

APPENDIX I

Florida Scrub-Jay Specific Species Survey

To: **Zakia Williams, USFWS**

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Date: **December 13, 2024**

RE: **SR 70 West of SR 31 to SE Highlands Co. Line Rd.**

FPID: 451942-1-22-01

USFWS Florida Scrub-Jay Technical Memorandum

Introduction

Florida Department of Transportation (FDOT), District One is conducting a Project Development and Environment (PD&E) study for proposed improvements to the State Road (SR) 70 corridor in DeSoto County. This study will evaluate the widening of SR 70 from a two-lane undivided facility to a four-lane divided facility, including operational improvements from west of SR 31 (Mile Post [MP] 14.973) to SE Highlands County Line Road (MP 31.763), extending 16.7 miles in length. This project is mainly staying within existing FDOT right-of-way with the exception of stormwater management ponds and floodplain compensation sites. See **Appendix A** Project Location and Station Map for project location.

This project is within the U.S. Fish and Wildlife Service's (USFWS) consultation area for the federally threatened Florida scrub-jay (*Aphelocoma coerulescens*). Florida scrub-jays were listed as a federally threatened species by the USFWS in 1987 and receive protection under the Endangered Species Act 16 U.S.C. §1531-1544, Florida's Endangered and Threatened Species Rule 68A-27 F.A.C., and the Migratory Bird Treaty Act 16 U.S.C. §§ 703–712.

Methodology

A desktop review was conducted to assess the suitable Florida scrub-jay habitat within the project area, which includes the project limits and a 600-foot buffer. Refer to **Table 1** and **Appendix A** for the mapped habitat types that are present within the study area that could support the species.

Table 1. Potential suitable habitat areas for the Florida scrub-jay within the project limits and 600-foot buffer.

Area No.	FDOT FLUCFCS Habitat Type (Code)	Acres*	Coordinates
1	Pine Flatwoods (411)	12.79	27.210015, -81.763013
2	Mixed Rangeland (330)	3.80	27.210236, -81.760755
3	Shrub and Brushland (320)	19.26	27.206773, -81.749217
4	Herbaceous (Dry Prairie) (310)	7.66	27.208329, -81.727457
5	Shrub and Brushland (320)	9.84	27.210922, -81.709206
6	Shrub and Brushland (320)	11.42	27.210626, -81.688379
7	Mixed Rangeland (330)	22.17	27.210611, -81.663831
8	Mixed Rangeland (330)	21.93	27.210611, -81.663831
9	Shrub and Brushland (320)	44.11	27.211101, -81.639958
10	Improved Pastures (211)	6.76	27.209222, -81.557251
Total		159.74	

* Values are rounded to the second decimal place

Based on the proposed project activities and the desktop review, it was determined that a formal Florida scrub-jay survey would be required, to be conducted sometime between March 1, 2024, and October 31, 2024, per the USFWS' Florida scrub-jay Draft Survey Protocol (Updated 8/24/2007). An initial field survey was conducted by qualified biologists on September 10th, 2024, to confirm suitable habitat and the locations of transects and playback stations. Based on the site assessment, seven playback stations were strategically placed along the project corridor where suitable habitat was present. On October 8, 2024, approval was received from John Wrublik of the USFWS, confirming that the placement of the playback station and the survey methodology adhered to the standard survey protocol. Per the guidelines, in addition to the project limits, a 600-foot buffer surrounding the assessment was considered to account for off-site territories that may overlap the project limits.

The desktop review identified ten (10) areas with potentially suitable habitat. These areas were investigated during the initial surveys where three (3) areas were identified as having suitable habitat (**Table 2**). In addition to these three (3) areas, scrub habitat was found at Area 6a (27.209505, -81.692742), in a location with a FLUCFCS code not included in the Florida scrub-jay guidelines. Although this additional location (Area 6a) was mapped as FLUCFCS code of 6430: Wet Prairie, scrub vegetation was observed during the initial surveys. See **Figure 15** in **Appendix B** for photo documentation of scrub vegetation in Area 6a.

Suitable habitat, proposed transect lines, and playback stations were field verified by qualified field biologists during initial surveys on August 23, 2024, August 28, 2024, and September 10, 2024. Suitable habitat was defined as those areas that contain scrub oaks since the presence of scrub oaks is a key indicator for suitable scrub habitat (USFWS, 2004). Scrub oaks consist of Myrtle Oak (*Quercus myrtifolia*), Sand Live Oak (*Q. geminata*), Chapman's Oak (*Q. chapmanii*), and Florida Scrub Oak (*Q. inopina*) (FNAI, 2010). All identified areas were observed to be Type II Florida scrub-jay habitat, defined as "any plant community, not meeting the definition of Type I habitat, in which one or more scrub oak species is represented" (USFWS, 2004).

Table 2. Evaluation of potential FL scrub-jay suitable habitat areas within project limits and 600-foot buffer and decision to survey.

Area No. * * Area No. highlighted in green are those that FDOT surveyed in fall 2024 (October).	FDOT FLUCFCS Habitat Type (Code) * FDOT FLUCFCS Habitat Type (Code)	Field Notes	Area Acres** * Values are rounded to the second decimal.	Field Verified Suitable Habitat Acres within Area*** ***These acreages are the field verified suitable habitat portion of each area. Only the field verified suitable habitat portion will be surveyed.	Coordinates 27.210015, -81.763013 27.210236, -81.760755 27.206773, -81.749217 27.208329, -81.727457 27.210922, -81.709206 27.210626, -81.688379 27.209506, -81.691922 27.210611, -81.663831 27.210611, -81.663831 27.211101, -81.639958 27.209222, -81.557251	Survey Recommended (Y/N)
1	Pine Flatwoods (411)	Identified as Type II habitat. Pine flatwoods dominated by saw palmetto (<i>Serenoa repens</i>) with open areas and little scrub vegetation. Limited foraging habitat available. Area to the northwest transitions to no scrub vegetation and higher density of understory herbaceous vegetation.	12.79	1.02	27.210015, -81.763013	Y
2	Mixed Rangeland (330)	Not suitable habitat , dominated by saw palmetto (<i>Serenoa repens</i>) and muscadine vine (<i>Vitis rotundifolia</i>). No foraging habitat present, dominated by large undocumented wetland east of 27.209859, -81.761752.	3.80	N/A	27.210236, -81.760755	N
3	Shrub and Brushland (320)	Identified as Type II habitat. Recently maintained with fire (burned in Spring 2024); sandy soils, saw palmetto (<i>Serenoa repens</i>), Southern live oaks (<i>Quercus virginiana</i>) with scrub vegetation. FL scrub-jay sighting (quantity of 3 birds) by John Fitzpatrick on November 16, 2023 (eBird, 2023) at 27.206861, -81.733448 approximately 0.8 miles east of area. Habitat not suitable east of 27.20696, -81.749716, as the northeast portion transitions to understory dominated by dense saw palmetto (<i>Serenoa repens</i>).	19.26	1.73	27.206773, -81.749217	Y
4	Herbaceous (Dry Prairie) (310)	Not suitable habitat. No scrub vegetation, dominated by large Southern Live Oaks (<i>Quercus virginiana</i>), groundcover made up of non-scrub grass sp.	7.66	N/A	27.208329, -81.727457	N
5	Shrub and Brushland (320)	Not suitable habitat. Lack of foraging habitat due to overgrown understory. Dominated by saw palmetto (<i>Serenoa repens</i>) and large Southern Live Oaks (<i>Quercus virginiana</i>).	9.84	N/A	27.210922, -81.709206	N
6	Shrub and Brushland (320)	Not suitable habitat. Lack of foraging habitat due to overgrown understory, dominated by Cogon grass (<i>Imperata cylindrica</i>). Canopy dominated by large Southern Live Oaks (<i>Quercus virginiana</i>).	11.42	N/A	27.210626, -81.688379	N
Additional Location, 6a	Wet Prairies (643)	Identified as Type II habitat. Sandy soils, scrub vegetation, limited foraging habitat available, identified scrub oak species on location. Surrounding area is a wetland habitat with hydric soils.	0.98	0.64	27.209506, -81.691922	Y
7	Mixed Rangeland (330)	Not suitable habitat. Vegetation cover too dense and no scrub oak.	22.17	N/A	27.210611, -81.663831	N
8	Mixed Rangeland (330)	Not suitable habitat. Lack of foraging habitat due to overgrown understory, dominated by saw palmetto (<i>Serenoa repens</i>) and muscadine vine (<i>Vitis rotundifolia</i>).	21.93	N/A	27.210611, -81.663831	N
9	Shrub and Brushland (320)	Identified as Type II habitat. Sandy soils, scrub vegetation on location, limited foraging habitat available. East of 27.210959, -81.641893 (drainage ditch) soils become hydric, no longer suitable habitat. Monitoring wells associated with land fill are present further east.	44.11	12.79	27.211101, -81.639958	Y
10	Improved Pastures (211)	Not suitable habitat. Lack of foraging habitat due to overgrown groundcover with no canopy presence, wetland adjacent to area, dominated by wax myrtle (<i>Myrica cerifera</i>) and saw palmetto (<i>Serenoa repens</i>).	6.76	N/A	27.209222, -81.557251	N
Total Acres			160.72	16.18		

* Areas highlighted in green are those that FDOT surveyed in fall 2024 (October).

** Values are rounded to the second decimal.

***These acreages are the field verified suitable habitat portion of each area. Only the field verified suitable habitat portion will be surveyed.

Based on the initial surveys, a total of four (4) areas (area 1, 3, 9, and the additional location, 6a) would require a Florida scrub-jay survey to determine the presence or absence of the Florida scrub-jay. A total of seven (7) playback stations were strategically placed along seven (7) transects across the four (4) areas where suitable habitat was found. The seven (7) playback stations and seven (7) transects were placed to ensure that all suitable habitat would be sampled and were placed no more than 200 meters apart from each other within suitable habitats. See **Appendix A** for the Project Location and Survey Maps.

Qualified field biologists experienced in avian surveys conducted the survey, beginning about one hour after sunrise and terminating before mid-day heat or wind. Based on the proposed project activities, the desktop review, and initial surveys, a formal Florida scrub-jay survey was conducted during the fall (September and October) of 2024, which is within the accepted survey period time as described in the USFWS protocol (USFWS, 2004). The surveys were conducted for five (5) survey events, with each of the seven (7) playback stations being surveyed during each of the five (5) events. Although consecutive surveys are recommended per USFWS's Florida Scrub-jay Draft Survey Protocol, surveys are not to be conducted when winds greater than eight (8) miles per hour (mph) are recorded (USFWS, 2004). Winds exceeded eight (8) mph during a six (6) day period between Survey Event 2 (October 16, 2024) and Survey Event 3 (October 23, 2024), resulting in the survey being non-consecutive.

