Sustainable Jacksonville

2016 Report

Prepared by the UNF Environmental Center

Energy · Water · Transportation · Resiliency · Sustainable Jacksonville · Green Space · Waste · Administration · Community

The University of North Florida's Environmental Center is proud and excited to begin the ambitious undertaking of creating a sustainability report for the public sector of Jacksonville. We believe that the many public authorities and organizations in our city and region are continuing to strive toward more sustainable practices. However, we feel that there has been a gap in communicating these efforts to the general citizenry in a holistic, big picture sense. The center has also identified a specific need for reporting on what the region is achieving in order to remain consistent and competitive when being ranked by various national organizations on topics ranging from energy efficiency to walkability. This program seeks to unify the information of the many authorities and organizations which have an environmental impact on our region into one accessible report. We believe that building partnerships will be the best way to both achieve this goal and help our local community reach our utmost green potential.

This project has been discussed for the past few years but has only recently been feasible to undertake due to the development of our Environmental Leadership Program (ELP). The ELP seeks to develop students at the University of North Florida into the next generation of great environmental leaders. These are students who are driven and hope to make a positive impact on their community and the world at large. For the first inaugural effort, this report was assembled by Kevin O'Halloran with input from our entire team of community partners, design help from Caitlyn Kangle and the guidance of Maria Mark. Our center sees so much potential in our future leaders and the ELP effort that they embody. This Sustainable Jacksonville Report is just one of many great initiatives that our students are undertaking and we hope that this will be a hugely successful program moving forward. It is our hope that through this effort and others we can truly begin to make Jacksonville the sustainable community we know it can be.

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Special Thank you to Marci Larson, Wanda Forrest, David Dunkley, James Richardson, Andy Rodgers, Margo Moehring, Scott Skinner, and Wayne Young for their input and support towards this report.

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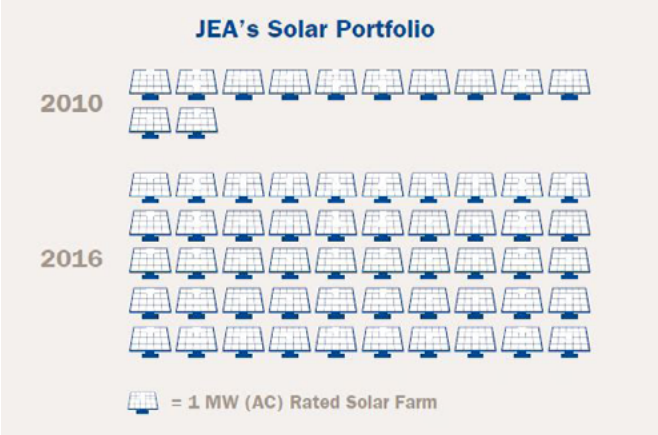
Energy

Energy production and consumption is one of the most important aspects of understanding a community's carbon foot print and environmental impact. Sources of energy like coal or natural gas are known as fossil fuels and when burned, can produce emissions like carbon dioxide (CO_2) which contribute to climate change. However, not all fossil fuels are exactly equal. Though there may be issues associated with initial extraction, natural gas burns cleaner and produces only about 25% as much CO_2 as coal, while also emitting less particulates like nitrox oxide and Mercury. Alternatively, sources of energy like solar and wind are known as renewables and come from the unending supply of natural systems. These sources emit no greenhouse gasses and are significantly better for human health and environmental sustainability. According to the Environmental Protection Agency (EPA), electricity generation accounted for roughly 30% of all U.S. greenhouse gas emissions emitted in 2014. This means that paying attention to how we generate electricity here in Jacksonville is very important to understanding our total impact on our local community and the planet.

About:
The Jacksonville Electric Authority (JEA) is the municipal electric and water utility for the Jacksonville area which owns more than 745 miles of electric transmission lines, 6,640 miles of distribution lines and provides electricity to more than 438,000 customers around Northeast Florida. In 2015, the utility primarily used coal, natural gas and petroleum coke to generate electricity at 53%, 28%, and 11%, respectively. However, there are efforts to capture more energy from renewable resources in the coming years. Learn more by reading JEA's Corporate Cizitenship Report



Initiatives

Fuel Mix
- Solar: JEA plans to add 38 MW of utility scale solar PV in 2016 to reach 50 MW of total capacity powering roughly 7,080 homes.
- Landfill Gas: In 2011, JEA agreed to purchase 18 MW from landfill gas-to-energy facilities.

Efficiency
- LED Lighting Installation: JEA has started its six year plan to install 20,000 LED street lights for an eventual 50% reduction in street light energy consumption or $1 million in savings. Over 5,630 new LED lights have been installed so far.
- Utility Tracker: "My JEA Utility Tracker" is an online tool that is part of a smart grid initiative and allows customers to track their electric and water consumption daily.

Rebates
- Net-Metering: JEA established this program to encourage private solar installation. Customers are reimbursed at a set retail rate for every kWh sent to the grid by their solar system.
- Electric Vehicle Rebate: JEA offers up to $1000 in rebates for customers who buy an electric vehicle. Rebate amounts vary depending on battery size and are for plug-in electric passenger type vehicles (all electric and hybrid) licensed to operate by FDOT.
- Other Rebates: JEA offers a wide range of home energy rebate options for: lighting, heating/cooling, insulation and solar hot water heaters.

JEA Community Outreach Initiatives

Community

DUVAL COUNTY PUBLIC SCHOOLS

- Duval County Public Schools: The DCPS system with the help of JEA rebates on efficient lighting and HVAC systems has achieved a district energy cost of $152.42 per student. This cost per student ratio is the lowest among the seven largest urban school districts in the state and second-lowest cost per student among Florida's 67 school districts. This has allowed DCPS to save roughly $6 million on energy costs that can now go towards educational programs.

- Home Energy Audit Kit: JEA Home Energy and Water Evaluation Kits can show you how to lower your monthly utility costs using a wide range of assessment tools. These kits are available to be checked out from Duval, Nassau and St. Johns County (near Ponte Vedra) public libraries. In 2013, this program was awarded a Green Initiative Award from the U.S. Green Building Council North Florida Chapter.

Administration

City of Jacksonville Ordinance

Title VIII Ch. 327- Sustainable Building Program:

"It is the intent of the Council in creating this Sustainable Building program to demonstrate a substantial commitment on the part of the City to finance, plan, design, construct, manage, renovate, commission, maintain and deconstruct County Buildings with sustainable building standards and to support development of privately owned buildings in Jacksonville to sustainable standards. The purpose of this program is to provide the City with a certification-based "sustainable building" program to promote sustainable and environmentally friendly practices of design, construction, commissioning, maintenance and retirement for buildings. It also the intent of Council to comply with F.S. § 255.2575."

In 2015, Jacksonville's City Hall was designated as an ENERGY STAR cerified building.

JACKSONVILLE TRANSPORTATION AUTHORITY

About:

The Jacksonville Transportation Authority (JTA) is the primary public transportation and infrustructure entitiy for Duval County. Though their main focus might be getting commuters from point A to point B, there is also an emphsis placed on remaining energy efficient and doing their part to conserve resources. JTA has undertaken a few initiatives to help fulfill this goal.

Initiatives

Jacksonville Regional Transit Center

- The JTA has selected a final design for the $40 million future regional transit center which should be completed by 2019. The Jaxis transit hub will serve as the connection point for all of JTA's many transit services to move riders throughout Jacksonville. Beyond being a new iconic structure in Downtown the building will meet stringent sustainability and efficiency standards.

Efficiency

- LED Lighting: JTA's Kings Ave. garage was upgraded with LED lighting and occupancy sensors, which have resulted in an estimated 75% savings in energy costs. JTA also has 10 LED roadway projects planned and an authority-wide lighting assesment currently underway.

JAXPORT
JACKSONVILLE PORT AUTHORITY

About:
Jacksonville's Port Authority (JaxPort) is at the heart of the local economy and is responsible for shipping tons of goods in and out of Northeast Florida. While the port is mainly concerned with the transportation of these goods, the terrminals which handle this freight can also have a major impact on energy consumption and, by extension, the local environment. JaxPort is committed to trying to increase port terrminal efficiency as much as possible.

Initiatives

Crane Emission Reductions

- JaxPort received a $15 million FDOT grant to replace its existing diesel-operated cranes for the Blount Island Marine Terminal with new 100-gauge electric cranes. The cranes will be in operation by the end of 2016 and will significantly reduce port emissions, while allowing for greater cargo handling capacity. JaxPort's long-term strategic plan calls for the purchase of a total of 10 new 100-gauge cranes.

Efficiency

- LED Lighting: JaxPort has plans to upgrade all lighting at its various terminals to energy efficient LED bulbs within the next few years.

JAA
Jacksonville Aviation Authority

About:
The Jacksonville Aviation Authority (JAA) is responsible for the oversight of four seperate airports in Duval County. Each of these facilities serve differnt needs in the region, from JAX serving over 5.5 million passengers per year, JAX EX serving executive flights, Cecil hosting the military and a spaceport to the small Herlong airport serving recreational pilots. These four facilities and their operations combined can have a large energy footprint, so JAA is striving to improve efficiency as much as possible.

Initiatives

Jacksonville International Airport

- Reduced airfield electricity use (kWh) by 35% in 2014, with a 2006 baseline
- Reduced terminal electricity use by 5% in 2014, with a 2010 baseline
- Reduced other electricity use by 5% in 2014, with a 2010 baseline

Cecil Airport/Spaceport

- Goal to reduce electricity use by 10% by 2016, with a 2011 baseline
- Reduced natural gas use by 10% in 2014, with a 2011 baseline

Jacksonville Executive Airport

- Goal to reduce electricity use by 10% by 2016, with a 2011 baseline

Herlong Airport

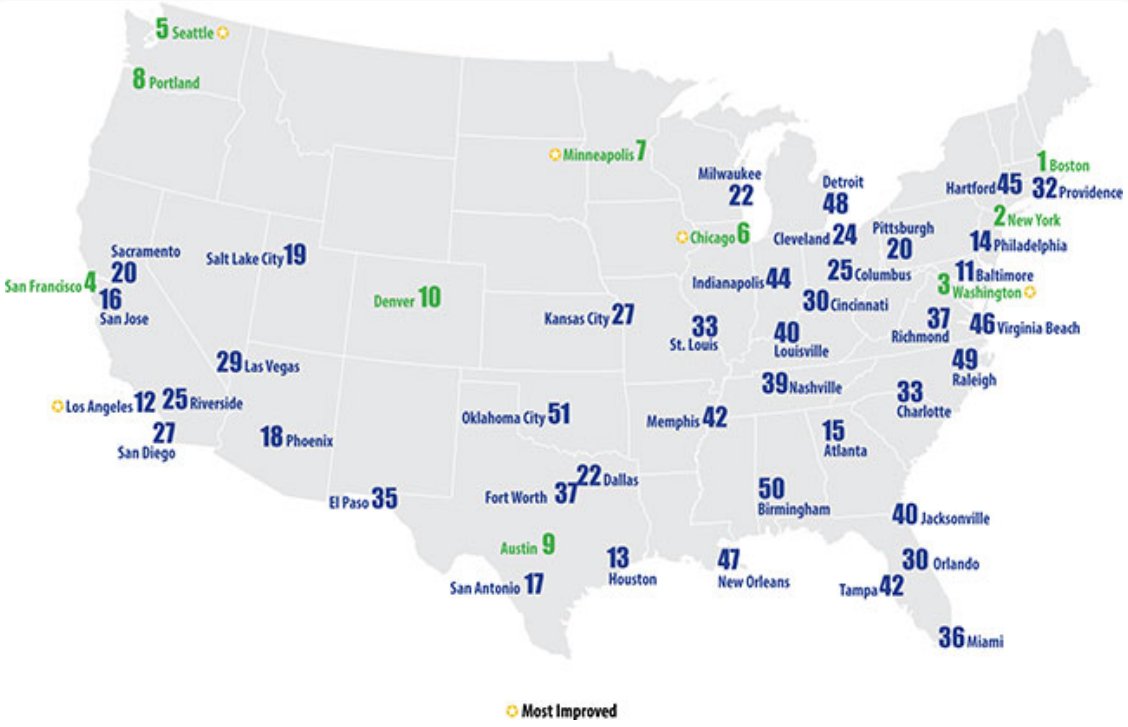
- Goal to reduce electricity use by 10% by 2016, with a 2010 baseline

How do we Rank? 2015 ACEEE City Energy Efficiency Scorecard

The American Council for an Energy-Efficient Economy (ACEEE), a nonprofit, acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors. ACEEE believes that the United States can harness the full potential of energy efficiency to achieve greater economic prosperity, energy security, and environmental protection for all its people.

