



CITY OF TITUSVILLE

TITUSVILLE ENVIRONMENTAL COMMISSION

AGENDA

Regular Meeting

April 30, 2026 - 5:30 PM

Council Chamber at City Hall

555 South Washington Avenue, Titusville, FL 32796

All persons who anticipate speaking on any Public Hearing item must fill out an Oath Card to be heard on that agenda item and sign the oath contained thereon. These cards are located on the table near the entrance to the Council Chamber or may be obtained from the Recording Secretary. This meeting will be conducted in accordance to the procedures adopted in Resolution No. 24-1997.

Those speaking in favor of a request will be heard first, those opposed will be heard second, and those who wish to make a public comment on the item will speak third. The applicant may make a brief rebuttal if necessary. A representative from either side, for or against, may cross-examine a witness.

Anyone who speaks is considered a witness. If you have photographs, sketches, or documents that you desire for the Commission to consider, they must be submitted into evidence and will be retained by the City. Please submit such exhibits to the Recording Secretary.

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. DETERMINATION OF A QUORUM**
- 4. PLEDGE OF ALLEGIANCE**
- 5. APPROVAL OF MINUTES**
 - A. Minutes April 15, 2026**
Approve Minutes
- 6. PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT (NON-AGENDA ITEMS)**
- 7. OLD BUSINESS**

A. Wetlands

8. NEW BUSINESS

A. Urban Forest Management Plan Draft Review

Provide the consultant with feedback, comments, and questions about the draft plan.

9. PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

10. REPORTS

11. FUTURE AGENDA ITEMS

12. ADJOURNMENT

Any person who decides to appeal any decision of the Titusville Environmental Commission with respect to any matter considered at this meeting will need a record of the proceedings, and for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

The City desires to accommodate persons with disabilities. Accordingly, any physically handicapped person, pursuant to Chapter 286.26 Florida Statutes, should, at least 48 hours prior to the meeting, submit a written request to the chairperson that the physically handicapped person desires to attend the meeting.

City of Titusville
"Gateway to Nature and Space"

REPORT

To: Members of the Titusville Environmental Commission
From: Bradley Parrish, Community Development Director
Subject: **Minutes April 15, 2026**
Department/Office: Planning

Recommended Action:

Approve Minutes

Summary Explanation & Background:

Minutes April 15, 2026

Alternatives:

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

1. 04.15.26 TEC Minutes Draft

The Titusville Environmental Commission (TEC) of the City of Titusville, Florida met in regular session at City Hall in the Council Chamber located at 555 South Washington Avenue on Wednesday, April 15, 2026, at 5:30 pm.

XXX

Chairman Myjak called the meeting to order at 5:30 pm. Present were, Vice Chairwoman Laurilee Thompson, Member John Nico, Member Beth Ann Tucker, Member Hector Delgado, Member Jason Miller and Member Jonathan Burdette. Alternate Member Kevin Rosa and Alternate Member William Young were absent. Staff present were Sustainability Program Coordinator Lily Galleo, Assistant City Manager Kevin Cook, Public Works Director Sandra Reller, Assistant Public Works Director Ashleigh Smith, Assistant City Attorney David Melito and Recording Secretary Laurie Dargie.

XXX

Member Delgado made a motion to approve the March 26, 2026 meeting minutes with corrections. Member Miller seconded. There was a unanimous voice vote in favor.

XXX

Petitions and Requests from Public Present

Stan Johnston of Titusville, Florida came and made comments regarding his family history in serving in the military. Mr. Johnston spoke about his concerns with the sewage spray.

XXX

Vice Chairwoman Thompson made a motion to move New Business before Old Business. Member Tucker seconded. There was a unanimous voice vote in person.

XXX

New Business

Alternative Water Supply

Public Works Director Sandra Reller stated that City Council gave direction to staff to look into alternative water supplies. City Council also asked that this be brought before the Titusville

Environmental Commission for their comments in regard to supporting this study on using brackish water as an alternative water supply.

Member Miller said he would definitely be in support of having a study done on how to use brackish water as an alternative water supply.

The Titusville Environmental Commission members had questions regarding the importance of water recharge, water injection, maintaining and recharge of the city's wellfields, the water capacity for consumption with regards to growth, and the need for studies on Aquifer Storage and Recovery (ASR).

Assistant City Manager Kevin Cook, Public Works Director Sandra Reller, and Assistant Public Works Director Ashleigh Smith answered questions.

Ms. Smith said staff can ask the consultant to provide feedback from studies that they have already done for other municipalities regarding ASR.

XXX

Member Miller made a motion to recommend to City Council to move forward with the brackish water study and to consider looking into a study on the Aquifer Storage and Recovery as well as wellfield recharge. Member Delgado seconded.

Roll call was as follows:

Member Burdette	Yes
Member Delgado	Yes
Member Nico	Yes
Member Tucker	Yes
Vice Chairwoman Thompson	Yes
Member Miller	Yes
Chairman Myjak	Yes

Motion passed.

XXX

Vice Chairwoman Thompson asked Public Works Director Sandra Reller if she would be able to attend the Environmentally Endangered Lands selection and management committee tour of the

MARS 405 property. Vice Chairwoman Thompson said they will be meeting at 9:30am at Dixie Crossroads.

Member Miller said they will be looking at this wetland as endangered land and not so much as redirection of stormwater at this time. They will be looking for endangered species and focusing on the wetland itself being an endangered land to get Selection and Management Committee (SMC) support. Ms. Reller asked if there is permission to go on private property. Member Miller said SMC has permission through a willing seller application for the 405 MARS property.

Public Works Director Sandra Reller said she will plan to attend as requested by the Titusville Environmental Commission.

Member Nico asked Ms. Reller if she can request to get feedback from the consultant on the results for projects that have been done for other municipalities. Ms. Reller said she would ask for that information.

XXX

Old Business

Wetland Conservation

Mary Sphar of Cocoa, Florida came to continue the in-depth review of the wetlands policies and strategies.

Ms. Sphar provided a handout “Note to TEC; Before Deciding What to do on the Following Strategy” Strategy 1.16.2.2. Ms. Sphar went over the strategy.

Ms. Sphar said that the city needs to think about where appropriate sites are in the city for scrub jays.

Member Miller said he will reach out to Mike, his contact with Environmentally Endangered Lands (EELS) to ask him about appropriate areas in the city for scrub jay habitats and protection.

Vice Chairwoman Thompson said the wellfields off of Barna Avenue are ideal for scrub jay habitats.

Ms. Sphar provided a handout “Objective 1.1 Natural Resources”. Ms. Sphar went over each section of this handout.

The Titusville Environmental Commission members had discussion regarding Policy 1.1.1, specifically on critical habitats, partnering with Brevard County to get assessments, required environmental surveys and getting the data that is needed to protect and find habitats.

Ms. Sphar talked about Policy 1.1.1, Policy 1.1.3, and Strategy 1.1.3.1 from the handout.

The Titusville Environmental Commission suggested adding “and respective watershed to Strategy 1.1.3.1; #2.

Chairman Myjak said that the underground waterflow should not be disrupted.

Ms. Sphar suggested that the Titusville Environmental Commission members look this over in depth and bring back their feedback at the next meeting.

Chairman Myjak said the Habitat Corridors on #7 has a name which is East Central Florida Greenway.

Ms. Sphar went over Policy 1.1.6. The Titusville Environmental Commission had discussion regarding land donations.

Member Tucker suggested adding “mitigation” to the last sentence of Policy 1.1.6.

Assistant City Attorney Melito stated that the purpose of this Policy 1.1.6 as written is for the purchase of property, therefore the discussion of land donations and mitigation may need to go in their own stand-alone section or strategy. Mr. Melito stated the city can accept land donations without this in the Comprehensive Plan. This Policy is more about guiding the City where economically feasible to make purchases.

Ms. Sphar went over Policy 1.1.8.

XXX

Petitions and Requests from Public Present

None

XXX

Reports

Member Delgado said there is a Blue Origin launch next week.

Vice Chairwoman Thompson brought copies of the Indian River Lagoon National Estuary Program annual report to all TEC members and staff.

Member Miller mentioned the SMC tour of the MARS 405 at 9:30am tomorrow, meeting at Dixie Crossroads.

Member Miller said that EELS is moving forward on two property acquisitions.

Chairman Myjak reminded the Titusville Environmental Commission of the Earth Day event at Enchanted Forest on Saturday April 18, 2026.

Sustainability Program Coordinator Lily Galleo asked the Commission to think about how they want to do community outreach programs to get the community involved in environmental issues.

Sustainability Program Coordinator Lily Galleo said the consultant will be attending the April 30, 2026 meeting to give the presentation on the Urban Forestry Action Plan.

XXX

Future Agenda Items

1. Wetland Conservation
2. Outreach efforts
3. Flooding
4. Sustainability Action Plan
5. Stormwater

Vice Chairwoman Thompson said it would be nice to have a list of the Titusville Environmental Commission's priorities and projects etc. to help with conversations during the event. Vice Chairwoman Thompson asked if maps can also be provided to be displayed at the Earth Day event.

XXX

Adjournment 7:42p.m.

City of Titusville
"Gateway to Nature and Space"

REPORT

To: Members of the Titusville Environmental Commission

From:

Subject: **Wetlands**

Department/Office: Planning

Recommended Action:

Summary Explanation & Background:

Continue discussion on wetlands in the Conservation Element

Alternatives:

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

1. Conservation Element - Objective 1.1 4-15-2026

Objective 1.1: Natural Resources.

To ensure the preservation of wildlife, particularly threatened and endangered species and the protection of their habitat, identify and conserve important natural resources, including large wetland systems, and critical habitat where economically and environmentally feasible, to prevent adverse alterations to these areas.

Policy 1.1.1: ??? What has been done?

Identify state and federal listed wildlife species habitat: Potential wildlife habitat and sites of listed species shall be depicted in a Map by 2012 which will indicate the presence of state and federal listed wildlife species as per data provided by Florida Fish and Wildlife Conservation Commission (FFWCC), United States Fish and Wildlife Services (USFWS) and other agencies.

Policy 1.1.2: ???

The City shall work with other agencies having jurisdiction to conduct an inventory of state and federal listed wildlife species habitat remaining within its boundaries.

Policy 1.1.3:

The City shall inventory, identify and define environmentally endangered lands within the City utilizing applicable data from state and federal agencies and will cooperate with the State and with Brevard County in acquiring and conserving environmentally endangered lands to be preserved through acquisition and/or regulations.

Strategy 1.1.3.1:

The City shall develop a procedure to identify such lands. Review and evaluation shall include at a minimum the following:

1. State and federal listed wildlife and estuary life species habitats.
2. Large wetlands, and wetland systems, along with sufficient buffer to maintain wetland functions.
3. ~~Wetlands, natural~~ Natural lakes, lagoon and rivers.
- 3.4. Upland native vegetation that are rare and depleting in the City/County.
- 4.5. Undisturbed and undeveloped 100-year flood plains.
- 5- 6. Wellhead protection area and Areas of Critical Concern.
- 6- 7. Critical habitats identified by the East Coast Florida Regional Planning Council (ECFRPC)
- 7- and Habitat Corridors.

Policy 1.1.4:

The City shall maintain, to the best of its abilities, the populations of wildlife species which are state and federal listed and their habitat, and shall restrict activities within these areas known to adversely affect the survival of these species as per regulations by permitting agencies.

Policy 1.1.5:

The owner/developer of ~~development~~ property in the City of Titusville which requires formal site plan approval, including, but not limited to any platting of land shall be required to perform an environmental study, as appropriate. These stipulations and/or management plans required by the applicable regulatory agency or agencies will be included in the City's site plan approval.

Policy 1.1.6: should this include wetlands

The City shall purchase, if economically feasible, properties identified as ~~critical habitat~~ as environmentally endangered lands by the East Coast Florida Regional Planning Council (ECFRPC), ~~or properties identified as in Policy 1.1.3 in their capacity as a clearinghouse for this information.~~ The selection criteria to be used in determining these properties shall place greater weight on the selection of lands, which appear on inventories of endangered or threatened species, even though public use and recreation may not be appropriate. The following criteria shall be adhered to in the implementation of this policy: The protection of ~~critical habitat~~ environmentally endangered lands can be accomplished through acquisition, easements, land donation, Transfer Development Rights, Purchase Development Right and other planning tools.

Strategy 1.1.6.1:

Acquired land should be selected based on the need to prioritize all current fiscal obligations of the City's resources.

Strategy 1.1.6.2:

Priority shall be given to the acquisition of ~~land~~ lands which are identified as environmentally endangered lands and to those areas known to be important as "habitat corridors" in the movement of wildlife. Environmental value shall be prioritized, even where public use may be limited or inappropriate.

Policy 1.1.7:

Where acquisition of identified property habitat is not fiscally possible, any public or private use of land greater than three (3) acres in an area shall **require a management plan???** ~~designated~~ designed [or be designed] to minimize harm to the state and federal listed wildlife species and its habitat.

Strategy 1.1.7.1:

The City shall recognize the species as "listed" by the United State Fish and Wildlife Services (USFWS), National Marine Fisheries Services (NMFS), Florida Department of Environmental Protection (FDEP), Florida Fish and Wildlife Conservation Commission (FFWCC), and Florida Department of Agriculture and Consumer Services (FDACS) ~~as compiled by the East Central Florida Regional Planning Council (ECFRPC), acting as a data source and information clearinghouse.~~

Policy 1.1.8:

The City shall work cooperatively with the US Fish and Wildlife Service (FWS) and the Florida Fish and Wildlife Conservation Commission (FFWCC) to protect and promote the recovery of species designated by these agencies as listed wildlife species.

Strategy 1.1.8.1:

The City shall require applicants of a development order to provide determination of these agencies when development proposals are received for sites documented as having historic and/or current occurrences of state or federal listed wildlife species;

Strategy 1.1.8.2:

The City shall consult with these agencies for technical assistance consultation; or

Strategy 1.1.8.3:

The City shall cooperate with these agencies in locating potential introduction sites for designated species **on existing? conservation lands???** **What about private lands?**

Policy 1.1.9:

When one (1) or more individuals of state or federal listed wildlife species are found on a site undergoing development activities for which no management plan has been adopted, said activities shall cease until a management plan has been prepared by the developers and found to be acceptable by the City.

Policy 1.1.10:

The City shall protect existing natural ~~reservations~~ resources including recreation and publicly protected conservation lands according to the strategies set forth in the Recreation and Open Space Element.

Policy 1.1.11:

All costs for restoring environmentally damaged areas shall be borne by the party directly responsible for the damage. Mitigation (wetlands/seagrass) shall occur as per State and Federal regulations. If within a reasonable time, for the particular plant species, mitigation has not been successful, the responsible party shall replant or act to "mitigate" the problem.

Objective 1.6:

To encourage the preservation/protection of wetlands according to their function by implementing programs both locally and in conjunction with other governmental entities, toward this effort:

Policy 1.6.1:

The development of wetlands shall be addressed in the development regulations according to the following criteria:

Strategy 1.6.1.1:

The protection of the wetlands shall be determined by the functional value of the wetland.

Strategy 1.6.1.2:

The development of land under all land uses categories shall take into consideration natural constraints such as flood hazard, wetlands, soil suitability and aquifer recharge potential.

Policy 1.6.2:

Proposed land uses, which are compatible with the function of wetlands, shall be identified within a conservation land use designation on the Future Land Use Map and further addressed in the land development regulations.

Strategy 1.6.2.1:

In addition to the permitted land uses identified in the Future Land Use Element, conditional uses may be considered as provided for in the land development regulations, with criteria based upon the mitigation policies of the U.S. Fish and Wildlife Service. At a minimum, the criteria to be considered for approval of a conditional use shall include:

1. The use is ecologically sound;
2. The use is water dependent or water related and there is a documented public need;
3. The use is the least environmentally damaging alternative;
4. There is no practical alternative to insure reasonable use of the applicant's property; and
5. Any unavoidable damage or loss of wetland shall be mitigated to insure no net loss of wetlands and no loss of functional value.

Policy 1.6.3:

Wetlands shall be defined consistent with existing state and federal regulatory agencies.

Strategy 1.6.3.1:

At a minimum, the U.S. Department of the Interior Fish and Wildlife Service Wetland Maps (1988), or as most recently updated, shall be used to define the Conservation Land Use areas within the City.

Strategy 1.6.3.2:

At a minimum, wetlands five (5) acres or more in size shall be designated as a conservation land use and wetlands less than five (5) acres will be subject to review to determine what protection, if any, they should receive from development. Said review shall be based on the functional value criteria specified in Strategy 1.6.4. If based on this determination, protection is warranted, development may be permitted, based upon criteria set forth in the environmental performance standards of the land development regulations.

Policy 1.6.4:

Land development impacts on designated wetlands shall be assessed based upon the functional value of wetlands. The functional value assessment criteria for wetlands shall include, at a minimum, consideration of:

1. Size;
2. Capacity for floor storage or flow regulation;
3. Potential as wildlife and/or fisheries habitat;
4. Provision of habitat for state or federally protected species;
5. Rarity as a vegetative community type;
6. Degree of prior adverse impacts which would limit the future viability of wetland (e.g., invasion by upland or exotic species, fire, permanent alteration of drainage patterns); and
7. Potential for recreational use.

Policy 1.6.5:

Activities whose impacts are assessed to be minimal, or offset by mitigation measures, shall be addressed in the land development regulations and shall utilize the following criteria:

1. The activity is necessary to prevent or eliminate a public hazard;
2. The activity would provide direct public benefits which would exceed those lost to the public as a result of the degradation or destruction of wetlands (e.g., right-of-way for public roads or utilities); and
3. The activity is proposed for wetlands whose functional values are so limited that their loss does not significantly affect the public interest (i.e., inherent in this statement is that this land can be utilized as recreational, conservation, open space or low density residential areas.).

Policy 1.6.6:

Mitigation for unavoidable impacts to wetlands, which possess significant functional value, as determined by a functional assessment, will be addressed in the land development regulations.

Policy 1.6.7:

Monitoring shall be required to ensure that all mitigation or compensation efforts as outlined in the land development regulations are successful.

City of Titusville
"Gateway to Nature and Space"

REPORT

To: Members of the Titusville Environmental Commission
From: Lily Galleo, Sustainability Program Coordinator
Subject: **Urban Forest Management Plan Draft Review**
Department/Office: Planning

Recommended Action:

Provide the consultant with feedback, comments, and questions about the draft plan.

Summary Explanation & Background:

In 2025, the City initiated a contract with Eocene Environmental Group to develop its first Urban Forestry Management Plan. The attached document represents an initial working draft provided for review by the Titusville Environmental Commission (TEC). The consultant is seeking feedback, comments, and questions about the draft plan. Please note that this is a preliminary version, and several sections will be further developed as the plan progresses toward a final version.

Alternatives:

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

1. Titusville_Draft_UFMP_4.21.26

CITY OF TITUSVILLE URBAN FOREST MANAGEMENT PLAN

APRIL 2026
DRAFT REPORT

DRAFT

Prepared For
CITY OF TITUSVILLE, FLORIDA

Prepared By
EOCENE ENVIRONMENTAL GROUP



CITY OF TITUSVILLE URBAN FOREST MANAGEMENT PLAN



APRIL 2026 | DRAFT REPORT

DRAFT

Prepared For
CITY OF TITUSVILLE, FLORIDA

Prepared By
EOCENE ENVIRONMENTAL GROUP

Executive Summary

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Acknowledgements

We gratefully acknowledge the following individuals and the City of Titusville for their contributions to this project:

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We would like to extend a special thanks to the Titusville Environmental Commission and the Tree Team for their input and participation throughout the planning process.

Funding

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1 CHAPTER ONE Introduction & Background

1.1

What Is an Urban Forest?

While the term “urban forest” typically brings to mind tree-lined streets and shaded parks, it consists of all trees within a given geographic area. The Florida Urban Forest Primer describes an urban forest in detail as “a human ecosystem in which there are formal, regimented planting of trees, palms, and shrubs along roads and boulevards, to small groups of trees and shrubs in residential yards, to trees in planned parks, woodlots, and remnant native forests” (Northrup et al., 2022).

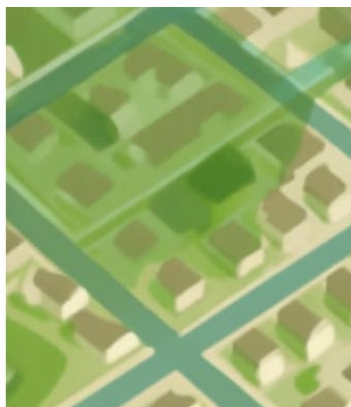
This definition may seem broad, but that is intentional, reflecting its scope. According to the Arbor Day Foundation, only 20% of trees in urban areas are located on public land (Arbor Day, 2018). The urban forest is not simply a municipal asset that the City can manage on its own. The long-term health and sustainability of the urban forest depend on how residents, institutional land owners, developers, and the City manage trees on their land. This means that the urban forest is a shared community resource that must function as a single system across ownership boundaries.

One framework for measuring how urban forest benefits are reaching residents is the 3-30-300 rule (Konijnendijk, 2022). This guideline proposes that every resident should be able to see at least 3 trees from their home, every neighborhood should have at least 30% tree canopy cover, and that every resident should live within 300 meters (~5-minute walk) of a park, green space, or natural area. 3-30-300 provides a practical, people-centered approach to assessing urban forest equity and setting meaningful targets. Understanding where Titusville stands relative to this benchmark serves as a lens throughout the plan, connecting the analysis of current canopy cover to plan objectives and monitoring.

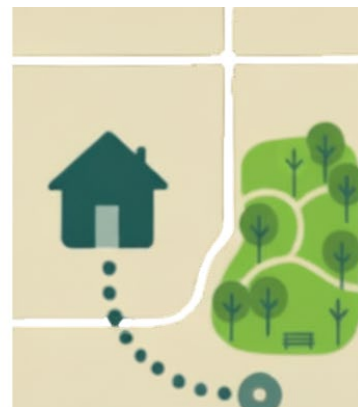
3-30-300 Guideline For Urban Forestry



3 TREES
seen from your window



30% CANOPY
in your neighborhood



300M / 5 MIN WALK
from your park

1.2

Urban Tree Benefits

Trees are among the few municipal assets that increase in value over time, providing greater benefits as they mature. A US Forest Service study of central Florida communities found that the environmental benefits of trees, such as energy savings, stormwater runoff reduction, air quality improvement, and carbon storage, exceeded the cost of their care over 40 years (Peper et al., 2010). Of particular note in the study was that the benefits associated with reduced stormwater runoff and increased property values accounted for the largest proportion of the region's total benefits. Given that stormwater runoff and water quality are of concern in Titusville, this is particularly relevant.

The same study confirmed that over a tree's lifetime, net benefits (benefits minus costs) range from \$23 to almost \$5,000 per tree depending on size and location (Peper, 2010). Larger trees planted in yards yielded the highest benefits compared to small public trees. While trees generally offer benefits, it should be noted that condition and ultimate size strongly influence the long-term measurable benefits they provide. This makes it imperative to plant a tree well-suited to the location, with a focus on larger canopy trees.

Beyond those measurable environmental returns, trees provide significant social and health-related benefits. Research links higher canopy cover to lower stress, better mental health, increased physical activity, and stronger social connections (Dhal et al., 2025). Shaded parks and tree-lined streets encourage walking and outdoor social gatherings, while also contributing to neighborhood identity (Locosselli & Buckeridge, 2023) and overall community well-being.

However, these benefits are not evenly distributed. Where trees are sparse, residents face reduced air quality, increased flooding risk, greater heat exposure, and less access to nature. This makes managing the urban forest not just an environmental focus, but also critical to equity and community resilience. For Titusville, an investment in the urban forest is an investment in the community's health, livability, and long-term sustainability.

Urban Forest
Tree Benefits
Enhancing the Titusville Community

- Stormwater Management**
Trees absorb rainwater, reducing runoff, filtering pollutants, protecting local water quality.


- Property Values**
Well-maintained trees can increase property values by 3-10% while attracting businesses.


- Air Quality**
Trees filter pollutants, enhancing the air quality and providing cleaner, healthier environments for residents.


- Community Health**
Access to green spaces promotes physical activity, mental health, and social connections among residents.


- Cooling Effects**
Shade reduces urban temperatures by up to 10°, lowering energy costs by up to 25%.



1.3

Plan Purpose

Titusville has a long history of commitment to its urban forest. Since 2001, when the City established the Public Landscape Trust Fund (LTF) and earned its first Tree City USA designation from the Arbor Day Foundation, the community has recognized the value of trees. For over 25 years, the City has maintained its Tree City USA status – a reflection of its ongoing commitment, even in the face of potential challenges such as limited resources and capacity.

Building on those early efforts, Titusville has undertaken other notable initiatives recognizing trees as a community asset. In 2021, the City passed its Tree Canopy Ordinance and visited a peer city to learn from its forestry efforts. Then in 2022, Titusville completed its first canopy cover study. The following year, the City adopted the Sustainability Action Plan, which specifically called for developing an urban forestry plan to manage tree infrastructure and canopy. Also in 2023, the Titusville Environmental Commission (TEC) drafted an initial forest plan, signifying the growing urgency to proactively manage trees. Likewise, without a formal City tree planting program, community volunteers have stepped up to plant trees, demonstrating both their personal investment in the urban forest and the potential for organized stewardship.

More recently, the City was awarded an Urban and Community Forestry grant from the Florida Department of Agriculture and Consumer Services, which provided the necessary resources to develop this Urban Forest Management Plan (UFMP). In 2025, the City adopted its Natural Resources Plan, which echoed the Sustainability Action Plan’s call for an urban forest plan. Throughout this period, the TEC has continued to advance recommendations to protect the City’s canopy, including multifamily canopy requirements, critical root zones, and LTF transparency.

This UFMP arrives at a critical juncture for the City, with conditions aligned for action: the planning process has been funded, a community vision has been developed, a dedicated volunteer base is ready to assist, and policy conversations are underway. The City has not lacked sustained interest or commitment to its natural resources; rather, it has lacked a coordinated framework that connects Titusville's values to actual commitments, with accountability and tracking measures. Through previous plans and public outreach, the Titusville community has already expressed what it wants. This plan responds by assessing what the City currently has (the State of the Urban Forest) and by identifying how to systematically move towards those goals.

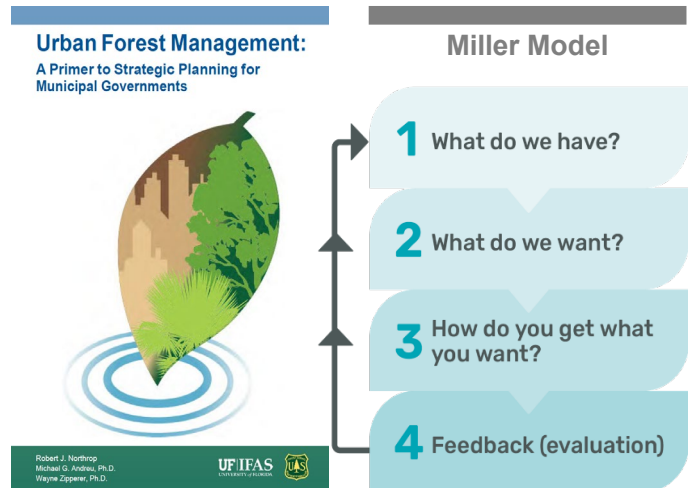
1.4

Plan Scope & Development

This UFMP covers all of the City of Titusville and its urban forest, including public and privately owned trees. The plan builds on previous canopy studies and other related plans adopted by the City. It is structured around a 20-year planning horizon, with implementation broken into 5-year operational cycles, as recommended by the Florida Urban Forest Primer (Northrup et al., 2022). The planning horizon conveys the need for sustained commitment, while the operational cycle supports near-term priorities, progress tracking, and adaptability.

The plan was developed using the Florida Urban Forest Management framework (Northrup et al., 2022) as its primary foundation. The primer establishes an approach for cities to develop urban forest plans, focused on strategic planning, community engagement, goal-setting, and performance measurement. This framework is grounded in Miller’s (1988) Model of urban forest planning, which asks key questions as part of an ongoing process.

Together, these frameworks informed the plan’s development from project kickoff through community engagement, canopy analysis, stakeholder input, and strategic plan development.



1.5

How to Use This Plan

This plan is intended to serve multiple audiences, including city staff, community members, elected officials, and leadership. Staff will likely find the implementation tables and monitoring framework in Chapters 7 and 8 most useful for day-to-day decision-making and reporting. Community members and organizations can use the vision statement, goals, and stewardship objectives in Chapters 5 and 6 to understand the City’s commitments and identify opportunities to work together. They may also find the community engagement in Chapter 2 useful for understanding how public input shaped the plan. The goals framework, equity benchmark, 5-year operational plan, and progress report will be most useful to elected officials and City leadership for accountability and long-range planning.

2 CHAPTER TWO Community Engagement

The City of Titusville and Eocene Environmental Group conducted a multifaceted public engagement process for the Urban Forest Management Plan between October 2025 and April 2026. This approach used three distinct methods to gather input and ensure broad community participation: two in-person events, a detailed community-wide survey, and a FlashVote poll to reach additional residents. The complete engagement results are provided in Appendix C.

