

#### ENDANGERED AND THREATENED SPECIES REPORT

For

## **TRB EDGEWATER – SOUTH RIDGEWOOD BOULEVARD**

For submittal to:

City of Edgewater 104 North Riverside Drive Edgewater, Florida 32132

Prepared for:

TRB Edgewater, LLC 1366 N US Highway 1 Suite 604 Ormond Beach, Florida 32141

Prepared by:

Biological Consulting Services, Inc. 208 Rush Street New Smyrna Beach, Florida 32168

May 2024

Joe H. Young III, President Principal Field Biologist FFWCC Authorized Gopher Tortoise Agent GTA-09-00127H

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#### 1.0 SITE LOCATION AND DESCRIPTION

The TRB Edgewater project site is a 13.56± site located in Section 12, Township 18 South, Range 34 East, in Edgewater, Volusia County, Florida. The site is located on the east side of South Ridgewood Avenue, south of Homeport Terrace and north of Sea Pines Memorial Gardens.

The site was reviewed to determine the occurrence of threatened and endangered species, to identify vegetative communities that occur on the property, and to review the physical features (soils and topography). A pedestrian field survey was conducted on May 13, 2024.

The site topography is characterized as being gently sloping with higher elevations on the southwest side of the property ranging from the 21' contour down to the 6-7' contour in the wetlands on the east portion of the property, according to LiDAR information from Volusia County. Plant communities were subsequently mapped and community types were classified utilizing the Florida Land Cover Classification System (FLCCS, FWC, 2018). The site is located within an urban setting, but is undeveloped and consists of Pine Flatwoods (1300), Scrubby Flatwoods (1312), Shrub and Brushland (1500), Isolated Freshwater Marsh (2121) and Freshwater Forested Wetlands (2200) vegetative communities.







	TRB Edgewater S. Ridgewood Ave.	Aerial Exhibit	Project 24-05051
-Legend –   Project Boundary - 13.56 Acres	5/17/2024	Joe H. Young III Estuarine Field Biologist	BIOLOGICAL New Smyrn Beach, FL 32168 CONSULTING 386-423-3402 SERVICES, INC, biocon@bellsouth.net
	SCAL	E: 1" = 10	0' 100 <b>2</b> Feet

## 2.0 SOIL SURVEY

The Natural Resources Conservation Service Web Soil Survey (websoilsurvey.nrcs.usda.gov) indicates that the following soil types are found in this area. Normally vegetation within these soil types indicates hydric (*wetland*) or non-hydric (*non-wetland*) characteristics.

- 4 Astatula fine sand, 0-8% slopes
- 13 Cassia fine sand, 0-2% slopes
- 32 Myakka-Myakka, wet fine sands, 0-2% slopes
- 63 Tavares fine sand, 0-5% slopes

The soil survey is fairly accurate in the typing of soils; however, boundaries of the soils are sometimes poorly indicative of site conditions. Please review the Soils Map for soil type boundaries and the chart below for soil type/vegetation correlation for this site. The Natural Resources Conservation Service Web Soil Survey indicated that both upland and hydric soils would be present on this site, which was confirmed during the site visit.

WETLAND SOILS None mapped

UPLAND SOILS
Astatula fine sand, 0-8% slopes
Cassia fine sand, 0-2% slopes
Myakka-Myakka, wet fine sand, 0-2% slopes
Tavares fine sand, 0-5% slopes

Astatula fine sand, 0 - 8% slopes soil (4) is defined as an excessively drained, nearly level to sloping soil which occur on sandhills. The water table typically occurs below 80 inches and is normally below 120 inches. This map unit is characterized as a very rapidly permeable soil type. The soil type has a "Highly Suited" rating for gopher tortoise burrowing. This soil type has no restrictions for use and is favorable for burrowing by gopher tortoises. Colonization and population densities may be above average if other habitat factors are not limiting. **Category: Non-hydric** 

Cassia fine sand, 0-2% slopes soil (13) is characterized as a somewhat poorly drained sandy soil typically found in elevated areas within flatwoods or in lower areas within sandhill communities. Generally, the water table is between depths of 15 and 40 inches for approximately 6 months during most years. During dry seasons the water table may recede to below 40 inches. Permeability is moderately rapid in the subsoil but very rapid in the other horizons. The soil type has a "Highly Suited" rating for gopher tortoise burrowing. This soil type has no restrictions for use and is favorable for burrowing by gopher tortoises. Colonization and population densities may be above average if other habitat factors are not limiting. **Category: Non-hydric** 

