7	53	7	21	5	0	0	4	2	4	163

Table III - 4b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	3.24	1.39	17.13	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	22.69
4	51	0.87	0.29	0.00	0.29	0.00	0.87	0.00	0.00	0.00	0.00	0.29	2.61
4	52	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	1.72
4	53	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	3.92	0.00	0.00	7.84
4	54	6.90	0.57	9.20	2.30	0.57	0.00	0.00	0.00	1.15	0.00	0.00	20.69
4	55	6.94	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	8.33
4	56	13.21	0.00	0.00	0.00	12.58	0.00	0.00	0.00	0.00	0.00	1.26	27.04
4	57	0.80	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.20
4	58	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38

Table III- 5a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	5	0	0	2	0	0	0	0	17	0	0	24
5	60	9	0	0	0	0	0	0	0	0	0	0	9
5	61	13	0	0	1	0	0	0	1	2	0	1	18
5	62	3	0	0	0	0	0	0	0	0	0	0	3
5	63	4	2	0	1	0	0	0	0	0	0	0	7
5	64	10	0	0	2	0	0	0	0	0	0	0	12
5	65	17	3	0	0	0	3	0	0	0	0	0	23
5	66	5	7	0	7	0	0	0	0	0	0	1	20
5	67	7	0	1	0	1	0	0	0	0	0	0	9
5	68	1	0	4	0	0	0	0	0	0	0	0	5
5	69	0	0	0	0	0	0	0	1	0	0	0	1
5	70	1	0	0	0	0	0	0	0	0	0	0	1
5	71	2	0	3	0	0	1	0	0	0	0	1	7
5	72	3	1	0	2	0	0	0	0	10	0	0	16
Total		80	13	8	15	1	4	0	2	29	0	3	155

Table III - 5b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	2.25	0.00	0.00	0.90	0.00	0.00	0.00	0.00	7.66	0.00	0.00	10.81
5	60	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.55
5	61	5.16	0.00	0.00	0.40	0.00	0.00	0.00	0.40	0.79	0.00	0.40	7.14
5	62	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
5	63	1.11	0.56	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94
5	64	2.82	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39
5	65	4.61	0.81	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	6.23
5	66	1.20	1.68	0.00	1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.24	4.80
5	67	1.69	0.00	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	2.17
5	68	0.25	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.23
5	69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.28
5	70	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
5	71	0.75	0.00	1.12	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.37	2.62
5	72	1.56	0.52	0.00	1.04	0.00	0.00	0.00	0.00	5.21	0.00	0.00	8.33

Table III- 6a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species										TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	1	0	118	9	0	0	0	0	0	0	0	128
1	12	0	0	11	4	0	25	0	0	0	0	2	42
1	13	38	12	0	6	2	0	0	0	0	0	16	74
1	14	6	2	0	0	0	2	0	0	1	0	0	11
1	15	7	1	250	0	0	224	0	0	0	0	0	482
1	16	2	0	5	1	0	20	0	1	0	0	0	29
1	17	36	6	2	1056	0	402	0	0	6	0	1	1509
1	18	14	2	9	54	0	273	0	0	1	0	1	354
1	19	8	4	103	7	0	13	0	1	3	0	0	139
1	20	4	0	3	0	0	1	0	0	1	0	0	9
1	21	22	1	28	0	0	22	0	0	1	0	1	75
1	22	0	2	225	1	0	3	0	0	0	0	0	231
1	23	3	4	102	1	0	0	0	0	1	0	2	113
1	24	0	1	30	0	1	0	0	0	0	0	1	33
Total		141	35	886	1139	3	985	0	2	14	0	24	3229

Table III - 6b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the June 1998 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species										TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11.00	0.37	0.00	43.22	3.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.89
1	12.00	0.00	0.00	4.03	1.47	0.00	9.16	0.00	0.00	0.00	0.00	0.73	15.38
1	13.00	12.93	4.08	0.00	2.04	0.68	0.00	0.00	0.00	0.00	0.00	5.44	25.17
1	14.00	2.04	0.68	0.00	0.00	0.00	0.68	0.00	0.00	0.34	0.00	0.00	3.74
1	15.00	2.36	0.34	84.18	0.00	0.00	75.42	0.00	0.00	0.00	0.00	0.00	162.29
1	16.00	0.58	0.00	1.45	0.29	0.00	5.80	0.00	0.29	0.00	0.00	0.00	8.41
1	17.00	6.35	1.06	0.35	186.24	0.00	70.90	0.00	0.00	1.06	0.00	0.18	266.14
1	18.00	2.44	0.35	1.57	9.42	0.00	47.64	0.00	0.00	0.17	0.00	0.17	61.78
1	19.00	4.04	2.02	52.02	3.54	0.00	6.57	0.00	0.51	1.52	0.00	0.00	70.20
1	20.00	1.59	0.00	1.19	0.00	0.00	0.40	0.00	0.00	0.40	0.00	0.00	3.57
1	21.00	8.84	0.40	11.24	0.00	0.00	8.84	0.00	0.00	0.40	0.00	0.40	30.12
1	22.00	0.00	0.77	86.21	0.38	0.00	1.15	0.00	0.00	0.00	0.00	0.00	88.51
1	23.00	1.10	1.47	37.36	0.37	0.00	0.00	0.00	0.00	0.37	0.00	0.73	41.39
1	24.00	0.00	0.34	10.20	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.34	11.22

Table III- 7a. Total number of wading birds counted within Stratum II of the St. Johns River Marsh Upper Basin in the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	11	1	0	2	1	0	1	0	0	0	1	17
2	26	35	0	30	40	0	0	0	0	0	0	3	108
2	27	103	10	52	20	0	2	7	0	0	0	3	197
2	28	63	0	10	45	25	29	0	0	3	0	2	177
2	29	61	0	0	73	4	15	0	0	1	0	3	157
2	30	11	0	3	20	6	0	0	0	0	0	0	41
2	31	3	0	10	0	0	8	0	0	0	0	0	21
2	32	26	51	1	2	80	21	0	0	11	10	1	203
2	33	2	0	200	1	0	12	0	0	0	0	2	217
2	34	93	2	2	6	1	118	0	0	0	0	0	222
2	35	12	0	0	3	0	31	0	0	0	0	0	46
2	36	1	0	6	0	0	30	0	0	0	0	0	37
2	37	3	2	0	3	0	0	0	0	1	0	0	9
2	38	3	3	33	1	1	50	0	0	0	0	0	91
Total		427	69	347	216	118	316	8	0	16	10	15	1543

Table III - 7b. Number of wading birds per km^2 within Stratum II of the St. Johns River Marsh Upper Basin from the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	3.36	0.3	0	0.6116	0.3	0	0.3	0	0	0	0.31	5.199
2	26	11.4	0	9.8	13.072	0	0	0	0	0	0	0.98	35.29
2	27	33.3	3.2	16.8	6.4725	0	0.65	2.3	0	0	0	0.97	63.75
2	28	20.4	0	3.24	14.563	8.1	9.39	0	0	0.97	0	0.65	57.28
2	29	18.5	0	0	22.121	1.2	4.55	0	0	0.3	0	0.91	47.58
2	30	3.08	0	0.84	5.6022	1.7	0	0	0	0	0	0	11.48
2	31	0.9	0	3	0	0	2.4	0	0	0	0	0	6.306
2	32	7.95	16	0.31	0.6116	24	6.42	0	0	3.36	3.06	0.31	62.08
2	33	0.78	0	78.4	0.3922	0	4.71	0	0	0	0	0.78	85.1
2	34	41.3	0.9	0.89	2.6667	0.4	52.4	0	0	0	0	0	98.67
2	35	4.17	0	0	1.0417	0	10.8	0	0	0	0	0	15.97
2	36	0.32	0	1.94	0	0	9.71	0	0	0	0	0	11.97
2	37	1.35	0.9	0	1.3514	0	0	0	0	0.45	0	0	4.054
2	38	1.3	1.3	14.3	0.4329	0.4	21.6	0	0	0	0	0	39.39

Table III- 8a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	73	1	0	203	90	100	0	0	0	0	0	467
3	40	13	30	10	56	0	51	0	0	1	0	0	161
3	41	12	2	0	50	0	1	0	0	3	0	2	70
3	42	30	0	0	28	2	2	0	0	0	30	0	92
3	43	24	1	5	64	0	2	0	0	2	0	0	98
3	44	33	14	0	23	10	39	0	2	2	0	1	124
3	45	31	20	0	20	20	51	0	0	0	0	0	142
3	46	42	1	0	131	0	1	0	0	0	0	1	176
3	47	5	0	70	2	0	0	0	1	0	0	0	78
3	48	1	0	60	24	0	1	0	0	0	0	0	86
3	49	11	0	70	22	0	0	0	0	0	1	2	106
Total		275	69	215	623	122	248	0	3	8	31	6	1600

Table III - 8b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	38	0.5	0	105.73	47	52.1	0	0	0	0	0	21.35
3	40	6.99	16	5.38	30.108	0	27.4	0	0	0.54	0	0	4.30
3	41	4.3	0.7	0	17.921	0	0.36	0	0	1.08	0	0.72	0.36
3	42	10	0	0	9.3333	0.7	0.67	0	0	0	10	0	9.00
3	43	8.42	0.4	1.75	22.456	0	0.7	0	0	0.7	0	0	11.93
3	44	7.91	3.4	0	5.5156	2.4	9.35	0	0.48	0.48	0	0.24	9.83
3	45	8.68	5.6	0	5.6022	5.6	14.3	0	0	0	0	0	10.92
3	46	38.9	0.9	0	121.3	0	0.93	0	0	0	0	0.93	148.15
3	47	2.38	0	33.3	0.9524	0	0	0	0.48	0	0	0	8.57
3	48	0.98	0	58.8	23.529	0	0.98	0	0	0	0	0	0.98
3	49	9.65	0	61.4	19.298	0	0	0	0	0	0.88	1.75	81.58

Table III- 9a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	39	0	0	31	2	15	0	3	0	0	20	80
4	51	3	4	1	54	0	26	0	0	0	0	0	88
4	52	100	0	20	105	0	1	0	0	1	0	1	228
4	53	83	1	0	47	2	50	0	0	1	20	1	205
4	54	7	0	0	7	0	1	0	0	0	0	0	15
4	55	26	0	0	3	21	1	0	0	0	30	0	78
4	56	0	20	0	0	0	190	20	0	0	0	0	230
4	57	2	0	0	152	0	120	0	0	0	0	0	274
4	58	20	0	400	40	0	151	0	0	0	20	0	630
Total		280	25	421	439	25	555	20	3	2	70	22	1828

Table III - 9b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	18.1	0	0	14.352	0.9	6.94	0	1.39	0	0	9.26	37.04
4	51	0.87	1.2	0.29	15.652	0	7.54	0	0	0	0	0	25.51
4	52	28.7	0	5.75	30.172	0	0.29	0	0	0.29	0	0.29	65.52
4	53	163	2	0	92.157	3.9	98	0	0	1.96	39.2	1.96	402
4	54	4.02	0	0	4.023	0	0.57	0	0	0	0	0	8.621
4	55	18.1	0	0	2.0833	15	0.69	0	0	0	20.8	0	54.17
4	56	0	13	0	0	0	119	13	0	0	0	0	144.7
4	57	0.8	0	0	61.044	0	48.2	0	0	0	0	0	110
4	58	7.58	0	152	15.152	0	57.2	0	0	0	7.58	0	238.6

Table III- 10a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	12	0	0	12	0	200	20	0	0	0	1	245
5	60	0	0	8	30	0	80	30	0	0	0	0	148
5	61	37	2	5	60	0	222	70	0	0	11	1	408
5	62	49	20	20	38	0	14	0	0	10	10	0	161
5	63	46	0	0	4	0	55	0	0	0	10	0	115
5	64	69	1	0	6	10	112	0	0	0	50	1	249
5	65	4	0	0	1	1	4	0	0	0	0	2	12
5	66	0	70	0	15	0	128	0	0	0	20	2	235
5	67	2	0	0	132	0	124	0	0	0	0	0	258
5	68	45	0	1	37	10	101	36	0	20	0	1	251
5	69	6	0	0	0	0	6	0	0	1	0	0	13
5	70	45	0	20	35	31	2	0	0	0	0	1	134
5	71	217	0	50	100	200	52	0	0	0	50	2	671
5	72	46	0	20	7	0	22	0	0	2	10	4	111
Total		578	93	124	477	252	1122	156	0	33	161	15	3011

Table III - 10b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum #	Transect#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	5.41	0	0	5.4054	0	90.1	9	0	0	0	0.45	110.4
5	60	0	0	4.04	15.152	0	40.4	15	0	0	0	0	74.75
5	61	14.7	0.8	1.98	23.81	0	88.1	28	0	0	4.37	0.4	161.9
5	62	14	5.7	5.7	10.826	0	3.99	0	0	2.85	2.85	0	45.87
5	63	12.8	0	0	1.1111	0	15.3	0	0	0	2.78	0	31.94
5	64	19.5	0.3	0	1.6949	2.8	31.6	0	0	0	14.1	0.28	70.34
5	65	1.08	0	0	0.271	0.3	1.08	0	0	0	0	0.54	3.252
5	66	0	17	0	3.5971	0	30.7	0	0	0	4.8	0.48	56.35
5	67	0.48	0	0	31.884	0	30	0	0	0	0	0	62.32
5	68	11.1	0	0.25	9.1358	2.5	24.9	8.9	0	4.94	0	0.25	61.98
5	69	1.69	0	0	0	0	1.69	0	0	0.28	0	0	3.672
5	70	20.3	0	9.01	15.766	14	0.9	0	0	0	0	0.45	60.36
5	71	81.3	0	18.7	37.453	75	19.5	0	0	0	18.7	0.75	251.3
5	72	24	0	10.4	3.6458	0	11.5	0	0	1.04	5.21	2.08	57.81

