

# PRESERVATION PORTFOLIO



The Strategic Conservation Vision for the North Florida Land Trust





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Florida's population will likely double by 2060. The scenic beauty, abundant wildlife, recreational opportunities, and overall quality of life in North Florida has brought millions of visitors and permanent residents to our region. As our population continues to grow and development continues to expand, it is crucial that important natural areas are preserved, to ensure our area's natural resources and critical wildlife habitats are protected for years to come.

North Florida Land Trust is a non-profit organization focused on the preservation of the most ecologically, agriculturally, historically and personally significant lands of North Florida. We work with willing landowners, public agency partners, foundations, and others to safeguard the natural character of our region through the protection of important conservation lands.

Definition of a land trust: "Land trusts are nonprofit, community-based organizations dedicated to the permanent protection and stewardship of land for public benefit. They work closely with landowners to conserve land through acquisition, conservation easements or other interests in real property. Land trusts are supported through charitable donations and use funds for a variety of purposes in support of their mission. Once land has been protected, land trusts have an ongoing responsibility to care for the land, ensuring that easements are upheld and preserves well-managed."

- Connecticut Land Conservation Council







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### Introduction

North Florida Land Trust preserves land throughout Northeast Florida. From coastal salt marshes and pine forests to cypress swamps and everything in between, a remarkable array of ecosystems makes up our region.

To focus our efforts and prioritize those lands which should be preserved, North Florida Land Trust first developed a strategic land prioritization tool to identify areas with the highest natural, agricultural and historic values, as well as areas most at risk from population growth and sea level rise.

#### **North Florida Conservation Priorities**

Through stakeholder input and computer mapping analysis, NFLT developed North Florida Conservation Priorities (NFCP), an adaptable database of natural resources in our operating area. NFCP is specific to the goals and mission of North Florida Land Trust, using 26 attributes such as landscape connectivity, critical wildlife habitat areas, water quality, and agricultural soil productivity to ascribe natural resource values to lands throughout our entire region. North Florida Land Trust now uses NFCP as a daily decision-making tool.

#### **Preservation Priority Areas**

North Florida Land Trust used North Florida Conservation Priorities to identify focus areas in our region with the highest-ranking natural resource values, now referred to as "Preservation Priority Areas." These Preservation Priority Areas are the focus of our Preservation Portfolio.

North Florida Land Trust will now concentrate its preservation efforts on the 112,000 acres of land within these Preservation Priority Areas. We will pursue funding, engage in outreach campaigns, and talk to landowners about the ways by which NFLT can help them preserve their land.

#### **Ecosystem Service Values**

Our native ecosystems provide a number of services that benefit us. These services can include the removal of toxins from the air by trees or the provision of food, such as shellfish, by a river. In many instances, a dollar amount can be ascribed to the service, such as the monetary value of commercial oyster harvesting to the economy.

For our analysis, we used widely accepted research and studies on the monetary value of ecosystem services. For each of our Preservation Priority Areas, we studied the potential ecosystem service benefits of preservation and calculated their values. Those benefits fall under a number of categories, including: removal of air pollutants and greenhouses gases; protection from storms, floods and droughts; regulating water supply; building organic soils for farming and forestry; removing nutrients and contaminants from our waterways; maintaining native habitats and wildlife we enjoy, and the production of food and fiber, to name a few.

#### **Cost of Acquisition**

For every Preservation Priority Area, we have estimated the general cost of acquisition. Costs are assumed based on the tax appraised values for each parcel within them, increased by 35%, which is an appraising estimation used by the State of Florida. However, this cost of acquisition figure assumes full acquisition (ownership) of property by NFLT. In most instances, we will be seeking conservation easements or other lower cost acquisition options, which means cost estimates are likely to be conservative.

#### Return on Investment

Return on Investment (ROI), in this document, refers to the length of time each Preservation Priority Area would take to pay back its acquisition cost in terms of ecosystem services. For example, the Long Branch Preservation Priority Area has an estimated acquisition cost of \$14.9 million, but an annual ecosystem service value of \$33 million, and therefore this property has a Return on Investment of 5.5 months. Because the Preservation Portfolio focuses on the most highly valued ecosystems in our area, most are extremely productive in terms of ecosystem services, with the longest ROI being 5 years (Guana River).

### Preservation Priority Areas



If we preserve all of the lands within our Preservation Priority areas today, they will pay for themselves in terms of ecosystem services in six months.

The table below summarizes the acreages, ecosystem services values, acquisition costs, and return on investment times for each of our Preservation Priority Areas.

Preservation Priority Area	Area (Acres)	Total Ecosystem Services Value	Cost of Acquisition	Return on Investment
Black Creek	5,077	\$26,003,309	\$24,939,675	1 year
Black Hammock	1,432	\$15,597,661	\$6,034,590	5 months
Crescent Lake-Lake Disston	21,884	\$47,597,701	\$9,322,685	3 months
Etoniah Greenway	10,031	\$36,276,182	\$9,962,362	4 months
Guana River	242	\$1,608,512	\$7,587,436	4 years 9 months
Julington-Durbin Creeks	3,083	\$12,395,685	\$17,596,622	1 year 5 months
Lofton Creek	5,726	\$23,559,629	\$16,708,874	9 months
Long Branch	9,226	\$33,345,746	\$14,907,518	6 months
Ocklawaha	2,400	\$8,234,456	\$5,701,166	9 months
Ortega River	875	\$3,901,877	\$15,645,577	4 years
Palm Coast	25,785	\$96,970,987	\$29,914,869	4 months
Putnam Lakes	3,337	\$15,728,168	\$9,549,720	8 months
Sixmile Creek	5,512	\$21,935,854	\$23,227,039	1 year 1 month
South Prong St. Marys River	3,993	\$20,892,763	\$8,689,351	5 months
Tri-County Agricultural Area	13,743	\$49,382,199	\$16,729,450	5 months
TOTAL	112,346	\$413,430,729	\$216,516,934	6 months



# Black Creek



A large blackwater stream, Black Creek is a significant tributary to the St. Johns River and is remarkable both for its wide and healthy floodplain swamps, as well as the steep bluffs and ravines towering above its banks. It is also known for its frequent, significant floods. The lands identified along Black Creek are a mosaic of upland and wetland habitats along the Creek and Fleming Island. Lands in the Black Creek corridor represent unfragmented floodplain and wetland communities which contribute to water quality preservation and stand as a buffer against increased flooding.

**TOTAL ACREAGE**5.077 acres

COST OF ACQUISITION \$24,939,675

ECOSYSTEM SERVICES VALUE

RETURN ON INVESTMENT

\$26,003,309/year ROI = 1 year



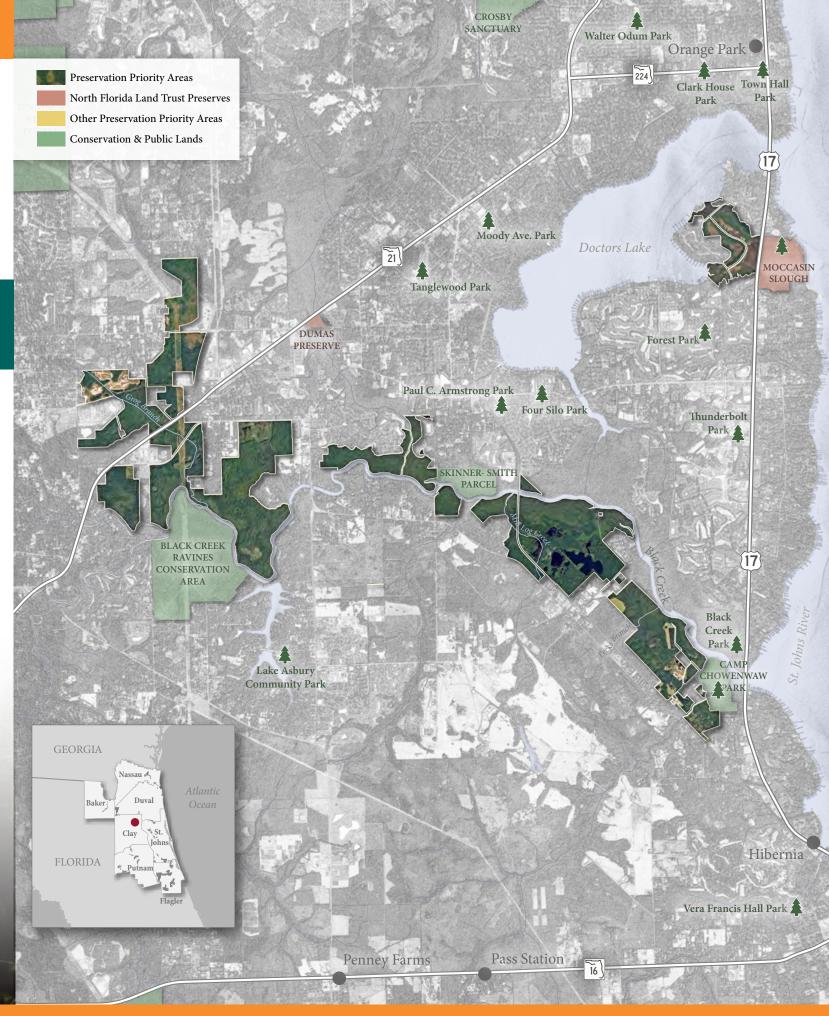
The 2,855 acres of floodplain swamp habitats on Black Creek targeted for preservation...