2.1 Community Survey & FlashVote

The community survey was distributed through the City's website and social media from October through November 2025, collecting input on tree likes and dislikes, urban forest priorities, and opinions on tree management. The survey received 77 responses in total. Notably, the City experienced a historic rainfall and flooding event during the survey period that likely affected participation. Recognizing the lower response rate, a more concise FlashVote poll was subsequently developed to gather additional input from a broader cross-section of the community.

The City launched a FlashVote poll in January 2026 that received 242 responses. This poll reached a larger portion of the community, validated survey findings, and provided additional context. Unlike the community survey, demographic information was not collected in the FlashVote poll.

FLASHVOTE CITY SURVEYS

Do you have about one minute a month to help make Titusville better?

Survey Demographics

Survey respondents were predominantly older adults (76.7% aged 45+, with 39.7% aged 65+) and highly educated (56.5% held bachelor's or graduate degrees). The majority lived in single-family homes (81.3%) and identified as White/Caucasian (84.6%). The overall demographics suggest potential underrepresentation of younger families and adults, higher-density housing residents, and those with diverse identities, informing the decision to supplement the survey with the FlashVote poll.

Canopy Preferences

Despite Titusville's relatively high canopy coverage, responses showed a gap between what residents have and what they want. Almost 45% said the canopy in their neighborhood had decreased since they moved in, with only 16% reporting an increase. When selecting images representing canopy cover levels, most (over 50%) reported living in lower canopy cover areas; however, over 70% selected dense canopy cover as their ideal neighborhood. So while they think canopy cover has decreased and their neighborhood has low coverage, they mostly desire to live in more treed areas. In FlashVote responses, almost 75% would prefer "more trees in public areas, with only 2.9% preferring less.

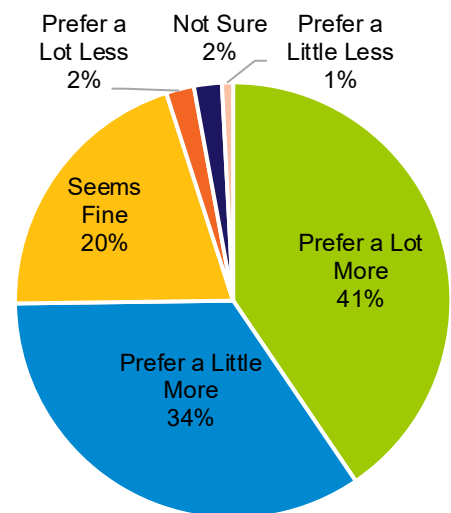


Figure. FlashVote results on amount of trees preferred in public areas.

Tree Benefits & Values

Survey respondents expressed overwhelming support for trees, with 92% saying that having trees in their neighborhood was “extremely” or “very” important (Figure). When ranking tree benefits, the top three were stormwater and runoff reduction, shade, and wildlife and pollinator support. Economic and aesthetic benefits, such as increased property values and tourism, were ranked lowest. This demonstrated that residents in Titusville value trees primarily for their environmental and quality-of-life benefits.



Figure. Community survey results on the importance of having trees in their neighborhood.

FlashVote reinforced these priorities, with shade, heat, and air quality selected as the top benefits, with wildlife support and floodwater absorption also ranking highly. FlashVote respondents placed slightly more emphasis on shade and heat than stormwater, which may have been due to the question's phrasing or to the broader audience reached through FlashVote. Both surveys reinforced that environmental benefits, not the economics, garner community support for urban forestry.

Rank	Community Survey	FlashVote
1	<i>Reduce Stormwater and Runoff</i>	<i>Provide Shade</i>
2	<i>Provide Shade</i>	<i>Absorb and Reduce Heat</i>
3	<i>Support Wildlife and Pollinators</i>	<i>Improve Air Quality</i>

Tree Concerns

While overall tree concerns were relatively modest, they represented opportunities for the City to address. The most frequent drawbacks were debris (22.2%) and maintenance burden (16.7%), but 25% cited no drawbacks. Storm-related concerns for trees in Titusville were unexpectedly low, with fewer than 7% of respondents being “extremely concerned” and 68% slightly or moderately so.

In terms of climate concerns, respondents were worried about the lack of trees exacerbating problems. The top concerns were extreme heat in areas without shade (26.8%), tree removal and death due to development (25.8%), and flooding in areas without trees (23.4%). These responses show an understanding that the loss or lack of trees poses a real risk to the community.

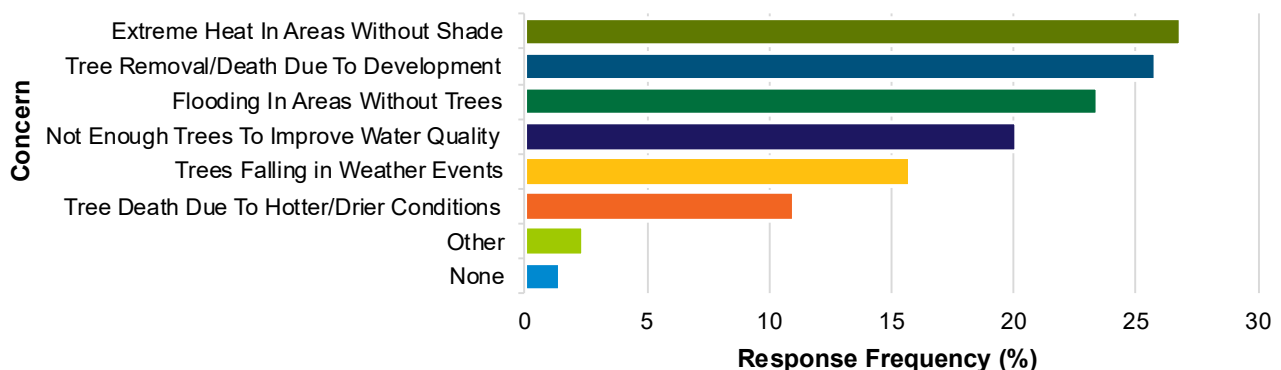


Figure. Community survey results on climate related tree concerns.

City Tree Management

Respondents from both FlashVote and the community survey sent a clear message that the City’s current tree management is inadequate, and they support spending more on public trees. While almost 41% of respondents had no trees on their street, only 5.3% said their street trees were well cared for, compared to 23.7% who said they were not. When asked about improvements to public trees, the top desires were more trees (27.9%) and better maintenance (18.6%). FlashVote responses to using City funding for public tree planting and maintenance showed high support (69.0% strongly or somewhat support). Regarding tree preservation, the majority (65.3%) wanted as many trees preserved as possible, and an additional 25.3% supported replacing trees after removal.

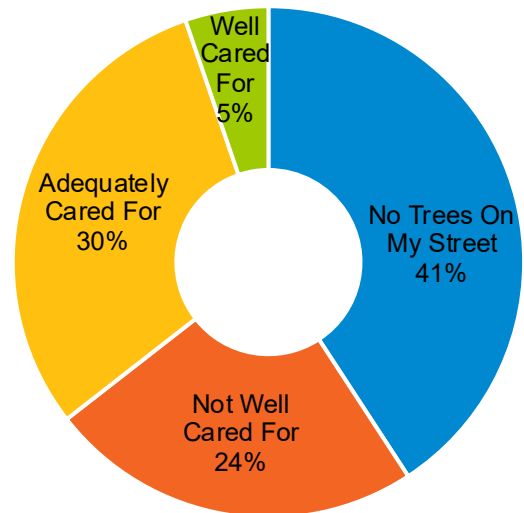


Figure. Community survey results on opinion of City street tree maintenance.

The preferred planting locations for new trees varied slightly between engagement tools. The community survey overwhelmingly selected streets and sidewalks as the top location (46.7%), while FlashVote had a tie between parks and downtown/commercial areas. However, FlashVote phrased the question differently, allowing respondents to choose multiple locations, and the community survey asked for the top location.

Awareness & Engagement

Titusville residents showed strong interest in participating in urban forestry. A majority of survey respondents (75.3%) would plant a tree on their property if the City offered a financial incentive, and only 6.5% would not. This supports the FlashVote finding that the majority would support spending City funds on public urban forestry. However, a majority were unsure (17.8%) or did not know (41.1%) how to report a public tree maintenance issue to the City. This shows a gap in information communication to the public. Digital methods, such as email, Facebook, and the City’s website, were the preferred communication channels. Only 3% wanted no information on the City’s urban forest programs and tree care.

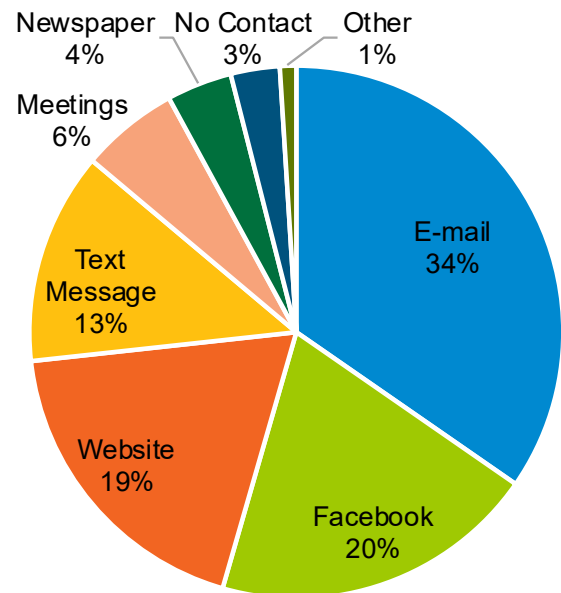


Figure. Community survey results on urban forestry information contact methods.

Living with trees cannot be a negative experience, even when naturally occurring things like storms happen...

Community Survey respondent, 2025

3-30-300 Resident Baseline

Titusville's community survey results offer a resident-reported baseline on where the community stands relative to the three components of the 3-30-300 rule (Konijnendijk, 2022). A recent statewide Florida study using the same survey methodology provides a useful point of comparison (Koeser et al., 2024). Of the three thresholds, Titusville was above the Florida average for visible trees but below for canopy cover and green space access (Figure).

3 Trees Visible from Home

Every resident should be able to see at least 3 trees from their home.

TITUSVILLE 93.5%



FLORIDA AVG. 71.9%



Above Average
21.6 points above Florida Avg.

Note: Survey sample skewed toward established single-family homeowners.

30% Neighborhood Tree Canopy Cover

Every neighborhood should have at least 30% tree canopy cover.



62.4% Titusville



72.9% Florida Avg.

Below Average
10.5 points below Florida Avg.

Note: Citywide average canopy (44.0%) exceeds the threshold overall. Neighborhood-level canopy analysis in Chapter 3 Section 5 identifies areas with coverage below 30%.

300m Access to a Park or Green Space

Every resident should live within 300 meters (~5 minute walk) of a park or green space.



45.9% Titusville



57.7% Florida Avg.

Below Average
11.8 points below Florida Avg.

Note: 4.1% were unsure if they could walk to a park within 5 minutes; most parks are managed by Brevard County, requiring interagency coordination.

Sources: Konijnendijk (2022); Koeser et al. (2024); City of Titusville Community Survey (2025)

2.2

Vision Workshop

On November 10, 2025, the City held a public workshop at City Hall that brought together community members, City staff, City Council members, the Titusville Environmental Commission, Tree Team members, and the Eocene consulting team. After an informal meet-and-greet and a brief presentation on canopy cover and the City's urban forestry journey, participants divided into facilitated small groups. Each group discussed its urban forest values and priorities, including what makes Titusville special, and through collaborative discussion crafted a vision statement reflecting community priorities for Titusville's future urban forest. The three vision statements developed were:

Our City's vision for our Urban Forest is...

1. *To enhance and preserve a healthy urban forest through conservation and strategic tree plantings that maximize environmental benefits, improves water quality, reduces heat, and enriches quality of life for the greater Titusville community.*
2. *To create a vibrant, native forest that is beautiful, supports wildlife, improves air and water quality in the City and Indian River Lagoon, and enhances our quality of life for all. The Forest will represent the unique natural history of this area.*
3. *To preserve, conserve, enhance, and restore Titusville's natural canopy and thoughtfully design a native urban forest that promotes the City's heat reduction, flood management, and improved air quality goals, along with maximizing environmental benefits.*

2.3

Vision Statement Vote

The three vision statements developed at the November 2025 workshop were posted publicly for community-wide voting. With 104 votes cast, the below vision received 36% of the vote and was selected as the guiding statement for the UFMP:

"To enhance and preserve a healthy urban forest through conservation and strategic tree plantings that maximize environmental benefits, improve water quality, reduce heat, and enrich the quality of life for the greater Titusville community."

2.4

Stakeholder Perspectives

As part of the engagement process, input was gathered from the TEC, City Staff, and the Tree Team, as they have direct knowledge of the City's urban forestry programs. Input was gathered through a SWOT (Strengths, Weaknesses, Opportunities, Threats) assessment and collected separately. City staff's opinions were gathered through an in-person session on February 9, 2026. The TEC and Tree Team were solicited via email to complete an online form to remain in compliance with the Florida Sunshine Law, which prohibits unnoticed group meetings among board members. Complete SWOT findings are in Appendix F, and analysis of findings is in Chapter 3 Section 10.

City Staff input reflected the reality of managing public trees without a dedicated urban forester. While the team has the qualifications and is collaborative, it lacks the capacity to manage City trees. Staff identified the City's lack of proactive tree maintenance and risk programs, noting that funding and workspace limitations make it difficult to expand capacity. They noted that the Public Landscape Trust

fund, citizen volunteer groups, and the state's urban forestry network all provide resources that the City could expand upon. Severe weather events and negative social media were identified as risks that can quickly undermine public support for urban forestry in Titusville.

The TEC and Tree Team's input touched on several similar themes, but with a stronger policy focus. They identified the City's use of the Trust Fund as a major concern, noting that it has been used primarily for landscaping rather than for trees. The lack of a true City urban forestry program and failure to implement previous tree studies were also cited as issues. They also brought to light the effect of development pressures on the tree canopy and limitations of the current City code, which is further restricted by recent Florida legislation. Related to opportunities, they were positive about the amount of plantable space within the city, the potential for the Trust Fund to be redirected to urban forestry, and the willingness of community groups to partner with the City on tree planting and maintenance.

2.5

Draft Plan Public Input

[PLACEHOLDER: complete after engagement event. Inc meeting date, location, format, attendance; summary of draft plan sections shown at meeting; key public comments and themes; how input was incorporated into final plan -can refer to [Appendix](#) if needed.]

2.6

Role in Plan Development

The community engagement process provided clear direction for the plan's goals and strategies. The strong consensus on functional environmental benefits, specifically stormwater management, shade, and wildlife support, helped drive goal-setting and implementation priorities. Community concerns about maintenance and infrastructure compatibility highlighted the need for strategies to address tree care capacity and "right tree, right place" planning. The high interest and low awareness of existing programs demonstrate the potential for active urban forestry participation; however, public education and communication will need to be enhanced to encourage this participation.

These engagement findings translated directly into plan decisions, reflected in the Strategic Plan (Chapter 6). The top-ranked priorities of stormwater, shade, and wildlife are the foundation of environmental health goals and inform species selection guidance. Likewise, the desire for more trees and better maintenance influenced canopy growth and preservation strategies. The gap in public awareness, with 41% of residents unable to identify how to report a tree concern, helped drive education and outreach objectives. Together, the engagement findings rooted the plan's goals and strategies in community values, helping to ensure the UFMP reflects what matters most to residents.

3 CHAPTER THREE State of the Urban Forest

In Titusville, the urban forest exists within an ecological context that sets the City apart from its peers. Set along the Indian River Lagoon (IRL), one of the most unique and diverse estuaries in the country, the city's coastal landscape is shaped by a subtropical climate, seasonal flooding, and strong storms. The 2023 USDA Plant Hardiness Zone Map places Titusville in Zone 10a, in one zone warmer than the 2012 map, a shift that affects species suitability and canopy resilience. The urban forest and the city's broader vegetation community play a critical role in providing ecological, social, and human health benefits to residents, including filtering runoff before it reaches the Lagoon and mitigating heat. Understanding these conditions is critical for effectively managing Titusville's trees as a shared community resource – they function as a single system that produces benefits connected across public and private land. This chapter examines the current state of Titusville's urban forest through a citywide canopy assessment, an inventory of existing programs and resources, a stakeholder-informed SWOT analysis, and an overview of the external threats and pressures shaping the urban forest's future.

3.1

Tree Canopy Assessment Overview

Tree canopy assessments are a critical component of understanding the urban forest. They provide an estimate of the various land cover types, including tree canopy cover, across a defined geographical area. Cities often use the resulting information as a foundational planning element to enhance environmental assets and community well-being. Tree canopy cover percentages often are a source of pride for residents and generate public interest in urban forestry and trees as a whole.

Titusville's tree canopy assessment is an important investment in the City's future, as it develops planning tools for data-based decision-making. Using consistent and replicable methods, a tree canopy cover (TCC) estimate was developed using both current 2023 and 2010 historical data. This will assist the City in continuing to track changes in tree canopy and neighborhood trends over time. The project shows the City is prioritizing its natural and environmental resources, responding to community members' needs, and focusing on the health and well-being of current and future generations.

What is a Tree Canopy Assessment?

A tree canopy assessment (TCA) provides a perspective of how much of the land area is covered by trees, including trees on public and private property. A TCA, also called Urban Tree Canopy (UTC) or Tree Canopy Cover (TCC), is used to describe what percentage of an area has trees as seen from an aerial perspective.

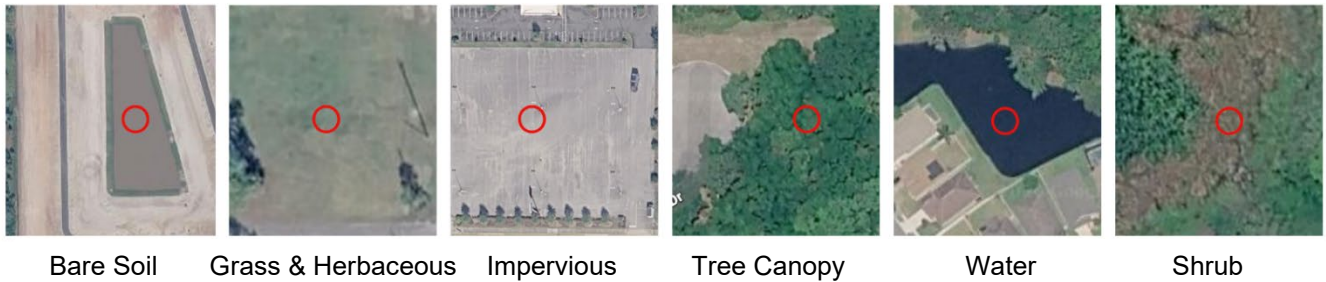
What a Tree Canopy Assessment is Not

A TCA does not collect individual tree attributes, such as size, species, and health. It does not classify the land surface underneath the tree canopy, which can be bare soil, shrubs, grass, herbaceous plants, impervious surface (e.g., roof or roads), or water.

3.2

Methods

The City of Titusville’s current and historical land cover was estimated through a sample point assessment. Sample point methodology is considered the gold standard for comparison with machine-learning classification systems (Clymire-Stern, 2022) and is based on a 95% confidence interval that provides a high level of accuracy. In this method, geospatial points were randomly generated and subsequently classified by a reviewer as Bare Soil, Grass & Herbaceous Plants, Impervious Surface, Tree Canopy, Water, or Shrub (Figure X).



To perform the current 2023 land cover analysis, 6,000 points were classified using commercial imagery with 30-centimeter resolution. Historical coverage was assessed using 2010 high-resolution imagery (60-centimeter to 1-meter). Both timeframes used imagery from the National Agriculture Imagery Program (NAIP, 2023). For quality control, a secondary reviewer independently classified a subsample of the points to develop an overall project accuracy percentage for tree canopy cover.

Plantable area analysis was conducted using the 2023 land cover data. Sample points where a tree could potentially be planted (Grass & Herbaceous and Bare Soil) were separated from points where tree planting would not be immediately feasible (Impervious, Water, Shrub, and existing Tree Canopy). Potentially plantable spaces were then individually assessed to determine whether a small, medium, or large tree could be planted, based on above and below-ground constraints, including proximity to hardscape and structures, overhead utility conductors, and distance to other trees.

The canopy and plantable area data was disaggregated into three levels: census blocks, study areas, and watersheds. Throughout the canopy assessment, the Indian River Lagoon was excluded from the area of interest to remain consistent with land-based canopy analysis and urban forest metrics. Detailed land cover classifications and the accuracy assessment are located in Appendix F, while the detailed planting criteria are in Appendix H.

3.3

Canopy Cover & Change

In 2023, Tree Canopy was the most common land cover in Titusville, accounting for 44.0% of the city's land area (Table X). Other land covers classified included Grass and Herbaceous Plants (26.0%), Impervious Surface (20.5%), Shrub (3.9%), Bare Soil (3.3%), and Water (2.4%) (Figure x). A visual representation of the current land cover is shown in Figure X.

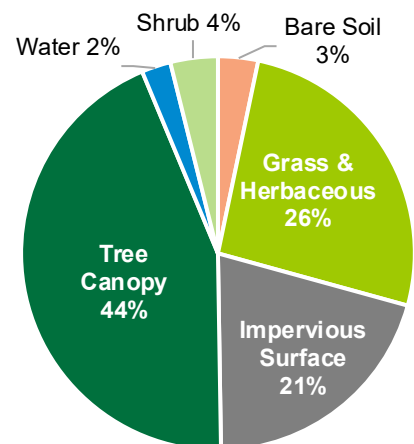
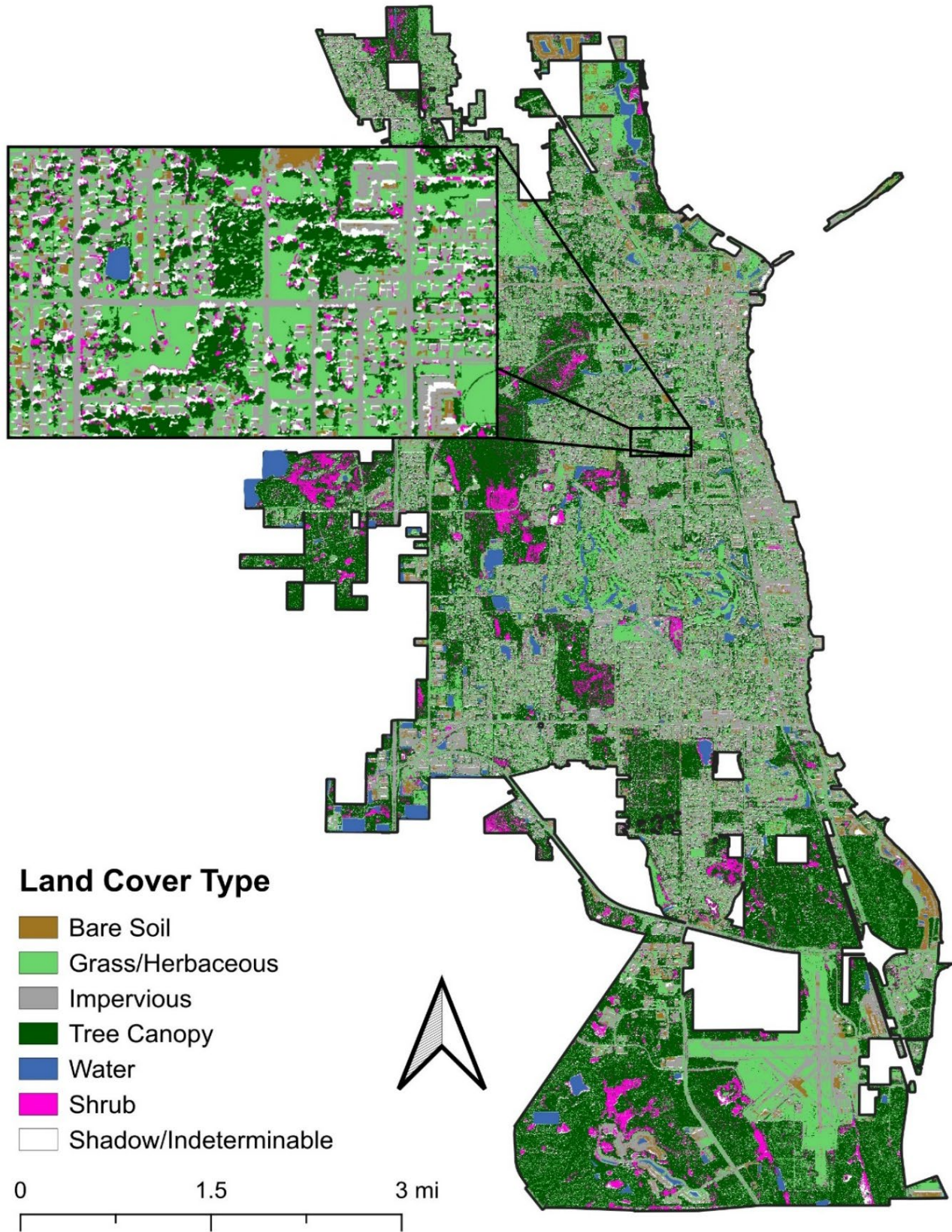


Figure. Distribution of land covers in Titusville.



Map. Supervised classification land cover map of Titusville.

Between 2010 and 2023, Titusville experienced a notable decline in overall tree canopy cover, decreasing from 50.2% to 44.0%, a statistically significant drop of over six percentage points (Figure X). During the same period, Shrub cover was the only other land cover to show a statistically significant change, increasing from 0.4% in 2010 to 3.9% in 2023.

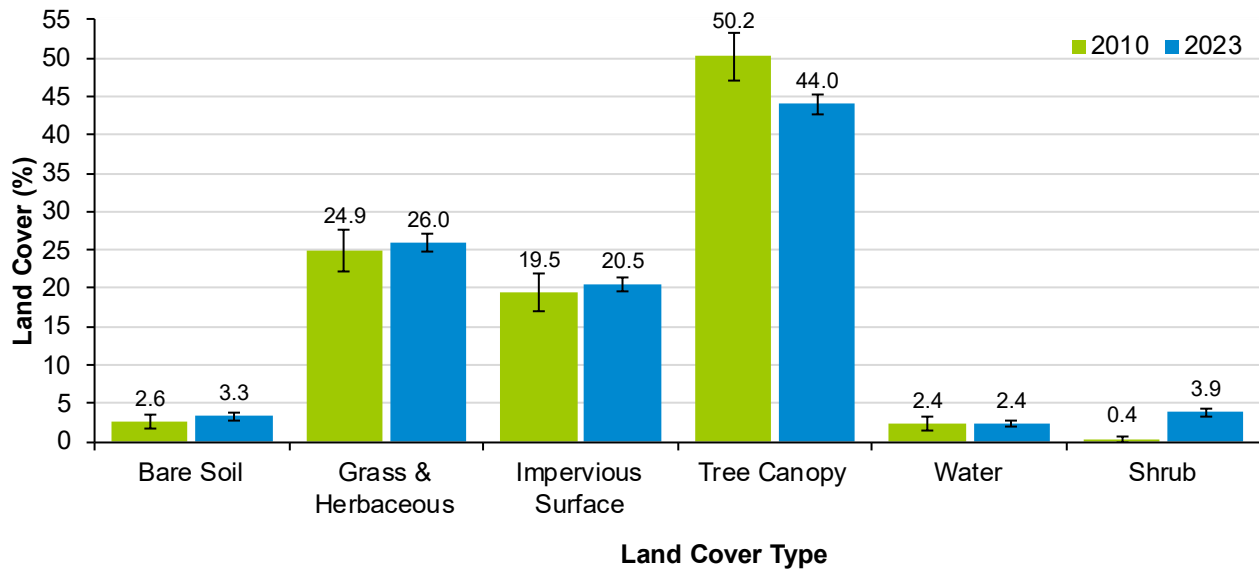


Figure. Titusville land covers in 2023 compared to 2010.

However, a closer look at the data reveals more than these figures suggest alone. To further analyze the decline in canopy and the increase in shrubs, a change analysis was performed for points classified as Tree Canopy in 2010 that shifted to another land cover by 2023. The most common conversion was Tree Canopy to Grass & Herbaceous cover, accounting for 43% of all change. Shrub had the next highest conversion at 28%, followed by Bare Soil (12%), Impervious Surface (12%), and Water (4%).