Table III- 11a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Transt#	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	11	1	9	0	0	0	0	0	1	0	0	22
1	12	4	0	14	1	0	0	0	0	1	0	2	22
1	13	13	0	10	30	0	8	0	0	0	0	0	61
1	14	7	1	0	2	0	33	0	0	0	1	0	44
1	15	14	0	89	67	0	996	0	0	0	0	0	1166
1	16	22	0	142	102	0	5	0	0	1	0	0	272
1	17	21	0	2	0	0	3	0	0	0	3	0	29
1	18	4	3	2	17	0	2	0	0	0	0	0	28
1	19	12	0	231	2	0	0	0	0	0	0	0	245
1	20	1		0						0			1
1	21	4	0	0	0	0	1	0	0	0	0	0	16
1	22	1	0	0	50	0	0	0	0	0	1	0	52
1	23	0	0	1126	1	0	0	0	1	0	0	1	1129
1	24	7	0	20	5	0	0	0	0	0	0	1	33
Total		121	5	1645	277	0	1048	0	1	3	5	4	3120

Table III - 11b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the August 1998 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	4.03	0.37	3.30	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	8.06
1	12	1.47	0.00	5.13	0.37	0.00	0.00	0.00	0.00	0.37	0.00	0.73	8.06
1	13	4.42	0.00	3.40	10.20	0.00	2.72	0.00	0.00	0.00	0.00	0.00	20.75
1	14	2.38	0.34	0.00	0.68	0.00	11.22	0.00	0.00	0.00	0.34	0.00	14.97
1	15	4.71	0.00	29.97	22.56	0.00	335.35	0.00	0.00	0.00	0.00	0.00	392.59
1	16	6.38	0.00	41.16	29.57	0.00	1.45	0.00	0.00	0.29	0.00	0.00	78.84
1	17	3.70	0.00	0.35	0.00	0.00	0.53	0.00	0.00	0.00	0.53	0.00	5.11
1	18	0.70	0.52	0.35	2.97	0.00	0.35	0.00	0.00	0.00	0.00	0.00	4.89
1	19	6.06	0.00	116.67	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	123.74
1	20	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40
1	21	1.61	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	6.43
1	22	0.38	0.00	0.00	19.16	0.00	0.00	0.00	0.00	0.00	0.38	0.00	19.92
1	23	0.00	0.00	412.45	0.37	0.00	0.00	0.00	0.37	0.00	0.00	0.37	413.55
1	24	2.38	0.00	6.80	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.34	11.22

Table III- 12a. Total number of wading birds counted within Stratum II of the St. Johns River Marsh Upper Basin in the August 1998 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	17	1	0	202	1	0	0	0	0	0	1	222
2	26	11	0	80	0	0	0	0	0	0	0	2	91
2	27	20	2	0	2	10	0	0	0	0	0	2	36
2	28	13	0	1320	277	0	10	1	0	40	25	0	1685
2	29	11	0	20	20	0	0	0	0	0	0	1	52
2	30	90	5	0	33	0	0	0	0	0	0	0	128
2	31	10	1	481	22	0	0	0	0	0	0	0	514
2	32	26	0	450	21	0	2	0	0	0	1	0	500
2	33	7	1	51	0	0	0	0	0	0	0	1	59
2	34	3	0	40	0	0	0	0	0	0	0	0	43
2	35	12	0	10	25	0	183	0	0	0	2	2	234
2	36	27	0	0	30	0	0	0	0	4	4	0	65
2	37	6	0	0	0	0	0	0	0	0	0	1	7
2	38	13	0	10	0	0	0	0	0	0	0	0	23
Total		266	10	2462	632	11	195	1	0	44	32	10	3659

Table III - 12b. Number of wading birds per km^2 within Stratum II of the St. Johns River Marsh Upper Basin from the August 1998 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	5.2	0.3	0	61.8	0.31	0	0	0	0	0	0.31	67.89
2	26	3.59	0	26.14	0	0	0	0	0	0	0	0.65	29.739
2	27	6.47	0.6	0	0.65	3.24	0	0	0	0	0	0.65	11.65
2	28	4.21	0	427.2	89.6	0	3.236	0.32	0	12.9	8.09	0	545.31
2	29	3.33	0	6.061	6.06	0	0	0	0	0	0	0.3	15.758
2	30	25.2	1.4	0	9.24	0	0	0	0	0	0	0	35.854
2	31	3	0.3	144.4	6.61	0	0	0	0	0	0	0	154.35
2	32	7.95	0	137.6	6.42	0	0.612	0	0	0	0.31	0	152.91
2	33	2.75	0.4	20	0	0	0	0	0	0	0	0.39	23.137
2	34	1.33	0	17.78	0	0	0	0	0	0	0	0	19.111
2	35	4.17	0	3.472	8.68	0	63.54	0	0	0	0.69	0.69	81.25
2	36	8.74	0	0	9.71	0	0	0	0	1.29	1.29	0	21.036
2	37	2.7	0	0	0	0	0	0	0	0	0	0.45	3.1532
2	38	5.63	0	4.329	0	0	0	0	0	0	0	0	9.9567

Table III- 13a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	12	0	10	0	0	0	0	0	0	0	0	22
3	40	1	6	0	0	0	0	0	0	0	0	0	7
3	41	6	0	0	0	0	0	0	0	0	0	0	6
3	42	4	0	0	0	2	0	0	0	0	0	0	6
3	43	2	0	0	0	0	0	0	0	0	0	0	2
3	44	2	0	0	0	0	1	0	0	0	0	0	3
3	45	2			0								2
3	46	3	0	0	0	0	1	0	0	0	0	1	5
3	47	16	0	0	30	0	0	0	0	0	0	0	46
3	48	4	0	330	0	0	1	0	0	0	0	0	335
3	49	7	0	0	0	0	0	0	0	0	0	0	7
Total		59	6	340	30	2	3	0	0	0	0	1	441

Table III - 13b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	6.25	0	5.208	0	0	0	0	0	0	0	0	11.458
3	40	0.54	3.2	0	0	0	0	0	0	0	0	0	3.7634
3	41	2.15	0	0	0	0	0	0	0	0	0	0	2.1505
3	42	1.33	0	0	0	0.67	0	0	0	0	0	0	2
3	43	0.7	0	0	0	0	0	0	0	0	0	0	0.7018
3	44	0.48	0	0	0	0	0.24	0	0	0	0	0	0.7194
3	45	0.56	0	0	0	0	0	0	0	0	0	0	0.5602
3	46	2.78	0	0	0	0	0.926	0	0	0	0	0.93	4.6296
3	47	7.62	0	0	14.3	0	0	0	0	0	0	0	21.905
3	48	3.92	0	323.5	0	0	0.98	0	0	0	0	0	328.43
3	49	6.14	0	0	0	0	0	0	0	0	0	0	6.1404

Table III- 14a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	3	1	20	1	0	0	0	0	0	0	0	25
4	51	1	1	0	300	0	0	0	0	0	0	0	302
4	52	5	0	0	0	0	0	0	0	0	0	0	5
4	53	7	0	0	0	0	0	0	0	0	0	0	7
4	54	105	0	0	23	0	0	0	0	0	0	0	128
4	55	4	0	0	0	0	0	1	0	0	0	0	5
4	56	3	0	0	0	0	1	0	0	0	1	0	5
4	57	22	0	10	30	0	0	0	0	0	4	0	66
4	58	4	0	11	0	0	1	0	0	0	0	0	16
Total		154	2	41	354	0	2	1	0	0	5	0	559

Table III - 14b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	1.39	0.5	9.259	0.46	0	0	0	0	0	0	0	11.574
4	51	0.29	0.3	0	87	0	0	0	0	0	0	0	87.536
4	52	1.44	0	0	0	0	0	0	0	0	0	0	1.4368
4	53	13.7	0	0	0	0	0	0	0	0	0	0	13.725
4	54	60.3	0	0	13.2	0	0	0	0	0	0	0	73.563
4	55	2.78	0	0	0	0	0	0.69	0	0	0	0	3.4722
4	56	1.89	0	0	0	0	0.629	0	0	0	0.63	0	3.1447
4	57	8.84	0	4.016	12	0	0	0	0	0	1.61	0	26.506
4	58	1.52	0	4.167	0	0	0.379	0	0	0	0	0	6.0606

Table III- 15a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the August 1998 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	24	0	202	0	0	100	0	0	0	0	0	326
5	60	4	0	60	10	0	0	0	0	0	0	0	74
5	61	9	0	0	0	0	0	0	0	0	1	0	10
5	62	7	0	250	201	0	80	0	0	0	0	0	538
5	63	3	0	0	0	0	0	0	0	0	0	0	3
5	64	8	0	0	0	0	0	0	0	0	0	0	8
5	65	7	0	0	1	0	2	0	0	0	0	1	11
5	66	18	4	0	0	1	0	0	0	0	1	1	25
5	67	36	0	70	60	0	0	0	0	0	0	0	166
5	68	8	2	0	45	0	3	0	0	0	0	0	58
5	69	44	2	0	40	0	2	0	0	0	0	1	89
5	70	40	0	0	0	1	0	0	0	0	0	2	43
5	71	43	0	90	0	0	0	0	0	0	0	0	133
5	72	21	3	20	3	0	0	0	0	0	0	1	48
Total		272	11	692	360	2	187	0	0	0	2	6	1532

Table III -1 5b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the August 1998 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Trans. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	10.8	0	90.99	0	0	45.05	0	0	0	0	0	146.85
5	60	2.02	0	30.3	5.05	0	0	0	0	0	0	0	37.374
5	61	3.57	0	0	0	0	0	0	0	0	0.4	0	3.9683
5	62	1.99	0	71.23	57.3	0	22.79	0	0	0	0	0	153.28
5	63	0.83	0	0	0	0	0	0	0	0	0	0	0.8333
5	64	2.26	0	0	0	0	0	0	0	0	0	0	2.2599
5	65	1.9	0	0	0.27	0	0.542	0	0	0	0	0.27	2.981
5	66	4.32	1	0	0	0.24	0	0	0	0	0.24	0.24	5.9952
5	67	8.7	0	16.91	14.5	0	0	0	0	0	0	0	40.097
5	68	1.98	0.5	0	11.1	0	0.741	0	0	0	0	0	14.321
5	69	12.4	0.6	0	11.3	0	0.565	0	0	0	0	0.28	25.141
5	70	18	0	0	0	0.45	0	0	0	0	0	0.9	19.369
5	71	16.1	0	33.71	0	0	0	0	0	0	0	0	49.813
5	72	10.9	1.6	10.42	1.56	0	0	0	0	0	0	0.52	25

Table III- 16a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	21	10	0	0	2	0	0	0	5	0	6	44
1	12	0	0	0	0	0	0	0	0	0	0	0	0
1	13	550	0	0	0	0	0	0	0	0	0	20	570
1	14	483	1	5	10	0	3	0	0	0	0	11	513
1	15	40	0	0	70	0	0	0	0	20	0	11	141
1	16	4	2	1	0	1	1	0	0	0	0	2	11
1	17	16	1	0	1	0	6	0	0	1	10	2	38
1	18	32	3	21	82	6	20	0	1	0	0	16	181
1	19	0	0	0	0	0	0	0	0	0	1		1
1	20	0	0	0	0	0	0	0	0	0	0	0	0
1	21	0	0	0	0	0	0	0	0	0	0	1	1
1	22	0	0	51	0	0	0	0	0	0	0	0	51
1	23	1	0	85	0	0	0	0	0	0	0	1	87
1	24	1	0	0	0	0	0	0	0	0	0	0	1
Total		1148	17	163	163	9	30	0	1	26	11	70	1639

Table III - 16b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	7.69	3.66	0.00	0.00	0.73	0.00	0.00	0.00	1.83	0.00	2.20	16.12
1	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	13	323.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.80	329.93
1	14	300.34	0.34	1.70	3.40	0.00	1.02	0.00	0.00	0.00	0.00	3.74	310.54
1	15	13.47	0.00	0.00	23.57	0.00	0.00	0.00	0.00	6.73	0.00	3.70	47.47
1	16	1.16	0.58	0.29	0.00	0.29	0.29	0.00	0.00	0.00	0.00	0.58	3.19
1	17	2.82	0.18	0.00	0.18	0.00	1.06	0.00	0.00	0.18	1.76	0.35	6.70
1	18	5.58	0.52	3.66	14.31	1.05	3.49	0.00	0.17	0.00	0.00	2.79	31.59
1	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.51
1	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40
1	22	0.00	0.00	19.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.54
1	23	0.37	0.00	31.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	31.87
1	24	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34

Table III- 17a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	21	0	0	20	6	3	0	0	1	0	2	53
2	26	4	0	0	0	0	0	0	0	0	1	0	5
2	27	2	0	0	0	0	0	0	0	0	0	1	3
2	28	5	0	0	2	0	0	0	0	0	3	0	10
2	29	7	0	5	3	0	0	0	0	0	0	2	17
2	30	0	0	0	0	1	0	0	0	0	0	1	2
2	31	0	0	5	0	0	0	0	0	0	0	0	5
2	32	0	0	0	0	0	0	0	0	0	0	0	0
2	33	0	0	1	0	0	0	0	0	0	0	0	1
2	34	0	0	0	0	0	0	0	0	0	0	0	0
2	35	0	0	30	0	1	0	0	0	0	0	0	31
2	36	5	0	8	0	0	0	0	0	0	0	0	13
2	37	0	0	2	0	0	0	0	0	0	0	0	2
2	38	5	0	2	0	1	3	0	0	0	0	1	12
Total		49	0	53	25	9	6	0	0	1	4	7	154

Table III - 17b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	6.42	0.00	0.00	6.12	1.83	0.92	0.00	0.00	0.31	0.00	0.61	16.21
2	26	1.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	1.63
2	27	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.97
2	28	1.62	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.97	0.00	3.24
2	29	2.12	0.00	1.52	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.61	5.15
2	30	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.28	0.56
2	31	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50
2	32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	33	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39
2	34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	35	0.00	0.00	10.42	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	10.76
2	36	1.62	0.00	2.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.21
2	37	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
2	38	2.16	0.00	0.87	0.00	0.43	1.30	0.00	0.00	0.00	0.00	0.43	5.19

Table III- 18a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	0	0	0	1	0	0	0	0	0	0	0	1
3	40	0	0	0	0	0	0	0	0	0	0	0	0
3	41	3	0	0	1	0	0	0	1	1	0	1	7
3	42	0	0	0	0	0	0	0	0	0	0	0	0
3	43	18	0	0	10	0	0	0	0	1	10	3	42
3	44	35	0	0	21	1	0	0	0	1	2	7	67
3	45	1	0	0	0	0	0	0	0	0	0	2	3
3	46	0	0	0	0	0	0	0	0	0	0	1	1
3	47	0	0	0	0	0	0	0	0	0	0	1	1
3	48	6	0	0	0	0	0	0	0	0	0	0	7
3	49	1	0	0	0	0	0	0	0	0	0	3	4
Total		64	0	0	33	1	0	0	1	3	12	18	133

