



Green Plan

2022 Update

City of Pembroke Pines

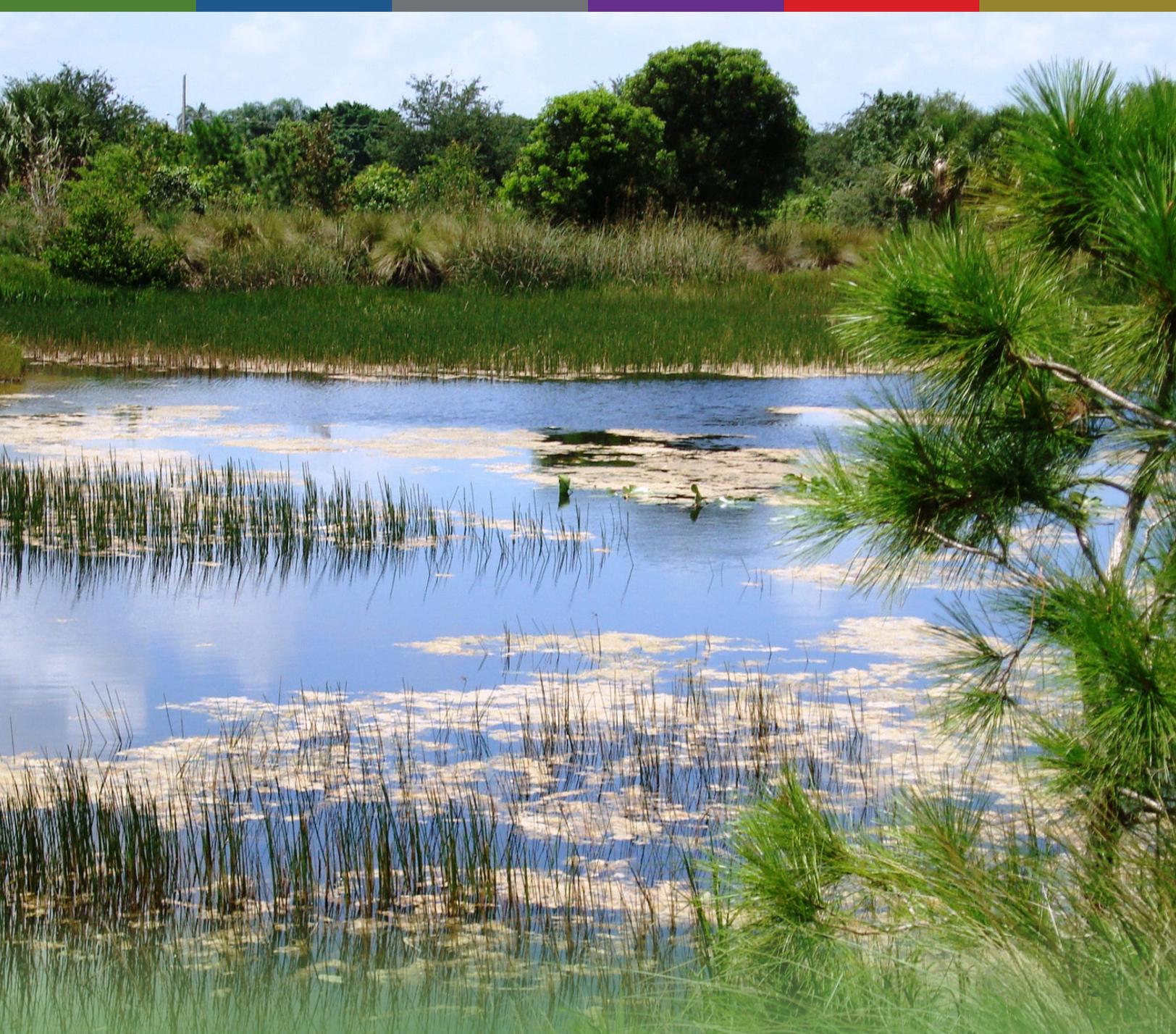




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Purpose

In 2014, the City Commission adopted Resolution 3432, which enacted the City's first Green Plan. The 2014 Green Plan established a framework of goals and objectives that have been designed to assist in guiding City officials and staff in making decisions to protect the environment for the betterment of the community.

The 2022 Green Plan Update aims to evaluate the City's progress made since the establishment of the 2014 Green Plan while updating goals and objectives for the future. The Green Plan Update is not intended to fully replace the 2014 Green Plan, rather to compliment the original document, as many of the goals and values in the 2014 Green Plan still apply today. The goals and recommendations contained within the Green Plan Update continue the City's Mission, "to provide a quality of life that in our community will foster the desire to live, work, and raise a family."

Additionally, the Green Plan Update will be utilized in the future as a support document for other City master planning documents including the Parks Master Plan, Transportation Master Plan, and Economic Development Strategic Plan 2.0.

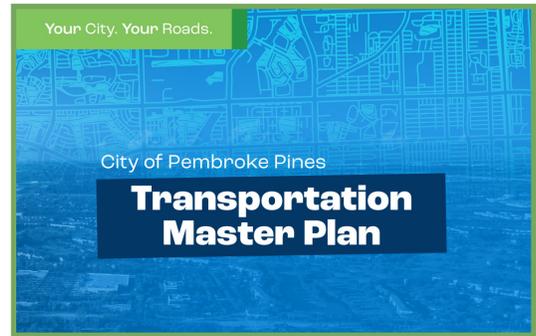


Figure 1: City of Pembroke Pines (COPP) Proposed Transportation Master Plan front cover



Figure 2: COPP Proposed Economic Development Strategic Plan Update front cover

Foundation

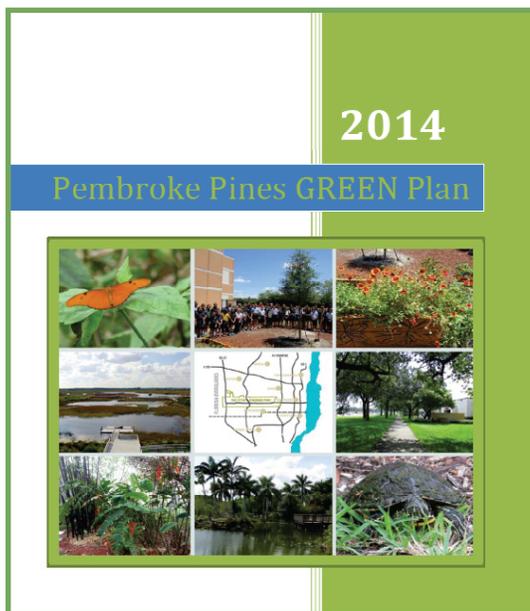


Figure 3: COPP 2014 Green Plan Cover page

The foundation of the 2014 Green Plan document began in November of 2014, when the City Commission approved the City's initial Green Plan. In 2017, the Commission amended the City Code to raise further awareness of the environment through the passage of Ordinance 1869, which converted the City's Landscape Advisory Board to the Environmental Advisory Board (EAB). In the re-branding of this board, the EAB's responsibilities were expanded from its primary landscape oriented purpose to providing constructive recommendations to the City Commission on environmental protection and conservation that is relevant to the community.

Process / Timeline

The COVID 19 pandemic temporarily delayed the Green Plan Update process as the City was limited in its ability to hold certain public meetings. City staff, alongside the EAB, began the update process in September 2021 with the Boards final review in November 2022. Throughout the year, both the EAB and city staff reviewed the 2014 Green Plan document. Each chapter review included the following elements:

1. **Reporting** on the City’s performance in meeting the goals and objectives within the 2014 Green Plan document.
2. **Communicating** with the EAB what updates have been made with the Green Plan through scheduled meetings.
3. **Analyzing** the existing goals and objectives to begin to integrate the City’s Mission in an effort to move forward in encouraging the community to be more environmentally aligned.
4. **Identifying** policies that need to be retained, removed, or updated within the goals and objectives reflective of city achievements, changing laws, or conditions and challenges facing the City in order to successfully strategize for the future.

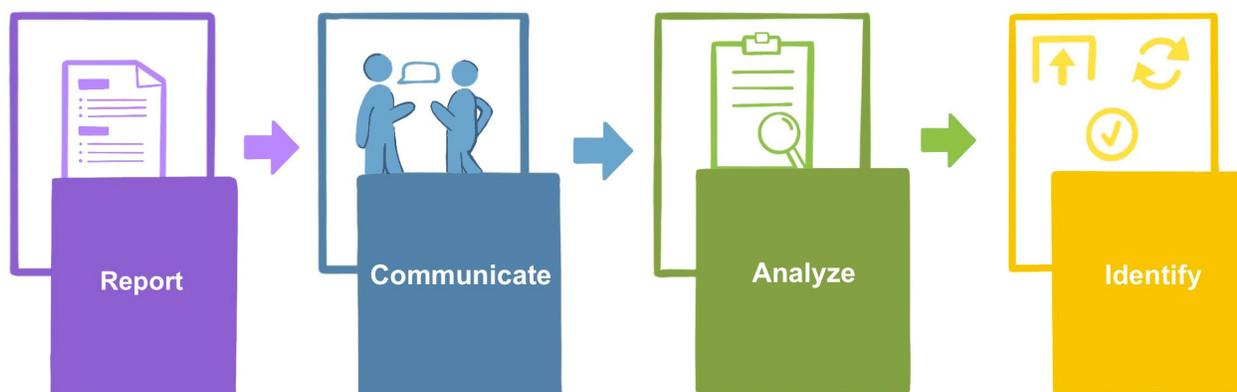


Figure 4: COPP infographic

Upon completion of the final chapter of the update in June 2022, staff re-reviewed the entire document to ensure the chapter goals and objectives reflected overall discussions which occurred throughout the process. The final chapters of the plan were provided for formal acceptance by the EAB in December 2022. The City Commission ultimately approved the Green Plan Update document in April 4, 2023 via Resolution 3815.

Plan Framework & Structure

In reviewing the 2014 Green Plan, the EAB was presented by staff a decision matrix which included a list of the existing objectives by chapter, as well as a staff recommendation on whether to remove, retain or update that objective. The decision matrix is included as the appendix of this document.

Plan Framework & Structure

City staff worked with the EAB to determine the structure of the document. It was determined by staff for continuity purposes that the format of the Green Plan Update would retain the same chapters as adopted in the 2014 plan with the addition of *reuse* to Chapter 4 due to the change in recycling policies:

- Chapter 1: Natural Resources & Environmental Design
- Chapter 2: Energy Efficiency & Conservation
- Chapter 3: Built Environment & Transportation
- Chapter 4: Waste Reduction, Reuse & Recycling
- Chapter 5: Community Outreach & Empowerment
- Chapter 6: Leadership & City Operations

Each chapter of the Green Plan Update has been evaluated and reworked to reflect the accomplishments of the City since 2014 and policy changes that have occurred within the City. In some cases, the update provides a new vision for that chapter. For example, Chapter 4: Waste Reduction & Recycling has added in Reuse as a tertiary element as the City Commission moved towards considering new directions in recycling policies as a result of global changes to the recycling marketplace.

At the suggestion of the EAB Board, staff modified specific goals and objectives within each chapter to correspond directly to the triple bottom line, which was only broadly referenced within the 2014 Green Plan. The triple bottom line is a transformative structure for organizations to follow to help move them towards a regenerative and more sustainable future through the process of benchmarking and setting goals based on the three principles.

The three principles of the Triple Bottom Line are:

- *Environmental*: Natural Resources, environmental management, pollution prevention
- *Social*: Standard of living, providing equal opportunity
- *Economic*: Cost savings, economic growth, research and development

Furthermore, the City will provide future yearly status reports to the EAB. The reports will provide the progress or standing of each goal and recommendation. The intention behind these status reports is to aid City Staff in providing progress reports that track accomplishments to provide to the public in a timely manner based on past difficulties in keeping the public informed on environmental enhancements. This document will continue to move the City towards its responsible growth and success through the collaboration and cooperation of all City leaders and its community.



Figure 5: COPP Chapel Trail Nature Preserve

1 Natural Resources & Environmental Design

Natural resource enhancement, the protection of our air quality & ecosystems, and the conservation of water remain of the utmost importance to the health of the Pembroke Pines community. As the City has grown, its pursuit has been reshaped to match the needs of the growing environment. Part of this pursuit includes the collaborative efforts the City is taking in creating several master plans that inform further enhancements to be made to the City's open spaces based on the priorities of the residents. This chapter defines the goals and vision the City is striving for as it continues to adapt to a changing environment and its needs.

NATURAL RESOURCES & ENVIRONMENTAL DESIGN

The City is home to approximately 2,815 acres of wetlands that surround many residential communities and are spread throughout the City, some of these conservation wetland areas can be visited as a passive park. These wetlands are maintained by Home Owners Associations, the City, and other Governmental agencies.

These conservation areas are an essential environmental asset to these Pembroke Pines communities. Additional components include the various parks and recreational areas that are maintained throughout the City.

Chapter One update has taken into consideration the importance of maintaining a well balanced environment, as well as, enhancing the City's environment as a whole. The goals and recommendations have been structured from the 2014 Green Plan to build upon what was previously formed. Some of these accomplishments have been as follows:



Figure 6: COPP Wetlands Park

LOOKING BACK ON ACCOMPLISHMENTS

CHAPTER 1 OF THE 2014 GREEN PLAN:

- The City updated the Land Development Code (LDC) in April 2021 to provide further guidelines for all landscaping standards. Items included:
 - An established list of native plant species.
 - Creation of a landscape mitigation program.
 - Creation of green wall, roof standards, and open space requirements.
- The ongoing enhancement of parks through upgrades of park furniture, addition of walking trails, resurfacing of walking paths, etc.
- City's Landscape Inspector performs courtesy inspections of commercial sites to ensure landscape maintenance. Around 40 courtesy inspections are performed annually to be in compliance with the approved site plans.
- The City continues to support the partnership with Broward County Metropolitan Planning Organization (MPO) to encourage a connection between greenways and public transportation to enhance the natural environment.
- The City partners with Broward County's NatureScape Irrigation Service (NIS) to keep track of the reduction in water consumption of the city per year.
- The adoption of a conservation element to the City's comprehensive plan in 2015 that is a declaration to conserve, protect, and appropriately utilize the City's natural resources.
- Continued conservation, protection, and maintenance of the Eagle Sanctuary located on Pines Boulevard near US 27 which was designated by the Mayor and Commission.

**Appendix contains additional information on the Green Plan Status Report*

ENVIRONMENTAL

CHAPTER 1: NATURAL RESOURCES & ENVIRONMENTAL DESIGN



Figure 7: COPP Silver Lakes wetlands



Figure 8: COPP Wetlands Park



Figure 9: COPP Towngate Park

GOAL:

Maintain an exceptional environmental quality of life for the City.