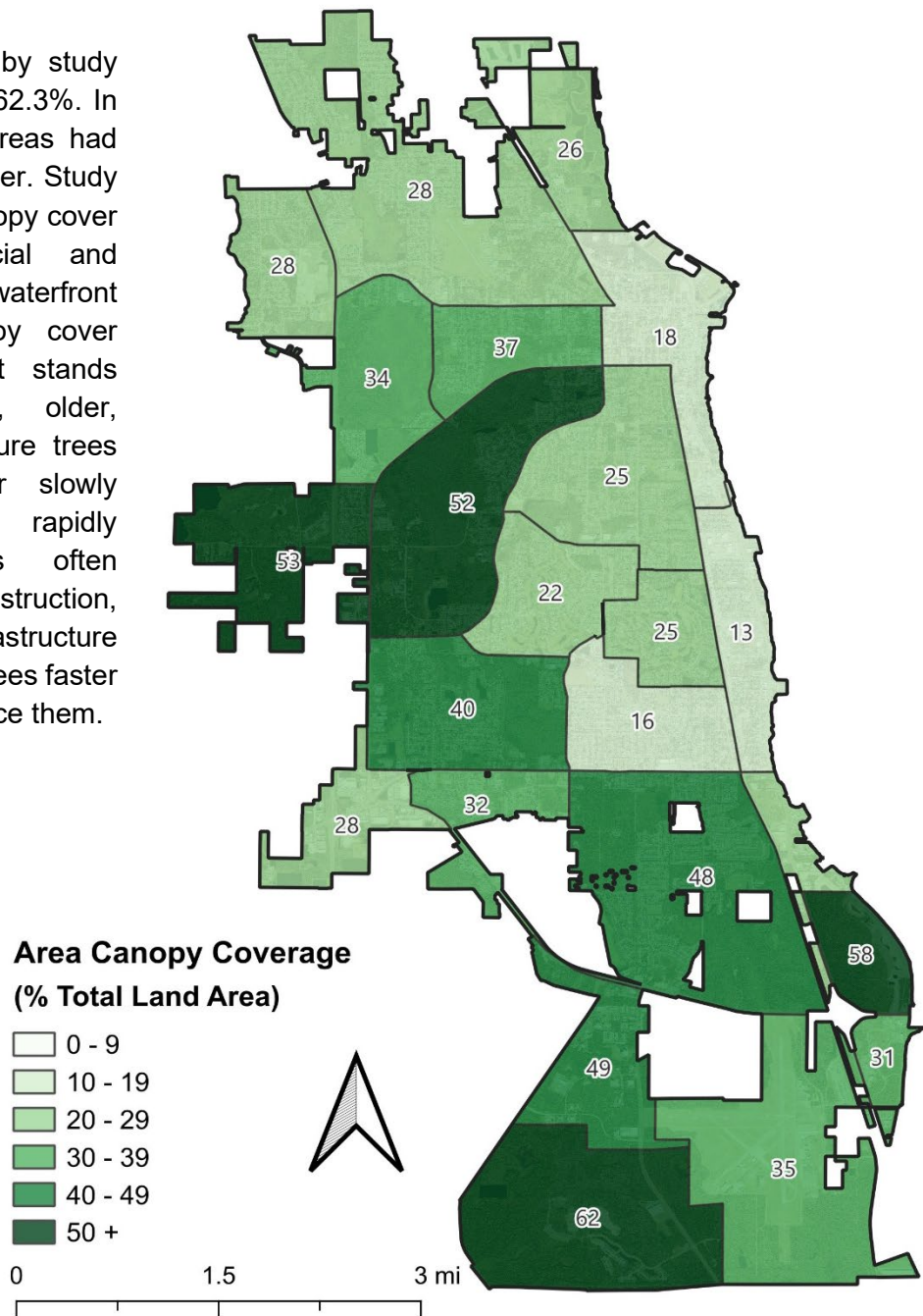
These patterns point to two distinct causes of canopy loss over the 13-year period. The dominant conversion from Tree Canopy to Grass & Herbaceous is consistent with development and population growth, as forested areas are cleared for residential homes with lawns and landscaped yards. Census data supports this interpretation, with Titusville's population growing from approximately 44,000 residents in 2010 to an estimated almost 50,000 in 2024 (U.S. Census Bureau, 2025). The secondary conversion from Tree Canopy to Shrub reflects a different process specific to coastal areas like Titusville, where storm damage, salt exposure, and altered site conditions can reduce tree survival. Following tree loss, shrub and scrub species reestablish more quickly than trees, particularly in lagoon and shoreline environments. When taken together, these findings indicate that while development is the primary driver of canopy loss, environmental stress factors have contributed to the overall decline in ways that land cover data alone cannot capture.

3.4

Canopy by Study Area

Analyzing canopy cover at the neighborhood scale provides a more granular understanding of spatial patterns, drivers, and disparities in urban forest distribution. This level of analysis enables the City to better pinpoint locations of canopy gains and losses over time. Neighborhood-level metrics also support equity-focused planning, allowing the City to identify areas with disproportionate canopy cover, limited planting space, or historically low investment. By disaggregating citywide canopy data into smaller geographic units, the City can produce targeted management strategies, prioritize planting projects, and monitor the effectiveness of interventions over time with better precision and accountability. In particular, the planning areas and census blocks (Chapter 3 Section 5) are essential for monitoring the 30% canopy benchmark under

In Titusville, canopy cover by study area ranged from 12.5% to 62.3%. In total, 12 of the 23 Study Areas had canopy cover of 30% or higher. Study areas that present lower canopy cover appear to be commercial and industrial, downtown, and waterfront areas, while higher canopy cover areas have natural forest stands (Figure X). In general, older, established areas with mature trees tend to show stable or slowly increasing canopy, while rapidly developing neighborhoods often experience declines as construction, development, and infrastructure expansion remove existing trees faster than new plantings can replace them.



Map. Canopy cover by study area in Titusville.

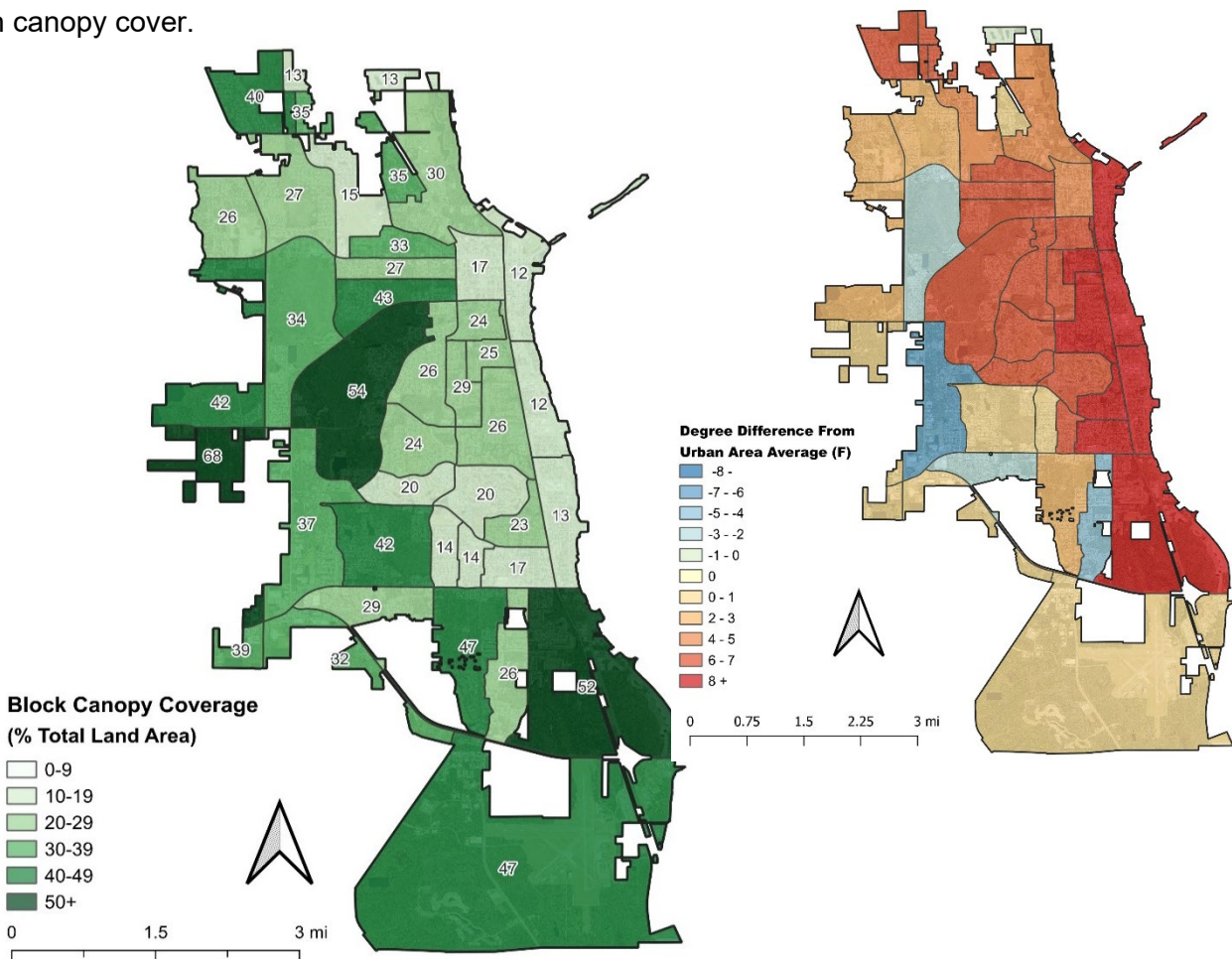
3.5

Canopy & Heat Index by Census Block

Similar to analyzing canopy by Planning Area, canopy cover by census block is a smaller scale that can help monitor change over time and progress towards the 30% neighborhood canopy benchmark of 3-30-300. The census block canopy cover percentages had a similar range to that of the study areas, from 11.9% to 67.9%. The lower cover areas were generally along the coast, while the higher cover areas had large, undisturbed forested areas. Out of 41 census blocks, 16 had canopy cover of 30% or more and met the 3-30-300 rule’s benchmark.

Census blocks are particularly helpful in analyzing canopy related to demographics and measures such as the heat index. Tree canopy cover is considered a key determinant of neighborhood-level heat exposure. Areas with higher canopy density experience lower surface and air temperatures because trees reduce incoming heat from the sun, increase evapotranspiration, and shade areas to limit heat accumulation in the built environment. Similarly, neighborhoods with sparse canopy, especially those dominated by impervious surfaces such as asphalt and concrete, show higher heat index values, often several degrees more than nearby treed areas.

Comparing Titusville’s heat index map to the existing canopy cover map (Map x), the connection between canopy cover and heat is visible in the northern coastal blocks. However, in the southern area by the Enchanted Forest and the airport, the connection is less evident. This is likely influenced by the high level of impervious cover in those areas driving heat, while large tracts of undeveloped forests had high canopy cover.



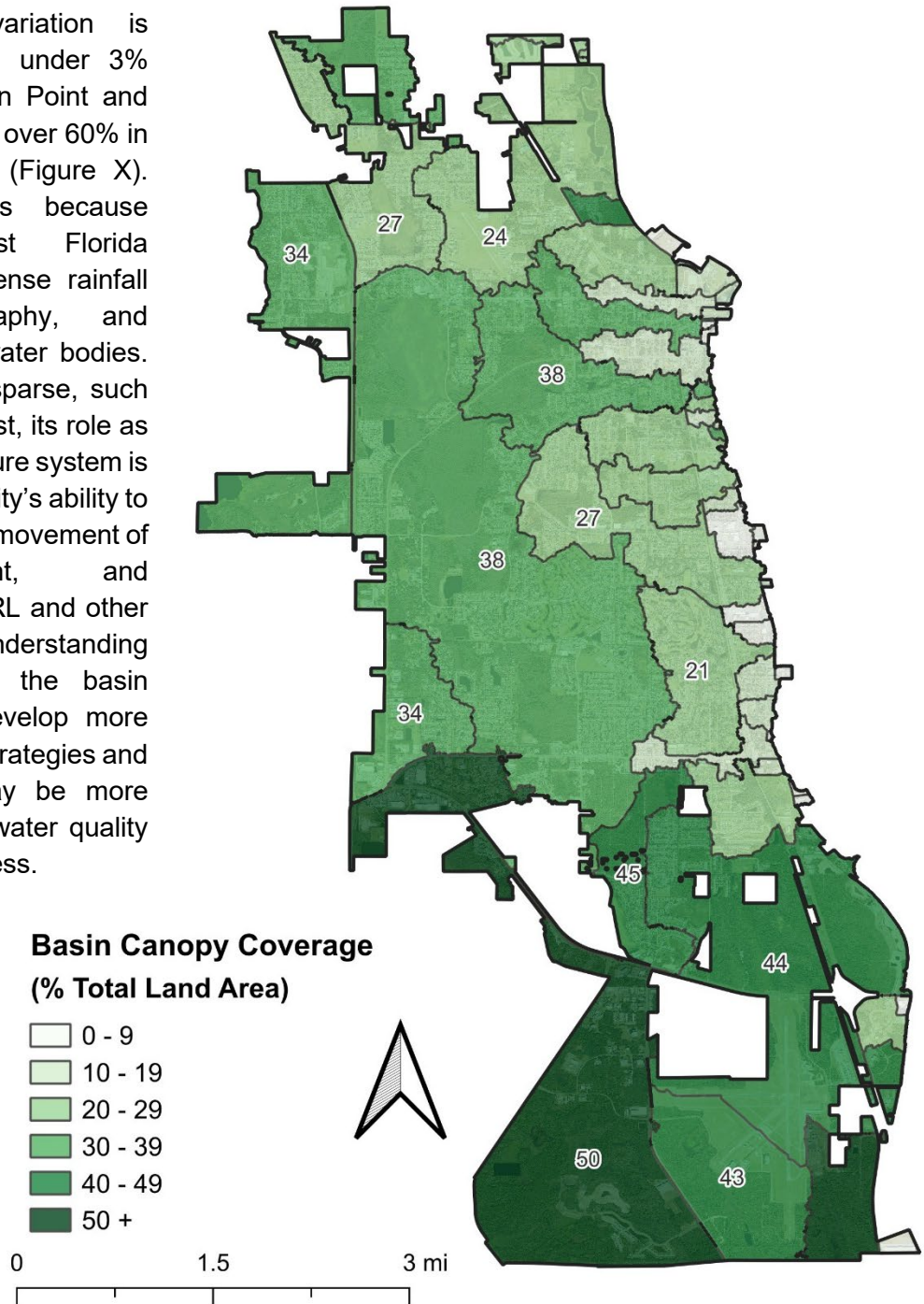
Map. Canopy cover compared to heat index by census block in Titusville.

3.6

Canopy by Stormwater Basin

Tree canopy plays a critical role in maintaining the ecological function and resilience of storm basins by intercepting rainfall, reducing surface runoff, improving water quality, and mitigating urban heat. Tree leaves and branches capture and store precipitation, while root systems increase infiltration, slow runoff, and stabilize soils, ultimately reducing peak flows and erosion in drainage systems. As a result, variations in tree canopy cover across stormwater basins can significantly influence how effectively each basin manages stormwater and protects downstream water bodies (Seitz & Escobedo, 2011).

In Titusville, that variation is dramatic, ranging from under 3% canopy cover in Pelican Point and Hopkins Road Basins to over 60% in Ponce de Leon Basin (Figure X). This disparity matters because Titusville, like most Florida communities, faces intense rainfall events, flat topography, and proximity to sensitive water bodies. Where tree canopy is sparse, such as along Titusville’s coast, its role as natural green infrastructure system is inhibited, reducing the City’s ability to filter pollutants and limit movement of nutrients, sediment, and contaminants into the IRL and other waterways. By understanding canopy distribution at the basin scale, the City can develop more targeted management strategies and identify areas that may be more vulnerable to flooding, water quality degradation, or heat stress.



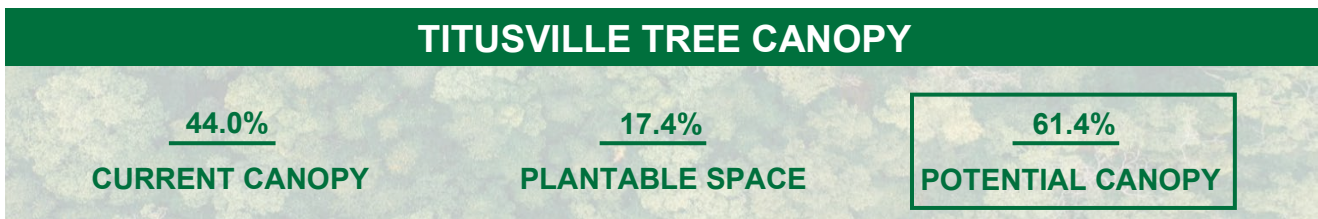
Map. Canopy cover by stormwater basin in Titusville.

3.7

Canopy Potential

While cities often set planting or canopy cover goals, these numbers can sometimes be unattainable. Limiting factors, such as right-of-way width and infrastructure conflicts, can reduce the percentage of land available for trees. By determining current and potential canopy cover, the City can develop realistic, achievable canopy goals. However, it is important to remember that the number is for planning purposes and represents potential capacity. Actual planting locations should always be determined through a site assessment to account for location usage and any restrictions not observable through aerial imagery.

From the initial classification, potentially 29.2% of the total land area was classified as Bare Soil and Grass & Herbaceous, or locations that could potentially support a new tree. Upon further examination and application of tree planting criteria (Appendix H) to the potentially plantable locations, 17.4% of the citywide land area was determined suitable for a new tree.



When looking at plantable space by the City’s study areas and census blocks, the potential ranged widely. Study area planting space availability ranged from 4.3% up to 27.9%, and census blocks similarly ran from 8.5% to 44.4%. Detailed planting availability maps are located in Appendix E. Combining current canopy cover with potentially plantable space, estimates ranged from 22.4% to 76.4%. Based on potential canopy (current canopy + plantable space), all study areas exceed the 30% threshold, and only one census block falls below. For that block to reach 30% canopy cover, design alternatives to incorporate trees, such as bump-outs, streetscape redesign, and pavement removal, will need to be explored.

The assessment of planting area was further broken down by potential new tree size and geography. Of the identified tree planting locations, 63% were able to support Large stature trees. Future Small and Medium sized trees comprised only 17% of sites combined, while gaps in existing forested areas accounted for 20% of available planting space. This distribution conveys that Titusville not only has the potential to increase canopy citywide, but can do so with larger trees that will provide the most long-term community benefits.

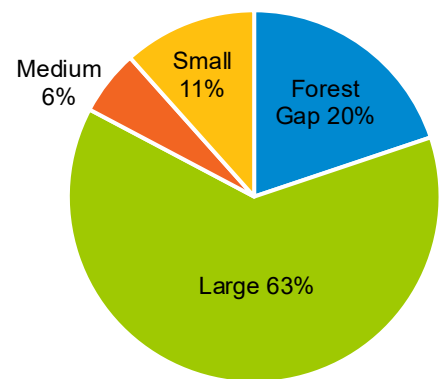


Figure. Potential tree size based on canopy assessment in Titusville.

3.8

Ecosystem Benefits

The City of Titusville’s current tree canopy coverage was used to calculate the value its trees provide in terms of carbon sequestration and storage, water runoff, and air quality improvement. To measure the environmental benefits of Titusville’s tree canopy, i-Tree Canopy (canopy.itreetools.org) values were used. Carbon storage value and annual values of avoided water runoff, carbon sequestration, and air pollutant removal were estimated based on the City’s 2023 tree canopy cover of 44.0%. The current tree canopy in the City has over \$5 million in annual benefits (Table X). Additionally, the estimated carbon storage of the trees has a value of over \$122 million (existing, not annual). Annual carbon sequestration was the largest contributor to the annual benefit estimate, totaling almost \$4.9 million. Avoided water runoff contributed approximately \$0.26 million annually, while air pollutant removal (carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter 2.5 and 10) was valued at almost \$0.86 million per year.

Table . Ecosystem benefits of tree canopy within the City of Titusville.

Annual Removal or Runoff Rates	Amount ¹	Value (\$)
Carbon Monoxide	3.9	5,601
Nitrogen Dioxide	15.6	2,446
Ozone	187.3	109,302
Sulfur Dioxide	33.6	365
Particulate Matter 2.5	9.8	230,106
Particulate Matter 10	75.1	507,960
Water Runoff	29.2	260,808
Carbon Sequestration	11.3	4,870,818
Annual Total		\$5,987,405
Carbon Stored (not annual)	282.7	122,324,511

¹ Units in tons except runoff in millions of gallons and carbon in kilotons

While i-Tree is a standard tool to relate economic values of ecosystem services provided by tree canopy, it does not capture less tangible but equally important social and human benefits, such as:

- Aesthetic Values: the visual appeal of trees can increase property values (University of Florida IFAS, 2016)
- Social Cohesion: tree-lined streets and quality green spaces encourage social interaction, leading to bonding and a greater sense of community (Jennings & Bamkole, 2019)
- Human Mental Health and Wellbeing: tree canopy can lower anxiety and depression (Dhal et al., 2025) and decrease crime (Lin, Wang, & Huang, 2021).
- Increased Recreation: canopy helps increase outdoor activity (Locosselli & Buckeridge, 2023)
- Livability: trees enhance beauty, livability, and how people experience places (UF/IFAS)
- Education & Stewardship: urban forestry education and Tree Steward programs build community capacity (UF/IFAS)

It is important to keep the full suite of benefits trees provide, both measurable and intangible, in mind when examining urban forest contributions. These benefits as described above depend on the programs, partnerships, and policies examined in the sections that follow.

3.9

Existing Tree Resources & Programs

Titusville already has several solid components of an urban forest program in place, and outlined below is a high-level overview of the existing relationships, funding mechanisms, and programs that comprise its foundation. Operational resources related to staffing capacity, maintenance programs, and budgets

relative to comparable communities are addressed in Chapter 4 Section 5, Urban Forestry Benchmarking.

Tree City USA



Titusville has maintained its Tree City designation from the Arbor Day Foundation for over 25 consecutive years. The program recognizes cities meeting core standards: a tree board or department, a tree ordinance, a forestry budget of \$2+ per capita, and an annual Arbor Day observance. Tree City status allows increased access to the Florida Forest Service’s technical assistance, the Arbor Day Foundation’s resources, and offers a competitive advantage in grant applications. Further, the Tree City status can foster public pride in community trees and the benefits they provide.

Community Partners

Besides the Titusville Environmental Commission, several other groups were identified that either have existing roles or the capacity to partner with the City in urban forest undertakings. Specifically, the Tree Team is an active volunteer group that has organized and conducted native tree plantings in the City without a formal City program structure or funding. Their work demonstrates a sustained commitment to the urban forest and offers a partnership opportunity that supports the UFMP’s stewardship goals. Various other community groups, such as garden clubs, Friends of the Enchanted Forest, and the Native Plant Society, represent a potential support base for the City as it looks to expand its urban forestry program.

Public Landscape Trust Fund

Established by Resolution 30-2001, the LTF receives mitigation fee payments when permitted tree removal cannot be offset by replanting new trees onsite. The current fund balance is approximately \$700,000, with recent expenditures towards gateway landscape enhancements. Historically, the fund has been directed more toward general beautification than toward enhancing tree canopy. A more recent resolution reallocated a funds balance from the sunset Landscape Enhancement Program to the LTF as a required match for this UFMP. Updating the fee schedule, developed almost 25 years ago, and realigning the expenditure policy are addressed in Goals 2 and 4 in Chapter 6, as well as Policy Recommendations in Chapter 7 Section 3. This funding source represents one of Titusville’s best available assets for developing its urban forestry program.

Tree Ordinance

Titusville’s tree protection framework is established by Ordinance 20-2021, adopted in 2021, which serves as the foundation for the City’s current tree protection and canopy enhancement program. While this ordinance represents a significant update of prior regulations, additional updates related to native landscaping, multi-family canopy, and critical root zones were advancing through the City’s review process at the time this plan was developed. The strengths and gaps of the existing ordinance are further evaluated in Section 4.3.

State & Federal Support Programs

Titusville has access to Florida’s strong urban forestry support network, including the FDACS Urban and Community Forestry Grant program (funding this UFMP), Florida Forest Service technical assistance, the Florida Urban Forestry Council, and the University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS) Urban Forestry Extension Council. On the national level, the USDA Forest Service’s urban forestry program provides additional federal grant opportunities.

3.10

SWOT Analysis Summary

To evaluate Titusville’s urban forestry program, a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted as part of the UFMP planning process. A SWOT is designed to discover what the City is doing well, where there are program gaps, and what external forces are shaping the local urban forest. Input was gathered from City staff through a facilitated in-person meeting, and an online survey was conducted for the Titusville Environmental Commission (TEC) and the Tree Team. The full SWOT tables are located in Appendix F.

25+
consecutive years
as Tree City USA

17%
of city land area
available for planting

25 years
since mitigation fees
were updated

240
trees planted by
volunteers without City
program

S Strengths

- ISA (International Society of Arboriculture) Arborists with Tree Risk Assessment Qualification on staff; collaborative team
- Established community organizations to partner with
- Strong foundation: Tree City USA, Public Landscape Trust Fund, Adopt a Street program, tree ordinances
- Higher tree canopy than other Florida communities, as well as other natural assets like the Indian River Lagoon

W Weaknesses

- No one person designated responsible for City trees; all tree maintenance is reactive
- No preventive maintenance or risk management program
- Opposition to hiring an urban forester, existing staff capacity limited
- Lack of enforcement mechanisms in the code
- Failure to implement prior tree and canopy studies

O Opportunities

- Willing volunteer base but underutilized
- Approximately 17% of the land area in Titusville is plantable
- Florida’s active urban forestry network, grant program, new County director
- Permit and mitigation fees overdue for update – unchanged in 25 years
- Trust Fund could fund programs for resident tree planting, maintenance, urban forester position, or proactive tree maintenance

T Threats

- Development pressure on the Space Coast; developers have removed hundreds of acres of trees
- State legislation restricting barriers to development has stalled ordinance updates
- Severe weather (e.g., hurricanes and floods) threatens tree health and can create a negative public perception of trees

Planning Considerations

Findings from the SWOT analysis point to four themes that run throughout the strategic plan:

- The absence of a staff member dedicated to public tree management is the primary constraint that the guiding principles and implementation address.
- The City’s existing funding mechanisms, such as the Trust Fund and fee schedules, are underperforming, and this is addressed in implementation and policy recommendations in Chapter 7.
- Existing community organizations have already shown that they are willing to help; for example, the Tree Team has already planted over 200 trees without a formal City support program. Building those partnerships is featured in the goals portion of this plan.
- Positioning trees as a community asset – not as competition with other City infrastructure – is a concept embedded throughout the plan.

Together, these themes connect the SWOT findings to the guiding principles, which are then translated into the goals, objectives, and actions that follow in Chapters 6 and 7.

3.11

Threats & Challenges

While internal weaknesses and external threats were discussed in Chapter 3 Section 10 as part of the SWOT analysis, this section focuses on those external change drivers that may influence Titusville’s urban forest regardless of programmatic decisions. Impacts such as state regulations (addressed in Chapter 4 Section 1), development, ecological stressors, climate trajectory, and infrastructure conflicts require a different planning approach than operational gaps, such as program staffing. Understanding these challenges, including how they link to internal weaknesses, informed the goals, objectives, and species guidance throughout this plan.

Climate & Heat

In 2023, the USDA’s Plant Hardiness Zone Map placed Titusville in Zone 10a, one zone warmer than in its previous 2012 zone map (USDA, 2023). This noted shift in minimum temperatures affects which species can reliably establish and grow healthily in Titusville. For species at the northern edge of their range, the potential for higher heat and drought can lead to longer periods of stress, weakening trees over time. Essentially, species planting choices in Titusville today will affect the next 50 or more years, with the species growing under conditions that might be significantly different from those now. Climate guidance is integrated into the species guide and is one of the factors limiting the requirement for all Brevard County native species in planting projects.

Storms & Hurricanes

Hurricanes are one of the most notorious threats to Titusville’s urban forest, with several hurricanes occurring in Florida over the last four years that caused widespread damage and demonstrated the ongoing risk (Florida Forest Service, 2026). Research analyzing 300 Florida cities found that peak wind gusts during hurricanes were a significant predictor of current canopy cover, a finding that documents the lasting effect that such storms can have on tree canopy coverage (Salisbury et al., 2022). Titusville’s coastal exposure increases its vulnerability to wind damage from storms, and the primary ways to increase its resilience are proactive risk management, a storm plan, and species diversity addressed in this UFMP’s goals.

Development

Growth in Titusville and generally in the Space Coast region is an ongoing risk to the existing tree canopy. During the UFMP and the Natural Resources Plan, community engagement consistently identified the clear-cutting of lots as a primary concern. Often during development, larger canopy species and contiguous areas of tree canopy are replaced by smaller-stature species, resulting in a decrease in canopy, even when accounting for future tree growth. In a study of 43 Florida municipalities, it was found that housing density had a significant negative relationship with tree canopy, whereas heritage tree protections led to higher canopy cover (Hilbert et al., 2019). Interviews with Florida developers found that punitive regulations alone were insufficient to reduce tree canopy loss during development (Willis et al., 2024). The developers wanted financial incentives to preserve and plant trees, but were willing to work with regulators to create solutions.

