



EcoVest
Conservation
Property
North Myrtle
Beach,
Horry County, SC
October 2020



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## Interim Wildlife Inventory Report AZALEA BAY

EcoVest Conservation Property North Myrtle Beach, Horry County, SC

Wednesday, October 7, 2020

This report provides an interim update of findings for an ongoing wildlife inventory of the 269 acre Azalea Bay conservation property located near the town of North Myrtle Beach in Horry County, SC. The property is one of 4 mostly contiguous conservation properties (Azalea Bay, Magnolia Bay, Ocean Grove Resort, & White Sands Village) totaling 827 acres, which are held under easement by North American Land Trust and managed by EcoVest Capital Inc. Because the wildlife found on any one property are likely to occur on the neighboring properties, and for practical reasons, the wildlife survey results for all 4 properties are presented together here.

The properties lie in the Southeastern Coastal Plain and are characterized by very low elevations and flat topography. Vegetation types are described in the Baseline Documentation Reports produced by NALT. General habitats include xeric sandhill scrub, planted loblolly stands with closed canopies and thick shrub layers, recently thinned loblolly stands that have a more open woodland structure, mature hardwood swamps, Carolina Bays, and depression pools and ponds.

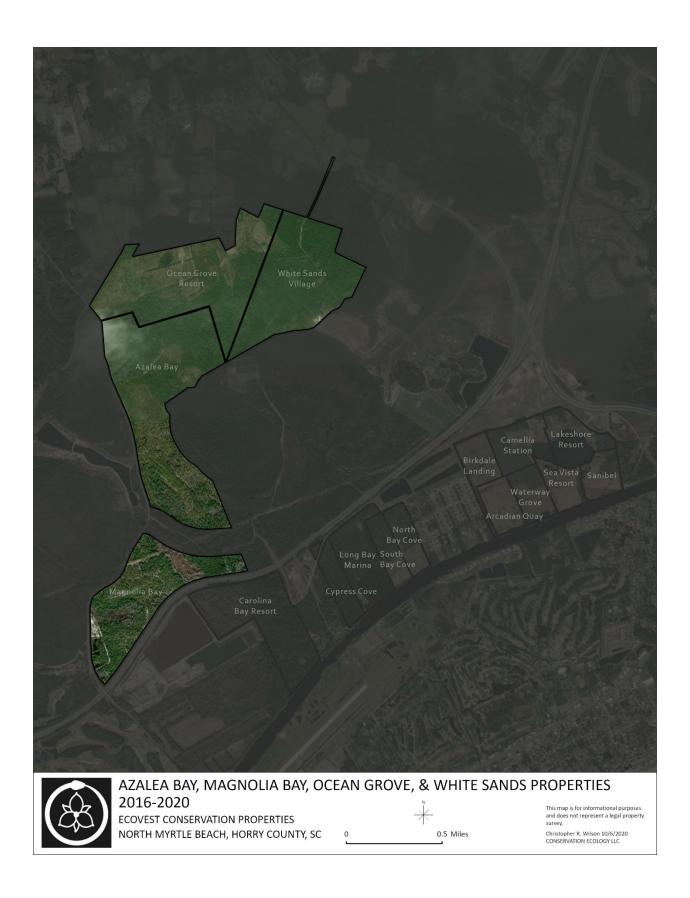
Wildlife surveys were conducted on multiple occasions between spring of 2016 and September of 2020. The Priority Species (or Species of Greatest Conservation Need) listed in South Carolina's 2015 Comprehensive Wildlife Conservation Strategy (also referred to as State Wildlife Action Plan, SWAP) was used to determine conservation significance of wildlife species found on the properties. A total of 133 species were observed, including 49 listed as priority species under the SC SWAP.

#### Birds -

Bird surveys were conducted across the properties between spring of 2016 and 2020. Casual observations of birds were recorded year-round during fieldwork activities and were photographed when possible. In order to gauge the relative abundance and distribution of breeding birds, spring-time bird surveys were conducted at 56 point locations throughout the properties, where all birds seen or heard were identified and counted, during early morning hours, over a roughly 5-minute period. Survey point locations were sampled once and were generally spaced >250 meters apart each season to avoid counting the same birds.

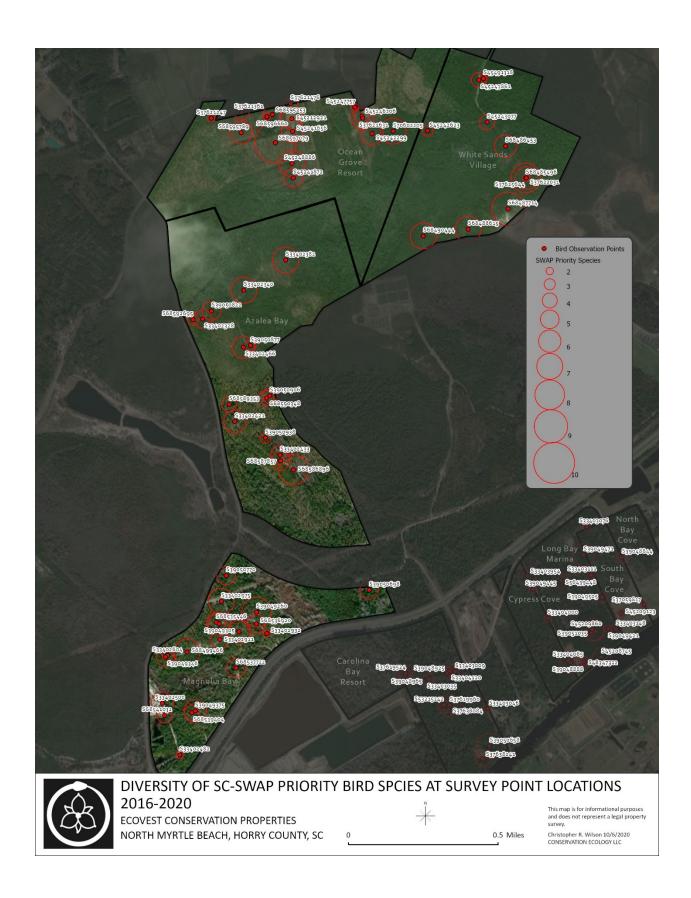
A total of 74 bird species were observed. Other than 3 spring migrants (Solitary Sandpiper, Chestnut-sided Warbler, Blackpoll Warbler) most species observed likely breed on, or near the properties. Spring point counts recorded 70 species, including 34 listed as conservation priority species by the SC SWAP which ranged between 2 and 10 species per point, with a median of 5. The 10 most abundant SC SWAP Priority species were Eastern Towhee, Pine Warbler, Brown-headed Nuthatch, Carolina Wren, Summer Tanager, Indigo Bunting, Red-bellied Woodpecker, Carolina Chickadee, Purple Martin, and Red-headed Woodpecker.