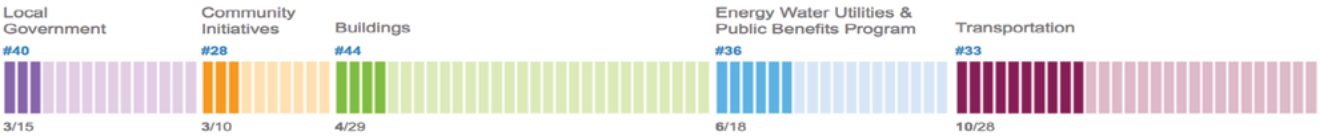
The second biennial ACEEE City Energy Efficiency Scorecard measures the progress of city policies and programs that save energy while benefiting the environment and promoting economic growth. ACEEE ranked 51 large U.S. cities for their energy efficiency efforts across five policy areas: local government operations, community-wide initiatives, buildings, energy and water utilities, and transportation.

Jacksonville ranked 40th in the country for energy efficiency. To find out more details about this ranking Click Here



JACKSONVILLE

Rank #40 TOTAL SCORE: **26**



CITY STATS

- Point Change from *2013 Scorecard*: +8.75
- City pop.: 842,583
- Metro pop.: 1,394,624
- Utilities: JEA (elec), TECO PGS (gas)

BEST PRACTICES

- 2030 Mobility Plan identifies VMT per capita reduction target and contains other measures to reduce transportation-related energy use.
- High citywide combined heat and power capacity and several district energy systems.

AREAS FOR IMPROVEMENT

- Increase resources for building energy code compliance, advocate for stronger statewide residential and commercial building energy codes, and adopt building benchmarking and transparency policies.
- Establish local government operations and community-wide energy-savings goals.
- Greater investment in electric and natural-gas utility efficiency programs.

POLICY CATEGORIES

Infographic data based on ACEEE's *2015 City Energy Efficiency Scorecard* released May 2015

ACEEE
American Council for an Energy-Efficient Economy

Water

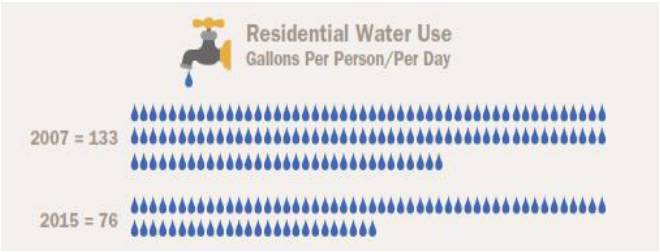
Jacksonville has always had a special relationship with water. Whether it is gently flowing up the St. Johns River, wading on the intercostal or making waves at the beaches, our city is surrounded by it and our two fates are inextricably linked. Though it may seem as though we have plenty of water to work with, it is actually our most precious resource and one that is facing many challenges today. As the ocean begins to rise and acidify it threatens our shores, the health of our river and the aquifer we drink from. As we expand, our fertilizer from lawns and our waste from sceptic tanks seep into and poison our many creeks and streams. Jacksonville is beginning to face these problems by focusing efforts on conserving potable water and improving our wastewater infrastructure.

JEA

About:

The Jacksonville Electric Authority (JEA) is the municipal electric and water utility for the Jacksonville area which delivers over 107 million gallons of water per day throughout Northeast Florida. JEA is also responsible for 3,700 miles of collection lines, over 1,200 pumping stations and 11 sewer water treatment plants. All these things considered, JEA has a huge impact on the region's water systems and is commited to being the best possible steward of of this precious resource.

Learn more by reading JEA's Corporate Citizenship Report



Jacksonville's Per Capita Water Use

In 2015, per capita residential water use was around 76 gallons per person per day. This is down significantly from 2007 when per capita usage was closer to 133 gallons per day. That is a reduction of 41% in less than 10 years. This per capita use is also slightly less than the national average of 80-100 gallons estimated by the EPA.

Initiatives

Sewage Upgrades

- JEA has invested $400 million to replace failing sewer pipes and upgrade sewer pump stations resulting in an 80% decrease in annually reported sewer overflows.
- JEA also invested $220 million to upgrade the regional sewer treatment plants. The Buckman wastewater treatment plant received the EPA's Operations and Maintenance Excellence award in 2003 for best large facility in the US.
- The authority recently converted its old waste solids incineration plant into a new facility which, in partnership with Green Technologies LLC, processes these solids into a commercial grade slow-release organic fertilizer. The final product is called Green Edge and is commercially available.

Reclaimed Water and Discharge

- JEA has been aggressively pursuing reclaimed water to supply the needs of local irrigation. Today reclaimed water use has gone from 1 million gallons per day in 1999 to 13 million gallons in 2015, which reduces the need to draw more fresh water from the aquifer. This program received the state of Florida's highest reuse honor in 2015 by winning the David W. York Reuse Award.
- The wastewater disinfection process was upgraded to take advantage of new ultraviolet technology which eliminates the need for JEA to add hazardous chlorine to effluent which is discharged back into the St. Johns River.
- Nitrogen discharge into the St. Johns River was 1,450 tons per year in 1999, today it is below BMAP requirements at 577 tons per year.

JEA's waste collection and treatment system consists of more than

3,700

miles of collection lines,

1,200 +

pumping stations and

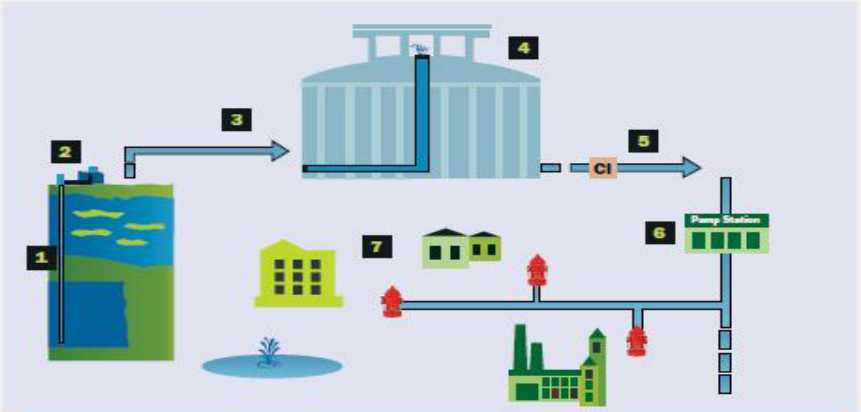
11

sewer treatment plants.

JEA's Reclaimed Water Use

Gallons in millions per day

How Water Is Processed

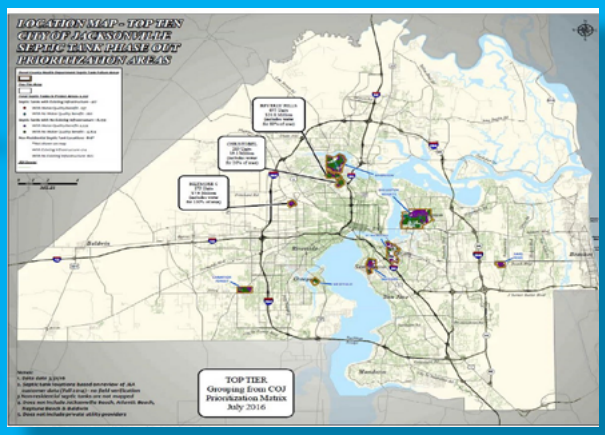


1. The Florida Aquifer is the source of water in Northeast Florida. JEA utilizes this source to provide potable (drinking) water to our customers. The aquifer is a gigantic underground river that courses through limestone formations many hundreds of feet underground. 2. Deep Well Turbine Pumps are used to draw the water from the aquifer and deliver it through 3. Well Headers to the 4. Water Treatment Plant. At the plant, the water is aerated and stored until there is demand for the water. As needed, the water is chlorinated and pumped into the system by the plant's service pumps. 5. Transmission Mains carry the potable water throughout the many miles of service area and ultimately deliver the water through 6. Distribution Mains, service connections, and water meters to our customers.

Administration

City of Jacksonville & JEA Septic Tank Phase Out Program

The City of Jacksonville and JEA recently announced a new $30 million deal to phase-out the use of septic tanks in the most environmentally sensitive areas of the city within 5 years. The program was approved by City Council on August 23, 2016 and will involve the installation of new water and sewer services in designated areas of the community. This initiative is in addition to a long standing program to help subsidize the voluntary transition away from septic sytems towards city sewer. Septic tanks are the second leading cause of nitrogen pollution in Florida's surface waters, after agriculture, and one of the leading causes of fecal coliform bacteria. The city and JEA hope to utilize this program to help improve water quality in Jacksonville.



Community

The Health of the St. Johns River

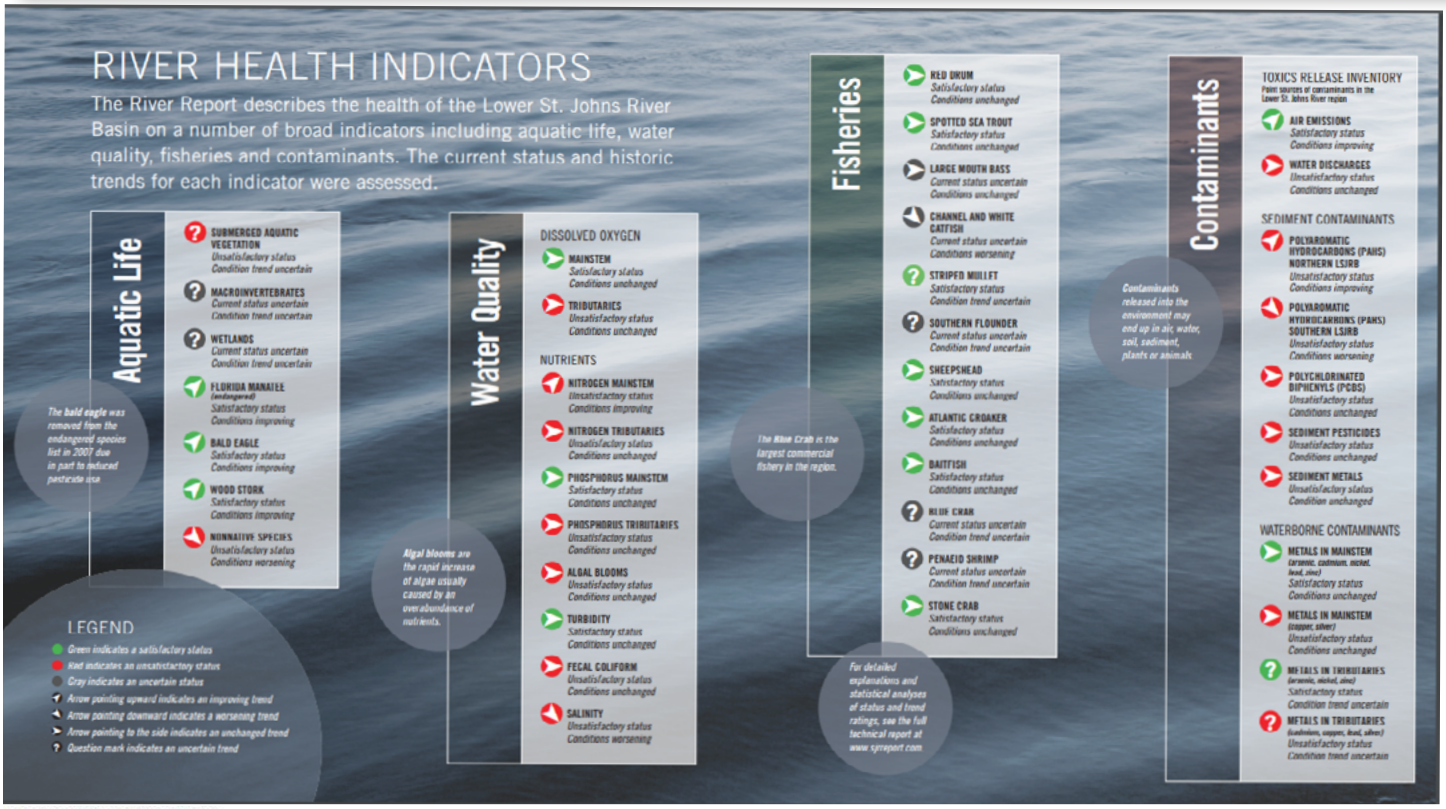
- St. Johns River Report: The State of the River Report for the Lower St. Johns River Basin is a report written by a team of academic researchers from Jacksonville University (JU), University of North Florida (UNF), Valdosta State University (VSU), and Florida Southern College (FSC). The State of the River Report was funded through the Environmental Protection Board (EPB) of the City of Jacksonville (COJ), Florida, and the River Branch Foundation. The report comprises one component of a range of far-reaching efforts initiated by Jacksonville Mayors John Delaney and John Peyton and continued by the River Accord partners to inform and educate the public regarding the status of the Lower St. Johns River Basin (LSJRB), Florida

THE RIVER ACCORD
A PARTNERSHIP FOR THE ST. JOHNS

- The River Accord: On July 27, 2006 JEA, COJ, DEP, SJRWMD and the Waste/Sewer Expansion Authority signed a $700 million, 10 year deal to restore the lower SJR basin by:
  1. Phasing out older technology waste water treatment plants
  2. Improving other treatment plants and installing pipelines for reusing treated waste water
  3. Eliminating failing septic tanks
  4. Capturing and treating storm water before it enters the river

Where Do We Stand Today?

