

SUSTAINABLETAMPA

A look at what the City of Tampa is doing to become a truly sustainable city

A SUSTAINABLE FUTURE

Global scientific consensus clearly establishes the threat of climate change to our infrastructure, health, and daily lives. The

City of Tampa is committed to combating the effects of a changing environment and looks for opportunities in each project we do to use less, conserve more, and provide educational opportunities. From planting an unprecedented number of new trees to upgrading all city traffic signals, we are focused on implementing policies that will have long-term environmental, financial, and quality of life benefits.



*Tampa Mayor
Jane Castor*

“We are aggressively pursuing solutions that will protect our citizens, create a more resilient city, and establish a more sustainable future to transform Tampa’s tomorrow.”

THE CITY OF TAMPA HAS ORGANIZED ITS PLAN FOR GREENHOUSE GAS EMISSIONS REDUCTION INTO FIVE MAIN AREAS:



Clean Energy
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Solid Waste
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Area Source
Emissions
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Transportation
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Water
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CLEAN ENERGY

The GHG reductions and cost effectiveness of the Building Codes for Energy Efficiency legislation would reduce emissions by 8.4% of the state's total emissions from electricity by 2025. Tampa updates and revises its building codes to ensure that all current designs are compliant with the new energy requirements. Other programs and several stand-alone facilities have gone through energy efficient upgrades which reduce GHG and utilize alternate clean energy components.



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Traffic Signal Upgrades to LED

- Since 2011, all 480 city traffic signals have been converted from incandescent to LED lighting, reducing power demand by 70-80% per lamp, reducing electricity cost by about 60-70%.

Residential Energy Efficient Retrofits

- The City's affordable housing programs for new construction use homes that are energy efficient and HERS rated. Home Energy Rating System (HERS) Index is the industry standard by which a home's energy efficiency is measured.
- Through a TECO partnership with the Tampa Police Department, the City distributed over 10,000 CFL energy efficient light bulbs throughout the community. These light bulbs use 75% less energy than traditional light bulbs.

Energy Efficient Training & Public Education

- The Tampa Convention Center developed an energy efficient training specific to their facility and all operations personnel have been trained in green building system operations.
- The Mayor's Neighborhood University includes green and sustainability sessions to each class going through the program.

Energy Efficient Upgrades to City facilities

Every time the City upgrades a facility, we take the time to evaluate what energy-saving improvements could be included. Some highlights include:

- The Tampa Convention Center lighting, escalator, and HVAC variable drive motors.
- Lighting upgrades to the Tampa Municipal Office Building, Old City Hall, Oak Park Community Center, Grant Park Community Center, Tampa Police Districts 1 & 2, Friendship Playground, Martin Luther King Art Studio, and several more.
- Wastewater Pump Station rehabilitation and upgrades: Pumping equipment, electrical improvements, and valve replacements made to 26 pump stations to increase efficiency.
- Wastewater Treatment Plant Improvements: The Wastewater Department has completed projects for the rehabilitation of the High Purity Oxygen Generator Facility, Denitrification Filter Media Rehabilitation, Final Sedimentation Tank Rehabilitation, and currently conducting a treatment plant master plant study to determine improvements to increase reliability and operating efficiency.
- Several thousand high-intensity discharge lights with induction lighting have been replaced in the City's Parking Garages resulting in a 50% savings in electricity costs along with brighter, whiter light, allowing for clearer visibility. The Parking Division has done upgrades of lighting to LED lights on 60% of the surface parking lots.
- Energy Management Systems at Old City Hall, the Tampa Police Department and Tampa Fire Rescue headquarters to reduce electrical consumption by controlling operational hours of lighting and equipment, fresh air usage and interior space temperature. Savings range from 10% to 25% and are expected to increase by using remote monitoring capabilities to detect problems early, allowing for improved response time for remedial actions.
- Cuscaden Pool has been renovated to minimize water usage and waste. The addition of new high energy efficiency heaters conserves energy to provide a cost and energy savings during the cooler months to allow a more economical and energy efficient solution to year-round swimming.



