

**Review of potential Florida Scrub-Jay Habitat in the City of North Port,
Sarasota County, Florida**

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SUMMARY

The following document is a review of previously delineated habitat in undeveloped lands in the City of North Port (Sarasota County, Florida) that currently contain or could potentially sustain territories of Florida Scrub-Jays (*Aphelocoma coerulescens*). The findings herein are intended to supplement conservation prioritization efforts as part of the Habitat Conservation Planning process for Florida Scrub-Jays in Sarasota County, and should be treated as a general guide for directing protection efforts rather than as an exact delineation of habitat. The objectives of this project were:

- To verify and corroborate previously mapped areas with potential for Florida Scrub-Jay use.
- To distinguish between Type I and Type II habitat (as defined in Fitzpatrick et al. 1991).

Two hundred habitat polygons encompassing 1565 acres were corroborated during this study. Eighteen polygons (188 acres) fell under the Type I category and 56 polygons (532 acres) fell under the Type II category. An additional 126 polygons (845 acres) should be surveyed more thoroughly to determine habitat types and potential for Scrub-Jay use. There are four currently known Florida Scrub-Jay groups in the North Port area, as compared to 6 groups reported in 2000, which constitutes a slightly higher rate of loss for this area than the rest of Sarasota County, most likely because of habitat overgrowth and quickening development. Although the patches discussed in this document represent areas that could *potentially* support Florida Scrub-Jays, *ALL* of the habitat areas are currently in sub-optimal condition (mostly due to urban disturbance and the disruption of fire regimes), and would need aggressive management in order to provide suitable habitat for sustaining Florida Scrub-Jay territories. Furthermore, the City of North Port is developing at an accelerating pace, which creates a sense of urgency since sub-urbanization greatly diminishes the opportunity for supporting a large, sustained population of Florida Scrub-Jays. However, because of their proximity to currently protected habitat in the southern portion of Sarasota County and existing Florida Scrub-Jay groups in neighboring Charlotte County, these areas could play an important role in the metapopulation dynamics of Florida Scrub-Jays in this region.

INTRODUCTION

Field surveys were conducted January 16 to January 19, 2005 within a previously designated area of interest in the City of North Port. The area was surveyed by County staff throughout 2004 and 1342 acres of new potential habitat patches were delineated on the basis of vegetation, soils, and hydrology (Brouse 2004). These were added to a set of habitat patches documented in a Florida Scrub-Jay survey submitted to the County in November 2000 (Christman). The primary objectives of the current project were to verify and confirm that the newly delineated patches represent potential habitat for Florida Scrub-Jays, and to categorize these patches as Type I or Type II habitat.

METHODS

Only areas that had previously been documented or mapped by County staff were visited. Each mapped area was revisited and ground-truthed to verify its condition and potential for Florida Scrub-Jay use. Each site was inspected for the presence of scrub oak species (namely, *Quercus geminata*, *Q. myrtifolia*, *Q. chapmanii* and *Q. minima*), and other scrub vegetation, including *Serenoa repens*, *Lyonia* sp., and *Sabal etonia*. Since all previously mapped areas contained one or more of these species, the areas were further examined to distinguish between patches with high oak densities (15% or more, Type I) and low oak densities (less than 15%, Type II). For the purposes of this study, oak cover was the only landscape characteristic considered, since this is the most important variable when considering the restoration potential of a site (Fitzpatrick et al. 1991). Other factors that would change significantly following habitat restoration, such as scrub oak height or percent pine cover were not assessed. Due to time constraints, Type assessment was made by visually estimating the current percentage cover of scrub oak species. This was completed for the areas with higher priority, Areas 1 and 2 (see Figure 1), but only a cursory survey of Area 3 (lower priority) was completed.

To verify the patch delineations, recent aerial photographs (2002 Orthophotos, 1 meter = 1 pixel resolution) were used as backdrops to add, delete, or refine polygon lines representative of habitat types. Changes to the GIS polygons were made onsite at each patch (with ArcView 3.3 ESRI), using visual markers and ground-truthed landscape characteristics, thereby eliminating the need to modify polygons in the office.

All spatial analyses were conducted using ArcView 3.3.