RECOMMENDATIONS:

1. Develop a courtesy landscape inspection program for non-residential properties on a three to four year rotation. Courtesy inspections will review existing landscape conditions for compliance and recommend improvements where applicable.
2. Prioritize the planting of Southeast Florida Native species throughout the City.
3. Evaluate 2009 tree canopy commitment (30% increase by 2030) and consider an increase to the canopy standard by measuring the current canopy through the iTree program, if feasible.
4. Review & update the City's preferred planting list annually based on the species that thrive within the city to encourage resiliency in the natural environment.
5. Reevaluate the "right tree, right place" planting standard in the landscape code to reflect changes in practice, if applicable.
6. Create and maintain a tree inventory for all City property and public spaces utilizing Geographic Information System (GIS) map.
7. Review current LDC standards for open space, parking, bufferyards, and local roadways to identify ways to reduce impervious areas and enhance green spaces.
8. Promote the use of Landscape Mitigation Plans as a tool to encourage impacted communities which may be experiencing adverse effects due to improper plantings.
9. Resume collaboration with the Broward County Sheriff's Office to maintain proper disposal of medical waste & provide statistics as to the accomplishments of disposal yearly.

SOCIAL

CHAPTER 1: NATURAL RESOURCES & ENVIRONMENTAL DESIGN

GOAL:

Encourage the beautification of the City through enhancing the natural environment and educating the community.

RECOMMENDATIONS:

1. Explore certification of Chapel Trail Nature Preserve as a Great Florida Birding & Wildlife Trail.
2. Create an interactive GIS map accessible to all citizens for local parks and non-motorized paths to be provided on the City website in collaboration with City GIS personal.
3. Support the findings of the Parks Master Plan in collaboration with the Recreational & Cultural Arts Department to enhance the quality of the areas highlighted through the findings for the residents of the City.
4. Encourage property owners to obtain the National Wildlife Federation (NWF) certification for their properties. Work to achieve 15 new NWF homes and 5 common areas within each calendar year.
5. Create a city wide campaign to educate the residents on sustainable gardening and landscaping practices.



Figure 10: Florida-Friendly Landscaping logo



Figure 11: Chapel Trail Nature Preserve

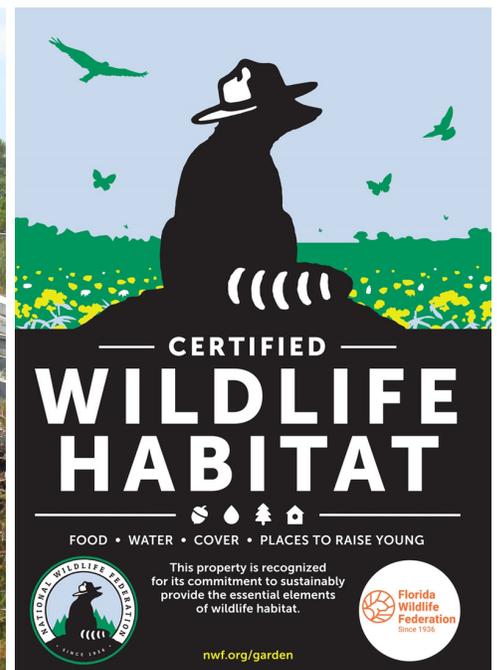


Figure 12: NWF sign

ECONOMIC

CHAPTER 1: NATURAL RESOURCES & ENVIRONMENTAL DESIGN

GOAL:

Encourage environmental improvements that result in cost savings, economic growth, and promote environmental enhancements.

RECOMMENDATIONS:

1. Work to achieve efficiency based on the Naturescape Irrigation Services (NIS) recommendations provided; Post yearly NIS studies on the City's website.
2. Build upon the successes of the 2021 LDC update by continuing to monitor, evaluate and suggest new updates where applicable & feasible to encourage and identify green standards & uses currently not listed within the Code.
3. Evaluate new and existing uses in the LDC that may have adverse environmental impacts. Consider requiring the Special Exception process for these uses in the zoning code.
4. In partnership with Broward County MPO, future greenway projects will include City Center and Washington Street mobility hub with the goal to encourage reinvestment into adjacent properties. Currently, the Flamingo Road greenway is being expanded.
5. Consider reviewing abandoned/underutilized parcels for green space to bring reinvestments back into these properties.



Figure 13: Pembroke Point Offices built as LEED Certified



Figure 14: Broward County's Complete Street Masterplan Front Cover



Figure 15: NatureScape Broward logo



Figure 16: C.B. Smith Park solar panels over parking

2 Energy Efficiency & Conservation

As the awareness towards energy efficiency and conservation has grown, the importance and need for alternative energy sources has become relevant to developments in the City. The City has been in support of these energy adaptations since the adoption of the 2014 Green Plan. Today, the City continues to support these changes through the addition of the sustainability section 155.6120 to the Land Development Code (LDC). This chapter will continue to build on those necessary steps that have been taken to progress into the new technological advancements that energy efficiency and conservation continue to bring.

ENERGY EFFICIENCY & CONSERVATION



Figure 17: Solar roof paneling on Pembroke Lakes Regional Mall

The City continues to take the role of being leaders within the community to reduce the use of fossil fuel energy by increasing the demand, call, and support for renewable energy resources.

As energy efficiency and conservation efforts are adapted based on technological advancements, the city will expand on the policies created to progress forward. This Chapter builds upon the updated sections of the LDC and extends the accessibility for residents to be part of the efforts towards being an energy efficient City.

LOOKING BACK ON ACCOMPLISHMENTS

CHAPTER 2 OF THE 2014 GREEN PLAN:

- The construction of City Hall was completed utilizing Green principles.
- The City has added solar components to City monument signs, bus shelters, and outside utilities.
- The addition of the sustainability section to the Land Development Code (LDC) in 2021 which includes energy efficient upgrade recommendations.
- The City has reduced its fleet vehicles to now be shared between employees in each department.
- The City has entered into non-exclusive agreements with Property Assessed Clean Energy (PACE) providers for the addition of energy efficient upgrades such as solar systems on residential properties.
- The City regularly performs LED lighting conversions on City properties.

**Appendix contains additional information on the Green Plan Status Report*

ENVIRONMENTAL

CHAPTER 2: ENERGY EFFICIENCY & CONSERVATION



Figure 18: Cobblestone Plaza Tesla charging stations

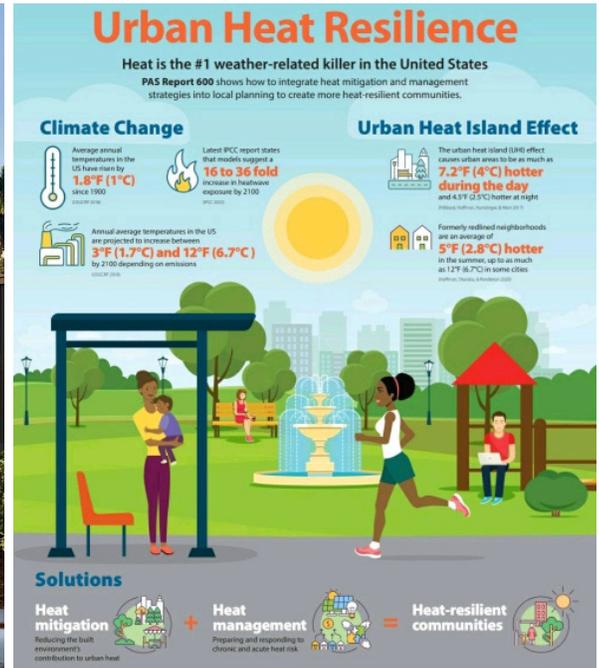


Figure 19: Urban Heat Resilience graphic

GOAL:

Encourage and promote energy conservation and renewable energy sources throughout the City and for residents.

RECOMMENDATIONS:

1. Encourage applicants of new projects or qualifying upgrades to obtain green certifications through the Development Review Process (DRC).
2. Identify possible improvements to be made to the Land Development Code (LDC) with emphasis on the sustainability table and the landscape section to add additional energy efficiency and conservation elements.
3. Report on all new applications and permits related to the installation of renewable energy; provide to the EAB Board on a regular basis.
4. Explore adding solar energy language to the Sustainability Section of the LDC. Staff to encourage the incorporation of these principles through the DRC.
5. Expand requirements in the LDC sustainability section to require applicants who apply for building expansion applications to submit sustainability statements that identify green practices within the project, where applicable.
6. Consider using solar energy for municipal operations that include flashing beacons, traffic control lights, lighting for lift stations, etc., where applicable.
7. Convert all City lighting to LED. Consider wildlife that may be present in the area when determining lighting color.

SOCIAL

CHAPTER 2: ENERGY EFFICIENCY & CONSERVATION



Figure 20: Montessori Academy of Broward solar roof paneling



Figure 21: Pembroke Pines Residents homes that have solar powering their homes

Goal:

Promote the installation of energy efficient upgrades within the community.

Recommendations:

1. Encourage the use of energy star appliances and energy efficient light fixtures by creating a dedicated section on the City's website to educate the citizens on the benefits of these upgrades.
2. Continue to evaluate City facilities and budget for regular upgrades that improve the energy efficiency of the building.
3. Promote energy efficiency through infographics/displays at City events with the collaboration of FPL, Broward County and other entities.
4. Have City personnel attend Broward County's Water Matters Day.

ECONOMIC

CHAPTER 2: ENERGY EFFICIENCY & CONSERVATION

GOAL:

Promote energy conservation that results in economic savings for the citizens and City.

RECOMMENDATIONS:

1. Consider partnering with energy cooperatives with the goal in reducing the cost for residents in purchasing alternative energy sources.
2. Continue to review opportunities for the purchasing of new office equipment that result in energy efficiency and cost savings over the lifetime of the equipment.
3. Identify potential grants for green projects within the City to reduce energy consumption.
4. Continue practice of third party energy audits of city properties to obtain efficiencies and lower costs overall.
5. In an effort to reduce green house gas emissions, encourage Electric Vehicle Charging (EVC) stations and carpool parking spaces as part of the review process for new developments.



Figure 22: Charles F. Dodge City Center



Figure 23: C.B. Smith Park solar installation



Figure 24: Douglas Gardens North

3 Built Environment & Transportation

The built environment and transportation combined contributes over 70% of all carbon emission released into the environment according to the U.S. Green Building Council (USGBC). In order to effectively plan for the future the city works to encourage green and transit oriented development. The City has built upon the goals set in the 2014 Green Plan that were formed to support and encourage green development techniques, smart growth, and mobility enhancements. The recommendations presented in this chapter identify areas of the previous recommendations where there were opportunities for further development to enhance the built environment and transportation of the City.

BUILT ENVIRONMENT & TRANSPORTATION



Figure 25: Graphic courtesy of Broward County MPO

The built environment and transportation are elements that continually impact our lives in the spaces we live, work, and play. A factor that has positive impacts on the built environment of the City is the LEED certification of buildings. According to the USGBC, “LEED certified buildings are proven to save money, improve efficiency, lower carbon emissions and create healthier places for people. They are a critical part of addressing the climate crisis, meeting ESG [Environmental, Social, and Governance] goals, enhancing resilience, and supporting more equitable communities.” As the City continues to implement these green initiatives, it will emphasize maintaining a well-built environment and community to ensure a high quality of life for the residents of Pembroke Pines.

LOOKING BACK ON ACCOMPLISHMENTS

CHAPTER 3 OF THE 2014 GREEN PLAN:

- The City was recognized for having seven LEED certified buildings at the time of adoption of the 2014 Green Plan. Since 2014, nine additional buildings are in process of completing, or have completed their certifications.
- The incorporation of standards in the Land Development Code (LDC) requiring developers to submit a narrative of utilized green building techniques for new developments. A list of recommended green practices are included in the LDC, such as greenwalls and white roofs.
- The continued support of affordable housing projects, with the addition of five affordable housing/senior living facilities in response to offering opportunities to residents of the low - very low income spectrum.
- Creation of smart growth partnerships with entities including the Broward County MPO to identify areas for complete streets. Current projects include the City Center Mobility Hub and Flamingo Road greenway.

**Appendix contains additional information on the Green Plan Status Report*

ENVIRONMENTAL

CHAPTER 3: BUILT ENVIRONMENT & TRANSPORTATION

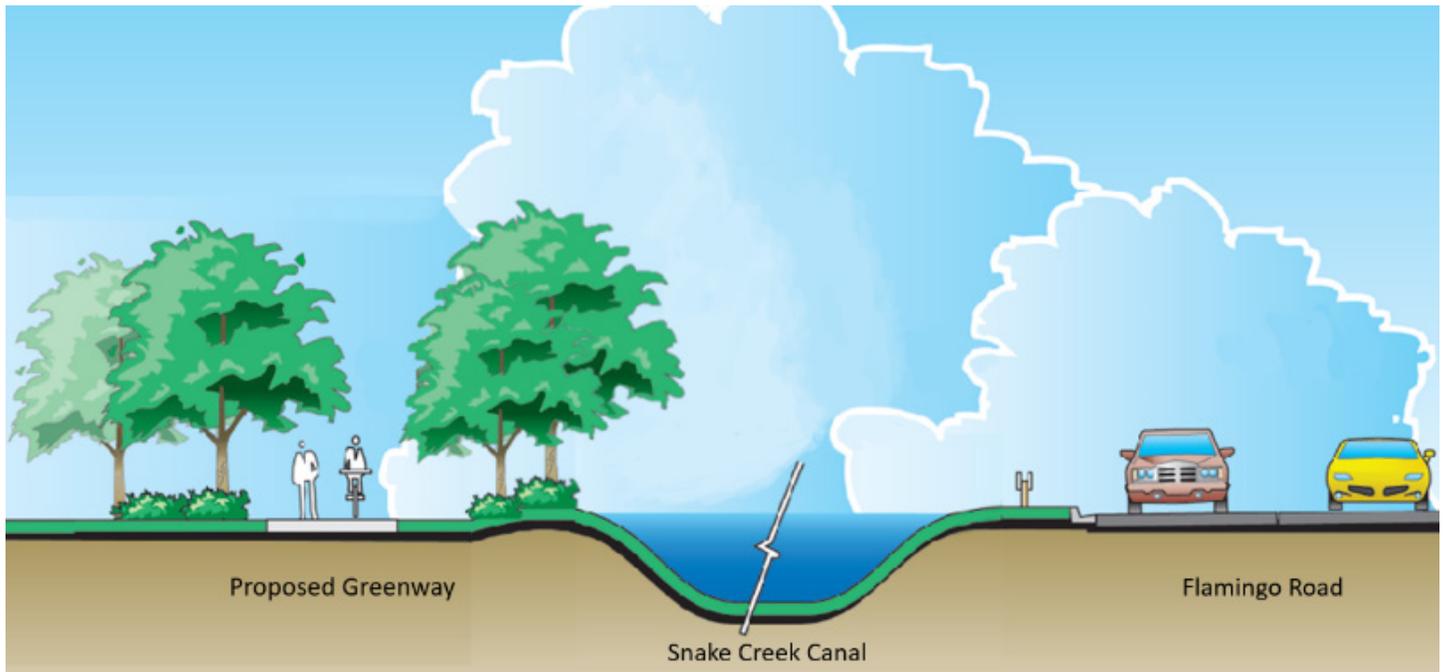


Figure 26: Broward County greenway proposal

GOAL:

Improve the built environment with the focus on sustainability and Smart Growth principles.