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SOLID WASTE

Most of the municipal solid waste from the City's residents and businesses is converted into electrical energy at the McKay Bay Refuse-to-Energy Facility. A small portion of the City's waste is transported to the Southeast County Landfill where this waste is converted to electrical energy as well at the County's waste-to-energy facility.



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Florida's 75% Recycling Goal by 2020

- Tampa has already achieved this statewide goal by sending most of its waste to the McKay Bay Refuse-to-Energy Facility.
- In honor of Earth Day 2016, the City of Tampa's Department of Solid Waste and Environmental Program Management expanded its recycling program and sustainability initiatives to include all City of Tampa government buildings.
- In 2016, the City recycled approximately 18,173.59 tons of material from residences and commercial businesses.



Tampa's 12% Waste Reduction Goal by 2018

- In 2016 the Tampa Convention Center (TCC) recycled over 312 cubic yards of commingled material which includes, aluminum, plastic and mixed-paper products. In addition to the commingled recycling TCC recycles over 77 tons of source separated cardboard annually.
- Tampa launched "Be Smart, Use Your Cart" program for City of Tampa residents. The overall effect was a reduction in the waste stream.
 - Over an 18-month period, the 14-gallon blue bins currently used were replaced with new 95-gallon green recycling carts, complete with tracking technology.
 - Through the implementation of automated carted recycling residential participation rates increased from 33% to 67%.
 - The 2016 residential participation rate is at 84% and the tonnage of recyclables collected has been more than doubled since the implementation of recycling carts.
- The City purchases green and or environmentally friendly products for 21.3% of its office supply needs and participates in the Hewlett-Packard (HP) Recycling Program. Original HP ink and LaserJet cartridges are returned to HP and HP gives the City credit points towards free equipment and supplies. The City recycled 760 toner cartridges in 2013.

Tampa's No Waste to Landfill Goal

- The McKay Bay Refuse-to-Energy Facility uses about 94% of the City's post recycled waste as fuel to produce clean, renewable energy.
 - The facility produces 500 kWh of electricity from each ton of solid waste.
 - Each ton of waste used as fuel offsets the use of one barrel of oil or ¼ ton of coal and prevents one ton of CO2 equivalents from being released from fossil fuel power plants and landfills.
- McKay Bay also recovers about 8,000 tons of ferrous metals and 240 tons of non-ferrous metals per year for recycling.
- McKay Bay uses about 200 million gallons of reclaimed water each year from the City's advanced wastewater treatment facility.

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Waste Education Program

- The City of Tampa and Keep Tampa Bay Beautiful created a Partnership in 2016 to increase public access to recycling.
- Fifteen permanent recycling containers were installed in Al Lopez Park, Cotanchobee Park, and along the Riverwalk.
- The program is expected to increase in 2017 with an additional 15 containers added to the Riverwalk and 10 containers along Bayshore Blvd.
- In 2016, the City recycled approximately 18,173.59 tons of material from residences and commercial businesses.
- The Department of Solid Waste & Environmental Program Management continues to increase recycling through outreach and education efforts in our Parks and Recreations Centers, City buildings, commercial businesses, schools and special events.



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AREA SOURCE EMISSIONS

Tampa commitment to sustainability was officially formalized on February 2, 2007 when Tampa signed on to support the U.S. Conference of Mayor's Climate Protection Agreement that urges the federal and state governments to enact policies and programs to reduce GHG emissions and promote efforts to address climate change at the municipal level.