RESULTS

All patches in Areas 1 and 2 were visited twice during this project; patches in Area 3 were only visited once. Including updates to the 2000 Christman study and the 2004 County review, the current project has corroborated a total of 200 habitat polygons encompassing 1565 acres in the general North Port Area, excluding Warm Mineral Springs (Figure 1). Changes in polygon shapes were made to previously mapped habitat patches when the landscape had been developed (usually into residential housing), and polygons were added to areas deemed appropriate under the Type I/II habitat definition. Therefore, total acreage numbers for this study do not necessarily reflect the sum of previously mapped acres (both from the 2000 and 2004 reports) and additional acres determined in 2005. Polygons mapped in the 2000 Christman Report were not inspected for Type I/II habitat, and are listed under the “Not Surveyed” column; polygons in Area 3 are also listed under the “Not Surveyed” column. Results for the entire area are summarized in Table 1. A more comprehensive table summarizing each patch in Areas 1 and 2 is located in Appendix B.

Table 1. Acreage totals for general North Port Area.

Study	Type I		Type II		Not Surveyed		Totals	
	Polygons	Acres	Polygons	Acres	Polygons	Acres	Polygons	Acres
2005 QA	18	188	56	532	126	845	200	1565
2004 County (excluding Christman)	17	177	168	1188	--	--	185	1342
2000 Christman	--	--	--	--	--	--	10	242

High Priority Area 1 (East of LOR property, West of Sumter Blvd.):

A total of 45 habitat polygons encompassing 546 acres have been delineated in this area (Figure 2). Thirteen of these polygons fall under the Type I habitat designation. A total of 61 escheated lots either border these 47 polygons or are contained (partly or entirely) within them. Two sizeable polygons of Type II habitat were added along the southern and southwestern edges of North Port High School (south of Price Blvd.). These should be inspected further to confirm their size, since they were only observed from the road. Results are summarized in Table 2.

In addition, a minimum of 2 Florida Scrub-Jay groups (7 individual birds) were discovered in this area (Figure 2). This increases the total number of current Scrub-Jay groups utilizing these patches from 2 to 4.

Table 2. Acreage totals for Area 1 (High Priority).

Study	Type I		Type II		Not Surveyed		Totals	
	Polygons	Acres	Polygons	Acres	Polygons	Acres	Polygons	Acres
2005 QA	13	167	23	190	9	189	45	546
2004 County (excluding Christman)	9	132	21	179	--	--	30	311
2000 Christman	--	--	--	--	--	--	10	242

High Priority Area 2 (East of Toledo Blade Blvd., West of I-75):

A total of 38 habitat polygons encompassing 363 acres have been delineated in this area (Figure 3). Five of these polygons fall under the Type I habitat designation. A total of 134 escheated lots either border these 38 polygons or are contained (partly or entirely) within them. Results for Area 2 are summarized in Table 3.

Table 3. Acreage totals for Area 2 (High Priority).

Study	Type I		Type II		Not Surveyed		Totals	
	Polygons	Acres	Polygons	Acres	Polygons	Acres	Polygons	Acres
2005 QA	5	21	33	342	--	--	38	363
2004 County (excluding Christman)	4	17	32	371	--	--	36	388
2000 Christman	0	0	0	0	0	0	0	0

Area 3 (Between Sumter Blvd. and Toledo Blade Blvd.):

Only a cursory review of this area was conducted. The majority of previously mapped polygons were viewed from the roadside to confirm presence of scrub oak species. All viewed patches contained scrub oaks (mostly overgrown *Quercus geminata*), but a more thorough survey of this area is necessary to distinguish between Type I and II patches.

CONCLUSIONS

Site visits indicated that most polygons accurately delineated potential habitat; the majority of changes to polygon shapes were due to advancing development, which is rapidly increasing in the North Port area. The main discrepancy between previous delineations and those detailed in this report can be attributed to differences in the demarcation of Type I and Type II habitat. Repeatedly, patches that were previously defined as Type I habitat only appeared as such from the roadside, but upon further inspection of the patch interiors, many revealed scrub oak densities much lower than 15%, and were thus redefined as Type II habitat in this report. Therefore, it appears that preliminary observations of potential habitat from the roadside can identify general areas of interest, but more detailed surveys of the interior of these patches should be conducted to distinguish between types of habitat.