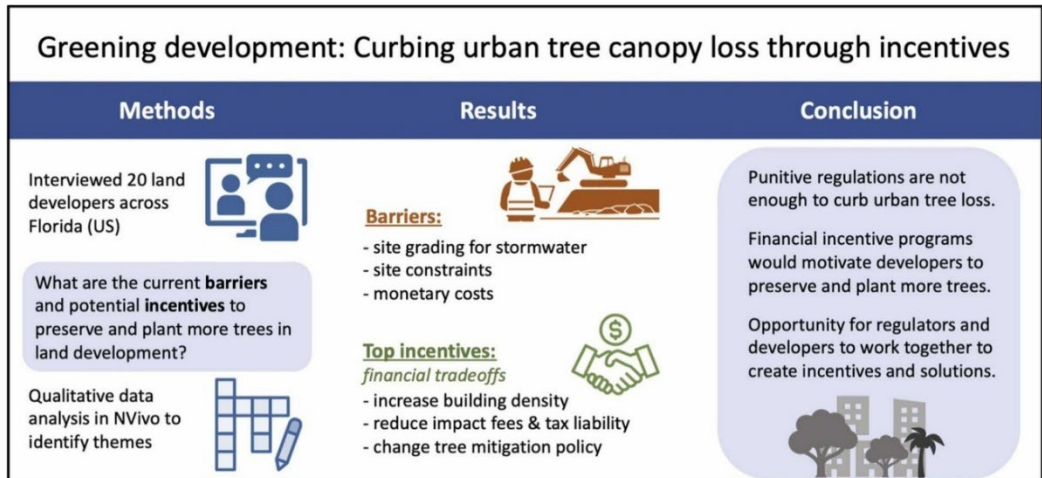


Figure. Reducing tree canopy loss during development. *Source: Hilbert et al., (2019).*

Infrastructure

Unfortunately, trees sometimes conflict with the built environment, competing for the same space as sidewalks and utilities. This creates management challenges that can lead to shorter lifespans and higher costs. While infrastructure conflicts are not unique to Titusville, they are exacerbated by the lack of an inventory and proactive maintenance plan. With those elements, conflicts can be addressed without waiting for major damage or an emergency. Choosing the right tree for the location, including accounting for existing underground and overhead utilities during site assessment, is the main way to limit and resolve these issues.



Pests & Disease

Urban forests are particularly vulnerable to pests and diseases because trees in cities face more stressful growing conditions and have lower diversity than those in natural forests. Notable threats to tree health include laurel wilt, ambrosia beetles, palm trunk rot, and other fungal diseases, all of which are exacerbated by Titusville’s subtropical climate, storm events, and other urban stressors, such as soil compaction. Without a tree maintenance and inspection plan, the City has no systematic way to discover the early signs of potential problems. Species diversity and native species planting objectives are a long-term way to reduce this vulnerability by increasing diversity and planting species well-suited to the region and climate.

4 CHAPTER FOUR **Regulatory, Policy, & Program Context**

4.1

State & Federal Framework

Florida municipal urban forestry programs operate within a complex framework of state statutes, agency programs, local ordinances, and voluntary standards. The Florida Forest Service (FFS), within the Department of Agriculture and Consumer Services (FDACS), administers the state's Urban and Community Forestry program. This program provides technical assistance, resources, and grant funding, including the grant that has funded this Plan, to support local urban forestry. FFS also oversees Florida communities' participation in Tree City USA through the Arbor Day Foundation.

Florida law establishes several preemptions on local tree management authority that affect what Titusville can and cannot require. Florida Statute 163.045 prohibits local governments from requiring permits, fees, or mitigation for tree pruning or removal on single-family residential property when a certified arborist or other qualified professional determines and documents that the tree poses an unacceptable risk. Further, Florida Statute 163.3209 prevents local authority over utility vegetation management along power line corridors. These constraints are accounted for in Titusville's existing code and limit the UFMP's regulatory recommendations, guiding plan strategies toward incentives, education, and voluntary programs rather than permit requirements.

Recent legislation may also influence future City ordinance updates. In particular, Senate Bill 180 (2025) prohibits local governments from adopting land development regulations more restrictive than those in place prior to August 2024. Senate Bill 840 (2026) recently narrowed and shortened those post-disaster restrictions, potentially reducing long-term conflicts with future ordinance updates. However, any ordinance modifications or updates should be thoroughly reviewed by the City's attorney for compliance.

Additionally, House Bill 1217/State Bill 1628 (2026) prohibits governmental entities from adopting or funding net-zero policies, also warranting monitoring. While its direct applicability to urban forestry ordinances is limited, it may be relevant to how the City frames tree-related climate and carbon benefits. It is worth noting that these bills are relatively recent, and as such, regulatory language is subject to change. Before acting on any code changes, the City's attorney should review their applicability.

Together, these statutes and programs define the regulatory environment within which this plan operates. They affirm the City's authority to manage public trees and regulate development-related tree removal and replacement, while drawing the boundaries within which new and updated policies must be developed.

4.2

Related City Plans Alignment

The UFMP is designed to support and build upon existing planning efforts within the City. Where alignment is noted as strong, the UFMP provides detailed pathways through implementation and/or monitoring. Where gaps or opportunities are noted, the plan includes specific recommendations to achieve consistency across plans. This may include using UFMP goals and actions to advance existing plans' goals or identifying areas where plan updates would benefit from more obvious urban forestry integration.

The regulatory tools used to implement plan policies (tree protection ordinances, landscaping requirements, the Public Landscape Trust Fund) are addressed in Chapter 4 Section 3. The plans reviewed below help frame the strategic plan portion of the UFMP.

Table. Titusville plans alignment with the UFMP.

PLAN	KEY TREE/URBAN FOREST DETAILS	UFMP ALIGNMENT
<p><i>Sustainability Action Plan 2023</i></p>	<p>Goal 2: Protect natural resources and develop an ecologically resilient community.</p> <p>Action 2.1.2 calls for development of an Urban Forestry Management Plan to manage tree infrastructure and canopy.</p> <p>Action 2.2.4 identifies stormwater infrastructure for green infrastructure opportunities. Resilient Titusville goals and IRL water quality objectives throughout.</p>	<p>Strong</p> <p>The UFMP is the direct implementation of Sustainability Action Plan Action 2.1.2. UFMP goals addressing canopy expansion, stormwater benefits, and green infrastructure advance the Sustainability Action Plan's ecosystem and resiliency focus area.</p>
<p><i>Comprehensive Plan – Conservation Element 2018</i></p>	<p>Objective 1.2: the City shall preserve and protect trees and native vegetation.</p> <p>Policy 1.2.1: assure maintenance and conservation of trees and native vegetation through City property maintenance and the site plan review process for new development.</p> <p>Policy 1.2.3: no total removal of vegetation during development. New development plans shall emphasize maintenance of native vegetation, rather than clearing and replanting</p> <p>Policy 1.12.3: promote conservation of natural vegetation in floodplain areas for stormwater storage.</p>	<p>Strong</p> <p>UFMP canopy and green infrastructure goals advance Conservation Element natural resources policies. Objective 1.2 and Policy 1.2.1 provide the policy basis for tree conservation; the UFMP acts on those provisions through canopy goals, planting standards, and monitoring indicators. Policy 1.2.3 related to community concern over clear cutting and Goal 4 reduce tree loss from development. Policy 1.12.3 (natural vegetation for stormwater storage) has not been fully implemented through code; Chapter 4 Section 3 addresses this gap.</p>
<p><i>Community Redevelopment Plan 2022</i></p>	<p>Objective 5.2.1.6: evaluate opportunities to provide street trees and canopy cover along CRA sidewalks and trails to encourage non-automobile travel.</p> <p>Objective 6.4.3: preserve and protect trees and native vegetation, including through land development regulations and a tree planting program (Policies 6.4.3.1-6.4.3.3).</p> <p>Goal 6.4: prioritize environmental resiliency-LID standards, native/Florida-friendly plants, stormwater management (Policies 6.4.1.2-6.4.1.6).</p> <p>Goal 6.1: promote sense of place, safety, walkability through streetscape improvements.</p>	<p>Strong</p> <p>CRA policies on street tree canopy, tree preservation incentives, and LID align with UFMP goals. CRA boundary represents a priority implementation area where UFMP planting and canopy goals can advance with redevelopment investment. UFMP provides species guidance, planting standards, canopy targets called for in the CRA plan.</p>
<p><i>Multimodal Master Plan 2019</i></p>	<p>Goals include improving landscaping on trails and along roads. Public survey respondents ranked "more shade on walking and bicycling routes" and "landscaped buffers between sidewalk and curb" among top desired improvements. CRA funding for sidewalk infill noted; tree boxes referenced in stormwater</p>	<p>Complementary</p> <p>UFMP street tree and right-of-way planting goals directly support Multimodal Plan walkability and shade. UFMP canopy priority areas and the recommended</p>

	infrastructure context. No tree planting standards or canopy targets included.	corridors should be coordinated to maximize benefits. Gap: the Multimodal Plan lacks tree integration standards for planned corridor improvements; the UFMP recommends this coordination in Objective 5.4.
<i>Stormwater Utility Program</i> <i>Ongoing</i>	Stormwater Utility maintains tree boxes as part of the City's stormwater infrastructure. \$20+ million received for IRL stormwater projects. Program focus on reducing nitrogen and phosphorus to IRL and St. Johns River. Program operates through capital project delivery.	Complementary Tree box infrastructure shows City investment in tree-stormwater integration. UFMP stormwater-related goals and code recommendation to strengthen tree-LID integration support stormwater utility program outcomes. Opportunity exists to formalize ties between UFMP implementation and stormwater capital project planning.
<i>Neighborhood & Corridor Plans</i> <i>Various</i>	U.S. 1 Corridor Plan: strategies for development along U.S. 1 and IRL shoreline; corridor landscaping in Trust Fund grant history. Waterfront Plan: park improvements, waterfront trail, shoreline health along IRL. Indian River City and South Street Plans: land use and character guidance; limited tree mentions.	Complementary Spatially coordinate UFMP canopy growth and priority planting areas with corridor and neighborhood boundaries, particularly U.S. 1 and the waterfront. Tree planting there supports the UFMP vision and placemaking goals of these plans. Urban forest integration is not in most neighborhood/corridor plans; the UFMP can provide this going forward.
<i>Natural Resources Plan</i> <i>2025</i>	Tree canopy and preservation were a priority topic through public engagement. Recommendations include strengthening the tree protection ordinance to ANSI/ISA standards, directing LTF to tree planting, requiring canopy for multi-family development, increasing mitigation fees, and calling for development and funding of an urban forest plan.	Strong This UFMP fulfills the plan's recommendation to establish and fund an urban forest plan. UFMP ordinance and policy recommendations further strengthen tree protection. The LTF recommendations align with both plans and address community concerns about fund misalignment.

Summary

Overall, Titusville's existing plans align well with the UFMP, particularly related to stormwater management, green infrastructure, walkability, and environmental resilience. The strongest alignment is with the Sustainability Action Plan, which directly called for this UFMP, and the CRA Redevelopment Plan, which specifically calls for tree preservation and planting. The 2025 Natural Resource plan echoes these earlier plans, with its related public engagement highlighting similar priorities identified during the UFMP engagement. Specifically, tree preservation, LTF reallocations, stronger enforcement, and native species all emerged as ongoing community values rather than one-time responses. The Natural Resources Plan also calls for the development of an urban forest plan, which this document fulfills.

The primary gap found across plans is not conflict but incompleteness. While several plans call for tree planting, canopy enhancement, or green infrastructure, they do not provide operational or monitoring guidance for implementation. The UFMP is designed to fill that gap across all plans without conflict. One area of partial difference should be noted: the Natural Resource Plan recommends all native landscaping in new development, whereas the UFMP takes a more balanced approach, recognizing state regulatory constraints and the effects of a changing climate on species suitability.

Where regulatory gaps exist, they are addressed through policy recommendations in Chapter 7 Section 3.

4.3

Policy & Ordinance Review Findings

Titusville's tree protection, landscaping, and development regulations were reviewed across four code sections: Section 2 (Technical Design Standards: Environmental Protection), Section 5 (Technical Design Standards: Landscaping), Division 10 (Land Development Regulations: Landscaping), and Sections 30-31 through 30-40 (Land Development Regulations: Tree Protection) to assess how well current requirements support the urban forest canopy goals established through community engagement.

Strengths

Titusville has established a meaningful foundation for tree protection, including comprehensive tree survey requirements, a protected tree designation system (significant, specimen, and heritage trees), and canopy area preservation requirements for residential subdivisions. Section 5 provides an extensive plant list with an emphasis on Florida-friendly and native species. Section 2 includes construction protection standards with specific setback requirements from tree trunks. Together, these provisions reflect a municipal commitment to the urban forest that the UFMP can build upon.

Gaps

Several gaps limit the effectiveness of existing protections. Enforcement mechanisms for construction-phase tree protection are not clearly defined, lacking penalties for non-compliance and arborist monitoring requirements during construction. Replacement and mitigation standards lack soil volume minimums, which are critical for long-term tree health and for trees reaching the mature canopy size needed to deliver the stormwater and shade benefits residents prioritize. Species diversity requirements are not established, creating a risk of monocultures and vulnerability to pests and disease. Any such thresholds will need to be scalable, as discussed in Chapter 7 Section 3. Stormwater and tree integration provisions exist but are underutilized relative to the community's top-ranked priority. Commercial and industrial development is not required to meet canopy area standards, meaning a significant portion of new development avoids canopy requirements entirely.

A critical and related gap identified by City staff during the UFMP planning process is the adequacy of the fee-in-lieu of replanting rate. The current mitigation ranges from \$75 to \$100 per net DBH inch of trees to be planted (Resolution 30-2001), and it has not been updated in 25 years. When the cost of paying the fee is lower than the cost of replanting, the program may create an incentive to pay rather than replant. This undermines the system's intent – to retain and grow the City's tree canopy. Updating the fee to match current tree planting rates, potentially including maintenance costs, and codifying a mechanism to keep the rate current, are priority recommendations.

Stakeholder input also identified another notable gap, which is the absence of a public tree care ordinance governing the management of City-owned trees. There are no formal standards for planting, maintenance, pruning, or removal of trees in public rights-of-way and on City property. This creates inconsistency in how public trees are managed, limits transparency and accountability, and represents a significant vulnerability for the long-term health of the public urban forest.

Code Organization

Tree and landscape requirements are currently distributed across four separate code sections, requiring City staff, developers, and landscape professionals to cross-reference multiple documents to understand the full requirements. For example, a tree planting project currently requires consulting Sections 5 for species selection, 30-322 for size standards, 30-372 for planting standards, and 30-31 for root zone requirements. This fragmentation increases the risk of missed requirements, inconsistent application, and conflicting updates over time.

Priority Recommendations Summary

The full code review analysis, gap assessment, and detailed recommendations are provided in Chapter 7 Section 3. Priority recommendations are summarized below:

Table. Titusville plans alignment with the UFMP.

PRIORITY	TOPIC	RECOMMENDED ACTION
HIGH	Construction Protection Enforcement	Add penalties; require arborist monitoring; establish pre-construction documentation
HIGH	Replacement Tree Soil Volume	Establish minimums by tree size class
HIGH	Mitigation Fee-In-Lieu Rate	Update \$75-\$100/DBH inch to reflect current new tree costs
HIGH	Planting Standards	Shift from large caliper new trees to soil conditions that support healthy growth
MEDIUM	Commercial/Industrial Canopy	Evaluate transition from optional to required canopy standards
MEDIUM	Species Diversity	Cap single species at 10%, genus at 20%, and family at 30% of required plantings; thresholds require scaled/alternatives for smaller projects
MEDIUM	Native Species	Evaluate phased approach to native landscaping requirements in new development, starting with incentives
MEDIUM	Stormwater/Tree Integration	Create canopy credit incentives for bioretention tree systems; develop flood-tolerant species list
MEDIUM	Public Tree Management	Develop standards for City-owned right-of-way trees; establish public tree care ordinance
LOW	Code Consolidation	Consolidate related provisions to reduce cross-referencing

Implementation timelines range from administrative updates achievable within 0–6 months through Technical Design Standards revisions to longer-term ordinance changes requiring Council review.

Alignment with Community Priorities

These code gaps and recommendations tie directly to what residents identified as their top priorities. Stormwater management, the community's top-ranked benefit, is limited by the lack of soil volume requirements and underutilized tree and stormwater integration provisions. Shade, ranked second, depends on trees reaching mature size, which soil volume standards make possible. Wildlife and pollinator support, ranked third, requires the species diversity that the current code does not mandate. Native species also support wildlife and pollinators, but the absence of requirements for native species is a current gap. Native species were also mentioned in UFMP stakeholder engagement and the Natural Resources Plan. Strengthening these provisions translates community values into the regulatory framework that shapes development decisions in Titusville.

4.4

Public Landscape Trust Fund

Titusville established the Public Landscape Trust Fund (Resolution 30-2001) to receive payment-in-lieu mitigation fees when on-site tree replacement is not feasible following permitted tree removal. Under the current fee schedule, mitigation payments are \$75-\$100 per DBH inch and are deposited into the fund designated for beautification of publicly owned or maintained properties.

The fund history of use includes \$100,000 allocated to establish a Landscape Enhancement Grant program targeting curb appeal improvements along the U.S. 1 corridor (Resolution 32-2010). That program sunset in 2011 with a remaining balance of \$65,050. In April 2025, Resolution 9-2025 reallocated the remaining program funds back into the Trust Fund and toward this UFMP's required match for the FDACS Urban and Community Forestry Grant. The LTF's current balance is approximately \$700,000.

Community feedback gathered through the UFMP engagement process identified a concern that Trust Fund revenues have been directed too heavily toward general corridor beautification rather than tree planting and canopy replacement. Given that mitigation payments originate from permitted tree removal on private property, residents and stakeholders noted a disconnect when funds do not return to canopy replacement. This concern is consistent with the community's strong support for tree preservation and replacement identified in the community survey. It reflects a broader expectation that mitigation fees translate into measurable canopy outcomes.

The UFMP includes specific recommendations to update the fee-in-lieu rate, realign Trust Fund priorities, and potentially expand Trust Fund uses to better align with community canopy goals and the plan's implementation needs. Those recommendations are addressed in Chapter 7 Section 3 (Policy & Ordinance Recommendations).

4.5

Urban Forestry Program Benchmarking

As part of the State of the Urban Forest, an assessment of Titusville's urban forestry program against comparable municipalities was conducted using the Hauer and Peterson (2016) framework. This work is the foundational national municipal tree care activities study benchmarking communities by size, geography, and program. Metrics evaluated include budget per capita and per tree, staffing levels, ordinance strength and scope, maintenance costs, tree inventory status, and community engagement practices. Results establish where Titusville's program currently stands relative to similar cities and identify the gaps that the UFMP goals and implementation actions are designed to close.

The tree maintenance program is completely reactive, with the Public Works Department handling public tree care on an as-needed basis. Although there is no dedicated urban forester position, ISA-certified arborists on staff have in-depth knowledge of Titusville's urban forest. This staffing gap, between what is needed to manage an urban forest program and what Titusville currently has, is the primary constraint addressed in Goal 1 of Chapter 6.

4.6

Policy Practices of Florida Cities

Titusville’s challenges are similar to those experienced by other Florida municipalities, including a lack of an urban forestry coordinator, reactive maintenance, and underutilized funding mechanisms. A review of peer cities provides important insights into how these challenges can be addressed and what Titusville can accomplish through this plan. This section of the plan first summarizes recent research on what works related to Florida urban forestry. It then examines three Florida cities with documented program statuses to complement the general findings.

Florida Urban Forestry Context

Several studies on municipal urban forestry in Florida support Titusville’s policy decisions and plan recommendations. Research identified heritage tree protections as one of the most important tools for maintaining citywide tree canopy, as cities with this type of ordinance had 6.7% higher tree canopy than those without. The same study found that over three-quarters of the surveyed Florida communities had an arborist on staff, with over two-thirds having a government-organized tree board (Hilbert et al., 2019). These are all conditions that Titusville currently meets, yet consistent implementation and enforcement were underlying factors.

A broader study of 300 Florida communities found that although heritage and tree protection ordinances did influence canopy outcomes, they were heavily dependent on consistent enforcement rather than just language alone (Salisbury et al., 2022). Financial mechanisms also play a crucial role in the effectiveness of ordinances. When mitigation fees are set below the true cost of replacement replanting, they can unintentionally incentivize canopy loss. Interviews with Florida developers confirmed that mitigation policies were among the most cited decision factors, with developers indicating a higher likelihood of preserving trees when mitigation costs and incentives were more realistically aligned with current conditions (Willis et al., 2024). Titusville’s mitigation fees of \$75-100 per inch of tree diameter, unchanged for almost 25 years, are understood to be below current planting and establishment costs and are identified as a needed update in this plan.

Interviews with Florida developers further found that punishment-based regulatory approaches alone were insufficient to prevent canopy loss in development-heavy regions. Instead, developers identified financial incentives (density bonuses, reduced impact fees, and restructured mitigation policies) as the most effective tools for tree preservation (Willis et al., 2024). These findings support the UFMP’s approach to native landscaping requirements and inform the plan’s caution about requiring species diversity percentages uniformly.

Florida Cities

One of Florida’s most established urban forestry programs is through the City of Gainesville, representing what a well-resourced and supported program can achieve:

- Dedicated Urban Forestry Division within Public Works
- Mission to maintain diversity, mitigate canopy loss, lessen hazards, and conserve heritage trees
- Adopted Urban Forest Management Plan
- Canopy cover goal of no less than 35%
- Tree Sponsor Program
- Heritage tree mitigation codified
- Public tree inventory (update currently underway)

Naples’s urban forest plan includes a work plan for the upcoming year and an annual overview of tree care activities, similar to the reporting methods discussed later in Titusville’s UFMP. Their urban forest program includes:

- Dedicated tree board and ordinance
- Public tree inventory
- Tree Fill-In Program to replace removed public trees along neighborhood streets
- Tree City USA for 27 consecutive years
- Approximately 30% canopy citywide
- Manages 20,000 public trees
- Recent update to urban forest plan, rebranded as Naples Urban Forest Green Print

The City of Tampa’s urban forestry program lies within the planning department, with a senior forester and an urban forest plan informed by canopy analyses.

- Estimated tree canopy was approximately 32% citywide (2016 data)
- Public tree inventory
- Canopy tracked by planning district and neighborhood, with neighborhood canopy cover from 4% to 73%
- Documented City responsibility to maintain trees in the public rights-of-way and alleyways
- Comprehensive tree protection ordinance for public and private property, including special protection for large or high-value trees
- Trees for Tampa tree planting program

Planning Considerations

When combined, the generalized Florida communities research and these three specific cities point to a baseline set of conditions that set a city up for success – a dedicated urban forestry staff, an adopted plan with set goals, a public tree inventory, tree codes with enforcement mechanisms, and community-based tree planting programs. While Titusville has several of these elements in place or in progress, such as a canopy assessment, an urban forest plan, a tree ordinance, and Tree City USA status, this UFMP is designed to address the gaps. Staffing, a public tree inventory, fee updates, the LTF spending policy, and resident programs are areas that differentiate Titusville from cities with more established and successful programs.

5 CHAPTER FIVE Vision & Guiding Principles

5.1

Vision Statement

The vision statement below was selected by public vote following the November 2025 workshop and was adopted as the guiding light for every goal, objective, and action in the UFMP.

"To enhance and preserve a healthy urban forest through conservation and strategic tree plantings that maximize environmental benefits, improve water quality, reduce heat, and enrich the quality of life for the greater Titusville community."

The vision centers on five interconnected priorities that define what Titusville's urban forest should achieve and how it should serve the community:

- **Enhance and preserve:** growing the forest and protecting what exists
- **Tree health:** a healthy urban forest, not just more trees
- **Environmental benefits:** a main measure of value
- **Quality of life:** trees are a community asset, not just an environmental one
- **Community:** the Titusville community as both the primary benefit recipient and a partner in caring for the urban forest

5.2

Guiding Principles

Guiding principles define the legal limits and constraints of city management for Titusville's urban forest. These principles were developed through analysis of community engagement results, existing City policies, the Florida Urban Forest Management planning framework (Northrup et al., 2022), and findings from the SWOT analysis conducted with City staff and community stakeholders. During the planning process, they were refined through meetings with City staff and reviewed and adapted as needed.

1. Effective urban forest management depends on clear roles, resources, and commitment to implementation.

The SWOT analysis identified a foundational gap, where no single person is tasked with overseeing public trees, leading to no planting program and 100% reactive maintenance. Prior investments in planning led to recommendations that were not implemented. Effective urban forestry requires clear ownership and the commitment to act on plans and recommendations once made.

2. Tree health and quality must guide planting and maintenance decisions.

A community survey showed that ~24% of respondents believed public trees were inadequately maintained, and feedback frequently emphasized the desire for more trees 'done right'. The SWOT also identified that a lack of planning for new tree plantings leads to maintenance challenges and lower survival rates. Best practices in planning, species selection, and maintenance (including the right tree, right place principle) are critical to achieving the vision's goal of healthy trees and strategic planting.

3. Environmental function is the primary measure of urban forest value.

This reflects the community's top-ranked priorities from survey data: stormwater/runoff, shade, and wildlife/pollinator support. It aligns with the vision statement's emphasis on environmental benefits, water quality, and reduced heat as primary outcomes. Recent extreme weather (flooding, freezing, and drought) has reinforced this, with awareness of trees' roles in climate resilience. This project supports Resilient Titusville goals and Lagoon water quality improvement initiatives.

4. The urban forest both serves and depends on the entire Titusville community.

Urban trees provide benefits to all residents, yet over 50% of survey respondents reported living in lower-canopy neighborhoods, and about half reported they could not walk to a park within 5 minutes, highlighting gaps in who currently benefits. Since most trees in Titusville, like across the country, are on private property, the City cannot grow or preserve the urban forest alone. The SWOT confirmed this – volunteers have planted trees in the absence of a defined City program, while developers continue to contribute to tree loss. Achieving the vision requires shared commitment from residents, developers, community organizations, and the City, each with a role to play.

5. Tree canopy – existing and future – must be integrated into City planning and maintenance.

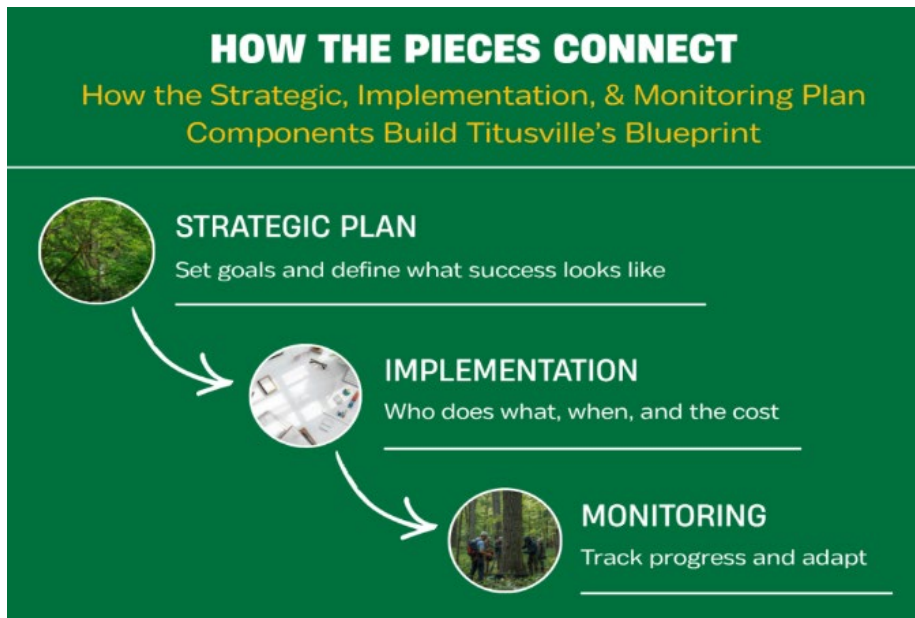
Trees are often treated as separate from or even in competition with roads, utilities, and development. Over 25% of survey respondents cited tree removal from development as a top concern, and the SWOT confirmed this is ongoing. Reframing trees as part of the solution, helping to manage stormwater, reduce heat, and support infrastructure lifespans, requires integration into City planning. This entails working within existing tools, such as the Trust Fund, updated fee schedules, and heritage tree protections, given state regulatory constraints.

Purpose & Application

These guiding principles provide the foundational framework for what the City of Titusville can and cannot do in managing its urban forest. They establish the big-picture constraints and priorities that guide goals, objectives, and management actions in the UFMP. Each goal and action developed in the plan must align with and operate within these principles while directly reflecting the vision. By clearly stating these principles up front, the UFMP can remain realistic, compliant, and responsive to community values and City capabilities.

6 CHAPTER SIX
Strategic Plan

As part of the UFMP, the strategic plan establishes six goals with supporting objectives and performance indicators. Goals are broad, more general outcomes that the City is working towards, while objectives are the specific steps that achieve the goals. Performance indicators are how the City and, in turn, the community, will monitor progress towards those goals. The goals and objectives were developed based on the vision statement, grounded in the guiding principles, and supported by community feedback. The strategic plan works in tandem with the implementation and monitoring plans to form the basis of Titusville’s management framework.



6.1
Goal Foundations

The table below shows the connection between the vision statement, guiding principles, and community feedback to the goal. The complete objectives and performance indicators, along with summary key actions, are presented in the table in Chapter 6 Section 3.

Titusville’s Urban Forest Vision

"To enhance and preserve a healthy urban forest through conservation and strategic tree plantings that maximize environmental benefits, improve water quality, reduce heat, and enrich the quality of life for the greater Titusville community."