Table III - 18b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	0.00	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52
3	40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	41	1.08	0.00	0.00	0.36	0.00	0.00	0.00	0.36	0.36	0.00	0.36	2.51
3	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	43	6.32	0.00	0.00	3.51	0.00	0.00	0.00	0.00	0.35	3.51	1.05	14.74
3	44	8.39	0.00	0.00	5.04	0.24	0.00	0.00	0.00	0.24	0.48	1.68	16.07
3	45	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.84
3	46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.93
3	47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.48
3	48	5.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.86
3	49	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	3.51

Table III- 19a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	0	0	0	0	4	0	0	0	0	2	0	6
4	51	4	0	0	2	0	0	30	0	0	3	1	40
4	52	50	10	0	7	0	1	10	0	5	0	1	84
4	53	1	0	0	0	0	0	0	0	0	1	0	2
4	54	2	0	0	0	0	0	0	0	0	0	0	2
4	55	1	0	0	2	0	0	1	0	0	0	1	5
4	56	7	0	4	5	3	0	0	0	0	0	2	21
4	57	0	0	1	3	1	0	0	0	0	2	2	9
4	58	6	1	0	0	0	0	0	0	3	0	3	13
Total		71	11	5	19	8	1	41	0	8	8	10	182

Table III - 19b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	0.00	0.00	0.00	0.00	1.85	0.00	0.00	0.00	0.00	0.93	0.00	2.78
4	51	1.16	0.00	0.00	0.58	0.00	0.00	8.70	0.00	0.00	0.87	0.29	11.59
4	52	14.37	2.87	0.00	2.01	0.00	0.29	2.87	0.00	1.44	0.00	0.29	24.14
4	53	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	3.92
4	54	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
4	55	0.69	0.00	0.00	1.39	0.00	0.00	0.69	0.00	0.00	0.00	0.69	3.47
4	56	4.40	0.00	2.52	3.14	1.89	0.00	0.00	0.00	0.00	0.00	1.26	13.21
4	57	0.00	0.00	0.40	1.20	0.40	0.00	0.00	0.00	0.00	0.80	0.80	3.61
4	58	2.27	0.38	0.00	0.00	0.00	0.00	0.00	0.00	1.14	0.00	1.14	4.92

Table III- 20a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	2	0	0	0	0	0	0	0	0	0	2	4
5	60	5	0	0	0	0	0	0	0	0	5	0	10
5	61	0	0	0	0	0	0	0	0	0	0	1	1
5	62	5	1	10	1	0	4	0	0	0	0	0	21
5	63	2	0	0	10	10	0	0	0	0	0	0	22
5	64	7	10	0	0	0	0	0	0	2	12	5	36
5	65	7	1	0	0	0	0	0	0	1	2	4	15
5	66	1	0	0	0	0	0	0	0	0	6	3	10
5	67	23	0	0	5	0	0	0	0	0	0	1	29
5	68	33	0	0	0	0	0	0	0	0	0	4	37
5	69	1	0	0	0	0	0	0	1	0	2	2	6
5	70	0	0	0	0	0	0	0	0	0	10	1	11
5	71	26	0	0	5	0	0	0	0	5	30	4	70
5	72	10	0	0	45	10	0	0	0	0	10	3	78
Total		122	12	10	66	20	4	0	1	8	77	30	350

Table III - 20b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	1.80
5	60	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.53	0.00	5.05
5	61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40
5	62	1.42	0.28	2.85	0.28	0.00	1.14	0.00	0.00	0.00	0.00	0.00	5.98
5	63	0.56	0.00	0.00	2.78	2.78	0.00	0.00	0.00	0.00	0.00	0.00	6.11
5	64	1.98	2.82	0.00	0.00	0.00	0.00	0.00	0.00	0.56	3.39	1.41	10.17
5	65	1.90	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.54	1.08	4.07
5	66	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	0.72	2.40
5	67	5.56	0.00	0.00	1.21	0.00	0.00	0.00	0.00	0.00	0.00	0.24	7.00
5	68	8.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	9.14
5	69	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.56	0.56	1.69
5	70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.50	0.45	4.95
5	71	9.74	0.00	0.00	1.87	0.00	0.00	0.00	0.00	1.87	11.24	1.50	26.22
5	72	5.21	0.00	0.00	23.44	5.21	0.00	0.00	0.00	0.00	5.21	1.56	40.63

Table III- 21a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	3	0	1	9	0	4	0	0	0	0	0	17
1	12	1	0	2	0	0	0	0	0	0	1	1	5
1	13	4	1	0	6	0	0	0	0	1	0	0	12
1	14	20	0	5	1	0	0	0	0	0	0	0	26
1	15	10	0	8	1	0	34	0	0	0	0	0	53
1	16	126	0	18	21	0	0	0	0	0	0	0	165
1	17	64	0	45	128	1	0	0	0	0	2	1	241
1	18	28	1	9	14	1	1	0	0	0	1	1	56
1	19	1	0	30	0	0	0	0	0	0	0	1	32
1	20	1	0	4	0	0	0	0	0	0	0	0	5
1	21	1	0	5	0	0	0	0	0	0	0	0	6
1	22	1	0	37	1	0	0	0	0	0	0	0	39
1	23	2	0	304	0	0	0	0	0	0	0	0	306
1	24	6	0	0	6	0	0	0	0	0	0	0	12
Total		268	2	468	187	2	39	0	0	1	4	4	975

Table III - 21b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the June 1999 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	1.10	0.00	0.37	3.30	0.00	1.47	0.00	0.00	0.00	0.00	0.00	6.23
1	12	0.37	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	1.83
1	13	1.36	0.34	0.00	2.04	0.00	0.00	0.00	0.00	0.34	0.00	0.00	4.08
1	14	6.80	0.00	1.70	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.84
1	15	3.37	0.00	2.69	0.34	0.00	11.45	0.00	0.00	0.00	0.00	0.00	17.85
1	16	36.52	0.00	5.22	6.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.83
1	17	11.29	0.00	7.94	22.57	0.18	0.00	0.00	0.00	0.00	0.35	0.18	42.50
1	18	4.89	0.17	1.57	2.44	0.17	0.17	0.00	0.00	0.00	0.17	0.17	9.77
1	19	0.51	0.00	15.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	16.16
1	20	0.40	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
1	21	0.40	0.00	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.41
1	22	0.38	0.00	14.18	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.94
1	23	0.73	0.00	111.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.09
1	24	2.04	0.00	0.00	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.08

Table III- 22a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	90	0	20	246	0	0	0	0	0	0	0	356
2	26	5	0	60	0	0	0	0	0	0	0	0	65
2	27	31	0	60	0	0	0	0	0	0	1	1	93
2	28	20	0	550	101	0	3	0	0	0	0	0	674
2	29	9	0	238	0	0	0	0	0	0	0	0	247
2	30	1	0	60	0	0	0	0	0	0	0	0	61
2	31	1	0	193	0	0	0	0	0	0	1	0	195
2	32	2	0	0	3	0	0	0	0	0	0	0	5
2	33	18	0	100	0	0	0	0	0	0	0	0	118
2	34	2	0	4	6	0	0	0	0	0	0	0	12
2	35	3	0	25	6	0	0	0	0	0	0	0	34
2	36	5	0	0	3	0	0	0	0	0	0	0	8
2	37	1	0	11	2	0	0	0	0	0	0	0	14
2	38	2	0	8	32	0	0	0	0	0	0	0	42
Total		190	0	1329	399	0	3	0	0	0	2	1	1924

Table III - 22b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	27.52	0.00	6.12	75.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	108.87
2	26	1.63	0.00	19.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.24
2	27	10.03	0.00	19.42	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	30.10
2	28	6.47	0.00	177.9	32.69	0.00	0.97	0.00	0.00	0.00	0.00	0.00	218.12
2	29	2.73	0.00	72.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.85
2	30	0.28	0.00	16.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.09
2	31	0.30	0.00	57.96	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	58.56
2	32	0.61	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.53
2	33	7.06	0.00	39.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.27
2	34	0.89	0.00	1.78	2.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.33
2	35	1.04	0.00	8.68	2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.81
2	36	1.62	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.59
2	37	0.45	0.00	4.95	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.31
2	38	0.87	0.00	3.46	13.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.18

Table III- 23a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	5	0	0	0	0	0	0	0	0	0	0	5
3	40	2	0	0	0	0	0	0	0	0	0	0	2
3	41	0	0	0	0	0	0	0	0	0	0	0	0
3	42	0	0	0	1	0	0	0	0	0	0	0	1
3	43	18	0	0	22	0	0	0	0	0	0	1	41
3	44	1	0	1	0	0	0	0	0	0	0	0	2
3	45	1	0	0	8	0	0	0	0	0	0	0	9
3	46	5	0	60	0	0	0	0	0	0	0	0	65
3	47	4	0	0	4	0	0	0	0	0	0	0	8
3	48	9	0	50	2	0	0	0	0	0	0	0	61
3	49	1	0	0	0	0	0	0	0	0	0	0	1
Total		46	0	111	37	0	0	0	0	0	0	1	195

Table III - 23b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60
3	40	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
3	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	42	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
3	43	6.32	0.00	0.00	7.72	0.00	0.00	0.00	0.00	0.00	0.00	0.35	14.39
3	44	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48
3	45	0.28	0.00	0.00	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.52
3	46	4.63	0.00	55.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.19
3	47	1.90	0.00	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.81
3	48	8.82	0.00	49.02	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.80
3	49	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88

Table III- 24a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	151	0	2	50	0	0	0	0	0	0	0	203
4	51	2	0	0	1	0	0	0	0	0	0	1	4
4	52	15	0	23	21	0	1	0	0	0	0	0	60
4	53	19	0	15	23	0	0	0	0	0	0	0	57
4	54	2	0	0	2	0	0	0	0	0	0	0	4
4	55	5	0	0	0	0	0	0	0	0	0	0	5
4	56	1	0	30	0	0	0	0	0	0	0	0	31
4	57	4	0	0	22	0	0	0	0	0	10	0	36
4	58	1	0	25	2	0	0	0	0	0	1	1	30
Total		200	0	95	121	0	1	0	0	0	11	2	430

Table III - 24b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	69.91	0.00	0.93	23.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.98
4	51	0.58	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.29	1.16
4	52	4.31	0.00	6.61	6.03	0.00	0.29	0.00	0.00	0.00	0.00	0.00	17.24
4	53	37.25	0.00	29.41	45.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	111.76
4	54	1.15	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30
4	55	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.47
4	56	0.63	0.00	18.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.50
4	57	1.61	0.00	0.00	8.84	0.00	0.00	0.00	0.00	0.00	4.02	0.00	14.46
4	58	0.38	0.00	9.47	0.76	0.00	0.00	0.00	0.00	0.00	0.38	0.38	11.36

Table III- 25a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	10	0	30	3	0	0	0	0	0	0	0	43
5	60	2	0	0	41	0	0	0	0	0	0	0	43
5	61	36	0	3	3	0	0	0	0	0	0	1	43
5	62	21	0	46	10	0	0	0	0	0	0	0	77
5	63	6	0	0	0	0	0	0	0	0	0	0	6
5	64	1	0	0	0	0	1	0	0	1	2	3	8
5	65	14	2	0	7	0	0	0	0	0	0	1	24
5	66	7	0	50	1	0	0	0	0	0	0	1	59
5	67	61	0	60	24	0	0	0	0	0	2	2	149
5	68	4	0	5	4	0	1	0	0	0	0	0	14
5	69	13	0	99	10	3	0	0	0	0	0	0	125
5	70	5	1	5	0	0	0	0	0	0	1	2	14
5	71	13	0	25	1	1	0	0	0	0	0	2	43
5	72	4	0	0	2	0	0	0	0	0	0	0	6
Total		197	3	323	106	4	2	0	0	1	5	12	654

Table III - 25b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	4.50	0.00	13.51	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.37
5	60	1.01	0.00	0.00	20.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.72
5	61	14.29	0.00	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.40	17.06
5	62	5.98	0.00	13.11	2.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.94
5	63	1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67
5	64	0.28	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.28	0.56	0.85	2.26
5	65	3.79	0.54	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.27	6.50
5	66	1.68	0.00	11.99	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.24	14.15
5	67	14.73	0.00	14.49	5.80	0.00	0.00	0.00	0.00	0.00	0.48	0.48	35.99
5	68	0.99	0.00	1.23	0.99	0.00	0.25	0.00	0.00	0.00	0.00	0.00	3.46
5	69	3.67	0.00	27.97	2.82	0.85	0.00	0.00	0.00	0.00	0.00	0.00	35.31
5	70	2.25	0.45	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.90	6.31
5	71	4.87	0.00	9.36	0.37	0.37	0.00	0.00	0.00	0.00	0.00	0.75	16.10
5	72	2.08	0.00	0.00	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13

Table III- 26a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	3	0	1	50	0	0	0	0	0	0	0	54
1	12	4	0	0	3	0	1	0	0	0	0	0	8
1	13	9	0	0	4	1	0	0	0	0	0	0	14
1	14	4	0	2	2	0	0	0	0	0	0	0	8
1	15	10	0	245	2	0	0	0	0	0	0	0	257
1	16	2	0	40	0	0	0	0	0	0	0	1	43
1	17	22	0	0	125	0	0	0	0	0	0	2	149
1	18	5	0	7	1	0	0	0	0	0	1	0	14
1	19	1	0	3243	0	0	0	0	0	0	0	0	3243
1	20	0	0	0	0	0	0	0	0	0	0	0	0
1	21	72	0	0	20	0	0	0	0	0	0	0	92
1	22	3	0	960	2	0	0	0	0	0	1	0	966
1	23	5	0	3751	0	0	0	0	0	1	20	0	3777
1	24	3	0	0	2	0	0	0	0	0	0	1	6
Total		143	0	8249	211	1	1	0	0	1	22	4	8631