Surveys began in the morning, about one hour after sunrise, and terminated before midday. Survey stations were not monitored numerically at the same times each day in order to get an accurate representation of the wildlife at each Playback Station. At each station, a qualified biologist broadcasted Florida scrub-jay calls obtained from the Cornell Lab of Ornithology for at least one minute in each cardinal direction on a JBL Clip 3 Bluetooth speaker (Cornell Lab of Ornithology, 2022). Biologists conducting the survey recorded the following: start and end times of each survey, weather conditions (average temperature, wind speed and direction, visibility, and precipitation), Florida scrub-jay observations (number observed, whether adult or juvenile, direction of movement, behaviors, presence of Florida scrub-jay predators (e.g., Swallow-tailed kite (*Elanoides forficatus*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), and cooper's hawk (*Accipiter cooperii*) (Korosy, 2020), and other important observations (i.e., other endangered species, avian predators, etc.). See **Appendix B** for Photo Documentation of each of the Areas and associated Playback Stations.

Results

The Florida scrub-jay survey was conducted between October 16, 2024, and October 25, 2024. The surveys were conducted in the fall (October), which is the time of year when territorial displays are most frequent among scrub-jays. No Florida scrub-jay activity was observed at any of the seven playback stations during the five survey events. See **Appendix B** for photo documentation for each station. See **Appendix C** for field sheet data.

Area 1, Playback Station 1

Playback Station 1 was placed at 27.209021, -81.762230, approximately 200 feet northwest of the SR 70 and NE Mahon Ave intersection. The surrounding habitat includes pine flatwoods (FLUCFCS 411).

There were zero (0) Florida scrub-jay observations in total at Playback Station 1 (refer to **Appendix A** for playback station maps with observations). There were no instances of foraging or nesting activity observed. Other bird species observed include Gray Vireo (*Vireo vicinior*) and an unidentified woodpecker (*Picidae spp.*).

Area 3, Playback Station 2

Playback Station 2 was placed at 27.206927, -81.751031, approximately 675 feet southeast of the SR 70 and SE County Rd 760 intersection. The surrounding habitat includes shrub and brushland (FLUCFCS 320).

There were zero (0) Florida scrub-jay observations in total at Playback Station 2 (refer to **Appendix A** for playback station maps with observations). There were no instances of foraging or nesting activity observed. Other bird species observed include the Northern Cardinal (*Cardinalis cardinalis*), Gray Catbird (*Dumetella carolinensis*), and an unidentified Wren (*Troglodytidae spp.*).

Area 6a, Playback Station 3

Playback Station 3 was placed at 27.209506, -81.691920, approximately 750 feet northeast of the SR 70 and NE 4 Mile Grade intersection. The surrounding habitat is classified as Wet Prairies (FLUCFCS 643); however, scrub vegetation was found on August 28, 2024, at this location.

There were zero (0) Florida scrub-jay observations in total at Playback Station 3 (refer to **Appendix A** for playback station maps with observations). There were no instances of foraging or nesting activity observed. Other bird species observed include the Great Egret (*Ardea alba*), Northern Cardinal (*Cardinalis cardinalis*), and Blue Jay (*Cyanocitta cristata*).

Area 9, Playback Station 4

Playback Station 4 was placed at 27.210480, -81.644794, approximately 0.72 miles northwest of the SR 70 and entrance to the DeSoto Landfill intersection. The surrounding habitat includes shrub and brushland (FLUCFCS 320).

There were zero (0) Florida scrub-jay observations in total at Playback Station 4 (refer to **Appendix A** for playback station maps with observations). Sightings of Florida scrub-jay predators, such as the Red-shouldered Hawk (*Buteo lineatus*), were observed and noted at this playback station during one of the five survey events. There were no instances of foraging or nesting activity observed.

Area 9, Playback Station 5

Playback Station 5 was placed at 27.210859, -81.644093, approximately 0.68 miles northwest of the SR 70 and entrance to the DeSoto Landfill intersection. The surrounding habitat includes shrub and brushland (FLUCFCS 320).

There were zero (0) Florida scrub-jay observations in total at Playback Station 5 (refer to **Appendix A** for playback station maps with observations). There were no instances of foraging or nesting activity observed. Other bird species observed included the Gray Vireo (*Vireo vicinior*).

Area 9, Playback Station 6

Playback Station 6 was placed at 27.211419, -81.642290, approximately 0.58 miles northwest of the SR 70 and entrance to the DeSoto Landfill intersection. The surrounding habitat includes shrub and brushland (FLUCFCS 320).

There were zero (0) Florida scrub-jay observations in total at Playback Station 6 (refer to **Appendix A** for playback station maps with observations). Sightings of Florida scrub-jay predators such as the Red-shouldered Hawk (*Buteo lineatus*) and Black Racer Snake (*Coluber constrictor priapus*) were observed and noted at this playback station during two of the five survey events. When predators were present, the survey was paused and resumed at a later time once predators were no longer observed. There were no instances of foraging or nesting activity observed. Other bird species observed include the Carolina Wren (*Thryothorus ludovicianus*).

Area 9, Playback Station 7

Playback Station 7 was placed at 27.2104383, -81.6432056, approximately 0.70 miles northwest of the SR 70 and entrance to the DeSoto Landfill intersection. The surrounding habitat includes shrub and brushland (FLUCFCS 320).

There were zero (0) Florida scrub-jay observations in total at Playback Station 7 (refer to **Appendix A** for playback station maps with observations). There were no instances of foraging or nesting activity observed. Other bird species observed include the Carolina Wren (*Thryothorus ludovicianus*).

Conclusion

Results of the Fall 2024 Florida scrub-jay survey indicate that Florida scrub-jays do not occur within the project footprint or the 600-foot buffer zone around the perimeter of the project area. Therefore, it is anticipated that the proposed project ***may affect, not likely to adversely affect*** the Florida scrub-jay. If construction does not begin within that year, coordination with USFWS and additional surveys may be required.

Ms. Zakia Williams
SR 70 West of SR 31 to SE Highlands Co. Line Rd.
FPID: 451942-1-22-01
Protected Species Survey Methodology

Additionally, Section 7-1.4: Compliance with Federal Endangered Species Act and other Wildlife Regulations of the Standard Specifications for Road and Bridge Construction should be adhered to for wildlife involvement during construction.

If you have any questions or would like to discuss this project or the information contained within this memorandum, please contact Nikki Gilmer, ETDM Coordinator & Environmental Project Manager, FDOT D1 at (863) 519-2375 Email: nikki.gilmer@dot.state.fl.us.

References

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Appendix A

Project Location and Survey Maps

N



Arcadia



600 foot Buffer
 Project Limits

Assigned FLUCFCS

- (110) RESIDENTIAL, LOW DENSITY
- (120) RESIDENTIAL, MEDIUM DENSITY
- (130) RESIDENTIAL, HIGH DENSITY
- (140) COMMERCIAL AND SERVICES
- (150) INDUSTRIAL
- (170) INSTITUTIONAL
- (190) OPEN LAND
- (210) CROPLAND AND PASTURELAND
- (211) IMPROVED PASTURES; (310) HERBACEOUS (DRY PRAIRIE); (320) SHRUB AND BRUSHLAND; (330) MIXED RANGELAND; (411) PINE FLATWOODS
- (220) TREE CROPS

- (240) NURSERIES AND VINEYARDS
- (260) OTHER OPEN LANDS (RURAL)
- (434) HARDWOOD - CONIFEROUS MIXED
- (510) STREAMS AND WATERWAYS; (5300) RESERVOIRS
- (615) STREAMS AND LAKE SWAMPS (BOTTOMLAND)
- (640) VEGETATED NON-FORESTED WETLANDS
- (641) FRESHWATER MARSHES
- (643) WET PRAIRIES
- (644) EMERGENT AQUATIC VEGETATION
- (740) DISTURBED LAND
- (810) TRANSPORTATION

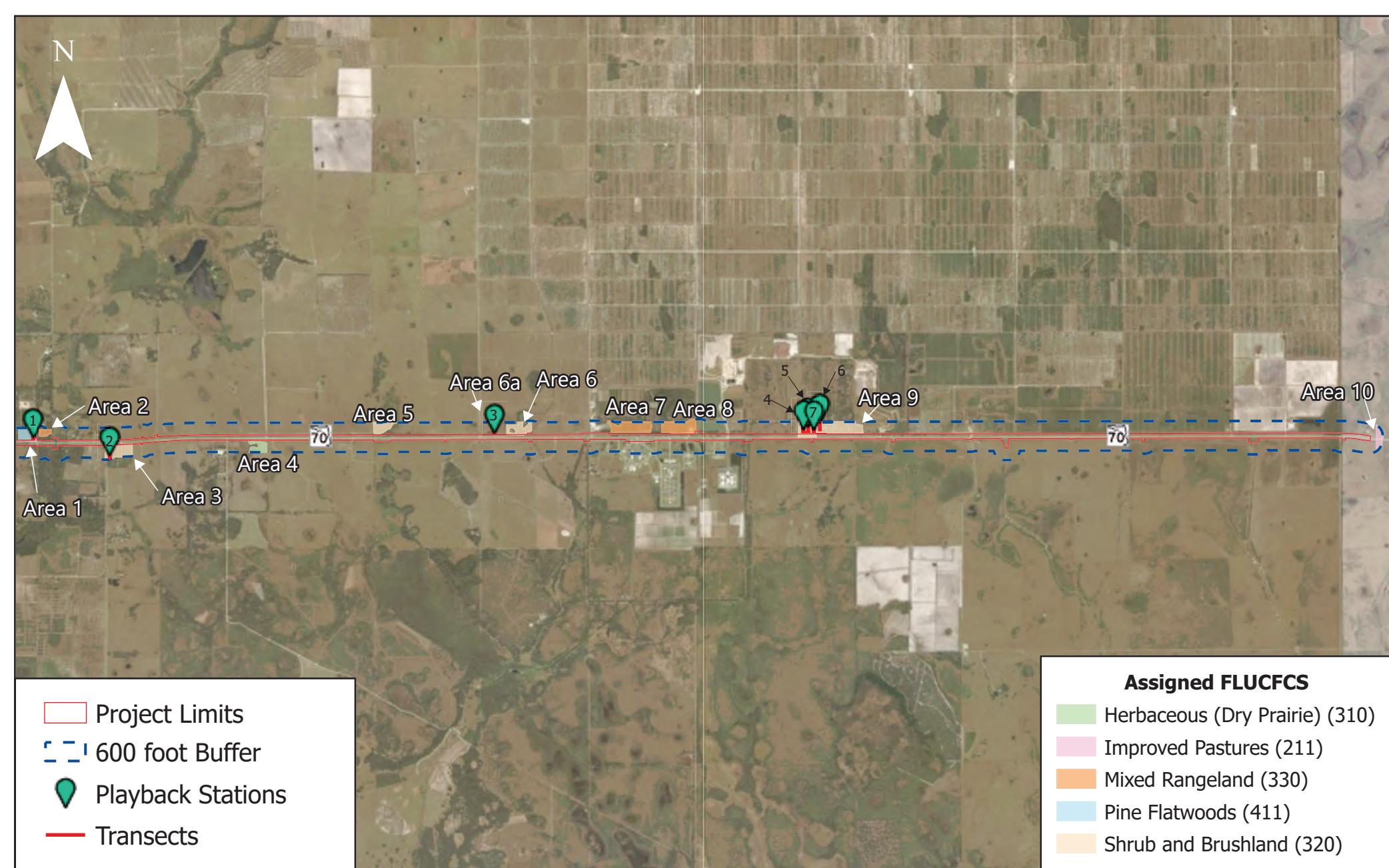


Project Location Map

SR 70 from West of SR 31 to SE Highlands County Line Rd
DeSoto County, Florida
FPID: 451942-1-22-01