RECOMMENDATIONS:

1. Staff to emphasize sustainability through the site plan review process. All sustainable practices utilized by the applicant shall be reported to the various applicable review boards.
2. Partner with government agencies to determine additional opportunities for bike lane additions. Perform an analysis to help identify these areas based on needs/demands of the community.
3. Identify areas where pedestrian/vehicular connectivity can be increased to alleviate traffic from adjacent roadways when considering development applications.

SOCIAL

CHAPTER 3: BUILT ENVIRONMENT & TRANSPORTATION

GOAL:

In aiming to build a healthy community, educate and include the residents in the improvements being made in relation to the built environment and transportation throughout the City.

RECOMMENDATIONS:

1. Educate the citizens on the negative impact of Volatile Organic Compounds (VOCs) found in everyday household items utilizing city social media platforms, City website, and City events; and encourage city operations to restrict or limit the use of VOC's where feasible.
2. Work with Broward County Transportation to determine bus route efficiencies. Continue to evaluate potential transit additions throughout the City to increase mobility.
3. Promote the Pines Shuttle program through City media platforms and improve the accessibility of the schedule of the routes to citizens through the exploration of utilizing other tools, such as the formation of a City phone application.
4. Support the recently approved design FDOT I-75 park & ride project through the education of residents on the improvements this project will bring to the City. Assist further through the permitting process of the project.
5. Identify areas and prioritize improvements to be made for ADA access in older areas of the City through the Development Review Process.
6. Utilize City digital displays and web page to promote alternative transportation methods to encourage the reduction of carbon emissions and air pollution.
7. Work with Broward's MPO to identify corridors that can be converted to complete streets to improve the built environment through improved mobility and access.

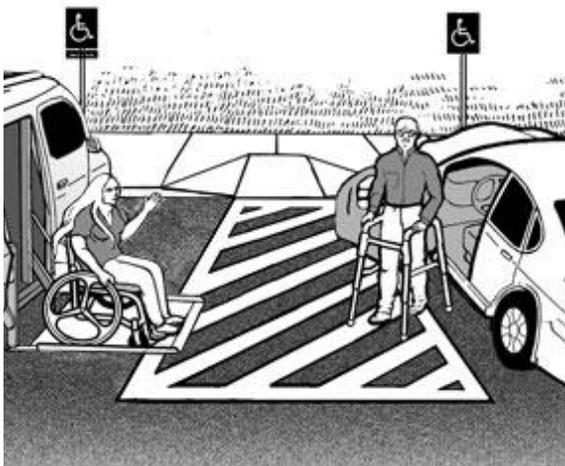


Figure 27: ADA parking accessibility graphic from ada.gov



Figure 28: Rendering of proposed park & ride facility; Pines Blvd, I-75

ECONOMIC

CHAPTER 3: BUILT ENVIRONMENT & TRANSPORTATION

GOAL:

Seek to enhance the City's built environment and transportation that result in economic benefits for the City.

RECOMMENDATIONS:

1. In collaboration with the Affordable Housing Advisory Committee (AHAC) evaluate and identify under-utilized properties to redevelop into affordable housing projects in support of the built environment for the community.
2. Search for funding opportunities to support future transportation improvements/additions.
3. Continue to identify opportunities for redevelopment along major corridors that are feasible for new housing opportunities near multi-modal locations.
4. Identify parcels that may be vacant or in need of redevelopment along the University/Pines corridor to spur reinvestment at adjacent properties.
5. Work with the City's Bus Shelter provider to identify locations in need of new shelters; Find funding sources or new partnerships for construction of new shelters.



Figure 29: Hiatus Greenway bus shelter rendering



Figure 30: Affordable housing project; Douglas Gardens IV & VI rendering



Figure 31: COPP Waste Water Treatment Facility

4 Waste Reduction, Reuse & Recycling

Lack of awareness in our waste production contributes to the pollution of our atmosphere, waterways and natural environments. Bringing awareness to our ecological footprint is one of the greatest challenges we have as a City. Creating the goal of achieving sustainable waste management for the City can be reached by actively educating the community on various waste reduction methods. The City will achieve the greatest impacts of this by utilizing the five R's method: refuse, reduce, reuse, repurpose, and rot, which can be learned and applied to every day lives in an effort to minimize our ecological footprint.

WASTE REDUCTION, REUSE & RECYCLING

The City has undergone a paradigm shift in its approach toward recycling since the advent of the Green Plan in 2014. Cities in general are no longer recycling materials because it is not cost effective, at this time.

In 2018, major waste purchasers made the decision not to purchase recyclable material throughout the world. As a result, the United States was ill prepared to process the large amount of materials it produced and sent abroad.

Fewer buyers resulted in recycling companies losing profits. To recuperate lost profits, waste providers increased their municipal service fees. Due to the increase in fees, it was no longer feasible for some municipalities to offer recycling services. The City of Pembroke Pines was one of many Cities across the Country which were adversely impacted by the global shift in recycling, therefore City administration began revising its recycling policies.

The City's contract with Reuter Recycling ended January 1, 2022. The City entered into contract with WastePro who collects the City's waste and transports it to Wheelabrator South Broward Waste-to-Energy Facility beginning January 2, 2022. This facility collects all items into one system that goes through a process of incineration where it is converted into energy as a form of recycling. The facility also separates the few items that cannot be incinerated and properly disposes of them. By Florida Statute 403.7032 the incineration of refuse materials to make energy is considered recycling.

At this time of report, the City continues to work with State, regional, and local agencies to identify future opportunities for other cost effective recycling efforts.

As the city moves forward with adapting to the changes in recycling, the focus of this chapter has shifted to creating goals and recommendations in support of the five R's that have been identified as Refuse, Reduce, Reuse, Repurpose, and Rot. The implementation of these five R's will encourage the reduction in the City's ecological footprint.



Figure 32: COPP graphic

LOOKING BACK ON ACCOMPLISHMENTS

CHAPTER 4 OF THE 2014 GREEN PLAN:

- The City Wastewater Treatment Plant Biosolids Processing and Centrifuge System was built in 2017. The system has been designed to convert wastewater to Biosolids. Since installation, the City has been able to produce very high quality biosolids (Class AA) which may be used for fertilizer.
- The City has joined a partnership with Clean Harbors Environmental Services to ensure residents are able to properly dispose of Hazardous Waste Materials.
- The City offers opportunities for donations of unwanted goods and toy donations during the holidays.
- The City offers and encourages individual and community wide yard sale permits. This enables residents and HOA's to hold these events as a form of waste reduction and reuse.

**Appendix contains additional information on the Green Plan Status Report*

ENVIRONMENTAL

CHAPTER 4: WASTE REDUCTION, REUSE & RECYCLING



Figure 33: COPP Graphic

GOAL:

Reduce the City's environmental impact through the support and encouragement of the 5 R's: refuse, reduce, reuse, repurpose, and rot.

RECOMMENDATIONS:

1. Invest in the wastewater treatment processing upgrades to increase the amounts of high quality fertilizer (Class AA biosolids). Explore reuse options to distribute the fertilizer to residents and/or other entities.
2. Create an educational campaign on the implementation of the five R's in households to promote the reduction of waste to a landfill. Promote the education of the five R's through City website, City Connect, and social media.
3. City to collaborate with local, state, and regional governments to identify waste disposal alternatives for recyclable materials. Evaluate whether the City's current practices can meet the Environmental Protection Agency's (EPA) nationwide goal of recycling 50% of waste across the nation by 2030.
4. Continue the City's partnership with waste disposal contractors who demonstrate the protection and preservation of the environment.

SOCIAL

CHAPTER 4: WASTE REDUCTION, REUSE & RECYCLING

GOAL:

Educate and encourage the residents & businesses to engage in different methods of waste reduction, reuse, and recycling.

RECOMMENDATIONS:

1. Promote and offer the opportunity for the donation of second hand items by residents to local organizations at City events. Continue to provide access for donation bins to staff during the holidays.
2. Promote residential composting.
3. Partner with schools/houses of worship to promote the donation of second hand goods and clothing in good condition.
4. Consider a permanent drop-off location for second hand items at City Hall and other city locations where feasible.
5. Utilize City website / social media to report updates on policies related to recycling.
6. Partner with HOA's to increase the number and regularity of community wide garage sales.



Figure 34: Flea Market event at the S.W. Focal Point Senior Center



Figure 35: COPP Flyer

ECONOMIC

CHAPTER 4: WASTE REDUCTION, REUSE & RECYCLING



Figure 36: COPP Flyer



Figure 37: Waste Pro truck that is powered by natural gas ("CNG") and other fuels

GOAL:

Expand collaborations throughout the City that aim to support waste reduction that have economic savings in waste disposal.

RECOMMENDATIONS:

1. Create a City partnership program with local food vendors and restaurants for the donation of foods near the end of their shelf life to aid those with economic hardships.
2. City staff to consider the full life cycle of goods and products when making purchases, with the aim of reducing waste and having an economic saving in the long term.
3. Campaign to reduce the use of flushable wipes to help decrease the maintenance cost for the wastewater plant.
4. Explore economic impacts of converting biosolids produced at wastewater treatment plant to fertilizer for local use.



Figure 38: Pines Day Event

5 Community Outreach & Empowerment

Pembroke Pines is a city which values the input of its residents and visitors. To obtain this vital input, the City has given the opportunity to its residents through community outreach efforts. These efforts must take into account the large diversity of people within this community. Pembroke Pines has been successful in outreach efforts through the community newspaper, social media, TV channel, and website. In addition, the City solicits community input at its events and through public meetings. The advisory boards were created to encourage resident advocacy related to the environment, diversity, economic vitality, arts, and education to name a few. These Boards include resident appointees who are empowered to make recommendations on topics in which they are passionate about. Through both community outreach and empowerment, Pembroke Pines residents are assured a voice in their community.

COMMUNITY OUTREACH & EMPOWERMENT



Figure 39: Charles F. Dodge City Center

Being transparent to the citizens and ensuring the voices of the diverse Pembroke Pines community are heard is what builds a stronger, sustainable city. Since formation of the 2014 Green Plan the City of Pembroke Pines has been very proactive in expanding its methods of outreach to the residents and general public through the following actions:

- Establishing an Office of Communications which oversees press releases, City TV and City Connect content, as well as social media postings.
- The creation of social media pages for real time messaging to residents and visitors.
- Rebuilding the City website to be more user friendly to the public.
- Building digital displays around the City to allow for residents to receive city information in a local setting.

In addition, the City is currently in the process of creating a Citywide Transportation Master Plan and Parks Master Plan. These plans include significant public input through the use of survey documents as well as input via public meetings.

Pembroke Pines values the opinions and priorities of the community and will work towards enhancing the environment collaboratively as the community sees fit. The City's investment in the physical, economic, social and cultural environment of the community will form a better city for all who live here.

LOOKING BACK ON ACCOMPLISHMENTS

CHAPTER 5 OF THE 2014 GREEN PLAN:

- The continual release of a bi-monthly City Connect, bringing local news and information to residents.
- The City made improvements to the Homeowner Association registration allowing for easier reporting of changes to HOA leadership.
- On the Pembroke Pines website a voluntary e-mail sign-up for local events and City meetings is provided.
- The City promotes and offers State and Federal grants to qualified residents for minor home repairs that focus on energy efficient upgrades.
- The City is currently part of the Broward Water Partnership. Through this partnership, rebates and free water-conserving devices are available to qualifying customers.
- An annual Arbor Day poster contest is held for the children to participate in as part of a partnership with the City's elementary schools.
- The Planning and Economic Development Department coordinates an annual tree giveaway to its residents to help raise awareness of the benefits of trees in the City while increasing tree canopy.
- The Landscape Division created a tree mitigation program in which HOA's are empowered to work with staff for the removal and replacement of damaged or harmful trees in their neighborhood.

**Appendix contains additional information on the Green Plan Status Report*

ENVIRONMENTAL

CHAPTER 5: COMMUNITY OUTREACH & EMPOWERMENT

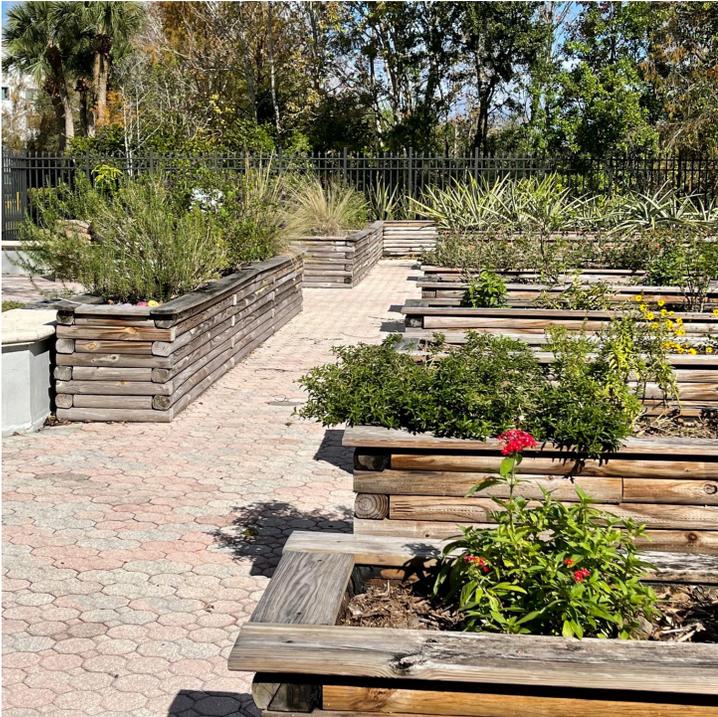


Figure 41: S.W. Focal Point Senior Center Garden



Figure 40: Century Village Secret Garden



Figure 42: Century Village Garden

GOAL:

Provide opportunities to the residents of Pembroke Pines that foster a sustainable and environmentally conscious community.