Table III - 26b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the August 1999 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	1.10	0.00	0.37	18.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.78
1	12	1.47	0.00	0.00	1.10	0.00	0.37	0.00	0.00	0.00	0.00	0.00	2.93
1	13	3.06	0.00	0.00	1.36	0.34	0.00	0.00	0.00	0.00	0.00	0.00	4.76
1	14	1.36	0.00	0.68	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.72
1	15	3.37	0.00	82.49	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86.53
1	16	0.58	0.00	11.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	12.46
1	17	3.88	0.00	0.00	22.05	0.00	0.00	0.00	0.00	0.00	0.00	0.35	26.28
1	18	0.87	0.00	1.22	0.17	0.00	0.00	0.00	0.00	0.00	0.17	0.00	2.44
1	19	0.51	0.00	1637.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1637.88
1	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	21	28.92	0.00	0.00	8.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.95
1	22	1.15	0.00	367.82	0.77	0.00	0.00	0.00	0.00	0.00	0.38	0.00	370.11
1	23	1.83	0.00	1373.99	0.00	0.00	0.00	0.00	0.00	0.37	7.33	0.00	1383.52
1	24	1.02	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.34	2.04

Table III- 27a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the August 1999 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	15	1	1	19	0	0	0	0	0	0	0	36
2	26	8	0	95	2	0	0	0	0	0	0	8	113
2	27	36	2	0	18	0	0	0	0	0	0	0	56
2	28	12	0	1	110	0	0	0	0	0	0	2	125
2	29	49	0	2	58	0	0	0	0	0	0	1	110
2	30	3	0	400	0	0	0	0	0	0	0	0	403
2	31	4	0	0	5	0	0	0	0	0	0	0	9
2	32	1	0	0	0	0	0	0	0	0	0	0	1
2	33	1	0	101	1	0	0	0	0	0	0	0	103
2	34	29	0	0	10	0	0	0	0	0	0	0	39
2	35	16	0	0	5	0	0	0	0	0	0	0	21
2	36	1	0	0	1	0	0	0	0	0	2	0	4
2	37	0	0	1	4	0	0	0	0	0	0	0	5
2	38	1	0	1	1	0	0	0	0	0	0	0	3
Total		176	3	602	234	0	0	0	0	0	2	11	1028

Table III - 27b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the August 1999 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	4.59	0.31	0.31	5.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.01
2	26	2.61	0.00	31.05	0.65	0.00	0.00	0.00	0.00	0.00	0.00	2.61	36.93
2	27	11.65	0.65	0.00	5.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.12
2	28	3.88	0.00	0.32	35.60	0.00	0.00	0.00	0.00	0.00	0.00	0.65	40.45
2	29	14.85	0.00	0.61	17.58	0.00	0.00	0.00	0.00	0.00	0.00	0.30	33.33
2	30	0.84	0.00	112.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.89
2	31	1.20	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.70
2	32	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
2	33	0.39	0.00	39.61	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.39
2	34	12.89	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.33
2	35	5.56	0.00	0.00	1.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.29
2	36	0.32	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.65	0.00	1.29
2	37	0.00	0.00	0.45	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25
2	38	0.43	0.00	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30

Table III- 28a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	0	0	0	0	0	0	0	0	0	0	0	0
3	40	0	0	0	0	0	0	0	0	0	0	0	0
3	41	1	0	0	0	0	0	0	0	0	0	0	1
3	42	0	0	0	0	0	0	0	0	0	0	0	0
3	43	8	0	250	0	0	0	0	0	0	0	0	258
3	44	108	0	0	46	4	0	0	0	0	0	0	159
3	45	18	0	0	1	0	0	0	0	0	0	0	19
3	46	1	0	30	0	0	0	0	0	0	0	0	31
3	47	13	0	30	58	0	0	0	0	0	0	1	102
3	48	51	0	0	56	0	0	0	0	0	0	0	107
3	49	22	0	0	10	0	0	0	0	0	0	1	33
Total		222	0	310	171	4	0	0	0	0	0	2	710

Table III - 28b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	41	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36
3	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	43	2.81	0.00	87.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.53
3	44	25.90	0.00	0.00	11.03	0.96	0.00	0.00	0.00	0.00	0.00	0.00	38.13
3	45	5.04	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.32
3	46	0.93	0.00	27.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.70
3	47	6.19	0.00	14.29	27.62	0.00	0.00	0.00	0.00	0.00	0.00	0.48	48.57
3	48	50.00	0.00	0.00	54.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	104.90
3	49	19.30	0.00	0.00	8.77	0.00	0.00	0.00	0.00	0.00	0.00	0.88	28.95

Table III- 29a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	22	0	0	1	0	0	0	0	0	1	1	25
4	51	12	0	0	45	0	0	0	0	0	0	0	57
4	52	74	0	0	40	0	0	0	0	0	0	0	114
4	53	3	0	0	10	0	0	0	0	0	1	0	14
4	54	13	0	0	0	1	0	0	0	0	0	0	14
4	55	10	0	0	2	0	0	0	0	0	0	0	12
4	56	5	0	40	9	0	0	0	0	0	0	0	54
4	57	17	0	80	5	0	0	0	0	0	0	1	103
4	58	7	0	0	4	0	0	0	0	0	0	1	12
Total		163	0	120	116	1	0	0	0	0	2	3	405

Table III - 29b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	10.19	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.46	0.46	11.57
4	51	3.48	0.00	0.00	13.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.52
4	52	21.26	0.00	0.00	11.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.76
4	53	5.88	0.00	0.00	19.61	0.00	0.00	0.00	0.00	0.00	1.96	0.00	27.45
4	54	7.47	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	8.05
4	55	6.94	0.00	0.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.33
4	56	3.14	0.00	25.16	5.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.96
4	57	6.83	0.00	32.13	2.01	0.00	0.00	0.00	0.00	0.00	0.00	0.40	41.37
4	58	2.65	0.00	0.00	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.38	4.55

Table III- 30a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the August 1999 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	9	0	38	52	0	0	0	0	0	0	0	99
5	60	3	0	50	1	0	0	0	0	0	0	0	54
5	61	10	0	27	40	0	1	0	0	0	0	1	79
5	62	13	0	132	0	0	0	0	0	0	1	1	147
5	63	4	0	0	40	0	0	0	0	0	0	0	44
5	64	4	0	0	41	0	0	0	0	0	1	0	46
5	65	4	0	0	3	0	0	0	0	0	1	0	8
5	66	12	0	2	4	0	0	0	0	0	0	0	18
5	67	13	0	80	45	0	0	0	0	0	0	0	138
5	68	19	0	40	6	0	0	0	0	0	0	1	66
5	69	11	0	30	6	1	0	0	0	0	3	0	51
5	70	3	0	20	6	0	0	0	0	0	0	1	30
5	71	15	0	40	2	0	0	0	0	0	0	1	58
5	72	6	0	15	0	0	0	0	0	0	1	0	22
Total		126	0	474	246	1	1	0	0	0	7	5	860

Table III -30b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the August 1999 survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	4.05	0.00	17.12	23.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.59
5	60	1.52	0.00	25.25	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.27
5	61	3.97	0.00	10.71	15.87	0.00	0.40	0.00	0.00	0.00	0.00	0.40	31.35
5	62	3.70	0.00	37.61	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.28	41.88
5	63	1.11	0.00	0.00	11.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.22
5	64	1.13	0.00	0.00	11.58	0.00	0.00	0.00	0.00	0.00	0.28	0.00	12.99
5	65	1.08	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.27	0.00	2.17
5	66	2.88	0.00	0.48	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.32
5	67	3.14	0.00	19.32	10.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33
5	68	4.69	0.00	9.88	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.25	16.30
5	69	3.11	0.00	8.47	1.69	0.28	0.00	0.00	0.00	0.00	0.85	0.00	14.41
5	70	1.35	0.00	9.01	2.70	0.00	0.00	0.00	0.00	0.00	0.00	0.45	13.51
5	71	5.62	0.00	14.98	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.37	21.72
5	72	3.13	0.00	7.81	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	11.46

Table II- 31a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	9	2	0	4	0	0	0	0	0	1	1	12
1	12	3	0	0	13	0	2	0	0	0	0	0	18
1	13	60	0	2	3	0	1	0	0	0	0	1	67
1	14	9	1	3	0	0	7	1	0	0	0	0	21
1	15	12	0	4	5	0	4	0	0	0	1	4	30
1	16	1	0	22	1	0	23	0	0	0	0	0	47
1	17	16	0	21	6	0	16	0	0	0	0	4	63
1	18	16	3	5	0	12	1	0	0	0	0	2	39
1	19	2	0	76	0	7	0	0	0	1	0	0	86
1	20	0	1	3	0	0	1	0	0	0	0	0	5
1	21	2	0	0	1	0	0	0	0	0	0	1	4
1	22	4	1	10	0	0	0	0	0	0	0	0	15
1	23	0	0	103	0	0	0	0	0	0	1	1	105
1	24	1	0	0	0	0	0	0	0	0	0	3	4
Total		135	8	249	33	19	55	1	0	1	3	17	516

Table III - 31b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	3.30	0.73	0.00	1.47	0.00	0.00	0.00	0.00	0.00	0.37	0.37	4.40
1	12	1.10	0.00	0.00	4.76	0.00	0.73	0.00	0.00	0.00	0.00	0.00	6.59
1	13	20.41	0.00	0.68	1.02	0.00	0.34	0.00	0.00	0.00	0.00	0.34	22.79
1	14	3.06	0.34	1.02	0.00	0.00	2.38	0.34	0.00	0.00	0.00	0.00	7.14
1	15	4.04	0.00	1.35	1.68	0.00	1.35	0.00	0.00	0.00	0.34	1.35	10.10
1	16	0.29	0.00	6.38	0.29	0.00	6.67	0.00	0.00	0.00	0.00	0.00	13.62
1	17	2.82	0.00	3.70	1.06	0.00	2.82	0.00	0.00	0.00	0.00	0.71	11.11
1	18	2.79	0.52	0.87	0.00	2.09	0.17	0.00	0.00	0.00	0.00	0.35	6.81
1	19	1.01	0.00	38.38	0.00	3.54	0.00	0.00	0.00	0.51	0.00	0.00	43.43
1	20	0.00	0.40	1.19	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	1.98
1	21	0.80	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.61
1	22	1.53	0.38	3.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.75
1	23	0.00	0.00	37.73	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	38.46
1	24	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02	1.36

Table III- 32a. Total number of wading birds counted within Stratum II of the St. Johns River Marsh Upper Basin in the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	11	0	0	0	3	0	0	0	0	1	2	18
2	26	9	1	0	4	0	0	3	0	0	1	0	18
2	27	15	1	0	2	0	0	0	0	0	0	0	18
2	28	31	0	34	10	0	0	0	0	0	0	0	75
2	29	14	0	3	1	4	0	0	0	0	3	0	25
2	30	4	0	0	0	0	0	0	0	0	1	2	7
2	31	8	0	0	0	0	0	0	0	0	0	0	8
2	32	14	0	3	1	0	0	0	0	0	3	0	21
2	33	5	0	0	11	1	20	0	0	0	2	1	40
2	34	0	0	0	0	0	0	0	0	0	0	0	0
2	35	0	0	0	0	0	0	0	0	0	0	1	1
2	36	0	0	0	0	0	0	0	0	0	0	0	0
2	37	1	1	0	0	0	1	0	0	0	0	0	3
2	38	3	0	0	0	0	0	0	0	0	0	0	3
Total		115	3	40	29	8	21	3	0	0	11	6	237

Table III - 32b. Number of wading birds per km^2 within Stratum II of the St. Johns River Marsh Upper Basin from the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	3.36	0.00	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.31	0.61	5.50
2	26	2.94	0.33	0.00	1.31	0.00	0.00	0.98	0.00	0.00	0.33	0.00	5.88
2	27	4.85	0.32	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.83
2	28	10.03	0.00	11.00	3.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.27
2	29	4.24	0.00	0.91	0.30	1.21	0.00	0.00	0.00	0.00	0.91	0.00	7.58
2	30	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.56	1.96
2	31	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.40
2	32	4.28	0.00	0.92	0.31	0.00	0.00	0.00	0.00	0.00	0.92	0.00	6.42
2	33	1.96	0.00	0.00	4.31	0.39	7.84	0.00	0.00	0.00	0.78	0.39	15.69
2	34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35
2	36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	37	0.45	0.45	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	1.35
2	38	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30

Table III- 33a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	5	2	50	1	1	0	0	0	0	0	0	59
3	40	20	0	0	10	0	0	0	0	0	0	1	31
3	41	0	0	0	0	0	0	0	0	0	0	0	0
3	42	0	0	0	0	0	0	0	0	0	0	0	0
3	43	4	0	0	6	0	1	0	0	0	0	0	11
3	44	4	1	0	5	0	0	0	0	0	0	2	12
3	45	3	0	0	2	0	0	0	0	0	1	0	6
3	46	2	0	0	0	0	1	0	0	0	0	0	3
3	47	4	2	0	0	0	0	0	0	0	1	3	10
3	48	2	0	1	1	0	0	0	0	0	0	0	4
3	49	0	2	0	0	0	0	0	0	0	0	0	2
Total		44	7	51	25	1	2	0	0	0	2	6	138

Table III - 33b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	2.60	1.04	26.04	0.52	0.52	0.00	0.00	0.00	0.00	0.00	0.00	30.73
3	40	10.75	0.00	0.00	5.38	0.00	0.00	0.00	0.00	0.00	0.00	0.54	16.67
3	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	43	1.40	0.00	0.00	2.11	0.00	0.35	0.00	0.00	0.00	0.00	0.00	3.86
3	44	0.96	0.24	0.00	1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.48	2.88
3	45	0.84	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.28	0.00	1.68
3	46	1.85	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	2.78
3	47	1.90	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	1.43	4.76
3	48	1.96	0.00	0.98	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.92
3	49	0.00	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75

Table III- 34a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	6	0	0	0	0	0	1	0	1	0	1	9
4	51	3	1	0	0	0	0	0	0	0	1	4	9
4	52	10	4	0	6	0	0	0	0	2	3	1	26
4	53	3	2	0	10	1	0	0	0	0	2	1	19
4	54	2	0	0	0	0	0	0	0	0	0	1	3
4	55	5	0	0	0	0	0	0	2	0	1	1	9
4	56	0	0	0	15	0	0	0	0	0	0	2	17
4	57	7	0	0	2	0	0	0	0	0	4	1	14
4	58	0	20	0	0	0	0	0	0	0	0	0	20
Total		36	27	0	33	1	0	1	2	3	11	12	126