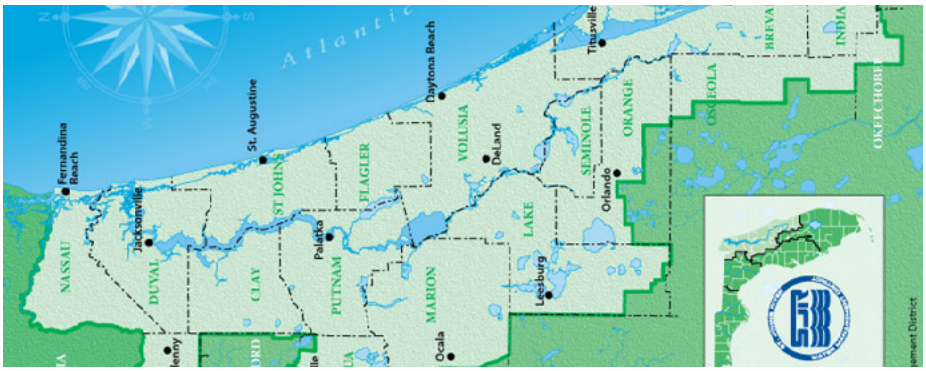
The River Accord and the State of the River Report have been in effect for years and have helped the community deal with some of the many challenges the St. Johns River faces. However, there is still much work to be done and goals yet to be met. A quick status update from the 2016 State of the River report and a reportcard from the Florida Times-Union on the 2006 River Accord can help citizens and elected officials gain an understanding of how much has improved and how much work is still left to be done.



A RIVER ACCORD REPORT CARD

The River Accord, signed in July 2006, was a 10-year plan that called for $700 million to improve the river's water quality plus $42 million to enhance riverfront access. Here is a report card on what got done and what remains unfinished.

JEA would contribute $200 million and the St. Johns River Water Management District would put up $150 million for wastewater treatment plants and reclaimed water projects.	**Done:** Shut down six of JEA's older wastewater treatment plants. **Done:** Upgrade JEA's five other plants so they would dump less nitrogen into the river. **Partially done:** Expand JEA's use of reclaimed water from treatment plants so it's used for purposes like irrigation instead of going into the river. JEA officials said in 2006 the goal would be 40 percent reuse rate for wastewater. It's reached 20 percent and JEA intends to keep expanding as new development occurs.
$200 million in federal, state and city funds would pay for removal of septic tanks.	**Partially Done:** Remove 21,000 failing septic tanks from 22 neighborhoods. To date, about 1,000 septic tanks have been removed through River Accord. **Not done:** Form a mitigation bank that developers wanting to add new septic tanks would pay into, and the money would help remove failing septic tanks. **Not done:** Increase setback for septic tanks located near water sources to more than the state-required 75 feet.
$150 million from the city would pay for stormwater retention projects to treat water runoff before it enters waterways. The city also would tighten regulation of fertilizer.	**Done:** Update city's master stormwater management plan. **Partially done:** Create more regional retention ponds instead of smaller ponds to handle and treat stormwater runoff. **Not done:** Require use of more environmentally friendly fertilizer throughout Jacksonville. (A fertilizer ordinance did set limits on how close fertilizer can be used near waterways)
$42 million in federal, state and city money to add access to the river.	**Partially Done:** Add river taxis throughout Timucuan Ecological and Historical Preserve. Boat landings were built, but National Park Service hasn't been able to get taxi service started. **Done:** Upgrade Huguenot Park. **Done:** Upgrade the Southbank Riverwalk. New concrete structure replaced wood-decked riverwalk. **Partially done:** Build bike trail from Nassau County to Huguenot Park. Some sections have opened and work continues to build out route.
Measure the progress of the River Accord and the river's ecological health.	**Done:** Track the amount of sediment going into the river. UNF does this report. **Done:** Compile annual State of the River report by UNF and Jacksonville University. **Done:** Create a steering committee to track progress and milestones.



Courtesy of the Florida Times-Union*

Initiatives

Jacksonville International Airport

- Goal to reduce water use by 15% by 2016, with a 2009 baseline. This is being accomplished by installing low flow water fixtures throughout the terminals

Cecil Airport/Spaceport

- Goal to reduce water use by 10% by 2016, with a 2009 baseline
- Install low flow water fixtures in all new renovated installations
- Use native and drought tolerant plants for landscaping

Jacksonville Executive Airport

- Goal to reduce water use by 10% by 2016, with a 2009 baseline

Herlong Airport

- Goal to reduce water use by 10% by 2016, with a 2009 baseline

JAA Jacksonville Aviation Authority

About:

The Jacksonville Aviation Authority (JAA) is responsible for the oversight of four seperate airports in Duval County. Each of these facilities serve differnt needs in the region, from JAX serving over 5.5 million passengers per year to the small Herlong airport serving recreational pilots. These four facilities and their operations combined can have a large impact on regional water use, so JAA is striving to improve efficiency as much as possible.

JAXPORT JACKSONVILLE PORT AUTHORITY

VS

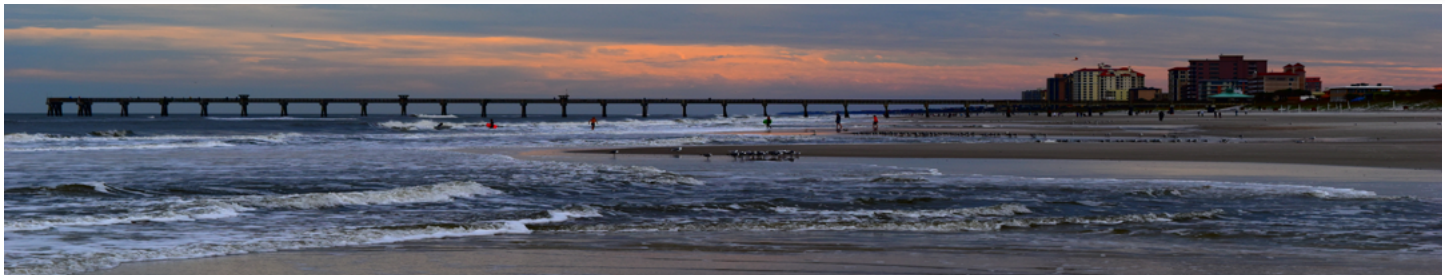
ST. JOHNS RIVERKEEPER®

Community

Community Conversation:
St. Johns River Dredging and Port Expansion Project

With the recent expansion of the Panama Canal, to support the passage of larger "Post-Panamax" ships, there has been a great deal of discussion in the Jacksonville community about deepening the St. Johns River in order to compete for these new vessels. This has led to a sometimes contentious debate about the economic future of our port, the health of our river and the pros and cons of both. JaxPort and the US Army Corps of Engineers contend that expansion will spur a significant economic boost in Northeast Florida and are confident that the adequate amount of environmental remediation will be included in the project. The St. Johns Riverkeeper, however, disagrees with these claims and believes the port deepening will have costly ramifications for our sensitive river ecosystem with little economic benefit to show for it.

To learn more about this community debate please visit both the JaxPort and Riverkeeper sites for more information.



Transportation

Jacksonville serves as a multi-modal hub for a plethora of transportation options. Our city sits at the intersection of two major U.S. interstate highways, is a hub for multiple railways, hosts an international airport and has one of the largest ports on the eastern seaboard. Transportation is in many ways the lifeblood of our economy and allows for the smooth functioning of citizen's daily lives. It then goes without saying that transportation leaves an impact, but this impact extends far beyond just the economy and those who work within it. The wide range of transportation options in Jacksonville also have an environmental impact which can sometimes be significant. From emitting green house gasses and smog causing pollution to contributing to suburban sprawl, transportation is a major factor when considering a region's environmental footprint. This is why Northeast Florida's various transportation entities are continuously striving to become more efficient and "green" to better serve the region's citizens, the economy and our precious natural environment.

JACKSONVILLE TRANSPORTATION AUTHORITY

About:

The Jacksonville Transportation Authority (JTA), is an independent state agency serving Duval County, which has multi-modal responsibilities. JTA designs and constructs bridges and highways and provides varied mass transit services. These include express and regular bus service, community shuttles for a neighborhood ride, a downtown Skyway monorail, the Trolley service, the Stadium Shuttle for various sporting events at Jacksonville Stadium, Paratransit for the disabled and elderly, and Ride Request on demand services. In 2016, JTA was even awarded an Outstanding Public Transportation System Award for medium sized transit services from the American Public Transportation Association (APTA).

Initiatives

Route Optimization

In November of 2014, JTA launched its route optimization program where almost every bus route in the city was tweaked in order to improve efficiency and meet the current needs of transit riders in Jacksonville. The three focus upgrades include:

1. Simpler downtown circulation with under 10 min. frequency
2. 100 mile frequent bus network
3. 22 routes with 30- minute or better service

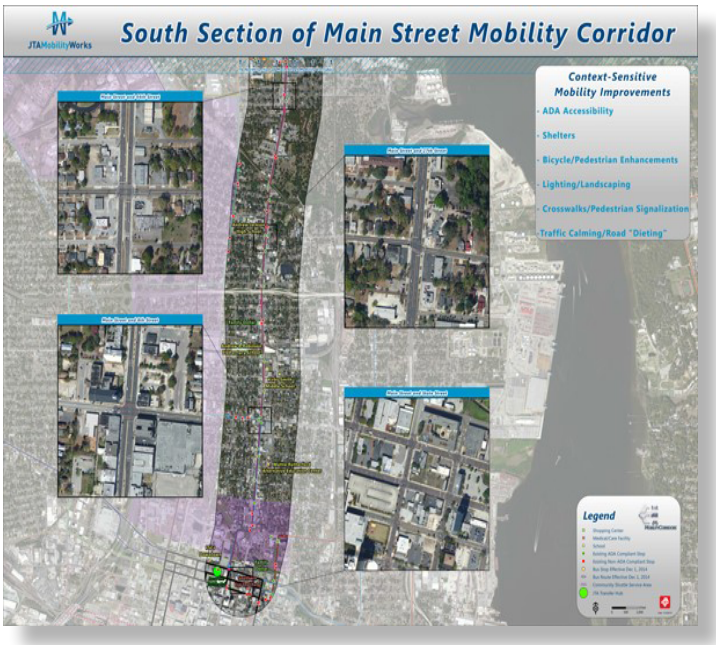
Compressed Natural Gas (CNG)

- Bus Rapid Transit (BRT): In December 2015, the north corridor Green Line of the First Coast Flyer system was launched as the first BRT route in the city and features eight top of the line CNG busses to service riders. Once it's complete, the First Coast Flyer (FCF) system will connect customers to 57 miles of destination travel downtown and in the north, southeast, east and southwest areas of Jacksonville using only the most efficient CNG busses. Flyer service requires minimal use of schedules and features fewer stops, waits of 10-15 minutes, easier transfers and frequent trips. Once the FCF system is complete it will be the largest BRT system in the southeastern United States. As the region expands, the Flyer will be an essential part of a streamlined transit system that can grow and improve with the times.
- Standard Bus System: JTA hopes to add 100 CNG powered busses to its standard routes within 5 years.

Initiatives Cont.