RECOMMENDATIONS:

1. In addition to the Adopt-A-Canal program, identify other potential waterway maintenance and natural environmental protection programs to incorporate into the community.
2. Reestablish the Natalie Belmonte Great Yards Award contest, post covid.
3. Explore additional contests or challenges to promote within the community to engage residents in green practices like National Bike Day, National Million Pollinator Challenge, etc.
4. Encourage schools in the City to participate in the Broward County NatureScape School Partnership.

ECONOMIC

CHAPTER 5: COMMUNITY OUTREACH & EMPOWERMENT

GOAL:

Encourage the City's local businesses to foster a sustainable environment for their business.

RECOMMENDATIONS:

1. Partner with the Miramar Pembroke Pines Regional Chamber of Commerce to encourage & identify businesses who have incorporated green practices in their operations.
2. Promotion of "buy local, shop local" on the City website and other City social media platforms.
3. Highlight a local business and their green practices in the City newspaper.
4. General outreach to local business owners to educate them on the potential financial benefits of going "Green".
5. Work with city departments to further develop "green initiative" categories in evaluating the purchasing of environmentally preferred materials and resources where feasible.



Figure 45: COPP Biking Event



Figure 46: COPP Flyer



Figure 47: Mural at Charles F. Dodge City Center Frank Art Gallery

6 Leadership & City Operations

Decisions big and small that impact the Pembroke Pines community are continually made by elected officials, appointed bodies, and City staff. Since formation of the 2014 Green Plan, the City has passed ordinances and performed upgrades that required environmental considerations to enhance the quality of life for the community. The City continues to take this role in leadership by continually building upon, and creating new goals/recommendations that move the City towards the decisions needed to build a sustainable local government.

LEADERSHIP & CITY OPERATIONS

City leaders actively consider the environment into their overall decision making processes. This may occur through the ordinances and resolutions they pass which protect the environment, through major efforts such as the construction of the new city hall utilizing green principles, through the selection of environmentally responsible vendors the City chooses to select, or even through everyday operational decisions such as the use of environmentally sensitive cleaners to clean City buildings.

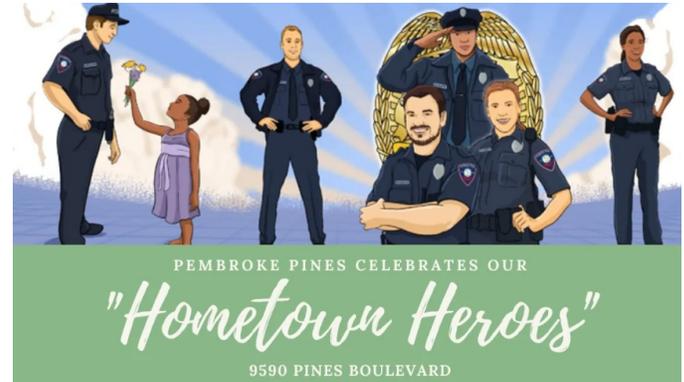


Figure 48: Paintings on utility box from Recreation & Cultural Arts department

LOOKING BACK ON ACCOMPLISHMENTS

CHAPTER 6 OF THE 2014 GREEN PLAN:

- City owned properties and buildings are continuously upgraded/renovated to follow building code requirements of implementing energy efficient upgrades.
- LEED principals were utilized in the planning and construction of City facilities, which included City Hall.
- The recent transition to an online permitting system in April 2022, called the Development Hub that allows residents to do all permitting processing online, saving review time and reducing paper.
- The City continues to revise and add to the comprehensive plan policy document. An archeological site, Buzzard's Roost, found in the Chapel Trail Nature Preserve was named a designation to be preserved in 2017 as part of the conservation section of the comprehensive plan.
- In 2021, the Landscape Division updated the landscape Code from suggesting Florida-Friendly Landscaping™ to requiring these techniques to be implemented throughout the City.
- In 2017, City Commission passed Ordinance #1896 that updated the lighting standards with the goal of limiting light pollution and adverse environmental impacts. The addition of Sec. 116.07 Natural Areas, Preserves & Environmentally Sensitive Areas is a driving force in achieving that goal.
- Two energy audits were preformed through third-party agencies that began in 2015 & 2016 where they produced annual reports that reflect on the savings from Green improvements made in City Charter schools, the senior center, and Health Park.
- The adoption of internal quality control standards pertaining to the use of green cleaning products for City facilities as a policy was implemented.
- The continual partnership with Broward County's MPO for the improvements of Citywide street corridors with the goal of adding bike lanes and improving transit stops.
- The City has recently began the Co-op with the City of Coconut Creek to provide hazardous waste pick up for the citizens through Clean Harbors Environmental Services.

**Appendix contains additional information on the Green Plan Status Report*

ENVIRONMENTAL

CHAPTER 6: LEADERSHIP & CITY OPERATIONS



Figure 49: COPP Graphic



Figure 50: Tree City USA logo which the City has been certified for 30 years

GOAL:

Consider environmental impacts within City Operations.

RECOMMENDATIONS:

1. In conjunction with the Procurement Department, standardize the practice of environmentally friendly purchasing throughout City operations through the expansion of the "green initiative category".
2. Work to retrofit City owned and operated buildings with an eye towards green building upgrades and enhancements. Prioritize list of improvements based on the age and/or inefficiency of facilities.
3. Utilize green building techniques during the construction of City buildings and facilities.
4. Explore additional certifications the City can obtain that encourages environmental efficiencies and conservation.
5. Evaluate the benefits of installing Electrical Vehicle (EV) charging stations at City owned buildings and parks.
6. Encourage the swap of chemical based cleaning products for natural cleaning products when cleaning City facilities.

SOCIAL

CHAPTER 6: LEADERSHIP & CITY OPERATIONS

GOAL:

Make environmental decisions related to City Operations that have a positive impact on the residents of the community.

RECOMMENDATIONS:

1. Utilize solar components to enhance city signs, bus shelters, and utilities where feasible.
2. Work with the Recreation & Cultural Arts Department to identify additional City property for certification through the National Wildlife Federation (NWF).
3. Create an annual summary report outlining city environmental accomplishments.
4. Work with the Miramar Pembroke Pines Regional Chamber of Commerce to create incentives for companies to go "Green". Create an educational campaign to support the incentive of companies to go "Green".



Figure 51: NWF certified property in Pembroke Pines



Figure 52: Art installation at City Hall

ECONOMIC

CHAPTER 6: LEADERSHIP & CITY OPERATIONS

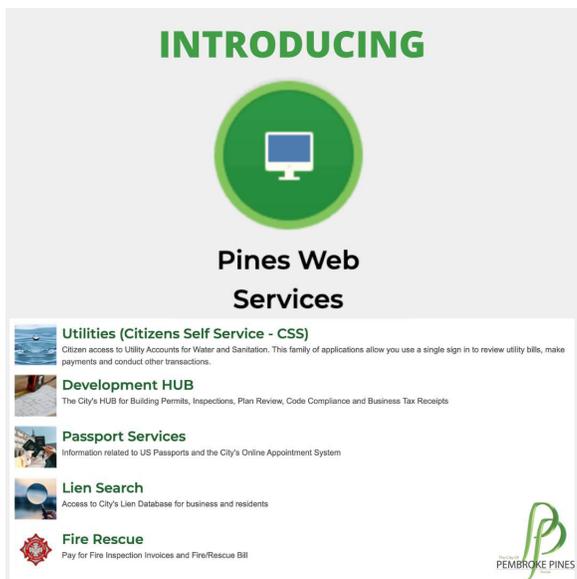


Figure 53: COPP Web Services



Figure 54: Proposed WM Recycling Facilities in Pembroke Pines

GOAL:

Review City Operations to identify ways that encourage economic development and create efficiencies through environmental improvements.

RECOMMENDATIONS:

1. Form a list of standards or requirements for developments/businesses to reach, to be named as a City designated "Green Business". Promote the developments and businesses who qualified based on the standards created on the City's website.
2. Support the expansion of new buildings/businesses within the City dedicated to recycling and reuse efforts.
3. Provide a status report on the estimated savings in paper and fuel saved through the Development Hub system, which enables City functions such as permitting to be completed online.
4. Examine the financial impact of upgrading the City fleet to utilizing vehicles that use alternative fuel sources.
5. Determine if there are grants available for the City to install EV stations at City owned buildings.

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APPENDICES

CHAPTER 1

NATURAL RESOURCES & ENVIRONMENTAL DESIGN



Update



Maintain



Complete

Goal / Objective

GOAL 1.1: NATURAL RESOURCE ENHANCEMENT



City staff is currently rewriting the landscape code in order for all users to better understand and interpret the code.

- **Status:** The LDC update of 2021 included the revision of the landscape code to address new landscape standards.
 - ✓ *Updated in Economic recommendation #2*



The adoption of Florida-Friendly Landscaping™ practices in 2010 which requires that at least 50% of landscape is Southeast Florida Native.

- **Status:** Implementation of Florida - Friendly Landscape practices were added to the LDC update and are ongoing.
 - ✓ *Updated in Environmental recommendation #2*



Participation in NatureScape Broward – a Broward County initiative that focuses on landscapes that conserve water, protects water quality, and creates wildlife habitat.

- **Status:** The City continues to participate in the NatureScape Broward quarterly.



National Wildlife Certification – Pembroke Pines recently became one of the largest Cities within Florida to participate within the National Wildlife Federation’s certification program, whose goal is to create wildlife habitats through providing food sources, water sources, shelter and an area for wildlife within individual properties.

- **Status:** The City continues to renew their NWF certification yearly.
 - ✓ *Updated in Social recommendation #4*

OBJECTIVE 1.1.1: ENHANCE PARKS



Preserve and expand green and open space within the City to ensure quality of life to residents through identifying key areas for recreation and conservation.

- **Status:** several updates have been done to the parks within the City:
 - Complete renovation the north restroom at Flamingo Park, and north restroom at Pembroke Shores Park.
 - New irrigation system and improved walking trail at Ben Fiorendino park.
 - Built new walking trail called Raintree Park.
 - Replaced playground systems at; Cinnamon Ridge park (added walking trail and exercise equipment), Pembroke Shores, Price Park and Fahey Park.



Update



Maintain



Complete

- Installed new playground system at Memorial Park.
- Complete renovations of Rupp Dog Park.
- Resurfaced walking path at Linear Park.
- Removed sand from all playground systems and replaced them with engineered wood fibers
 - ✓ *Updated in Social recommendation #3*



Continue to implement Florida-Friendly Landscaping™ practices and remove invasive species.

- **Status:** The implementation of these landscape practices continue.
 - ✓ *Updated in Environmental recommendation #4*



Continue to plant large shade trees where feasible.

- **Status:** The implementation of large shade trees are applied through the landscape code mitigation requirements. Staff tracks each permit and mitigation to keep records of what is done. As a result staff has seen a 25% increase in tree canopy through the itree software.
 - ✓ *Updated in Environmental recommendation #5*



Map parks to ensure all residents reside within walking distance of green or open space.

- **Status:** The City currently has posted on the web page a parks map for the City. The City Comprehensive plan establishes a level of service for parks of 10 Acres of parkland per 1,000 population.
 - ✓ *Updated in Social recommendation #2*

OBJECTIVE 1.1.2 – DEVELOP, DESIGN, AND DESIGNATE GREENWAYS



Encourage residents to plant Florida friendly category 1-3 trees.

- **Status:** The City has posted a preferred species planting list; this list includes preferred category 1-3 trees. The list is updated periodically based on observed species performance and availability.
 - ✓ *Updated in Environmental recommendation #4*



Design, plan and implement green corridors that link major environmental assets to residential communities within the City through identifying grants and local partnerships.

- **Status:** The City is currently working with Broward MPO to create multimodal paths throughout the City. Locations under review and design include: City Center, Washington Street and along Flamingo Road.
 - ✓ *Updated in Economic recommendation #4*

 Explore the feasibility to nominate a site within the City to add to the Great Florida Birding & Wildlife Trail.

- **Status:** Explored by the City but not yet completed.

✓ *Updated in Social recommendation #1*

OBJECTIVE 1.1.3 – UPDATE, REVISE, AND STRENGTHEN POLICIES

 Revise city code of ordinances to better protect and preserve natural resources.

- **Status:**
 - Landscape code was codified in 2015 and revised in 2021
 - Establishment of the Environmental Advisory Board by Ordinance in 2016
 - Lighting code revised to address LED lighting in 2017.
 - Electric Vehicle Charging Stations added to Code in 2017.
 - Bike Share regulations added to Code in 2018.
 - Sustainability Section added to the Land Development Code (LDC) update in 2021.

 Updating the City’s Comprehensive Plan to ensure it is up to date with current needs and County requirements.

- **Status:** The City periodically updates comprehensive plan as required by State law. City Code must be consistent with County plan.

 Create flexible landscaping guidelines for the original east side of the City where there is little room for landscaping and trees to maintain an aesthetically pleasing city that residents are proud of.

- **Status:** The city has written into the landscape code the allowance of a mitigation plan for existing non-conforming properties as well as properties that do not have the ability to hold / sustain landscape. City has acknowledged the use of green walls and other vertical landscaping which may ultimately be considered in granting such mitigation plan.

✓ *Updated in Environmental recommendation #8*

GOAL 1.2 – PROTECTING AIR QUALITY

 Tree removal permits – residents and businesses are required to obtain a tree removal permit to remove native trees.

- **Status:** The City requires a permit for the removal of any tree within the city. Approximately 2,900 tree removal permits have been processed since 2015. These removals typically require replacement with trees which are better

suited for the location. Native tree removals must be replaced with a native species.



Increase tree canopy by 30% by 2030 – City Commission in 2009 passed Resolution number 3218 to increase tree canopy by 30% within the City.

- **Status:** The Planning and Economic Development Department has processed approximately 325 landscape permits since 2015 which established new tree canopy. The City has not conducted a tree inventory however has obtained tree canopy measurements through ITree software. The software indicates that the City increased in tree coverage by roughly a 30% increase in 2021 from 2009 numbers.

✓ *Updated in Environmental recommendation #3*



Restricting and regulating industrial businesses that may contribute to pollution.

- **Status:** The City continues to evaluate industrial zoning for compatibility with surrounding uses. In many cases, the City is able to work with developers to limit undesirable uses on sites through restrictive covenants.

✓ *Updated in Economic recommendation #3*



Increase the diversity of species being planted and approved to ensure diversity and resilience.