Table. Connections between the goals, vision, and guiding principals grounded in a community basis.

GOAL	VISION	GUIDING PRINCIPLES	COMMUNITY BASIS
GOAL 1 Establish the Program Foundation	<i>Enhance and preserve a healthy urban forest</i>	Efficient, quality-driven management; align with adopted City plans and policies	SWOT: no designated ownership of public trees; public tree maintenance is reactive; lack of needed resources for public tree care.
GOAL 2 Build a Sustainable Urban Forestry Program	<i>Enhance and preserve a healthy urban forest</i>	Efficient, quality-driven management; align with adopted City plans and policies	SWOT: no proactive maintenance program; LTF underutilized; funding not committed until UFMP complete.
GOAL 3 Expand & Enhance the Tree Canopy	<i>Strategic tree plantings that maximize environmental benefits</i>	Maximize environmental benefits and resilience; enhance community well-being and equity	Survey: 44.7% report canopy has decreased. FlashVote: 75% want more public trees; parks and downtown tied as top planting priorities.
GOAL 4 Protect & Preserve Existing Trees	<i>Conservation</i>	Maximize environmental benefits and resilience; align with adopted City plans and policies	SWOT: developers removing trees; code allows residential tree removal; fees outdated; LTF not well-used for trees.
GOAL 5 Manage The Urban Forest for Environmental Health & Benefits	<i>Maximize environmental benefits; improve water quality; reduce heat</i>	Maximize environmental benefits and resilience; ensure infrastructure compatibility and integration	Survey: stormwater/runoff ranked #1; shade #2; wildlife #3. FlashVote: heat reduction and air quality top ranked. SWOT: Oct 2025 flood raised Council awareness of trees' stormwater value.
GOAL 6 Cultivate Community Stewardship, Education, & Equitable Access	<i>Enrich quality of life for the greater Titusville community</i>	Enhance community well-being and equity; efficient, quality-driven management	Survey: 92% say trees are extremely or very important; 41% cannot identify how to report a public tree concern. SWOT: volunteer base untapped; community receptive at tabling events; large retired population willing to help.

6.2

The 3-30-300 Rule

Titusville's urban forest should benefit all residents – not just those living in treed neighborhoods or near parks. Introduced in Chapter 1, the 3-30-300 rule (Konijnendijk, 2022) provides a community framework for assessing if urban forest benefits are reaching all residents. This UFMP integrates it as an equity benchmark, with progress toward each threshold assessed every 5 years. The annual urban forestry report summarizes the status and is used to inform adaptive management decisions for goals and objectives.

These thresholds are not regulatory requirements, and meeting all three citywide is a long-term ambition rather than a near-term target. An important limiting factor applies to the third threshold: parks in Titusville are mostly managed by Brevard County, which may affect the City's authority over access to green space. The first two thresholds, tree visibility and neighborhood canopy cover, are within the City's influence and are the primary drivers of this plan's goals and objectives.

The cards below depict Titusville's current status, target, and data source for each benchmark. Progress towards each threshold is tracked in the 5-year monitoring table in Chapter 8 Section 2.

3 Trees Visible from Home

Every resident should be able to see at least 3 trees from their home.

Current Baseline	Survey: 93.5% of respondents reported seeing several trees or more (3+)
Long-Term Target	100% of residents meeting threshold across all neighborhoods
Data Source	Community survey

Note: Survey sample skewed toward older, single-family homeowners.

30% Neighborhood Tree Canopy Cover

Every neighborhood should have at least 30% tree canopy cover.

Current Baseline	Survey: 62.4% of respondents selected images representing 30%+ canopy; citywide canopy 44.0%; 39% of census blocks have 30%+ canopy
Long-Term Target	All census blocks meet the 30% canopy threshold
Data Source	Canopy assessment analyzed by census block

Note: Citywide average canopy (44.0%) exceeds the threshold overall.

300m Access to a Park or Green Space

Every resident should live within 300 meters (~5-minute walk) of a park or green space.

Current Baseline	Survey: 45.9% could walk to a park within 5 minutes
Long-Term Target	100% of population can walk to a park or green space in 5 minutes
Data Source	Community survey, GIS mapping

Note: Most parks are managed by Brevard County, limiting the City's ability to reach this threshold.

6.3

Objectives By Goal

GOAL 1

Establish the Program Foundation

Before the City can proactively manage or plan, it must establish a dedicated urban forest champion, a public tree inventory, and data systems to support and track. Most of this plan’s objectives cannot be realized or tracked without this urban forestry program infrastructure in place.

OBJECTIVES

- 1.1 Complete a full or sample GIS-based inventory of public trees and vacant planting locations within 2 years, capturing species, condition, size, and location (see Appendix I for inventory options comparison)
- 1.2 Designate a staff role responsible for coordinating public tree management, maintenance, interagency communication, and UFMP reporting within 6 months
- 1.3 Establish a GIS-based data management system for urban forestry within 2 years, integrating inventory records, planting logs, maintenance history, and resident requests/complaints
- 1.4 Establish a tree risk management program for public trees, including inspections of all trees every 5 years, annual inspection of trees classified as monitor, and mitigation of high and extreme risk trees within 30 days
- 1.5 Develop staffing plan to bring Titusville more in line with benchmark of 5.25 FTEs involved in managing municipal trees, with recommendations presented to the City Manager within a year

PERFORMANCE INDICATORS

- Inventory completed by 2028; number of trees and vacant planting sites recorded; trees assessed on a 5-year cycle
- Coordinator designated within 6 months; responsibilities and reporting structure documented
- GIS system operational by Year 2; data layers maintained annually
- Risk program established upon inventory completion; percent of trees on scheduled assessment cycle; high risk trees addressed within 30 days
- Staffing plan developed and brought to City Manager within 1 year

KEY ACTIONS

- Designate urban forestry coordination role within 6 months
- Procure and complete public tree inventory within 2 years
- Develop and present staffing plan to City Manager within 1 year

GOAL 2

Build a Sustainable Urban Forestry Program

With the program foundation solidified, the City will transition from reactive to proactive management, establish consistent maintenance standards, and develop the funding strategy needed to sustain urban forestry operations over the long term.

OBJECTIVES

- 2.1 Track the ratio of proactive vs. reactive tree maintenance annually, targeting 25% proactive by Year 2 and 75% by Year 5. Progress depends on inventory completion (Obj 1.1) and the scheduled maintenance cycle (Obj 2.2)
- 2.2 Develop a scheduled maintenance cycle for all inventoried public trees based on tree inventory findings and the 5-year tree inspection timeframe
- 2.3 Develop a Best Management Practices (BMP) guide for public tree planting, maintenance, pruning, and removal consistent with ISA and ANSI A300 standards within 3 years
- 2.4 Develop a long-term urban forest funding strategy within 2 years, including updated mitigation fees, LTF expenditure policy, and grant opportunities
- 2.5 Develop and adopt an urban forestry storm plan, covering response and recovery, within 3 years

PERFORMANCE INDICATORS

- Percent of tree work orders determined to be proactive vs. reactive; 25% proactive by Year 2 and 75% by Year 5
- Percent of scheduled maintenance complete on schedule
- Guide adopted and given to staff and City contractors in 3 years
- LTF revenue and expenses and grant application activities.
- Adopt storm plan by Year 3

KEY ACTIONS

- Develop scheduled maintenance cycle upon inventory completion
- Update LTF expenditure policy and mitigation fee schedule per Chapter 7 Section 3
- Develop and adopt urban forestry storm response and recovery plan

GOAL 3

Expand & Enhance the Tree Canopy

The City will strategically increase tree canopy on City-managed public land, prioritizing low-canopy and high-need areas identified in the TCA. Planting in County-managed parks and along State-managed roads requires coordination with those agencies.

OBJECTIVES

- 3.1 Achieve a net increase in citywide canopy from 44.0% to 50% (2010 canopy cover level) within 10 years with no net canopy loss in any census block
- 3.2 Increase number of trees planted on public property through City operations, volunteer and community group partnerships, and agreements with other agencies
- 3.3 Develop planting plans, including species, amounts, and locations, for City-managed areas within 3 years
- 3.4 Start coordination efforts with the County and FDOT within 2 years to explore planting opportunities in County-managed parks and along State-managed roads within Titusville

PERFORMANCE INDICATORS

- Measure canopy cover on a 5 year cycle; report increases and decreases by census blocks
- Number of trees planted tracked in GIS and by funding source
- Plans completed for priority areas within 3 years
- Documented coordination meetings/communications; formal agreements or MOUs recorded

KEY ACTIONS

- Establish Year 1 planting baseline and set annual planting targets by Year 2
- Develop neighborhood-level planting plans for highest-priority low-canopy areas
- Initiate coordination with Brevard County and FDOT on planting opportunities by Year 2

GOAL 4

Protect & Preserve Existing Trees

The City will strengthen protections for public trees, reduce tree loss from development and deferred maintenance, and ensure the Public Landscape Trust Fund (LTF) is used to offset canopy loss.

OBJECTIVES

- 4.1 No net loss of public trees on City-managed land, tracked annually.
- 4.2 Strengthen tree protections and align the LTF with canopy goals through policy and ordinance updates per Chapter 7 Section 3 recommendations

PERFORMANCE INDICATORS

- Annual count of public trees planted minus removed, reported separately for City projects and permitted development impacting public trees
- LTF policy adopted by Year 1; code updates initiated per Section 7.3 timeline; ordinance revisions submitted to Council by Year 2

KEY ACTIONS

- Establish public tree removal and replacement tracking protocol by Year 1
- Coordinate with Obj 2.4 LTF adoption to ensure tree protection priorities are reflected in eligible fund uses
- Pursue priority code updates per Chapter 7 Section 3 recommendations

Note: Where code updates are to advance preservation goals, those specific changes are addressed in the Code and Ordinance Recommendations section of this plan.

GOAL 5

Manage the Urban Forest for Environmental Health & Benefits

The City will manage the urban forest to deliver the environmental benefits that community members ranked as most important: stormwater management, heat reduction, air quality improvement, and wildlife habitat support. Native species will be emphasized to increase resilience.

OBJECTIVES

- 5.1 Increase the urban forest's stormwater interception, carbon, and air quality benefits relative to the 2025 TCA reported benefits
- 5.2 Increase species diversity in public tree plantings, where no single species exceeds 10%, genus 20%, or family 30% of the total City-managed public tree inventory
- 5.3 Plant 50% native species in all new public tree plantings starting next planting season, with 25% minimum wildlife value species (identified in UFMP species guide)
- 5.4 Increase tree canopy shade in high heat census blocks identified in the TCA, prioritizing streets and pedestrian corridors

PERFORMANCE INDICATORS

- Stormwater, carbon, and air quality benefits quantified through i-Tree or similar; reporting aligned with canopy assessment update frequency compared to 2025 baseline
- Diversity report when tree inventory is updated, with species over 10%, genus over 20%, and families over 30% reduced in City plantings
- Percent native and wildlife value in annual planting records
- Number of trees planted annually in high heat census blocks

KEY ACTIONS

- Conduct environmental benefits assessment at each 5-year TCA cycle using i-Tree Canopy or comparable tool
- Apply 50% native and 25% wildlife value species standards to all City-led plantings beginning next planting season
- Incorporate high heat census blocks as priority planting areas in annual planting program

GOAL 6

Cultivate Community Stewardship, Education, & Equitable Access

The City will work to have urban forest benefits distributed equitably across Titusville, increase public awareness of the urban forestry program, and activate the community's volunteer base as a key partner.

OBJECTIVES

- 6.1 Engage a minimum of 50 volunteers, partner organizations, or educational groups in urban forestry activities annually by Year 2, building on existing partnerships with the Titusville Tree Team, local garden clubs, and area schools
- 6.2 Launch a residential urban forestry assistance program within 3 years, with partial funding from the LTF, focused on priority equity areas. Distribute a minimum of 50 trees and include guidance on planting, species selection, and follow-up care
- 6.3 Ensure the majority of residents can access tree care and urban forestry resources and know how to report tree concerns to the City
- 6.4 Publish an annual staff-evaluated urban forestry progress report that assesses performance related to KPIs and make it publicly available within 2 months of fiscal year end

PERFORMANCE INDICATORS

- Number of volunteer events, volunteers, and hours donated annually
- Number of trees distributed and residents participating; percentage in priority areas
- Urban forestry website page and reporting mechanism live by Year 1; public awareness measured via online poll or FlashVote by Year 3
- Annual progress report published, presented to TEC and Council, and publicly available

KEY ACTIONS

- Launch urban forestry web page and public tree reporting mechanism by Year 1
- Develop and pilot residential tree assistance program in priority equity areas within 3 years
- Establish Adopt-a-Tree program for resident stewardship of City street trees by Year 2

7 CHAPTER SEVEN Implementation Plan

The implementation plan translates the goals and objectives established in Chapter 6 into specific actions, each with a responsible party, timeline, and priority level. Implementation leads reflect the current City department assignments; as urban forestry staffing capacity grows through Goal 1 objectives, responsibility will transition to the urban forestry coordinator and any hired or reassigned program staff. Actions are organized by goal and are designed to be consistent with the regulatory framework and plan alignments described in Chapter 4.

Some actions depend on enabling conditions, such as policy and ordinance updates, budget allocations, and staffing decisions, that must be resolved before implementation can proceed. Those enabling conditions are addressed in Chapter 7 Section 3. Funding considerations, including existing sources such as grants, the Public Landscape Trust Fund, and the City's general fund, are referenced by individual action when applicable.

7.1

Implementation By Goal

GOAL 1 Establish the Program Foundation

Objective 1.1 Complete a full or sample GIS-based inventory of public trees and vacant planting locations within 2 years, capturing species, condition, size, and location.

Action	Lead	Partners	Time	Priority
1.1.a Determine inventory scope and method (complete vs. sample approach)	Public Works Community Development	GIS	Yr 1	High
1.1.b Start inventory procurement if awarded (FL Urban & Community Forestry grant); identify supplemental funding sources to cover any gap	Public Works Community Development	Finance	Yr 1	High
1.1.c Develop inventory Request for Proposal specifications	Public Works Community Development	Finance GIS	Yr 1	High
1.1.d Conduct inventory and load into City GIS system	Public Works Consultant	GIS	Yr 1-2	High

Objective 1.2 Designate a staff role responsible for coordinating public tree management, maintenance, interagency communication, and UFMP reporting within 6 months.

Action	Lead	Partners	Time	Priority
1.2.a Review existing staff roles and identify options for designating urban forestry coordination responsibilities	City Manager Public Works	Community Development	Yr 1	High
1.2.b Develop written role description documenting urban forestry coordination responsibilities and reporting structure	City Manager HR	Public Works Community Development	Yr 1	High

1.2.c Present designation options with recommendation to City Manager	Public Works	Community Development	Yr 1	High
1.2.d Designate role and document in City organizational structure	City Manager	HR	Yr 1	High

Objective 1.3 Establish a GIS-based data management system for urban forestry within 2 years, integrating inventory records, planting logs, maintenance history, and resident requests/complaints.

Action	Lead	Partners	Time	Priority
1.3.a Assess existing GIS and identify options for urban forestry data management	GIS	Public Works	Yr 1	High
1.3.b Establish data layers and fields for inventory records, planting logs, maintenance history, and resident requests	GIS	Public Works	Yr 1-2	High
1.3.c Integrate citizen tree reporting mechanism into chosen GIS system	GIS	Community Development	Yr 2	Medium
1.3.d Train staff on GIS system use and establish data entry protocols	GIS	Public Works	Yr 2	High
1.3.e Review and update GIS system on 5-year cycle	GIS	Public Works	5-Year	Medium

Objective 1.4 Establish a tree risk management program for public trees, including inspections of all trees every 5 years, annual inspection of trees classified as monitor, and mitigation of high and extreme risk trees within 30 days.

Action	Lead	Partners	Time	Priority
1.4.a Research tree risk assessment methodology (ISA, USDA) and develop protocols	Public Works	Community Development	Yr 1	High
1.4.b Train relevant staff in chosen tree risk assessment protocols	Public Works	Community Development	Yr 1-2	High
1.4.c Develop mitigation response standards for high and extreme risk public trees	Public Works	Community Development	Yr 1-2	High
1.4.d Start risk inspection program upon inventory completion	Public Works	GIS	Yr 2-3	High
1.4.e Track and report inspection completion rates and mitigation actions annually	Public Works	GIS	Annual	Medium

Objective 1.5 Develop staffing plan to bring Titusville more in line with benchmark of 5.25 FTEs involved in managing municipal trees, with recommendations presented to the City Manager within a year.

Action	Lead	Partners	Time	Priority
1.5.b Develop staffing plan with options for reaching benchmark levels (new hires,	Public Works	HR Finance	Yr 1	High

reassignment, contractor support, technology solutions)

1.5.b Present staffing plan with recommendations to City Manager	Public Works	Community Development	Yr 1	High
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GOAL 2 Build a Sustainable Urban Forestry Program

Objective 2.1 Track the ratio of proactive vs. reactive tree maintenance annually, targeting 25% proactive by Year 2 and 75% by Year 5. Progress depends on inventory completion (Obj 1.1) and the scheduled maintenance cycle (Obj 2.2).

Action	Lead	Partners	Time	Priority
2.1.a Incorporate proactive vs. reactive categorization into work order system as GIS system is established (Obj 1.3)	Public Works	GIS	Yr 2	High
2.1.b Shift crew scheduling toward proactive maintenance as the scheduled maintenance cycle (Obj 2.2) starts, targeting 25% proactive by Yr 2 and 75% by Yr 5	Public Works		Yr 2-5	High
2.1.c Track proactive vs. reactive ratio annually through monitoring indicator	Public Works	GIS	Annual	Medium

Objective 2.2 Develop a scheduled maintenance cycle for all inventoried public trees based on tree inventory findings and the 5-year tree inspection timeframe.

Action	Lead	Partners	Time	Priority
2.2.a Upon inventory completion, develop maintenance schedule prioritized by condition and risk rating	Public Works	Consultant	Yr 2-3	High
2.2.b Identify staffing, contract capacity, and funding needed for maintenance schedule	Public Works	Finance	Yr 2-3	High
2.2.c Implement scheduled maintenance cycle and track completion rate annually	Public Works		Yr 3+	High
2.2.d Review and update maintenance schedule following each 5-year inventory cycle	Public Works	GIS	5-Year	Medium

Objective 2.3 Develop a Best Management Practices (BMP) guide for public tree planting, maintenance, pruning, and removal consistent with ISA and ANSI A300 standards within 3 years.

Action	Lead	Partners	Time	Priority
2.3.a Draft BMP guide covering planting, pruning, maintenance, and removal standards using available industry resources	Public Works	Community Development	Yr 2	Medium
2.3.b Distribute BMP guide to City staff, contractors, and landscapers	Public Works	Community Development	Yr 2-3	Medium

2.3.c Review and update BMP guide at each 5-year cycle or when major ISA standard changes occur	Public Works		5-Year	Low
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Objective 2.4 Develop a long-term urban forest funding strategy within 2 years, including updated mitigation fees, LTF expenditure policy, and grant opportunities.

Action	Lead	Partners	Time	Priority
2.4.a Update LTF expenditure policy per recommendations in 7.3	Community Development	City Attorney	Yr 1	High
2.4.b Update mitigation fee schedule and bring to Council for adoption	Community Development	City Manager	Yr 1-2	High
2.4.c Identify and pursue state and federal grant opportunities annually	Community Development	Public Works	Annual	Medium
2.4.d Develop annual LTF report documenting revenues, expenditures, and grant activities	Finance	Community Development	Annual	Medium

Objective 2.5 Develop and adopt an urban forestry storm plan, covering response and recovery, within 3 years.

Action	Lead	Partners	Time	Priority
2.5.a Review existing City emergency management and debris management plans for urban forestry integration opportunities	Public Works	Emergency Management	Yr 1-2	Medium
2.5.b Draft storm response and recovery plan covering inspection prioritization, debris protocols, and interagency coordination	Public Works	Community Development	Yr 2-3	Medium
2.5.c Coordinate with FPL and other utilities on post-storm tree response protocols	Public Works		Yr 2-3	Medium
2.5.d Adopt storm plan and distribute to relevant City departments	Public Works	City Manager	Yr 3	Medium
2.5.e Review and update storm plan following any major storm event or at each 5-year cycle	Public Works		As Needed	Low

GOAL 3 Expand & Enhance the Tree Canopy

Objective 3.1 Achieve a net increase in citywide canopy from 44.0% to 50% (2010 canopy cover level) within 10 years with no net canopy loss in any census block.

Action	Lead	Partners	Time	Priority
3.1.a Meet canopy target of 50% within 10 years through public planting, neighborhood planting plans, agency coordination, and residential assistance program	Public Works	Community Development	Yr 1-5	High

3.1.b Identify and document significant canopy loss events (development, storm, disease) for tracking and mitigation	Public Works	Community Development	As Needed	High
3.1.c Track canopy cover by census block at each 5-year TCA cycle and flag any blocks showing net loss for targeted tree planting and giveaways	Public Works	Consultant	5-Year	High

Objective 3.2 Increase number of trees planted on public property through City operations, volunteer and community group partnerships, and agreements with other agencies.

Action	Lead	Partners	Time	Priority
3.2.a Compile existing planting records and establish Year 1 planting baseline	Public Works	GIS	Yr 1	High
3.2.b Set annual planting targets based on inventory findings, available planting sites, and capacity	Public Works	Community Development	Yr 2	High
3.2.c Develop annual planting program including species selection, site preparation, and planting schedule	Public Works	Consultant	Yr 2-3	High
3.2.d Coordinate with Titusville Tree Team and community volunteers for supplemental planting events	Public Works	Community Development	Annual	Medium
3.2.e Track and report trees planted annually in GIS and by funding source	Public Works	GIS	Annual	Medium

Objective 3.3 Develop planting plans, including species, amounts, and locations, for City-managed areas within 3 years.

Action	Lead	Partners	Time	Priority
3.3.a Develop neighborhood-level planting plans for highest-priority areas identified in TCA analysis	Public Works	Consultant	Yr 2-3	High
3.3.b Incorporate 3-30-300 equity analysis into planting plan prioritization, with emphasis on census blocks below 30% canopy threshold	Community Development	GIS Public Works	Yr 2-3	High
3.3.c Update planting plans following each 5-year TCA cycle to reflect changed conditions	Public Works	GIS	5-Year	Medium

Objective 3.4 Start coordination efforts with the County and FDOT within 2 years to explore planting opportunities in County-managed parks and along State-managed roads within Titusville.

Action	Lead	Partners	Time	Priority
3.4.a Identify County-managed parks and FDOT corridors within City limits where canopy enhancement is feasible and desirable	Community Development	GIS	Yr 1-2	Medium

3.4.b Initiate coordination meetings with Brevard County Parks and FDOT to discuss planting opportunities	City Manager	Community Development	Yr 2	Medium
3.4.c Pursue interlocal agreement or MOU with Brevard County for planting coordination in City-adjacent parks	Community Development	City Attorney City Manager	Yr 2-3	Medium
3.4.d Track coordination activities and plantings achieved through agency partnerships annually	Community Development	Public Works	Annual	Low

GOAL 4 Protect & Preserve Existing Trees

Objective 4.1 No net loss of public trees on City-managed land, tracked annually.

Action	Lead	Partners	Time	Priority
4.1.a Establish protocol for tracking public tree removals	Community Development	Public Works	Yr 1	High
4.1.b Integrate public tree removal tracking into GIS system and work order records	GIS	Public Works Community Development	Yr 1-2	High
4.1.c Require replacement planting for all City-initiated public tree removals and document replacement in GIS	Public Works	GIS	Ongoing	High
4.1.d Report net public tree gain or loss annually in urban forestry progress report	Public Works	GIS	Annual	Medium

Objective 4.2 Strengthen tree protections and align the LTF with canopy goals through policy and ordinance updates per Chapter 7 Section 3 recommendations.

Action	Lead	Partners	Time	Priority
4.2.a Coordinate with Obj 2.4 LTF expenditure policy adoption to ensure tree protection and canopy priorities are reflected in eligible fund uses	Community Development	Finance	Yr 1	High
4.2.b Evaluate and pursue code updates per priority recommendations in 7.3, including soil volume, species diversity, construction protection, and stormwater integration	Community Development	City Attorney Public Works	Yr 1-4	High
4.2.c Bring recommended ordinance revisions through Council adoption process per 7.3 implementation timeline	Community Development	City Manager	Yr 2-4	High
4.2.d Monitor adopted code effectiveness and flag issues at each 5-year review	Community Development	Public Works	5-Year	Low

GOAL 5 Manage the Urban Forest for Environmental Health & Benefits

Objective 5.1 Increase the urban forest's stormwater interception, carbon, and air quality benefits relative to the 2025 TCA reported benefits.

Action	Lead	Partners	Time	Priority
5.1.a Conduct environmental benefits study using i-Tree Canopy or similar with each TCA cycle	Public Works	Consultant	5-Year	High
5.1.b Coordinate with Stormwater Utility program to identify opportunities to formalize tree-stormwater integration in capital project planning	Public Works	Stormwater Community Development	Yr 2-3	Medium

Objective 5.2 Increase species diversity in public tree plantings, where no single species exceeds 10%,genus 20%, or family 30% of the total City-managed public tree inventory.

Action	Lead	Partners	Time	Priority
5.2.a Upon inventory completion, assess current species composition and identify any existing monocultures	Public Works	Consultant	Yr 2	High
5.2.b Apply diversity standards to all planting plans and contractor specifications	Public Works		Ongoing	High
5.3.c Track species composition in GIS annually; flag species, genus, families over 10/20/30% diversity threshold	Public Works	GIS	Annual	Medium

Objective 5.3 Plant 50% native species in all new public tree plantings starting next planting season, with 25% minimum wildlife value species (identified in UFMP species guide).

Action	Lead	Partners	Time	Priority
5.3.a Establish native species and wildlife/pollinator value criteria for tracking using the approved plant list and UF/IFAS guidance	Public Works	Community Development	Yr 1	High
5.3.b Ensure species selected for all City-led planting programs meet native and wildlife criteria to the extent practicable	Public Works		Ongoing	High
5.3.c Track and report species composition and wildlife value percentages of new plantings annually	Public Works	GIS	Annual	Medium
5.3.d Review and update approved plant list to reflect climate adaptation needs and emerging species guidance every 5 years, or when notable UF/IFAS updates occur	Community Development	Consultant	5-Year	Low

Objective 5.4 Increase tree canopy shade in high heat index census blocks identified in the TCA, prioritizing streets and pedestrian corridors.

Action	Lead	Partners	Time	Priority
5.4.a Develop heat-priority planting list of large-canopy species suited to street and corridor conditions	Public Works	Community Development Consultant	Yr 1-2	High
5.4.b Incorporate heat index priority areas into annual planting program and planting plans developed under Objective 3.3	Public Works	GIS	Yr 2-3	High
5.4.c Track and report number of trees planted in high heat census blocks annually	Public Works	GIS	Annual	Medium

GOAL 6 Cultivate Community Stewardship, Education, & Equitable Access

Objective 6.1 Engage a minimum of 50 volunteers, partner organizations, or educational groups in urban forestry activities annually by Year 2, building on existing partnerships with the Titusville Tree Team, local garden clubs, and area schools.

Action	Lead	Partners	Time	Priority
6.1.a Inventory existing volunteer and partner relationships and establish baseline engagement numbers in Year 1	Community Development	Public Works	Yr 1	High
6.1.b Develop annual volunteer engagement calendar including planting events, educational programming, and stewardship activities	Community Development	Tree Team	Yr 1-2	High
6.1.c Develop an Adopt-a-Tree program for residents and community groups to commit to the care of designated City street trees, including watering, weeding, mulching, and monitoring	Community Development	Public Works	Yr 2	Medium
6.1.d Explore development of a commemorative or memorial tree program	Community Development	Public Works Finance	Yr 2	Medium
6.1.e Establish partnership agreements or MOUs with key community organizations including Tree Team	Community Development	City Manager	Yr 2	Medium
6.1.f Recruit school and youth group participation in urban forestry programming	Community Development	Schools Tree Team	Yr 2-3	Medium
6.1.g Track and report volunteer events, participants, and hours donated annually	Community Development		Annual	Medium

Objective 6.2 Launch a residential urban forestry assistance program within 3 years, with partial funding from the LTF, focused on priority equity areas. Distribute a minimum of 50 trees and include guidance on planting, species selection, and follow-up care.

Action	Lead	Partners	Time	Priority
6.2.a Ensure LTF expenditure policy (Obj 2.4) establishes private property planting grants as an eligible use per 7.3	Community Development	City Attorney	Yr 1-2	High
6.2.b Design residential assistance program including eligibility, services offered, application process, and technical assistance provided by the City or partners	Community Development	Public Works Tree Team	Yr 2	High
6.2.c Use TCA equity analysis and 3-30-300 threshold data to identify and prioritize program target areas	Community Development		Yr 2	High
6.2.d Pilot program in highest-priority census blocks	Community Development	Tree Team	Yr 2-3	High
6.2.e Evaluate pilot outcomes and adjust program based on funding and demand	Community Development	Finance	Yr 3+	Medium
6.2.f Track participants, trees distributed, and locations annually; report percentage in priority equity areas	Community Development	GIS	Annual	Medium

Objective 6.3 Ensure the majority of residents can access tree care and urban forestry resources and know how to report tree concerns to the City.