provide an average of \$2,230/ acre of flood regulation per year...

for a total annual, re-occuring benefit of \$6,366,650

Black Creek has hit flood gauges of 26 feet, one of the highest recorded in Northeast Florida





### Black Hammock Island

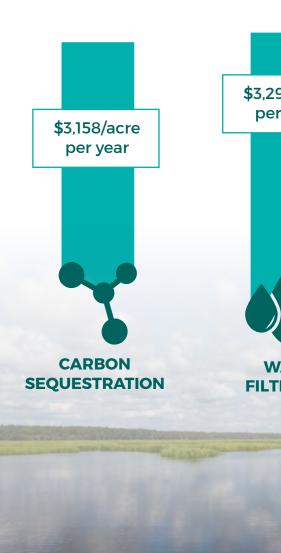


There are four major barrier islands located on the outskirts of Jacksonville: Big Talbot Island, Little Talbot Island, Fort George Island and Black Hammock Island. The first three have already been mostly preserved, but Black Hammock is almost entirely privately owned and undeveloped. Though it is technically located within Jacksonville city limits, the community of Black Hammock is a rustic example of island life and many of its residents prefer it to remain that way. The island is home to a mixture of salt marsh and maritime hammock forests which remain intact and are worthy of preservation.

**TOTAL ACREAGE** 1,432 acres

**COST OF ACQUISITION** \$6,034,590

**ECOSYSTEM SERVICES VALUE** \$15,597,661/year



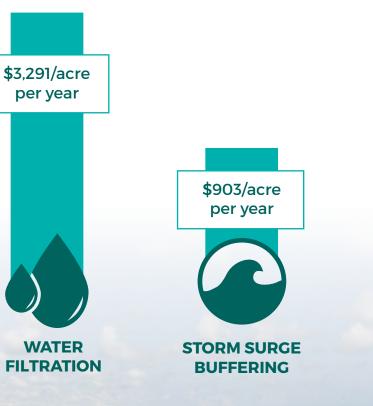
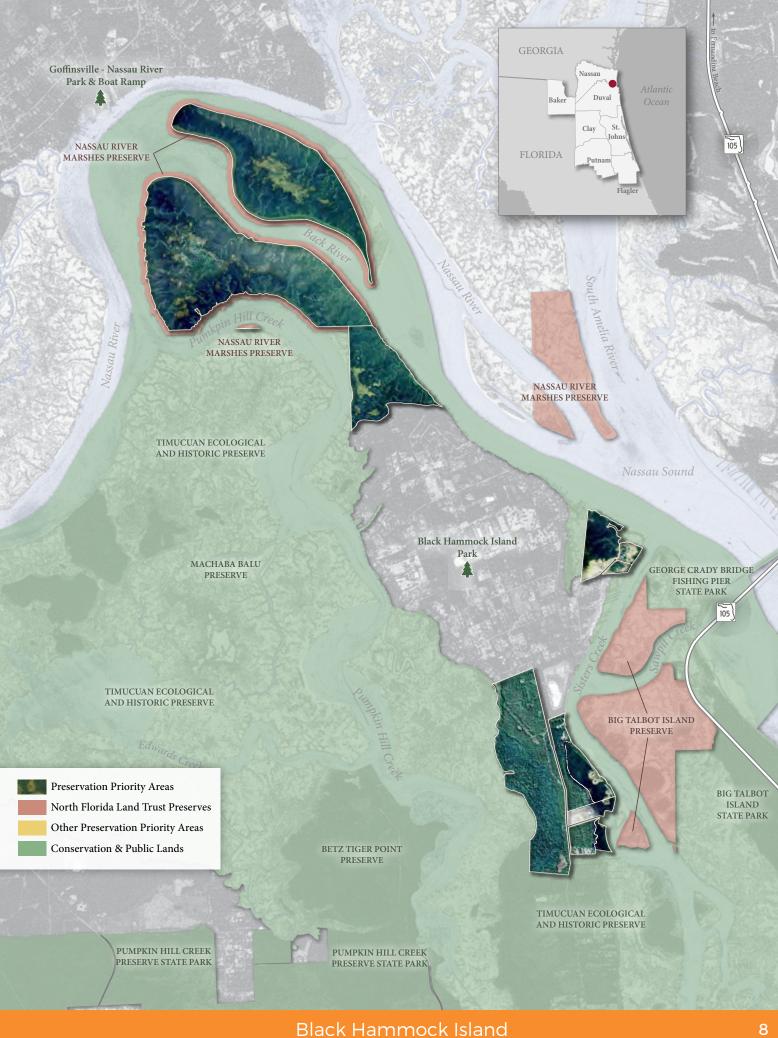






Photo credit: Jenny Alvarado



# Crescent Lake-Lake Disston



At almost 16,000 acres in size, Crescent Lake is a large, complex lake system. Plenty of largemouth bass and black crappie can be found swimming in the eelgrass of Crescent Lake and, thanks to a number of salt springs on the bottom of the lake, plenty of blue crab as well. The area provides important habitat for a number of wildlife species, including bald eagles, osprey, wading birds, and waterfowl. The preservation focus area consists of mixed forested wetlands, pine plantation, scrub-shrub wetlands, and agriculture. Moving forward, this area is largely set aside to ensure the future health of Crescent Lake and Lake Disston.