- **Status:** City Code requires species diversification. No more than 20% of a single species can be planted on a site.

OBJECTIVE 1.2.1 – PROTECTING AIR QUALITY



Promote the use of alternative transportation to reduce carbon emissions and air pollution.

- **Status:** The City Continues to promote the Citywide community bus service through the City website as well as through social media and the community newspaper.

✓ *Moved to Chapter 6 recommendations*



Create an outline on how the City can meet the 30% increase in tree canopy.

- **Status:** The City plans to increase the tree canopy in the City the following ways:
 - Requiring a 1.5 to 1 tree replacement for tree removal permits
 - Performing courtesy inspections on non-residential and multifamily residential sites to ensure compliance with site plans.
 - Encouraging the use of canopy trees above and beyond Code requirements for all new development.



Develop a city tree and open space inventory for insurance and streetscape purposes.

- **Status:** Not yet completed.
 ✓ *Updated in Environmental recommendation #6*

GOAL 1.3 – PROTECTING ECOSYSTEMS



Designation and protection of the Eagle Sanctuary located in Western Pines – the first pair of nesting bald eagles in Broward County in over 50 years.

- **Status:** Mayor Ortis appointed Eagle Sanctuary Steering Committee to recommend measures to protect and preserve nesting sites & provide opportunities for the public to safely observe the rest. The City passes conservation policies 4.24-4.26 to conserve, protect, & maintain native vegetative communities, wildlife habitats, Bald Eagle Nesting sites & marine Habitats.



Designation and protection of the Taft/Palm Bird Rookery through monitoring and landscape maintenance and enhancement.

- **Status:** Comprehensive Plan Conservation Element Policy 4.2 completed.



Continually coordinate mitigation efforts for all new development.

- **Status:** All mitigation on new properties is reviewed for compliance by the City Environmental Services Department as well as Broward County Environmental Protection and Growth Management Department.



Continually monitor and maintain approximately 620 acres of wetlands.

- **Status:** The City continues to maintain city controlled wetlands throughout the City.



Continued support for the Comprehensive Everglades Restoration Plan and prohibition of development within the Florida East Coast Buffer Zone in the western most portion of the City along the Florida Everglades.

- **Status:** The City supports this through the addition of the protection of this to the Comprehensive Plan. Staff monitors and restricts building permits within these areas.

OBJECTIVE 1.3.1 – ENHANCE AND PROTECT ECOSYSTEMS



Enhance protections for the Eagle Sanctuary to ensure safety for both wildlife and people.

- **Status:** The City created a protection zone of 300’ around the Eagle nest.



Reviews the City’s Wetland Management Plan and identify deficiencies to ensure the success and health of these vital ecosystems.

- **Status:** The Public Services Department reviews and coordinates with Broward County on management of wetlands.



Market Chapel Trail Nature Preserve to encourage recreational use and eco-tourism.

- **Status:** The City currently advertises nature preserve on web site.

GOAL 1.4 – WATER CONSERVATION

-  Incorporation of conservation into the City’s Comprehensive Plan.
 - **Status:** The conservation section of the Comprehensive plan discusses the availability of water resources within the City as well as protection of wellfields. Current water needs are also discussed within the Infrastructure Element. In 2021, the City approved the Water Supply Plan. This plan projected the City’s water use needs for at least a 10-year period; identify and prioritize the water supply facilities and sources of water that will be needed to meet the demand; and include in the City’s Five-Year Schedule of Capital Improvements a financing schedule to fund the necessary capital improvements identified in the work plan.
-  Promoting xeriscaping techniques (Conservation Element Policy 4.22).
 - **Status:** The City continues to apply this landscaping technique.
-  Not allowing potable water for irrigation.
 - **Status:** Potable water for irrigation continues to remain not allowed.
-  Partnership with Broward County’s Energy Sense rebate program which encourages residents to switch to low flow toilets, faucets and shower heads.
 - **Status:** The City currently gives away low flow shower heads and aerators to residents who request such items which can be found on the City’s website.
-  The City continues to enforce water restrictions set forth by the South Florida Water Management District (SFWMD).
 - **Status:** In March 2021, the City passed Ordinance 1964 – updating irrigation Code to be consistent with SFWMD water restriction regulations.
-  Partnership with Broward County to evaluate irrigation systems on public lands to ensure efficiency.
 - **Status:** The City partnered with Broward County NatureScape Irrigation Service (NIS) last year to evaluate nine locations within the City. The NIS evaluated nine sites with three follow-ups for City of Pembroke Pines this past year. The actions taken by city staff at those locations, based on recommendations provided by the NIS, resulted in a demand reduction of 3,867,810 gallons/year (or 26.9% of the total original use), with an average Actual Water Savings of 11.4% per evaluation and an Overall Water Demand reduction per site of 15.3%.
 - ✓ *Updated in Economic recommendation #1*

OBJECTIVE 1.4.1 – ENCOURAGE WATER CONSERVATIONS

-  Identify high water users within the city by working with the City’s water provider to ensure they are abiding by restrictions and best management practices.
 - **Status:** The City continues to identify these areas.
-  Encourage large developments to install and use water reuse techniques and alternatives.
 - **Status:** This is continually done through the Development Review process.

-  Encourage the commercial and residential use of rain barrels.
 - **Status:** The City encourages residents to obtain the National Wildlife Certifications for their property. A component of the Nation Wildlife Certification is water conservation through proper irrigation techniques such as rain barrels.
 - ✓ *Updated in Social recommendation #5*

OBJECTIVE 1.4.2 – PROTECT WATER RESOURCES

-  Incorporate Green Infrastructure within the City where appropriate to assist in reducing storm water runoff.
 - **Status:** The City monitors the design of roads and sites to ensure that they comply with South Broward Drainage District storm water retention standards.
-  Partner with Broward County Sheriff’s Office for proper disposals of medications to ensure they do not end up in the waterways, canals and aquifers.
 - **Status:** Annually, the City holds two Shred-a-Thon events, one on our own, and one in collaboration with BSO. During the BSO collaboration, we also host the “Operation Medicine Cabinet”, where we collect unused, unwanted or expired medications for safe disposal. Due to Covid-19, we were unable to collaborate with BSO in 2021. We hope to resume the partnership in 2022.
 - ✓ *Updated in Environmental recommendation #9*
-  Encourage commercial and residential projects to follow Florida Water Star SM 16 standards and guidelines for water efficiency.
 - **Status:** Per recently approved water supply plan – Per capita usage of approximately 82.68 gallons per day (gpd) (2017-2019 average) is far lower than the Florida average of 127 gpd for Broward County Service Area.
-  Explore the idea of using reclaimed water for irrigation of public spaces, City parks, City property, construction and landscape.
 - **Status:** The City explored the idea of utilizing reclaimed water for irrigation however the cost to install the system outweighed the benefit.

CHAPTER 2

ENERGY EFFICIENCY & CONSERVATION

 Update  Maintain  Complete

Goal / Objective

GOAL 2.1 – ENERGY EFFICIENCY

-  Encouraging energy efficiency in new development through the installation of Energy Star appliances and light fixtures.
 - **Status:** The construction of the City Hall building was completed in 2017 utilizing green building techniques / principles. LED lighting was incorporated into the building and parking lot designs as well as the use of modern, high SEER Air Conditioning Units, as well as the use of energy efficient appliances within the building.
 - The Sustainability Code was adopted in 2021. Developers of new sites are required to provide a narrative on any green construction methods as well as any green business practices related to the proposed development.
 - ✓ *Updated in Social recommendation #2*
-  LEED™ Silver Standard for all new Construction of City owned building projects.
 - **Status:** LEED principals have been utilized in the construction of City facilities such as City Hall.
 - ✓ *Updated in Environmental recommendation #1*
-  Downsized vehicle fleet and supporting the use of fuel efficient vehicles.
 - **Status:** The City has reduced its fleet over the years as the City has adjusted its workforce. When feasible, city cars are shared between multiple employees within a department to perform everyday work tasks such as inspections. Vehicles are upgraded as they age, typically resulting in greater fuel efficiencies and lower maintenance costs.
 - ✓ *Updated in Economic recommendation #5*
-  Support and encourage the use of renewable energy.
 - **Status:** The City continues to support the responsible use of the PACE program to help residents fund energy efficient upgrades. The PACE program allows for residents to finance solar panels for their homes should they so desire.
 - ✓ *Updated in Economic recommendation #1*

OBJECTIVE 2.1.1 – PROMOTE ENERGY EFFICIENT UPGRADES

-  Continue diversification of energy portfolio by giving preference to vendors who highlight the use of energy efficiency and renewable energy.
 - **Status:** The City's Administration and the Procurement Department reviews and drafts solicitations for review by the City Commission prior to advertising. In various solicitations, the City includes requirements for the bidders/proposers to submit information regarding green and environmentally

friendly products and processes for the City to evaluate when awarding the project.

✓ *Updated in Environmental recommendation #5*

 If adopted by the County, promote the use of Broward County’s Property-Assessed Clean Energy (PACE) program which offers financing options for energy efficiency retrofits for both residents and businesses, such as the installation of renewable energy (rooftop solar), insulation, energy efficient lighting, etc...

- **Status:** The City continues to support the responsible use of the PACE program to help residents fund energy efficient upgrades. The PACE program allows for residents to finance solar panels for their homes should they so desire.

 Explore other energy efficient upgrades on City property that would result in financial savings.

Status:

- The construction of the City Hall building was completed in 2017 utilizing green building techniques / principles. LED lighting was incorporated into the building and parking lot designs as well as the use of modern, high SEER Air Conditioning Units, as well as the use of energy efficient appliances within the building.
- City in process of installing new impact windows and doors at the senior center, replacing decades old windows and improving building A/C efficiency utilizing Community Development Block Grant (CDBG) funds.

✓ *Updated in Economic recommendation #2*

GOAL 2.2 ENERGY CONSERVATION

 Reduction of a five day work week to a four day work week for general shift employees.

- **Status:** Completed and ongoing. Practice resulting in one less day that the City Hall must be operated. This reduces general fuel consumption for employees due to a shorter commute.

 The purchase of Energy Star™ office supplies since 2012.

- **Status:** The Technology Services Department reviews requests for office equipment replacements and reviews Energy Star options to make recommendations on which equipment would be best suited for the using departments.

✓ *Updated in Economic recommendation #2*

 Recently contracted company for Investment Grade Energy Audit to evaluate consumption and propose construction projects that will result in reduced energy consumption to be paid with the energy cost savings.

- **Status:** Energy audits reports are provided through the Procurement department.

✓ *Updated in Economic recommendation #4*

 A culture of environmental stewardship.

- **Status:** The City continues to foster this environment through the individual environmentally friendly purchases and savings within each department.

OBJECTIVE 2.2.1 – ENCOURAGE AND PROMOTE ENERGY CONSERVATION

 Phase in LED lighting throughout the City where deemed appropriate.

- **Status:** The City Hall building utilizes LED technology internal to the building as well as used within the parking lots. Developers throughout the City are encouraged by the Planning Division to utilize LED technology in lieu of other sources.

✓ *Updated in Environmental recommendation #7*

 Encourage new development to use and install renewable energy, such as solar panels.

- **Status:** City Planning Division staff encourages the use of renewable energy whenever a project is proposed. The Pembroke Lakes Mall, Montessori academy, and C.B. Smith park are examples of locations within the City that have implemented solar panels as part of their building design.

✓ *Updated in Environmental recommendation #4*

 Community outreach on energy conservation tips and challenges.

- **Status:** There is various information found on the City website that provide education on green initiatives.

GOAL 2.3 RENEWABLE ENERGY

 Diversifying energy portfolio through added solar components to City monument signs, bus shelters and outside utilities.

- **Status:** the City continues to update their monument signs, bus shelters and outside utilities with solar components.

✓ *Updated in Environmental recommendation #6*

 Installation of a GeoThermal Pool Heating and Cooling system in 2011 at the Academic Village campus.

- **Status:** Completed.

OBJECTIVE 2.3.1- PROMOTE AND ENCOURAGE RENEWABLE ENERGY



Educate and encourage residents to purchase or install renewable energy.

- **Status:** The City continues to provide information on the responsible use of the PACE program to help residents fund energy efficient upgrades. The PACE program allows residents to finance solar panels for their homes should they so desire. A page on the City's website can be found with all the information.

✓ *Updated in Social recommendation #1*



Explore purchasing of renewable energy credits and/or systems.

- **Status:** On August 4, 2021, the City Commission approved the utilization of the agreement with Wheelabrator Environmental Systems, Inc. for the purpose of utilizing waste-to-energy services.



Encourage new development to follow principles for passive solar design when feasible.

- **Status:** The Sustainability Code was adopted in 2021. Developers of new sites are required to provide a narrative on any green construction methods as well as any green business practices related to the proposed development.

✓ *Updated in Environmental recommendation #4*



Explore and identify funding sources for the installation of solar panels on public buildings.

- **Status:** The City Commission was recently (AUGUST 18, 2021) provided a presentation on joining a solar cooperative by Laura Tellez. Commissioner Castillo requested that the City work to promote the non-profit solar cooperative on City TV, social media, and other forms of communication available to the City.

✓ *Updated in Economic recommendation #3*

CHAPTER 3

BUILT ENVIRONMENT & TRANSPORTATION

 Update  Maintain  Complete

Goal / Objective

GOAL 3.1 – GREEN DEVELOPMENT

-  To date, the City has eleven LEED™ certified buildings (USGBC) within the City, with several pending...
 - Four LEED™ Gold : Two TD Banks along Pines Boulevard, Broward College, Building 72, Modera Clubhouse
 - Two LEED™ Silver : Broward County South Regional Library, Douglas Gardens North, Phase III
 - One LEED™ Certified : Baptist Health of South Florida
 - o **Status:** Since 2015 the following buildings have become LEED certified according to the LEED website:
 - Memorial Cancer Institute (in progress)
 - Altis Pembroke Gardens (December 2018 certified)
 - NIKE Factory Store (April 2017 certified)
 - Pembroke Pointe (May 2016 certified)
 - Broward College Science Building (September 2016 certified)
 - Pembroke Pines Clubhouse Phase II (September 2015 certified)
-  Plans are in place to build a LEED™ Silver Certified City Hall/Civic Center within the next several years.
 - o **Status:** City Hall and the Civic Center were built with LEED principles. LEED certificate was not obtained.