Tampa Tree Planting Initiatives

- The Tree-Mendous Tampa Free Tree Program
 - Since 2013, we have planted a total of approximately 3,000 trees for residents of the City of Tampa.
 - An educational component includes help for residents by providing the “best management practices” for trees.
- Downtown Trees
 - 782 indigenous trees such as Southern Red Cedar, Chickasaw Plum, and Sabal Palms were planted in and around downtown.
- Scott Street Improvements
 - Pedestrian amenities include over 100 new trees to shade the pedestrian areas.
- Clarence Fort Freedom Trail
 - More than 110 trees planted along the exercise trail and boardwalk surrounding Osborne Pond.
- New Tampa Nature Park
 - In 2016, the city planted 268 trees across the park to increase the tree canopy coverage along the wetland edges, provide shade to park users and create additional areas to support wildlife.
- South Tampa Trail
 - 82 Florida-friendly trees were planted along the one-mile multi-use trail to create a future-shaded walkway.



Heat Island Plan

- This includes guidelines for cool roofs, cool pavements, and strategically placed shade trees, and parking lot shading in the City.
- Changes to City of Tampa Code
 - Many code changes were adopted include community gardens throughout the City and to reduce use of turf area.
 - Turf area percentages were lowered from 50% configured with a permanent irrigation system to 45% in 2009.
 - In 2011, the allowable percentage was 35%, and decreased 5% annually until reaching 25% in 2013.
- Cool Roof material is being used throughout the City for minimal slope roof replacements above conditioned spaces to reduce heat gain. The Aluminum clad membrane material reflects the sun's heat back to the sky instead of transferring it to the building.
 - Cool Roof Systems installed at Tampa Police Department District 1 and the Tampa Municipal Office Building's north roof.
- Tampa Convention Center added new landscaping to include additional trees shaped to create a canopy and sun shading systems.
- New facilities built to LEED Silver Standards including Fire Stations #11, #19, and #22 as well as the Springhill Park Community Center located in Sulphur Springs.
- Urban Forest
 - The City boasts over 7.8 million trees that assist in the removal of air pollutants and reduce heat island effect, provide energy conservation, conserve soil and water, and bring the natural environment into our lives.



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TRANSPORTATION

Tampa updated its Comprehensive Plan and Transportation Concurrency Exception Area (TCEA) to focus new development and redevelopment into three main locations; Downtown, Westshore business district, and the University of South Florida (USF), creating activity hubs that support alternate modes of transportation. The City promotes the use of low emission vehicles (ULEV) and high occupancy vehicles (HOV) by offering discounted or preferred parking privileges at City facilities.



“10 BY 10” Renewable Fuel Standards

- Florida’s Energy and Climate Change Action Plan includes estimates for the greenhouse gas reductions and cost savings anticipated from this state policy.
- Developing and Expanding Low-GHG Fuels is predicted to reduce annual emissions by 12.62 MMtCO₂e statewide in the year 2025; this amounts to a reduction of 6.3% from Florida’s transportation emissions in 2025.
- The strategy has a cost effectiveness or -\$142/tCO₂e; the negative sign indicates a cost savings for the implementation of this measure over the timeframe from 2010 to 2025.

Expand the Use of Low/Zero Emission Vehicles

- The Downtowner
 - In partnership with the Tampa Downtown Partnership and the FDOT, The Downtowner, a shuttle service using electric vehicles throughout the downtown launched in 2016.
 - With more than 100,000 rides given, this project takes gas driven vehicles off the road and reducing GHG emissions.
 - The Downtowner provides service at no cost to riders.
- The Department of Solid Waste and Environmental Program Management operates refuse vehicles fueled by Compressed Natural Gas (CNG).
 - The fleet currently includes 36 CNG fueled vehicles and more are being added every year.
 - Plans are underway to construct an additional temporary CNG fueling station at the Fleet and Solid Waste Yard while preparations are made for a permanent station that will accommodate the entire Solid Waste fleet.
- Tampa deployed 12 electric vehicle charging stations in October 2011 to help reduce greenhouse emissions.
 - The stations are part of the Charge Point America program sponsored by Coulomb Technologies through the Department of Energy.
 - As an incentive, the City does not charge a fee for the use of the charging stations to recharge vehicles.
- The Parking Division has replaced several gas-operated trucks, cars and 4-wheelers with Global Electric Motorcars (GEM).
 - This has resulted in a substantial reduction in fuel costs, emissions and noise pollution while allowing for greater mobility and higher visibility.