TOTAL **ACREAGE** 21,884 acres

**COST OF ACQUISITION** \$9,322,685

**ECOSYSTEM SERVICES VALUE** 

\$47,597,701/year

**RETURN ON INVESTMENT** 

ROI = 3 months

miles undeveloped lake shoreline

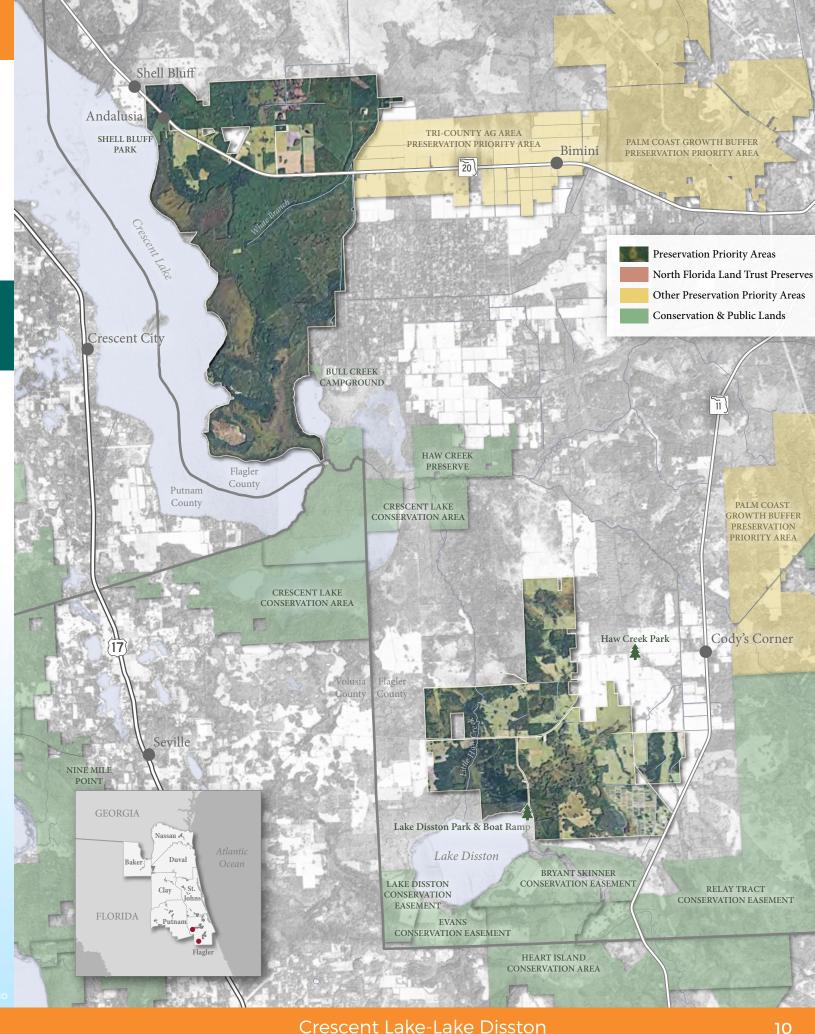


**4,600** acres of swamp forests



per year re-occuring benefit





### Guana River



The Guana River is the northernmost waterway feeding into the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR), one of 28 coastal sites designated to protect and study estuarine systems in the United States. While the greater portion of the waterway is already preserved within the GTM Research Reserve, the headwaters of the Guana River begin in a retention pond, and in many places are surrounded by development. However, there are still stretches of freshwater marsh and upland maritime hammock forest left. These upstream freshwater sections are critical to the adaptability of this estuarine system under sea level rise. North Florida Land Trust feels that the ownership and management of these lands is critical towards ensuring the future health of the GTM-NERR.

TOTAL ACREAGE 242 acres

COST OF ACQUISITION \$7.587.436

ECOSYSTEM SERVICES VALUE

\$1,608,512/year

RETURN ON INVESTMENT

ROI = 4 years, 9 months

Water quality improvements



+

Flood retention



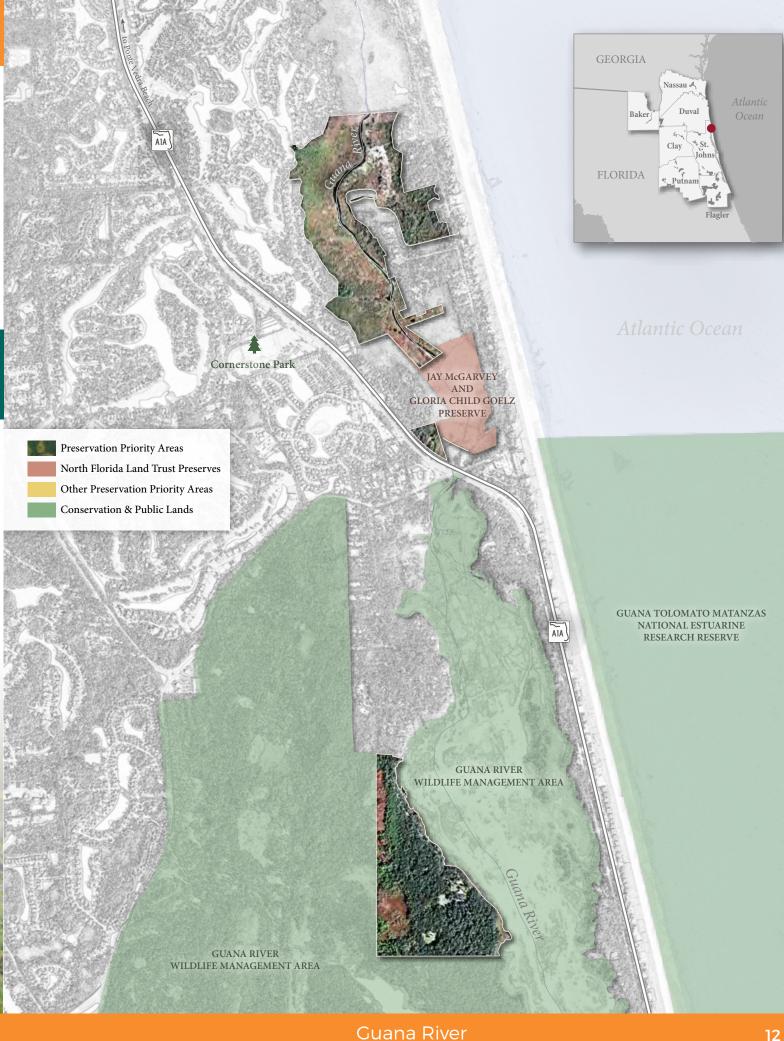
\$1,600,000 per year return



Small acreage with big ecosystem services.

Just 242 acres generates a \$6,611 per acre return!





Guana River 5

# **Etoniah Greenway**



The Etoniah/Cross Florida Greenway is an important portion of the Florida Wildlife Corridor, connecting Ocala National Forest in the southern portion of Putnam County to Osceola National Forest and the southern extent of the Okefenokee Swamp in Baker County. A mosaic of sandhill, scrub, cypress, hardwood bottomlands and working pine plantations make up the region. This acquisition area sits inside an existing Florida Forever project area and is considered a critical linkage for the passage of some of Florida's most emblematic species, including the Florida black bear.

TOTAL ACREAGE 10.031 acres

COST OF ACQUISITION \$9,962,362

**ECOSYSTEM SERVICES VALUE**\$36,276,182/year

RETURN ON INVESTMENT

ROI = 4 months

Maintaining wildlife populations isn't just part of a healthy ecosystems, but a healthy economy. Wildlife viewing is a \$4.9 billion per year industry in Florida.



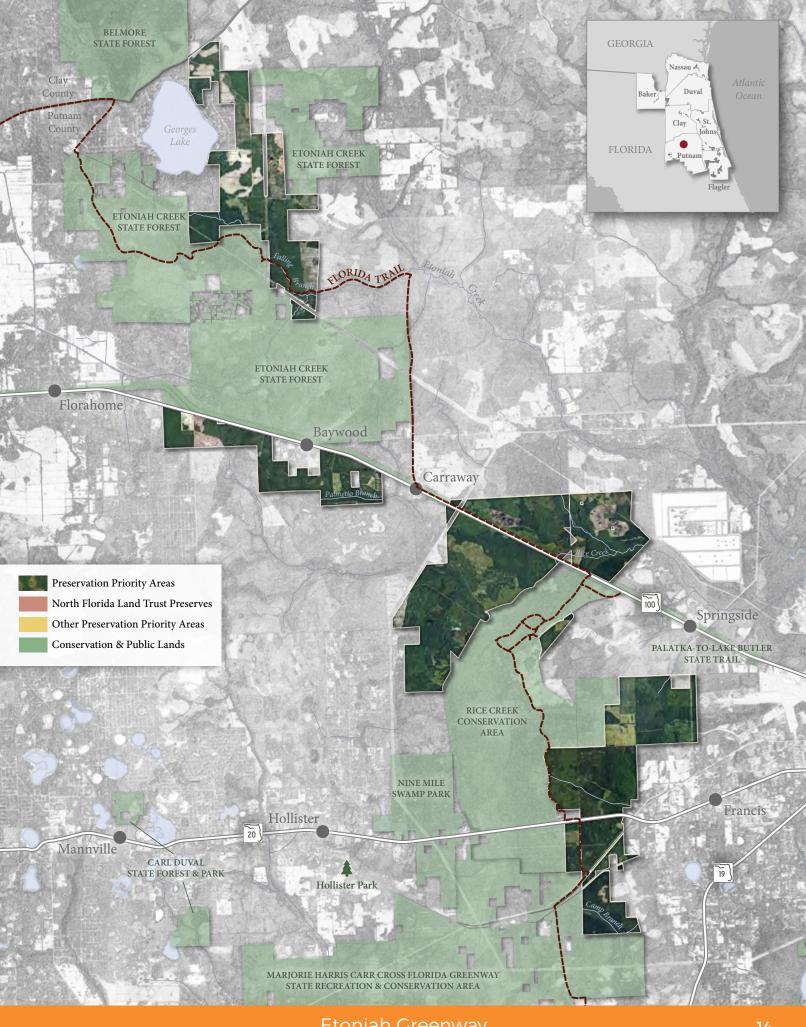












Etoniah Greenway Etoniah Greenway

# Julington-Durbin Creeks



Julington and Durbin Creeks sit on the county line between St. Johns County and Duval County, at the forefront of suburban expansion from the City of Jacksonville. A large and vital floodplain swamp system, with a matrix of freshwater marshes and cypress sloughs, this area is both developed and developing but historically was one of the core regions for fishermen on the St. Johns River. Fish camps rose in popularity in the 1930s-40s when shacks started popping up along rivers that provided fishermen with a place where they could buy bait & tackle, as well as filet and cook the catch of the day. Eventually those shacks started to open up their doors to non-fisherman so anyone could get a taste of backwoods and southern cooking. Today, there are still popular fish camps on Julington Creek that bear forward the memory of that time.