OBJECTIVE 3.1.1 – SUPPORT AND ENCOURAGE GREEN DEVELOPMENT TECHNIQUES

-  Creation of a Green Checklist to add to the Unified Development Application to ensure all new development or major renovations within the city adds a “Green” component to their development site, which in turn will create awareness and a beautification component.
 - o **Status:** In 2021, the City incorporated a sustainability section to the Code of Ordinances which requires a developer to submit a narrative of all building techniques to be used on their site. A general list of preferred green practices were included within the Code.
 - ✓ *Updated in Environmental recommendation #1*



Allow Green Roofs and Living Walls within the City.



Green Roofs are roofs that support shallow root vegetation – typically results in reduced energy use, water quality and reduced air pollution and greenhouse gas emissions are to name a few. (epa.gov)

Living Walls are facades equipped with vegetation and share some of the same benefits of green roofs.

- **Status:** Green Wall and roof standards were added to the Code of Ordinances as part of the 2021 LDC update.



Decrease heat island effect through the encouragement of solar reflective coatings on roofs and parking areas, permeable pavement and increased tree canopy.

- **Status:** In 2021, the City incorporated a sustainability section to the Code of Ordinances which requires a developer to submit a narrative of all building techniques to be used on their site. A general list of preferred green practices were included within the Code. Included of note were the use of White Roofs. Newer developments such as the Edison office park, City Center, Keiser University, etc. throughout the city have implemented the White Roof technique. The City continues to take efforts to increase tree canopy through the enforcement of the landscape code. Permeable pavement systems like turf block have been reviewed by the fire department and are not supported in fire truck routes as there are concerns as to their integrity with high weight fire trucks / emergency vehicles.



Encourage the use of low volatile organic compounds (VOCs) 22 found in sealants, paints and adhesives.

- **Status:** Propose to add to the LDC's Sustainability section. Explore incorporating these restrictions in general city operations where feasible.

✓ *Updated in Social recommendation #1*



Continue adopting policies that encourage and promote Green Development and resiliency.

- **Status:** In 2021, the City incorporated a sustainability section to the Code of Ordinances which requires a developer to submit a narrative of all building techniques to be used on their site. A general list of preferred green practices were included within the Code.

GOAL 3.2 SMART GROWTH



City Center is currently zoned Mixed Use Development (MXD) encouraging innovative development and redevelopment that is architecturally compatible, promotes a pedestrian friendly environment and reduces traffic generation.

- **Status:** The City continues to work with the City Center developers to attract developments that contribute to the concept of live work play development within the MXD. City is working with Broward MPO to build a multi-modal hub



within City Center plaza. Improvements include bike lanes on Pines Boulevard, construction of a multi-use path on Washington Street, as well as new bus bays in and around city center.



Pembroke Pines Community Bus and Broward County Transit routes along all major thoroughfares, bicycle lanes throughout the City and pedestrian access to many of the commercial shopping centers.

- **Status:** The City continuously works with Broward County to improve mass transit availability of major roads. The City Commission in September of 2015 approved a redesign of community bus routes (Green, blue, gold routes) to achieve greater connectivity throughout the City. Yearly updates are provided through the Broward transportation to determine route efficiency.

✓ *Updated in Social recommendation #2*



All new development and redevelopment goes through a vigorous public noticing process before development can be scheduled for the Planning and Zoning Board.

- **Status:** Notice for most development applications are provided through an onsite posted notice sign, mailed notice to affected parties, and a legal ad in the Sun sentinel. Agendas are also posted throughout the City as well as on the City website. The noticing process was revisited prior to the update to the Land Development Code and minor changes were made. The City continues to update and maintain an HOA database for noticing purposes.



Pembroke Pines is home to an abundance of senior housing, affordable housing options, workforce housing and a range of other housing options.

- **Status:** The City is home to numerous senior housing communities such as Century Village, Hollybrook, Park place, and Colony Point amongst others. The City is a leader in providing affordable housing as they have built and operate Pines Point (190 units) housing units and Pines Place (614 units) affordable residences. In addition to City Owned properties, the following properties have been identified as affordable.
 - Pembroke Tower – 100 units, **Built**
 - Pembroke Tower II, Southport (88 units, Low Income Seniors), **Approved**
 - St. Boniface Gardens – 96 units (Low Income, Disabled), **Built**
 - Douglas Gardens North – 75 units (Low Income Seniors), **Built**
 - Douglas Gardens V – 110 units (Low Income Seniors), **Built**
 - Veterans Housing at Howard Foreman Health Park– 5, 5-bedroom Houses (Low Income Veterans), **Built**

✓ *Updated in Economic recommendation #1*



The creation of a new “Planned Development Small Lot District” or PD-SL District that allows for a flexible zoning category for smaller lots of land.

- **Status:** PD-SL is a tool in which the City utilizes for primarily redevelopment purposes. The district requires strong connectivity to mass transit and encourages the use on sustainable development practices.
 - Altis Pembroke Pines (LEED certified)
 - 1600 Pines plaza – Approved.



Participated in Complete Streets audit with the Smart Growth Partnership.

- **Status:** The City continues to work with Smart Growth Partnership partners such as Broward County and the Broward County MPO to identify potential areas for complete streets. Once locations are identified, the city assists with the design of that street. No projects have been directly coordinated with the Smart Growth Partnership at this time.

OBJECTIVE 3.2.1 – SUPPORT AND ENCOURAGE LIVABLE COMMUNITIES



Adopt some or all Complete Streets principles.

- **Status:** Complete Streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. (smartgrowthamerica.org). As the City approaches build out, the City reviews ways in which its existing road network can be converted to complete streets.

✓ *Updated in Social recommendation #7*



Encourage new development to abide by Smart Growth and Complete Street principles.

- **Status:** The City is currently working with Broward Metropolitan Planning Organization (MPO) to develop complete streets throughout the City. Current projects include the development complete streets at City Center, Washington Street, and Flamingo Road.



Assist communities in the eastern portion of the City to create a sense of place and foster an ethic of participation through community outreach and engagement.

- **Status:** The City continues to work with eastern community associations to engage them in outreach and participation. The Pines Village Association has been engaged in several projects such as the building of a community wall that provides privacy for the East Pines area as well as having input into the Carter Financial Plaza redevelopment project across from McArthur High School.
- In June of 2019, the City created the Diversity and Heritage Board via Ordinance 1928 to promote awareness and to celebrate the rich Heritage and the vast Diversity of the City of Pembroke Pines, and make recommendations



to the City Commission on diversity and equity strategies that strengthen connections among diverse community groups and with city government.

✓ *Updated in Economic recommendation #3*

GOAL 3.3 - TRANSIT ORIENTED DEVELOPMENT (TOD)



General support for transit hubs throughout the City.

- **Status:** The City has partnered with Broward’s MPO to create City Center’s multi-modal hub. It is projected to be completed within 2-3 years. This hub will provide optimal connectivity for all pedestrians, transit riders, and bicyclists.



Park and Rides (aka express buses) situated along Pines Boulevard on Flamingo Road and University Drive.

- **Status:** Currently this program is offered at C.B. Smith Park, North Perry Airport, and Pembroke Commons that transport residents to downtown Miami.

✓ *Updated in Social recommendation #4*



Recognizing the need for regional connectivity and collaboration (Transportation Policy 2.1.16).

- **Status:** The City works with Broward County to analyze yearly where new transit routes can be added. The City is part of Broward County’s greenways masterplan that brings pedestrian and bicyclist connectivity throughout the regional area of Pembroke Pines.

✓ *Updated in Social recommendation #2*



Encourage new housing to locate on or near major corridors, regional intermodal facilities and regional centers (Transportation Policy 2.2.9).

- **Status:** Since 2015 the following residential projects have been approved off major corridors.
 - Tuscan Pines Townhomes – 58 Units (Pines Blvd/184th)
 - Merrick Square Townhomes – 211 units (Pines Blvd/172nd)
 - 16000 Pines Boulevard – 125 units (Pines Blvd / Dykes Road)
 - City Center Apartments – 1452 units total, 135 Bed Assisted Living Facilities (Pines Blvd/ Palm Ave)
 - Centra Falls Townhomes – 150 units (Flamingo/ Taft)
 - Chapel Grove Townhomes –125 units (Pines Blvd/US27)
 - Ventura Pointe Apartments – 206 units (University Drive)

✓ *Updated in Economic recommendation #3*



Continue to work with the County and local Metropolitan Planning Organization (MPO) in their efforts to establish a transit-oriented corridor overlay zoning district along high capacity transit corridors within the City (Transportation Policy 2.2.8).



- **Status:** No TOD overlays have been proposed.
-  Continue to encourage the use of public transit.
 - **Status:** Ongoing through the use of digital signs and via website.
-  Participation in the University Drive Mobility Improvements Planning Study.
 - **Status:** This study was completed in 2015. The recommendations provided were based on the addition/extension of buffers, restriping, addition of lighting, enhancement of bus stations, addition of sidewalks and curbing, etc.
 - <http://archive.browardmpo.org/userfiles/files/UDriveFinal%20Summary%20Report%20-%2003202015v2.pdf>

OBJECTIVE 3.3.1 – SUPPORT AND ENCOURAGE TRANSIT COMMUNITIES

-  Continue working with Broward Metropolitan Planning Organization (MPO) with the Hollywood/Pines Corridor Project and University Drive Mobility Improvements Planning Study.
 - **Status:** This study was completed in 2015 provided by Broward County’s MPO staff.
<http://archive.browardmpo.org/userfiles/files/UDriveFinal%20Summary%20Report%20-%2003202015v2.pdf>
-  Explore and identify parcels that the City could potentially purchase, develop and sell to ensure the success of University/Pines Corridors.
 - **Status:** The City purchased City Center lot with the intent of creating a mixed-use development to promote the development of this corridor. The city will continue to search for purchase opportunities throughout the city for development.
 - ✓ *Updated in Economic recommendation #4*
-  Provide tree canopy along sidewalks where feasible throughout the City.
 - **Status:** Per the LDC update, the City requires a 1.5 to 1 tree replacement for tree removal permits which has increased our overall tree canopy by 30% since 2009. City has implemented mitigation plans to work with private communities to support the addition of street canopy along sidewalks.
-  Identify bike paths and create safe cyclists paths to travel along throughout the City.
 - **Status:** The City continues to work with Broward Counties MPO to create these safe paths. The collaboration with Broward County’s greenway reports and developments creates these paths where feasible throughout the city.
 - ✓ *Updated in Environmental recommendation #2*
-  Encourage the installation of bike racks within commercial and business centers.
 - **Status:** As part of the 2021 LDC update, Bike racks are now required for new non-residential and multi-family development (155.607).

GOAL 3.4 – MOBILITY



Pines Shuttle bus currently transports approximately 218,000 passengers per year with three routes that run and intersect within most of the commercial areas within the City. (Broward County Transit)

- **Status:** Current transportation ridership is approximately 194,500 based on 2019 stats from October 2018 – September 2019.
 ✓ *Updated in Social recommendation #3*



The County currently operates Broward County Transit (BCT) routes 2, 5, 7, 16, 23 including University Breeze and two Park and Ride buses located on Pines Boulevard along Flamingo Road and University Drive. - Route 7 is one of the heaviest used routes in the County and connects to the TriRail. (BCT)

- **Status:** The City's route seven (7) is a connective route to the tri-rail. There is opportunities to identify more transit routes to the west of I-75.



Many senior communities, including Century Village, in Pembroke Pines operate a transit system that transports seniors to nearby shopping centers and commercial areas.

- **Status:** The Community Services department coordinates with the Broward Transit to provide these services for the Century Village community.

OBJECTIVE 3.4.1 – SUPPORT MOBILITY AND ALTERNATIVE TRANSPORTATION



Encourage shelter and shade at bus stops without coverage.

- **Status:** The City has partnered with Martin-Gold Coast Inc. to install bus shelters in exchange for advertising rights. The City is working with the Broward MPO to install new bus shelters at City Center.
 ✓ *Updated in Economic recommendation #5*



Encourage the creation of a car share or car pool program for residents.

- **Status:**
 The Community Services department will be working on the following coming 2022:
 - Automated system so one can book a ride without talking to a person.
 - Looking at natural gas vehicles and electric vehicles.
 - Looking at door to door service utilizing smaller vehicles.



Continue to monitor and assess the City bus network to ensure coverage, identify gaps and modify routes as appropriate.

- **Status:** Yearly updates are done through the Community Service department to access any gaps for the routes. Changes are coordinated with Broward County Mass Transit.

-  Work with the County to identify whether or not there is a need for an express bus west of I-75.
 - **Status:** Broward County assesses the need for routes based on ridership. No express bus has been determined to be necessary west of I-75.
 - ✓ *Updated in Social recommendation #4*
-  Work with communities near shopping centers to create pedestrian access.
 - **Status:** The engineering department works on development and redevelopment applications to increase ADA access points and analyze more connectivity opportunities with the City. The planning department also provides analysis' on pedestrian accesses.
 - ✓ *Updated in Environmental recommendation #3*
-  Encourage interconnections between developments.
 - **Status:** The review of connectivity between plazas and communities is analyzed as part of the planning department's assessments during projects. In many cases, roads are created between developments that alleviate the traffic on main roads for local travelers.
 - ✓ *Updated in Environmental recommendation #3*
-  Continue to promote and explore alternative transportation options for residents, visitors and workers.
 - **Status:** Currently being done through the MPO projects.
 - ✓ *Updated in Social recommendation #6*

GOAL 3.5 – HEALTHY COMMUNITIES

-  The City established an Organic Community Garden in 2011 now located near City Center, on Washington Street, east of Hiatus Road.
 - **Status:** The Community Garden has been permanently relocated to the Senior Center. The City encourages the creation of independent community gardens. Recent changes to State Law also reduced restrictions on residents who wish to grow a garden on their own property.
-  The City supports the establishment of Farmers Markets.
 - **Status:** The City was instrumental in establishing these markets with the market coordinator. There is a Farmers Market located at Pembroke Gardens that is held every Sunday between 11 am – 5 pm. An additional Farmers Market is held at the Pembroke Lakes Mall on Thursday's.
 - ✓ *Moved to Chapter 5*
-  The City has a range of grocery options from different types of grocery stores offering local food, organic foods, culturally diverse foods, and conventional grocery stores.
 - **Status:** These markets include:
 - Doris Italian Market & Bakery
 - Food Fair Wholesale Fresh Market
 - Kimchi Mart
 - Nutrition Smart
 - Sedano's Supermarkets



-  The City has a range of international culinary cuisine.
 - **Status:** The City continues to support the range of cuisines offered throughout the City through the permitting process.