Complete Streets:
JTA has launched its Mobility Works Program where it seeks to address the safety concerns for both pedestrians and bicyclists on fourteen strategic mobility corridors throughout the city over the next 5 years. Projects will include upgraded sidewalks, bike lanes, ADA compliant crossings, aesthetically pleasing landscapes, transit improvements, traffic calming measures and road diets, where applicable. To see renderings and plans for complete street improvements download the document from JTA's Mobility Works website.

Ridership:
JTA's public bus ridership has grown over the past couple of years from 11,220,230 rides in 2013 up to 11,634,258 rides in 2015. JTA is trying to retool to attract not only its frequent customers but also "choice riders" who can choose to either take public transit or drive alone. Skyway rides are also up to about 1,315,833 in 2015 from 1,079,179 in 2013.



JTAMobilityWorks

JAA Jacksonville Aviation Authority

About:
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Initiatives

Jacksonville International Airport
- Goal to reduce fuel usage by 10% by 2016, with a 2011 baseline

Cecil Airport/Spaceport
- Goal to reduce fuel usage by 15% by 2017 with a 2011 baseline

Jacksonville Executive Airport
- Goal to reduce fuel usage by 15% by 2017 with a 2011 baseline

Herlong Airport
- Goal to reduce fuel usage by 15% by 2017, with a 2011 baseline

City of Jacksonville
Pedestrian and Bicycle Master Plan Study

The City of Jacksonville has hired Toole Design Group to assist with the development of a Pedestrian and Bicycle Master Plan in response to Jacksonville's designation as a Focus City. Mr. Andy Clarke, former President of the League of American Bicyclists and Director of Strategy for Toole Design Group, is the Consultant Project Manager.

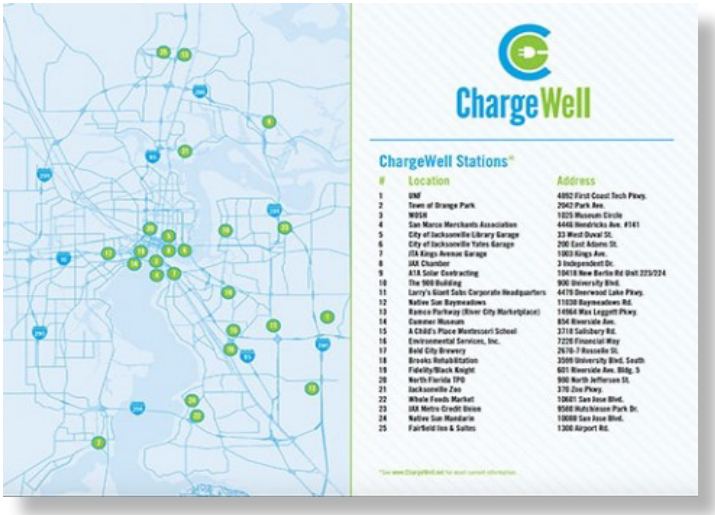
The plan will establish a baseline of existing conditions, identify needs, establish a recommended network, and help to prioritize strategies that will increase the number and frequency of people walking and bicycling while improving safety within the City of Jacksonville. The City of Jacksonville expects that the Pedestrian and Bicycle master plan will:

- Identify vision, goals, and objectives which complement the City's 2030 Mobility Plan
- Outline existing conditions, needs, and deficiencies
- Identify a network of connectivity for walking and a network of connectivity for biking
- Establish project prioritization methodology
- Identify near and long term implementation strategy
- Outline key recommendations
- Identify policies and programs that educate and encourage safe pedestrian and bicycle activities

Two products of this study will be a Pedestrian Safety Action Plan and a Bicycle Level of Service Assessment. (Project limit map)

North Florida TPO
Transportation Planning Organization
PLAN · FUND · MOBILIZE

About:
The North Florida Transportation Planning Orgaization (TPO) is the principal regional body for transportation planning in Duval, Clay, Nassau and St. Johns counties. The TPO is involved with many initiatives which seek to improve regional transportation efficiency to help get people where they need to go. Beyond efficiency, the TPO also seeks to reduce our collective impact on the environment by persuing partnerships that help make alternative fuels more attractive for businesses and commuters alike.



Initiatives

Electric Vehicles
TPO partnered with JEA and launched the ChargeWell EV charging program in 2015 as part of their Clean Fuels initiative. For the first phase, both organizations installed a total of 25 EV charging stations throughout Jacksonville. By the end of 2016 the TPO hopes to expand this program across Duval, Clay, Nassau and St. Johns counties. After just the first phase of installations, Jacksonville has seen the number of electric vehicles owned climb to around 900.
(Not a large raw number but one that signals exponential growth)

Compressed and Liquified Natural Gas (CNG & LNG)

- Public Access CNG Stations: TPO partnered with JTA to open an authority owned CNG station on Myrtle Ave. that will both fuel JTA busses and be open for public use so that the business community may have open access. Another partnership with Champion Brands has also led to a second CNG fueling station on Jacksonville's Southside. These investments have spurred other private sector investors like GATE to build public access CNG stations that in turn grow the market.
- LNG Stations: Due to TPO partnerships, both Eagle LNG Partners and Pivotal LNG have decided to build stations in Jacksonville. Eagle LNG Partners will open a public access station on Heckscher Dr. while Pivotal LNG has signed an agreement with WesPac and TOTE to provide fuel for new state-of-the-art container ships near Dames Point.

Clean Cities Designation

On June 29 2016, Jacksonville and the NE Florida region was officially designated as a "Clean City" by the U.S. Department of Energy. The Clean Cities initiative seeks to advance the nation's economic, environmental and energy security by supporting local actions to cut petroleum use in transportation. The coalition consists of 93 local chapters throughout the country and has helped to save more than 7.5 billion gallons of petroleum since the program started in 1993. The North Florida TPO was at the forefront of gaining this designation and is leveraging many local partners towards the goal of a cleaner city.

Initiatives Cont.

CNG & LNG Continued

COJ Sanitation Vehicle Transition: TPO has helped transition seven COJ sanitation trucks (mostly operating near downtown) to CNG and hopes to add more in the coming years.

Regional CNG Initiatives

St. Johns County Fleet Conversion: $732,000 for converting 130 trucks to CNG bi-fuel

FEC Railway Freight Locomotive Conversion: $375,000 to purchase one of four LNG retrofit kits

North Florida Regional Transportation Management Center

The RTMC is an initiative undertaken by the TPO, FDOT and FHP in order to create a streamlined epicenter for traffic and transportation management in NE Florida. The center houses Florida Depatment of Trasportation, Florida Highway Patrol, Florida Wildlife Commission, Jacksonville Sheriff's Office and many other agencies which address the various issues related to transportation in the area. The purpose of this is to increase efficiency in how the larger transportation system operates. Accidents, traffic jams and detours for construction can all be dealt with from one central hub instead of multiple disconnected offices. Communication is key when dealing with a complicated network of roads and infrastructure so this seeks to address that with departments working together and observing the entire system. One major goal is to reduce traffic jams which can cause cars to idle and waste fuel for hours and add significant pollution to the air. The RTMC is proving to be a nationally acclaimed high tech solution for the future of transportation management.

JAXPORT
JACKSONVILLE PORT AUTHORITY

About:
Jacksonville's Port Authority (JaxPort) is at the heart of the local economy and is responsible for shipping tons of goods in and out of Northeast Florida everyday. Efficient transportation is the main focus of JaxPort in order to both keep the economy moving and the air clean. The port and its many cargo ships are unsurprisingly a large source of local air pollution, however, JaxPort is committed to persuing projects that seek to address these issues.

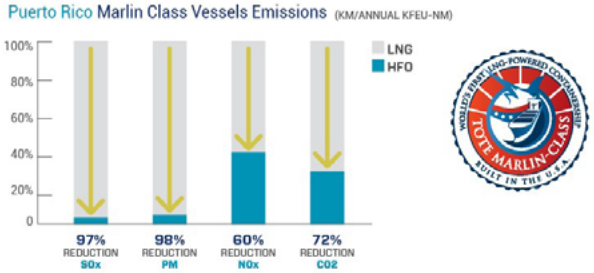
Initiatives

Clean Truck Program
JaxPort is partnering with the TPO to gain $162,000 in financial incentives for cleaner diesel or alternative fuel vehicles to operate ground shipping into and out of the port. In 2013 JaxPort also joined the Coalition for Responsible Transportation to learn best practices in sustainable operations and help improve air quality.

Intermodal Container Transfer Facility (ICTF)
JaxPort finished construction of the $30 million ICTF in late 2015 in order to directly connect all of the northern terminals and major CSX lines for a truly multi-modal transfer facility. The use of rail to transfer and ship container cargo significantly reduces the amount of trucking required to move freight and can have significant impacts on emissions and traffic congestion on local roads.

Liquified Natural Gas (LNG) Ships:
JaxPort has partnered with TOTE Maritime, Crowley Maritime and the TPO to pioneer LNG shipping technology in Jacksonville. TOTE Maritime and Crowley Maritime Corp. are taking a lead role in the emergence of liquefied natural gas as a preferred environmentally friendly fuel source in Northeast Florida. New ships will include:

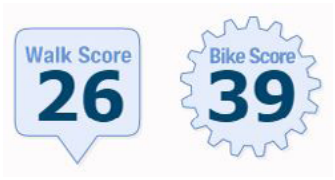
1. TOTE Maritime's two new Marlin Class U.S.-built, LNG-powered vessels, the Isla Bella and Perla Del Caribe, each have capacities of 3,100 twenty-foot-equivalent container units, making them the largest dry cargo ships powered by LNG. The technology increases fuel efficiency and the decrease in emissions is equivalent to removing nearly 16,000 automobiles from the road. The Isla Bella and the Perla Del Caribe are now working between JAXPORT and San Juan, Puerto Rico.
2. By 2017, Jacksonville-based Crowley Maritime Corp. will have two new, liquefied-natural-gas-powered, combination container-roll-on/roll-off ConRo ships supplying waters between JAXPORT and San Juan. The ships will replace towed triple-deck barge units that have served the U.S.-Puerto Rico trade since the early 1970s and will offer a 38% reduction in CO2 emissions per container compared with existing fossil fuels.



How do we Rank? Jacksonville Walk Score and Bike Score

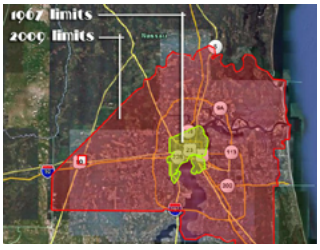
Over the past several decades, Jacksonville has struggled to create an urban environment which encourages walking and biking (the greenest form of transportation). Like many places throughout the country, the predominance of the automobile has prompted many transportation planners to place the needs of pedestrians and bicyclists last. This is reflected in the rankings put out by Walk Score, an internationally recognized organization which rates cities and their neighborhoods based on the "walkability" of their streets. In the latest rankings, Jacksonville scored a very low 26 out of 100 putting the city in 49th place out of the 50 most populated cities in the country for walkability. For biking, Jacksonville scored a slightly better 39 out of 100.

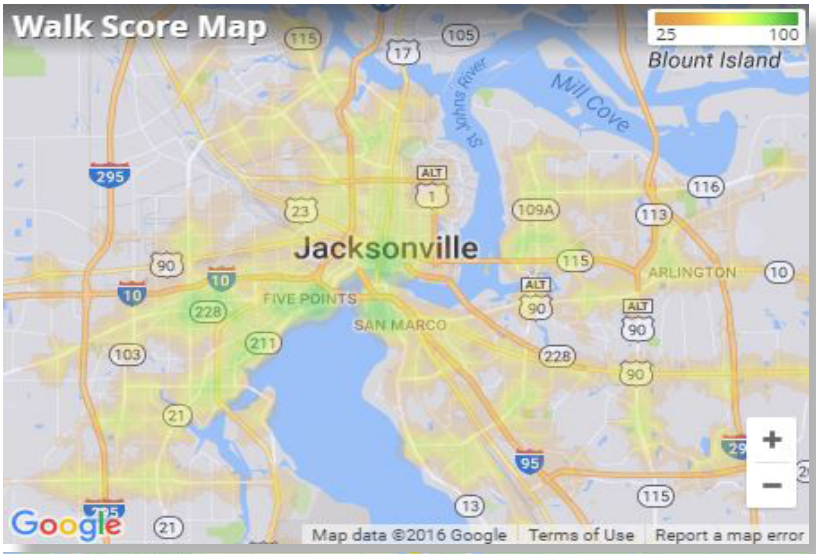
Though there needs to be priority placed on pedestrian and bicycle safety, it is important to note that unlike many other cities in the U.S. Jacksonville is a consolidated city which includes the entirety of Duval County. This means that all of the suburbs and rural areas surrounding what was once thought of as urban core Jacksonville are part of the city and these neighborhood scores are averaged in with those of more walkable urban neighborhoods. This might skew scores in favor of cities with a small urban footprint even if they exist in a sea of sprawl. A quick calculation of the average Walk Score for the pre-consolidation neighborhoods will result in a rough score of 52. Not spectacular, but it shows that there are some great walkable neighborhoods in Jacksonville to be enjoyed.