**TOTAL ACREAGE** 

3.083 acres

**COST OF ACQUISITION** 

\$17,596,622

**SERVICES VALUE** \$12,395,685/year

**ECOSYSTEM** 

**RETURN ON INVESTMENT** 

ROI = 1 year, 5 months



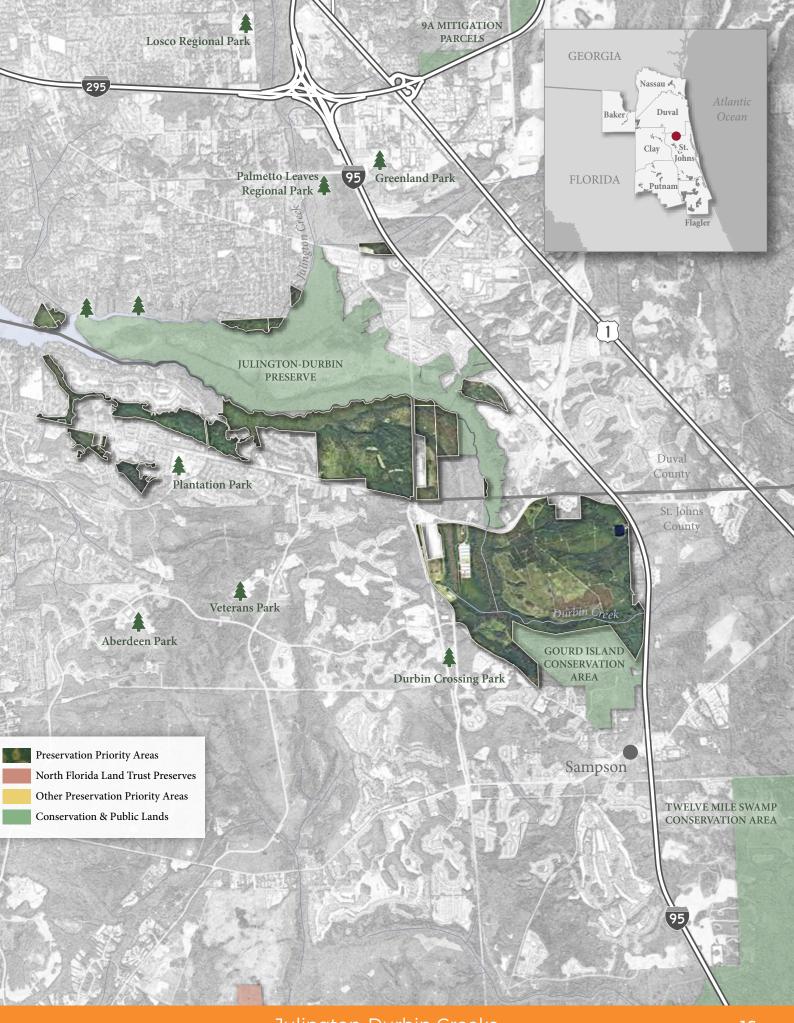
Muck soils in cypress forests sequester more carbon than any other southern forest.



Cypress forests at most risk for sea level rise and high waters will drown cypress trees.



Cypress trees die and release their hold on muck soils, releasing stored carbon into the ecosystem.



# Lofton Creek



The Nassau River, which has the greatest tidal range of any river in Florida, is the most likely river to be impacted by the flooding caused by sea level rise. Lofton Creek, as a major seaward tributary of the Nassau River, is likely to experience a significant part of that change as saltwater habitats transition upriver. Due to these potential ecosystem transitions and eminent plans for the development of most of eastern Nassau County, preservation of the wetland habitats along Lofton Creek is a vital need.

TOTAL ACREAGE 5,726 acres

COST OF ACQUISITION \$16,708,874

ECOSYSTEM SERVICES VALUE

\$23,559,629/year

RETURN ON INVESTMENT

ROI = 9 months



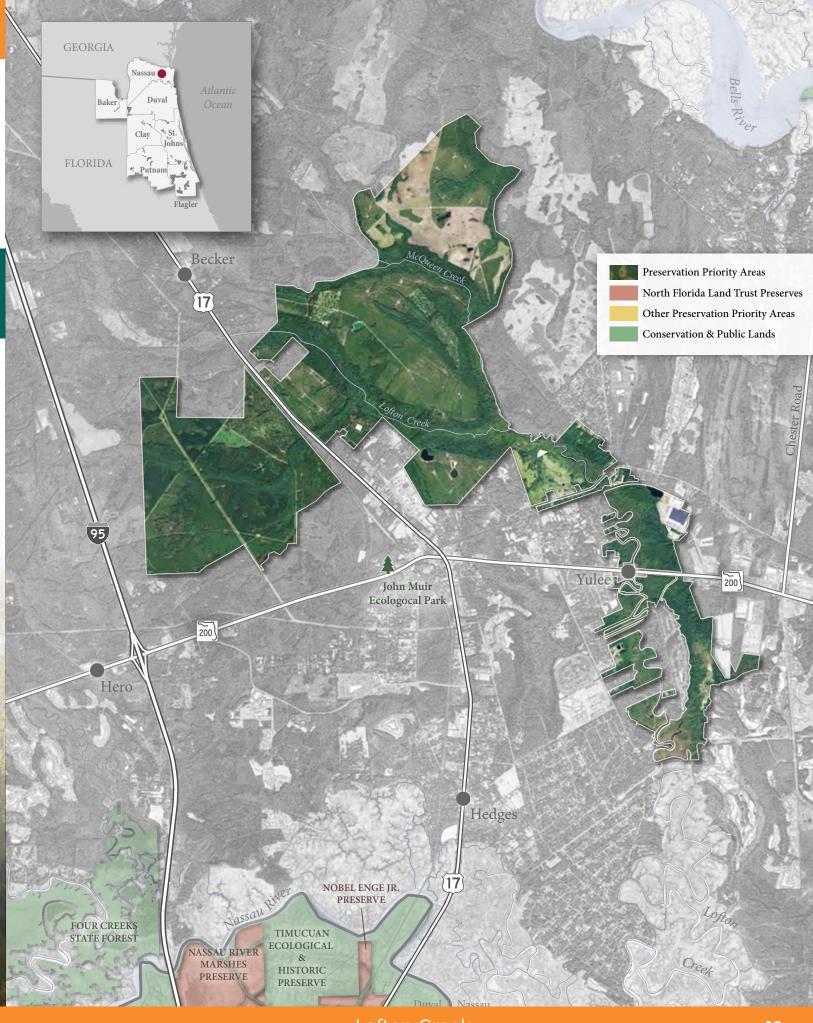
Run-off from urban areas is one of the greatest sources of nitrogen pollution in northeast Florida.



A large swamp can remove up to 90% of nitrogen pollution through natural processes.



Wastewater treatment facilities remove nitrogen at a minimal cost of \$250/lb.