Table III - 34b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	2.78	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.46	0.00	0.46	4.17
4	51	0.87	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	1.16	2.61
4	52	2.87	1.15	0.00	1.72	0.00	0.00	0.00	0.00	0.57	0.86	0.29	7.47
4	53	5.88	3.92	0.00	19.61	1.96	0.00	0.00	0.00	0.00	3.92	1.96	37.25
4	54	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	1.72
4	55	3.47	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00	0.69	0.69	6.25
4	56	0.00	0.00	0.00	9.43	0.00	0.00	0.00	0.00	0.00	0.00	1.26	10.69
4	57	2.81	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00	1.61	0.40	5.62
4	58	0.00	7.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.58

Table III- 35a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	10	26	0	11	0	0	0	0	0	0	1	48
5	60	1	1	0	0	1	0	0	0	0	1	0	4
5	61	6	2	0	0	0	0	0	0	0	1	2	11
5	62	1	0	0	1	0	0	0	0	0	2	1	5
5	63	10	0	0	0	10	0	0	0	0	2	0	22
5	64	12	0	0	2	0	1	0	0	0	3	2	20
5	65	4	1	0	1	0	0	0	0	0	3	2	11
5	66	10	1	0	1	0	0	0	0	1	0	1	14
5	67	5	2	0	0	0	0	0	0	0	3	0	10
5	68	0	0	10	0	0	0	0	0	0	0	0	10
5	69	0	0	0	0	0	0	0	0	0	1	2	3
5	70	1	0	0	0	0	0	0	0	0	0	1	2
5	71	1	0	0	0	0	0	0	0	0	1	0	2
5	72	10	0	0	10	4	1	0	0	0	0	2	27
Total		71	33	10	26	15	2	0	0	1	17	14	189

Table III - 35b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	4.50	11.71	0.00	4.95	0.00	0.00	0.00	0.00	0.00	0.00	0.45	21.62
5	60	0.51	0.51	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.51	0.00	2.02
5	61	2.38	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.79	4.37
5	62	0.28	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.57	0.28	1.42
5	63	2.78	0.00	0.00	0.00	2.78	0.00	0.00	0.00	0.00	0.56	0.00	6.11
5	64	3.39	0.00	0.00	0.56	0.00	0.28	0.00	0.00	0.00	0.85	0.56	5.65
5	65	1.08	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.81	0.54	2.98
5	66	2.40	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.24	0.00	0.24	3.36
5	67	1.21	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	2.42
5	68	0.00	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.47
5	69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.56	0.85
5	70	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.90
5	71	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.75
5	72	5.21	0.00	0.00	5.21	2.08	0.52	0.00	0.00	0.00	0.00	1.04	14.06

Table III- 36a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	2	0	0	1	0	0	0	0	0	0	0	3
1	12	2	0	0	8	2	0	0	0	0	1	1	14
1	13	75	0	0	20	0	0	0	0	0	1	2	98
1	14	13	0	0	12	0	2	0	0	0	0	0	27
1	15	6	0	3	2	0	1	0	0	0	0	2	14
1	16	19	0	0	19	0	0	0	0	1	1	0	40
1	17	26	0	1	12	0	1	0	0	0	0	1	41
1	18	5	0	1	33	1	3	0	0	0	2	0	45
1	19	2	0	20	16	0	0	0	0	0	0	0	38
1	20	0	0	0	3	0	0	0	0	0	0	0	3
1	21	1	0	3	12	0	0	0	0	0	0	0	16
1	22	0	0	62	11	0	0	0	0	0	0	0	73
1	23	0	0	200	11	0	0	0	0	0	0	0	211
1	24	11	0	0	19	0	0	0	0	0	2	1	33
Total		162	0	290	179	3	7	0	0	1	7	7	656

Table III - 36b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	0.73	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
1	12	0.73	0.00	0.00	2.93	0.73	0.00	0.00	0.00	0.00	0.37	0.37	5.13
1	13	25.51	0.00	0.00	6.80	0.00	0.00	0.00	0.00	0.00	0.34	0.68	33.33
1	14	4.42	0.00	0.00	4.08	0.00	0.68	0.00	0.00	0.00	0.00	0.00	9.18
1	15	2.02	0.00	1.01	0.67	0.00	0.34	0.00	0.00	0.00	0.00	0.67	4.71
1	16	5.51	0.00	0.00	5.51	0.00	0.00	0.00	0.00	0.29	0.29	0.00	11.59
1	17	4.59	0.00	0.18	2.12	0.00	0.18	0.00	0.00	0.00	0.00	0.18	7.23
1	18	0.87	0.00	0.17	5.76	0.17	0.52	0.00	0.00	0.00	0.35	0.00	7.85
1	19	1.01	0.00	10.10	8.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.19
1	20	0.00	0.00	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19
1	21	0.40	0.00	1.20	4.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.43
1	22	0.00	0.00	23.75	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.97
1	23	0.00	0.00	73.26	4.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.29
1	24	3.74	0.00	0.00	6.46	0.00	0.00	0.00	0.00	0.00	0.68	0.34	11.22

Table III- 37a. Total number of wading birds counted within Stratum II of the St. Johns River Marsh Upper Basin in the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	7	0	0	24	4	0	0	0	0	0	3	38
2	26	4	0	0	5	0	1	0	0	0	0	4	14
2	27	11	0	0	5	0	0	0	0	0	0	3	19
2	28	17	0	7	37	0	0	0	0	0	1	0	62
2	29	6	0	0	114	0	0	0	0	0	2	3	121
2	30	0	0	0	4	0	0	0	0	0	0	0	4
2	31	1	0	0	29	0	0	0	0	0	1	1	32
2	32	1	0	78	0	0	1	0	0	0	0	0	80
2	33	4	0	0	7	0	0	0	0	0	0	0	11
2	34	2	0	0	3	0	0	0	0	0	0	1	6
2	35	2	0	3	22	0	0	0	0	0	0	0	27
2	36	2	0	0	19	0	0	0	0	0	1	0	22
2	37	0	0	14	9	0	0	0	0	0	0	0	23
2	38	0	0	3	11	0	0	0	0	0	5	0	19
Total		57	0	105	289	4	2	0	0	0	10	15	478

Table III -37b. Number of wading birds per km^2 within Stratum II of the St. Johns River Marsh Upper Basin from the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	2.14	0.00	0.00	7.34	1.22	0.00	0.00	0.00	0.00	0.00	0.92	11.62
2	26	1.31	0.00	0.00	1.63	0.00	0.33	0.00	0.00	0.00	0.00	1.31	4.58
2	27	3.56	0.00	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.97	6.15
2	28	5.50	0.00	2.27	11.97	0.00	0.00	0.00	0.00	0.00	0.32	0.00	20.06
2	29	1.82	0.00	0.00	34.55	0.00	0.00	0.00	0.00	0.00	0.61	0.91	36.67
2	30	0.00	0.00	0.00	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12
2	31	0.30	0.00	0.00	8.71	0.00	0.00	0.00	0.00	0.00	0.30	0.30	9.61
2	32	0.31	0.00	23.85	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	24.46
2	33	1.57	0.00	0.00	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.31
2	34	0.89	0.00	0.00	1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.44	2.67
2	35	0.69	0.00	1.04	7.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.38
2	36	0.65	0.00	0.00	6.15	0.00	0.00	0.00	0.00	0.00	0.32	0.00	7.12
2	37	0.00	0.00	6.31	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.36
2	38	0.00	0.00	1.30	4.76	0.00	0.00	0.00	0.00	0.00	2.16	0.00	8.23

Table III- 38a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	8	0	4	46	0	0	0	0	0	0	0	58
3	40	2	0	19	2	0	0	0	0	0	0	0	23
3	41	3	0	0	0	0	0	0	0	0	0	0	3
3	42	0	0	0	0	0	0	0	0	0	0	0	0
3	43	35	0	20	40	0	0	0	0	0	0	0	95
3	44	1	0	0	2	0	0	0	0	0	0	0	3
3	45	0	0	5	19	0	0	0	0	0	0	1	25
3	46	6	0	30	3	0	0	0	0	0	2	1	42
3	47	0	0	42	15	0	0	0	0	0	0	2	59
3	48	2	0	50	20	0	0	0	0	0	3	6	81
3	49	2	0	19	2	0	0	0	0	0	0	0	23
Total		59	0	189	149	0	0	0	0	0	5	10	412

Table III - 38b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	4.17	0.00	2.08	23.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.21
3	40	1.08	0.00	10.22	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.37
3	41	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08
3	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	43	12.28	0.00	7.02	14.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.33
3	44	0.24	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
3	45	0.00	0.00	1.40	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.28	7.00
3	46	5.56	0.00	27.78	2.78	0.00	0.00	0.00	0.00	0.00	1.85	0.93	38.89
3	47	0.00	0.00	20.00	7.14	0.00	0.00	0.00	0.00	0.00	0.00	0.95	28.10
3	48	1.96	0.00	49.02	19.61	0.00	0.00	0.00	0.00	0.00	2.94	5.88	79.41
3	49	1.75	0.00	16.67	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.18

Table III-39a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	100	0	2	33	0	0	0	0	0	0	1	136
4	51	15	0	0	0	0	0	0	0	0	2	2	19
4	52	3	0	0	13	1	0	0	0	0	5	0	22
4	53	24	0	0	11	0	0	0	0	0	4	5	43
4	54	1	0	0	0	0	0	0	0	0	0	0	1
4	55	3	0	4	2	1	0	0	0	0	0	1	11
4	56	1	0	4	1	0	0	0	0	0	0	0	6
4	57	1	0	50	0	0	0	0	0	0	0	1	52
4	58	2	0	0	8	0	0	0	0	0	0	2	12
Total		150	0	60	68	2	0	0	0	0	11	12	302

Table III - 39b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	46.30	0.00	0.93	15.28	0.00	0.00	0.00	0.00	0.00	0.00	0.46	62.96
4	51	4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.58	5.51
4	52	0.86	0.00	0.00	3.74	0.29	0.00	0.00	0.00	0.00	1.44	0.00	6.32
4	53	47.06	0.00	0.00	21.57	0.00	0.00	0.00	0.00	0.00	7.84	9.80	84.31
4	54	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57
4	55	2.08	0.00	2.78	1.39	0.69	0.00	0.00	0.00	0.00	0.00	0.69	7.64
4	56	0.63	0.00	2.52	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.77
4	57	0.40	0.00	20.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	20.88
4	58	0.76	0.00	0.00	3.03	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4.55

Table III- 40a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	3	0	0	21	0	0	0	0	0	0	2	26
5	60	1	0	0	0	0	0	0	0	0	7	3	10
5	61	2	0	20	16	0	0	0	0	0	1	1	40
5	62	16	0	20	12	0	0	0	0	0	0	1	49
5	63	12	0	0	4	0	0	0	0	0	0	0	17
5	64	26	0	0	20	10	0	0	0	0	6	7	69
5	65	15	0	20	5	0	0	0	0	0	7	2	48
5	66	14	0	0	12	0	0	0	0	0	0	16	42
5	67	23	0	31	45	0	0	0	0	0	3	1	103
5	68	2	0	14	0	0	0	0	0	0	6	3	25
5	69	2	0	22	0	0	0	0	0	0	0	2	26
5	70	12	0	0	2	0	0	0	0	0	2	10	26
5	71	2	0	0	0	0	0	0	0	0	0	2	4
5	72	5	0	1	0	0	0	0	0	0	0	0	6
Total		135	0	128	137	10	0	0	0	0	32	50	491

Table III - 40b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	1.35	0.00	0.00	9.46	0.00	0.00	0.00	0.00	0.00	0.00	0.90	11.71
5	60	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54	1.52	5.05
5	61	0.79	0.00	7.94	6.35	0.00	0.00	0.00	0.00	0.00	0.40	0.40	15.87
5	62	4.56	0.00	5.70	3.42	0.00	0.00	0.00	0.00	0.00	0.00	0.28	13.96
5	63	3.33	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.72
5	64	7.34	0.00	0.00	5.65	2.82	0.00	0.00	0.00	0.00	1.69	1.98	19.49
5	65	4.07	0.00	5.42	1.36	0.00	0.00	0.00	0.00	0.00	1.90	0.54	13.01
5	66	3.36	0.00	0.00	2.88	0.00	0.00	0.00	0.00	0.00	0.00	3.84	10.07
5	67	5.56	0.00	7.49	10.87	0.00	0.00	0.00	0.00	0.00	0.72	0.24	24.88
5	68	0.49	0.00	3.46	0.00	0.00	0.00	0.00	0.00	0.00	1.48	0.74	6.17
5	69	0.56	0.00	6.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	7.34
5	70	5.41	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.90	4.50	11.71
5	71	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	1.50
5	72	2.60	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.13

Table III- 41a. Total number of wading birds counted within Stratum I of the St. Johns River Marsh Upper Basin in the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	3	0	9	1	0	0	0	0	0	0	0	13
1	12	3	0	1	0	0	0	0	0	0	0	0	4
1	13	8	0	0	1	0	4	0	0	0	0	1	14
1	14	4	0	3	13	0	2	0	0	0	1	0	23
1	15	11	2	0	29	0	1	0	0	0	1	0	44
1	16	3	0	0	5	0	0	0	0	0	0	0	7
1	17	51	0	1	91	0	12	0	0	4	0	0	159
1	18	12	0	12	6	0	0	0	0	0	0	0	30
1	19	4	0	281	1	0	20	0	0	0	0	0	306
1	20	1	0	0	0	0	2	0	0	0	0	0	3
1	21	5	0	0	110	0	0	0	0	0	0	0	115
1	22	1	0	100	2	0	0	0	0	0	0	0	103
1	23	4	0	636	0	0	0	0	0	0	0	0	610
1	24	5	0	0	1	0	0	0	0	0	0	1	7
Total		115	2	1043	260	0	41	0	0	4	2	2	1438

Table III - 41b. Number of wading birds per km^2 within Stratum I of the St. Johns River Marsh Upper Basin from the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
1	11	1.10	0.00	3.30	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76
1	12	1.10	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
1	13	2.72	0.00	0.00	0.34	0.00	1.36	0.00	0.00	0.00	0.00	0.34	4.76
1	14	1.36	0.00	1.02	4.42	0.00	0.68	0.00	0.00	0.00	0.34	0.00	7.82
1	15	3.70	0.67	0.00	9.76	0.00	0.34	0.00	0.00	0.00	0.34	0.00	14.8
1	16	0.87	0.00	0.00	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
1	17	8.99	0.00	0.18	16.05	0.00	2.12	0.00	0.00	0.71	0.00	0.00	28
1	18	2.09	0.00	2.09	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.24
1	19	2.02	0.00	141.92	0.51	0.00	10.10	0.00	0.00	0.00	0.00	0.00	155
1	20	0.40	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00	0.00	1.19
1	21	2.01	0.00	0.00	44.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.2
1	22	0.38	0.00	38.31	0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.5
1	23	1.47	0.00	232.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	223
1	24	1.70	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.34	2.38