0 1 2 3 4
Miles

N



Evaluated Potential Scrub-jay Habitat, Location of Playback Stations, & Transects

SR 70 from West of SR 31 to SE Highlands County Line Rd
DeSoto County, Florida
FPID: 451942-1-22-01

0 1 2 3
Miles

N



Area 1

Area 2

- 1 red-headed woodpecker
- Woodpecker spp.
- Mockingbird
- 2 Carolina wrens
- Playback Station 1

NE Mahon Ave

Observations During Survey

Survey Event

- 1
- 2
- 4
- 5

Mahon Ave

Assigned FLUCFCS

- Mixed Rangeland (330)
- Pine Flatwoods (411)

Suitable Habitat (Field Verified FLUCFCS)

- Pine Flatwoods (411)

Playback Stations

Transects

Project Limits

600-ft Buffer



Playback Station 1 Survey Results

SR 70 from West of SR 31 to SE Highlands County Line Rd
 DeSoto County, Florida
 FPID: 451942-1-22-01

0 50 100
 US Feet

N



760

760

SE County Road 760

Sandhill
crane (audio)

Playback Station 2

Cardinal

Area 3

Observations During Survey

Survey Event

- 1
- 2
- 4
- 5

Assigned FLUCFCS

Shrub and Brushland (320)

Suitable Habitat (Field Verified FLUCFCS)

Shrub and Brushland
(320)

● Playback Stations

— Transects

— Project Limits

— 600-ft Buffer

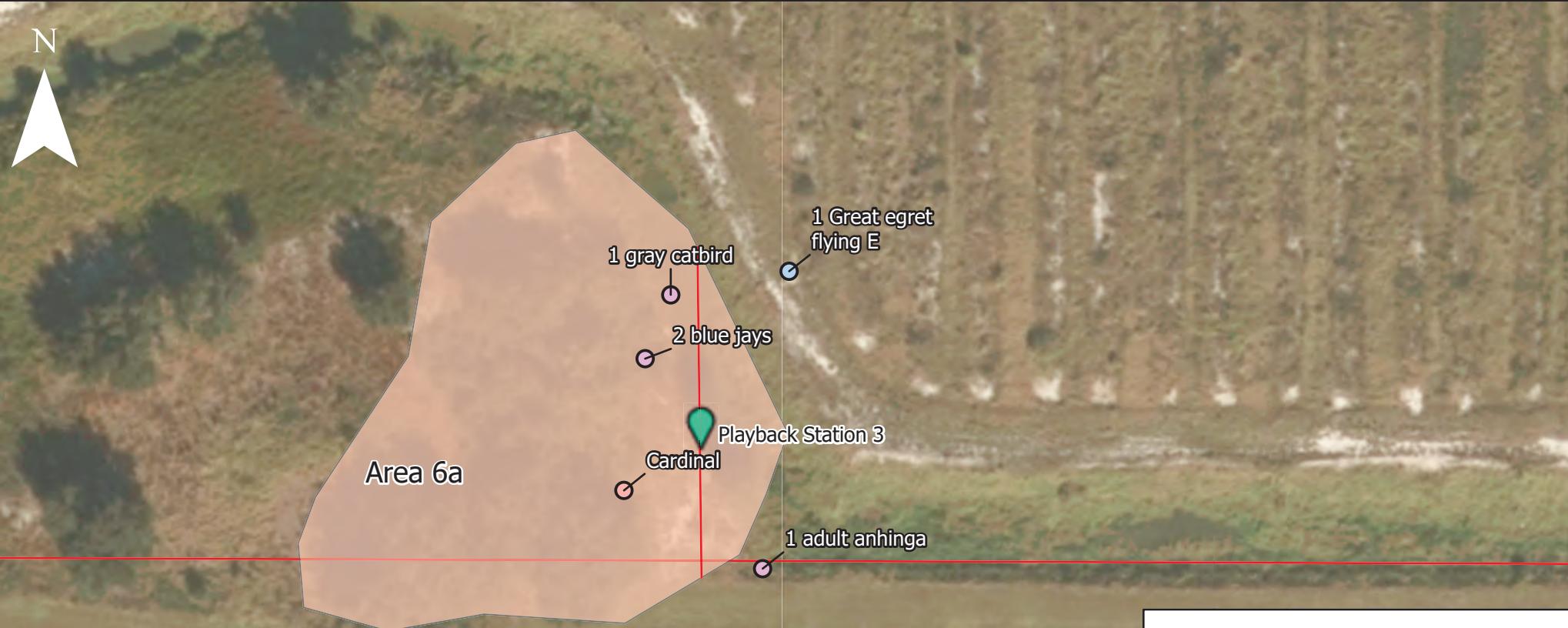


Playback Station 2 Results

SR 70 from West of SR 31 to SE Highlands County Line Rd
DeSoto County, Florida
FPID: 451942-1-22-01

0 100 200
US Feet

N



Observations During Survey

Survey Event

- 1
- 2
- 4
- 5

70 70 70

Suitable Habitat (Field Verified FLUCFCS)

- Field Verified Suitable Habitat
- Playback Stations
- Transects
- Project Limits
- 600-ft Buffer



Playback Station 3 Results

SR 70 from West of SR 31 to SE Highlands County Line Rd
DeSoto County, Florida
FPID: 451942-1-22-01

0 50 100
US Feet

N

way

1 adult Bald eagle

Vulture spp.

Deer spp.

Hawk spp.
flying N

Red-shouldered hawk; 4 blue jays

5 blue jays

1 vireo spp.

Black racer

2 adult caracara
flying NW

Playback Station 5

White tailed deer

Area 9

Playback Station 4

Potentially occupied
Gopher tortoise burrow

Playback Station 7

Observations During Survey

Survey Event

- 1
- 2
- 4
- 5

Assigned FLUCFCS

Shrub and Brushland (320)

Suitable Habitat (Field Verified FLUCFCS)

Shrub and Brushland (320)

● Playback Stations

— Transects

— Project Limits

— 600-ft Buffer

Playback Stations 4, 5, 6, & 7 Results

SR 70 from West of SR 31 to SE Highlands County Line Rd
DeSoto County, Florida
FPID: 451942-1-22-01

0 100 200 300
US Feet



Appendix B

Photo Documentation



Figure 1. Area 1, limited suitable habitat, Type II habitat



Figure 2. Station 1, north orientation



Figure 3. Station 1, south orientation



Figure 4. Station 1, east orientation



Figure 5. Station 1, west orientation



Figure 6. Area 2, no suitable habitat



Figure 7. Area 3, limited suitable habitat near FL scrub-jay eBird sighting, Type II habitat