Areas 1 and 2 have been reviewed independently on three occasions over the past 5 years. Both contain several patches of Type I and Type II habitat areas that, if protected and managed properly, could continue supporting existing Florida Scrub-Jay groups and potentially sustain as many as 25 Scrub-Jay groups (Fitzpatrick et al. 2004). Nearly all of the habitat surveyed was in overgrown, suboptimal condition for Florida Scrub-Jays, and requires restoration and management to maintain existing territories and to establish new territories. Because of its proximity to currently protected habitat and existing Scrub-Jays groups, Area 1 should be viewed as a priority for directing protection efforts in the City of North Port.

APPENDIX A

Figure 1. Overview of general study area in the City of North Port.

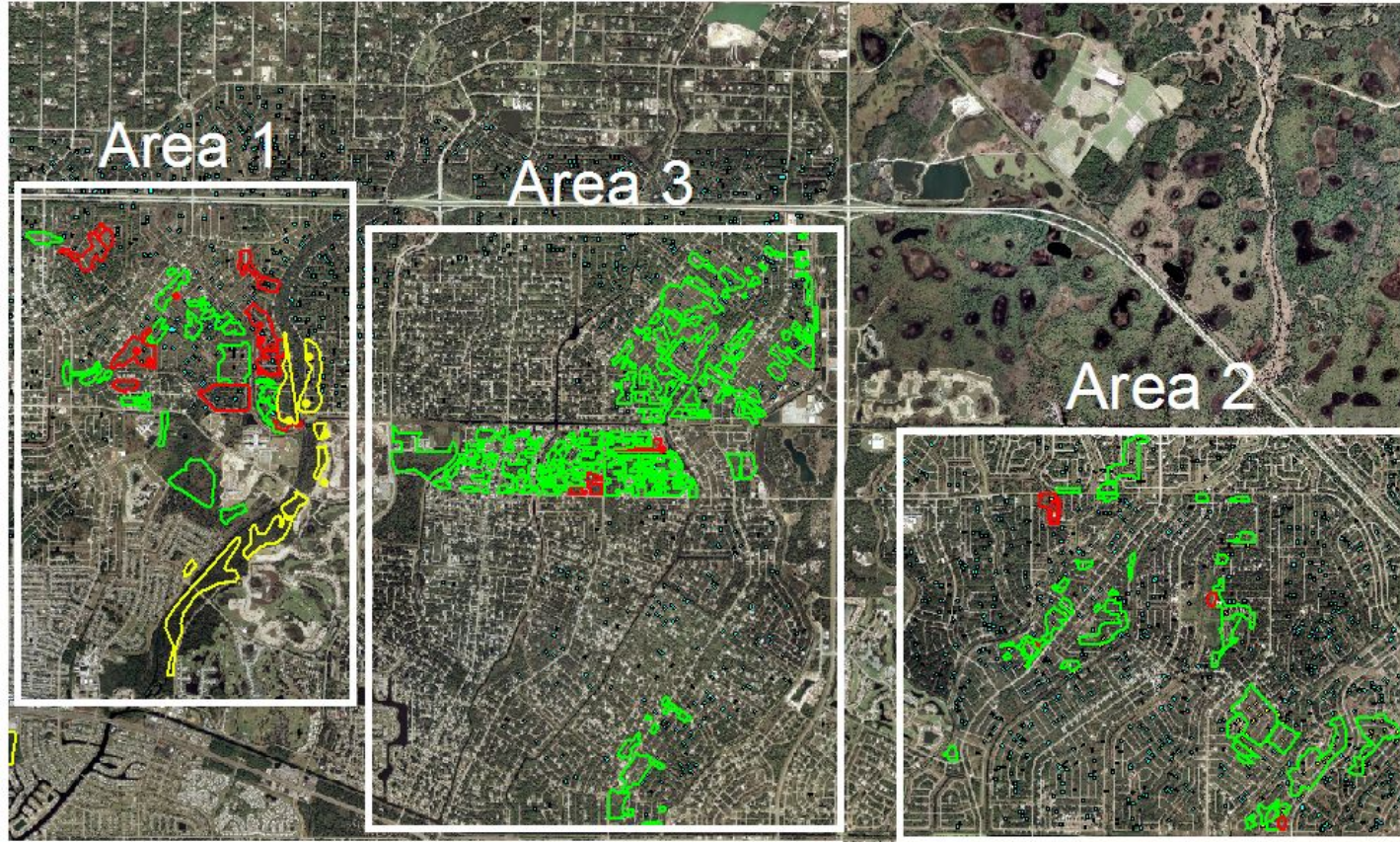


Figure 2. Area 1 (high priority).