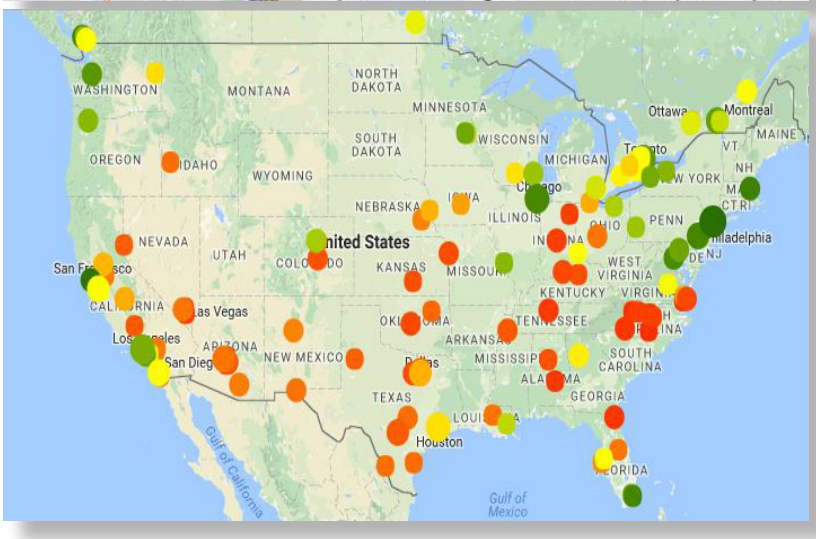


Jacksonville Neighborhoods

Rank	Name	Walk Score	Transit Score	Bike Score	Population
1	Downtown	75	-	71	6,232
2	San Marco	71	-	61	2,525
3	Riverside	70	-	52	9,909
4	Springfield	69	-	58	5,234
5	Avondale	66	-	59	5,571
6	Fairfax	65	-	62	1,738
7	LaVilla	64	-	51	694
8	Murray Hill	63	-	63	8,971
9	Normandy	61	-	57	544
10	Southside	60	-	60	2,109







Dangerous By Design

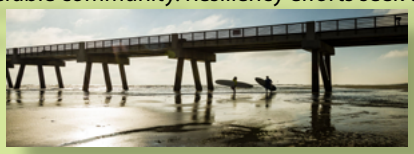
In 2014, Smart Growth America released their Dangerous by Design report focusing on bicycle and pedestrian safety across the country. Jacksonville ranked as the 3rd worst city in the nation for pedestrian fatalities behind the Orlando and Tampa metro areas. The city has since comitted to tackling some of the worst fatality areas to make our streets safer for pedestrians and bicyclists.

Large metro areas, ranked by Pedestrian Danger Index

Rank	Metropolitan area	Total pedestrian deaths (2003–2012)	Annual pedestrian deaths per 100,000 (2008–2012)	Percent of people commuting by foot (2008–2012)	Pedestrian Danger Index (2008–2012)
1	Orlando-Kissimmee, FL	583	2.75	1.1	**244.28**
2	Tampa-St. Petersburg-Clearwater, FL	874	2.97	1.6	**190.13**
3	Jacksonville, FL	359	2.48	1.4	**182.71**
4	Miami-Fort Lauderdale-Pompano Beach, FL	1,539	2.58	1.8	**145.33**
5	Memphis, TN-MS-AR	239	1.72	1.3	**131.26**
6	Birmingham-Hoover, AL*	148	1.33	1.1	**125.60**
7	Houston-Sugar Land-Baytown, TX	1,034	1.70	1.4	**119.64**
8	Atlanta-Sandy Springs-Marietta, GA	839	1.59	1.3	**119.35**
9	Phoenix-Mesa-Scottsdale, AZ	840	1.86	1.6	**118.64**
10	Charlotte-Gastonia-Concord, NC-SC	254	1.65	1.5	**111.74**
11	Detroit-Warren-Livonia, MI	713	1.55	1.4	**111.63**
12	Dallas-Fort Worth-Arlington, TX	900	1.31	1.2	**107.54**
13	Las Vegas-Paradise, NV	413	1.85	1.8	**102.67**
14	Riverside-San Bernardino-Ontario, CA	889	1.81	1.8	**102.17**
15	Nashville-Davidson-Murfreesboro-Franklin, TN	210	1.25	1.2	**100.79**
16	Raleigh-Cary, NC*	165	1.37	1.4	**100.35**
17	Louisville-Jefferson County, KY-IN	200	1.60	1.6	**98.48**
18	San Antonio, TX	373	1.86	1.9	**96.87**
19	Richmond, VA	167	1.32	1.4	**94.98**
20	Oklahoma City, OK	177	1.43	1.6	**87.16**

Resiliency

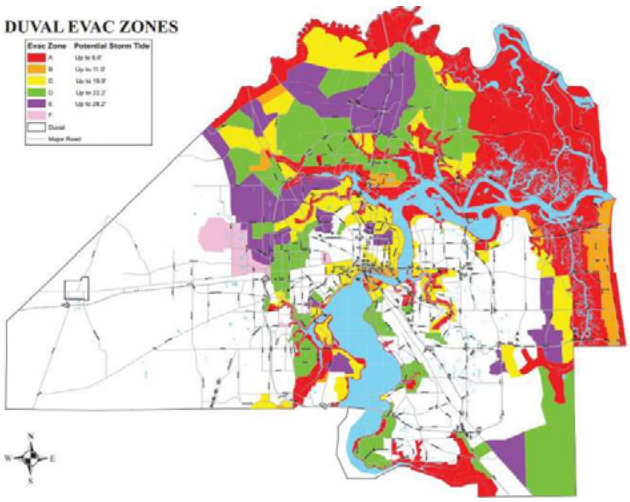
As climate change continues to effect global temperatures and threaten the stability of our polar ice caps, the threat of sea-level rise is encroaching upon coastal areas around the world. Florida, Duval County and specifically our beach communities are at the forefront of this slow moving adverse environmental impact. Following similar efforts across the country, local organizations and governmental bodies have begun to plan for some of the impacts that could one day reshape our vulnerable community. Resiliency efforts seek to address our vulnerabilities and leave us better prepared for not only sea-level rise, but also natural disasters as a whole, so that Jacksonville can continue to be a thriving city for generations to come.



Northeast Florida Regional Council

About:

Regional Planning Councils are authorized by Florida Statutes. There are 10 Regional Planning Councils in the State of Florida. The Northeast Florida Regional Council (NEFRC), which covers Regional District 4, was formed in 1977 by an inter-local agreement, pursuant to Chapter 163, Florida Statutes, to "...establish an organization that will promote area-wide coordination and related cooperative activities of federal, state, and local governments ensuring a broad based regional organization that can provide a truly regional perspective and enhance the ability and opportunity of local governments to resolve issues and problems transcending their individual boundaries."



Initiatives

Public/Private Regional Resiliency (P2R2)

On June 27, 2016, the P2R2 Committee released the next phase of action items to address resiliency in Northeast Florida. This effort was the result of work done by many partners and community volunteers who have dedicated themselves to resiliency. The action items are:

1. Education

NEFRC will create a presentation and train volunteers to visit organizations in Northeast Florida and discuss our risks and the benefits of resilience.

2. Insurers

NEFRC will reach out to insurers to build relationships and understand how their business works. We will use this understanding as we consider the actions of the Community Rating System Users Group and related policies specific to Northeast Florida.

3. Program for Public Information (PPI)

This type of program is a relatively new way for communities to get points (which can result in saving their residents money on flood insurance) in the Community Rating System. NEFRC will use the partnerships and resources identified in the first Action Phase to create a regional PPI with the potential to benefit all communities in Northeast Florida.

4. Comprehensive Plan Policies Related to Flood Risk

NEFRC will develop drafts of these for the consideration of local governments as they update their plan as related to §163.3178, Florida Statutes.

5. Regional Evacuation Planning

NEFRC and county partners will work together to prepare for evacuations.

6. Vulnerability Assessment

Regional Partners will meet to determine what data is already available, and what is needed for the various types of decisions to be made regarding resiliency issues. They will determine what data and/or analysis gaps exist, and work together to develop an approach to close the gaps.

Initiatives Cont.

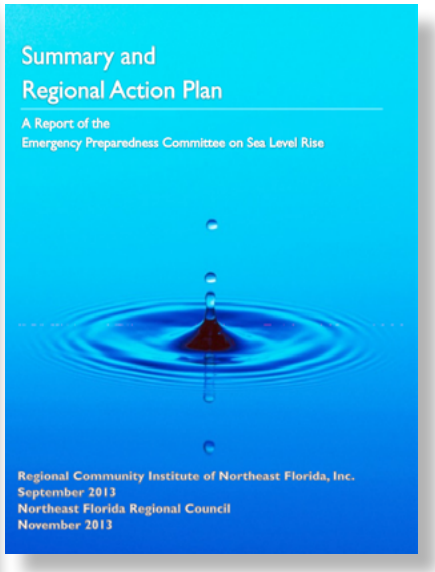
Regional Action Plan

"The Regional Community Institute of Northeast Florida, Inc. (RCI) is a non-profit organization created by the Northeast Florida Regional Council (NEFRC) to consider policy issues. In January 2012, NEFRC put out a call for information and opinions related to climate change in Northeast Florida, in response to an action item contained in First Coast Vision, the 2011 RCI-created vision for growth and development in Northeast Florida for the next 50 years. The overwhelming response to the outreach on climate change was information and opinions related to sea level rise. In August 2012, NEFRC assigned sea level rise as a policy issue to RCI. RCI assigned the topic to its Emergency Preparedness Committee. Their one-year work program included determining whether the seven county region (Baker, Clay, Duval, Flagler, Nassau, Putnam, and St. Johns counties) is vulnerable to sea level rise. If they deemed the region vulnerable, they were to review the available information and make assumptions as to range and level of rise and planning timeframe. They were then to work with coastal or waterfront local governments on community resiliency assessments, using the assumptions. Their final task was to take the best practices and lessons learned from the local government experience and make policy recommendations to the NEFRC in October 2013."

"The Committee volunteers therefore reviewed, with great appreciation, the work of those that had gone before and relied on their findings and the input of local experts. Based on what they learned, they decided Northeast Florida is vulnerable to sea level rise and the region should consider the potential for impacts of 6", 1', 3' and 6' of rise. The committee made observations based on a robust set of community resiliency assessments, designed to get a conversation started within local governments. They also created an extensive list of policies that they recommend NEFRC, other regional entities and local governments consider as they consider planning for sea level rise."

The Regional Action Plan lays out five overarching actions which the committee and NEFRC should undertake to address resiliency in the northeast Florida region. They include:

1. Create a Clearinghouse on Understanding Risk
2. Engage the Community
3. Save Money
4. Collaborate and Leverage Success



Administration

City of Jacksonville
Resiliency and Emergency Preparedness

1. Rockefeller Foundation's 100 Resilient Cities: Under former Mayor Alvin Brown, the city of Jacksonville was awarded participation in the 100 Risilient Cities initiative which granted it assistance in addressing concerns such as extreme weather and sea level rise. On Jan. 25, 2016, Mayor Curry's administration provided a letter from the president of the organization thanking the city for its participation, but stated that he understood "that the priorities of setting up your administration perhaps have made it a challenge to dedicate resources and time to making this partnership a success." Essentially, this ended the city's involvment in the organization and Jacksonville no longer has a stance on the potential threat of sea level rise.