7 Lofton Creek

# Long Branch



The Long Branch acquisition area is a section of western Duval county which connects the significant conservation lands of the Timucuan Ecological and Historic Preserve to the east to the Florida Wildlife Corridor and Osceola National Forest through the Northeast Florida Timber and Watershed Reserve. The Loblolly Mitigation Bank, which is restoring wetlands on lands downstream on Long Branch and Deep Creeks, is adjacent to the east, along with Jennings State Forest and Cecil Field Conservation Area. Connecting the Florida Wildlife Corridor to the coastal resources in the Timucuan Preserve allows for the free passage of wildlife throughout our region for years to come.

**TOTAL ACREAGE**9,226 acres

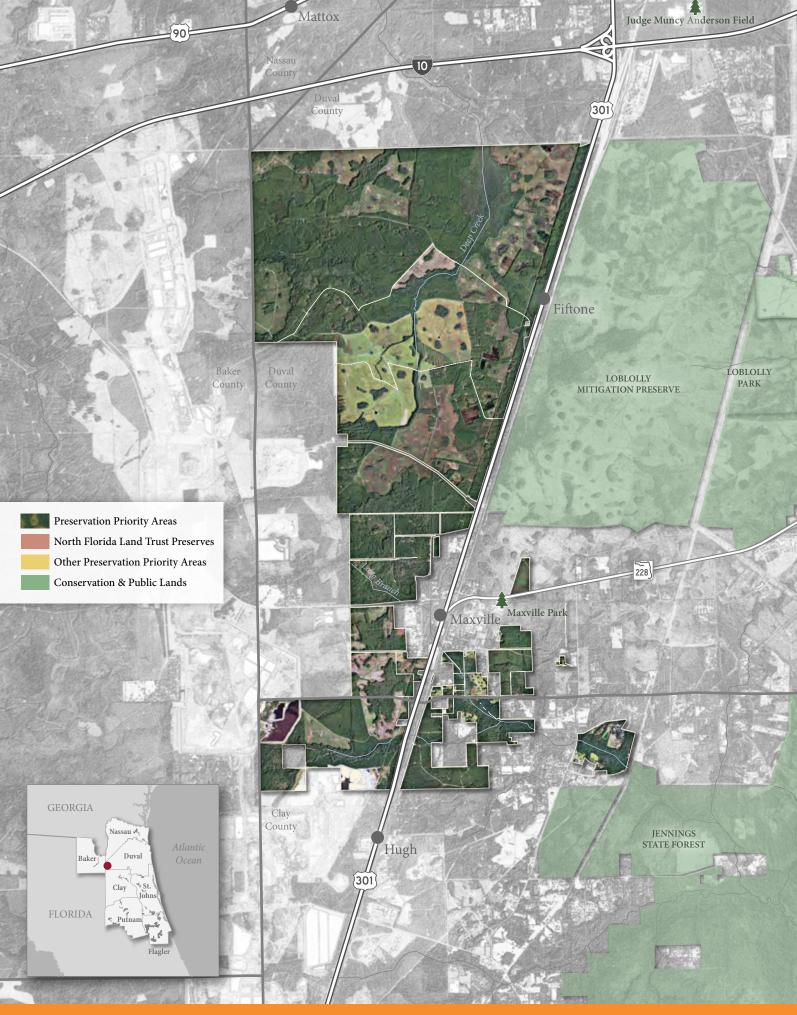
COST OF ACQUISITION \$14,907,518

ECOSYSTEM SERVICES VALUE

RETURN ON INVESTMENT

\$33,345,747/year ROI = 6 months





9 Long Branch 20

# Ocklawaha



The Ocklawaha River is the greatest tributary to the St. Johns River, sourced in Lake Griffin and fed by many springs along the way. It forms the 55mile northern and western boundary of Ocala National Forest and was also part of the Cross-Florida Barge Canal, an attempt to cut a shipping lane across Florida that could have destroyed the ecology of the entire river system. The Canal project was eventually stopped by Marjorie Harris-Carr and other conservationists, but the dam from that project still stands and remains controversial. The Ocklawaha River is wild, scenic and beautiful and justly deserves preservation.

TOTAL **ACREAGE** 2,400 acres

**COST OF ACQUISITION** \$5,701,166

**ECOSYSTEM SERVICES VALUE** 

**RETURN ON INVESTMENT**  **PUTNAM LAKES** 

PRESERVATION

PRIORITY AREA

\$8,234,456/year ROI = 9 months

Cypress forests are 5 times more productive, as fisheries, than the open water of an adjacent lake.

VS.

#### **CYPRESS FORESTS**

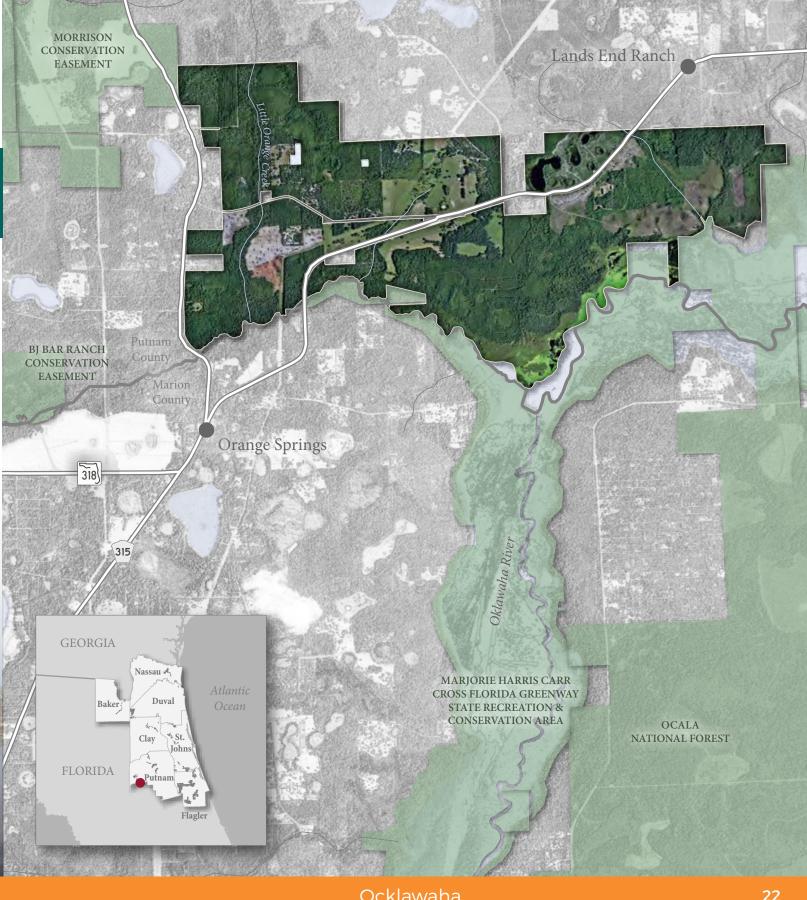


\$124 per acre per year fish nurseries value

**OPEN LAKES** 



**\$23** per acre per year fish nurseries value



Preservation Priority Areas

North Florida Land Trust Preserves

Other Preservation Priority Areas

Conservation & Public Lands

# Ortega River



The Ortega River has been one of Jacksonville's favorite jaunts for fishing or paddling for centuries. The community of Ortega at the mouth of the river came into its own in 1902, when J. Pierpont Morgan financed its creation. Since then, Jacksonville has swallowed up most of the developable upland, while leaving a large natural floodplain swamp along the river. The City of Jacksonville has already started preservation work there with Ringhaver Park, with North Florida Land Trust looking to expand that preservation going forward. The Ortega River is also critical as it sits at the freshwaterto-brackish transition zone, making the upstream sections targeted in this plan important to the resiliency of the Ortega River under sea level rise.

**TOTAL** ACREAGE

875 acres

**COST OF ACQUISITION** 

**ECOSYSTEM SERVICES VALUE** 

**RETURN ON INVESTMENT** 

\$3,901,877/year \$15,645,577

ROI = 4 years

**Ecosystem Service Fact:** When the city of Chattanooga, Tennessee decided to invest in creating more and further beautifying their parks, nearby property values soared by 127%, and city tax revenues on those same lands increased by 99%.