Other notable observations – A flock of Mottled Duck (SC-SWAP Moderate Priority) with young were observed in the pond at the southern tip of Magnolia Bay during the spring of 2017. A small flock of Wood Ducks (SC-SWAP High Priority) were observed in the pond on Ocean Grove during September 2020. A young male Painted Bunting (SC-SWAP Highest Priority) was photographed singing and foraging at the southwest corner of the Azalea property.



## Observed Priority Bird Species 2016-2020

Common Name	Azalea Bay	Magnolia Bay	Ocean Grove Resort	White Sands Village
Acadian Flycatcher		х		
Bald Eagle				х
Blue Grosbeak	х	х	х	
Brown Thrasher	х	х	х	
Brown-headed Nuthatch	х	х	х	х
Carolina Chickadee	х	х		х
Carolina Wren	х	х	х	х
Chimney Swift		х		
Chuck-will's-widow		х		
Eastern Kingbird		х	х	
Eastern Towhee	х	х	х	х
Eastern Wood-Pewee	х			
Great Egret		х		
Hooded Warbler	х			х
Indigo Bunting		х	х	
Kentucky Warbler		х		
Louisiana Waterthrush				х
Painted Bunting	Х			
Pileated Woodpecker	х		х	х
Pine Warbler	х	х	х	х
Prairie Warbler	х	х		х
Prothonotary Warbler	х	х		х
Purple Martin	х	х	х	х
Red-bellied Woodpecker	х	х	х	х
Red-headed Woodpecker	х		х	х
Red-shouldered Hawk			х	х
Snowy Egret	Х			
Summer Tanager	х	х	х	х
Swainson's Warbler		х	х	х
White Ibis		х		
White-eyed Vireo	х	х		
Wood Duck				х
Worm-eating Warbler	х			
Yellow-billed Cuckoo	х	х	x	x
Yellow-breasted Chat		х		
TOTAL	21	24	16	19



SC State Wildlife Action Plan (2015) Priority Bird Species Observed at Spring / Breeding Season Bird Survey Point Locations

Azalea Bay
S33402328
High
Brown Thrasher
Eastern Towhee
Moderate
Pine Warbler
Red-bellied Woodpecker
Summer Tanager
S33402340
High
Brown Thrasher
Eastern Towhee
Moderate
Blue Grosbeak
Pine Warbler
Red-bellied Woodpecker
Summer Tanager
White-eyed Vireo
S33402382
High
Eastern Towhee
Moderate
Brown-headed Nuthatch
Hooded Warbler
Pine Warbler
Summer Tanager
White-eyed Vireo
Worm-eating Warbler
S33402421
High
Eastern Towhee
Moderate
Blue Grosbeak
Brown-headed Nuthatch
Pine Warbler
Red-bellied Woodpecker
Red-headed Woodpecker
\$33402433
High

Eastern Towhee
Moderate
Brown-headed Nuthatch
Carolina Chickadee
Pine Warbler
Prothonotary Warbler
S39050822
High
Purple Martin
Moderate
Brown-headed Nuthatch
Carolina Chickadee
Red-bellied Woodpecker
Summer Tanager
S39050877
High
Eastern Towhee
Moderate
Pine Warbler
Summer Tanager
S39050906
High
Purple Martin
Moderate
Brown-headed Nuthatch
Carolina Chickadee
Summer Tanager
S39050938
High
Purple Martin
Moderate
Carolina Chickadee
Pine Warbler
\$68586896
High
Eastern Towhee
Prairie Warbler
Moderate
Brown-headed Nuthatch
Carolina Chickadee
Carolina Wren
Pileated Woodpecker

Pine Warbler
Red-bellied Woodpecker
S68589353
High
Eastern Towhee
Yellow-billed Cuckoo
Moderate
Brown-headed Nuthatch
Pine Warbler
S68590348
High
Eastern Towhee
Eastern Wood-Pewee
Yellow-billed Cuckoo
Moderate
Pine Warbler
S68592695
Moderate
Pine Warbler
Prothonotary Warbler
Summer Tanager
J
Magnolia Bay
Magnolia Bay S33402482
S33402482
S33402482 High
S33402482 High Eastern Towhee Moderate
S33402482  High  Eastern Towhee  Moderate  Carolina Wren
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500  High
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500  High  Eastern Kingbird
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500  High  Eastern Kingbird  Highest
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500  High  Eastern Kingbird  Highest  White Ibis
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500  High  Eastern Kingbird  Highest  White Ibis  Moderate  Carolina Wren
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate Carolina Wren Indigo Bunting
S33402482  High  Eastern Towhee  Moderate  Carolina Wren  S33402500  High  Eastern Kingbird  Highest  White Ibis  Moderate  Carolina Wren  Indigo Bunting  Pine Warbler
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate Carolina Wren Indigo Bunting Pine Warbler White-eyed Vireo
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate Carolina Wren Indigo Bunting Pine Warbler White-eyed Vireo S33402604
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate Carolina Wren Indigo Bunting Pine Warbler White-eyed Vireo S33402604 High
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate Carolina Wren Indigo Bunting Pine Warbler White-eyed Vireo S33402604 High Eastern Towhee
S33402482 High Eastern Towhee Moderate Carolina Wren S33402500 High Eastern Kingbird Highest White Ibis Moderate Carolina Wren Indigo Bunting Pine Warbler White-eyed Vireo S33402604 High