Table III- 42a. Total number of wading birds counted within Stratum II of the St. Johns River Marsh Upper Basin in the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	17	0	22	37	0	0	0	0	0	0	2	78
2	26	10	0	25	0	0	0	0	0	0	0	0	35
2	27	5	0	20	6	0	0	0	0	0	1	1	33
2	28	2	0	260	2	0	1	0	0	0	0	0	265
2	29	16	0	193	45	0	0	0	0	0	0	0	254
2	30	1	0	0	11	0	0	0	0	0	0	0	12
2	31	21	0	200	667	0	0	0	0	0	4	0	892
2	32	5	0	200	50	0	0	0	0	0	1	0	256
2	33	14	0	60	36	0	6	0	0	0	0	0	116
2	34	11	0	0	5	0	26	0	0	0	1	0	43
2	35	28	0	1	8	0	13	0	0	0	0	0	50
2	36	13	0	15	2	0	0	0	0	0	0	0	32
2	37	11	0	0	28	0	0	0	0	0	2	0	41
2	38	0	0	0	2	0	0	0	0	0	0	0	2
Total		154	0	996	899	0	46	0	0	0	9	3	2109

Table III - 42b. Number of wading birds per km^2 within Stratum II of the St. Johns River Marsh Upper Basin from the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
2	25	5.20	0.00	6.73	11.31	0.00	0.00	0.00	0.00	0.00	0.00	0.61	23.9
2	26	3.27	0.00	8.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.4
2	27	1.62	0.00	6.47	1.94	0.00	0.00	0.00	0.00	0.00	0.32	0.32	10.7
2	28	0.65	0.00	84.14	0.65	0.00	0.32	0.00	0.00	0.00	0.00	0.00	85.8
2	29	4.85	0.00	58.48	13.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77
2	30	0.28	0.00	0.00	3.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.36
2	31	6.31	0.00	60.06	200.30	0.00	0.00	0.00	0.00	0.00	1.20	0.00	268
2	32	1.53	0.00	61.16	15.29	0.00	0.00	0.00	0.00	0.00	0.31	0.00	78.3
2	33	5.49	0.00	23.53	14.12	0.00	2.35	0.00	0.00	0.00	0.00	0.00	45.5
2	34	4.89	0.00	0.00	2.22	0.00	11.56	0.00	0.00	0.00	0.44	0.00	19.1
2	35	9.72	0.00	0.35	2.78	0.00	4.51	0.00	0.00	0.00	0.00	0.00	17.4
2	36	4.21	0.00	4.85	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.4
2	37	4.95	0.00	0.00	12.61	0.00	0.00	0.00	0.00	0.00	0.90	0.00	18.5
2	38	0.00	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87

Table III- 43a. Total number of wading birds counted within Stratum III of the St. Johns River Marsh Upper Basin in the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	1	0	26	0	0	0	0	0	0	0	0	27
3	40	0	0	30	0	0	0	0	0	0	0	0	30
3	41	0	0	0	0	0	0	0	0	0	0	0	0
3	42	1	0	0	0	0	0	0	0	0	0	0	1
3	43	8	0	0	7	0	0	0	0	0	1	0	16
3	44	25	0	0	34	0	0	0	0	0	0	0	59
3	45	0	0	0	0	0	0	0	0	0	0	0	0
3	46	0	0	40	0	0	60	0	0	0	0	0	100
3	47	8	0	0	17	0	0	0	0	0	0	0	23
3	48	3	0	0	14	0	0	0	0	0	0	1	18
3	49	1	0	0	0	0	0	0	0	0	0	1	2
Total		47	0	96	72	0	60	0	0	0	1	2	276

Table III - 43b. Number of wading birds per km^2 within Stratum III of the St. Johns River Marsh Upper Basin from the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
3	39	0.52	0.00	13.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.1
3	40	0.00	0.00	16.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.1
3	41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
3	42	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
3	43	2.81	0.00	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.35	0.00	5.61
3	44	6.00	0.00	0.00	8.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.1
3	45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
3	46	0.00	0.00	37.04	0.00	0.00	55.56	0.00	0.00	0.00	0.00	0.00	92.6
3	47	3.81	0.00	0.00	8.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11
3	48	2.94	0.00	0.00	13.73	0.00	0.00	0.00	0.00	0.00	0.00	0.98	17.6
3	49	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	1.75

Table III- 44a. Total number of wading birds counted within Stratum IV of the St. Johns River Marsh Upper Basin in the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	0	0	0	0	0	0	0	0	0	0	0	0
4	51	2	0	0	0	0	0	0	0	0	1	0	3
4	52	9	0	0	29	0	0	0	0	0	0	1	39
4	53	Not Surveyd Due to Weather											
4	54	Not Surveyd Due to Weather											
4	55	Not Surveyd Due to Weather											
4	56	Not Surveyd Due to Weather											
4	57	Not Surveyd Due to Weather											
4	58	Not Surveyd Due to Weather											
Total		11	0	0	29	0	0	0	0	0	1	1	42

Table III - 44b. Number of wading birds per km^2 within Stratum IV of the St. Johns River Marsh Upper Basin from the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
4	50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
4	51	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.87
4	52	2.59	0.00	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.29	11.2
4	53	Not Surveyd Due to Weather											
4	54	Not Surveyd Due to Weather											
4	55	Not Surveyd Due to Weather											
4	56	Not Surveyd Due to Weather											
4	57	Not Surveyd Due to Weather											
4	58	Not Surveyd Due to Weather											

Table III- 45a. Total number of wading birds counted within Stratum V of the St. Johns River Marsh Upper Basin in the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	0	0	25	0	0	12	0	0	0	0	0	37
5	60	7	0	90	0	0	0	0	0	0	0	1	98
5	61	1	0	65	24	0	0	0	0	0	1	2	93
5	62	3	0	0	0	0	0	0	0	0	0	0	3
5	63	0	0	0	1	0	0	0	0	0	0	0	1
5	64	12	0	0	20	0	25	0	0	0	2	0	57
5	65	3	0	0	0	0	4	0	0	0	1	2	10
5	66	3	0	0	10	0	0	0	0	0	0	5	18
5	67	1	0	0	73	0	0	0	0	0	0	1	75
5	68	2	0	158	6	0	0	0	0	0	0	0	166
5	69	4	0	36	21	0	3	0	0	0	1	3	68
5	70	6	0	90	0	0	0	0	0	0	0	1	97
5	71	11	0	20	54	0	23	0	0	0	0	0	108
5	72	5	0	0	54	0	0	0	0	0	0	1	60
Total		58	0	484	263	0	67	0	0	0	5	16	891

Table III - 45b. Number of wading birds per km^2 within Stratum V of the St. Johns River Marsh Upper Basin from the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat#	Tran. #	Species											TTL
		GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
5	59	0.00	0.00	11.26	0.00	0.00	5.41	0.00	0.00	0.00	0.00	0.00	16.7
5	60	3.54	0.00	45.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	49.5
5	61	0.40	0.00	25.79	9.52	0.00	0.00	0.00	0.00	0.00	0.40	0.79	36.9
5	62	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85
5	63	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28
5	64	3.39	0.00	0.00	5.65	0.00	7.06	0.00	0.00	0.00	0.56	0.00	16.1
5	65	0.81	0.00	0.00	0.00	0.00	1.08	0.00	0.00	0.00	0.27	0.54	2.71
5	66	0.72	0.00	0.00	2.40	0.00	0.00	0.00	0.00	0.00	0.00	1.20	4.32
5	67	0.24	0.00	0.00	17.63	0.00	0.00	0.00	0.00	0.00	0.00	0.24	18.1
5	68	0.49	0.00	39.01	1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41
5	69	1.13	0.00	10.17	5.93	0.00	0.85	0.00	0.00	0.00	0.28	0.85	19.2
5	70	2.70	0.00	40.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	43.7
5	71	4.12	0.00	7.49	20.22	0.00	8.61	0.00	0.00	0.00	0.00	0.00	40.4
5	72	2.60	0.00	0.00	28.13	0.00	0.00	0.00	0.00	0.00	0.00	0.52	31.3

Appendix IV
Monthly Detail of 1999, 1998, & 2000 Wading Bird Systematic Transect Surveys in the St. Johns River Marsh Upper Basin

April 1998 Transect Survey Detail

The April 1998 wading bird transect survey was conducted on April 14, 1998 from 8:00 A.M. to 4:00 P.M. Weather was sunny and warm (68° to 80° f.) with a slight breeze (10 mph). A total of 1918 birds were counted in the 62 transect line study area (Table IV - 1). The highest number of birds were found in Stratum II (n = 764) while only 155 birds were counted in Stratum V. Cattle Egret were found in the highest numbers (n = 714) while Great Egret numbers were second highest (n = 579). The highest densities of wading birds were found in both Stratum II (18.51/km^2) and Stratum III (18.16/ km^2), (Table IV - 2). Stratum I and II had lower wading bird densities (8.37/ km^2 and 8.36/km^2) while StratumV had the lowest density (3.54/ km^2). Great Blue Heron were found in almost equal densities within all strata except Stratum V. Great Egret were found in almost equal densities in Stratum II & III (4.92/ km^2 & 4.82/ km^2 respectively). The highest density of Snowy Egret was found in Stratum I (0.43/ km^2) while the highest density of White Ibis, Glossy Ibis, and Tricolored Heron was found in Stratum II (2.33/ km^2 ,1.70/ km^2, & 0.05/ km^2 respectively). The highest density of Wood Stork was found in Stratum IV (1.08/ km^2).

The estimated population of wading birds that was utilizing the St. Johns River Marsh Upper Basin on April 13, 1998 was between 12,329 and 13,244 individuals (Table IV - 3). Almost 40% of the estimated population was located in Stratum II, while Stratum III had 24% and Stratum I had 19% of the birds utilizing the marsh. About 9% of the estimated wading bird population was utilizing Stratum IV and another 9% using Stratum V. Variance in the number of birds found on each transect line was highest in Stratum II (S_y^2 = 155.323), (Table IV - 4). The standard deviation was highest in Stratum III (s = 614.881).

Table IV - 1. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	112	19	202	9	0	20	0	0	2	0	8	372
II	203	7	208	162	2	96	70	2	4	1	9	764
III	123	5	243	35	14	36	0	0	2	0	5	463
IV	60	7	53	7	21	5	0	0	4	2	4	163
V	80	13	8	15	1	4	0	2	29	0	3	155
Total	579	51	714	228	38	161	70	4	41	3	29	1918

Table IV - 2. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the April 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	2.52	0.43	4.55	0.20	0.00	0.45	0.00	0.00	0.05	0.00	0.18	8.37
II	4.92	0.17	5.04	3.92	0.05	2.33	1.70	0.05	0.10	0.02	0.22	18.51
III	4.82	0.20	9.53	1.37	0.55	1.41	0.00	0.00	0.08	0.00	0.20	18.16
IV	3.08	0.36	2.72	0.36	1.08	0.26	0.00	0.00	0.21	0.10	0.21	8.36
V	1.83	0.30	0.18	0.34	0.02	0.09	0.00	0.05	0.66	0.00	0.07	3.54

Table IV - 3. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the April 1998 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.	Species											Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	747	127	1347	60	0	133	0	0	13	0	53	2480	2385 - 2575
II	1353	47	1387	1080	13	640	467	13	27	7	60	5093	5016 - 5171
III	827	33	1620	233	93	240	0	0	13	0	33	3093	2908 - 3279
IV	400	47	353	47	140	33	0	0	27	13	27	1087	1062 - 1112
V	533	87	53	100	7	27	0	13	193	0	20	1033	985 - 1082
Total	3860	340	4760	1520	253	1073	467	27	273	20	193	12787	12329 - 13244

Table IV - 4. Statistics calculated from April 1998 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/% coverage(N)	# Transects (n)	Var/birds (S_y^2)	Var/area (S_z^2)	Covar (S_{zy})	Density (R)	Standard Deviation (s)
I	93.333	14	53.795	1.252	-5.827	8.37	355.636
II	93.333	14	155.323	0.194	10.296	18.51	290.294
III	73.333	11	89.539	1.099	-21.057	18.16	614.881
IV	60.000	9	35.691	0.936	4.356	8.36	74.651
V	93.333	14	5.337	0.692	-6.922	3.54	182.595
All Strata	413.33	62	1253	0.921	10.987	3.453	1836.440

June 1998 Transect Survey Detail

The June 1998 wading bird transect survey was conducted on June 15, 1998 from 8:00 A.M. to 4:00 P.M. Weather was sunny and hot (82° to 90° f.) with a slight breeze (10 mph). A total of 11,211 birds were counted in the 62 transect line study area (Table IV - 5). The highest number of birds were found in Stratum I (n = 3229) while Stratum II had the lowest count of 1543. White Ibis were found in the highest numbers (n = 3226) while Small White Heron numbers were second highest (n = 2994). The highest densities of wading birds were found in both Stratum II (18.51/km^2) and Stratum III (18.16/ km^2), (Table IV - 6). Stratum I and II had lower wading bird densities (8.37/ km^2 and 8.36/km^2) while Stratum V had the lowest density (3.54/ km^2). Great Blue Heron were found in almost equal densities within all strata except Stratum V. Great Egret were found in almost equal desities in Stratum II & III (4.92/ km^2 & 4.82/ km^2 respectively). The highest density of Snowy Egret was found in Stratum I (0.43/ km^2) while the highest density of White Ibis, Glossy Ibis, and Tricolored Heron was found in Stratum II (2.33/ km^2 ,1.70/ km^2, & 0.05/ km^2 respectively). The highest density of Wood Stork was found in Stratum IV (1.08/ km^2).