Myakka fine sand soil (32) is characterized as a nearly level, poorly drained soil, typically found in flatwoods. The water table is within 12 inches of the surface from June to November and typically within 40 inches of the surface the rest of the year. Permeability is rapid in the surface layer and moderate in the subsoil layers. The soil type has a "Less Suited" rating for gopher tortoise burrowing. This soil type has characteristics that may limit establishment, maintenance, or use of the site by gopher tortoise. Colonization and population densities may be below average or restricted in the area due to the limiting factors even though all of the other species habitat requirements are met. **Category: Non-hydric** 

Tavares fine sand soil (63) is described as a moderately well drained, nearly level to gently sloping sandy soil which occurs on sand ridges. Typically, the water table is between 40 and 60 inches during the wet season. Permeability is typically rapid and organic matter content of the soil is low. The soil type has a "Highly Suited" rating for gopher tortoise burrowing. This soil type has no restrictions for use and is favorable for burrowing by gopher tortoises. Colonization and population densities may be above average if other habitat factors are not limiting. **Category: Non-hydric.** 

No hydric soils are listed for this site per the NRCS soils maps. Most of the soils did not have hydric characteristics, and upland vegetation was the dominant cover indicating non-hydric conditions, except for the two small isolated wetlands at the north and south ends of the site and the isolated freshwater marsh on the east side of the site. The small depressions are probably a hydric inclusion within the soil matrix.

The depth to water table attribute of these soils and Gopher Tortoise Burrowing Suitability was analyzed using the Natural Resource Conservation Service Web Soil Survey for this site (<u>www.websoilsurvey.usda.nrcs.gov</u>). The depth to water table is defined as the distance below grade that the saturated zone of the soil can be found within a specific soil type. Below is a chart that lists the existing soils on site and the corresponding depth to water table.

The soil types on site have either a "Less Suited" or "Unsuitable" rating for gopher tortoise burrowing suitability. "Less Suited" soils have characteristics that may limit establishment, maintenance, or use of a site by gopher tortoise. Colonization and population densities may be below average or restricted in the area due to the limiting factors even though all of the other species habitat requirements are met. "Unsuitable" soils have characteristics that may limit establishment, maintenance, or use of the site by gopher tortoises. Areas of included soils with better drainage may provide suitable soil properties in some locations.

#### SOILS ON SITE

Astatula fine sand, 0-8% slopes Cassia fine sand, 0-2% slopes Myakka-Myakka, wet fine sand, 0-2% slopes Tavares fine sand, 0-5% slopes DEPTH TO WATER TABLE >200 cm (>6 ft 7 in) 76 cm (2 ft 6 in) 30 cm (1 ft 0 in) 76 cm (2 ft 6 in) GOPHER TORTOISE BURROWING SUITABILITY Highly suited Highly suited

Less suited Highly suited



	Topsite Cr.	TRB Edgewater S. Ridgewood Ave.	Soils Exhibit	Project 24-05051
		5/17/2024	Joe H. Young III Estuarine Field Biologist	ZUO KUSHI SUTEEL New Smyrna Bach, FL 32168 386-423-3402 biocon@bellsouth.net
Legend Project Boundary - 13.56 Acres il Type tatula Fine Sale, 0-8% Slopes ssia Fine Sand, 0-2% Slopes	Soils Area 1.52 Acres 4.45 Acres	2	٢	BIOLOGICAL CONSULTING SERVICES, INC.
yakka-Myakka Wet Fine Sands, 0-2% Slopes vares Fine Sand, 0-5% Slopes	0.43 Acres 7.16 Acres	SCAL 0 25	E: 1" = 10	0' 100

# 3.0 FLORIDA LAND USE COVER & FORMS CLASSIFICATION SYSTEM

The vegetative communities and land uses found within the project boundary were field verified, and the site was mapped utilizing the Florida Land Cover Classification System (FLCCS, FWC, 2018). Five (5) land use and cover types were identified in and around the project site.