PIONEERED BY THE ROCKEFELLER FOUNDATION 100 RESILIENT CITIES

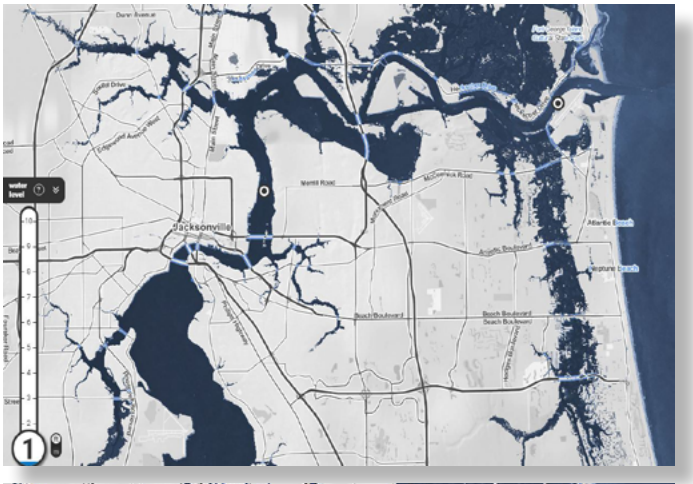
2. Emergency Preparendness- Jax Ready: Being a coastal city in Florida, Jacksonville always has to be prepared to deal with severe weather emergencies. From hurricanes and tornadoes to flooding, most deal with the destructive power of wind and water. This is why the city has developed an emergency preparedness program called JAX Ready. The program includes an emergency preparedness guide with information on evacuation zones, procedures to staying safe during severe weather and an inventory of supplies everyone should have to stay prepared. The effort also includes a mobile app to help give residance minute-by-minute updates and easily accessible information. Part of being a resilient city is always being prepared for hazardous extreme weather. This program was essential to making sure citizens had the best information during Hurricane Matthew on October 6, 2016.

JAX READY
CITY OF JACKSONVILLE EMERGENCY PREPAREDNESS

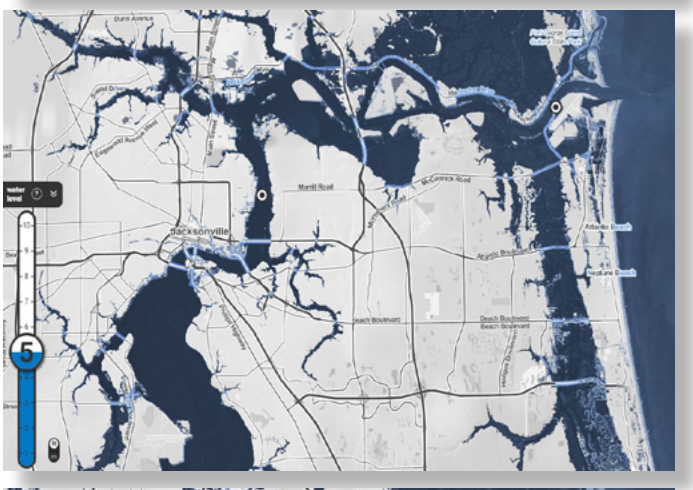
Surging Seas: Sea level rise analysis by Climate Central

Sea level rise is a topic very impotant to the future of many coastal cities around the world, but this is especially true right here in the state of Florida. Though some parts of the state have more at risk in the future with risings seas, northeast Florida could also lose entire segments of the community if preparation is not taken. In order to help communities across the world understand their risk, Climate Central released their Surging Seas database which provides a map that can be adjusted to demostrate where effects will be felt the most if sea level rise continues. This is where resiliency planning can have a great impact in preparing our communities to endure in a future affected by climate change.

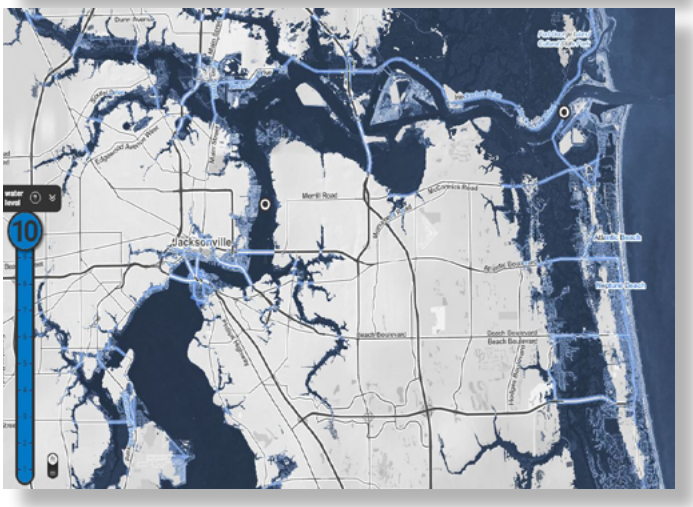
CLIMATE CENTRAL



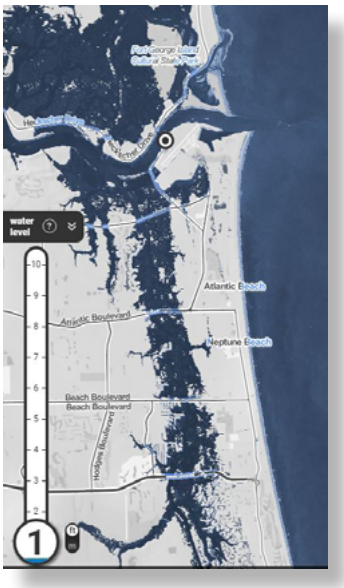
This overview of Jacksonville shows the effects of 1 ft. of sea level rise. If this level of rise were to occur, the city could expect extreme beach erosion, a higher level for waterways including the intracoastal waterway and disruption to local sewage systems. Residential displacement would be fairly minimal, though periodic flooding would be increasingly common and disruptive. Current projections place 1 ft. of rise occurring around 2060, though these impacts might be felt as soon as 2040.



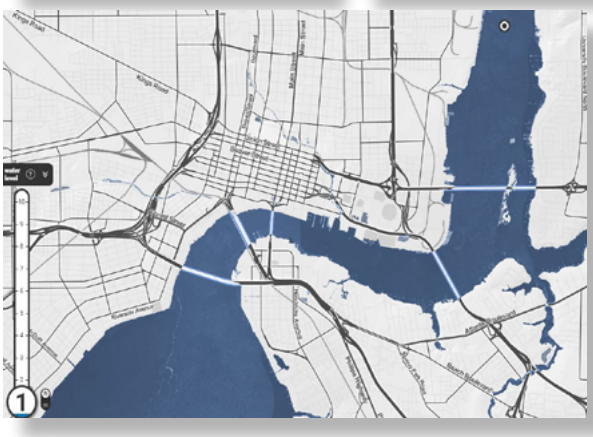
This overview of Jacksonville shows the effects of 5 ft. of sea level rise. If this level of rise were to occur, the city could expect a complete disapearance of beaches, a greatly expanded intracoastal waterway and St. Johns River system, and great disruption to city sewage and water supplies. Residential impact would be fairly significant especially in the beaches communities and in urban core neighborhoods like San Marco. Periodic flooding would become very common and disruptive to basic city functions. Current projections place 5 ft. of rise occurring around 2170, though these impacts might be felt as soon as 2120.

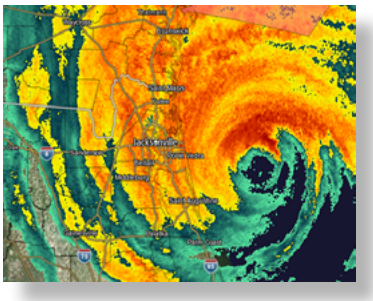


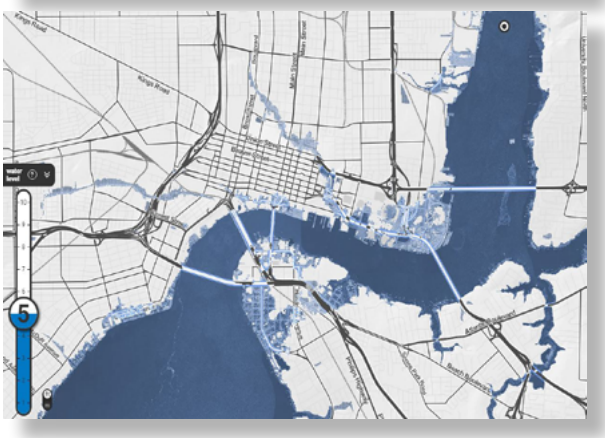
This overview of Jacksonville shows the effects of 10 ft. of sea level rise. If this level of rise were to occur, the city could expect the beaches communities and all of San Marco to disappear entirely, sewage and water systems to be completely disrupted, and a greatly expanded intracoastal waterway and St. Johns River system. This would disrupt almost all basic city functions. Many residents of Duval County would lose their homes, not only at the beaches, but also in the urban core, Ortega and in Arlington. Current projections place 10 ft. of rise occuring somewhere around 2200, but impacts could be felt as soon as 2180.

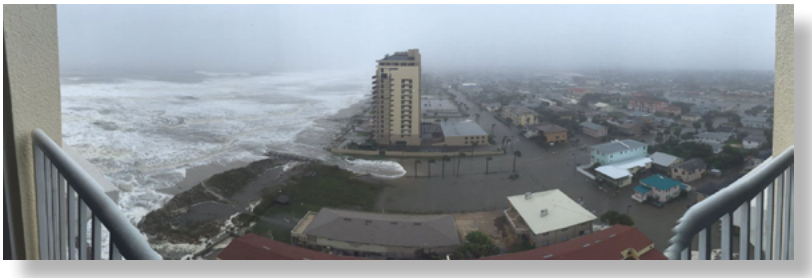


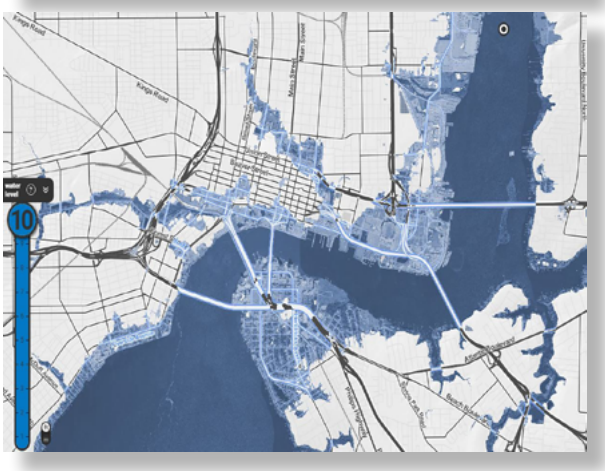
Left, are projections specific to the beach communities. The beaches are at greatest risk of sea level rise if nothing is done to develop a resiliency strategy. The maps demonstrate that with 5 ft. of sea level rise, large segments of Sawgrass, Ponte Vedra, Atlantic Beach and Mayport would expreience very disruptive flooding. Neptune beach and Jacksonville beach would also experience moderate flooding. As the water rises further to a projected maximum of 10 ft., almost the entirety of the barrier islands could be lost. Demonstrations of the potential for coastal inundation and susceptibility to storm surge were proven by Hurricane Matthew on October 6, 2016, when large segments of the beaches were flooded.











Left, are projections specific to Jacksonville's downtown and urban core neighborhoods. Many areas including Downtown, San Marco, Riverside, Springfield and the sports district could be highly susceptible to a rise in sea level which would also raise the level of the St. Johns River. A rise of 5 ft. along the river could lead to large portions of San Marco and the Southbank being flooded, as well as Everbank Field to the northeast. If the maximum of 10 ft. were to occur, almost no neighborhood would be unaffected including Arlington, Springfield/Eastside and Newtown. This type of flooding would not only displace residents from their homes, but would also greatly disrupt the economic resources which surround the urban core.

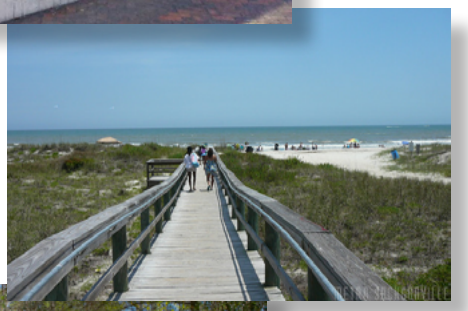
Green Space

With over 80,000 acres of public parks, Jacksonville boasts the largest urban park system in the United States. The metro area includes not only 400 municipal parks, but also national, state and city preservation parks. Jacksonville, under former Mayor John Delaney's leadership, embarked on the Preservation Project which sought to protect the precious natural places Duval County still had left. The project led to thousands of acres eventually being added to the city's park system to be protected and enjoyed. Today, there are an abundance of outdoor areas waiting to be explored. From the small peaceful pocket parks common in the city's urban core all the way to the huge tracts of protected land on the outter periphery. Some parks provide great recreational facilities while others just provide a place to relax. Overall, Jacksonville is home to unique mix of parks that anyone can take advantage of right now. So what are you waiting for? Get outside!