#### **BEFORE PARKS PROPERTY VALUES**

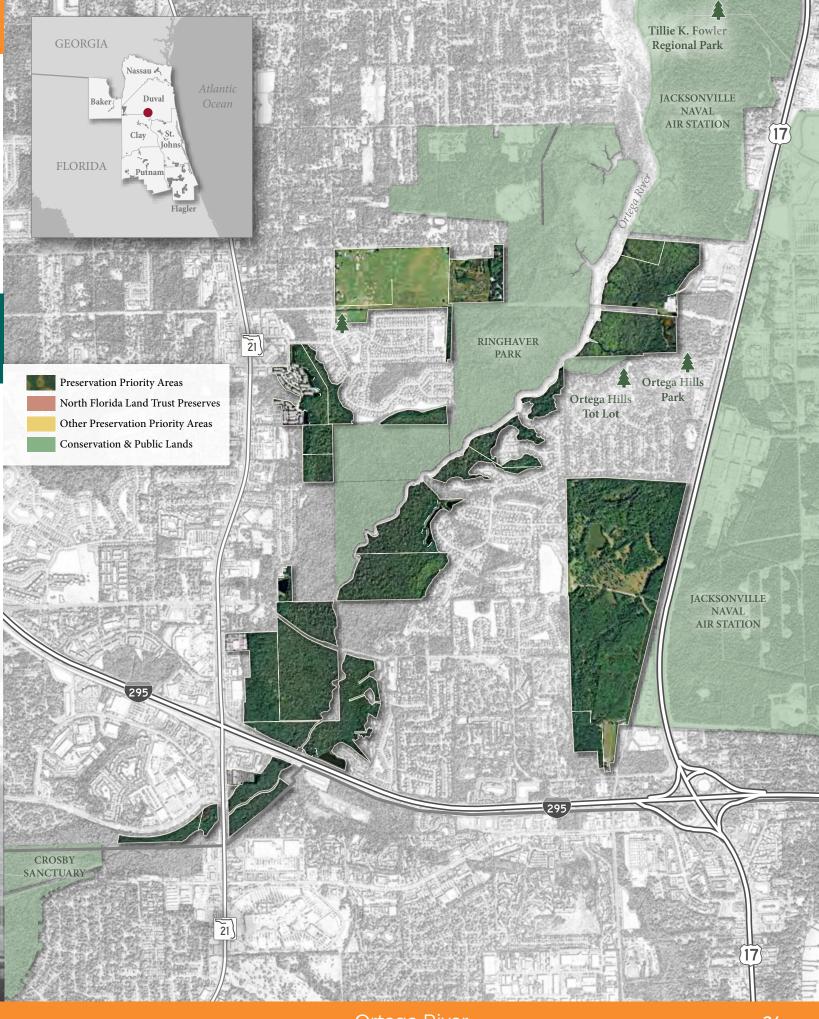
**AFTER PARKS PROPERTY VALUES** 

**127% INCREASE!** 

**BEFORE PARKS TAX REVENUES** 

**AFTER PARKS TAX REVENUES** 

99% **INCREASE!** 



### Palm Coast



The urban area in Flagler County is expected to quintuple by 2060. Most of that development will occur in the rapidly growing community of Palm Coast. Many people are drawn to the area for its unique natural character, its beaches, marshes, oak forests and history. The coastal ecology of this area is important, as it sits at the southern end of the Guana Tolomato Matanzas National Estuarine Research Reserve. Additionally, a unique blend of large basin swamps, sloughs, and pine flatwoods also typifies this region.

The purpose behind this preservation area is to try and identify large, healthy ecosystems in the path of projected development to ensure the health of the local and regional environments and the growing community of Palm Coast.

TOTAL ACREAGE 25,785 acres

COST OF ACQUISITION \$29,914,869

ECOSYSTEM SERVICES VALUE

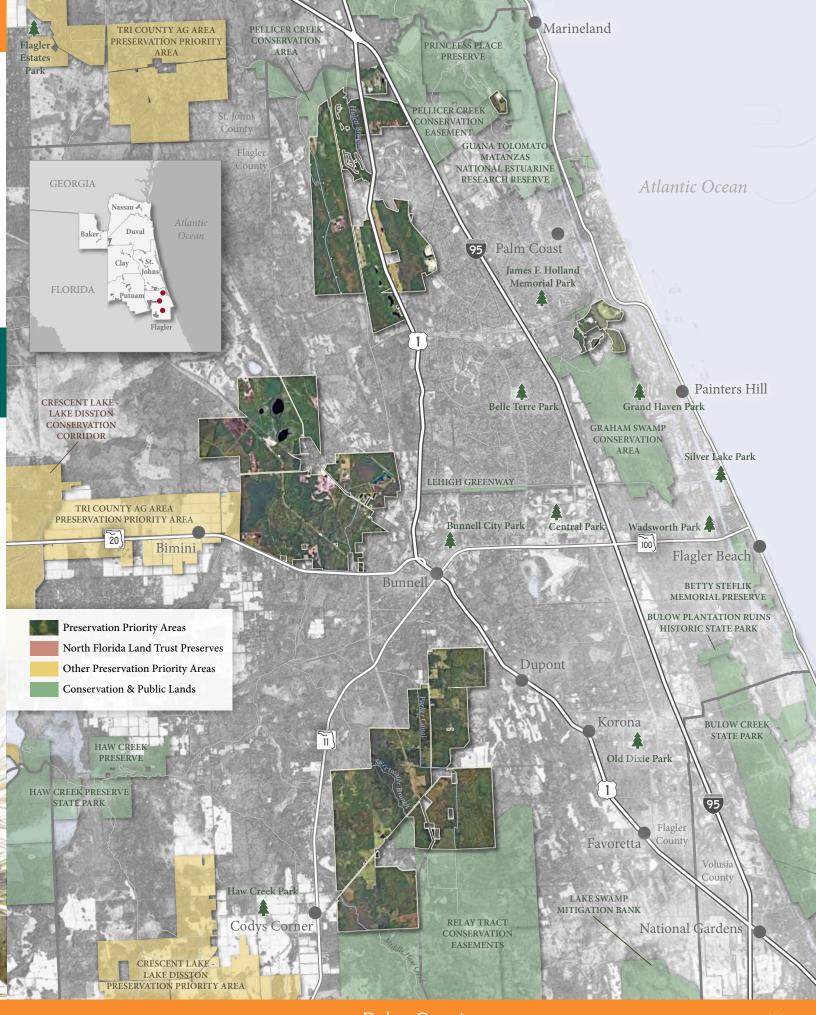
\$96,970,987/year

RETURN ON INVESTMENT

ROI = 4 months

Why should parks be part of a community's growth? 65% of home buyers felt that parks seriously influence their decision to move to a community.





### Putnam Lakes



In Florida, nearly all of its 20 million citizens get their water from the Floridan Aquifer, which is expected to reach capacity by 2035 (though there is some evidence it has already reached its capacity). It is paramount that we do all we can to protect recharge to the Floridan. Not all areas are equal in that regard, as some locations in Florida are more or less "super-seeps" for recharge that can easily be destroyed by development or poor land management. The Putnam Lakes district in southwest Putnam County is characterized by seepage lakes and highly permeable sand soils which make it a superior recharge area within the state.