Action	Lead	Partners	Time	Priority
6.3.a Establish dedicated urban forestry web page on City website with reporting link, resources, and program information	Community Development	IT	Yr 1	High
6.3.b Develop and distribute public tree reporting mechanism (online form, phone line, or integrated with existing 311 system)	Community Development	IT	Yr 1	High
6.3.c Launch public awareness campaign through City social media, email newsletter, and community events	Community Development		Yr 1-2	High
6.3.d Integrate urban forestry awareness into existing City communications channels and community events	Community Development		Ongoing	Medium
6.3.e Measure public awareness in community surveys; reduce inability to identify reporting channels from 41% survey baseline	Community Development		Yr 2+	Medium

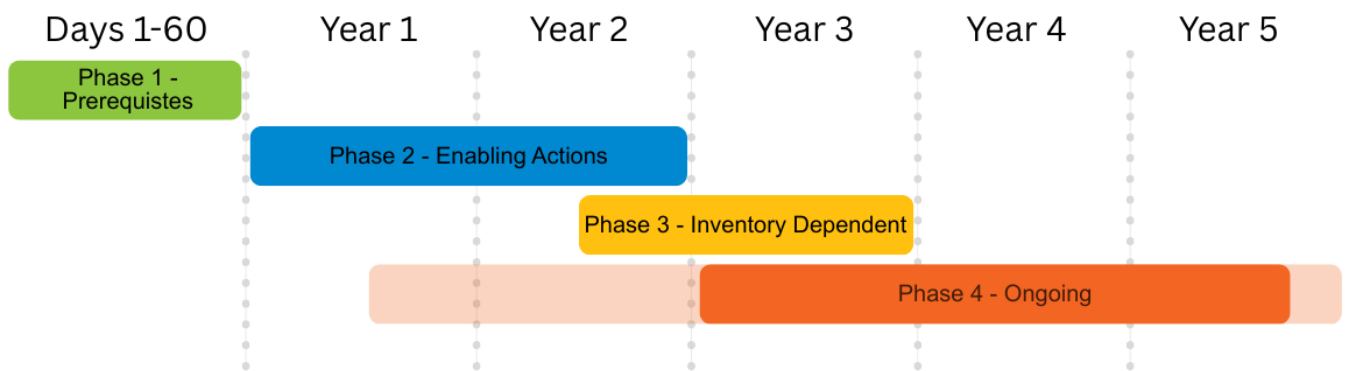
Objective 6.4 Publish an annual staff-evaluated urban forestry progress report that assesses performance related to KPIs and make it publicly available.

Action	Lead	Partners	Time	Priority
6.4.a Compile annual monitoring data from implementation monitoring tables across all six goals	Public Works	Community Development	Annual	High
6.4.b Calculate overall program status using On Track Objectives percentage	Community Development		Annual	High
6.4.c Prepare progress report using adopted template; update all placeholders with current year data	Community Development	Public Works	Annual	High
6.4.d Present progress report to TEC and City Council as part of annual urban forestry reporting	Community Development	City Manager	Annual	High
6.4.e Publish progress report on City website and distribute through community channels	Community Development	IT	Annual	High

7.2

5-Year Operational Plan

The first five years of UFMP implementation focus on building the program infrastructure, legal tools, and knowledge that the goals require. The inventory, coordinator role, and updated policies must be in place before the City can expand canopy, track tree preservation outcomes, or measure urban forestry program success. The order below reflects that logic, where Goal 1 foundation actions and Goal 4 policy updates come first because they enable everything else. Timelines begin upon plan adoption, although the City may already have made inroads on certain actions prior to adoption. This section summarizes priority actions for the first five years, with a high level overview of the timeline depicted in the below graphic. Appendix K features the full actions table, with responsible department, timeline, and planning-level cost estimates.



How Actions Are Phased

Urgency – time sensitive or prerequisite for other actions

Feasibility – can start with current staff and resources

Dependency – must come after another action’s completion

1 Immediate | Prerequisites
Begin within 60 days of plan adoption

There are three actions that must begin immediately, as other goals, objectives, and actions depend on them: designation of a coordinator, tree inventory procurement, and LTF policy. Public tree tracking and GIS setup should be initiated at the same time and are relatively low effort. From day 1, it is critical that the City show commitment and forward momentum – early, visible action is what translates a plan into an urban forestry program Titusville can be proud of.

Designate the urban forestry coordinator (Obj 1.2)
This is the most important enabling action in the plan. Without a designated contact, there is truly no one to implement this plan. It requires no new funding, as it is an assignment/reassignment of existing staff.

Launch public tree inventory procurement (Obj 1.1)

The maintenance schedule, risk program, species diversity, and planting plans depend on inventory findings. If a grant does not fully cover costs, identify supplemental funding sources and proceed with procurement.

Adopt LTF expenditure policy (Obj 2.4)

The residential tree assistance program, private property planting grants, and mitigation fee adjustment all require this to be in place first. This should be able to be done without a code amendment.

Establish public tree removal tracking protocol (Obj 4.1)

A low-effort action that can be completed by staff creates a baseline record. This allows annual net public tree gain or loss to be reported.

Set up GIS for urban forestry (Obj 1.3)

GIS tracking system and data layers should be set ahead of inventory completion for easy data upload. This allows planting records and work orders to be tracked.

2 Years 1-2 | Enabling Actions

Begin within Year 1 once Phase 1 actions are underway

Once the coordinator is designated and inventory procurement is underway, the following actions can move forward across multiple goals. None of these actions require the inventory to be completed. It should be noted that this phase is more heavy with priority actions than other phases.

Update mitigation fee schedule (Obj 2.4)

The fee schedule determines how much revenue flows to the LTF. Updating the fees per Chapter 7 Section 3 recommendations and bringing them to Council by Year 2 completes the funding strategy that started with the expenditure policy adoption in Phase 1.

Develop staffing plan (Obj 1.5)

With the coordinator designated in Phase 1, the next step is a staffing plan with options to move toward the 5.25 FTE benchmark through new hires, reassignment, or contractor support. Recommendations are presented to the City Manager by end of Year 1 to inform budget cycles.

Establish native and wildlife species criteria (Obj 5.3)

This must be finalized before the first planting season after adoption. Missing this window means waiting a full year to apply the standard to City-led plantings.

Launch urban forestry web page and public reporting mechanism (Obj 6.3)

With low cost and high visibility, this action targeted for Year 1 reflects commitment to public transparency and access. It also activates the citizen reporting infrastructure before the inventory is complete.

Establish volunteer engagement baseline and calendar (Obj 6.1)

Document existing volunteer relationships in Year 1 and coordinate the annual engagement calendar with the Tree Team in Years 1-2. The Adopt-a-Tree program design follows in Year 2.

Initiate priority code and standards updates (Obj 4.2)

Administrative updates to Technical Design Standards (construction protection enforcement and penalties, inspection requirements, establishment bonding) can move first and do not need Council adoption. Concurrently, Years 1-2 focus on evaluating and drafting priority ordinance revisions per Chapter 7 Section 3, including soil volumes, species diversity, and stormwater integration, with City Attorney review. Ordinance revisions come before Council in Years 2-4.

Begin County and FDOT coordination (Obj 3.4)

Identify County-managed parks and FDOT corridors within City limits where canopy enhancement is possible, and begin coordination meetings with Brevard County Parks and FDOT by Year 2. An interlocal agreement or MOU with Brevard County should be pursued by Year 3.

Develop urban forestry storm plan (Obj 2.5)

Given Florida's storm exposure and the lack of current urban forestry storm response protocol, this should be initiated in Year 1.

3 Years 2-3 | Tree Inventory Dependent Actions

Start as soon as inventory findings are available (approximately Year 2)

Several of the plan's most important actions cannot start until the tree inventory is complete and the City has the information. Actions in Years 1-2 will help align staff and consultant capacity so these actions can begin immediately after the inventory is completed.

Develop scheduled maintenance cycle (Obj 2.2)

A maintenance cycle requires knowing what trees exist, their condition, and their risk level to develop a schedule. Upon inventory completion, the schedule should be prioritized by condition and risk and identify staff and contractor capacity needed. Implementation should begin by Year 3.

Start tree risk inspection program (Obj 1.4)

Protocols and staff training can begin in Year 1-2, but the inspection program starts upon inventory completion. Trees assigned Monitor status in the inventory must be inspected, and high and extreme risk trees must be mitigated within 30 days.

Develop neighborhood planting plans (Obj 3.3)

Plans for the highest-priority low-canopy census blocks should employ the 3-30-300 equity analysis and heat data from the TCA. Annual planting targets (Obj 3.2) are set in Year 2 once the inventory locates available planting sites.

Launch residential tree assistance program pilot (Obj 6.2)

This requires the LTF policy update and a finalized program design before it can launch. A realistic pilot target is between Years 2-3, aligning with neighborhood planting plans, and funded by the LTF.

Assess species composition and apply diversity standards (Obj 5.2)

Once inventory is complete, assess current species composition and apply the 10% species, 20% and 30% family cap to future planting plans and specifications.

4 Years 3-5 | Ongoing & Long-Term Actions

Continue from Year 3 through end of plan cycle

By Year 3, the foundational program infrastructure should be established, with the program shifting from setup to ongoing operations. At this time, the focus is on implementation quality, tracking, and adaptive management.

Run scheduled maintenance cycle (Obj 2.2)

With the schedule developed in Phase 3, full implementation starts in Year 3. Track the proactive vs. reactive ratio annually, aiming for 75% proactive by Year 5.

Conduct annual planting program (Obj 3.2)

With priority planting plans in place from Phase 3, carry out consistent annual plantings tracked by funding source and location in GIS. Goal 5 standards for species diversity, natives species, and heat-prioritized planting are applied through this program.

Publish annual Urban Forestry Progress Report (Obj 6.4)

The reporting starts in Year 1 and continues every year of the plan. It is presented to TEC and Council and published publicly. It is the accountability mechanism that keeps the program visible, ensuring residents can see what is happening and that the plan and program are being acted upon.

Conduct comprehensive plan review (Year 5)

The review is aligned with the canopy assessment cycle. Staff updates targets based on new information, assesses effectiveness of actions, and sets priorities for the next five-year operational cycle. Major changes to goals or strategic direction require Council approval.

7.3

Policy & Ordinance Recommendations

This section uses the identified gaps in the ordinance review and the Public Landscape Trust Fund analysis in Chapter 4 to develop policy actions. The recommendations are organized by type and implementation timing. All recommendations should be reviewed by the City attorney prior to implementation.

Ordinance & Code Recommendations

Below summarizes recommendations by type and timeframe, with detailed recommendations following.

Administrative Updates	High-Priority Ordinance Revisions	Longer-Term Considerations
<ul style="list-style-type: none"> ▪ Construction protection enforcement with specified penalties ▪ Pre-construction photo documentation and periodic inspections ▪ Establishment monitoring period for replacement trees, secured by developer bond 	<ul style="list-style-type: none"> ▪ Soil volume minimums by tree size class ▪ Strengthened soil quality and compaction provisions ▪ Smaller stock planting standards ▪ Species diversity requirements ▪ Expanded canopy credit for stormwater-tree integration ▪ Fee-in-lieu rate update 	<ul style="list-style-type: none"> ▪ Public tree care ordinance and management standards ▪ Native species requirements through phased approach ▪ Evaluation of required canopy standards for commercial and industrial development ▪ Partial consolidation of tree and landscape code provisions

Administrative Updates

Several construction protection gaps can be addressed by updating the Technical Design Standards instead of amending an ordinance, making those updates a higher priority. City staff should confirm the correct adoption mechanism (administrative policy, technical manual update, or ordinance amendment).

- Add an enforcement mechanism for tree protection during construction, including specified monetary or operational penalties (e.g., first a written warning followed by a \$100 fine per tree with stop-work authority) for barricade removal or tree damage.
- Require pre-construction photo documentation, periodic inspections, and reports submitted to the City by a qualified arborist retained by the developer.
- Add a 1 to 2-year establishment monitoring requirement for replacement trees, secured by a developer-posted bond released upon survival verification.

High-Priority Ordinance Revisions

These revisions address gaps most closely linked to community priorities, including stormwater management, shade, and wildlife support. Ordinance revisions will require Council adoption.

- **Soil volume minimums:** establish requirements beyond the current 200-square-foot requirement, such as 1,200 cubic feet for large canopy trees, 800 cubic feet for medium trees, and 350 cubic feet for small trees. Literature on soil volumes continues to evolve, and the City should adjust these as conditions and best practices dictate, with separate volumes for palms.
- **Soil quality and disturbance:** strengthen existing soil quality requirements to limit disturbance and compaction in planting areas. Industry guidance is not fully standardized, so provisions should be written to allow adjustment as practice matures.

- **Planting standards:** shift planting requirements away from large-caliper trees toward smaller stock with soil conditions that support healthy growth. Research shows that smaller trees, planted with adequate soil volume and quality, establish faster and reach maturity more reliably than large-caliper trees planted in constrained conditions. This complements the soil volume and quality recommendations above.
- **Species diversity:** cap single species at 10%, single genus at 20%, and single family at 30% of required plantings to increase climate resilience and support biodiversity goals. Thresholds should be scaled or paired with alternative compliance pathways for smaller projects where percentage-based limits are impractical (e.g., planting requirement of 5 trees).
- **Stormwater and tree integration:** develop additional canopy credit (e.g., 1.5x) for bioretention tree systems and adopt an approved flood-tolerant species list. This addresses the community survey's top tree benefit of reducing stormwater and runoff.
- **Fee-in-lieu rate:** update the \$75-\$100 per DBH inch mitigation rate (Resolution 30-2001, ~25 years old) to reflect current planting and establishment costs, and codify a mechanism to keep the rate current. Related Trust Fund policy updates are addressed later in this section.

Soil volume and quality are the building blocks to growing healthy trees – without them, new trees cannot reach the mature size required to provide the shade and stormwater benefits residents prioritized through community engagement.

Longer-Term Considerations

The longer-term recommendations will benefit from wider stakeholder engagement and policy discussions to determine feasibility, desired language, and community preferences.

- **Public tree management standards:** develop planting, maintenance, pruning, and removal protocols for trees in City-owned rights-of-way and on City property, codified through a public tree care ordinance. This addresses a notable gap identified by stakeholders; numerous ordinances, including one from the Arbor Day Foundation, can serve as a starting point.
- **Native species in new development:** evaluate a phased approach to native plant requirements, starting with incentives (e.g., canopy credits or reduced mitigation fees for native plantings) before making a requirement. This recognizes state regulatory constraints and the effects of a changing climate on species suitability, while supporting identified wildlife, pollinator, and biodiversity goals.
- **Commercial and industrial canopy standards:** evaluate making canopy area requirements mandatory for commercial and industrial development.
- **Code consolidation:** tree and landscape requirements are distributed across Sections 2, 5, 30-31 through 30-40, and Division 10. Consolidation into a single document may not be practical, but partial consolidation will improve usability, support consistent updates, and reduce enforcement complexity.

Public Landscape Trust Fund Policy

The Trust Fund's current designation for beautification of publicly owned or maintained properties has led community members to note that funds have been directed more toward corridor landscaping than canopy replacement. Since mitigation payments originate from private property tree removal and most

of Titusville's land is privately owned, restricting use to public land limits the City's ability to regrow the tree canopy across neighborhoods.

A Trust Fund expenditure policy should be adopted, either a new resolution or a revision to Resolution 30-2001, to reflect the priority uses shown below. Suggested language changes are in Appendix J.

<p>Underserved & Low-Canopy Neighborhoods</p> <p>Tree planting in areas identified through the TCA as having low existing canopy coverage.</p>	<p>Street Tree Establishment</p> <p>Planting and establishment care of street trees in public rights-of-way.</p>
<p>Multi-Year Maintenance</p> <p>Maintenance funding for newly planted public trees to close increase long-term survival.</p>	<p>Private Property Cost-Share Grants</p> <p>Grants to support tree planting on private property, for priority areas with low canopy.</p>

Adjusting the LTF's focus to urban forestry creates a connection between trees lost and trees planted, and responds to the disconnect residents identified during community engagement.

Incentive Programs for Priority Areas

Citywide canopy growth depends on private property planting, and areas with the lowest canopy are often those with the fewest resources to plant and maintain trees. The following incentive program should be considered in coordination with the Trust Fund policy update.

- **Private property cost-share grant program:** this program would provide free or cost-share tree purchase and install on private property. Requirements may include species selection from an approved native or Florida-friendly list, minimum sizes, proper planting technique, and a property-owner maintenance commitment. The program should target the lowest-canopy neighborhoods in prioritized areas. Similar programs have been implemented successfully in other Florida municipalities and can serve as a model.
- **Community partnerships:** coordinate tree delivery through the Titusville Tree Team, Garden Club, and Adopt-a-Tree program (Goal 6) to extend reach and reduce per-tree program costs. This also increases local stewardship capacity and connects residents directly to trees planted in their neighborhoods.

Implementation Sequencing

Timeframe	Actions
<p>Immediate (0–6 months)</p>	<p>Construction protection enforcement, inspection requirements, and establishment bonding through Technical Design Standards updates; Trust Fund expenditure policy adoption</p>
<p>Near-Term (6–12 months)</p>	<p>Fee-in-lieu rate update; soil volume and species diversity ordinance revisions through TEC and Council review.</p>
<p>Long-Term (12–24 months)</p>	<p>Public tree care ordinance; commercial and industrial canopy standards; partial code consolidation; launch of private property grant program following Trust Fund policy adoption.</p>

8 CHAPTER EIGHT Monitoring & Adaptive Management Plan

The monitoring and adaptive management plan is the final piece in the City’s action plan. It tracks progress toward goals and objectives using key performance indicators (KPIs), providing a structure for when the City needs to make adjustments. For Titusville, there is a distinction between implementation and effectiveness monitoring (Northrup et al., 2022). Two questions guide this evaluation:

- Implementation: Are the actions being completed as planned?
- Effectiveness: Are the actions meeting the plan’s intended outcomes?

To allow for plan flexibility and adapt to changes in funding, time, staff, and resources, KPIs are complemented by adaptive management triggers. Where implementation monitoring actions are Needs Attention or Not Started, staff will document the reason and identify a corrective action or revised timeline. Where effectiveness monitoring indicates that KPIs are not helping to reach targets, the City will review and adjust the corresponding objectives, actions, and resource allocations.

This chapter is organized around three reporting functions that form the tracking and accountability system needed for monitoring:

1. **Annual Implementation Monitoring tables** track if actions are being completed on schedule. Staff updates the status of each objective annually. These tables are the primary tool for day-to-day program management.
2. **The 5-year effectiveness monitoring tables** assess whether actions are producing intended outcomes. These are updated every 5 years, optimally aligned with the canopy assessment, which provides the data needed to evaluate canopy-level outcomes.
3. **The 3-30-300 tracking table** tracks progress toward those three equity thresholds over the 20-year planning horizon. It is updated on the same 5-year cycle as the effectiveness monitoring tables (#2).

The Urban Forestry Progress Report (Appendix G) consolidates findings from the three reporting mechanisms. The Progress Report is the annual public-facing summary document that communicates program performance and upcoming priorities to residents, the TEC, and the City Council. It is based on self-reported monitoring and designed for a general audience rather than program staff.

8.1

Monitoring Overview

The section below features a high-level overview of the goals, with their status updated annually by staff. The detailed monitoring tables for each goal are presented in the subsequent sections. Findings will inform adaptive management decisions and be reported annually through the Urban Forestry Progress Report, established in Objective 6.4.

Annual Status Rating

- ✓ **On Track:** Action completed or going as planned; KPI is being met or within acceptable range.
- ▲ **Needs Attention:** Action delayed, underfunded, or KPI trending below target; corrective steps identified.
- ✘ **Not Started:** Action not started within the expected timeframe; reason with revised timeline required.

Goal	Overall Status	Last Reviewed	Notes / Corrective Action
Goal 1: Establish the Program Foundation			
Goal 2: Build a Sustainable Urban Forestry Program			
Goal 3: Expand & Enhance the Tree Canopy			
Goal 4: Protect & Preserve Existing Trees			
Goal 5: Manage the Urban Forest for Environmental Health & Benefits			
Goal 6: Cultivate Community Stewardship, Education, & Equitable Access			

8.2

Equity Benchmark Tracking with 3-30-300

GOAL 1 Establish the Program Foundation

In addition to tracking progress towards goals, this plan tracks the City’s progress toward the three thresholds comprising the 3-30-300 Rule on a 5-year cycle. As discussed in Chapter 6 Section 2, these thresholds help determine whether urban forest benefits are equitably reaching Titusville residents. Results are reported in the annual Urban Forestry Progress Report and also tie into goal-level monitoring.

Threshold	Baseline	Cycle 1 (2030)	Cycle 2 (2035)	Cycle 3 (2040)	Cycle 4 (2045)	Data Source
3 Trees % of residents seeing 3+ trees from home	93.5% (2025 survey)					Community survey
30% Canopy # of census blocks meeting 30% threshold	16 of 41 (2025 TCA)					Assessment by census block
300m Access % of residents within 300m of green space	45.9% (2025 Survey)					Community survey; GIS spatial analysis

Survey baselines reflect self-reported data from the 2025 community survey.

8.3

Goal-Level Monitoring

Implementation Monitoring: Are actions being completed as planned? Review annually.

Obj	KPI	Source	Responsible Party	Status
1.1	Inventory completed by 2028; number of trees and planting sites recorded; trees assessed on 5-year cycle	GIS database; inventory deliverables	Public Works	
1.2	Coordinator role designated within 6 months; responsibilities and reporting structure documented	HR records; organizational chart	City Manager	
1.3	GIS system usable by Year 2; data layers maintained annually	GIS system audit	GIS	
1.4	Risk program established after inventory completion; percent of trees on scheduled assessment cycle; high risk trees addressed within 30 days	Work order records; risk assessment logs	Public Works	
1.5	Staffing plan developed and presented to City Manager within 1 year	Staff records; meeting notes	Public Works	

Adaptive Management Triggers

- ▶ Inventory not started within timeframe → staff to identify barrier (e.g., funding, capacity), ways to overcome, and revised timeline within 30 days
- ▶ No staff urban forestry coordination role has been designated within 6 months → bring recommended options to City Manager within 30 days (e.g., new staff, reassignment, consultant)
- ▶ Urban forestry GIS data is not being operational or updated regularly → staff to identify gaps and reestablish ownership and responsibility
- ▶ Public tree failure causes damage or harm without a formal risk program in place → start risk management program development immediately regardless of timeline
- ▶ High risk trees from an inspection cycle have not been mitigated within 30 days → elevate to City manager

Effectiveness Monitoring: Are the outcomes meeting the intention? Review every 5 years.

Obj	KPI	Source	Responsible Party	Status
1.1	Inventory data is current, complete, and actively used to inform planting, maintenance, and risk decisions	GIS database review; staff interview	Public Works GIS	
1.2	Urban forestry coordinator role is staffed, funded, and undertaking documented responsibilities	Position description review; budget records	City Manager	
1.3	GIS system supports urban forestry decision-making	GIS use audit; staff feedback	GIS	
1.4	Tree risk program is reducing reactive removals and documenting risk reduction outcomes	Work order trend analysis; risk assessment records	Public Works	
1.5	Staffing growing toward 5.25 FTE benchmark; recommendations being acted on through budgets	Budget records; HR records	City Manager	

Adaptive Management Triggers

- ▶ Effectiveness triggers are to be established after designation of urban forestry coordinator and completion of the tree inventory by the coordinator within 60 days of both being completed.

GOAL 2 Build a Sustainable Urban Forestry Program

Implementation Monitoring: Are actions being completed as planned? Review annually.

Obj	KPI	Source	Responsible Party	Status
2.1	Work order categories established in Year 2; proactive vs. reactive tracked and reported Year 2 on; 25% proactive by Year 2, 75% by Year 5	Work order records	Public Works	

2.2	Maintenance schedule developed by Year 3; percent of scheduled maintenance completed on time reported annually	Work order records; maintenance logs	Public Works
2.3	BMP guide adopted by Year 3; distributed to City staff and contractors	Staff records; distribution log	Public Works
2.4	LTF policy adopted by Year 1; mitigation fees updated and submitted to Council by Year 2; annual LTF report published	Council records; Finance records	Community Development
2.5	Storm plan adopted by Year 3	Plan adoption record	Public Works

Adaptive Management Triggers

- ▶ Proactive maintenance ratio has not reached 25% by Year 2 → staff to identify capacity or funding barriers and bring options to City Manager within 60 days
- ▶ Maintenance schedule not developed within 6 months of inventory completion → staff to identify barriers and revised timeline within 30 days
- ▶ BMP not adopted by Year 3 → Public Works to identify barriers and bring solutions and revised timeline to City Manager within 30 days
- ▶ Mitigation fee revenue collected but not directed to canopy replacement → Finance and Community Development to review LTF expenditures and recommend corrective action to City Manager
- ▶ Storm event occurs without a storm plan in place → initiate storm plan development immediately

Effectiveness Monitoring: Are the outcomes meeting the intention? Review every 5 years.

Obj	KPI	Source	Responsible Party	Status
2.1	Proactive maintenance comprises 75% or more of total work orders by Year 5	Work order trend analysis	Public Works	
2.2	Scheduled maintenance cycle being executed; reactive emergency removals decreasing as proportion of total work	Work order analysis; maintenance records	Public Works	
2.3	BMP guide applied consistently; staff and contractor work consistent with ISA/ANSI A300 standards	Field review; contractor audits	Public Works	
2.4	LTF revenues directed to urban forestry priorities; fee-in-lieu rate reflects current planting costs; grant funding secured in 2 of 5 years	LTF annual reports; grant records	Community Development	
2.5	Storm response plan activated and performed as intended following any storm event	After-action review	Public Works	

Adaptive Management Triggers

- ▶ LTF policy adopted but funds continue to be directed to non-canopy purposes → bring to Council for clarification or resolution amendment
- ▶ Storm occurs but plan does not work as intended → post-storm review and plan updates within 90 days
- ▶ Effectiveness triggers for Obj 2.1-2.3 will be refined following the first full year of implementation monitoring data and inventory completion by urban forestry coordinator

GOAL 3 Expand & Enhance the Tree Canopy

Implementation Monitoring: Are actions being completed as planned? Review annually.

Obj	KPI	Source	Responsible Party	Status
3.1	Progress towards 50% canopy tracked; net canopy change reported on 5-year TCA cycle; significant canopy loss events noted; census block canopy tracked and those below 30% flagged	TCA records	Public Works Consultant	
3.2	Planting baseline established by Year 1; annual planting targets set by Year 2; trees planted annually tracked in GIS and by funding source	Planting records; GIS	Public Works Finance	
3.3	Neighborhood planting plans developed for priority areas by Year 3; 3-30-300 equity analysis incorporated into prioritization	GIS; planting plans	Public Works Community Development	
3.4	Coordination meetings initiated with County and FDOT by Year 2; MOU or agreement pursued by Year 3	Meeting records; agreement status	Community Development	

Adaptive Management Triggers

- ▶ Significant canopy loss event identified → staff to quantify loss and develop mitigation response within 60 days
- ▶ Annual planting targets not met for 2 consecutive years → staff to identify capacity or funding barrier and bring options to City Manager
- ▶ Census block showing net canopy loss at TCA cycle → flag for targeted planting prioritization in next annual planting program
- ▶ No coordination contact made with County or FDOT by Year 2 → Community Development to notify City manager and identify way forward within 30 days

Effectiveness Monitoring: Are the outcomes meeting the intention? Review every 5 years.

Obj	KPI	Source	Responsible Party	Status
3.1	Citywide canopy cover increasing from 44.0% baseline towards 50%; no net canopy loss per census block at 5-year review	TCA assessment by census block	Public Works Consultant	

3.2	Annual public tree planting at or over target	Planting records; GIS	Public Works
3.3	Planting occurring in priority low-canopy areas; number of census blocks meeting 30% threshold stable or increasing	TCA by census block; planting location records	Public Works Consultant
3.4	At least one coordination agreement with County or FDOT in place; joint plantings have occurred	Agreement records; planting logs	Community Development

Adaptive Management Triggers

- ▶ TCA assessment shows citywide canopy below 44.0% baseline at any 5-year cycle → review planting program, preservation objectives, and mitigation fee adequacy; bring findings to Council within 90 days
- ▶ Number of census blocks below 30% canopy threshold has increased at 5-year review → revise planting plan prioritization to concentrate resources in underserved areas.

GOAL 4 Protect & Preserve Existing Trees

Implementation Monitoring: Are actions being completed as planned? Review annually.

Obj	KPI	Source	Responsible Party	Status
4.1	Tracking protocol established by Year 1; public tree removals and replacements documented annually by City and private development loss/gain	GIS; work orders	Public Works Community Development	
4.2	Code updates per Chapter 7 Section 3 timeline; ordinance revisions submitted to Council by Years 2-4; coordination with Obj 2.4 LTF adoption documented	Policy adoption records; Council records; Finance	Community Development	

Adaptive Management Triggers

- ▶ Net public tree loss documented in two back-to-back annual reports without offsetting replacement → staff to review planting program and mitigation compliance within 60 days
- ▶ Priority ordinance revisions not submitted to Council by 7.3 timeline → Community Development to bring to City manager with revised timeline

Effectiveness Monitoring: Are the outcomes meeting the intention? Review every 5 years.