Mhite and Vine
White-eyed Vireo
S33402911
High
Eastern Towhee
Moderate
Carolina Wren
Indigo Bunting
Pine Warbler
Red-bellied Woodpecker
S33402932
Moderate
Carolina Wren
Indigo Bunting
S33402975
High
Eastern Towhee
Prairie Warbler
Purple Martin
Moderate
Brown-headed Nuthatch
Carolina Wren
Indigo Bunting
Pine Warbler
S39049047
High
Eastern Towhee
Moderate
Blue Grosbeak
Brown-headed Nuthatch
Indigo Bunting
Pine Warbler
Red-bellied Woodpecker
S39049260
High
Acadian Flycatcher
Eastern Towhee
Yellow-billed Cuckoo
Moderate
Brown-headed Nuthatch
Carolina Wren
Indigo Bunting
Pine Warbler
i ilic vvaibici

Summer Tanager
S39049305
High
Eastern Towhee
Swainson's Warbler
Moderate
Carolina Wren
Indigo Bunting
Pine Warbler
Summer Tanager
S39049346
High
Brown Thrasher
Prairie Warbler
Moderate
Brown-headed Nuthatch
Indigo Bunting
Prothonotary Warbler
S39049375
High
Brown Thrasher
Eastern Kingbird
Eastern Towhee
Kentucky Warbler
Moderate
Brown-headed Nuthatch
Carolina Chickadee
S39050698
High
Eastern Towhee
Moderate
Brown-headed Nuthatch
Carolina Wren
Pine Warbler
Summer Tanager
S39050770
High
Eastern Towhee
Moderate
Blue Grosbeak
Brown-headed Nuthatch
Carolina Chickadee
<del></del>

Constitutive Maria
Carolina Wren
S68499466
High
Chimney Swift
Eastern Towhee
Purple Martin
Yellow-billed Cuckoo
Moderate
Brown-headed Nuthatch
Carolina Wren
Pine Warbler
S68535446
High
Brown Thrasher
Eastern Towhee
Swainson's Warbler
Moderate
Brown-headed Nuthatch
Summer Tanager
S68536920
High
Eastern Towhee
Moderate
Brown-headed Nuthatch
Carolina Chickadee
Pine Warbler
Summer Tanager
S68537722
High
Eastern Towhee
Great Egret
Yellow-billed Cuckoo
Yellow-breasted Chat
S68539404
Moderate
Brown-headed Nuthatch
Carolina Wren
Pine Warbler
Red-bellied Woodpecker
S68541032
High Chuck-will's-widow
CHUCK-WIII S-WIUOW

Moderate
Carolina Wren
Pine Warbler
Summer Tanager
Ocean Grove Resort
S37621247
Moderate
Pine Warbler
Summer Tanager
S37621361
High
Eastern Towhee
Moderate
Indigo Bunting
Pileated Woodpecker
Pine Warbler
S37621476
High
Eastern Towhee
Moderate
Brown-headed Nuthatch
Indigo Bunting
Summer Tanager
S37621631
High
Eastern Towhee
Moderate
Carolina Wren
Indigo Bunting
Pine Warbler
Red-bellied Woodpecker
Summer Tanager
S45212921
High
Purple Martin
Moderate
Carolina Wren
Indigo Bunting
Pine Warbler
Red-bellied Woodpecker
Red-headed Woodpecker
S45241656

High
Eastern Kingbird
Moderate
Indigo Bunting
Pine Warbler
Red-bellied Woodpecker
Red-headed Woodpecker
Summer Tanager
S45241872
High
Eastern Towhee
Swainson's Warbler
Moderate
Carolina Wren
Red-headed Woodpecker
Summer Tanager
S45242299
High
Eastern Towhee
Moderate
Carolina Wren
Red-bellied Woodpecker
Red-headed Woodpecker
Red-shouldered Hawk
Summer Tanager
S45246206
Moderate
Brown-headed Nuthatch
Carolina Wren
Indigo Bunting
Pine Warbler
S45248886
High
Purple Martin
Swainson's Warbler
Yellow-billed Cuckoo
Moderate
Brown-headed Nuthatch
Indigo Bunting
Pine Warbler
Summer Tanager
S68595253

∐igh
High Brown Thrasher
Eastern Towhee  Moderate
Blue Grosbeak
Pine Warbler
Red-headed Woodpecker
S68595789
High
Eastern Towhee
Moderate
Blue Grosbeak
Carolina Wren
Pine Warbler
Red-bellied Woodpecker
Summer Tanager
S68597079
High
Brown Thrasher
Eastern Kingbird
Eastern Towhee
Yellow-billed Cuckoo
Moderate
Blue Grosbeak
Brown-headed Nuthatch
Indigo Bunting
Pileated Woodpecker
Pine Warbler
Red-shouldered Hawk
S70602205
Moderate
Brown-headed Nuthatch
Carolina Wren
Indigo Bunting
Pileated Woodpecker
Pine Warbler
Red-bellied Woodpecker
Summer Tanager
White Sands Village
S37622031
Moderate
Carolina Wren