- 1300 Pine Flatwoods
- 1312 Scrubby Flatwoods
- 1500 Shrub and Brushland
- 2121 Isolated Freshwater Marshes
- 2200 Freshwater Forested Wetlands

## 3.1 VEGETATIVE COMMUNITIES

The vegetative communities encountered on the site with the dominant vegetative cover are listed below:

**1300** - **Pine Flatwoods and Dry Prairie:** Mesic pine woodland or mesic shrubland on flat sandy or limestone substrates, often with a hard pan that impedes drainage (FNAI). Vegetation observed within this community included Slash pine (*Pinus elliottii*), Sand Live oak (*Quercus geminata*), Live Oak (*Quercus virginiana*), Pond Pine (*Pinus serotina*), Southern Magnolia (*Magnolia grandiflora*), Loblolly bay (*Gordonia lasianthus*), Saw Palmetto (*Serenoa repens*), Gallberry (*Ilex glabra*), Grape vine (*Vitis spp.*), and Bracken fern (*Pteridium aquilinum*).

**1312 - Scrubby Flatwoods:** Flatland with sand substrate; xeric-mesic; statewide except extreme southern peninsula and Keys; occasional fire (5-15 years); widely scattered pine canopy over saw palmetto and scrub oaks; longleaf pine, sand live oak, myrtle oak, Chapman's oak, saw palmetto, wiregrass. (FNAI) Vegetation observed within this community included Slash pine (*Pinus elliottii*), Saw Palmetto (*Serenoa repens*), Staggerbush (*Lyonia ferruginea*), Gallberry (*Ilex glabra*), Bracken fern (*Pteridium aquilinum*), Coontie (*Zamia spp.*), and Jasmine (*Trachelospermum jasminoides*).

**1500** - **Shrub and Brushland:** This association includes a variety of situations where natural upland community types have been recently disturbed through clear-cutting commercial pinelands, land clearing, or fire, and are recovering through natural successional processes. This type could be characterized as an early condition of old-field succession, and various shrubs, tree saplings, and lesser amounts of grasses and herbs dominate the community. Common species include wax myrtle, saltbush, sumac, elderberry, saw palmetto, blackberry, gallberry, fetterbush, staggerbush, broomsedge, dog fennel, together with oak, pine and other tree seedlings or saplings. (FWC)

**2121 - Isolated Freshwater Marsh:** This community is found in the depressional area that occurs on the east side of the site. Plants which characterize this community include Sand cordgrass (*Spartina bakeri*), Primrose willow, Wax myrtle, Yaupon holly (*Ilex vomitoria*), Sawgrass, Chain fern, Redroot (*Lacnanthes caroliniana*) and Beakrush (*Rhynchospora spp.*).

**2200 - Freshwater Forested Wetlands:** Floodplain or depression wetlands dominated by hydrophytic trees. (FNAI.)

Vegetation observed within the wetland areas on site included Wax myrtle (*Myrica cerifera*), Dahoon holly (*Ilex cassine*), Cinnamon fern (*Osmunda cinnamomea*), Virginia Sweetspire (*Itea virginica*), Chain fern (*Woodwardia virginica*), Common Buttonbush (*Cephalanthus occidentalis*), Sawgrass (*Cladium jamaicense*), and Royal fern (*Osmunda regalis*).

# 3.2 PHOTOGRAPHS



The photo above was taken from the south property line looking north at the Pine Flatwoods (1300) community.



The photo above was taken in the south portion of the site looking south at the Pine Flatwoods (1300) community.



The photo above shows wetland area observed in the southeast corner of the site.



The photo above was taken on the east side of the site looking west in the Shrub and Brushland (1500) community.



The photo above was taken in the east portion of the site looking west at the Isolated Freshwater Marsh (2121) community.



The photo above was taken in the southwest portion of the site looking east into the Scrubby Flatwoods (1312) community.



The above photo was taken looking east looking at the typical Scrubby Flatwoods (1312) community on site.



The photo above is of one of the potentially occupied gopher tortoise burrows observed on site.



The photo above is of one of the potentially occupied gopher tortoise burrows observed on site.



The photo above was taken looking east at the conditions along the southwest side of the site.