Obj	KPI	Source	Responsible Party	Status
4.1	No net loss of public trees on City-managed land; replacement planting occurring following all removals	GIS records	Public Works	

4.2	LTF revenues directed to canopy replacement and urban forestry; code changes applied consistently; tree preservation outcomes in development improving measured through tree retention numbers	LTF annual reports; permit records; enforcement logs	Community Development Finance
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Adaptive Management Triggers

- ▶ At 5-year review, net canopy loss on City-managed land continued despite tracking and replacement → escalate to City Manager; evaluate if stronger preservation requirements or increased planting are needed
- ▶ Code changes not being consistently applied in permit review, or tree retention not improved after 5 years → review if additional code revisions, enforcement mechanisms, or developer incentives are needed

GOAL 5 Manage the Urban Forest for Environmental Health & Benefits

Implementation Monitoring: Are actions being completed as planned? Review annually.

Obj	KPI	Source	Responsible Party	Status
5.2	Species composition assessed upon inventory completion by Year 2; species composition tracked annually	GIS; planting records	Public Works	
5.3	Native and wildlife value criteria established Year 1; 50% native, 25% wildlife value species tracked in GIS	GIS; planting records	Public Works	
5.4	Heat-priority planting list developed by Year 2; incorporated into planting program by Year 3; trees planted in high heat census blocks tracked annually	GIS; planting records	Public Works	

Adaptive Management Triggers

- ▶ Any single trees exceeds 10/20/30% thresholds in City-managed inventory → adjust planting program species selection immediately to rebalance composition
- ▶ Native species percentage in City-led plantings falling below 50% target for 2 consecutive years → review species selection criteria and planting program guidance
- ▶ No planting activity recorded in priority census blocks by end of Year 3 → review planting prioritization

Effectiveness Monitoring: Are the outcomes meeting the intention? Review every 5 years.

Obj	KPI	Source	Responsible Party	Status
5.1	Stormwater interception, carbon, and air quality benefits increasing relative to 2025 TCA baseline	i-Tree Canopy or comparable analysis	Public Works	

5.2	No single species exceeds 10%, genus 20%, or family 30% of City-managed inventory; composition diversifying over time	GIS inventory analysis	GIS
5.3	City-led plantings meeting or exceeding 50% native and 25% wildlife value targets	Planting records	Public Works
5.4	Tree canopy in high heat census blocks increasing relative to 2025 TCA baseline; shade coverage along priority corridors increasing	TCA by census block; planting location records	GIS

Adaptive Management Triggers

- ▶ i-Tree assessment shows stormwater or air quality benefits declined relative to 2025 TCA baseline → review canopy loss, species health, and maintenance program; bring findings to City Manager
- ▶ Tree diversity thresholds of 10/20/30% exceeded in City-managed inventory at 5-year review → review planting program species selection and consider stricter limits on City-led plantings
- ▶ Native species planting has not reached 50% target after two years → review species guide, planting criteria, and whether incentive or requirement approach needs adjustment
- ▶ High heat census blocks show no canopy improvement at 5-year review despite planting activity → evaluate whether site constraints require design alternatives such as bump-outs or pavement removal

GOAL 6 Cultivate Community Stewardship, Education, & Equitable Access

Implementation Monitoring: Are actions being completed as planned? Review annually.

Obj	KPI	Source	Responsible Party	Status
6.1	Baseline engagement established Year 1; 50 volunteers, organizations, or groups minimum engaged annually by Year 2; events, participants, and hours tracked and reported annually	Event records	Community Development	
6.2	LTF policy enabling residential grants adopted and program designed by Year 2; pilot launched in highest-priority census blocks by Year 3; minimum 50 trees distributed; participants and locations tracked annually	Program records; LTF reports; GIS	Community Development	
6.3	Urban forestry web page and reporting mechanism live by Year 1; awareness campaign launched by Year 2; awareness measured via FlashVote or online poll by Year 3	Website analytics; survey data	Community Development	
6.4	Progress report published annually within 2 months of fiscal year end; presented to TEC and Council; publicly available on City website	Publication records	Community Development	

Adaptive Management Triggers

- ▶ 50 volunteer/partner engagement target not met by Year 2 → review outreach strategy and partnership development; bring options to City Manager
- ▶ Residential program pilot not launched by Year 3 → identify funding or capacity barrier and bring options to City Manager within 60 days
- ▶ Progress report not published within 2 months of fiscal year end → Community Development to identify barriers; Council and TEC notified
- ▶ Poll shows public awareness of reporting channels has not improved after 2 years despite outreach → review communication strategy and consider alternative channels

Effectiveness Monitoring: Are the outcomes meeting the intention? Review every 5 years.

Obj	KPI	Source	Responsible Party	Status
6.1	Annual volunteer engagement meeting or exceeding 50 person target; partnerships with community organizations formalized and active	Event records; partnership agreements	Community Development	
6.2	Residential program operating in priority equity areas; trees distributed and planted; LTF funding canopy replacement on private property; percentage of participants in priority areas tracked	Program records; planting follow-up	Community Development	
6.3	Percentage of residents unable to identify tree reporting channels decreased from 41% baseline; urban forestry web presence active and used	Online poll; website analytics	Community Development	
6.4	Progress report published every year of the plan cycle; community and Council awareness of program performance documented	Publication records; Council minutes	Community Development	

Adaptive Management Triggers

- ▶ Volunteer engagement consistently less than 50 people across 5-year review → review partnership strategy, identify issues, and possible program redesign
- ▶ At 5-year review, public awareness of reporting channels has not improved despite sustained outreach → reassess communication strategy; consider whether reporting mechanism itself needs redesign
- ▶ Residential program reach in priority equity areas has not increased after 5 years → review program criteria and barriers to determine if program design, funding level, or community trust barriers need to be addressed
- ▶ Progress report not consistently published or reaching community/Council audience → review reporting format, distribution channels, and content and adjust as needed

8.4

Reporting & Plan Updates

The Urban Forestry Progress Report is prepared at the end of the fiscal year and presented to the TEC and Council. When monitoring notes “Needs Attention” or “Not Started”, or an adaptive management trigger is activated, the responsible staff documents the issue, identifies a corrective action or revised timeline. Issues unable to be resolved at the program level are reported to the City Manager. Actions taken in response to these triggers are summarized in the annual progress report to ensure that the TEC and City Council are informed of adjustments made during the reporting period.

Every five years, aligned with the canopy assessment cycle, staff conduct a comprehensive review of the UFMP to evaluate the relevance of goals and objectives, update targets based on new data, and establish priorities for the next five years. Any major changes to the plan’s goals or strategic direction require Council approval, while routine updates to timelines, implementation actions, and monitoring targets may be made administratively. With each review cycle, the City renews its commitment to a thriving urban forest that reflects the values and priorities of the community it serves.

9 CHAPTER NINE Appendices

Appendix A – References

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Appendix B – Glossary of Terms

BMP: Best Management Practices – accepted industry standards and methods used to achieve effective outcomes.

ISA: International Society of Arboriculture – global organization that sets professional standards and certification for arborists

LTF: Landscape Trust Fund – dedicated funding source used to support landscape, tree, and environmental initiatives

TCA: Tree Canopy Assessment – analysis that measures the extent and distribution of tree canopy cover.

TEC: Titusville Environmental Council – local advisory body focused on environmental stewardship and policy in Titusville.

UFMP: Urban Forest Management Plan – long-term strategic document guiding the care, maintenance, and expansion of a community's urban trees.

Appendix C – Urban Forest Community Engagement Results

The City of Titusville and Eocene Environmental Group conducted community engagement for the Urban Forest Management Plan through multiple methods to gather diverse input and ensure broad participation. This included an in-person vision-building workshop, a community-wide survey, and a public vote on the vision statement to capture values, priorities, and perspectives on Titusville's urban forest.

Highlights:

- Vision-building workshop held on November 10, 2025, with community members and City staff
- Three community-generated vision statements developed through small-group collaboration
- Community-wide survey distributed October-November 2025, receiving 77 responses
- Strong consensus on functional environmental benefits (stormwater management, shade, wildlife habitat), tree preservation, need for more trees, and better maintenance of existing City trees
- FlashVote in January received 242 responses using a shortened version of the survey, consisting of 5 questions

Vision Event

Date: November 10, 2025

Time: 5:00-7:00 PM

Location: Council Chambers at City Hall, 555 South Washington Avenue, Titusville, FL

Attendees

- Community members and residents
- City staff
- City Council members
- Titusville Environmental Commission (TEC) members
- Tree Team members
- Eocene Environmental Group consulting team

Eocene Team Present

- Liz Lingo, Project Manager and Consultant
- Cassidy Behnke, Inventory Arborist
- Paola Nansel, Assistant Urban Forestry Consultant

City Staff Present

- Lily Galleo, Sustainability Coordinator
- Brad Parrish, Community Development Director
- Jacob Begley, Development Services Arborist

Structure & Activities

The event began with an informal meet-and-greet to allow participants to interact with each other, City staff, and Eocene team members before the workshop. After a short recap of canopy cover findings thus far and a summary of the City's 20+ year journey, participants divided into three groups of approximately 5 people and a facilitator.

Group discussion focused on the values and priorities participants considered most important for the urban forest. They also discussed "What makes Titusville special?". Through collaborative discussion, groups developed and refined a vision statement to reflect community priorities for Titusville's future urban forest.

The three vision statements developed were:

1. To create a vibrant, native forest that is beautiful, supports wildlife, improves air and water quality in the City and Indian River Lagoon, and enhances our quality of life for all. The forest will represent the unique natural history of this area.
2. To enhance and preserve a healthy urban forest through conservation and strategic tree plantings that maximize environmental benefits, improves water quality, reduces heat, and enriches quality of life for the greater Titusville community.
3. To preserve, conserve, enhance and restore Titusville's natural canopy and thoughtfully design a native urban forest that promotes the City's head reduction, flood management, and improved air quality goals along with maximizing environmental benefits.

Community Vision Vote

The vision statements developed at the Vision Event on November 10, 2025, were posted on the City's website and on social media for public voting. With 104 public votes, vision statement #2 was ultimately selected. The vision will be the City's guiding light for every supporting strategy, objective, and action in the UFMP.

Vision Statement

To create a vibrant, native forest that is beautiful, supports wildlife, improves air and water quality in the City and Indian River Lagoon, and enhances our quality of life for all. The Forest will represent the unique natural history of this area.	31%
To enhance and preserve a healthy urban forest through conservation and strategic tree plantings that maximize environmental benefits, improves water quality, reduces heat, and enriches quality of life for the greater Titusville community.	36%
To preserve, conserve, enhance and restore Titusville's natural canopy and thoughtfully design a native urban forest that promotes the City's head reduction, flood management, and improved air quality goals along with maximizing environmental benefits.	34%

Community Survey

Distribution Period: October-November 2025

Total Responses: 77

Distribution Channels:

- City website and social media
- In-person at city buildings and civic centers
- Tabling events (3)

Survey Purpose: To gather community input on values, priorities, and likes and dislikes of trees in Titusville to inform the UFMP.

Demographics

Age Distribution (Select one, N=73)

Under 25	1.4%
25-34	4.1%
35-44	17.8%
45-54	16.4%
55-64	20.6%
65+	39.7%

Housing Type (Select one, N=75)

Single-family home	81.3%
Condo	6.7%
Townhouse/duplex	5.3%
Apartment	2.7%

Mobile 4.0%

Identity (Select all, N=78)

White/Caucasian	84.6%
Prefer Not to Say	5.1%
Native Hawaiian/Pacific Islander	2.6%
Asian	2.6%
Hispanic	2.6%
African American/Black	1.3%
American Indigenous	1.3%

Education (Select one, N=69)

High School Diploma or Equivalent	4.3%
Some College	29.0%
Associate Degree	10.1%
Bachelor Degree	24.6%
Graduate Degree	31.9%

Key Findings

Survey respondents were predominantly older (76.7% aged 45+, 39.7% aged 65+) and more educated (56.5% with bachelor's or graduate degrees) than Titusville's general population. This indicates strong engagement from established, long-term residents, but potential underrepresentation of younger families and working-age adults. The overwhelming majority live in single-family homes (81.3%) and identify as White/Caucasian (84.6%). There was lower engagement in higher-density housing and among those with diverse identities.

Tree Importance & Values

Having trees in my community or neighborhood is _____. (Select one, N=75)

Extremely Important	81.3%
Very Important	10.7%
Moderately Important	5.3%
Somewhat Important	1.3%
Not Important	1.3%

What are the top benefits you associate with trees? (Open-ended up to three, N=208)

Shade	20.7%
Wildlife	17.8%
Cooling	13.9%
Aesthetic	12.0%
Air Quality	11.5%
Flooding Control	7.2%
Stress Relief	3.4%
Erosion Control	2.9%
Nature	1.4%
Noise Reduction	1.4%
Wind Barrier	1.4%
Health	1.0%
Quality of Life	1.0%
Social	1.0%
Water Quality	1.0%
Comfort	0.5%

Food	0.5%
Identity	0.5%
Increased Property Value	0.5%
Water Runoff	0.5%

Rank the following tree benefits in order of importance to you. (1=most important) (N=76)

Top Rankings (weighted by #1 votes and average ranking):

1. Reduce Stormwater And Runoff (Avg: 2.38) - 80.3% ranked in top 3
2. Provide Shade (Avg: 2.53) - 81.6% ranked in top 3
3. Support Wildlife And Pollinators (Avg: 2.83) - 75.0% ranked in top 3

Moderate Priorities:

- Improve Mental and Physical Health (Avg. 4.96)
- Planting Wind/Storm Resistant Trees (Avg. 5.97)
- Create Sense of Community (Avg. 6.74)
- Plant Trees to Improve Community Resiliency (Avg: 6.86)

Lower Priorities:

- Aesthetics (Avg: 7.71)
- Enhance Tourism (Avg: 7.61)
- Increase Property Values (Avg: 7.42)

Key Findings

The overwhelming majority of people (92%) stated that having trees in their neighborhood or community was “extremely” or “very” important. Survey respondents prioritized functional and environmental tree benefits (shade, wildlife, cooling) over aesthetics and economic benefits (property value, tourism). Responses to questions emphasized valuing trees for climate, ecological, and quality-of-life benefits over financial returns.

Canopy & Greenspace

Compared to most other neighborhoods in the City of Titusville, my neighborhood has _____ trees. (Select one, N=77)

More	31.2%
Same Amount	29.9%
Fewer	28.6%
I Don't Know	10.4%

Since moving to my neighborhood, the tree cover/shade has _____. (Select one, N=77)

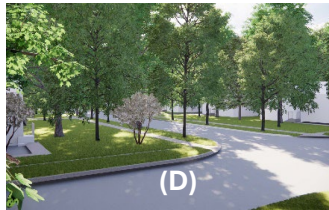
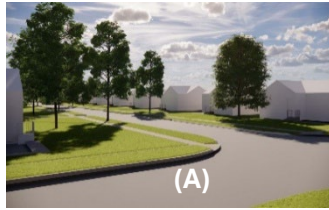
Decreased	44.7%
Stayed the Same	39.5%
Increased	15.8%

When I look out of the windows of my home, I see _____. (Select one, N=77)

Forest/Wooded Environment (12+)	39.0%
Several Trees (3-7)	29.9%
Many Trees (8-11)	24.7%
A Few Trees (1-2)	6.5%
No Trees	0.0%

Which image (letter) best represents the tree cover/shade in your neighborhood? (Select one, N=77)

- A 35.1%
- B 22.1%
- C 20.8%
- D 9.1%
- E 10.4%
- F 2.6%

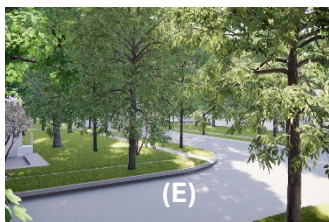
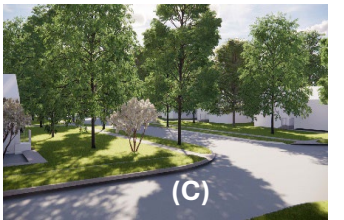
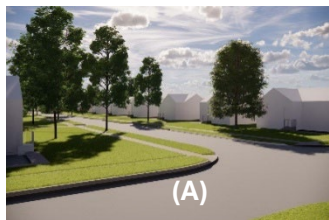


My neighborhood
doesn't have trees.

(F)

Which image (letter) would you prefer your neighborhood to look like? (Select one, N=77)

- A 3.9%
- B 3.9%
- C 19.5%
- D 22.1%
- E 48.1%
- F 2.6%



My ideal
neighborhood doesn't
have trees.

(F)

Are you able to walk from your home to the nearest park, green space, or natural area in less than five minutes? (Select one, N=74)

- No 50.0%
- Yes 45.9%
- Unsure 4.1%

How frequently do you visit your nearest park, green space, or natural area? (Select one, N=76)

- Weekly 42.1%
- Several Times a Year 23.7%
- Daily 14.5%
- Monthly 13.2%
- Never 3.9%
- Once a Year 2.6%

Key Findings

Every respondent could see at least one tree from the window of their home, with almost 64% seeing many trees or a forested environment. Over 55% of them also thought that canopy cover has stayed the same or increased since they've moved into the neighborhood. Access to green spaces is mixed, with less than 46% of respondents able to walk to a park within 5 minutes. However, almost 57% visit that greenspace or park daily or weekly, demonstrating high demand for improved access to park areas. Of all survey takers, only 2.6% stated that their ideal neighborhood had no trees, while the most

commonly selected canopy cover was the highest level (letter E). However, the majority (54.2%) lived in neighborhoods with lower canopy cover (letters A and B). This shows that despite living in areas without a robust tree canopy, there is a strong desire for well-treed neighborhoods.

Tree Concerns & Drawbacks

What are the drawbacks of trees in your community or neighborhood? (Open-ended up to three, N=72)

None	25.0%
Debris	22.2%
Maintenance	16.7%
Hazard	12.5%
Hardscape Damage/Accessibility	12.5%
Cost	4.2%
Invasive Species	2.8%
Visual Obstruction	2.8%
Species Too Large for Site	1.4%

Have you ever had a negative experience with a tree? (Select all, N=96)

No	44.8%
Costly Maintenance or Removal	20.8%
Property Damage	14.6%
Other	7.3%
Issue Obtaining Insurance	6.3%
Causing Injury	3.1%
Preventing Property Development	3.1%

How concerned are you about trees in your neighborhood during extreme weather events (e.g., hurricanes, flooding)? (Select one, N=75)

Very Concerned	5.3%
Slightly Concerned	36.0%
Not Concerned	20.0%
Moderately Concerned	32.0%
Extremely Concerned	6.7%

Which of the following climate-related tree issues are you most concerned about in Titusville? (Select all, N=209)

Extreme Heat In Areas Without Shade	26.8%
Tree Removal/Death Due to Development	25.8%
Flooding in Areas Without Trees	23.4%
Not Enough Trees to Improve Water Quality	20.1%
Trees Falling in Weather Events	15.8%
Tree Death Due to Hotter/Drier Conditions	11.0%
Other	2.4%
None	1.4%

Key Findings

Although survey respondents strongly supported trees, they also expressed practical concerns about maintenance, debris, and property damage. Notably, many respondents have not had a negative experience with trees (about 45%), and 25% saw no drawbacks to trees in their community. Storm-related concerns were moderate, with 68% having slight or moderate concerns about trees during storms. Climate-related concerns centered on heat and shade, tree loss due to development, and water quality and flooding.

Tree Management

The public trees on my street are _____. (Select one, N=76)

No Trees On My Street	40.8%
Adequately Cared For	30.3%
Not Well Cared For	23.7%
Well Cared For	5.3%

What, if anything, could be improved about the City of Titusville's public trees? (Open-ended, N=86)

More Trees	27.9%
Better Maintenance	18.6%
More Native Trees	14.0%
Tree Preservation	11.6%
Better Tree Selection	7.0%
Better Placement	4.7%
Debris Removal	4.7%
More Investment	3.5%
More Green Spaces	1.2%
Wildlife Preservation	1.2%
More Tree Removals	1.2%
No Trees On Boulevards	1.2%
More Fruit Trees	1.2%
Natural Areas Restoration	1.2%
No Pesticide Use	1.2%

Which of the following would you like to see in your park or street? (Select all, N=275)

Shade Trees	21.8%
Native Plants/Trees	21.8%
Flowering Trees	13.5%
More Variety Of Trees	12.0%
Edible Fruit/Nut Trees	11.3%
Flower Beds	7.6%
Shrubs	5.8%
Grass Lawns	3.6%
More Uniformity of Trees	2.5%

Which of the following would be your first choice of where there should be trees planted? (Select one, N=75)

Street and Sidewalks	46.7%
Commercial/Industrial	14.7%
Parks	14.7%
People's Yards	8.0%
Waterway/Shoreline	6.7%
Other	4.0%
Natural Areas	4.0%
Downtown	1.3%

What is your opinion on tree preservation in the City of Titusville? (Select one, N=75)

Preserve as Many as Possible	65.3%
Replace Trees When Removed	25.3%
All Individuals to Remove Trees as They Wish	5.3%
Preserve Only Large/Unique Trees	2.7%

Other 1.3%

Key Findings

Overall, there is a strong preference for the City to have more trees and provide better maintenance for existing trees. Maintenance of existing public trees was mixed: 23.7% reported that their street trees were not well cared for, 35.6% felt that trees were adequately or well cared for, and 40.8% reported having no street trees. Most respondents wanted shade trees and native plants, with the top planting location being along the streets and sidewalks. The survey showed overwhelming support (over 90%) for tree preservation and replacement, compared with only 5.3% of respondents expressing no support.

Engagement

Would you plant trees on your property if offered a financial incentive? (Select one, N=77)

Yes	75.3%
Need More Information	10.4%
Not Applicable	7.8%
No	6.5%

If a public tree near your property needed maintenance (e.g., pruning, removal), would you know how to report it to the City? (Select one, N=73)

No	41.1%
Yes	41.1%
Unsure	17.8%

How would you like to receive information about the City's urban forest programs and tree care? (Select all, N=101)

E-mail	34.7%
Facebook	19.8%
Website	18.8%
Text Message	12.9%
Meetings	5.9%
Newspaper	4.0%
No Contact	3.0%
Other	1.0%

Key Findings

There is a willingness to participate in urban forestry at the community level: over 75% are willing to plant a tree with financial incentives, and only 3% are uninterested in receiving urban forestry information. However, approximately 41% of the respondents do not know how to report a public tree issue to the City. Digital communication was highly preferred, with email, Facebook, and the City's website representing 73.3%. This suggests that expanding the City's urban forestry programs will require greater public education focused on digital engagement to connect interested residents. The high interest, coupled with low awareness, shows the community's potential to connect with its urban forest if barriers are removed.

FlashVote

Distribution Period: January 2026

Total Responses: 242

Distribution Channels: FlashVote

FlashVote Purpose: To supplement existing community survey responses by reaching additional members of the Titusville community. Feedback will inform UFMP goals and areas of focus.

What do you think of the current amount of trees and shade in public areas of Titusville such as streets, parks, and sidewalks? (Select one; n=242)

Would Prefer a Lot More	40.5%
Would Prefer a Little More	34.3%
Seems Fine	20.2%
Would Prefer a Lot Less	2.1%
Not Sure	2.1%
Would Prefer a Little Less	0.8%

Where would you most like to see additional trees planted on public property in Titusville, if anywhere? (Select up to 3; n=224)

Parks	49.9%
Downtown & Commercial Areas	49.9%
Along Trails & Bike Paths	39.3%
Major Roadways	37.5%
Residential Neighborhoods	37.5%
Don't See Need For More	15.2%
Other	8.0%

Which potential benefits from street trees are most important to you, if any? (Select up to four; n=223)

Providing Shade	73.1%
Absorbing/Reducing Heat	67.7%
Improving Air Quality	57.0%
Making Streets Look Nicer	46.6%
Supporting Wildlife	45.3%
Absorbing Floodwater	39.5%
Improving Water Quality	16.1%
Other	4.5%

Would you support or oppose using City funds to expand tree planting, maintenance and replacement in public spaces? (Select one; n= 232)

Strongly Support (5)	43.1%
Somewhat Support (4)	25.9%
Neutral (3)	14.7%
Somewhat Oppose (2)	5.6%
Strongly Oppose (1)	5.6%
Not Sure	2.2%

Any other comments or suggestions about trees in Titusville? (Open-ended; n=73)

Sentiment Towards Trees

Supportive/Positive	50.0%
Neutral/Mixed	22.2%
Negative/Critical	27.8%

Themes from Comments

Species Selection & Maintenance	26.0%
Infrastructure Priorities	24.7%
Responsible Development	16.4%
Equity & Strategic Planning	15.1%
Sidewalks & Accessibility	11.0%

Key Findings

In total, over 74% of respondents wanted more trees in public spaces (40.5% “a lot more”, 34.3% “a little more”). A majority also supports using City funds for tree planting and maintenance (43.1% strongly, 25.9% somewhat). The highest priorities were shade (73.1%), heat absorption and reduction (67.8%), and air quality (57.0%). The top locations that respondents wanted to see planted with new trees were parks and downtown and commercial areas (tied at 49.1%).

Overall, the FlashVote responses indicated strong support for urban forest expansion, emphasizing strategic planting, selection of native species, and proper maintenance. The responses demonstrated that the community wants trees, but wants them done right – equitable, right tree, right place, and developer accountability. While approximately 28% of responses to the open-ended question expressed negative or critical thoughts about Titusville’s trees, those comments were not necessarily anti-tree but rather called for the City to focus on other priorities. The City was criticized for not addressing infrastructure issues (roads, water, sewer), and those respondents saw trees as competing with infrastructure for funding rather than as part of the solution.

Appendix D – Tree Canopy Assessment & Land Cover Classifications

Table. Titusville citywide land cover classification for 2010 and 2023.

Titusville 2010 Total Area Land Classification					
Land Cover Type	Land Cover (%)	Standard Error (%)	Confidence Interval (95%)		
			±	Lower	Upper
Tree Canopy	50.2	1.58	3.1	47.1	53.3
Grass & Herbaceous	24.9	1.37	2.7	22.2	27.6
Impervious Surface	19.5	1.25	2.5	17.0	22.0
Bare Soil	2.6	0.50	1.0	1.6	3.6
Water	2.4	0.48	0.9	1.5	3.3
Shrub	0.4	0.20	0.4	0.0	0.8

Titusville 2023 Total Area Land Classification					
Land Cover Type	Land Cover (%)	Standard Error (%)	Confidence Interval (95%)		
			±	Lower	Upper
Tree Canopy	44.0	0.64	1.3	42.7	45.3
Grass & Herbaceous	26.0	0.57	1.1	24.9	27.1
Impervious Surface	20.5	0.52	1.0	19.5	21.5
Shrub	3.9	0.25	0.5	3.4	4.4
Bare Soil	3.3	0.23	0.4	2.9	3.7
Water	2.4	0.20	0.4	2.0	2.8

Table. Titusville accuracy assessment for land cover classification.

Titusville 2023 Entire Area User and Producer Outcome: Quality Control Outcome								
Land Cover Type	User						Grand Total	Producer Accuracy
	Bare Soil	Grass & Herbaceous	Impervious Surface	Tree Canopy	Water			
Bare Soil	8	3	2			13	61.5	
Grass & Herbaceous	1	137	1	15		154	89.0	
Impervious Surface		5	92	1		98	93.9	
Tree Canopy	1	9	1	227		238	95.4	
Water		2			95	97	97.9	
Grand Total	10	156	96	243	95			
User Accuracy	80.0	87.8	95.8	93.4	100.0			

Table. 2023 canopy cover by study area in Titusville.