OBJECTIVE 3.5.1 – ENSURE AND ENCOURAGE HEALTHY COMMUNITIES

-  Identify whether the City has any food deserts or concentration of food related illnesses, such as diabetes using Geographic Information Systems (GIS).
 - **Status:** Based on the information provided by the USDA Food Access Research Atlas, the neighborhoods that have Low-income residents who are more than ½ mile from the nearest supermarket are from:
 - Commission District 4
 - Pembroke Cay
 - Altis at PG
 - Century Village.
 - The City and Century Village both provide buses for residents to have access to nearby supermarkets thus taking some transportation related burden off of those residents.
-  Ensure residential communities are connected to nearby commercial shopping centers.
 - **Status:** The city has been developed in such a way that there is access to Commercial centers within a short drive of any residential community. The review of connectivity between plazas and communities is analyzed as part of the planning department’s assessments during projects. In many cases, roads are created between developments that alleviate the traffic on main roads for local travelers. The projects of City center, 16000 pines market, Cobblestone plaza all promote connectivity through their interconnected roads and paths from residential to commercial areas.
-  Encourage the purchase of locally sourced food, especially among Farmers Markets, through education and outreach.
 - **Status:** The city website currently promotes this through the City website at <https://www.ppines.com/104/Shop-Local-Business-Directory>.
 - ✓ *Moved to Chapter 5*
-  Ensure future residential communities have adequate access to recreational facilities.
 - **Status:** The City currently lists 31 municipal parks / recreation. In addition, the City is home to CB Smith County Park as well as numerous private parks and recreational facilities. In 2022 the city will begin the process of creating a masterplan for all parks throughout the city. Currently the City’s comprehensive plan establishes a minimum parks level of service of 10 acres of park/recreation space per 1000 people which the City is in compliance.

GOAL 3.6 – HISTORIC SITES

-  Commitment to preserving and protecting the Florida Everglades.
 - **Status:** Since 2015, the City Commission has adopted two Ordinances (Ordinance 3468 – August 2015) and (Ordinance 3511 – August 2016) opposing oil drilling permits on the Kanter property within the Florida Everglades. Move to different chapter.



- ✔ Preserving the original Pembroke Pines City Hall, located in the Pines Village neighborhood.
 - **Status:** Currently, Old City hall is currently being leased by the City to a private entity as a daycare facility.
- ✔ Preserving Perry Airport, a World War II site of historic importance.
 - **Status:** The City has been in contact with Broward County historic preservation regarding the potential future historic designations of locations within the City. The City has been successful in creating a historical sign program which has already created a street sign designating Howard J. Zimmerman Drive.

OBJECTIVE 3.6.1 – SUPPORT HISTORIC PRESERVATION

- ✔ Explore the idea of identifying and/or designating historic sites, sites which are of civic or of cultural importance, within the City.
 - **Status:** City created a historical sign Program that includes road dedications. (i.e.Zimmerman Way). The city also works with Broward County to identify sites in need of Historical designation. Speedway / Sportatorium. As the City ages, there will likely be more buildings which may qualify for historical designation.
- ✔ Identify possible historic sites of historic significance.
 - **Status:** City created a historical sign Program that includes road dedications. (i.e.Zimmerman Way). The city also works with Broward County to identify sites in need of Historical designation. Speedway / Sportatorium. As the City ages, there will likely be more buildings which may qualify for historical designation.
- ✔ Continue supporting Everglades Restoration and Preservation.
 - **Status:** Since 2015, the City Commission has adopted two Ordinances (Ordinance 3468 – August 2015) and (Ordinance 3511 – August 2016) opposing oil drilling permits on the Kanter property within the Florida Everglades. Move to different chapter.

CHAPTER 4

WASTE REDUCTION, REUSE & RECYCLING



Update



Maintain



Complete

Goal / Objective

GOAL 4.1: WASTE MANAGEMENT PLAN



The City encourages the donation of unwanted goods through a donation bin that is periodically setup at City Hall.

- **Status:** The City organizes a Toy Donation event and Holiday Food Drive at City Hall during December.



In 2010, the City initiated a single stream recycling program to allow residents to mix paper, plastic, cardboard and glass in one container to make it more convenient to recycle within the City.

- **Status:** Beginning January 2, 2022, all residential trash and recycling materials collected from single family residences by Waste Pro have been sent to the Wheelabrator South Broward Waste-to-Energy facility located on SR7/441 where it is converted into electricity by incineration. By Florida statute, the incineration of refuse materials to make energy is considered recycling.
- The City offers residents the option to pay for Waste Pro to pick up their blue bins, with the co-mingled recycling and garbage, by indication of a sticker on the bin.



The City will soon begin construction of a Wastewater Treatment Plant Biosolids Processing and Centrifuge System which creates Class AA biosolids to be used for commercial fertilizer.

- **Status:** Construction of this facility was completed in 2017. Currently, the facility is producing biosolids which can be used for fertilizer (Class AA biosolids). New technology is being installed that will improve the quality of the biosolids production. The City is one of the few cities in the region to produce biosolids that can be used for fertilizer from a wastewater treatment plant.

✓ *Updated in Environmental recommendation #1*

OBJECTIVE 4.1.1: ENHANCE AND ENCOURAGE REDUCING WASTE AND RECYCLING EFFORTS



Adopt a more comprehensive waste management plan that includes:

- Working with the City waste management company to identify processes in which the City can improve upon.
- Explore a commercial food waste recycling program.
- Explore a residential composting program.
- Adopt a 1:1 policy of pairing trash receptacles with recycling receptacles within the City.



- Ensure City events encourage and promote recycling.
 - **Status:** In the global arena, the U.S. no longer can sell recycling to China. Costs have risen three times from what they were when recycling began due to low, and in some cases, no demand in the global marketplace for materials such as glass and plastics #3 through #7, combined with high rates of contamination. It is estimated that between 10% and 40% of the recyclable materials collected in Pembroke Pines are contaminated, making them non-recyclable.
 - The City of Pembroke Pines is requiring residents to co-mingle both waste and recycling in their existing green garbage carts, as well as, offer a service of collecting the waste from the blue bins for an extra charge monthly, for those who have overflow of waste, to be taken to Wheelabrator Waste-to-energy plant as well.
 - Prior to Covid-19 pandemic, the community services department received donations of food from major food retailers in the city to be distributed to people in need. The Mayor's restaurant continues to donate unused bagels and other food items on a daily basis to the senior center.
 - ✓ Updated in Environmental recommendation #2
 - ✓ Updated in Social recommendation #2
 - ✓ Updated in Economic recommendation #1



Encourage community yard sale events to reduce waste and encourage reuse.

- **Status:** The City offers yard sale permits which can be obtained through the City Clerk's office. Additionally, many HOAs hold annual or biannual community wide yard sales.
 - ✓ Updated in Social recommendation #6



Meet the statewide recycling goal of 75% by 2020

- **Status:** According to the 2019 status report published by the Florida Department of Environmental protection, the State of Florida would not meet the State wide recycling goal of 75%. The recycling percentage of the State at time of report was 49%. Florida counties in general failed to meet the aggressive recycling goal.
- The nationwide goal was announced by the Environmental Protection Agency (EPA) in 2020 to achieve 50% recycling across the nation by 2030. The City needs to research the national criteria for recycling before making future determinations on citywide compliance.
https://www.epa.gov/sites/default/files/2020-12/documents/final_one_pager_to_print_508.pdf
 - ✓ Updated in Environmental recommendation #3



GOAL 4.2 – PARTNERSHIP



Partnerships with waste management companies who are dedicated to the protection and preservation of our environment.

- **Status:** Currently the City partners with Waste Pro and South Broward Wheelabrator facility:
- Waste Pro environmental statement: “Our commitment to the environment is time tested and proven through the recycling, energy efficiency and landfill innovations and technologies we have developed and implemented throughout the many communities we serve. We invest in sustainable initiatives that will positively impact our planet and our future. From our growing Compressed Natural Gas (CNG) fleet and fueling stations, onboard “regenerative” oil filtering systems, anti-wear armoring, and even our own internal recycling programs for 100% of our facilities, Waste Pro continually strives to minimize our carbon footprint.”
- Wheelabrator environmental statement: “Wheelabrator is committed to protecting public health and the environment. Our facilities use advanced environmental control systems to meet and exceed some of the most stringent environmental standards in the world while safely producing clean, renewable energy for nearby homes and businesses.” All of the Wheelabrator facilities have maintained their environmental permits since commencing their operations over 45 years ago.

✓ *Updated in Environmental recommendation #4*



Partnerships with Reuter recycling plant to ensure it can meet the needs of the City.

- **Status:** Reuter recycling contract with City ended at the end of the 2021. Beginning January 2, 2022, all residential trash and recycling materials collected from single family residences by Waste Pro will be sent to the Wheelabrator South Broward Waste-to Energy facility located on SR7/441 where it will be converted into electricity by incineration.



Continue partnership with local waste management provider to encourage proper disposal of electronic waste, hazardous waste and yard waste.

- **Status:** The City commission recently announced a new partnership with Clean Harbors Environmental Services, who will provide household hazardous waste drop off events for the residents. The events will be held quarterly at the City’s wastewater treatment plant located at 13975 Pembroke Road. More information can be found at <https://www.ppines.com/962/Hazardous-Waste-Disposal-Schedule>



Update



Maintain



Complete

OBJECTIVE 4.2.1 – CREATE PARTNERSHIPS TO ENHANCE AND ENCOURAGE WASTE REDUCTION EFFORTS



Partner with local organizations to encourage the donation, recycle and reuse of items not wanted by residents.

- **Status:** The City currently holds a holiday gift donation to provide gifts to underprivileged families within the City. Prior to COVID the community services department would accept donations of used furniture, clothing, medical equipment, etc... to provide to persons who were in need. The City accepts monetary donations around the holidays for United Way.

✓ Updated in Social recommendation #1



Encourage and promote the donation and reuse of unwanted goods.

- **Status:** Historically the City has provided permits at the request of HOA's such as Chapel Trail and Silver Lakes that have organized yard sales throughout the communities and in turn have encouraged the reuse of goods.

✓ Updated in Social recommendation #3

✓ Updated in Social recommendation #4



Outreach campaign to encourage recycling and educate the public on what can be recycled to reduce contaminated recycling.

- **Status:** The City created a flyer with information on contaminated recycling that can be found on the City's website at:

<https://www.ppines.com/DocumentCenter/View/9308/Recycling-together>

✓ Updated in Economic recommendation #3



Provide recycling bins at City parks and community events.

- **Status:** The City has dual use (trash/ recyclable) bins at City Hall. Due to changes in recycling protocols in 2022, both sides of the bins will be processed the same. Should the City consider traditional recycling in the future, the facilities will remain available to the public.



Partnerships with waste management company to ensure electronic waste and hazardous waste is disposed of properly.

- **Status:** The City has begun partnership with Clean Harbors Environmental Services who provide household hazardous waste drop off events for our residents. The first event was held on April 2, 2022. There are four events held on a quarterly basis. The City currently has hazardous waste disposal information that can be found on the City's website.

CHAPTER 5

COMMUNITY OUTREACH & EMPOWERMENT

 Update  Maintain  Complete

Goal / Objective

GOAL 5.1: EDUCATING CITIZENS



The bi-monthly release of the City Connect, bringing local news and information to residents.

- **Status:** The City Connect continues to be posted and can be found on the City's website <https://www.ppines.com/345/City-Connect>. Landscape maintenance articles as well as other environmentally related topics are frequently highlighted in the newsletter.

✓ *Updated in Social recommendation #2*



Recent makeover of the City website www.ppines.com allows easy to use, navigable website where residents and visitors have access to information and resources that are easy to find with the comprehensive "Search" button tool

- **Status:** The City's website continues to be modified individually by each department allowing for the most accurate information to be provided to visitors and residents. The City also supports the information provided on the city website through Social Media.



Public noticing of City Commission meetings and board meetings

- **Status:** The City continues to provide a public notice in advance of meetings through sources that may include City website, Newspaper notice, mailed notice, and posted notice.



Voluntary e-mail sign-up of local events and City meetings

- **Status:** The City's website provides a tab quothably named "Notify Me" for citizens to voluntarily add their emails to be notified for all city related information.

✓ *Updated in Social recommendation #1*

OBJECTIVE 5.1.1: EDUCATE AND EMPOWER COMMUNITIES TO "GO GREEN"



Educate and inform city residents and businesses on conservation, waste reduction, recycling, resource efficiency and pollution.

- **Status:** The City performs this function through the use of the city website, social media, through conversations with professional staff, and through discussions at public meetings. The City also provides much of this information at city events and will typically permit third parties such as WastePRO, Broward County, or FPL the opportunity to showcase their positive efforts toward the environment.



Creation of a citizen led 'Green Team' that will attend community events, inform, educate and empower the public. Educating the public on proper landscaping techniques to ensure the protection of water, resources and native wildlife and habitat. Promote the plantings of native trees and plants through education and outreach.

- **Status:** A "Green Team" has not been formed at this time. In 2017 the Landscape Advisory Board was changed to the Environmental Advisory Board with the purpose to "...provide constructive advice and counsel to the City Commission with a broad outlook toward environmental protection and conservation".



Continue to encourage and promote the City's organic community garden.

- **Status:** Currently the community garden is located at the Southwest Focal Point Senior Center. The Senior Center maintains various herbs and flower beds for the senior visitors.



Continue to partner with community incentive programs to encourage residents and businesses to purchase energy efficient upgrades to their homes and businesses.

- **Status:** The City is currently part of the Broward Water Partnership. Through this partnership, rebates and free water-conserving devices are available to qualifying customers. The PACE program supports residents to be able to install solar PV systems, solar pool heating, and solar water heating. The city also offers grants for minor home repairs that focus on energy efficient upgrades.



Educate residents to reduce the single use of plastic bags, the proper disposal of plastic bags and encouraging the use of reusable shopping bags.

- **Status:** The City has given out reusable straws and bags at City events such as Pines Day, the Art Festival, Arbor Day, etc. in support of conservation efforts.

✓ *Updated in Social recommendation #3*

GOAL 5.2 – COLLABORATION AND COOPERATION



Retrofits of buildings to ensure they are energy efficient and showcasing them to be environmentally conscious through exceeding City code standards, installing green components to their development and educating their workforce on the importance of recycling.

- **Status:** The Planning and Economic Development department requires applicants during the site plan review process to apply sustainable elements based on the sustainability section added to the recent LDC update in 2021. The Florida Building Code also requires retrofitted building additions to provide energy efficient upgrades.

✓ *Moved to Chapter 3*



The use and purchase of environmental preferable materials and resources.