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フィジョート・		TRB Edgewater S. Ridgewood Ave.	FLCCS Exhibit	Project 24-05051
	-Legend-	5/17/2024	Joe H. Young III Estuarine Field Biologist	200 rusn Sureet New Smyrna Beach, FL 32168 biocon@bellsouth.net
Der	FLCCS Type       Area         Pine Flatwoods       8.57 Acres         Scrubby Flatwoods       3.50 Acres         Shrub & Brushland       1.02 Acres         Isolated Freshwater Marsh       0.47 Acres         Freshwater Forested Wetlands       0.09 Acres	C	٩	BIOLOGICAL CONSULTING SERVICES, INC.
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#### 4.0 POTENTIAL ENDANGERED AND THREATENED SPECIES DISTRIBUTION

The vegetative composition on site mainly consists of the Pine Flatwoods (1300), Scrubby Flatwoods (1312), Shrub & Brushland (1500), and Isolated Freshwater Marsh (2121) communities with two (2) minor areas of Freshwater Forested Wetlands (2200). A list of species with the potential for occurrence on-site and which are afforded protection by the Florida Fish and Wildlife Conservation Commission (FFWCC) and the U.S. Fish and Wildlife Service (USFWS) was compiled prior to the protected species survey, based on a literature review of geographic range and preferred habitat. The protected species distribution chart contains the designated status of protected wildlife species with the potential for occurrence on this project.

# 4.1 PROTECTED SPECIES DISTRIBUTION CHART

COMMON NAME	SCIENTIFIC NAME	STATUS	POTENTIAL OF OCCURANCE
MAMMALS			
Florida Black Bear	Ursus americanus floridanus	delisted	Minor habitat available not observed on site
Florida Panther	Felis concolor coryi	FE	Minor habitat available not observed on site
BIRDS			
Bald Eagle	Haliaeetus leucocephalus	delisted	Minor habitat available not observed on site
Florida Sandhill Crane	Grus canadensis pratensis	ST	Minor habitat available not observed on site
Least Tern	Sterna antillarum	ST	Minor habitat available not observed on site
Little Blue Heron	Egretta caerulea	ST	Minor habitat available not observed on site
Peregrine Falcon	Falco peregrinus tundrius	delisted	Minor habitat available not observed on site
Red-cockaded Woodpecker	Picoides borealis	FE	Minor habitat available not observed on site
Southeastern American Kestrel	Falco sparverius paulus	ST	Minor habitat available not observed on site
Wood Stork	Mycteria americana	FT	Minor habitat available not observed on site
AMPHIBIANS & REPTILES			
Eastern Indigo Snake	Drymarchon corais couperi	FT	Minor habitat available not observed on site
Florida Pine Snake	Pituophis melanoleucus mugitus	ST	Minor habitat available not observed on site
Gopher Tortoise	Gopherus polyphemus	ST	Minor habitat available Two (2) burrows observed on site
PLANTS			
American chaffseed	Schwalbea americana	E	Minor habitat available not observed on site
Ashe's savory	Calamintha ashei	Т	Minor habitat available not observed on site
Blue flowered butterwort	Pinguicula caerulea	Т	Minor habitat available not observed on site
Brittons Beargrass	Nolina brittoniana	E	Minor habitat available not observed on site
Catesby's lily	Lilium catesbaei	Т	Minor habitat available not observed on site
Celestial lily	Nemastylis floridana	E	Minor habitat available not observed on site
Cinnamon Fern	Osmunda cinnamomea	CE	Minor habitat available observed on site

The following protected species could potentially utilize the site:

COMMON NAME	SCIENTIFIC NAME	STATUS	POTENTIAL OF
PLANTS			OCCONAITCE
	Tillandaia faccioulata		Minor habitat available
Common wild pine	Tillanasia fasciculata	E	not observed on site
Coontio (all nativo sposios)	Zamia spp	CE	Minor habitat available
coontie (an native species)	zumu spp.	CE	observed on site
Curtiss' milkweed	Asclenias curtissii	F	Minor habitat available
			not observed on site
Faster-lilv	Zenhvranthes treatiae	т	Minor habitat available
			not observed on site
Erect prickly pear	Opuntia stricta	т	Minor habitat available
			not observed on site
Flatwoods sunflower	Helianthus carnosus	Е	Minor habitat available
			not observed on site
Florida beargrass	Nolina atopocarpa	Т	Minor habitat available
			not observed on site
Florida jointtail grass	Coelorachis tuberculosa	Т	Minor habitat available
	(Wanisuris tuberculosa)		Niner behitet eveileble
Florida lady's nightcap	Bonamia grandiflora	E	not observed on site
			Minor babitat available
Florida lantana	Lantana depressa	E	not observed on site
			Minor habitat available
Florida mountain-mint	Pycnanthemum floridanum	Т	not observed on site
	Garberia heterophylla		Minor habitat available
Garberia		Т	not observed on site
	Pteroalossaspis ecristata		Minor habitat available
Giant orchid	(Eulophia ecristata)	Т	not observed on site
			Minor habitat available
Great wild pine	Tillandsia utriculata	E	not observed on site
	llastusiabtia flasidana	- T	Minor habitat available
Hartwrightia	Hartwrightia fioriaana	I	not observed on site
Hooded pitcherplant	Sarracania minor	т	Minor habitat available
	Surracenia minor	1	not observed on site
Indian River fragrant prickly-	Harrisia eriophora (Cereus	F	Minor habitat available
apple	eriophorus var. fragrans)		not observed on site
Lace-lin ladies' tresses	Spiranthes laciniata	т	Minor habitat available
			not observed on site
Large flowered rosemary	Conrading grandiflorg	т	Minor habitat available
			not observed on site
Leafless beaked orchid	Stenorrhynchos lanceolatus (Spiranthes lanceolata) Eriogonum floridanum	Т	Minor habitat available
			not observed on site
Longleaf buckwheat		E	Minor habitat available
			Ninor babitat available
Nodding club-moss	(Lycopodium cernuum (Lycopodiella cernua) Lechea divaricata	CE	
			Minor habitat available
Pine pinweed		E	not observed on site

COMMON NAME	SCIENTIFIC NAME	STATUS	POTENTIAL OF OCCURANCE	
PLANTS				
Pineland butterfly pea	Centrosema arenicola	E	Minor habitat available not observed on site	
Rainlily	Zephyranthes atamasca	т	Minor habitat available not observed on site	
Rose pogonia	Pogonia ophioglossoides	т	Minor habitat available not observed on site	
Royal fern	Osmunda regalis	CE	Minor habitat available observed on site	
Sand dune spurge	Chamaesyce cumulicola	E	Minor habitat available not observed on site	
Scrub pinweed	Lechea cernua	т	Minor habitat available not observed on site	
Simpson zephyr lily	Zephyranthes simpsonii	т	Minor habitat available not observed on site	
Small ladies tresses	Spiranthes brevilabris	E	Minor habitat available not observed on site	
Snowy orchid	Platanthera nivea (Habenaria nivea)	т	Minor habitat available not observed on site	
Southern tubercled orchid	Platanthera flava	т	Minor habitat available not observed on site	
Swamp plume polypody	Pecluma ptilodon	E	Minor habitat available not observed on site	
Tampa vervain	Verbena tampensis (Glandularia tampensis)	E	Minor habitat available not observed on site	
Water sundew	Drosera intermedia	т	Minor habitat available not observed on site	
Widespread polypody	Pecluma dispersa	E	Minor habitat available not observed on site	
Yellow flowered butterwort	Pinguicula lutea	т	Minor habitat available not observed on site	
Yellow fringed orchid	Platanthera ciliaris	т	Minor habitat available not observed on site	
Yellow Squirrel-banana (Rugel's pawpaw)	Deeringothamnus rugelii	E	Minor habitat available not observed on site	
LEGAL STATUS LEGEND STATE AND FEDERAL STATUS (FAUNA ONLY)				

CODE DEFINITION

FE Federally-designated Endangered

FT Federally-designated Threatened

FXN Federally-designated Threatened Nonessential Experimental Population

FT(S/A) Federally-designated Threatened species due to similarity of appearance

ST State-designated Threatened

SSC State-designated Species of Special Concern

## FDA STATUS (FLORA ONLY)

CODE DEFINITION

- Е Endangered
- т Threatened
- **Commercially Exploited** CE

TRB Edgewater – S Ridgewood Ave

Project No. 24-05051

**ETS Report** 

#### 5.0 ENDANGERED AND THREATENED SPECIES

#### 5.1 Mammals

The endangered Florida Panther (*Felis concolor coryi*) is found in a wide variety of habitat types, but requires a large range and substantial food source to survive. This site does not offer a substantial food source or range for the panther. The Florida Black Bear (*Ursus americanus floridanus*) is known to inhabit community types that occur on-site, but they require a large range to support the necessary food supply. Given the amount of development and activity in the area, the potential for utilization is moderately low for both species.

None of these species or any signs of their utilization were observed during the site reviews.