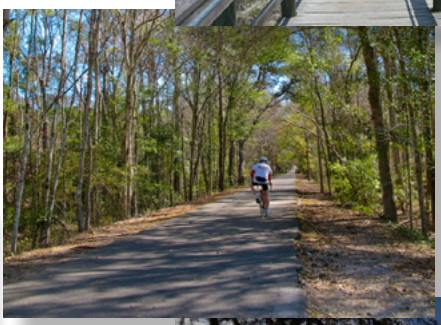
JAX Parks

About:
The Department of Parks, Recreation and Community Services provides the day-to-day management and oversight for one of the largest, most diverse, and unique urban park systems in the nation, with over 400 park and recreational sites within the city limits, consisting of a variety of parks; open spaces; trails; athletic facilities; community and senior centers; beaches; golf courses; aquatic facilities; boat and kayak launches; nature preserves; along with an amphitheater; arboretum and an equestrian center.

Hemming Park, Downtown

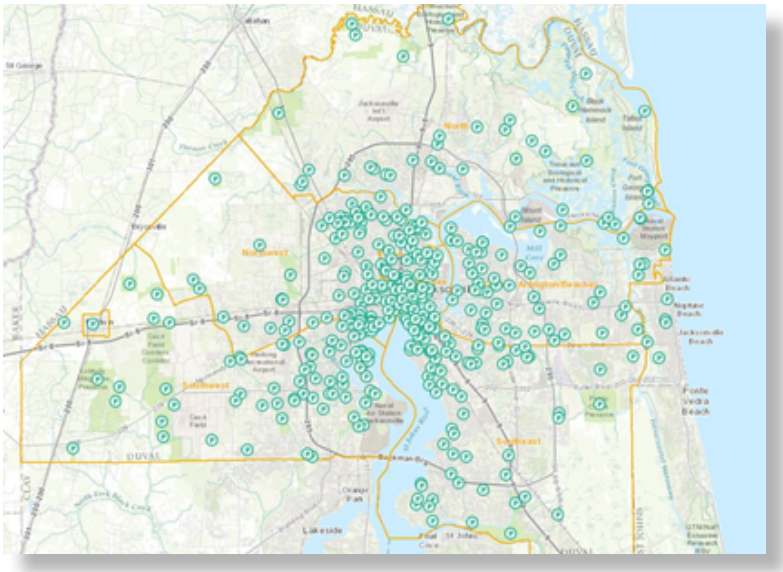


Hanna Park, Atlantic Beach



Baldwin Trail, Westside

Memorial Park, Riverside



City of Jacksonville
Section 25.03. - Tree protection and conservation; mitigation for loss or destruction of protected trees during development

During the clearing of land for development purposes, protected trees shall be conserved on the development site wherever and whenever reasonably possible. To the extent that protected trees are lost or destroyed as a result of the clearing of a development site, the developer shall mitigate for their loss or destruction by the planting of replacement trees as follows:

(a)The total caliper-inches of replacement trees required to be planted shall equal (i) the total number of dbh-inches of protected Live Oaks (Quercus virginiana) lost or destroyed on the development site, plus (ii) one-third of the total number of dbh-inches of other protected trees lost or destroyed on the development site, less (iii) the total dbh-inches for the tree conservation credits for those trees preserved on the site that qualify for tree conservation credits as defined in this article.

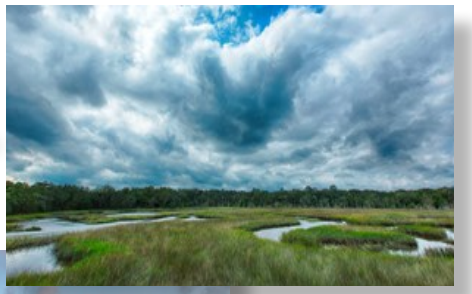
(b)The required amount of replacement trees shall be planted, established and nurtured on the development site to the extent determined practicable by the developer, provided that such trees shall be at least two caliper-inches and shall be planted no closer than ten feet to any other tree.

(c)To the extent that the developer is unable to, or fails to, plant the required number of replacement trees on the development site, the developer shall complete the mitigation requirements.
(i)by planting, establishing and nurturing the balance of the required amount of replacement trees at some other site in Duval County, sometimes referred to as off-site mitigation, provided that such trees shall be at least two-caliper inches and shall be planted no closer than ten feet to any other tree, and/or
(ii)by paying a monetary contribution to the City of Jacksonville's Tree Protection and Related Expenses Trust Fund for the total caliper-inches of required replacement trees that are not planted on the development site or at some other site in Duval County. For each caliper-inch, the contribution amount shall equal the lesser of (x) eighty-five dollars or (y) one-half of the median wholesale price, published by North Florida nurseries located within Duval, St. Johns, Clay, Baker and Nassau Counties, for a container grown two-inch caliper Live Oak calculated as of October 1 of the prior calendar year. The contribution amount shall be recalculated annually by the City of Jacksonville's Landscape Architect at or before the beginning of each calendar year.
(Referendum of 11-7-00)

Timucuan Preserve

About:
The Timucuan Ecological and Historic Preserve, named for the native people who once lived in the region, protects some of the most sensitive wetlands and important historical sites surrounding the St. Johns River and Jacksonville area. This 46,000 acre national preserve was designated in 1988 and serves as Jacksonville's premiere conservation area which hosts some of the most beautiful natural attractions in Northeast Florida. From the untouched Theodore Roosevelt Area to the Fort Caroline National Memorial or preserved Kingsley Plantation, there are so many important sites protected for future generations to enjoy.

Timucuan Preserve



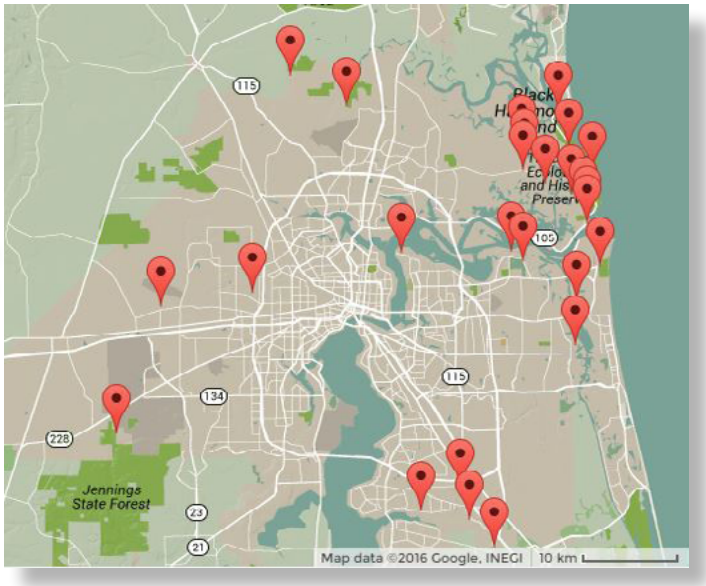
Kingsley Plantation

Fort Caroline

TIMUCUAN PARKS FOUNDATION

Your Parks' Best Friend

"The Timucuan Parks Foundation (TPF) is the best friend of 23 preservation parks located in the greater Jacksonville area. The North Florida community has greatly benefited from true visionaries who have made our city the home of the largest urban park system in America. These 23 extraordinary preservation parks will be here forever, if a passionate, engaged group of friends cares about the parks, supports the parks, and spends quality time in the parks. The foundation serves to preserve, promote and protect the Timucuan Parks through advocacy, fundraising and marketing. We are all stewards and best friends of the Timucuan Parks. We keep these natural and historical environments protected, valued and celebrated."



Florida State Parks

About:

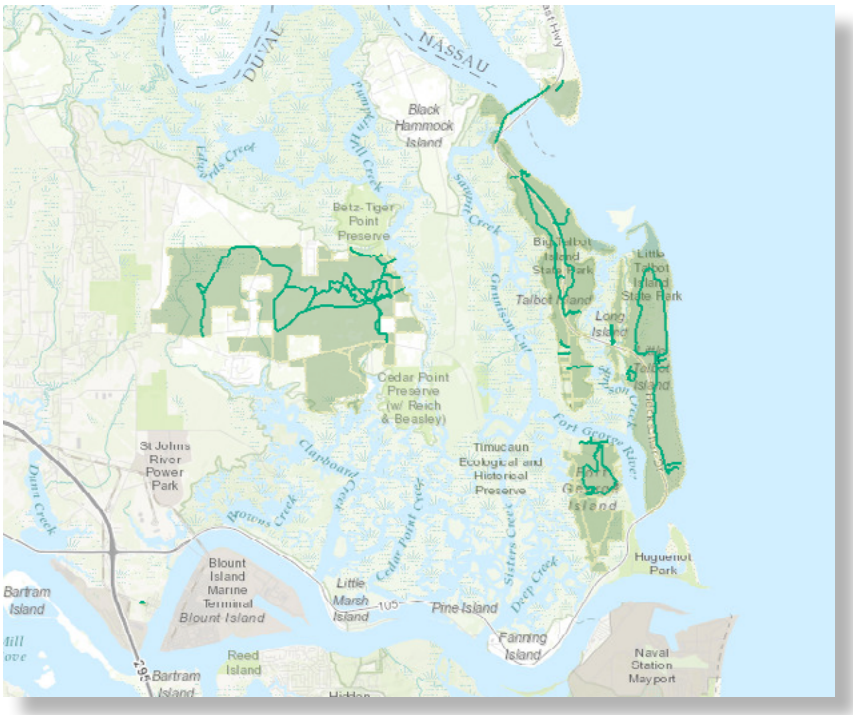
The Florida State Parks system has been consistantly recognized as one of the best state park systems in the country, the only to receive three Gold Medal Awards for Excellence, and offers a wide array of activities across 174 parks state-wide. Duval county is lucky to be home to four of these parks with jewels like Big Talbot Island being amongst them. These parks reside within the greater Timucuan Preserve area and offer their own unique variation of the local ecological landscape.