Figure 8. Station 2, north orientation

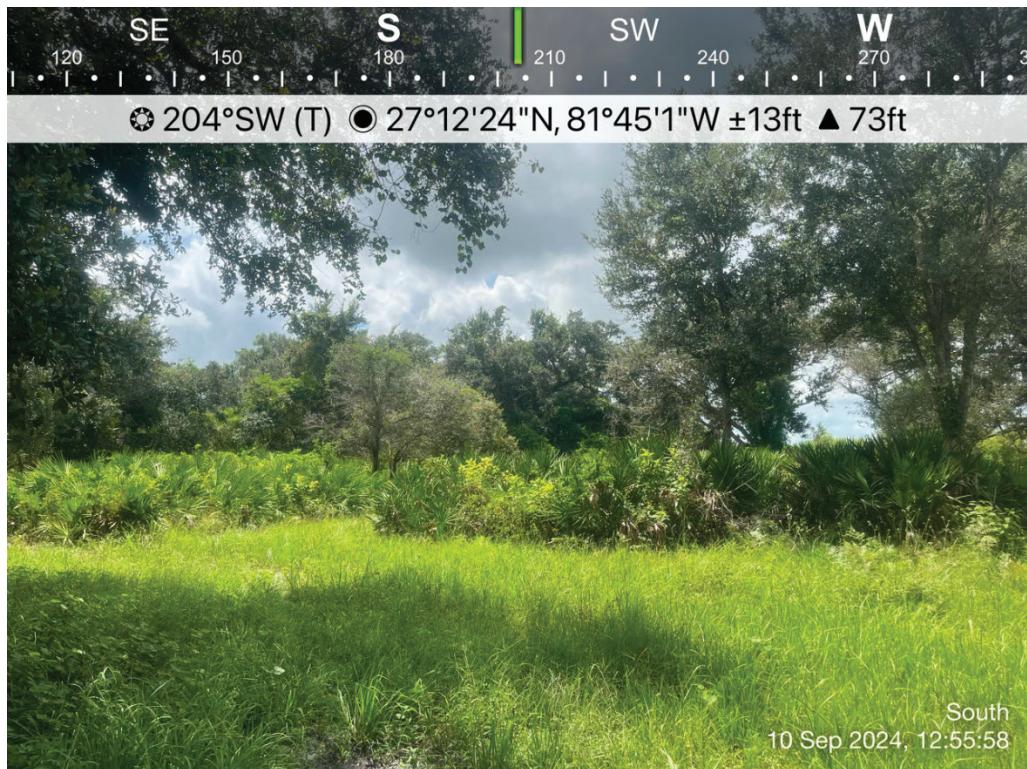


Figure 9. Station 2, south orientation



Figure 10. Station 2, east orientation



Figure 11. Station 2, west orientation



Figure 12. Area 4, no suitable habitat



Figure 13. Area 5, no suitable habitat



Figure 14. Area 6, no suitable habitat



Figure 15. Identified scrub oak in Area 6a, Type II habitat



Figure 16. Station 3, north orientation



Figure 17. Station 3, south orientation



Figure 18. Station 3, east orientation



Figure 19. Station 3, west orientation



Figure 20. Area 7, no suitable habitat



Figure 21. Area 8, no suitable habitat



Figure 22. Area 9, limited suitable habitat, Type II habitat



Figure 23. Station 4, north orientation



Figure 24. Station 4, south orientation



Figure 25. Station 4, east orientation



Figure 26. Station 4, west orientation



Figure 27. Station 5, north orientation



Figure 28. Station 5, south orientation



Figure 29. Station 5, east orientation



Figure 30. Station 5, west orientation



Figure 31. Station 6, north orientation



Figure 32. Station 6, south orientation



Figure 33. Station 6, east orientation



Figure 34. Station 6, west orientation



Figure 35. Area 10, no suitable habitat

Appendix C

Field Sheet Data

Survey Event, Date	Sunrise (am)	Start Time (am)	End Time (am)	Area No.	Playback Station No.	Average Temperature (F)	Wind Speed (mph), Wind Direction	Visibility	Precipitation	Number of Predators	Adult Scrub-Jays	Juvenile Scrub-Jays	Comments
1, 10/15/24	7:26	8:46	8:51	1	1	68	2, South	Unlimited	0	0	0	0	1 Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)
		9:01	9:07	3	2	69	2, South	Unlimited	0	0	0	0	1 Gray Catbird (<i>Dumetella carolinensis</i>) Sandhill Crane (audio), crows, cardinal (audio)
		9:20	9:28	6a	3	71	2, South	Unlimited	0	0	0	0	2 adult Blue Jays, Gray Catbird
		11:07	11:13	9	4	78	3, South	Unlimited	0	0	0	0	No observations.
		11:58	12:05	9	5	78	3, South	Unlimited	0	0	0	0	1 adult Vireo seen
		10:47	10:52	9	6	76	2, South	Unlimited	0	2	0	0	1 st attempt started at 9:45am; however, at 9:47am a Red-shouldered Hawk flew from NE to SE, interacting with 4 Blue Jays in tree above. Waited until hawk was gone for second attempt, which was stopped due to presence of black racer.
		10:56	11:03	9	7	74	2, South	Unlimited	0	0	0	0	3rd attempt: re-did again starting at 10:47am finished at 10:52, no sightings
													Gray Catbird (audio), Blue jays (audio)
2, 10/16/24	7:27	9:00	9:05	1	1	71	1, North	Unlimited	0	0	0	0	1 unidentified Woodpecker, 1 Mockingbird
		10:24	10:29	3	2	76	4, North	Unlimited	0	0	0	0	1 Wren, 1 Warbler
		9:11	9:19	6a	3	72	6, North	Unlimited	0	0	0	0	Cardinal and couple of unidentified small passerine birds
		10:05	10:11	9	4	76	4, North	Unlimited	0	1	0	0	Hawk seen flying north while in transit to next station, waited until it was gone before starting survey
		9:57	10:03	9	5	75	4, North	Unlimited	0	0	0	0	Carolina Wren
		9:34	9:39	9	6	73	1, North	Unlimited	0	0	0	0	Deer, Carolina Wren
		9:50	9:54	9	7	75	1, North	Unlimited	0	0	0	0	Carolina Wren
3, 10/23/24	7:31	10:21	10:28	1	1	77	1, Southwest	Unlimited	0	0	0	0	No observations.
		10:38	10:42	3	2	77	6, Southwest	Unlimited	0	0	0	0	No observations.
		10:51	10:56	6a	3	79	8, Southwest	Unlimited	0	0	0	0	No observations.
		11:36	11:42	9	4	80	5, Southwest	Unlimited	0	0	0	0	No observations.

		11:27	11:32	9	5	80	5, Southwest	Unlimited	0	0	0	0	2 Finches
		11:08	11:13	9	6	79	7, Southwest	Unlimited	0	0	0	0	Vultures
		11:18	11:23	9	7	80	7, Southwest	Unlimited	0	0	0	0	Vultures
4, 10/24/24	7:31	11:26	11:32	1	1	80	8, Southwest	Unlimited	0	0	0	0	1 small Finch spotted traveling north
		11:16	11:22	3	2	78	8, Southwest	Unlimited	0	0	0	0	No observations.
		11:02	11:08	6a	3	78	8, Southwest	Unlimited	0	0	0	0	3 crows flying in the distance.
		10:08	10:13	9	4	75	7, Southwest	Unlimited	0	0	0	0	No observations.
		10:45	10:51	9	5	76	7, Southwest	Unlimited	0	0	0	0	1 small Finch flying southwest.
		10:18	10:21	9	6	75	7, Southwest	Unlimited	0	2	0	0	2 Red-shouldered Hawks during first attempt. Waited until predators were gone before second attempt.
		10:24	10:29	9	6	75	7, Southwest	Unlimited	0	0	0	0	No observations
5, 10/25/24	7:32	9:20	9:29	1	1	72	4, Southwest	Unlimited	0	0	0	0	3 Finches spotted
		9:35	9:41	3	2	72	5, Southwest	Unlimited	0	0	0	0	1 Cardinal flying from east to west
		9:45	9:50	6a	3	73	6, Southwest	Unlimited	0	0	0	0	1 White Egret flying east.
		10:33	10:38	9	4	77	6, Southwest	Unlimited	0	0	0	0	No observations
		10:25	10:30	9	5	77	6, Southwest	Unlimited	0	0	0	0	1 Finch seen traveling northwest
		10:03	10:08	9	6	74	6, Southwest	Unlimited	0	0	0	0	No observations
		10:16	10:21	9	7	74	4, Southwest	Unlimited	0	0	0	0	No observations

Memorandum

Subject: **SR 70 West of SR 31 to SE Highlands County Line Road**
USFWS Florida Scrub-Jay Technical Results Memorandum
FPID: 451942-1-22-01
DeSoto County, FL

Introduction

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) study for the proposed improvements to State Road (SR) 70 in DeSoto County. The proposed improvements include the widening of SR 70 from a two-lane undivided facility to a four-lane divided facility and operational improvements from west of SR 31 (mile post [MP] 14.973) to SE Highlands County Line Road (MP 31.763). The total project exceeds 16.7 miles in length. Refer to **Appendix A** for a project location map.

The proposed project is located within the United States Fish and Wildlife Service (USFWS) consultation area for the Florida scrub-jay (*Aphelocoma coerulescens*). Florida scrub-jays were listed as a threatened species by the USFWS in 1987 and receive protection under the Endangered Species Act 16 U.S.C. § 1531-1544, Florida's Endangered and Threatened Species Rule 68A-27 F.A.C., and the Migratory Bird Treaty Act 16 U.S.C. §§ 703-712.

Methodology

An initial field survey was conducted by qualified field biologists on August 23, 2024, August 28, 2024, and September 10, 2024, to confirm suitable habitat for the Florida-scrub jay within the project limits. A subsequent desktop review was conducted to assess the suitable Florida scrub-jay habitat within the stormwater management facilities (SMF) and floodplain compensation sites (FPC) (pond sites). Refer to **Table 1** and **Appendix A** for the mapped habitat types that are present within the pond sites which could support Florida scrub-jays.

Table 1: Potential Suitable Habitat Areas for the Florida Scrub-Jay within the Pond Sites

Pond Site Name	FLUCCS* Habitat Type & Code	Acres**	Coordinates
SMF 0904C	4110: Pine Flatwoods	3.80	27.2096213, -81.7629411
SMF 0904A	4110: Pine Flatwoods	2.47	27.2095364, -81.7624082
FPC 1002B	3200: Shrub and Brushland	1.69	27.2085714, -81.7273761
FPC 1004C	1500: Industrial	0.86	27.2118387, -81.6744159
FPC 1005A	3300: Mixed Rangeland	14.32	27.2117327, -81.6720328
SMF 1005B	3300: Mixed Rangeland	2.56	27.2106512, -81.6729175
SMF 1005A	3300: Mixed Rangeland	0.55	27.2109948, -81.6681731
FPC 1005B	3300: Mixed Rangeland	16.08	27.2113333, -81.6654670
SMF 1006C-2L	3200: Shrub and Brushland	0.32	27.2097872, -81.6444361
Total:		42.65	

* FLUCCS = Florida Land Use and Cover Classification System (Southwest Florida Water Management District, 2017)

** Values are rounded to the second decimal place

The desktop review identified nine (9) pond sites with potentially suitable habitat. These pond sites were investigated during a pedestrian survey by qualified field biologists on February 18, 2025, where seven (7) pond sites were confirmed to contain suitable habitat. Refer to **Table 2** for the results of the evaluation of potential Florida scrub-jay habitat areas within the pond sites. The presence of scrub oaks is a key indicator for suitable scrub-jay habitat (USFWS, 2004); therefore, suitable habitat was defined as areas containing

scrub oaks. Scrub oak species include myrtle oak (*Quercus myrtifolia*), sand live oak (*Q. geminata*), Chapman's oak (*Q. chapmanii*), and Florida scrub oak (*Q. inopina*) (Florida Natural Areas Inventory [FNAI], 2010). All identified areas were observed to be Type II Florida scrub-jay habitat, defined as “any plant community, not meeting the definition of Type I habitat, in which one or more scrub oak species is represented” (USFWS, 2004).