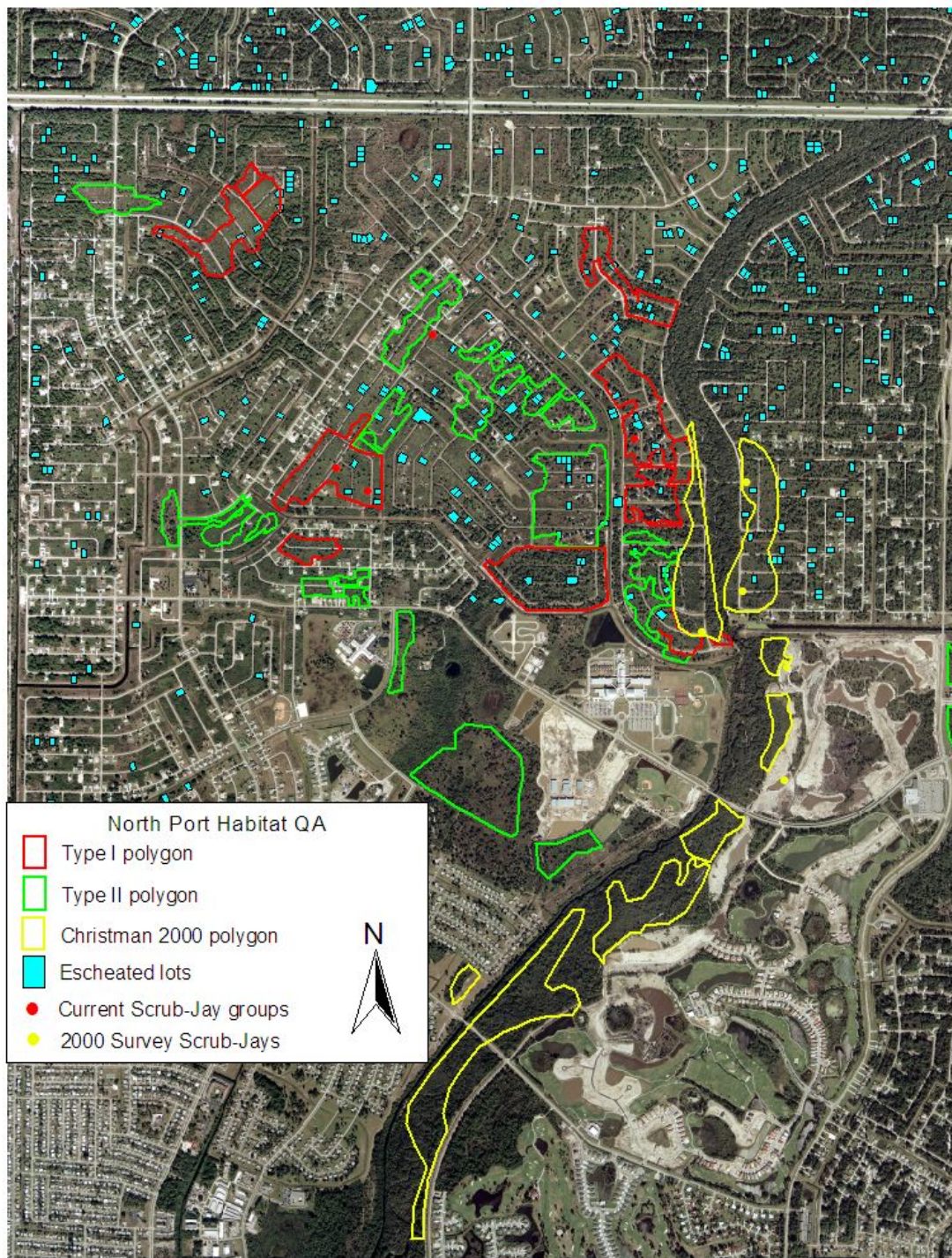