Ded hell's days advers
Red-bellied Woodpecker
S37625644
High
Purple Martin
Moderate
Carolina Chickadee
Carolina Wren
Hooded Warbler
Pine Warbler
Summer Tanager
S45242623
Moderate
Carolina Wren
Pine Warbler
Red-headed Woodpecker
S45243077
High
Purple Martin
Moderate
Carolina Chickadee
Carolina Wren
Pine Warbler
S45243861
Moderate
Carolina Chickadee
Carolina Wren
Pine Warbler
Red-bellied Woodpecker
S68485496
High
Eastern Towhee
Louisiana Waterthrush
Swainson's Warbler
Moderate
Carolina Chickadee
Hooded Warbler
Pileated Woodpecker
Pine Warbler
Summer Tanager
S68486453
High
Eastern Towhee

Yellow-billed Cuckoo
Moderate
Carolina Wren
Hooded Warbler
Pine Warbler
Summer Tanager
S68487714
High
Eastern Towhee
Moderate
Carolina Chickadee
Carolina Wren
Pileated Woodpecker
Pine Warbler
Prothonotary Warbler
Red-bellied Woodpecker
Summer Tanager
S68488615
High
Bald Eagle
Moderate
Brown-headed Nuthatch
Carolina Wren
Pine Warbler
Red-headed Woodpecker
Red-shouldered Hawk
Summer Tanager
S68490444
High
Prairie Warbler
Yellow-billed Cuckoo
Moderate
Carolina Wren
Pine Warbler
Red-bellied Woodpecker
Red-headed Woodpecker
Summer Tanager
2.2 2.4.1.1.0.0

#### Bats-

Bats were surveyed using mist nets in July 2018 and May 2019. Those methods and findings are detailed in previous reports. Automated acoustic surveys were conducted between May and September of 2016 through 2020 and used both Wildlife Acoustics SM2BAT+ detectors coupled with SMX-UT omnidirectional microphones, and SM4BAT detectors coupled with SMM-U1 omnidirectional microphones. The units were deployed at 26 locations (detector-sites) across the properties for a total of 79 detector-nights of sampling effort. In nearly all cases, microphones were mounted on 12-foot-high poles. On two occasions microphones were mounted on 24' high poles to increase detection of higher-flying species (detector unit 8748).

The detectors were placed along suspected flyways in open areas near the edge of forests, along forest roads, and near pools and waterways to intercept the most bats and maximize the number of recordings. The detectors were programed to record bat calls from local sunset to sunrise. The Sonobat 4.3.0 software suite (Sonobat, Inc., Humboldt, CA) was used to scrub the full-spectrum WAV file recordings and remove non-bat or noise files, and automatically identify each bat recording (or "pass"). The software also provided a probabilistic statement (a Maximum Likelihood Estimate, or MLE) about the certainty of the pooled identifications from recordings for each detector site-night based on the quality of the recordings and overlap with similar sounding species using default software settings and the Southeastern-Southeast set of classifiers. A probability of false identification value (or p-value) of <0.05 was chosen as a threshold for accepting the species identification and assuming presence on the property. Final species ID determinations were made manually for the combined project area by pooling the recordings from the four properties and inspecting the highest quality recordings flagged by the software.

Mist net surveys captured 3 species (Evening bat, Seminole Bat, and Southeastern myotis) on the properties. One additional species (Eastern red bat) was captured on other EcoVest properties nearby.

Acoustic surveys on the combined Azalea Bay, Magnolia Bay, Ocean Grove Resort, & White Sands Village properties produced 7,545 individual recordings of bats after scrubbing and 5 species were automatically identified by the software with an MLE<0.05. Manual vetting identified 8 species, with one species, the Silver-haired bat, considered probable. Together, the mist net and acoustic surveys reveal a total of 9 bat species in the study area: Big Brown Bat, Brazilian Free-tailed Bat, Eastern Red Bat, Evening Bat, Northern Yellow Bat, Seminole Bat, Silver-haired Bat, Southeastern Bat, and Tricolored Bat. Eastern Red Bat and Seminole Bat are indistinguishable acoustically, explaining the discrepancy between acoustic and mist netting results.

All detected species except the Evening Bat and Brazilian Free-tailed Bat are designated as *Highest Priority - Species of Greatest Conservation Need under the SC State Wildlife Action Plan (2015)*. The Southeastern myotis is ranked S1/S2 – Imperiled in South Carolina. The Tricolored Bat is currently under review by the USFWS for listing under the Endangered Species Act (Federal Register / Vol. 82, No. 243 / Wednesday, December 20, 2017 / Proposed Rules).

Mist Net Captures – North Myrtle Beach Properties (all 16 properties combined) - July 2018 & May 2019

Species	Total Captured	% of Total
Evening Bat	48	73%
Seminole Bat	12	18%
Eastern Red Bat	5	8%
Southeastern Bat	1	2%
Grand Total	66	100%

Bat Species Detected on the Azalea Bay, Magnolia Bay, Ocean Grove Resort, & White Sands Village properties 2016-2020

COMMON NAME	SCIENTIFIC NAME	4-LETTER CODE	6-LETTER CODE
Big brown bat	Eptesicus fuscus	EPFU	EPTFUS
Brazilian free-tailed bat	Tadarida brasiliensis	TABR	TADBRA
Eastern red bat	Lasiurus borealis	LABO	LASBOR
Evening bat	Nycticeius humeralis	NYHU	NYCHUM
Northern yellow bat	Lasiurus intermedius	LAIN	LASINT
Seminole bat	Lasiurus seminolus	LASE	LASSEM
Silver-haired bat	Lasionycteris noctivagans	LANO	LASNOC
Southeastern myotis	Myotis austroriparius	MYAU	MYOAUS
Tri-colored bat	Perimyotis subflavus	PESU	PERSUB