Table 2: Evaluation of Potential Florida Scrub-Jay Habitat Areas within the Pond Sites

Pond Site Name	FLUCCS Habitat Type & Code	Notes	Acres	Coordinates	Survey Recommended (Y/N)
SMF 0904C	4110: Pine Flatwoods	Identified as Type II habitat: Pine flatwoods dominated by saw palmetto (<i>Serenoa repens</i>) with open areas and little scrub vegetation.	3.80	27.2096213, -81.7629411	Y, Playback Station 1
SMF 0904A	4110: Pine Flatwoods	Identified as Type II habitat: Pine flatwoods dominated by saw palmetto (<i>Serenoa repens</i>) with open areas and little scrub vegetation.	2.47	27.2095364, -81.7624082	Y, Adjacent to Playback Station 1
FPC 1002B	3200: Shrub and Brushland	Not suitable habitat: No scrub vegetation, dominated by large oaks, groundcover made up of non-scrub grass sp.	N/A	27.2085714, -81.7273761	N
FPC 1004C	1500: Industrial	Identified as Type II habitat: Sandy soils and scrub vegetation present.	0.86	27.2118387, -81.6744159	Y, Adjacent to Playback Station 2
FPC 1005A	3300: Mixed Rangeland	Identified as Type II habitat: Dominated by saw palmetto (<i>Serenoa repens</i>) with open areas and little scrub vegetation.	14.32	27.2117327, -81.6720328	Y, Playback Station 3
SMF 1005B	3300: Mixed Rangeland	Identified as Type II habitat: Dominated by saw palmetto (<i>Serenoa repens</i>) with open areas and little scrub vegetation.	2.56	27.2106512, -81.6729175	Y, Adjacent to Playback Station 2

Pond Site Name	FLUCCS Habitat Type & Code	Notes	Acres	Coordinates	Survey Recommended (Y/N)
SMF 1005A	3300: Mixed Rangeland	Identified as Type II habitat: Sandy soils and scrub vegetation present.	0.55	27.2109948, -81.6681731	Y, Playback Station 4
FPC 1005B	3300: Mixed Rangeland	Identified as Type II habitat: Dominated by saw palmetto (<i>Serenoa repens</i>) with open areas and little scrub vegetation.	16.08	27.2113333, -81.6654670	Y, Playback Stations 5 and 6
SMF 1006C-2L	3200: Shrub and Brushland	Not suitable habitat: No scrub vegetation, groundcover made up of non-scrub grass sp.	N/A	27.2097872, -81.6444361	N

Based on the preliminary desktop review and the site assessments, a Florida scrub-jay survey would be required to determine the presence or absence of the species within the pond sites. In accordance with the USFWS' Florida scrub-jay Draft Survey Protocol (updated August 24, 2007), this survey would need to be conducted sometime between March 1, 2025, and October 31, 2025. A spring (March and April) survey with eleven (11) Playback Stations strategically placed throughout the suitable habitat within the pond sites was proposed. On March 20, 2025, John Wrublik of the USFWS approved the proposed survey methodology and the locations of the eleven (11) Playback Stations along the transects. No additional Florida scrub-jay surveys would be required based off the altered pond site locations. The rest of this report details the results of the Florida scrub-jay survey in accordance with the approved survey methodology by John Wrublik of the USFWS.

Initial surveys resulted in four (4) pond sites (SMF 0904C, FPC 1005A, SMF 1005A, FPC 1005B) that would require a Florida scrub-jay presence or absence survey. A total of eleven (11) Playback Stations were strategically placed along nine (9) transects across the pond sites where suitable habitat was found. The eleven (11) Playback Stations and nine (9) transects were placed no more than 200 meters apart within suitable habitat to ensure that all suitable habitat would be surveyed. Refer to **Attachment A** for a map depicting the Playback Stations and transect locations.

Qualified field biologists experienced in avian surveys conducted the survey during the spring (March and April) of 2025; within the accepted survey period as described in the USFWS protocol (USFWS, 2004). The surveys were conducted over five (5) consecutive days, with each of the eleven (11) Playback Stations being surveyed at every event. The surveys began about one hour after sunrise and terminated before midday heat or wind. The order in which the Playback Stations were visited switched each day to get a more accurate representation of wildlife presence.

At each station, a qualified field biologist broadcasted the Florida scrub-jay call, obtained from the Cornell Lab of Ornithology, for at least one minute in each cardinal direction on a JBL Clip 3 Bluetooth Speaker (Cornell Lab of Ornithology, 2022). The following information was recorded for each station: the start and end times of each survey; weather conditions, including average temperature, wind speed and direction, visibility, and precipitation; Florida scrub-jay observations, including number observed, age (adult or juvenile), direction of movement, behaviors, presence of Florida scrub-jay predators (e.g., swallow-tailed

kite (*Elanoides forficatus*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), and cooper's hawk (*Accipiter cooperii*) (Korosy, 2020, etc.); and other important observations (i.e., other endangered species, avian predators, etc.).

Results

The Florida scrub-jay survey was conducted by experienced field biologists from April 14, 2025, to April 18, 2025. Photos of the surrounding habitat were taken in each cardinal direction at the eleven (11) Playback Stations. Refer to **Appendix B** for this photo documentation. No Florida scrub-jay activity was observed at any of the eleven (11) Playback Stations during the five (5) survey events. Additional required information such as weather conditions and timing of each survey event is provided in **Appendix C**.

Playback Station 1

Playback Station 1 was placed at 27.2100262, -81.7630763, approximately 395 feet northwest of NE Mahon Avenue near the intersection of NE Mahon Avenue and Mahon Avenue within SMF 0904C. Survey data for SMF 0904A is included within this Playback Station as the suitable habitat within the site is within 200 meters of this Playback Station. The surrounding habitat includes upland coniferous forests (FLUCCS 4110).

Florida scrub-jays were not observed at Playback Station 1 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. Other birds observed during one or more survey events include the bluejay (*Cyanocitta cristata*), northern cardinal (*Cardinalis cardinalis*), and downy woodpecker (*Dryobates pubescens*).

Playback Station 2

Playback Station 2 was placed at 27.2109726, -81.6731798, approximately 523 feet north of SR 70 near the intersection of NE 4 Mile Grade between FPC 1005A and SMF 1005B. Survey data for FPC 1004C is included within this Playback Station as the suitable habitat within the site is within 200 meters of this Playback Station. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 2 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. Sightings of Florida-scrub jay predators, such as the red-shouldered hawk (*Buteo lineatus*), were observed at this playback station during one (1) survey event.

Playback Station 3

Playback Station 3 was placed at 27.2109902, -81.6716265, approximately 664 feet northwest of the intersection of SR 70 and the Florida Corrections Academy within FPC 1005A. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 3 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. Another bird observed during a survey event includes an American crow (*Corvus brachyrhynchos*).

Playback Station 4

Playback Station 4 was placed at 27.2111413, -81.6696457, approximately 615 feet northeast of the intersection of SR 70 and the Florida Corrections Academy between FPC 1005A and SMF 1005A. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 4 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. Other birds observed during one or more survey events include the boat-tailed grackle (*Quiscalus major*), the bluejay, and an American crow.

Playback Station 5

Playback Station 5 was placed at 27.2103660, -81.6647248, approximately 308 feet northeast of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution within FPC 1005B. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 5 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. No other birds were observed within any survey event.

Playback Station 6

Playback Station 6 was placed at 27.2119514, -81.6651212, approximately 842 feet north of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution within FPC 1005B. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 6 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. No other birds were observed within any survey event.

Playback Station 7

Playback Station 7 was placed at 27.2128099, -81.662100, approximately 1,187 feet northeast of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 7 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. No other birds were observed within any survey event.

Playback Station 8

Playback Station 8 was placed at 27.2145470, -81.66213370, approximately 1,779 feet northeast of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 8 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. Sightings of Florida scrub-jay predators, such as the swallow-tailed kite (*Elanoides forficatus*) and red-shouldered hawk, were observed at this playback station during one (1) survey event.

Playback Station 9

Playback Station 9 was placed at 27.2139183, -81.6636788, approximately 1,519 feet northwest of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 9 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. No other birds were observed within any survey event.

Playback Station 10

Playback Station 10 was placed at 27.2154755, -81.6636406, approximately 2,171 feet northwest of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 10 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. No other birds were observed within any survey event.

FPC 1005C, Playback Station 11

Playback Station 11 was placed at 27.2156944, -81.6654062, approximately 2,194 feet north of the intersection of SR 70 and a road leading to the DeSoto Annex Correctional Institution. The surrounding habitat includes mixed rangeland (FLUCCS 3300).

Florida scrub-jays were not observed at Playback Station 11 during any of the five (5) survey events. No evidence of nesting or foraging was observed within the Station area. No other birds were observed within any survey event.

Conclusion

Qualified biologists surveyed the potential pond sites for Florida scrub-jays in Spring 2025 using methodologies approved by the USFWS on March 20, 2025. Based on these surveys, no Florida scrub-jays are present within the pond sites. Therefore, the proposed project is anticipated to have a *may affect, not likely to adversely affect* determination for the Florida scrub-jay.

It is understood that if construction does not begin within the year, additional coordination with the USFWS and/or surveys may be required. Additionally, Section 7-1.4: Compliance with Federal Endangered Species Act and Other Wildlife Regulations of the Standard Specifications for Road and Bridge Construction will be adhered to for wildlife involvement during construction.

Attachment A:

Figures



Brownville

Cubitis

DeSoto

31

Legend

Project Area

SMF and FPC Sites



SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
Project Location Map

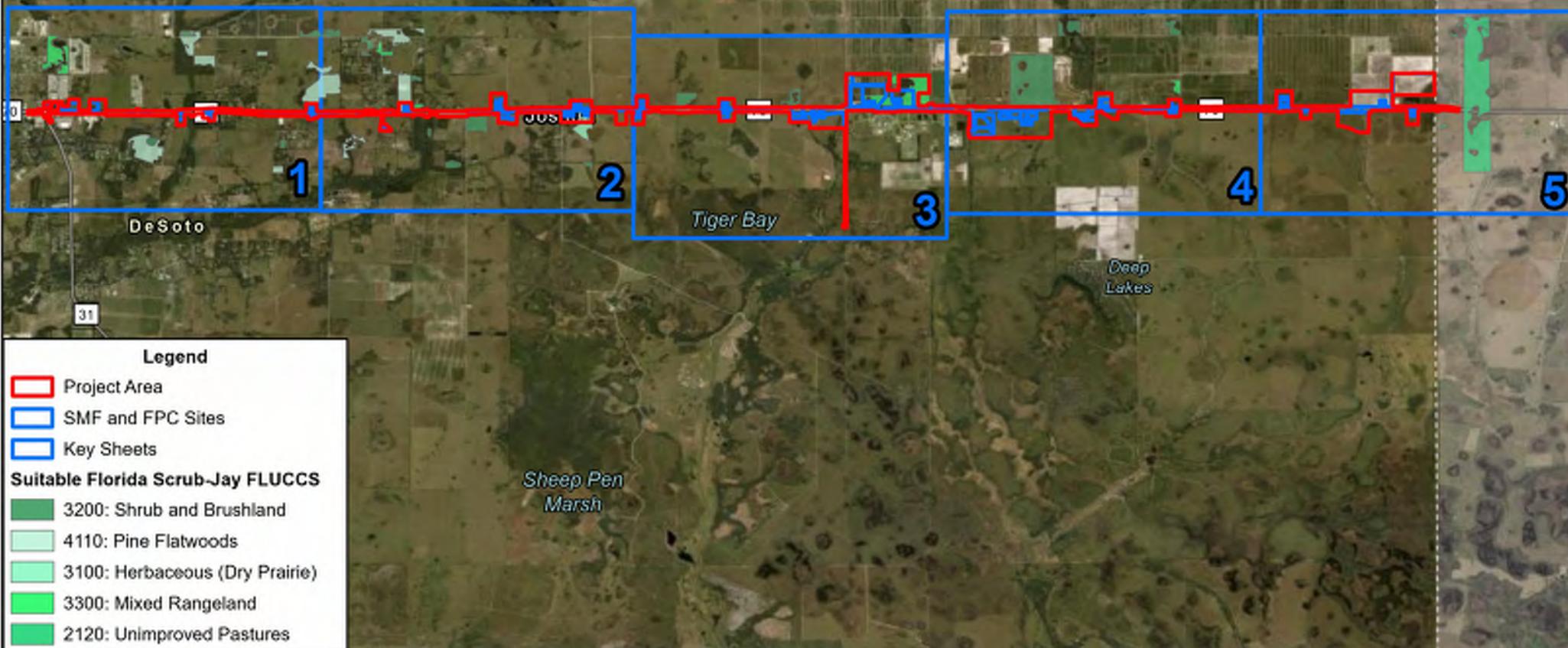


0 0.5 1 2 Miles



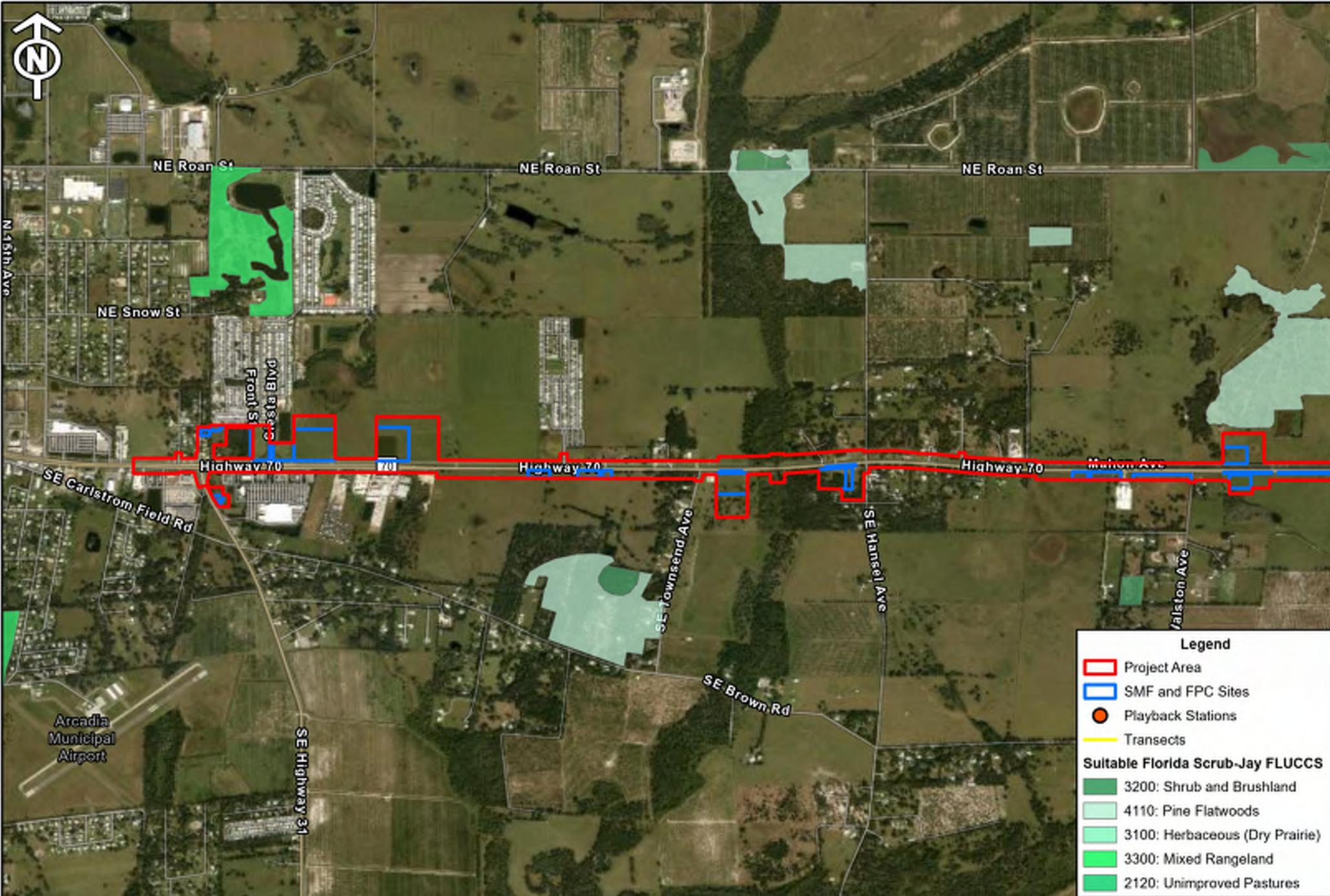
vnville

ritis



SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
FPC and SMF Sites Location Map

0 0.75 1.5 3 Miles



Legend

- Project Area
- SMF and FPC Sites
- Playback Stations
- Transsects

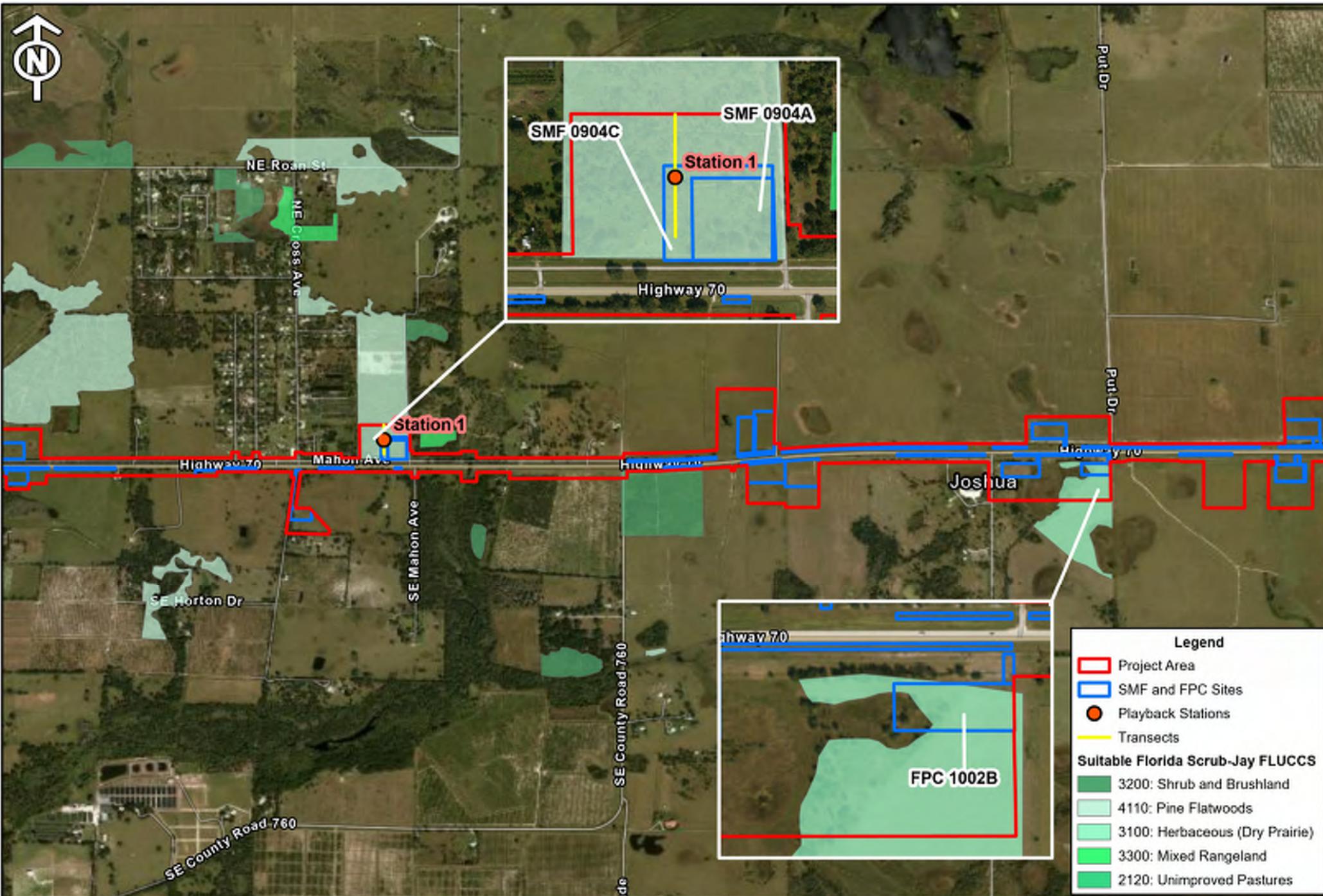
Suitable Florida Scrub-Jay FLUCCS

- 3200: Shrub and Brushland
- 4110: Pine Flatwoods
- 3100: Herbaceous (Dry Prairie)
- 3300: Mixed Rangeland
- 2120: Unimproved Pastures



SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
FPC and SMF Sites Location Map

0 0.13 0.25 0.5 Miles

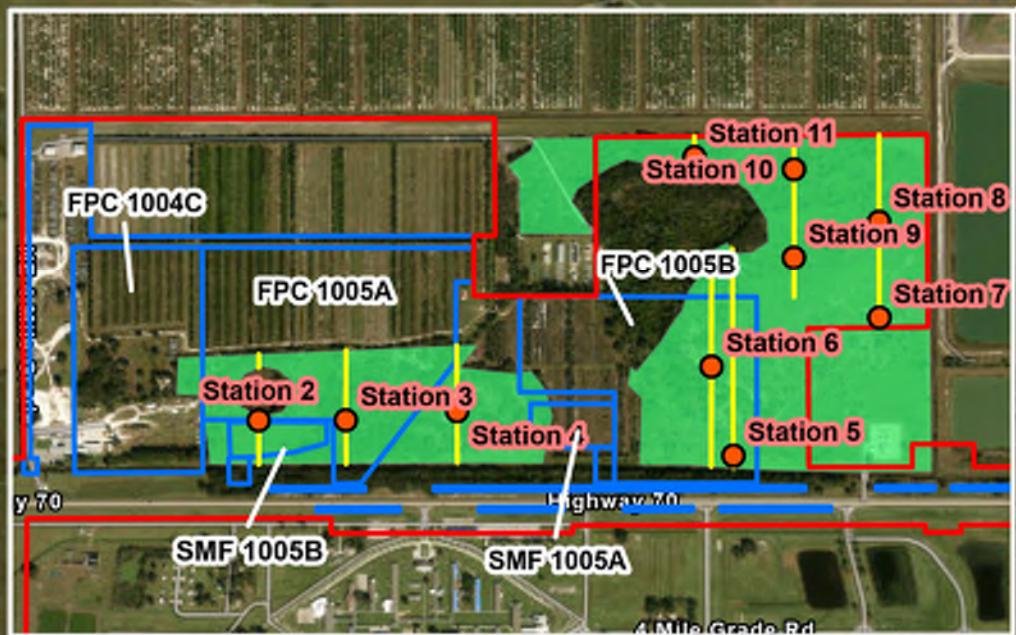


SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
FPC and SMF Sites Location Map