Pumpkin Hill Creek Preserve

Fort George Island

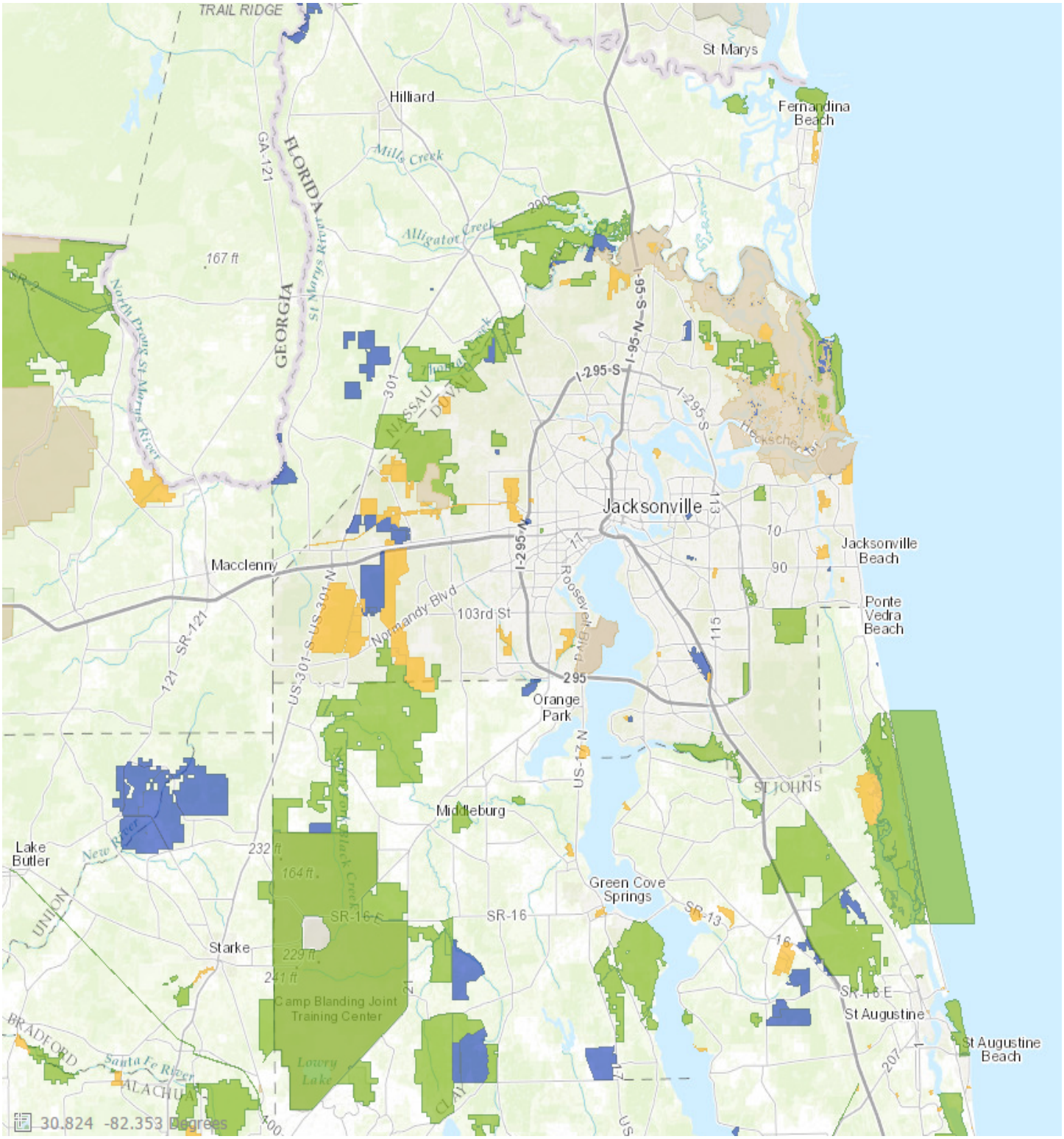
Little Talbot Island

Big Talbot Island



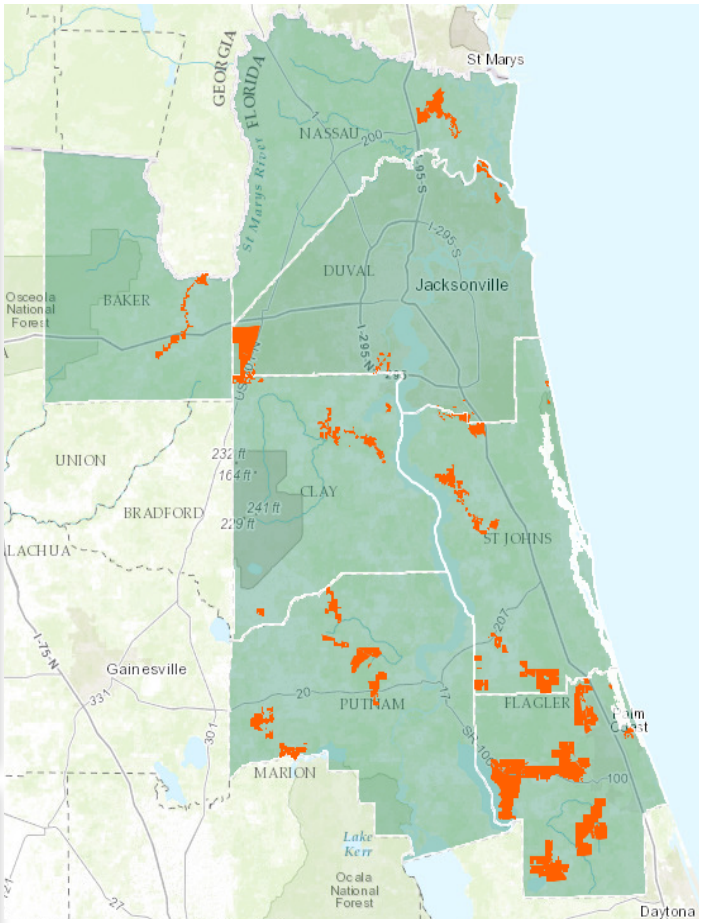
Who owns what? Northeast Florida's Parks and Preserves

It can be complicated understanding exactly what jurisdiction each park or preserve resides under. There are conservation areas controlled by all levels of government and even by private entities. It is also dificult to place all these stakeholders on a single map and see how they all connect. This is why the Florida Natural Areas Inventory created a database to cover just that. This database specifically covers conservation lands, those that are set aside to maintain and protect natural ecosystems. Therefore, this map does not include all the city or county parks designated for recreation, but it does give a good idea as to what areas are protected from development and which areas are still vulnerable.



Notable Organizations

About:
North Florida Land Trust (NFLT), founded in 1999, is a local land conservation organization focused on protecting ecologically, agriculturally, and historically significant lands. They preserve land throughout Northeast Florida- focusing on Baker, Clay, Duval, Flagler, Nassau, Putnam, and St. Johns Counties and throughout the years, have protected thousands of acres of environmentally significant land. NFLT is a 501(c)3 nonprofit organization funded largely by private and corporate contributions.



The North Florida Land Trust has recently released its Preservation Portfolio which seeks to provide a strategic conservation vision for the organization and the region at large. It also shows areas which NFLT has already protected and what areas the organization has identified as in the greatest need of future protection.

About:
Inspired by the Mayor's administration in 2013, Groundwork Jacksonville, Inc. is a partnership between the City of Jacksonville, U.S. National Park Service, US Environmental Protection Agency and Groundwork USA, Inc. and is part of the Groundwork USA network. Groundwork Jacksonville is one of 22 Trusts across the country, the only Trust in Florida and the 1st in the Southeast, United States. Groundwork Jacksonville is the city's primary non-profit specifically created to clean and redevelop Hogans Creek and convert contaminated land into parks, playgrounds, trails, and other public spaces, hoping to recreate the "Emerald Necklace" championed by famed architect, Henry Klutho in the early 20th Century.

Groundwork Jacksonville's largest overarching project is the completion of the "Emerald Necklace" urban park and greenway system. The vision is to connect many urban neighborhoods through a series of connected bike paths, parks and riverwalks to both improve quality of life and environmental sustainability for the surrounding community. The city of Jacksonville should have the first phase of a multi-use bike and pedestrian path along Hogan's Creek completed by early 2017.

Waste

Waste hauling is one of the primary functions of local government. If it were not for consistent waste removal, the daily functions of civilized life could not continue. However, this modern necessity has also created a problem. The way many Americans dispose of waste now is unsustainable so the primary repository for most trash generated in the U.S. is a landfill. From these dumping zones it is likely for issues of chemical contamination, leakage and the off-gasing of methane to disrupt the local environment. On top of these issues, many landfills in the U.S. are reaching capacity and even causing economic strain as cities struggle to cope with the costs of dumping. That is why increasing methods of reducing and recycling waste is so important. Jacksonville has struggled to significantly increase its recycling rate but recent initiatives hope to improve the sustainability of our local waste.

About:

The City of Jacksonville has a recycling contract with Republic Services which operates its $17 million recycling plant (one of the largest such facilities in the country) on the westside of Duval County. All recyclables collected in Jacksonville, regardless of independent waste hauling provider (Waste Pro, Advanced Disposal Services, etc.), are sent to this single-stream facility and are separated for recycle using an advanced sorting process.

State of Florida
Florida Statutes: Section 403.7032

In 2008, the Florida Legislature enacted House Bill 7135 which created Section 403.7032, Florida Statutes. This established a new statewide landfill diversion goal of 75% to be achieved by the year 2020. Also, the statute directed the Department of Environmental Protection (DEP) to develop a program designed to achieve this goal and submit it to the legislature for approval. DEP submitted its 75% Recycling Goal Report in January 2010.

City of Jacksonville
Section 124.105. - Recycling Program

The Chief of Procurement is authorized and directed to establish a program for the recycling of the paper and paper products used in the production and storage of public documents, whenever they have accumulated in the agencies and are no longer necessary for the public business. The Chief of Procurement may make suitable arrangements for the disposal of the paper and paper products and glass, aluminum and other material turned over to the recycling program and the receipts from the sale of these items shall be deposited in the Keep Jacksonville Beautiful Trust Fund.

WHAT CAN YOU RECYCLE?

PAPER

- Newspapers
- Craft paper
- Shredded paper
- Paper towel cores
- Chip board
- Phone books
- Cardboard boxes
- Paperback books
- Magazines

PLASTIC

- #1 - #7 plastics
- Detergent & cleaning containers
- Milk jugs & colored jugs
- Soda bottles
- Water bottles

CANS

- Aluminum beverage cans
- Steel food containers
- Aluminum baking tins
- Empty aerosol cans
- Aluminum food cans
- Clean metallic lids

GLASS

- Clear glass
- Green glass
- Brown glass

ASEPTIC PACKAGING

- Milk cartons
- Juice boxes
- Boxed soups

REPUBLIC SERVICES

Duval County Public Schools Waste Reduction

Community

DUVAL COUNTY PUBLIC SCHOOLS

- Duval County Public Schools (DCPS): The DCPS system is currently looking into ways to reduce waste from school lunch trays. Currently, all Duval schools provide lunch on polystyrene trays which after use are disposed of in the landfill. A student group identified this as a significant problem and began a campagine to change school district policy. The school board heard these concerns and is now exploring various options to phase out styrofoam trays in favor of more waste free options. The school board considered switching to washable trays but determined that the associated costs would be too high. For now the district is most interested in switching to recyclable and compostable options but a set plan has not yet been determined.

JAA Jacksonville Aviation Authority

About:

The Jacksonville Aviation Authority (JAA) is responsible for the oversight of four separate airports in Duval County. Each of these facilities serve differnt needs in the region, from JAX serving over 5.5 million passengers per year, JAX EX serving executive flights, Cecil hosting the military and a spaceport to the small Herlong airport serving recreational pilots. These four facilities and their operations combined can have a large impact on waste generation, so it is important that these public facilities are working to increase rates of recycling.

Initiatives

Jacksonville International Airport

- Goal to increase recycling participation by JIA staff and tenants to 100% by 2016 from a 2011 baseline.
- Goal to reduce waste per passenger by 25% by 2016 from a 2006 baseline

Cecil Airport/Spaceport, Jacksonville Executive Airport, Herlong Airport

- Each increased recycling by 20% in 2014 with a 2011 baseline
- Developed a centralized recycling system in 2014

Duval County's Waste Statistics

As part of Florida's state-mandated recycling goal, each county is required to report on where waste is going and the composition of that waste. The latest county reports publically available are for the year 2014, and as of that year Duval county recycled 47% of its waste. There is still a significant way to go before Duval County can meet the state-mandated requirement of 75% by 2020. However, the city of Jacksonville has begun to push more aggressively to get recycling bins into the possession of county residents.
To order a recycling bin for your home or business contact (904) 630-CITY (2489) or learn more HERE

Duval County 2014

1	**Population**	890,066

2 MSW Management (tons)

A.	Landfilled	964,297
B.	Combusted	1,703
C.	Recycled	841,301
D.	Stockpiled	0
E.	Total	1,807,301

E. Total Pounds per Capita Per Day	11.13

3 MSW Collected & Recycled

	Minimum 4 of 8	**Collected (tons)**	**Recycled (%)**
A.	Newspaper	28,917	31%
	Glass	36,146	34%
	Aluminum Cans	9,037	50%
	Plastic Bottles	19,880	26%
	Steel Cans	10,844	22%
	Cardboard	160,850	33%
	Office Paper	39,761	16%
	Yard Trash	271,095	38%
B.	**Other Recyclables**		
	Other Plastics	81,329	13%
	Ferrous Metals	122,896	78%
	White Goods	21,688	84%
	Non-ferrous Metals	56,025	83%
	Other Paper	131,933	17%
	Textiles	37,953	1%
	C&D Debris	632,555	52%
	Food	99,402	1%
	Miscellaneous	28,917	9%
	Tires	18,073	62%
	Processed Fuel	N/A	100%

C.	**Traditional Recycling Rate (%)**	
	1) Unadjusted	47%
	2) Adjusted	47%

	Renewable Energy Recycling Credits	**Mwh**	**Recycling Credit (%)**
D.	1) Waste-to-Energy	0	0.00%
	2) Landfill Gas	59,540	3.29%
	3) Renewable Energy (other than WTE)	1,085	0.06%

E.	**Yard Trash Disposed in a Landfill Beneficially Using Landfill Gas (for (something other than electricity)**	**Mwh** 0	**Recycling Credit (%)** 0.0000%

F.	**Overall Recycling Rate (%)**	
	1) Unadjusted	50%
	2) Adjusted	50%

	Participation in Recycling	**Units[1]**	**Percent[2]**
G.	1) Single Family Curbside	289,196	62%
	2) Multi-Family Curbside	508	100%
	3) Commercial		
	a) Scheduled Collection	1,801	100%
	b) On Call Collection	0	0%

[1]Represents the number of units with curbside service available.
[2]Represents the percent participation of units with service available.