#### 5.2 Amphibians and Reptiles

The threatened Gopher Tortoise (*Gopherus polyphemus*) was a species of concern because some of the site could potentially provide habitat for this species.

The site was reviewed extensively through the transect methodology outlined in the Florida Game and Fresh Water Fish Commission (FFWCC) Gopher Tortoise Permitting Guidelines (April 2008, Revised April 2023). Per the Guidelines, a burrow survey covering a minimum of 15% of the potential gopher tortoise habitat to be impacted by development activities (including staging areas for heavy equipment) is required to apply for a relocation permit. Two (2) potentially occupied gopher tortoise burrows were observed on-site. Several commensal species are known to inhabit Gopher Tortoise burrows such as the threatened Eastern Indigo Snake (*Drymarchon corais couperi*) and the threatened Florida Pine Snake (*Pituophis melanoleucus mugitus*).

No protected amphibians or reptiles or signs of their utilization were noted on the site during the review, other than the two (2) gopher tortoise burrows.

## 5.3 Invertebrates

Very few invertebrates are listed by the State of Florida as Endangered or Threatened, and of the species listed, none occur within the habitat found on this project site.

#### 5.4 Fish

No protected fish species were observed on the site in the area of proposed impact due to the lack of their specific habitat type.

#### 5.5 Birds

There are a moderate number of birds that could potentially utilize the habitats available on the site. The vegetative communities found on site could provide foraging and/or nesting habitat for the Bald Eagle (*Haliaeetus leucocephalus*), the Peregrine Falcon (*Falco peregrinus tundirus*), the threatened Little Blue Heron (*Egretta caerulea*), the threatened Florida Sandhill Crane (*Grus canadensis pratensis*), the threatened Least Tern (*Sterna antillarum*), the threatened Wood Stork (*Mycteria americana*). the endangered Red-cockaded Woodpecker (*Picoides borealis*), and the threatened Southeastern American Kestrel (*Falco sparverius paulus*).

A review of the FWC mapping for documented bald eagle nests and a review of the Audubon Florida EagleWatch mapping of non-documented nests revealed that there are no Eagle nests located within 660' of the project site. The nearest eagle nest (VO-106a) is located approximately 1,715 feet southwest of the project site. No eagle nest was observed during the review of the site.

A search of Wood Stork core foraging areas shows this property does not fall within a documented core foraging area.

No protected bird species or any signs of their utilization were observed during the site reviews.

#### 5.6 Plants

Three (3) listed plant species were observed on-site during the reviews, the commercially exploited Cinnamon fern (*Osmunda cinnamomea*), the commercially exploited Coontie (*Zamia spp.*), and the commercially exploited Royal fern (*Osmunda regalis*). According to Section 581.185 (8), Florida Statutes, certain exemptions apply to the clearing and removal of protected plant species on lands that will be utilized for silvicultural or agricultural uses, fire control measures, or required mining assessment work. The clearing or removal of regulated plants from canals, ditches, survey lines, building sites or roads or other right-of-ways by the landowner or his or her agent is also exempt on privately owned lands. On utility areas, the clearing of land by a public agency or a publicly or privately owned utility when acting in the performance of its obligation to provide a service to the public is also exempt. Listed plant species found on this site (if any) fall under one of the exemptions listed above and may be removed if needed.

#### 6.0 PROCESS OF REVIEW

Literature research utilizing the previously listed references was conducted to determine potential species distribution. Utilization of aerials, soils maps, and topographical surveys *(USGS quadrangle)* were combined to assess the physical parameters of the site for habitat evaluation. A transect review of the property was conducted on May 13, 2024 for the purpose of reviewing all aspects of the project and observations were made in reference to the presence of potential protected species.

The site was reviewed extensively through the transect methodology outlined in the Florida Game and Fresh Water Fish Commission (FFWCC) Gopher Tortoise Permitting Guidelines (April 2008, Revised April 2023). Per the Guidelines, a burrow survey covering a minimum of 15% of the potential gopher tortoise habitat to be impacted by development activities (including staging areas for heavy equipment) is required to apply for a relocation permit. This site has approximately 3.5± acres of suitable gopher tortoise habitat. During our review, two (2) potentially occupied gopher tortoise burrows were observed on site. The total review of this site covered 6± acres (1.33± acres in suitable gopher tortoise habitat). The method of evaluation for all potential species was accomplished by pedestrian observation.