0 0.13 0.25 0.5 Miles

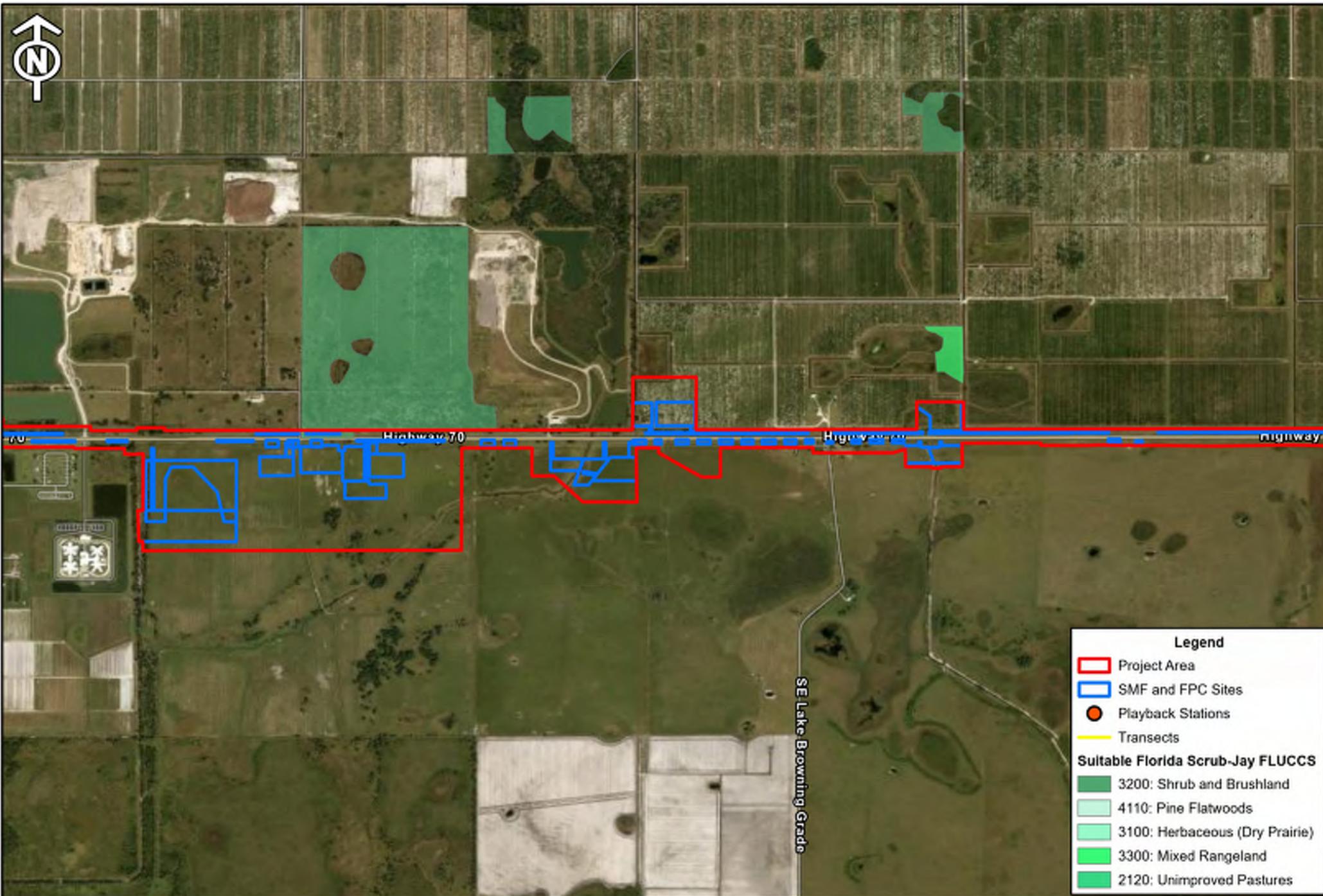


NE 4 Mile Grade



SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
FPC and SMF Sites Location Map

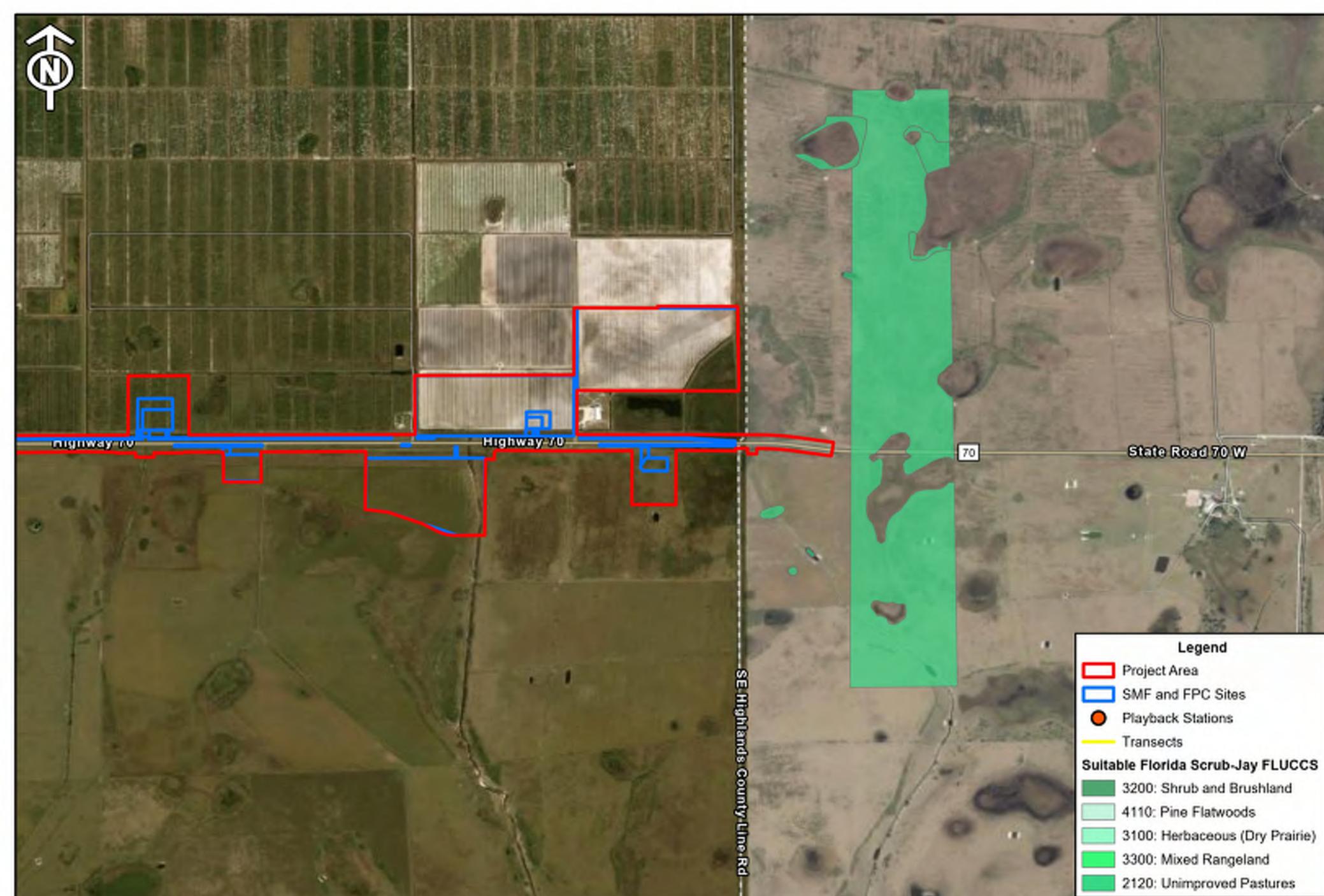
0 0.13 0.25 0.5 Miles



SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
FPC and SMF Sites Location Map

0 0.13 0.25 0.5 Miles

Legend
Project Area
SMF and FPC Sites
Playback Stations
Transects
Suitable Florida Scrub-Jay FLUCCS
3200: Shrub and Brushland
4110: Pine Flatwoods
3100: Herbaceous (Dry Prairie)
3300: Mixed Rangeland
2120: Unimproved Pastures



SR 70 from West of SR 31 to SE Highlands County Line Rd
FPID: 451942-1-22-01
FPC and SMF Sites Location Map

0 0.13 0.25 0.5 Miles

Attachment B:

Photo Documentation



Photo 1 – Station 1, north orientation



Photo 2 – Station 1, east orientation



Photo 3 – Station 1, south orientation



Photo 4 – Station 1, west orientation



Photo 5- Station 2, north orientation



Photo 6 – Station 2, east orientation



Photo 7 – Station 2, south orientation



Photo 8 – Station 2, west orientation



Photo 9 – Station 3, north orientation



Photo 10 – Station 3, east orientation



Photo 11 – Station 3, south orientation



Photo 12 – Station 3, west orientation



Photo 13 – Station 4, north orientation



Photo 14 – Station 4, east orientation



Photo 15 – Station 4, south orientation



Photo 16 – Station 4, west orientation



Photo 17 – Station 5, north orientation



Photo 18 – Station 5, east orientation



Photo 19 – Station 5, south orientation



Photo 20 – Station 5, west orientation



Photo 21 – Station 6, north orientation



Photo 22 – Station 6, east orientation



Photo 23 – Station 6, south orientation



Photo 24 – Station 6, west orientation



Photo 25 – Station 7, north orientation



Photo 26 – Station 7, east orientation



Photo 27 – Station 7, south orientation



Photo 28 – Station 7, west orientation



Photo 29 – Station 8, north orientation



Photo 30 – Station 8, east orientation



Photo 31 – Station 8, south orientation



Photo 32 – Station 8, west orientation



Photo 33 – Station 9, north orientation



Photo 34 – Station 9, east orientation



Photo 35 – Station 9, south orientation



Photo 36 – Station 9, west orientation



Photo 37 – Station 10, north orientation

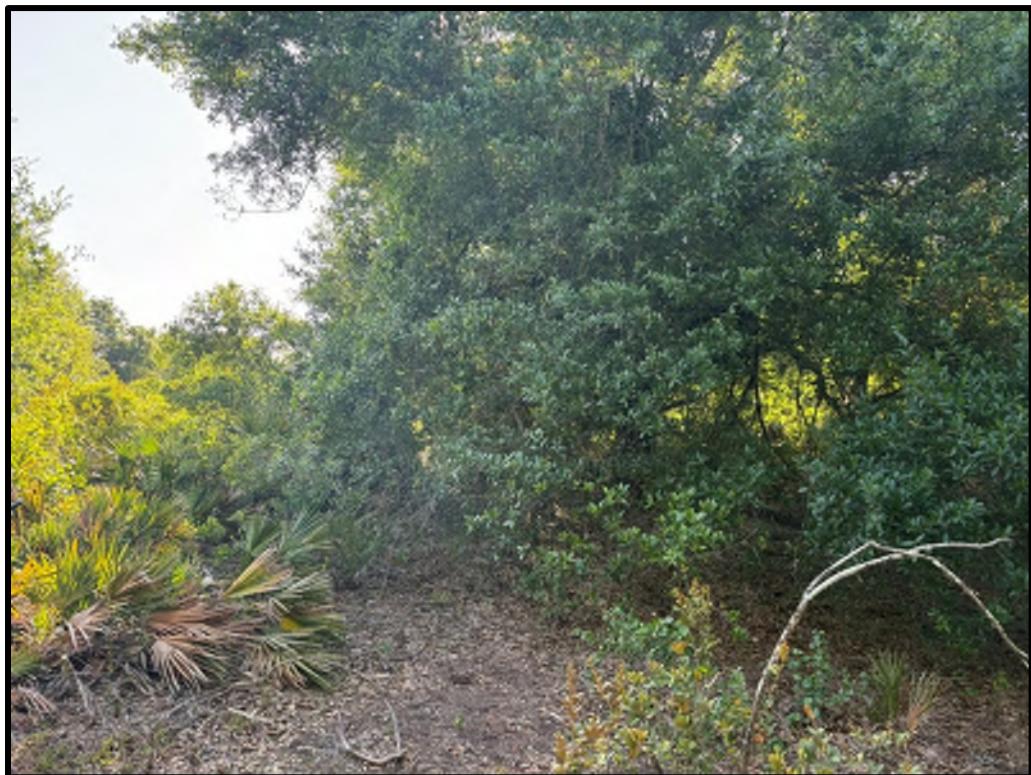


Photo 38 – Station 10, east orientation



Photo 39 – Station 10, south orientation



Photo 40 – Station 10, west orientation



Photo 41 – Station 11, north orientation



Photo 42 – Station 11, east orientation



Photo 43 – Station 11, south orientation



Photo 44 – Station 11, west orientation

Attachment C:

Field Sheet Data

Survey Event, Date	Sunrise (am)	Start Time (am)	End Time (am)	Pond Site Name	Playback Station No.	Average Temperature (F)	Wind Speed (mph), Wind Direction	Visibility	Precipitation	No. of Predators	Adult Scrub-Jays Observed	Juvenile Scrub-Jays Observed	Comments
1, 4/14/25	6:44	8:27	8:31	SMF 0904A	1	61	0	Unlimited	0	0	0	0	1 Bluejay (<i>Cyanocitta cristata</i>) and 1 northern cardinal (<i>Cardinalis cardinalis</i>) observed.
		9:42	9:46	FPC 1005A	2	72	1.4, South	Unlimited	0	1	0	0	1 Red-shouldered hawk (<i>Buteo lineatus</i>) observed.
		9:28	9:32	FPC 1005A	3	72	0	Unlimited	0	0	0	0	No observations.
		9:17	9:21	FPC 1005A	4	70	0	Unlimited	0	0	0	0	1 Boat-tailed grackle (<i>Quiscalus major</i>) observed.
		8:59	9:03	FPC 1005B	5	66	0	Unlimited	0	0	0	0	No observations.
		11:26	11:30	FPC 1005B	6	79	0	Unlimited	0	0	0	0	No observations.
		11:14	11:19	FPC 1005C	7	80	5.9, Northwest	Unlimited	0	0	0	0	No observations.
		11:01	11:05	FPC 1005C	8	79	0	Unlimited	0	3	0	0	2 Swallow tailed kites (<i>Elanoides forficatus</i>) and 1 red-shouldered hawk observed.
		11:16	11:20	FPC 1005C	9	79	1, South	Unlimited	0	0	0	0	No observations.
		10:32	10:36	FPC 1005C	10	78	0	Unlimited	0	0	0	0	No observations.
		10:21	10:25	FPC 1005C	11	77	1, South	Unlimited	0	0	0	0	No observations.
2, 4/15/25	6:43	8:00	8:04	SMF 0904A	1	62	1, East	Unlimited	0	0	0	0	1 Downy woodpecker (<i>Dryobates pubescens</i>) observed.
		9:44	9:48	FPC 1005A	2	74	2, West	Unlimited	0	0	0	0	No observations.
		9:57	10:01	FPC 1005A	3	73	0	Unlimited	0	0	0	0	No observations.
		10:07	10:11	FPC 1005A	4	75	0	Unlimited	0	0	0	0	1 Bluejay and 1 American crow (<i>Corvus brachyrhynchos</i>) observed.
		10:25	10:29	FPC 1005B	5	77	1.5, West	Unlimited	0	0	0	0	No observations.
		8:26	8:30	FPC 1005B	6	67	0	Unlimited	0	0	0	0	No observations.
		8:42	8:46	FPC 1005C	7	66	2.1, West	Unlimited	0	0	0	0	No observations.
		8:52	8:56	FPC 1005C	8	66	1.8, West	Unlimited	0	0	0	0	No observations.
		8:36	8:40	FPC 1005C	9	65	0	Unlimited	0	0	0	0	No observations.
		9:06	9:10	FPC 1005C	10	69	1, West	Unlimited	0	0	0	0	No observations.
		9:19	9:23	FPC 1005C	11	68	0	Unlimited	0	0	0	0	No observations.
3, 4/16/25	6:41	7:27	7:31	SMF 0904A	1	63	0	Unlimited	0	0	0	0	No observations.
		8:34	8:38	FPC 1005A	2	69	2.7, East	Unlimited	0	0	0	0	No observations.
		8:22	8:26	FPC 1005A	3	68	0	Unlimited	0	0	0	0	No observations.
		8:10	8:14	FPC 1005A	4	68	0	Unlimited	0	0	0	0	No observations.
		7:53	7:57	FPC 1005B	5	65	0	Unlimited	0	0	0	0	No observations.
		10:20	10:24	FPC 1005B	6	77	3.6, West	Unlimited	0	0	0	0	No observations.
		9:59	10:03	FPC 1005C	7	75	2.1, West	Unlimited	0	0	0	0	No observations.
		9:48	9:52	FPC 1005C	8	74	1.6, West	Unlimited	0	0	0	0	No observations.
		10:10	10:14	FPC 1005C	9	76	2.1, South	Unlimited	0	0	0	0	No observations.
		9:20	9:24	FPC 1005C	10	72	1.7, South	Unlimited	0	0	0	0	No observations.
		9:06	9:10	FPC 1005C	11	71	1.6, West	Unlimited	0	0	0	0	No observations.
4, 4/17/25	6:40	7:47	7:51	SMF 0904A	1	61	0	Unlimited	0	0	0	0	No observations.
		9:47	9:51	FPC 1005A	2	74	0	Unlimited	0	0	0	0	No observations.
		10:03	10:07	FPC 1005A	3	76	0	Unlimited	0	0	0	0	No observations.
		10:14	10:18	FPC 1005A	4	77	3.5, West	Unlimited	0	0	0	0	No observations.
		10:37	10:41	FPC 1005B	5	79	0.9, West	Unlimited	0	0	0	0	No observations.
		8:11	8:15	FPC 1005B	6	61	1.5, West	Unlimited	0	0	0	0	No observations.
		8:32	8:36	FPC 1005C	7	64	4.1, West	Unlimited	0	0	0	0	No observations.

Survey Event, Date	Sunrise (am)	Start Time (am)	End Time (am)	Pond Site Name	Playback Station No.	Average Temperature (F)	Wind Speed (mph), Wind Direction	Visibility	Precipitation	No. of Predators	Adult Scrub-Jays Observed	Juvenile Scrub-Jays Observed	Comments
		8:42	8:46	FPC 1005C	8	65	4.1, South	Unlimited	0	0	0	0	No observations.
		8:23	8:27	FPC 1005C	9	63	2.4, West	Unlimited	0	0	0	0	No observations.
		9:02	9:06	FPC 1005C	10	68	0	Unlimited	0	0	0	0	No observations.
		9:15	9:19	FPC 1005C	11	70	6.5, West	Unlimited	0	0	0	0	No observations.
5, 4/18/25	6:39	7:43	7:47	SMF 0904A	1	63	0	Unlimited	0	0	0	0	No observations.
		8:52	8:56	FPC 1005A	2	69	0	Unlimited	0	0	0	0	No observations.
		8:36	8:40	FPC 1005A	3	67	0.9, West	Unlimited	0	0	0	0	1 American crow observed.
		8:26	8:30	FPC 1005A	4	66	1.1, West	Unlimited	0	0	0	0	No observations.
		8:10	8:14	FPC 1005B	5	65	1.5, West	Unlimited	0	0	0	0	No observations.
		10:17	10:21	FPC 1005B	6	79	1.1, West	Unlimited	0	0	0	0	No observations.
		9:57	10:01	FPC 1005C	7	77	0.9, West	Unlimited	0	0	0	0	No observations.
		9:47	9:51	FPC 1005C	8	76	0	Unlimited	0	0	0	0	No observations.
		10:06	10:10	FPC 1005C	9	78	2.6, West	Unlimited	0	0	0	0	No observations.
		9:30	9:34	FPC 1005C	10	74	0	Unlimited	0	0	0	0	No observations.
		9:21	9:25	FPC 1005C	11	73	0	Unlimited	0	0	0	0	No observations.