### Sonobat and Manual Vetting Site-Night Results

## Azalea Bay, Magnolia Bay, Ocean Grove Resort, & White Sands Village properties 2016-2020

			Max	mum	Liklih	ood (f	VLE<0	.05 =	assum	e spp	prese	nce)	П							#Files Re	corde	ed			
			Myau			Labo								#Mvau	#Pesu	#Nyhu	#Labo	#Epfu				#Tabr #Laci	HiF	LoF	total
Site 032_20170615	20170615	Project Azalea Bay	1	1	1	1	1	1	1	1	1	1	F	0		-				0	0	0 0	passes 11	passes 0	passes 11
032_20170615		Azalea Bay	1	1	1	1	1	1	1	1	1	1	Ħ	0	_	_		-	_	0	0	0 0	26	0	
1033_20200506	20200506	Azalea Bay	1	0.96	1	0	1	1	1	1	1	1		0	1	2	40	0	0	0	0	0 0	82	0	
1034_20160705		Azalea Bay	0.97	0.06			1	1		1		1		1	-	8	147		_	0	0	8 0	500	49	
1034_20160705		Azalea Bay	0.97	0	0.93		0.49	1	_	1	0	1	L	1					_	0	3	26 0	366	67	
1034_20180503 1034_20180503	20180503	Azalea Bay Azalea Bay	1	0.9	0.56	0.13	0.93	1	_	1	0.16	1	-	0		5	8	1		0	0	8 0	49	12 11	
1034_20180503	20180505	Azalea Bay	1	1	0.82	0.08	1	1	1	1	0.4	1	H	0	0	1	5	0	0	0	0	4 0	24	7	
1034_20180503		Azalea Bay	1	0.87	0.29	0.47	1	1	1	1	0.63	1		0	1	7	4	. 0	0	0	0	2 0	50	7	
1034_20180503	20180507	Azalea Bay	1	1	0.95	0.31	1	1	1	1	0.5	1		0	0	1	. 4	0	0	0	0	3 0	18	5	
1034_20180503	20180508	Azalea Bay	1	0.73	1	0.3	1	1	1	1	1	1		0	1	. 0	4	0	_	0	0	0 0	10	1	
1034_20200506	20200506	Azalea Bay	1	1	0.71	0.27	1	1	1	1	1	1		0	0	3	5	C	_	0	0	0 0	19	0	
1034_20200506		Azalea Bay	1	1	2.00	0.53	1	1	1	1	1	1	H	0	_	-	_	0	_	0	0	0 0	3	0	
1034_20200615 1034_20200615		Azalea Bay Azalea Bay	1	1	0.06	0.99	1	1	1	1	1	1		0	0		0		_	0	0	0 0	25 10	1	
1034_20200615	20200617		1	0.96	0.32	0.16	1	0.97	_	0.99	_	1	H	0	_	54			_	0	1	10 0	144	16	
1034_20200615		Azalea Bay	1	0.84	0.01	0.5	1	1		1		1		0	2	23			0	0	0	10 0	80	14	
3105_20170615		Azalea Bay	0.69	0.93	0.05	1	1	1	1	0.98		1		1		14		0		0	1	4 0	58	16	
3105_20170615		Azalea Bay	1	0.97	0.01	0.98	1	1		1		1		0		21		0		0	0	5 0	59	15	
622_20170615		Azalea Bay	1	1	1	1	1	1		1	1		$\perp$	0		_			_	0	0	0 0	2	0	
622_20170615		Azalea Bay	1	1			0.77	1		1	1	1	H	0	_	_			_	0	0	0 0	6	3	
622_20170615 622_20170615		Azalea Bay Azalea Bay	1	1	_		0.77	1		1	1	1	H	0	_	_	_	1	_	0	0	0 0	2	3	
622_20170615		Azalea Bay	1	1	1		0.77	1	_	1	1		П	0	_	-	-	3	_	0	0	0 0	7	3	
622_20170615		Azalea Bay	1	1	1		0.77	1		1	1	1		0		_		_	_	0	0	0 0	3	1	
622_20170615		Azalea Bay	1	0.13			1	1		1	1	1	L	0	_	6				0	0	0 0	128	0	
622_20170615		Azalea Bay	1	0.96			1	1	_	1		1	Н	0		9	-			0	0	1 0	201	3	
8748_20200506		Azalea Bay	1	1	1	0.01	1	1	_	1	1	1	H	0	_	-			-	0	0	0 0	32	0	
8748_20200506 8748_20200910		Azalea Bay Azalea Bay	0.83	0.05	0.29		1	1		1	0.79		Н	1	7	8			_	0	0	0 0	94	3	
8748_20200910 8748_20200910		Azalea Bay	1	0.05			1	1	1	1		1	H	0	7	6	_		_	0	0	1 0	106	6	
1004_20170615		Magnolia Bay	0.62	1	0.01	0.41	1	1		1	0.43	0.75		2	0			0	_	0	0	4 2	123	12	
1004_20170615		Magnolia Bay	1	0	0.02	0.35	1	1	1	1	0.25	1		0	22			0	0	0	0	6 0	162	14	
1037_20160705	20160705	Magnolia Bay	1	0.76	0.22	0.09	1	1	1	0.58	0	1		0		11		0	0	0	7	44 0	105	87	
1037_20160705		Magnolia Bay	1	0.78	0	0.38	0.48	0.98		0.99		0.99		0		36				0	1	49 2	150	84	
1037_20170615		Magnolia Bay	1	0.40	0.42	0.55	1	1	_	1	0.2	1		0	_	5	-	0	0	0	0	7 0	31	13 9	
1037_20170615 3105_20200506		Magnolia Bay Magnolia Bay	1	0.46	0.03	0.98	1	0.9	1	1	0.33	1	H	0	_	16	23	0	0	0	0	3 0	51 35	9	
3105_20200506		Magnolia Bay	1	1	0.86	0.79	1	1	1	1	0.79	1	H	0	0	1	1	0	_	0	0	1 0	6	1	
3132_20170615		Magnolia Bay	1	0.97	0.33	0.04	1	0.89	1	0.99		1		0	_	9	13	0	_	0	1	4 0	91	18	
3132_20170615	20170616		1	1	0	0.09	1	1	1	0.99	0.17	1		0	0	36	15	0	0	0	2	8 0	180	29	