- **Status:** In various solicitations, the City includes requirements for the bidders/proposers to submit information regarding green and environmentally friendly products and processes for the City to evaluate when awarding the project. For example, in RFP # AD-21-01 "Solid Waste, Recycling, HHW, Bulk & Yard Waste Collection Services," the City allocated 10% of the weighted evaluation criteria to a category titled "Green Initiative."
 - ✓ *Updated in Economic recommendation #5*

OBJECTIVE 5.2.1 – COLLABORATION AND COOPERATION WITH LOCAL PARTNERS TO MEET THE GOALS AND OBJECTIVES OF THIS DOCUMENT



Identify Green business leaders within the City.

- **Status:**
 - The City has encouraged the implementation of green design to businesses during the site plan process through the addition of the sustainability requirements table in the LDC.
 - Staff provides a summary of green building efforts made by an applicant toward the development of a new building within the City.
 - City expanded Natalie Belmonte Great yards award to include commercial and school participation.
 - Currently developments across Pembroke Pines have received LEED certifications (seven at time of adoption, with an additional nine in process of completion or have completed the process)
 - Many businesses have implemented green building methods based on the addition of the sustainability section to the LDC update.
 - Businesses across the city have implemented solar paneling as well. (i.e. Pembroke Lakes Mall & Montessori Academy)
 - ✓ *Updated in Economic recommendation #3*



Identify possible "Green" markets within the City.

- **Status:** There are farmers markets held periodically at Pembroke Lakes mall and Pembroke Gardens which are two larger centrally located commerce areas of the City.



Promote and encourage buy local, shop local.

- **Status:** Currently promoted on the City's Website found here: <https://www.ppines.com/104/Shop-Local-Business-Directory>
 - ✓ *Updated in Economic recommendation #2*
 - ✓ *Updated in Social recommendation #6*



Partner with the Pembroke Pines – Miramar Chamber of Commerce to foster awareness and encourage member businesses to “Go Green.”

- **Status:** The City of Pembroke Pines and Miramar Chamber of Commerce have recently begun to discuss the support in forming a procedure to identify green businesses.

✓ *Updated in Economic recommendation #1*



Foster partnerships with active community members, homeowners associations, local non-profits, colleges and universities and businesses to convey information, outreach and empowerment

- **Status:** Currently the City participates in:
 - Previously in Broward County’s Water Matters day through a City booth.
 - The City invites local businesses and vendors to City events of which some businesses support and promote green initiatives.
 - The City partners with schools in the City to hold a poster contest on Arbor Day in supporting the education and empowerment of the children’s contest.

✓ *Updated in Social recommendation #4*

✓ *Update in Social recommendation #5*



Partner with community leaders and assist in facilitating community and waterway cleanup programs

- **Status:** Adopt-A-Canal is being managed by South Broward Drainage District, to clean up local canals.

✓ *Updated in Environmental recommendation #1*



Explore a neighborhood challenge contest to inform, engage and beautify communities within the City.

- **Status:** The City’s Natalie Belmonte Great Yards Award began in 2013. It is an annual contest used to promote great landscaping in our community. In 2018 the program was expanded to include non-residential properties. During the Arbor day City celebration the City holds a poster contest for the children to participate in.

✓ *Updated in Environmental recommendation #3*

CHAPTER 6

LEADERSHIP & CITY OPERATIONS

 Update  Maintain  Complete

Goal / Objective

GOAL 6.1: LEADERSHIP

-  Intergovernmental coordination with various agencies throughout the County.
 - **Status:** The City partners up with Broward County on items of environmental significance. These include, but are not limited to, wetlands, mass transit, water and air quality, parks, county roads and signalization, tree preservation, resiliency, and planning / land use. Additionally, the City works with many regional outside agencies which impact the environment such as the Miramar Pembroke Pines Chamber of Commerce, South Broward Drainage District, FDOT, and FPL on various projects.

-  Internal departmental recycling program.
 - **Status:** Each department has recycling bins available within their offices. Due to recent recycling policy changes, the waste is collected and taken to the Wheelbrator processing facility where it is converted from waste to energy. These services will continue until further determinations are made regarding recycling policies.

-  Retrofit of City owned and operated buildings.
 - **Status:** City owned properties and buildings are continuously going through upgrades and renovations that follow building code requirements of implementing energy efficient upgrades.
Some of these include:
 - The Senior Center upgrades of the impact windows and doors utilizing CDBG grants.
 - Lighting, Controls, and other surface improvements (All Charter Schools) - Retrofit existing lighting fixtures with greater energy efficiency technologies and provide lamp technologies with a greater operating hour rating which will help reduce energy consumption and maintenance requirements. Surface improvements have been made to reduce heat attraction.
✓ *Updated in Environmental recommendation #2*

-  Policy to build LEED™ Silver Certified standards of City buildings.
 - **Status:** LEED principals are utilized in the planning and construction of City facilities, including City Hall. The following green efforts were applied in construction:
 - Protect and Restore Drainage Basins
 - Maximize Open Space
 - Efficient Storm water Management
 - Eliminate Lighting Pollution



- Heat Island Efficiency(White Roof)
 - Water Efficiency(Landscaping)
 - Water Efficiency(Plumbing Fixtures)
 - Energy Performance(Fixtures, Sensors, Wiring)
 - Material(s) Re-Use(Recycled)
 - Construction Waste Management
 - Operation Waste Management
 - Thermal Comfort
 - Thermal Performance
 - Fire Safety
 - Sound Absorption
- ✓ Updated in Environmental recommendation #3



National Wildlife Certification of qualified public parks and open space.

- **Status:** The City continues to be a National Wildlife Habitat Community through the National Wildlife Federation certification yearly. The City has been certified since July 2018.
- ✓ Updated in Environmental recommendation #4



The City has approximately 85 comprehensive plan policies that are aimed at conservation of natural resources, sustainable infrastructure and transportation – some of which are included within this document.

- **Status:** The City continues to revise and add to the comprehensive plan, consistent with Broward County requirements. The addition and preservation of an archeological site found in the Chapel Trail nature Preserve was named a designation in 2017 and was made part of the conservation section of the comprehensive plan.



The use of Florida-Friendly Landscaping™ techniques within certain City properties.

- **Status:** In the update of the LDC, the requirements for these techniques were added to section 155.660 landscape parameters.

OBJECTIVE 6.1.1: EXPLORE AND IMPLEMENT ECO-FRIENDLY TECHNIQUES AND MEET THE GOALS AND OBJECTIVES OF THIS DOCUMENT.



Establish a sample National Wildlife Certified garden at City Hall

- **Status:** To be completed in the future in conjunction with the Recreation and Cultural Arts department.
- ✓ Updated in Social recommendation #2



Replace lighting within City parks and public facilities with LED lighting where appropriate.

- **Status:** In 2016 City Commission approved the retrofit all lighting fixtures with energy efficient technology to reduce energy consumption and maintenance requirements. This includes all areas of the Senior Center and the hallways, lobbies, elevators, main entrances, parking lots, and emergency stairwells of the Senior Residence locations. Additionally, City Hall and the surrounding facilities were all constructed utilizing LED lighting. As



existing facilities are upgraded and redesigned the implementation of LED lighting is actively pursued.



Conduct regular energy audits on City buildings

- **Status:** Two energy audits were performed that began in 2015 & 2016 where they conducted annual reports that reflect on the savings from Green improvements made in City Charter schools, the senior center, and the Forman Health Park.



Purchase fuel efficient vehicles.

- **Status:** In general, the City purchases vehicles on an annual basis for the various Departments throughout the City. On the most recent purchases of vehicles, approved by the City Commission on October 6, 2021, the total City Miles Per Gallon were increased from 382 MPG to 411, resulting in 29 more City MPG and a more fuel efficient fleet of vehicles. The City continues to explore more fuel efficient vehicle options on a regular basis.
 - ✓ *Updated in Environmental recommendation #5*
 - ✓ *Updated in Economic recommendation #5*



Use Green Infrastructure techniques and principles within public property.

- **Status:** Green principles are utilized in the planning and construction of City facilities.
 - ✓ *Updated in Economic recommendation #2*



Explore incentives for “Green” companies to locate and expand within the City.

- **Status:** The City of Pembroke Pines and Miramar Chamber of Commerce are discussing a program to identify green businesses within the City.
 - ✓ *Updated in Social recommendation #4*



Explore incentives to encourage Green Development within the City.

- **Status:** As part of the Land Development Code update sections 155.6120 – 155.6123 were added requiring sustainable practices and techniques be implemented into all new developments.
 - ✓ *Updated in Economic recommendation #1*



Explore the creation of a carpool/rideshare program for City employees to reduce vehicle miles travelled

- **Status:** The City’s Procurement Department looked into the cost of creating a car share program but ruled it not feasible.



GOAL 6.2 – CITY OPERATIONS



Practice of environmentally preferable purchasing.

- **Status:** The City's Administration and the Procurement Department reviews and drafts solicitations for review by the City Commission prior to advertising. In various solicitations, the City includes requirements for the bidders/proposers to submit information regarding green and environmentally friendly products and processes for the City to evaluate when awarding the project.

✓ *Updated in Environmental recommendation #1*



Practice of local preferable purchasing.

- **Status:** In an effort to promote local businesses and encourage their participation in competing for goods and services purchased by the City, the City Commission amended Chapter 35 of the City's Code of Ordinances to include Section 35.36 entitled "Local Vendor Preference" to the Procurement procedures which awards a five percent (5%) evaluation credit to all businesses located within the City of Pembroke Pines and a two and one half percent (2.5%) evaluation credit to all businesses located outside of Pembroke Pines but within Broward County.



Allowing bill payment and sign-up of electronic bills.

- **Status:** Online bill payment is available on the City's website through the new Development Hub enabling building permits, LBTRs and development applications to be paid online.



Consolidation of office equipment.

- **Status:** The office equipment is handled by each department. Determinations for additional equipment or removal of equipment is made based on the needs of staff.



Replacement of office equipment with Energy Star rated machines.

- **Status:** The Technology Services Department reviews requests for office equipment replacements and reviews Energy Star options to make recommendations on which equipment would be best suited for the each department.



Four day work week for general shift employees.

- **Status:** Since 2009, the City has been operating under a four day work week.



The distribution of electronic Agenda's for Commission meetings.

- **Status:** Agendas continue to be distributed electronically for Commission meetings.



OBJECTIVE 6.2.1 – ENSURE CITY OPERATIONS ARE EFFICIENT AND ENVIRONMENTALLY CONSCIENTIOUS



Develop an internal Green Team for policy updates, changes and departmental coordination.

- **Status:** The creation of a “Green Team” was not formed within internal departments but currently the City provides information through the City’s website as a form of education to the public on landscape, waste reduction, conservation methods, etc.



Adoption of environmentally preferable purchasing and local preferable purchasing policies.

- **Status:** The City’s Administration and the Procurement Department reviews and drafts solicitations for review by the City Commission prior to advertising. In various solicitations, the City includes requirements for the bidders/proposers to submit information regarding green and environmentally friendly products and processes for the City to evaluate when awarding the project.



Reduce paper waste through encouraging electronic submittals of applications, forms and bill payment

- **Status:** Many of these processes can be completed electronically. Through the City’s ERP process Energov will allow for electronic submittals of Building Permit, LBTRs, Development Applications and Tree Removal Permits.

✓ *Updated in Economic recommendation #3*



Internal recycling program within all City departments.

- **Status:** Each department has recycling bins available within their offices. Due to recent recycling policy changes, the recycling is collected with the trash and disposed of to the Wheelbrator processing facility. Should the City consider traditional recycling in the future, the facilities will remain available to the public.



Adopt internal quality control standards pertaining to sustainable policies and practices.

- **Status:** Each department internally quality controls their operations in relation to sustainable policies and practices.



Adopt a Green Cleaning policy.

- **Status:** The City’s facility management company (ASM Global) currently utilizes eco-friendly products for the cleaning of the offices and bathrooms, such as paper towels and cleaning chemicals.
✓ *Updated in Environmental recommendation #6*



Develop polices and remove barriers to foster the growth of renewable energy development within the City

- **Status:** The 2021 LDC update included the addition of the sustainability section which requires developers in the site plan application process to provide elements listed in the table within their development. A section of energy efficiency is included in this.



Develop policies and remove barriers for the use of green infrastructure within the city.

- **Status:** The 2021 LDC update included the addition of the sustainability section which requires developers in the site plan application process to provide elements listed on the table within their development. A section of infrastructure and environmental design is included as part of the section.
✓ *Updated in Economic recommendation #1*



Incorporate climate change into long range planning – including the likely impacts of water supply risk, health impacts of increased temperatures, sea level rise and flood mitigation.

- **Status:** The City coordinates with Broward County and other stakeholders when addressing regional issues such as climate change resiliency. The City continues to update its comprehensive plan, consistent with Broward County requirements and coordinates with floodplain requirements when building new structures.



Encourage all development review departments to host a staff member with green building standard credentials, such certifications as LEED™, Green Globes, FGBC33, etc.

- **Status:** There are no current staff members with green credentials. Employees are encouraged to seek additional certifications related to their departments. In many cases, certification maintenance costs are compensated by each department.



Integrate environmental stewardship into all levels of decision-making.

- **Status:** The City continually integrates this through the addition of the Sustainability section, Purchasing Department, and through energy audits.



Review Green Initiatives and policies every three years.

- **Status:** The update of this document was held off from the being updated due to the Covid pandemic. As the City works on the update of this document other policies and initiatives are revised and updated where feasible.

✓ *Updated in Social recommendation #3*



Review procurement policies to encourage City government vendors and contractors to use fuel efficient/alternative fuel vehicles within their fleets for City work.

- **Status:** The City includes various requirements and criteria in different solicitations, such as RFP # AD-21-01 "Solid Waste, Recycling, HHW, Bulk & Yard Waste Collection Services." As part of the requirement in the solicitation, the City required for the awarded contractor to provide all new vehicles instead of existing older vehicles. In addition, in the Green Initiative section various vendors addressed changing their fleet from Ultra-Low-Sulfur Diesel vehicles to CNG (Compressed Natural Gas) and other alternative fuels.

✓ *Updated in Environmental recommendation #6*



Continue intergovernmental coordination within the local, county and regional levels.

- **Status:** The City partners up with Broward County on items of environmental significance. These include, but are not limited to, wetlands, mass transit, water and air quality, parks, county roads and signalization, tree preservation, resiliency, and planning / land use. Additionally, the City works with many regional outside agencies which impact the environment such as the Miramar Pembroke Pines Chamber of Commerce, South Broward Drainage District, FDOT, and FPL on various projects.



Explore the feasibility and cost savings associated with an interdepartmental car share program where departments can check out a City car when in need.

- **Status:** Each department is responsible for managing their fleet of vehicles. Vehicles are shared between staff members with one department where feasible.