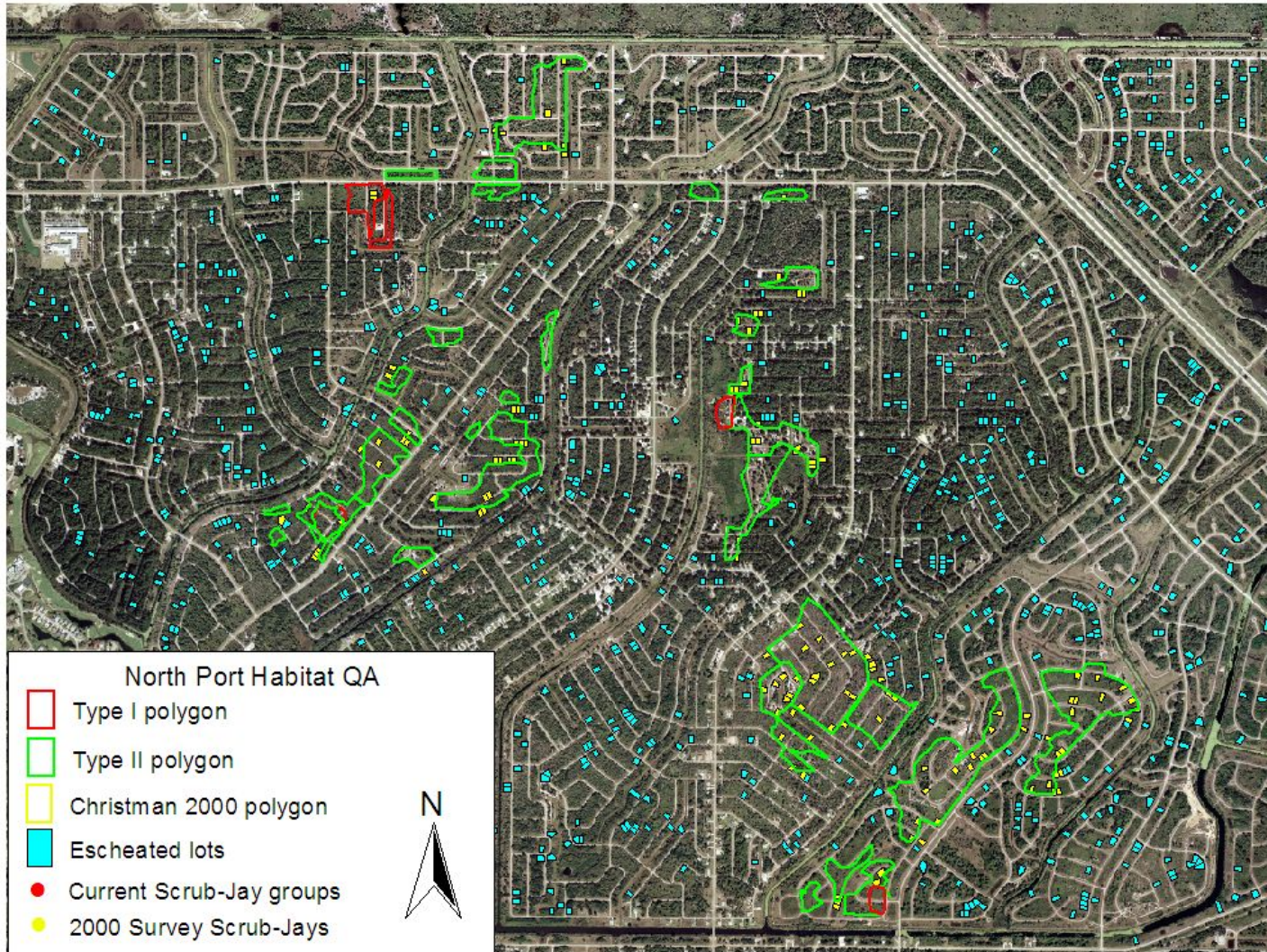