387_20170615		Magnolia Bay	1	1	0.79	1	1	1	1	1	1	1		0	_	1	. 0		_	0	0	0 0	12	0	
387_20170615		Magnolia Bay	1	1	0.5	1	1	1	1	1	1	1	Ш	0	_	3	0	0		0	0	0 0	37	0	
1004_20200909	20200909		1	0.11	0.92	0.88	1	1	1	0.85	0.82	1	H	0	_	0	_	0	_	0	1	1 0	22	7	
1004_20200909 1004_20200909		Ocean Grove Resort Ocean Grove Resort	1	0.55	0.69	0.83	1	1	1	1		1		0			_	_	_	0	0	0 0	14	1	
1034_20170815		Ocean Grove Resort	1	0.31			1	1				1		0	_	_			_	0	3	4 0	81	13	
1034_20170815		Ocean Grove Resort	1	1	1	0.41	1	0.99	1			1		0	0	0		0	1	0	2	14 0	29	40	
1034_20170815	20170817		1	1	0.9	0.58	1	0.82	1	1	0.09	1		0			. 2	0		0	0	11 0	22	36	
1037_20200909		Ocean Grove Resort	0.91	0.53	0.15	0.16	0.95	0.75			0.29	1		1	_	12		1	_	0	1	6 0	88	13	
1037_20200909		Ocean Grove Resort	1	0.04	2.00	0.37	1	1	1		0.79	1		0		0	_	0	_	0	0	1 0	25	1 6	
1037_20200909 3105_20170815		Ocean Grove Resort Ocean Grove Resort	1	0.78	0.65	0.51	0.45	1			0.79	1	H	0		3	97		_	0	0 22	3 0	255	45	
3105_20170815		Ocean Grove Resort	1	0.58		0.16	1					1	H	0		4			_	0	12	2 0	55	50	
3105_20170815		Ocean Grove Resort	1	0.66	1		0.99	0.55	1		1	_ 1	П	0		1	_			0	28	0 0	32	50	
3132_20200909		Ocean Grove Resort	1	0.15	0.49	0	1	0.97		1		1		0	7	10			1	0	0	11 0	89	22	111
3132_20200909		Ocean Grove Resort	1	0.02	0.79	0.92	1	1		1	0.79	1	Ц	0	_	2	1	0	-	0	0	1 0	22	2	
3132_20200909		Ocean Grove Resort	1	0.27	0.38	1	1	1				1	H	0		5	0			0	3	2 0	37	7	
1004_20200616 1004_20200616		White Sands Village White Sands Village	1	0.4	1	0.43	1	1		0.99	1	1	Н	0	_	66	_	0	_	0	0 1	0 0	11 389	1 25	
1004_20200616		White Sands Village	1	1	0	0.03	1	0.74		0.99		1	H	0	_				_	0	1	6 0	174	19	
1033_20200909		White Sands Village	0.38	0	0.94		1	1		1	0.23	1	П	3		2	5		_	0	0	10 0	126	14	
1033_20200909		White Sands Village	0.65		_		1	1	1	1		1		2		2			_	0	0	1 0	141	6	
1033_20200909	20200911	White Sands Village	0.67	0	0.1	0.31	1	1	1	1	1		듸	2	27	16	9	0		0	0	0 0	342	4	346
3105_20180503		White Sands Village	0.99	0.61	0.51	0.01	0.8	1	_	1	0.79		Н	1	3	8		1		0	0	1 0	137	15	
3105_20180503		White Sands Village	0.92	0.54	0.41	0	0.89	0.87		1	0.53		H	2	4	11			_	0	0	3 0	120	12	
3105_20180503 3105_20180503		White Sands Village White Sands Village	0.96	0.89	0.82		1	1		1	0.33	0.95	H	0	6	8	_		_	0	0	0 0	42 74	16 14	
3105_20180503		White Sands Village	0.50	0.14	0.44	0.03	1	1	_	1	0.16		Н	1	. 5	2		0		0	0	8 0		15	
3105_20180503		White Sands Village	1	0.73	0.94	0.44	0.87	1	1	1	0.10		П	0	-	1	. 3	1		0	0	4 0	55	9	
3132_20170815	20170815	White Sands Village	1	0.73		0.44	1	1	1	1	0.79	1		0		1	. 3	0		0	0	1 0	20	2	22
3132_20170815		White Sands Village	1	1	1	0.55	1	1	1	0.88			Ц	0	_			0		0	1	3 0	21	9	
3132_20170815		White Sands Village	1	0.55	1	1	1	1	_	0.45	0.45		$\vdash$	0		_				0	4	4 0	19	17	
3132_20180503		White Sands Village White Sands Village	0.99	0.37		0	1	1		1	0.22		H	1	4	_	19			0	0	0 0	102	9 11	
3132_20180503 3132_20180503		White Sands Village White Sands Village	1	0.48		0.02	1	1		1	0.32		Н	0		10			_	0	0	3 1	117	11	
3132_20180503		White Sands Village	0.95	0.49	0.24	0.02	1	0.84						2						0	1	2 0	152	20	
3132_20180503		White Sands Village	0.66	1	0.82	0	1	1		1		0.87		4						0	0	2 1	161	12	
3132_20180503		White Sands Village	1	0.74	0.84	0.01	1	1		1	0.79			0	2	4			0	0	0	1 0	105	12	117
		AutoID (MLE<0.05)	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No		26	250	635			16	0	96	334 7	6473	1072	7545
								Prob						_							1				
		Manual ID	Yes	Yes	Yes	Yes	Yes	able	No	Yes		No .	▙												
		Species	Myau	Pesu	Nyhu	Labo	Epfu	Lano	Cora	Lain	Tabr	Laci	J												