	TRB Edgewater S. Ridgewood Ave.	Suitable Gopher Tortoise Habitat & Transect Review Area Exhibit	Project 24-05051
	5/20/2024	Joe H. Young III Estuarine Field Biologist	Zoo rush succe New Smyrna Back, FL 32168 3866 423-3402 biocon@bellsouth.net
<ul> <li> Legend</li> <li>Project Boundary - 13.56 Acres</li> <li>Suitable Habitat - 3.5 Acres</li> <li>Transects</li> <li>Transect Review Area - 6.0 Acres (1.33 Acres in Suitable Habitat: 38%)</li> <li>Potentially Occupied Gopher Tortoise Burrow (2)</li> <li>TE: PROTECTED SPECIES</li> </ul>	2	€ €	BIOLOGICAL CONSULTING SERVICES, INC.
RVEY CONDUCTED ON 5/13/2024	SCAL	E: 1" = 10	0' 100 <b>2</b> Feet



#### 7.0 CONCLUSIONS AND RECOMMENDATIONS

In conclusion, pedestrian field surveys were conducted on May 13, 2024, to observe for the potential presence of endangered or threatened species. Two (2) gopher tortoise burrows were located on site. No other listed species were observed during the field reviews, except for a few listed plant species.

There are four available options to address the presence of gopher tortoises on lands slated for development: avoid development in the area occupied by tortoises, develop as to avoid gopher tortoise burrows by avoiding concentrations of burrows altogether and/or staying at least 25 feet from entrances of individual gopher tortoise burrows, relocate the gopher tortoises out of the way of construction either on-site or relocate the gopher tortoises off-site.

The avoidance of the burrows requires a buffer with a 25' radius from the mouth of the burrow to be preserved. This option often limits development plans to the extent that it is not feasible.

If ten or fewer gopher tortoise burrows (and the number of tortoises occupying those burrows) will be impacted by the proposed development, they can be relocated on-site to suitable gopher tortoise habitat not proposed for construction or off-site to a protected certified recipient area.

The FFWCC requires that a mitigation contribution be made for all relocation permits. Per the current Guidelines, a flat mitigation contribution of \$234.00 from each applicant applies to the first 10 burrows (up to 5 tortoises for conservation permits) impacted on each project site. If more than 10 gopher tortoise burrows will be impacted by the proposed development, a Conservation Relocation Permit will be required and the tortoises relocated off-site. An additional mitigation contribution of \$351.00 for each additional tortoise (over the first 5 tortoises permitted for relocation) is required for a conservation permit where the tortoises are relocated to a long-term protected area.

The Florida Fish and Wildlife Conservation Commission's current policy allows gopher tortoise relocations throughout the year. However, tortoises shall only be relocated when the low temperature at the recipient site is forecasted by the National Weather Service to be above 50° Fahrenheit for three consecutive days after release (including the day of relocation).

Demonstration of need for a relocation permit will require submittal of a development plan or proof of local government approval for the activity proposed. Proof of local government approvals for clearing, grading or construction activities (if required at the local government level) must be submitted to the FWC prior to commencing capture and relocation activities. Once the construction commencement timeframe has been established and when it is known that impending construction is to occur within 90 days, it will be necessary to conduct a 100% gopher tortoise burrow survey, and obtain the appropriate gopher tortoise relocation permit from the FFWCC for off-site relocation of tortoises if avoidance is not possible. After the relocation permit is issued, and local government approval for clearing has been obtained, the relocation of the tortoises can take place.

The gopher tortoise burrow survey was conducted on May 13, 2024, by Joe H. Young III (GTA-09-00127H) and Matthew Marconi (GTA-20-00075A), FFWCC Authorized Gopher Tortoise Agents qualified to conduct gopher tortoise burrow surveys, gopher tortoise relocation permitting and gopher tortoise relocations.

The results of the survey are valid for 90 days, due to the mobility of the species and per the FFWCC requirement that gopher tortoise surveys be conducted no more than 90 days prior to submittal of an application for a gopher tortoise relocation permit and prior to gopher tortoise relocation efforts.

No impacts are expected to occur to the other listed faunal species included in the protected species distribution chart (located within Section 4.1 of this report). While habitat is available on site for these species, no individuals or signs of their utilization were observed on site.