The estimated population of wading birds in the St. Johns River Marsh Upper Basin on June 15, 1998 was between 73450 and 76029 individuals (Table IV - 7). Almost 30% of the estimated population was located in Stratum I, while Stratum V had 27% and Stratum IV had 16% of the birds utilizing the area. About 14% of the estimated wading bird population was utilizing Stratum III and another 13% using Stratum II. Both variance and standard deviation in the number of birds found on each transect line was highest in Stratum I (S_y^2 = 5435.54) (s = 4872.41), (Table IV - 8).

Table IV - 5. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	141	35	886	1139	3	985	0	2	14	0	24	3229
II	427	69	347	216	118	316	8	0	16	10	15	1543
III	275	69	215	623	122	248	0	3	8	31	6	1600
IV	280	25	421	439	25	555	20	3	2	70	22	1828
V	678	93	124	577	352	1122	156	0	33	161	15	3011
Total	1801	291	1993	2994	620	3226	184	8	73	272	82	11211

Table IV - 6. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the June 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	3.17	0.79	19.9	25.6	0.07	22.2	0	0.05	0.32	0	0.54	72.7
II	10.3	1.67	8.41	5.23	2.86	7.66	0.19	0	0.39	0.24	0.36	37.4
III	10.8	2.71	8.43	24.4	4.78	9.73	0	0.12	0.31	1.22	0.24	62.7
IV	14.4	1.28	21.6	22.5	1.28	28.5	1.03	0.15	0.1	3.59	1.13	93.7
V	15.5	2.12	2.83	13.2	8.04	25.6	3.56	0	0.75	3.68	0.34	68.8

Table IV - 7. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the June 1998 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat	Species											Total	95% Confidence
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		Interval
I	940	233	5907	7593	20	6567	0	13.3	93.3	0	160	21527	20224 - 2282
II	2847	460	2313	1440	787	2107	53	0	107	67	100	10287	10155 - 1041
III	1833	460	1433	4153	813	1653	0	20	53	207	40	10667	9941 - 1139
IV	1867	167	2807	2927	167	3700	133	20	13	467	147	12187	11181 - 1319
V	4520	620	827	3847	2347	7480	1040	0	220	1073	100	20073	19848 - 2029
Total	12007	1940	13287	19960	4133	21507	1227	53	487	1813	547	74740	73450 - 7602

Table IV - 8. Statistics calculated from June 1998 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/% coverage(N)	# Transects (n)	Var/birds (S_y^2)	Var/area (S_z^2)	Covar (S_{zy})	Density (R)	Standard Deviation (s)
I	93.33	14	5435.54	1.25	391.71	72.68	4872.41
II	93.33	14	551.19	0.19	4.93	37.38	489.77
III	73.33	11	535.85	1.10	-72.32	62.75	2406.69
IV	60.00	9	3238.31	0.94	-81.52	93.74	3015.66
V	93.33	14	3806.11	0.69	41.78	68.79	839.66
All Strata	413.33	62	49104.00	0.92	69.21	64.25	10153.08

August 1998 Transect Survey Details

The August 1998 wading bird transect survey was conducted on August 8, 1998 from 8:00 A.M. to 4:00 P.M. Weather was sunny and hot (82° to 90° f.) with a slight breeze (10 mph). A total of 9,311 birds were counted in the 62 transect line study area (Table IV - 9). The highest number of birds were found in Stratum II (n = 3659) while Stratum III had the lowest count of 441. Cattle Egret were found in the highest numbers (n = 5180) while Small White Heron numbers were second highest (n = 1653). The highest densities of wading birds were found in both Stratum II (88.64/km^2) and Stratum I (70.22/ km^2), (Table IV - 10). Stratum V and VI had lower wading bird densities (35.00/ km^2 and 28.67/km^2) while Stratum III had the lowest density (17.29/ km^2). Great Blue Heron were found in the highest density in Stratum II (.24/ km^2). Great Egret were found in the highest density in Stratum VI (7.90/ km^2). Snowy Egret were found in almost equal densities in Stratums II and III (0.24/ km^2) while the highest density of White Ibis and Tricolored Heron was found in Stratum I (23.59/ km^2 & 0.02/ km^2 respectively). The highest density of Wood Stork was found in Stratum II (0.27/ km^2).

The estimated population of wading birds in the St. Johns River Marsh Upper Basin on August 8, 1998 was between 61,668 and 62,478 individuals (Table IV - 11). Almost 40% of the estimated population was located in Stratum II, while Stratum I had 34% and Stratum V had 17% of the birds utilizing the area. About 5% of the estimated wading bird population was utilizing Stratum III and another 6% using Stratum IV. Variance in the number of birds found on each transect line was highest in Stratum II (S_y^2 = 7070.30) while standard deviation was highest in Stratum I (s = 3305.46), (Table IV - 12).

Table IV - 9. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	121	5	1645	277	0	1048	0	1	3	5	4	3120
II	266	10	2462	632	11	195	1	0	44	32	10	3659
III	59	6	340	30	2	3	0	0	0	0	1	441
IV	154	2	41	354	0	2	1	0	0	5	0	559
V	272	11	692	360	2	187	0	0	0	2	6	1532
Total	872	34	5180	1653	15	1435	2	1	47	44	21	9311

Table IV - 10. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the August 1998 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	2.72	0.11	37.02	6.23	0.00	23.59	0.00	0.02	0.07	0.11	0.09	70.22
II	6.44	0.24	59.64	15.31	0.27	4.72	0.02	0.00	1.07	0.78	0.24	88.64
III	2.31	0.24	13.33	1.18	0.08	0.12	0.00	0.00	0.00	0.00	0.04	17.29
IV	7.90	0.10	2.10	18.15	0.00	0.10	0.05	0.00	0.00	0.26	0.00	28.67
V	6.21	0.25	15.81	8.22	0.05	4.27	0.00	0.00	0.00	0.05	0.14	35.00

Table IV - 11. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the August 1998 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum												Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	807	33	10967	1847	0	6987	0	7	20	33	27	20800	19917 - 21683
II	1773	67	16413	4213	73	1300	7	0	293	213	67	24393	24342 - 24444
III	393	40	2267	200	13	20	0	0	0	0	7	2940	2600 - 3280
IV	1027	13	273	2360	0	13	7	0	0	33	0	3727	3561 - 3893
V	1813	73	4613	2400	13	1247	0	0	0	13	40	10213	9860 -10566
Total	5813	227	34533	11020	100	9567	13	7	313	293	140	62073	61668 - 62478

Table IV - 12. Statistics calculated from August 1998 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/ % coverage(N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.333	14	3775.00	1.252	-76.255	70.22	3305.46
II	93.333	14	7070.00	0.194	48.8727	88.64	192.12
III	73.333	11	1303.00	1.099	-41.39	17.29	1128.25
IV	60.000	9	2188.90	0.936	38.9059	28.67	497.34
V	93.333	14	826.48	0.692	-23.257	35.00	1321.56
All Strata	413.33	62	3748.41	0.921	18.99	53.36	3189.89

April 1999 Transect Survey Detail

Systematic transect surveys were flown on April 19, 1999 from 9:00 A.M. to 4:00 P.M. Weather was cloudy and cool (64° to 78° f.) with a slight breeze (10 mph). Sixty-two east-west transect areas were surveyed to count birds utilizing the marsh, particularly foraging wading birds. A total of 3248 birds were counted in the 62 transect line study area. The highest number of birds was found in Stratum I (n = 2439) while only 133 birds were counted in Stratum III. Great Egret were found in the highest numbers (n = 1454) while Small White Heron numbers were second highest (n = 346). The highest density of wading birds was also found in Stratum I (36.89/km^2), while the lowest was in Stratum II (3.73/km^2). Great Egret, Cattle Egret, Small White Heron, White Ibis, Great Blue Heron, and Little Blue Heron were found in highest densities in Stratum I. The highest density of Snowy Egret was found in Stratum IV (0.43/ km^2). The highest density of Wood Stork was found in Stratum V. Glossy Ibis were seen only in Stratum IV. The estimated population of wading birds found utilizing the Upper St. Johns River Basin on April 19, 1999 was between 15084and 17,663 individuals. This estimated population does not include birds that were on nests. Variance in the number of birds found on each transect line was highest in Stratum I (S_y^2 = 35577.3). The standard deviation was also highest in Stratum V (s = 4222.66).

Table IV - 13. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	1148	17	163	163	9	30	0	1	26	11	70	2439
II	49	0	53	25	9	6	0	0	1	4	7	154
III	64	0	0	33	1	0	0	1	3	12	18	133
IV	71	11	5	19	8	1	41	0	8	8	10	182
V	122	12	10	66	20	4	0	1	8	77	30	350
Total	2254	40	231	306	47	41	41	3	46	112	135	3258

Table IV - 14. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the April 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	25.84	0.38	3.67	3.67	0.20	0.68	0.00	0.02	0.59	0.25	1.58	36.89
II	1.19	0.00	1.28	0.61	0.22	0.15	0.00	0.00	0.02	0.10	0.17	3.73
III	2.51	0.00	0.00	1.29	0.04	0.00	0.00	0.04	0.12	0.47	0.71	5.22
IV	3.64	0.56	0.26	0.97	0.41	0.05	2.10	0.00	0.41	0.41	0.51	9.33
V	2.79	0.27	0.23	1.51	0.46	0.09	0.00	0.02	0.18	1.76	0.69	8.00

Table IV - 15. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the April 1999 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	7653	113	1087	1087	60	200	0	7	173	73	467	10920	9791 - 12049
II	327	0	353	167	60	40	0	0	7	27	47	1026	860 - 1192
III	427	0	0	220	7	0	0	7	20	80	120	880	777 - 982
IV	473	73	33	127	53	7	273	0	53	53	67	1213	1140 - 1286
V	813	80	67	440	133	27	0	7	53	513	200	2333	1738 - 2928
Total	9693	267	1540	2040	313	273	273	20	307	747	900	16373	15084 - 17663

Table IV - 16. Statistics calculated from April 1999 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/ % coverage(N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.333	14	35577.3	1.252	48.3467	36.8895	4222.6618
II	93.333	14	716.9444	0.194	-1.3263	3.73062	621.16248
III	73.333	11	477.0909	1.099	21.7888	5.21569	340.9248
IV	60.000	9	218.9231	0.936	23.6341	9.33333	218.72
V	93.333	14	558.7692	0.692	-4.2604	7.99634	595.7869
All Strata	413.33	62	49104	0.921	69.21	64.253	10153.079

June 1999 Transect Survey Detail

Systematic transect surveys were flown on June 17 and 18, 1999 from 9:00 A.M. to 12:00 P.M each day. Weather was partly cloudy and warm (82° to 88° f.) with thunderstorms in the afternoon. Sixty two east-west transect areas were surveyed to count birds utilizing the marsh, particularly foraging wading birds. A total of 4178 birds were counted in the 62 transect line study area. The highest number of birds was found in Stratum II (n = 1924) while only 195 birds were counted in Stratum III. Cattle Egret were found in the highest numbers (n = 2326) while Great Egret numbers were second highest (n = 901). No Tricolored Heron or Glossy Ibis were observed. The highest density of wading birds was found in Stratum II (46.6/km^2), while the lowest was in Stratum III (7.65/km^2). Stratum II had the highest density of Cattle Egret and Small White Heron. The highest density of White Ibis were located in Stratum I. Great Blue Heron, Snowy Egret, Little Blue Heron, and Wood Stork were found in highest densities in Stratum V. The highest density of Great Egret was found in Stratum IV, while the highest density of Small Dark Heron was found in Stratum IV. The estimated population of wading birds found utilizing the St. Johns River Marsh Upper Basin on June 17 and 18, 1999 was between 27,186 and 28,507 individuals. This estimated population does not include birds that were on nests. Variance in the number of birds found on each transect line was highest in Stratum II (S_y^2 = 34577). The standard deviation was also highest in Stratum II (s = 4089).

Table IV - 17. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	268	2	468	187	2	39	0	0	1	4	4	975
II	190	0	1329	399	0	3	0	0	0	2	1	1924
III	46	0	111	37	0	0	0	0	0	0	1	195
IV	200	0	95	121	0	1	0	0	0	11	2	430
V	197	3	323	106	4	2	0	0	1	5	12	654
Total	901	5	2326	850	6	45	0	0	2	22	20	4178

Table IV - 18. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the June 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species										Total
	GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH	
I	6.03	0.05	10.5	4.21	0.05	0.88	0	0.02	0.09	0.09	21.9
II	4.6	0	32.2	9.67	0	0.07	0	0	0.05	0.02	46.6
III	1.8	0	4.35	1.45	0	0	0	0	0	0.04	7.65
IV	10.3	0	4.87	6.21	0	0.05	0	0	0.56	0.1	22.1
V	4.5	0.07	7.38	2.42	0.09	0.05	0	0.02	0.11	0.27	14.9

Table IV - 19. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the June 1999 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species										Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH		
I	1787	13	3120	1247	13	260	0	7	27	27	6500	5972 - 7027
II	1267	0	8860	2660	0	20	0	0	13	7	12827	11734 - 13920
III	307	0	740	247	0	0	0	0	0	7	1300	1128 - 1471
IV	1333	0	633	807	0	7	0	0	73	13	2867	2793 - 2939
V	1313	20	2153	707	27	13	0	7	33	80	4353	4109 - 4597
Total	6007	33	15507	5667	40	300	0	13	147	133	27847	27186 - 28507

Table IV - 20. Statistics calculated from June 1999 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum	# #Transects/% coverage(N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.333	14	9297.632	1.252	57.8467	21.9446	1973.1937
II	93.333	14	34577.03	0.194	36.2557	46.6085	4089.3415
III	73.333	11	635.0182	1.099	-5.1521	7.64706	568.62363
IV	60.000	9	3840.944	0.936	-11.87	22.0513	218.72
V	93.333	14	1937.297	0.692	17.321	14.9417	912.44629
All Strata	413.33	62	12097.65	0.921	22.5382	23.9454	10153.079

August 1999 Transect Survey Detail

The systematic transect survey was flown on August 19, 1999 from 8:30 A.M. to 3:30 P.M. Weather was sunny and warm (78° to 86° f.). Sixty-two east-west transect areas were surveyed to count birds utilizing the marsh, particularly foraging wading birds. A total of 11,634 birds were counted in the 62 transect line study area. The highest number of birds was found in Stratum I (n = 8631) while only 405 birds were counted in Stratum IV. Cattle Egret were found in the highest numbers (n = 9755) while Great Egret numbers were second highest (n = 830). No Tricolored Heron or Glossy Ibis were observed. The highest density of wading birds was found in Stratum I (194/km^2), while the lowest was in Stratum IV (19.6/km^2) (Table 3). Stratum I had the highest density of Cattle Egret. The highest density of White Ibis were located in Stratum I. Great Egret, small white heron, Wood Stork were found highest in Stratum III. Great Blue Heron were found in highest densities in Stratum II, while the highest density of Small Dark Heron was found in Stratum I. The estimated population of wading birds found utilizing the St. Johns River Marsh Upper Basin on August 19, 1999 was between 73,655 and 81,465 individuals. This estimated population does not include birds that were on nests. Variance in the number of birds found on each transect line was highest in Stratum I (S_y^2 = 1576689). The standard deviation was also highest in Stratum I (s = 30876).