#### Other species -

The American Black Bear, a SWAP Priority species, was observed directly on the Azalea property, photographed on the White Sands property with a camera trap, and tracks were found throughout the properties. Several Southern Fox Squirrel individuals were observed on the Azalea property. Unconfirmed tracks that appear to be bobcat and mink were observed on the Magnolia property.

Fifteen amphibian species and 12 reptile species were observed, including the Striped Mud Turtle, a SC SWAP Priority species. The state rare Spotted Turtle, Southern Hognose Snake, Eastern Diamondback Rattlesnake, Pygmy Rattlesnake, and Pine snake have strong potential to occur and future surveys should target these reptiles. Preliminary eDNA results suggest the Four-toed Salamander occurs on the Azalea property, which would be a new record for the county. Future surveys should target this and other rare pool breeding amphibians.

# Observed Species 2016-2020 Azalea Bay, Magnolia Bay, Ocean Grove Resort, & White Sands Village

GROUP	COMMON	SCIENTIFIC	FED STATUS	SC STATUS	SC SWAP PRIORITY
Actinopterygii	American Pickerel	Esox americanus			
Actinopterygii	Eastern Mudminnow	Umbra pygmaea			
Amphibia	Broken-striped Newt	Notophthalmus viridescens dorsalis			
Amphibia	Carpenter Frog	Lithobates virgatipes			
Amphibia	Cope's Gray Tree Frog	Hyla chrysoscelis			
Amphibia	Eastern Narrow-mouthed Toad	Gastrophryne carolinensis			
Amphibia	Eastern Spadefoot	Scaphiopus holbrookii			
Amphibia	Green Frog	Lithobates clamitans			
Amphibia	Green Tree Frog	Hyla cinerea			
Amphibia	Little Grass Frog	Pseudacris ocularis			
Amphibia	Oak Toad	Anaxyrus quercicus			
Amphibia	Pine Woods Tree Frog	Hyla femoralis			
Amphibia	Southern Cricket Frog	Acris gryllus			
Amphibia	Southern Leopard Frog	Lithobates sphenocephalus			
Amphibia	Southern Toad	Anaxyrus terrestris			
Amphibia	Spring Peeper	Pseudacris crucifer			
Amphibia	Squirrel Tree Frog	Hyla squirella			
Arachnida	Widow Spiders	Latrodectus			
Aves	Acadian Flycatcher	Empidonax virescens			High
Aves	American Crow	Corvus brachyrhynchos			
Aves	American Redstart	Setophaga ruticilla			
Aves	Bald Eagle	Haliaeetus leucocephalus		State Endangered	High
Aves	Barn Swallow	Hirundo rustica			
Aves	Barred Owl	Strix varia			
Aves	Black Vulture	Coragyps atratus			
Aves	Blackpoll Warbler	Setophaga striata			
Aves	Blue Grosbeak	Passerina caerulea			Moderate
Aves	Blue Jay	Cyanocitta cristata			
Aves	Blue-gray Gnatcatcher	Polioptila caerulea			
Aves	Boat-tailed Grackle	Quiscalus major			
Aves	Brown Thrasher	Toxostoma rufum			High
Aves	Brown-headed Cowbird	Molothrus ater			
Aves	Brown-headed Nuthatch	Sitta pusilla			Moderate
Aves	Canada Goose	Branta canadensis			
Aves	Carolina Chickadee	Poecile carolinensis			Moderate
Aves	Carolina Wren	Thryothorus ludovicianus			Moderate
Aves	Cedar Waxwing	Bombycilla cedrorum			
Aves	Chestnut-sided Warbler	Setophaga pensylvanica			Moderate
Aves	Chimney Swift	Chaetura pelagica			High
Aves	Chuck-will's-widow	Antrostomus carolinensis			High
Aves	Cliff Swallow	Petrochelidon pyrrhonota			
Aves	Common Grackle	Quiscalus quiscula			
Aves	Common Nighthawk	Chordeiles minor			
Aves	Common Yellowthroat	Geothlypis trichas			
Aves	Common_Nam	Scientific			
Aves	Cooper's Hawk	Accipiter cooperii			
Aves	Eastern Bluebird	Sialia sialis			
Aves	Eastern Kingbird	Tyrannus tyrannus			High