TOTAL **ACREAGE** 3,337 acres

**COST OF ACQUISITION** \$9.549.721

**ECOSYSTEM SERVICES VALUE** 

\$15,728,168/year

**RETURN ON INVESTMENT** 

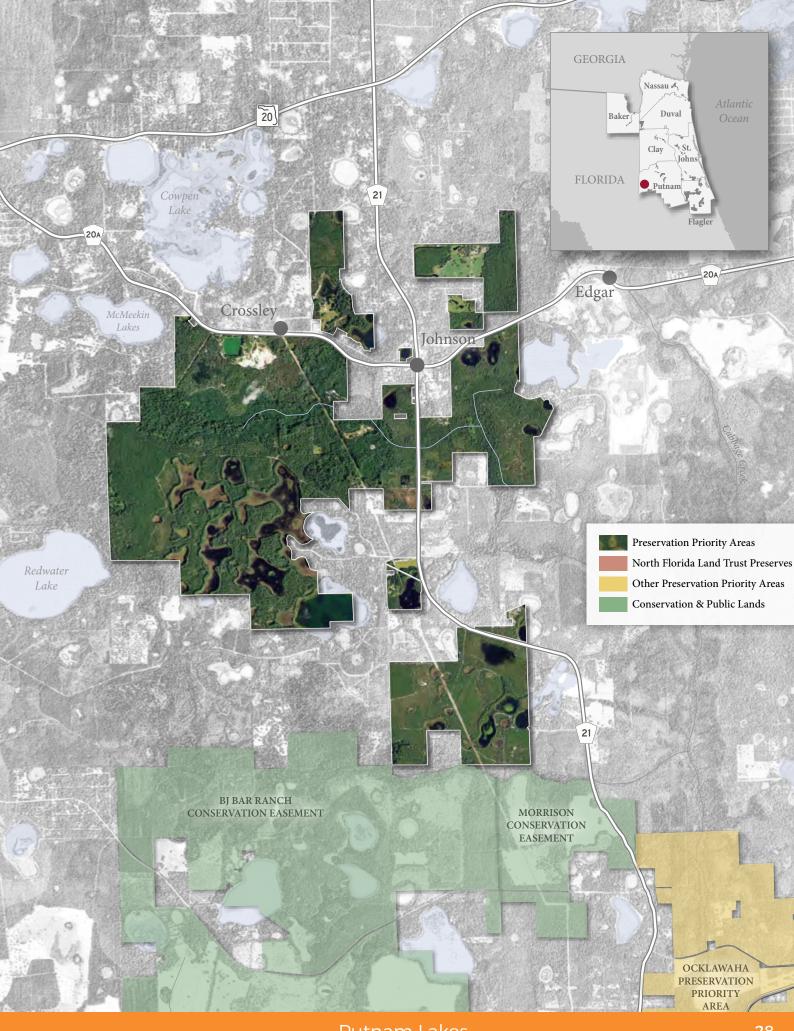
ROI = 8 months

Recharge to the Floridan Aquifer has been valued at \$600/acre per year for native habitat areas.



The recharge value of the Putnam Lakes area tops more than \$2 million per year.





Putnam Lakes

# Sixmile Creek



William Bartram is easily Florida's, and one of America's most famous naturalists, known for roaming most of Florida and being one of the first to describe its many native ecosystems. On the banks of the St. Johns River, on Little Florence Cove near the mouth of Trout and Sixmile Creeks, Bartram founded his own small plantation. This preservation area captures much of the site of his historic plantation, the William Bartram Scenic Highway, and the "Old Florida" swamps along Sixmile Creek. This area is in the process of rapid development, losing most of the natural and historic character that Bartram so famously recorded.

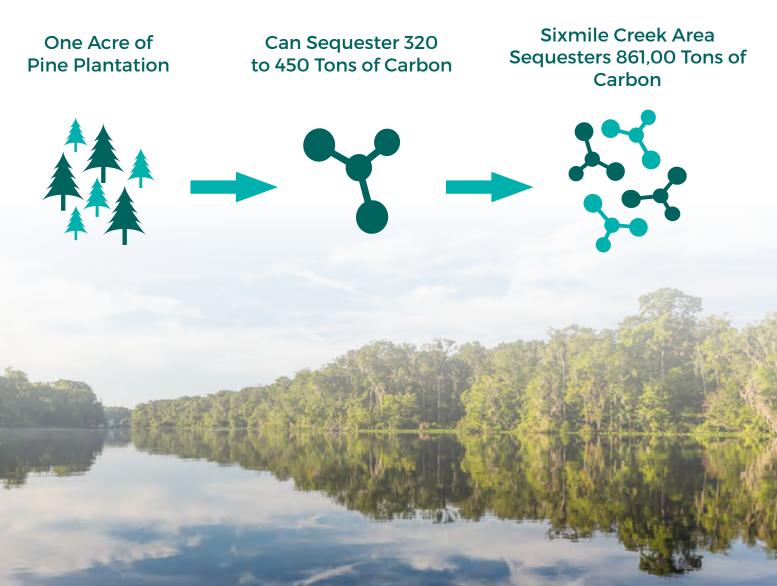
TOTAL **ACREAGE** 5,512 acres

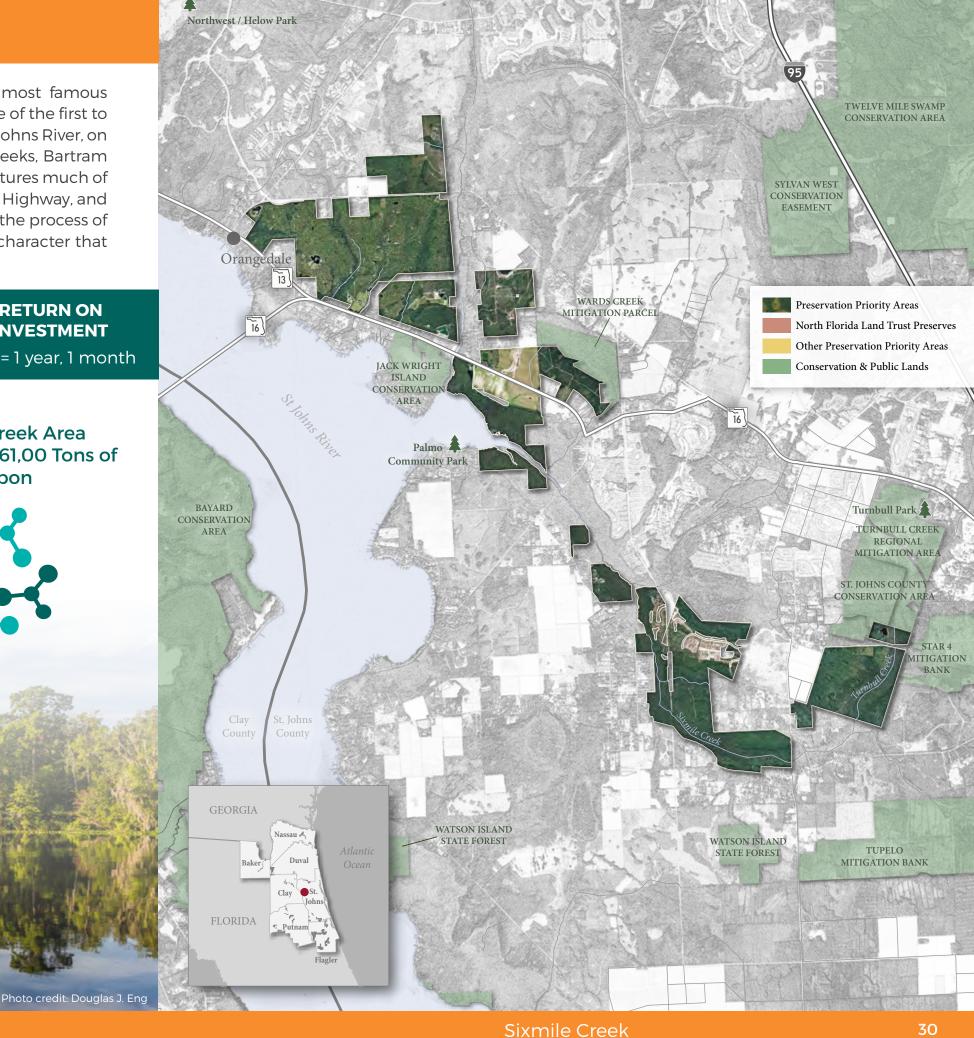
**COST OF ACQUISITION** \$23,227,039

**ECOSYSTEM SERVICES VALUE** \$21,935,854/year

**RETURN ON INVESTMENT** 

ROI = 1 year, 1 month





# South Prong of the St. Marys River



Long ago, mariners would come to the St. Marys River to fill their water casks before crossing the Atlantic; the tannic waters of the river were especially clear, and their slight acidity meant the water wouldn't spoil on the long voyage. Now, the shipmen most enjoying those same waters are canoers, kayakers and boaters. Nowhere else in Northeast Florida can one experience as much clean water and as wild and scenic a riverfront as on the St. Marys River. This is largely because a few large landowners appropriately managing their lands have kept the river healthy, especially in its headwater streams. The North Prong of the St. Marys River starts in the Okefonokee Swamp and is protected, but the South Prong, which runs through the towns of Glen St. Mary and Macclenny are privately held and remain at risk from future impacts and so must be preserved.