# 8.0 REGULATIONS AND ENFORCEMENT OF TAKING OF GOPHER TORTOISE BY DEVELOPMENT ACTIVITIES UNDER EXISTING RULES OF THE FLORIDA GAME AND FRESH WATER FISH COMMISSION

The gopher tortoise (Gopherus polyphemus) is declared to be State-designated Threatened Species per Chapter 68A-27.003 Florida Endangered and Threatened Species List; Prohibitions.

Subparagraph 68A-27.003 (2)(f)5 F.A.C. states:

The gopher tortoise shall be afforded the protective provisions specified in this subparagraph. No person shall take, attempt to take, pursue, hunt, harass, capture, possess, sell, or transport any gopher tortoise or parts thereof or their eggs, or molest, damage, or destroy gopher tortoise burrows, except as authorized by Commission permit or when complying with the Gopher Tortoise Management Plan effective September 2012 herein incorporated by reference (http://www.flrules.org/Gateway/reference.asp?No=Ref-12192). A gopher tortoise. Permits will be issued based upon whether issuance would further goals and objectives of the Management Plan and the Gopher Tortoise Permitting Guidelines effective July 2020, herein incorporated by reference by reference (http://www.flrules.org/Gateway/reference.asp?No=Ref-12193).

There are four available options to address the presence of gopher tortoises on lands slated for development:

- 1. Avoid developing in the area occupied by tortoises;
- 2. Develop as to avoid gopher tortoise burrows by avoiding concentrations of burrows altogether and/or staying at least 25 feet from entrances of individual burrows, provided that such activities do not harm gopher tortoise or violate rules protecting gopher tortoises;
- 3. Relocate tortoises on-site (permit required); or
- 4. Relocate tortoises off-site (permit required).

## 9.0 REFERENCES

- 1. <u>Florida's Endangered Species, Threatened Species, and Species of Special Concern</u>, Updated December 2022, Florida Game and Fresh Water Fish Commission
- 2. <u>26 Ecological Communities of Florida</u>, Soil Conservation Service
- 3. Web Soil Survey, United States Department of Agriculture, National Resources Conservation Service, http://websoilsurvey.nrcs.usda.gov
- 4. <u>Ecology and Habitat Protection Needs of Gopher Tortoise Populations</u>, James Cox, et al., December 1987.
- 5. <u>Rare and Endangered Biota of Florida, Volume I., Mammals</u>, Edited by Stephen R. Humphrey, Ray E. Ashton, Jr., SERIES EDITOR
- 6. <u>Rare and Endangered Biota of Florida, III., Amphibians and Reptiles</u>, Edited by Paul E. Moler, Ray E Ashton, Jr., SERIES EDITOR
- 7. <u>Rare and Endangered Biota of Florida, Volume IV, Invertebrates</u>, Edited by Mark Deyrup and Richard Franz, Ray E. Ashton, Jr., SERIES EDITOR
- 8. <u>Rare and Endangered Biota of Florida, Volume V, Birds</u>, Edited by James A. Rodgers, Jr., Herbert W. Kale II and Henry T. Smith, Ray E. Ashton, Jr., SERIES EDITOR
- 9. <u>Rare and Endangered Biota of Florida, Volume Five, Plants</u>, Edited by Daniel B. Ward, Peter C.H. Pritchard, SERIES EDITOR
- 10. <u>Ecology and Development-Related Habitat Requirements of the Florida Scrub Jay,</u> John W. Fitzpatrick, Glen E. Woolfender, Mark T. Kopeny.
- 11. <u>Florida Land Cover Classification System</u>, Florida Fish and Wildlife Conservation Commission (September 2018).
- 13. <u>County Distribution and Habitats of Rare and Endangered Species in Florida</u>, Florida Natural Areas Inventory, March 1997.
- 14. <u>Notes on Florida's Endangered and Threatened Plants</u>, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Nancy Coile and Mark A. Garland, 2003.
- 15. <u>Gopher Tortoise Permitting Guidelines</u>, Florida Fish and Wildlife Conservation Commission, April 2008 (Revised April 2023).
- 16. <u>Atlas of Florida Vascular Plants</u>, University of South Florida, Institute for Systemic Botany, http://www.plantatlas.usf.edu.
- 17. Audubon Center for Birds of Prey, Audubon EagleWatch Program https://cbop.audubon.org/conservation/about-eaglewatch-program