Aves	Eastern Wood-Pewee	Contopus virens		High
Aves	Fish Crow	Corvus ossifragus		
Aves	Gray Catbird	Dumetella carolinensis		
Aves	Great Crested Flycatcher	Myiarchus crinitus		
Aves	Great Egret	Ardea alba		High
Aves	Hairy Woodpecker	Dryobates villosus		
Aves	Hooded Warbler	Setophaga citrina		Moderate
Aves	House Finch	Haemorhous mexicanus		
Aves	Indigo Bunting	Passerina cyanea		Moderate
Aves	Kentucky Warbler	Geothlypis formosa		High
Aves	Laughing Gull	Leucophaeus atricilla		5
Aves	Louisiana Waterthrush	Parkesia motacilla		High
Aves	Mottled duck	Anas fulvigula		Moderate
Aves	Mourning Dove	Zenaida macroura		
Aves	Northern Cardinal	Cardinalis cardinalis		
Aves	Northern Flicker	Colaptes auratus		
Aves	Northern Mockingbird	Mimus polyglottos		
Aves	Northern Rough-winged	Stelgidopteryx serripennis		
	Swallow			
Aves	Ovenbird	Seiurus aurocapilla		
Aves	Painted Bunting	Passerina ciris		Highest
Aves	Pileated Woodpecker	Dryocopus pileatus		Moderate
Aves	Pine Warbler	Setophaga pinus		Moderate
Aves	Prairie Warbler	Setophaga discolor		High
Aves	Prothonotary Warbler	Protonotaria citrea		Moderate
Aves	Purple Martin	Progne subis		High
Aves	Red-bellied Woodpecker	Melanerpes carolinus		Moderate
Aves	Red-eyed Vireo	Vireo olivaceus		
Aves	Red-headed Woodpecker	Melanerpes erythrocephalus		Moderate
Aves	Red-shouldered Hawk	Buteo lineatus		Moderate
Aves	Red-tailed Hawk	Buteo jamaicensis		
Aves	Red-winged Blackbird	Agelaius phoeniceus		
Aves	Ruby-throated Hummingbird	Archilochus colubris		
Aves	Snowy Egret	Egretta thula		Moderate
Aves	Solitary Sandpiper	Tringa solitaria		Highest
Aves	Summer Tanager	Piranga rubra		Moderate
Aves	Swainson's Warbler	Limnothlypis swainsonii		High
Aves	Tufted Titmouse	Baeolophus bicolor		
Aves	Turkey Vulture	Cathartes aura		
Aves	White Ibis	Eudocimus albus		Highest
Aves	White-eyed Vireo	Vireo griseus		Moderate
Aves	Wood Duck	Aix sponsa		High
Aves	Worm-eating Warbler	Helmitheros vermivorum		Moderate
Aves	Yellow-billed Cuckoo	Coccyzus americanus		High
Aves	Yellow-breasted Chat	Icteria virens		High
Insecta	American Lady	Vanessa virginiensis		J
Insecta	Bar-winged Skimmer	Libellula axilena		
Insecta	Bee Flies	Bombyliidae		
Insecta	Blue Dasher	Pachydiplax longipennis		
Insecta	Carolina Saddlebags	Tramea carolina		
Insecta	Common Buckeye	Junonia coenia		
Insecta	Eastern Pondhawk	Erythemis simplicicollis		
Insecta	Great Blue Skimmer	Libellula vibrans		
Insecta	Palamedes Swallowtail	Papilio palamedes		
Insecta	wasp	Limonethe maurator		
Mammalia	Big brown bat	Eptesicus fuscus		Highest
Mammalia	Black Bear	Ursus americanus	 Of concern,	Moderate
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Mammalia Mammalia Mammalia Mammalia Mammalia Mammalia Mammalia Mammalia	Common Raccoon Coyote Eastern Raccoon Eastern red bat Evening Bat Gray Fox Northern yellow bat	Procyon lotor Canis latrans Procyon lotor lotor Lasiurus borealis Nycticeius humeralis Urocyon cinereoargenteus Lasiurus intermedius			Highest
Mammalia Mammalia Mammalia Mammalia	Eastern Raccoon Eastern red bat Evening Bat Gray Fox	Procyon lotor lotor  Lasiurus borealis  Nycticeius humeralis  Urocyon cinereoargenteus			Highest
Mammalia Mammalia Mammalia	Eastern red bat Evening Bat Gray Fox	Lasiurus borealis Nycticeius humeralis Urocyon cinereoargenteus			Highest
Mammalia Mammalia	Evening Bat Gray Fox	Nycticeius humeralis Urocyon cinereoargenteus			Highest
Mammalia	Gray Fox	Urocyon cinereoargenteus			
Mammalia	Northern yellow bat	Lasiurus intermedius			
				Of concern, State	Highest
Mammalia	Seminole Bat	Lasiurus seminolus			Highest
Mammalia	Silver-haired bat	Lasionycteris noctivagans			Highest
Mammalia	Southeastern Bat	Myotis austroriparius		State Threatened	Highest
Mammalia	Southeastern Fox Squirrel	Sciurus niger niger		Of concern, State	Moderate
Mammalia	Southern Flying Squirrel	Glaucomys volans			
Mammalia	Tricolored Bat	Perimyotis subflavus	ARS*: Risk, priority	ARS*: Risk, priority	Highest
Mammalia	Virginia opossum	Didelphis virginiana			
Mammalia	White-tailed Deer	Odocoileus virginianus			
Reptilia	Eastern Garter Snake	Thamnophis sirtalis sirtalis			
Reptilia	Eastern Hognose Snake	Heterodon platirhinos			
Reptilia	Green anole	Anolis carolinensis			
Reptilia	North American Racer	Coluber constrictor			
Reptilia	Northern Black Racer	Coluber constrictor constrictor			
Reptilia	Northern Cottonmouth	Agkistrodon piscivorus			
Reptilia	Rough Greensnake	Opheodrys aestivus			
Reptilia	Six-lined racerunner	Aspidoscelis sexlineata			
Reptilia	Southeastern Crowned Snake	Tantilla coronata			
Reptilia	Southeastern Five-lined Skink	Plestiodon inexpectatus			
Reptilia	Striped Mud Turtle	Kinosternon baurii		Of Concern, State	Moderate
Reptilia	Yellow-bellied slider	Trachemys scripta scripta			High