Table IV - 21. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	143	0	8249	211	1	1	0	0	1	22	4	8631
II	176	3	602	234	0	0	0	0	0	2	11	1028
III	222	0	310	171	4	0	0	0	0	0	2	710
IV	163	0	120	116	1	0	0	0	0	2	3	405
V	126	0	474	246	1	1	0	0	0	7	5	860
Total	830	3	9755	978	7	2	0	0	1	33	25	11634

Table IV - 22. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the August 1999 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species										Total
	GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH	
I	3.22	0	186	4.75	0.02	0.02	0	0.02	0.5	0.09	194
II	4.26	0.07	14.6	5.67	0	0	0	0	0.05	0.27	24.9
III	8.71	0	12.2	6.71	0.16	0	0	0	0	0.08	27.8
IV	8.36	0	6.15	5.95	0.05	0	0	0	0.1	0.15	20.8
V	2.88	0	10.8	5.62	0.02	0.02	0	0	0.16	0.11	19.6

Table IV - 23. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the August 1999 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.	Species											Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	953	0	54993	1407	7	7	0	0	7	147	27	57547	49305 - 65788
II	1173	20	4013	1560	0	0	0	0	0	13	73	6853	6228 - 7479
III	1480	0	2067	1140	27	0	0	0	0	0	13	4727	4221 - 5233
IV	1087	0	800	773	7	0	0	0	0	13	20	2700	2627 - 2773
V	840	0	3160	1640	7	7	0	0	0	47	33	5733	5468 - 5998
Total	5533	20	65033	6520	47	13	0	0	7	220	167	77560	73655 - 81465

Table IV - 24. Statistics calculated from August 1999 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transect /% coverage (N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.33	14	1576689	1.252	-447.7	194.261	30836.185
II	93.33	14	11119.49	0.194	17.8584	24.9031	2339.6883
III	73.33	11	7028.273	1.099	19.7732	27.8431	1678.4194
IV	60.00	9	1606.25	0.936	21.4067	20.7692	218.72
V	93.33	14	1763.648	0.692	4.40679	19.6482	991.19587
All Strata	413.3	62	394719.4	0.921	-35.842	66.6781	30745.571

April 2000 Transect Survey Detail

The systematic transect survey was flown on April 16, 2000 from 7:30 A.M. to 5:00 P.M. Weather was mild (74° to 80° f.). A total of 1,206 birds were counted in the 62 transect line study area. The highest number of birds was found in Stratum I (n = 516) while only 126 birds were counted in Stratum IV. Great Egret were found in the highest numbers (n = 401) while Cattle Egret numbers were second highest (n = 350). Only 2 Tricolored Heron, 5 Little Blue Heron and 5 Glossy Ibis were observed. The highest density of wading birds was found in Stratum I (11.61/km^2), while the lowest was in Stratum IV (4.32/km^2), (Table IV - 25). Stratum I had the highest density of Great Egret, Wood Stork, and Cattle Egret, (Table IV - 26). Great Blue Heron and Small Dark Heron were found in highest densities in Stratum IV. Tabulations of total wading bird numbers per transect as well as the density of birds per transect are found in Appendix I of this report in Tables I- 1a & b through I - 5a & b.

Table IV - 25. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	135	8	249	33	19	55	1	0	1	3	17	516
II	115	3	40	29	8	21	3	0	0	11	6	237
III	44	7	51	25	1	2	0	0	0	2	6	138
IV	36	27	0	33	1	0	1	2	3	11	12	126
V	71	33	10	26	15	2	0	0	1	17	14	189
Total	401	78	350	146	44	80	5	2	5	44	55	1206

Table IV - 26. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the April 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.	Species										Total
	GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH	
I	3.04	0.18	5.60	0.74	0.43	1.24	0.00	0.02	0.07	0.38	11.61
II	2.79	0.07	0.97	0.70	0.19	0.51	0.00	0.00	0.27	0.15	5.74
III	1.73	0.27	2.00	0.98	0.04	0.08	0.00	0.00	0.08	0.24	5.41
IV	1.85	1.38	0.00	1.69	0.05	0.00	0.10	0.15	0.56	0.62	6.46
V	1.62	0.75	0.23	0.59	0.34	0.05	0.00	0.02	0.39	0.32	4.32

The estimated population of wading birds found utilizing the St. Johns River Marsh Upper Basin on April 16, 2000 was between 7,379 and 8,700 individuals. This

estimated population does not include birds that were on nests. Variance in the number of birds found on each transect line was highest in Stratum II (S_y^2 = 414.07) (Table IV-27). The standard deviation was highest in Stratum I (s = 745.37), (Table IV - 28).

Table IV - 27. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the April 2000 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.	Species											Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	900	53	1660	220	127	367	7	0	7	20	113	3440	3235 - 3644
II	767	20	267	193	53	140	20	0	0	73	40	1580	1456 - 1703
III	293	47	340	167	7	13	0	0	0	13	40	920	803 - 1036
IV	240	180	0	220	7	0	7	13	20	73	80	840	767 - 912
V	473	220	67	173	100	13	0	0	7	113	93	1260	1175 - 1344
Total	2673	520	2333	973	293	533	33	13	33	293	367	8040	7379 - 8700

Table IV - 28. Statistics calculated from April 2000 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/% coverage(N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.333	14	1052.44	1.252	5.02978	11.6138	745.37602
II	93.333	14	414.0714	0.194	1.58457	5.74128	473.01634
III	73.333	11	314.0727	1.099	-1.4145	5.41176	331.06605
IV	60.000	9	51.25	0.936	1.17	6.46154	218.72
V	93.333	14	158.5769	0.692	-2.0025	4.31803	353.57609
All Strata	413.33	62	12097.65	0.921	22.5382	23.9454	5200.353

June 2000 Transect Survey Detail

The systematic transect survey was flown on June 17, 2000 from 7:30 A.M. to 5:00 P.M. Weather was warm 80° f. with a southeast wind. A total of 2,339 birds were counted in the 62 transect line study area. The highest number of birds was found in Stratum I (n = 656) while only 302 birds were counted in Stratum IV. Small white heron were found in the highest numbers (n = 822) while Cattle Egret numbers were second highest (n = 772). The highest density of wading birds was found in Stratum I (11.61/km^2), while the lowest was in Stratum IV (4.32/km^2), (Table IV - 29). Stratum I had the highest density of Great Egret, Wood Stork, and Cattle Egret, (Table IV 30). Great Blue Heron and Small Dark Heron were found in highest densities in Stratum IV. Tabulations of total wading bird numbers per transect as well as the density of birds per transect are found in Appendix I of this report in Tables I- 1a & b through I - 5a & b.

Table IV - 29. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	162	0	290	179	3	7	0	0	1	7	7	656
II	57	0	105	289	4	2	0	0	0	10	15	478
III	59	0	189	149	0	0	0	0	0	5	10	412
IV	150	0	60	68	2	0	0	0	0	11	12	302
V	135	0	128	137	10	0	0	0	0	32	50	491
Total	563	0	772	822	19	9	0	0	1	65	94	2339

Table IV - 30. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the June 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species										Total
	GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH	
I	3.646	0	6.527	4.029	0.068	0.158	0	0.023	0.158	0.158	14.76
II	1.381	0	2.544	7.001	0.097	0.048	0	0	0.242	0.363	11.58
III	2.314	0	7.412	5.843	0	0	0	0	0.196	0.392	16.16
IV	7.692	0	3.077	3.487	0.103	0	0	0	0.564	0.615	15.49
V	3.084	0	2.924	3.13	0.228	0	0	0	0.731	1.142	11.22

The estimated population of wading birds found utilizing the St. Johns River Marsh Upper Basin on June 17, 2000 was between 14,255 and 16,932 individuals (Table IV - 31). This estimated population does not include birds that were on nests. Variance in the number of birds found on each transect line was highest in Stratum I (S_y^2 = 2919.21), (Table IV - 32). The standard deviation was highest in Stratum I2661.9649 (s = 2661.96).

Table IV - 31. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the June 2000 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat	Species											Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	1080	0	1933	1193	20	46	0	0	7	48	47	4373	3811 - 4935
II	380	0	700	1927	27	13	0	0	0	67	100	3187	2994 - 3378
III	393	0	1260	993	0	0	0	0	0	33	67	2747	2374 - 3119
IV	1000	0	400	453	13	0	0	0	0	73	80	2013	1940 - 2086
V	900	0	853	913	67	0	0	0	0	213	333	3273	2561 - 3984
Total	3753	0	5147	5480	127	60	0	0	7	433	627	15593	14255 - 16932

Table IV - 32. Statistics calculated from June 2000 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/ % coverage(N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.333	14	2919.209	1.252	391.71	14.76	2104.153
II	93.333	14	1066.59	0.194	4.932	11.58	719.34002
III	73.333	11	1046.47	1.099	-72.324	16.16	1235.1038
IV	60.000	9	1757.78	0.936	-81.52	17.21	218.72
V	93.333	14	716.38	0.692	41.777	11.22	2661.9649
All Strata	413.33	62	49104	0.921	69.21	13.41	10538.064

August 2000 Transect Survey Detail

The systematic transect survey was flown on August 12, 2000 from 7:30 A.M. to 5:00 P.M. Weather was warm 88° f. with storms prevalent. Due to stormy weather, transects 53 - 58 were not surveyed. A total of 4,756 birds were counted in the 56 transect line study area. The highest number of birds was found in Stratum II (n = 2109) while only 42 birds were counted in Stratum IV. Cattle Egret were found in the highest numbers (n = 2619) while small white heron numbers were second highest (n = 1523). The highest density of wading birds was found in Stratum II (51.091/km^2), while the lowest was in Stratum IV (2.15/km^2), (Table IV - 33). The highest density of Cattle egret occurred in Stratums I (23.48/km^2) and II (24.13/km^2). Stratum III had the highest density of White Ibis (2.353/ km^2), (Table IV - 34). Tabulations of total wading bird numbers per transect as well as the density of birds per transect are found in Appendix I of this report in Tables I- 1a & b through I - 5a & b.

Table IV - 33. Total number of wading birds counted within each stratum of the St. Johns River Marsh Upper Basin in the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat. #	Species											Total
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH	
I	115	2	1043	260	0	41	0	0	4	2	2	1438
II	154	0	996	899	0	46	0	0	0	9	3	2109
III	47	0	96	72	0	60	0	0	0	1	2	276
IV	11	0	0	29	0	0	0	0	0	1	1	42
V	58	0	484	263	0	67	0	0	0	5	16	891
Total	385	2	2619	1523	0	214	0	0	4	18	24	4756

Table IV - 34. Number of wading birds per km^2 within each stratum of the St. Johns River Marsh Upper Basin from the August 2000 transect survey (GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Stratum	Species										Total
	GE	SE	CE	SWH	WS	WI	TCH	LBH	SDH	GBH	
I	2.588	0.045	23.48	5.852	0	0.923	0	0.09	0.045	0.045	32.37
II	3.731	0	24.13	21.78	0	1.114	0	0	0.218	0.073	51.09
III	1.843	0	3.765	2.824	0	2.353	0	0	0.039	0.078	10.82
IV	0.564	0	0	1.487	0	0	0	0	0.051	0.051	2.154
V	1.325	0	11.06	6.009	0	1.531	0	0	0.114	0.366	20.36

The estimated population of wading birds found utilizing the St. Johns River Marsh Upper Basin on August 12, 2000 was between 30,678 and 32,736 individuals (Table IV - 35). This estimated population does not include birds that were on nests. Variance in the number of birds found on each transect line was highest in Stratum I (S_y^2 = 2919.21), (Table IV - 36). The standard deviation was highest in Stratum I2661.9649 (s = 2661.96).

Table IV - 35. Population estimates of wading birds within each stratum of the St. Johns River Marsh Upper Basin from the August 2000 transect survey.(Strat. = Stratum, GE= Great Egret, SE= Snowy Egret, CE = Cattle Egret, SWH= Small White Heron, WS= Wood Stork, WI= White Ibis, GI= Glossy Ibis, TCH = Tricolored Heron, LBH= Little Blue Heron, SDH= Small Dark Heron, GBH= Great Blue Heron).

Strat.	Species											Total	95% Confidence Interval
	GE	SE	CE	SWH	WS	WI	GI	TCH	LBH	SDH	GBH		
I	767	13	6953	1733	0	273	0	0	26.7	13.3	13.3	9587	8496 - 10677
II	1027	0	6640	5993	0	307	0	0	0	60	20	14060	12663 - 15456
III	313	0	640	480	0	400	0	0	0	7	13	1840	1629 - 2051
IV	73	0	0	193	0	0	0	0	0	7	7	280	154 - 406
V	387	0	3227	1753	0	447	0	0	0	33	107	5940	5229 - 6651
Total	2567	13	17460	10153	0	1427	0	0	27	120	160	31707	30678 - 32736

Table IV - 36. Statistics calculated from August 2000 wading bird transect survey data to determine 95% confidence intervals for population estimates within each stratum of the St. Johns River Marsh Upper Basin.

Stratum #	#Transects/ % coverage(N)	# Transects (n)	Var/birds (Sy2)	Var/area (Sz2)	Covar (Szy)	Density (R)	Standard Deviation (s)
I	93.333	14	28538.53	1.252	-25.05	32.3655	4079.805
II	93.333	14	54407.02	0.194	32.2693	51.0901	5224.842
III	73.333	11	929.8909	1.099	-5.51	10.8235	699.63085
IV	60.000	3	471	0.5679	4.67	5.13385	218.72
V	93.333	14	2236.709	0.692	-7.4857	20.3564	2661.9649
All Strata	413.33	56	22605.78	0.82614	7.49817	28.9876	7700.167