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Bicycle Infrastructure

- 92 miles of new bike lanes built since 2011
- Coast Bike Share launched in the beginning of 2015
 - 30 bike hubs throughout the city with more than 300 available bikes
 - In the last year, Coast Bike share has tallied over 56,000 trips by more than 22,000 riders
 - Since launching, Coast Bike share has tallied over 134,000 trips totaling more than 377,000 miles traveled.
- Tampa's Cass Street Cycle Track
 - The first protected, two-way cycle track in the state of Florida



Tampa Riverwalk

- The completed Riverwalk stretches 2.4 miles from the Water Works Park down the Hillsborough River and along Garrison Channel to the Channelside District. The Riverwalk provides a venue for pedestrian activity, serves as an impetus for other transportation means such as water taxis and bicycles.

Regional Land Use & Transportation Coordination

- Advanced Traffic Management System upgrades include the replacement of current traffic control software, communications equipment and existing communications cabling in the field.
 - The project also upgrades the communications plant to fiber optic cable and replace controllers.
 - The City's traffic signal system is moving to the next generation of traffic control to help ease congestion which will result in reduced air pollution and less GHG emissions.
- The City of Tampa works closely with the Florida Department of Transportation (FDOT), Hillsborough County Metropolitan Planning Organization (MPO), Hillsborough Area Regional Transit (HART), Tampa Bay Area Regional Transit Authority (TBARTA)



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Tampa's Water Conservation activities are part of a long-range water conservation planning process that incorporates the goals of responsible stewardship of Tampa's water supply, limited reliance on the regional water resources to augment Tampa's water needs during dry periods, and the use of appropriate business practices to safeguard the fiscal well-being of the Tampa Water Department while retaining already achieved water use efficiencies.



David L Tippin Water Treatment Facility

- Master Plan in progress directed at optimizing treatment, improving treated water quality, reducing operating costs, improving water conservation and enhancing the reliability of treatment and operations.



Reclaimed Water

- In 2016, the Wastewater Department utilized 5.9 million gallons per day of reclaimed water saving approximately 2.1 billion gallons of processed potable water use.
- Reclaimed water is in use at Tampa International Airport (TIA) for irrigation and for cooling at one airside. Work is underway with TIA to facilitate the expansion of reclaimed water use to additional cooling towers.
- Tampa's reclaimed water customers used 3.2 million gallons per day of reclaimed water for lawn irrigation saving 1.2 billion gallons of potable water per year.

NexLube

- NexLube is Florida's first oil recycling plant. The Tampa NexLube facility is expected to re-refine approximately 24 million gallons of used oil a year, reducing air emission and using 50-80% less energy than the crude oil refining process.
- The facility will be up and running by the middle of 2018.

Tampa Augmentation Project

- This project will evaluate the cost and feasibility of increasing the use of reclaimed water from the Howard F. Curren Advanced Wastewater Treatment Plant (HFCWTP) to potentially augment the potable water supplies available for the region.
- The goal of the project is to determine the feasibility of using natural treatment systems, to enhance the quality of the reclaimed water currently discharged, from the HFCWTP for delivery as a source of potable water.



Monthly Meter Reading

- Between January and September 2012 the department implemented monthly meter reading for 100 percent of customers.
- A timelier accounting of water use provides customers the ability to discover and promptly repair service line, plumbing or irrigation system leaks sooner, thus saving more water city-wide.

Water Conservation Kits and Supplies Provided to Residents

- In 2016, the City of Tampa provided:
 - 1,074 free plumbing kits
 - 1,044 free leak detection kits
 - 157 free rain sensor devices
- In addition, we provided funding for residents to attend workshops on topics like rain barrel education, Florida-Friendly landscaping, home improvement, leak detection and more.



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