**TOTAL ACREAGE** 3.993 acres

**COST OF ACQUISITION** \$8.689.351

**ECOSYSTEM SERVICES VALUE** \$20,892,763/year

**INVESTMENT** 

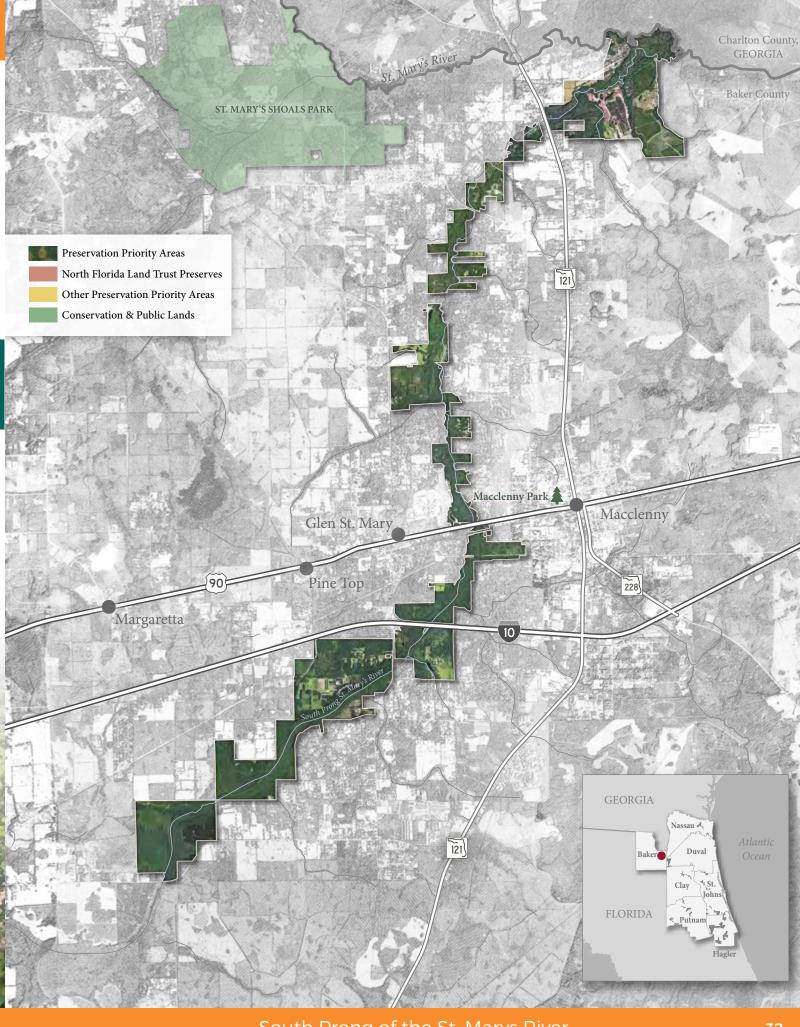
**RETURN ON** 

ROI = 5 months

The white sandbars of the St. Marys River are hallowed ground for the canoe-camper. The gear alone from camping, kayaking, canoeing, and other outdoor recreation sports generate \$1.3 billion in Florida every year.

The kind of gear that is purchased in Florida every year:





# Tri-County Agricultural Area



The tri-county agricultural area around Hastings, East Palatka and Spuds is the heart of the Northeast Florida region's agriculture. As such, this focus area is very specific to the preservation of those lands with the highest potential quality farming and forestry soils. If our region is committed to having fresh, locally available foods, and to preserving local agricultural industries and know-how, then a commitment to the preservation of these lands is necessary to accomplish those goals.

TOTAL ACREAGE 13,743 acres

COST OF ACQUISITION \$16,729,450

ECOSYSTEM SERVICES VALUE

RETURN ON INVESTMENT

\$49,382,199/year ROI = 5 months

Potatoes and cabbage are the largest single food products in our region. The 2,763 acres of potato and cabbage in our Preservation Priority Area have a food value of \$12.6 million/year



**POTATOES** 



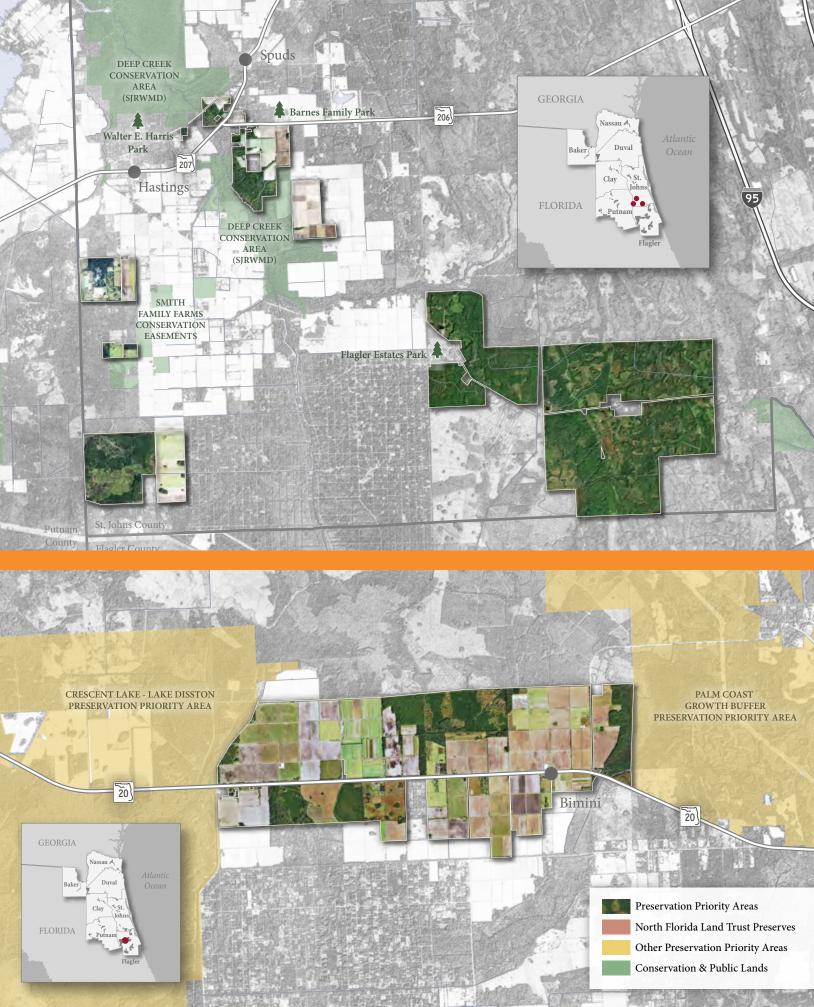


**CABBAGE** 



FOOD VALUE OF \$12,600,000 PER YEAR









Are you concerned about maintaining a natural and healthy Northeast Florida? The special places which make up our region are disappearing, and so we must act now.

There are other plans focused on the preservation of Florida as a whole, plans such as Florida Forever. These plans, while vitally important to our state, are not specifically focused on the needs of Northeast Florida.

We created the Preservation Portfolio after considerable research, input and thought, to establish a minimum for what must be preserved in order to retain the essential character of our home region. We had to ask ourselves many questions, such as: how do we ensure our water quality for the future? How can we put enough habitat aside to ensure biodiversity? Can we identify enough tillable soils to guarantee we have fresh, local foods for the future? Which of these places are the most likely to be threatened by population growth and sea level rise? The 112,000 acres in this report are not the only worthy conservation projects for Northeast Florida. In fact, they represent a mere 3% of our operating area, but we believe they are the most important projects for Northeast Florida.

The reality is that we are slowly, and bit by bit, losing Northeast Florida. We have in our area two of the most rapidly developing counties in the nation, St. Johns and Flagler Counties. In St. Johns County alone, a small town's worth of people is relocating there every year - 8,000 people or more. If we want to preserve our land for the future, we must act now. If you are a landowner in one of our Preservation Priority Areas, please reach out to us to find out how to preserve your property. If you are not, lend us your voice and support, as we work to find the resources to preserve these special places.

Come and join us as we protect the land and preserve our future!

Marc Hudson Land Protection Director North Florida Land Trust

> 36 Photo credit: Jenny Alvarado

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