Figure 3. Area 2 (high priority).



APPENDIX B

Table 4. Summary notes of patches.

Patch #	Survey Area	Habitat Type	Acres	% Oak Cover	Notes
1	1	I	1	17-20	Dense <i>gemanatas</i> , overgrown with smilax
2	1	II	1	7-10	Tall <i>gemanatas</i> and palmettos, along high canal sands
3	1	II	1	5-10	Many palmettos with interspersed <i>gemanatas</i>
4	1	II	7	5-10	Many <i>Lyonias</i> and tall palmettos with interspersed <i>gemanatas</i>
5	1	I	8	15-20	Short palmettos, more dense <i>gemanatas</i>
6	1	II	7	10-12	
7	1	II	2	10	Many <i>minimas</i> , clumps of <i>gemanatas</i>
8	1	I	24	20	Tall <i>gemanatas</i> throughout
9	1	I	37	25-30	Tall <i>gemanatas</i> , development ongoing
10	1	II	36	7-10	Tall <i>gemanatas</i> , open sand patches
11	1	II	6	7-10	Several lots already developed, development ongoing
12	1	II	5	10	Tall <i>gemanatas</i>
13	1	I	13	25	Tall <i>gemanatas</i> throughout
14	1	I	16	10-12	Tall <i>gemanatas</i> , pines must be thinned
15	1	I	1	15	Tall <i>gemanatas</i>
16	1	I	4	15	Tall <i>gemanatas</i>
17	1	II	9	3-5	
18	1	II	7	7-10	
19	1	II	2	5	Tall <i>gemanatas</i>
20	1	II	13	3-5	
21	1	I	19	15-20	Development ongoing
22	1	I	7	15	Development ongoing
23	1	I	2	15	Development ongoing
24	1	II	1	5	
25	1	II	9	3-5	Development ongoing
26	1	I	29	15	
27	1	II	5	1-3	
28	1	II	2	7-10	

Table 4. (Continued)

Patch #	Survey Area	Habitat Type	Acres	% Oak Cover	Notes
29	1	I	6	15	
30	1	II	6	10	
31	1	II	43	10-12	
32	1	II	8	10-12	
33	1	II	7	5	
34	1	II	3	10	Tall <i>gemanatas</i>
35	1	II	1	3-5	Tall <i>gemanatas</i>
36	1	II	9	3-5	Many palmettos, few <i>gemanatas</i>
37	1	Unknown	4	n/a	Not surveyed
38	1	Unknown		n/a	Not surveyed
39	1	Unknown		n/a	Not surveyed
40	1	Unknown		n/a	Not surveyed
41	1	Unknown		n/a	Not surveyed
42	1	Unknown		n/a	Not surveyed
43	1	Unknown		n/a	Not surveyed
44	1	Unknown		n/a	Not surveyed
45	1	Unknown		n/a	Not surveyed
46	2	I	3	15	
47	2	II	2	10-12	
48	2	II	16	10-12	
49	2	II	13	7-10	Old spoil from canal?
50	2	II	4	10	Development ongoing
51	2	II	3	10-12	
52	2	II	3	10-12	
53	2	II	5	10-12	
54	2	II	27	10	
55	2	II	2	10-12	
56	2	II	2	10-12	

Table 4. (Continued)

Patch #	Survey Area	Habitat Type	Acres	% Oak Cover	Notes
57	2	II	4	10	
58	2	II	1	1-3	
59	2	II	1	5	
60	2	I	5	15	
61	2	II	4	5-8	
62	2	II	8	5-8	
63	2	II	25	7-10	Paintball area, highly disturbed, burned ~3years ago, dead pines
64	2	II	1	5	
65	2	II	3	7-10	
66	2	II	3	10	
67	2	II	3	1-3	
68	2	II	6	10-12	
69	2	II	16	10-12	Lots of bare sand
70	2	II	16	10-12	
71	2	II	11	5	
72	2	II	49	10-12	High ridge, site with potential because of its size
73	2	II	7	10	
74	2	II	3	1-3	
75	2	II	5	10-12	
76	2	II	8	10-12	
77	2	I	3	15	
78	2	II	50	5	
79	2	II	37	5	
80	2	II	3	7-10	
81	2	I	7	20	
82	2	I	3	25-30	
83	2	II	1	7-10	

References

- Brouse, P.A. 2004. Scrub-Jay Habitat Additions in Sarasota County. Sarasota County, Resource Management.
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- Fitzpatrick, J.W., G.E. Woolfenden, and M.T. Kopeny. 1991. Ecology and Development-Related Habitat Requirements of the Florida Scrub-Jay (*Aphelocoma coerulescens coerulescens*). Nongame Wildlife Program Technical Report No. 8. Florida Game and Freshwater Fish Commission.
- Fitzpatrick, J.W., B.M. Stith, and M.A. Davison. 2004. Existing and Potential Florida Scrub-Jay Reserves in Sarasota County, Florida. (Preliminary Report to Sarasota County).