Study Area	Canopy Cover (%)
1	26.3
2	28.1
3	27.8
4	34.4
5	36.8
6	17.8
7	25.4
8	51.9
9	52.6
10	22.1
11	25.0
12	12.5
13	16.2
14	40.0
15	27.6
16	31.9
17	47.5
18	23.5
19	57.9
20	31.2
21	35.3
22	49.3
23	62.3

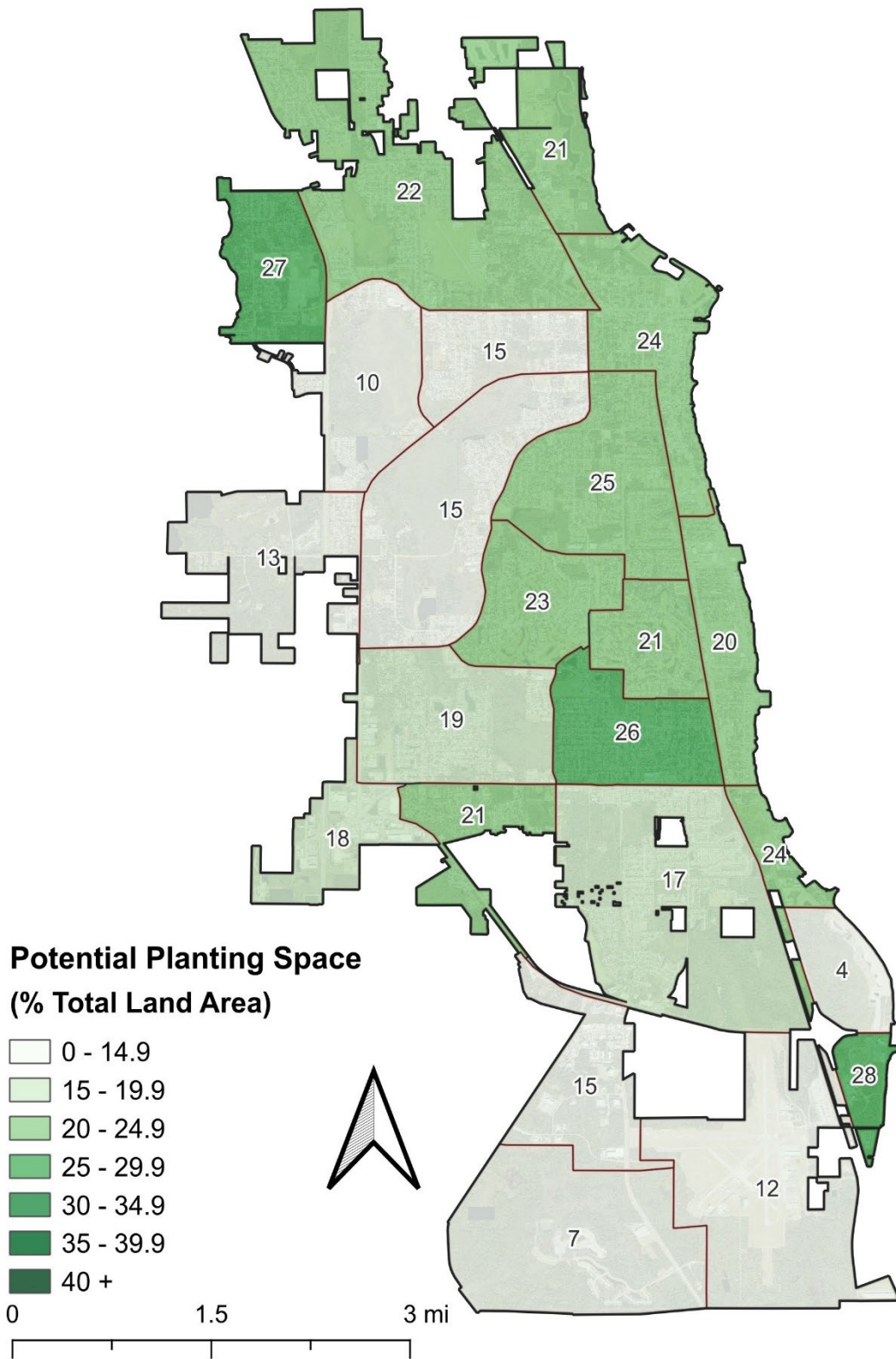
Table. 2023 canopy cover by census block in Titusville.

FIPS Code/GEOD	Canopy Cover (%)
120090602021	42.4
120090602022	25.8
120090603012	40.0
120090603021	34.9
120090603022	13.0
120090603023	12.7
120090604001	33.3
120090604002	27.1
120090604003	43.0
120090604004	34.5
120090604005	29.8
120090605001	34.0
120090605002	14.9
120090605003	26.7
120090606001	28.5
120090606002	53.6
120090606003	25.7
120090607001	17.2
120090607002	24.5
120090607003	23.8
120090610011	26.2
120090610012	22.9
120090610013	19.8
120090610021	13.6
120090610022	13.8
120090610023	17.1
120090611001	19.5
120090611002	24.3
120090611003	41.9
120090611004	37.3
120090612011	28.5
120090612012	47.1
120090612013	25.8
120090612014	52.2
120090612021	31.7
120090612023	47.4
120090711001	67.9
120090711002	39.3
120090714011	11.9
120090714012	12.1
120090714021	13.3

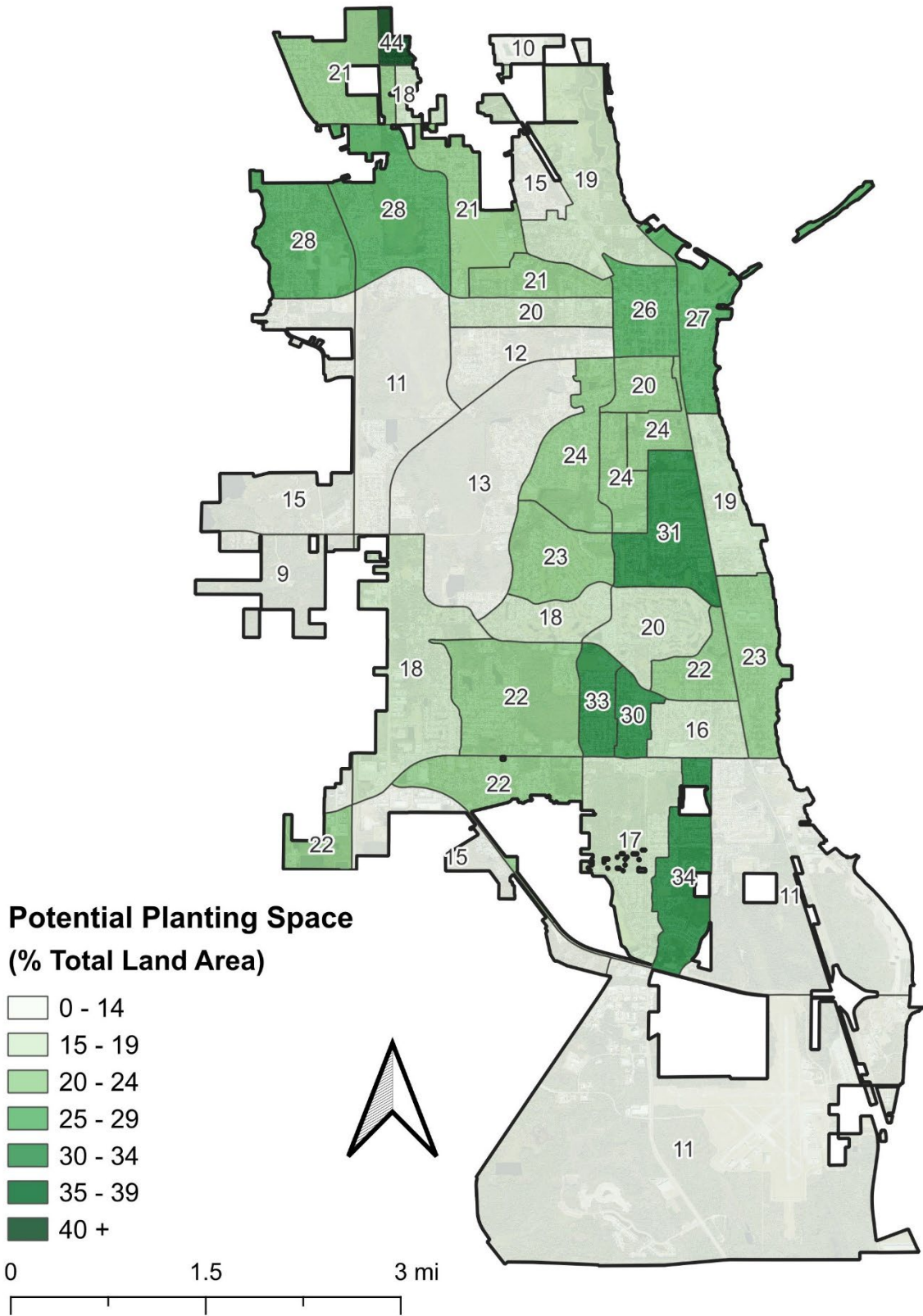
Table. 2023 canopy cover by stormwater basin in Titusville.

GridID	Basin Name	Canopy Cover (%)			
47115	Addison Canal Basin	44.0	42263	Unnamed SJ Basin	50.0
44726	Brevard Basin	20.3	42269	Unnamed SJ Basin	45.2
44106	Broad Street Basin	11.2	47115	Unnamed SJ Basin	43.2
42568	Chain of Lakes Basin	23.9	46660	Unnamed SJ Basin	38.8
42568	Coleman Basin	43.1	42263	Unnamed SJ Basin	37.8
44195	Commons Basin	6.8	45460	Unnamed SJ Basin	34.8
42568	Coranada Basin	8.8	42263	Unnamed SJ Basin	34.3
43577	Garden Street Basin	11.1	42805	Unnamed SJ Basin	34.3
44818	Grace Baisn	15.5	46660	Unnamed SJ Basin	27.4
43869	Habor Pointe Basin	10.1	48193	Vectorspace-Columbia Basin	4.2
45405	Harrison-Washington Basin	5.7	53268	Washington Basin	4.3
45818	Hopkins Road Basin	2.9	46646	Washington-Cheney Basin	18.7
48193	Horizon	22.7	43689	Washington-Marina Basin	17.5
44818	Indian River Basin	36.0			
46642	Kennedy Point Park Basin	7.7			
46345	Knox McRae Basin	13.6			
45763	La Paloma Basin	20.8			
44022	Main Street Basin	31.3			
43507	Marina B Basin	9.1			
43492	Marina Basin	27.3			
45304	Miracle City Basin	7.3			
46501	Mount Vernon Basin	9.6			
46128	Oleander Basin	15.2			
42265	Parrish Basin	22.7			
45405	Pelican Point Basin	2.5			
49389	Ponce De Leon Basin	62.1			
46879	Riveredge Basin	3.0			
49389	Riveredge-Horizon Basin	44.4			
44827	Riverside Basin	19.1			
44270	Riverview basin	7.1			
49389	Royal Palm Basin	9.2			
45304	S. Washington East Basin	4.8			
51308	Sand Point Park Basin	12.5			
45263	Somerset Riverfront Basin	12.5			
46642	South Marine Basin	26.0			
44270	South Street Basin	19.1			
46501	SR 50 Basin	13.2			
45263	ST Teresa Basin	26.6			
43750	St. Johns Basin	37.8			
44783	Sycamore Basin	24.0			
45216	Titusville High School 2 Basin	21.1			
45356	Titusville High School Basin	16.8			

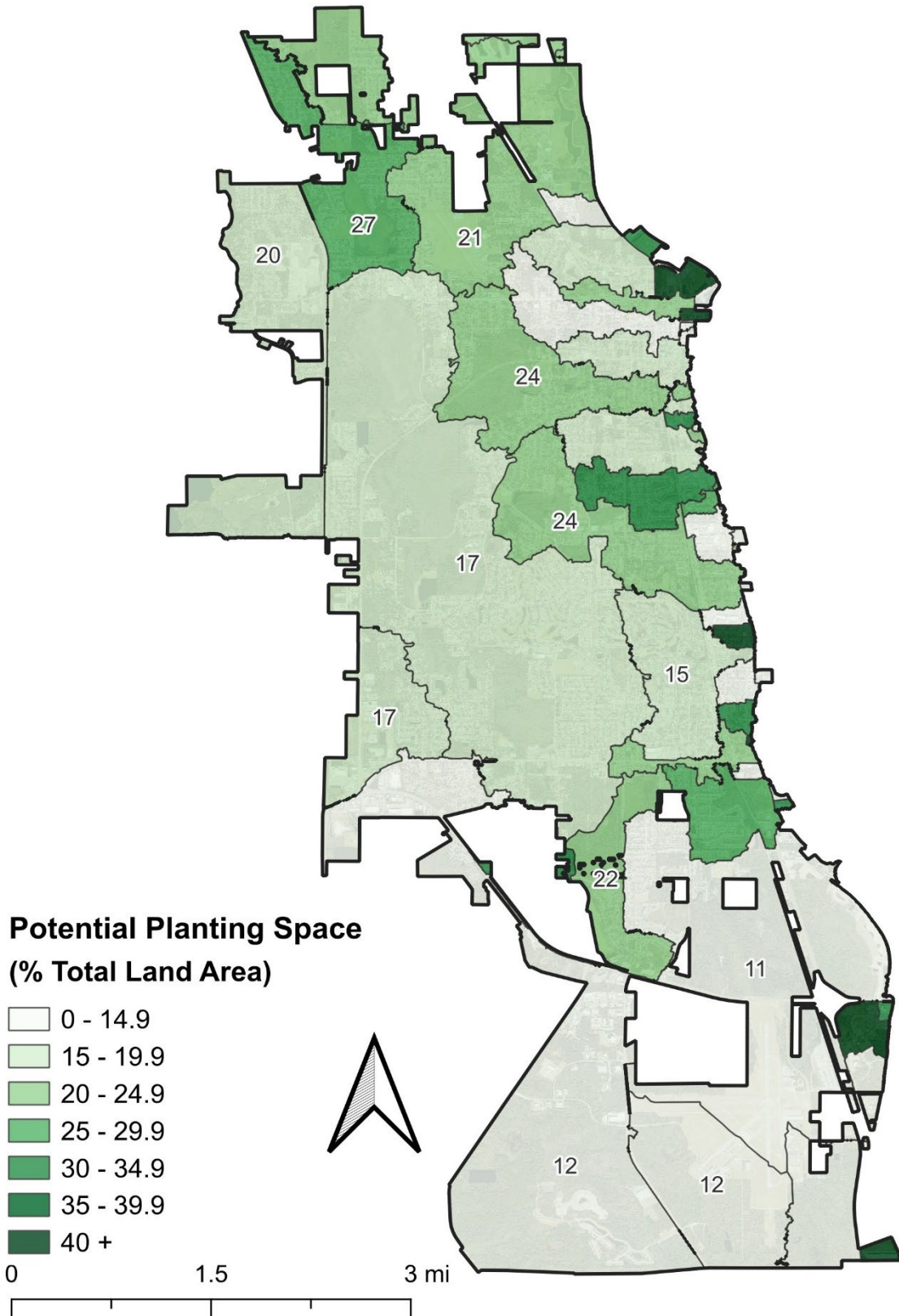
Appendix E – Planting Potential Maps



Map. Potential planting space in Titusville by study area.



Map. Potential planting space in Titusville by census block.



Map. Potential planting space in Titusville by stormwater basin.

Appendix F – SWOT Analysis Documentation

The list of findings below is based on a meeting with key Titusville urban forestry staff and feedback from involved citizens. The meeting with City staff occurred on February 9, 2026 in-person; the input from external stakeholders was collected through online an online survey distributed to the TEC and Tree Team. The Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis highlights the program's internal strengths and weaknesses (S&W), while examining external opportunities and threats (O&T). A primary goal of a SWOT analysis is to identify the factors that inform urban forestry management and operational decisions. This information helped develop a strategy based on the findings, supporting strategic decision-making and urban forestry planning.

Titusville Staff Input

POSITIVES	NEGATIVES
<ul style="list-style-type: none"> ▪ Strengths: What do you do well? What unique resources can you draw on? What do others see as your strengths? ▪ Opportunities: What opportunities are open to you? What trends could you take advantage of? How can you turn your strengths into opportunities? 	<ul style="list-style-type: none"> ▪ Weaknesses: What could you improve? Where do you have fewer resources than others? What are others likely to see as weaknesses? ▪ Threats: What threats could harm you? What threats do your weaknesses expose you to?
INTERNAL	
STRENGTHS	WEAKNESSES
<p>Staff & Expertise</p> <ul style="list-style-type: none"> • Certified arborists on staff with TRAQ certification • Knowledgeable, dedicated staff with good team mentality • Helpful to both the public and each other • Well-staffed for Class 2 permits and landscape installation (new development) <p>Operational Assets</p> <ul style="list-style-type: none"> • City-owned water truck • Adopt a Street program provides community stewardship framework • County funds City-owned park maintenance (~\$0.6M of \$2M) <p>Community Support</p> <ul style="list-style-type: none"> • Active citizen groups with boots on the ground (Tree Team, TEC, Friends of Enchanted Forest, Garden Club, Native Plant Society, Keep Our Yard Beautiful) 	<p>Program Gaps</p> <ul style="list-style-type: none"> • No one person in charge of public trees • All public tree maintenance is reactive; no proactive program <p>Resource Constraints</p> <ul style="list-style-type: none"> • Lack of adequate staff and funding for public tree care • Lacking physical office/workspace for new staff • Lack of strategic planning for new trees can lead to lower survival rates and challenging maintenance

EXTERNAL

OPPORTUNITIES

Funding & Policy

- Landscape Trust Fund – major opportunity to redirect toward trees
- LTF could fund free tree program for residents with code change – high public demand likely
- Update permit, mitigation, fee schedules that haven't been revised in years
- Reduce heritage tree size threshold to protect more trees

Partnerships & Volunteers

- Solidifying County relationship – new director creates new opportunities
- Supplement labor through supervised inmate crews
- Citizen groups not yet formally asked – receptive if engaged
- Large retired population willing to volunteer
- Engage youth: homeschooled students, elementary through college programs
- Community members are friendly and receptive at tabling events

Programs & Awareness

- Spin 'Adopt a Street' into 'Adopt a Tree'
- Gravel bed nursery as a local tree production resource
- Reframe trees as assets and part of the solution, not obstacles/competition
- Florida has a strong urban forestry network – learn from peer cities as models

THREATS

Political & Governance

- County has limited interaction with City staff and community and may not understand local needs
- Lack of major park upgrades dependent on County priorities and funding

Weather & Public Perception

- Unpredictable and severe weather damages trees and harms public perception of tree investment
- External social media can be very negative, undermining public support

External Stakeholder Input

POSITIVES	NEGATIVES
<ul style="list-style-type: none"> ▪ Strengths: What do you do well? What unique resources can you draw on? What do others see as your strengths? ▪ Opportunities: What opportunities are open to you? What trends could you take advantage of? How can you turn your strengths into opportunities? 	<ul style="list-style-type: none"> ▪ Weaknesses: What could you improve? Where do you have fewer resources than others? What are others likely to see as weaknesses? ▪ Threats: What threats could harm you? What threats do your weaknesses expose you to?

INTERNAL

STRENGTHS	WEAKNESSES
<p>Existing Foundation</p> <ul style="list-style-type: none"> • Tree City USA member since 2013 • 42.7-45.3% canopy coverage; large central wetland system anchors canopy • 2013 Master Plan and 2021 Canopy Assessment provide foundational data • 25% canopy requirement for new residential subdivisions • Low Impact Development (LID) ordinance with developer incentive matrix • Certified arborists on City staff • Public Landscape Trust Fund (~\$700K) funded by tree mitigation revenues • TEC expanded canopy protection, updated species lists, added multi-family coverage <p>Community Support</p> <ul style="list-style-type: none"> • Active organizations: TEC, Garden Club, Native Plant Society, Tree Team, Friends of Enchanted Forest • Tree Team planted 240 trees at no cost to City • Strong public advocacy for tree planting, preservation, sustainable development 	<p>Program Gaps</p> <ul style="list-style-type: none"> • No written urban forestry program • Tree City standards not truly met (no public tree care ordinance) • \$2/capita Tree City spend used for removal, not planting • 2013 and 2021 studies paid for with public funds but never implemented • No proactive public tree planting or street tree management program • LID remains voluntary <p>Resource Constraints</p> <ul style="list-style-type: none"> • Trust Fund diverted to I-95 gateway landscaping instead of urban forestry • Council won't commit funds until UFMP is completed; Mayor opposes urban forester hire • Certified arborists housed in understaffed planning dept with limited urban forestry capacity

EXTERNAL

OPPORTUNITIES	THREATS
<p>Planting Potential</p> <ul style="list-style-type: none"> • 27% plantable area citywide; multiple low-canopy public areas ready for trees 	<p>Political</p> <ul style="list-style-type: none"> • Council reluctant to fund UFMP; Mayor opposes urban forester expense

- Strategic tree placement near impervious surfaces reduces heat island, stormwater runoff, and energy costs
- City parks provide available planting sites

Funding & Partnerships

- Trust Fund could finance urban forester position if Council approves
- State and federal grants available for tree planting and canopy expansion
- Tree Team ready to partner on planting and community tree giveaways
- Pursuing public ownership of wetlands would protect and extend existing canopy

Growing Awareness

- Extreme weather (flood, freeze, drought) raised Council and public awareness of native trees' value
- Extreme weather creates momentum for climate resilience investment and native landscaping policy

- Florida 2025 legislation prohibits new development barriers, stalling TEC's updated protective ordinances

Development & Tree Loss

- Space Center-driven growth leading to clear-cutting of dune ridges and wetland buffers
- City Code permits residential tree removal without replacement
- Developers removing hundreds of acres, including trees considered 'protected' under current code

Environmental

- Outdated drainage system altering wetland hydrology, causing tree die-off
- Hurricanes, tropical storms, freezes, and drought threaten urban tree canopy

Appendix G – Example Urban Forestry Progress Report

CITY OF TITUSVILLE

Urban Forestry Progress Report

Fiscal Year [YEAR] | Prepared by [Department] | Reporting Period: [Dates]

OVERALL PROGRAM STATUS

[On Track]

[X] of 24 objectives On Track

PROGRAM SUMMARY

[To be completed by staff. High-level overview of the year, including main successes, areas needing attention, and the focus for the upcoming year.]

GOAL-BY-GOAL PERFORMANCE

Each goal grade reflects the percentage of objectives On Track. See the full UFMP for objective and KPI detail.

● ON TRACK

Action complete or going as planned; KPI being met.

▲ NEEDS ATTENTION

Delayed or trending below target.

■ NOT STARTED

Not begun within expected timeframe.

GOAL	OBJECTIVES ON TRACK	STATUS	HIGHLIGHT
Goal 1 Establish the Program Foundation	[X] of 5	[Status]	<i>[Placeholder: e.g., inventory underway; coordinator role designated]</i>
Goal 2 Build a Sustainable Urban Forestry Program	[X] of 5	[Status]	
Goal 3 Expand & Enhance the Tree Canopy	[X] of 4	[Status]	
Goal 4 Protect & Preserve Existing Trees	[X] of 2	[Status]	
Goal 5 Manage the Urban Forest for Environmental Health & Benefits	[X] of 4	[Status]	
Goal 6 Cultivate Community Stewardship, Education, & Equitable Access	[X] of 4	[Status]	

THIS YEAR'S PERFORMANCE VS LAST YEAR

Selected operational indication tracked annually – see Urban Forest Plan monitoring tables for all metrics.

METRIC	LAST FISCAL YR	THIS FY	CHANGE
Public trees planted	[X]	[X]	[+/-X]
Volunteer hours donated	[X]	[X]	[+/-X]
Proactive maintenance (% of work orders)	[X]%	[X]%	[+/-X % pts]
Public tree concerns reported & resolved	[X]	[X]	[+/-X]

LOOKING AHEAD: FY [NEXT YEAR]	GET INVOLVED
<ul style="list-style-type: none"> • [Key priorities] • • • 	<ul style="list-style-type: none"> • Plant a Tree: free trees available [date/location] • Volunteer: planting, watering, and events [link] • Report a Tree Concern: [link/phone] • Adopt-a-Tree: commit to caring for a City street tree [link]

3-30-300 EQUITY BENCHMARK *Next full update: 2030 (5-year cycle)*

3 trees from home 93.5% | 30% neighborhood canopy: 16/41 blocks | 300m to green space: 45.9%
(2025 baselines)

Questions? Contact [] | [email] | [website] | [phone]

The full Urban Forest Management Plan, including implementation and monitoring details, is available at [link](#).

Appendix H – Planting Potential Criteria

Maximum Tree Size Description:

- **Large trees (>50’ at mature height)** are a suitable choice for providing shade to large open spaces and for planting along streets if there is proper space above and below ground. Proper space is defined as no rooting constraints (e.g., curb or sidewalk 4 to 6’ or further away from mature tree trunk size) and no above ground limitation affecting normal growth. Also suitable for all tree sizes based on desired planting objective(s). Final choice based on additional sites conditions (e.g., soils, water limitations, pest issues).
- **Medium trees (30-50’ at mature height)** are suitable for sites where tree and potential growth met for the height and crown dimensions. Proper space is defined as no rooting constraints (e.g., curb or sidewalk 2 to 3’ or further away from mature tree trunk size) and no above ground limitation affecting normal growth.
- **Small trees (<30’ at mature height)** are often suggested for planting in downtown areas with limited soil space. Proper space is defined as no rooting constraints (e.g., curb or sidewalk 1 to 2’ or further away from mature tree trunk size) and no above ground limitation affecting normal growth.

Street Tree Spacing

- 15-20’ from a tree that is small in size at maturity (less than 30’ tall)
- 20-30’ from a tree that is medium in size at maturity (30 to 50’ tall)
- 30-40’ from a tree that is large in size at maturity (more than 50’ tall)

Table H-1. Potential tree decision matrix for planting assessment in Titusville.

Decision Criteria for Tree Size (Units in Feet)	Maximum Tree Size at Maturity		
	Small (<30’)	Medium (<50’)	Large (50’+)
Overhead wires	Acceptable	Unacceptable	Unacceptable
Minimum Horizontal distance from wires	Adjacent	> 25’+	> 50’+
Distance between sidewalk and curb	3 to < 5’	5 to < 8’	8’ +
Total planting area	50 to 150 ft ²	>150 to 300 ft ²	> 300 ft ² +
Minimum distance from Building/Structure	6’	8’	10’+
Street Tree Spacing Considerations for Minimum Distance Away From Infrastructure			
Water meter &/or utility box	5’	5’	5’
Residential driveway	5’	5’	5’
Non-traffic conducting signage	5’	5’	5’
Utility pole or light	5’	10’	15’
Fire hydrant	10’	10’	10’
Unregulated intersections	20’	20’	20’
Stop signs	30’	30’	30’
Commercial driveway or alley	30’	30’	30’
Intersection with traffic lights	40’	40’	40’

Keep in mind that these are minimum distances – actual site conditions will determine final tree selection. Increased spacing and setbacks will result in healthier trees with less potential for conflicts

Appendix I – Tree Inventory Approach Options

Tree inventories are a foundational tool for managing the urban forest. This appendix is intended to support the City’s procurement process for a public tree inventory by briefly outlining the primary inventory approaches available to municipalities. A complete inventory captures every relevant tree in an area of interest, such as a city’s street trees, whereas a sample inventory collects data on only a portion of the tree population and extrapolates results to the wider area (Miller et al., 2015). A third option is a planting site inventory, which is normally conducted alongside either approach to document locations where new trees could be established. The City should review these options in the context of its budget, staffing capacity, and intended use of the data before issuing a Request for Proposals.

Table I-1. Potential tree decision matrix for planting assessment in Titusville.

	Complete Inventory	Sample Inventory	Planting Site Inventory
What It Is	Tree-by-tree field assessment of every public tree within a defined scope (e.g., all right-of-ways and park trees).	Statistically designed assessment of a subset of trees used to estimate conditions across the population.	A field survey of vacant or suitable locations along rights-of-way and public lands where trees could be planted.
What It Contains	Species, DBH, condition, height, GPS location, maintenance, and risk rating each individual tree.	Estimated species composition, condition, and maintenance needs across the population – not individual tree records.	GPS location, site size, utility conflicts, adjacent land use, and recommended tree size.
Sampling Design	Not applicable.	Stratified: population divided into zones (e.g., land use or neighborhood) with random sampling in each stratum extrapolated city-wide. Simple: non-stratified random selection from full population; simpler but less precise.	Same as sample inventory. Can also be specified as collecting a certain amount of spaces within an area (e.g. 500 spaces in priority zone a).
Primary Uses	Operations and risk management.	Strategic planning and policy development.	Canopy growth planning and planting program targets.
Pros	Most detailed and actionable data; supports individual work orders; required for robust risk management; supports risk management program.	Lower cost and quicker than a complete inventory; sufficient for population estimates and high-level planning goals.	Identifies where canopy can grow; supports canopy goals; low incremental cost when conducted alongside a full or sample inventory.
Cons	Higher cost; more time-intensive; may require phased approach or grant funding.	No individual tree records; limits ability to schedule specific maintenance or track individual trees over time.	Standalone value is limited; most useful when paired with a tree inventory.
Typical Output	GIS database with individual tree records.	Summary statistics and population estimates.	GIS layer of potential planting locations with attribute data.

Appendix J – Public Landscape Trust Fund Language Updates

In updating the Trust Fund expenditure policy, the intent is to focus on enhancing Titusville’s tree canopy and limit use of the fund for landscaping purposes. Below are recommendations to consider based on best practices, community feedback, and Florida peer cities. The City should thoroughly review the suggestions and tailor them to their specific community needs.

1. Rename the fund

Current: *Public Landscape Trust Fund* Suggested: Urban Forest Trust Fund or Urban Canopy Trust Fund)

Why: "Landscape" is unclear and has historically authorized expenditures not directly tied to trees. A name change signals the City’s intent to spend on the canopy.

2. Replace the purpose statement in Resolution 30-2001, Section 2

Current: *"...be used to beautify publicly-owned or publicly-maintained property."*

Suggested: *"...be used to plant, establish, and maintain trees on public and eligible private property, with priority given to canopy replacement, low-canopy neighborhoods, and rights-of-way."*

3. Codify eligible expenditure categories

- Add language listing permitted uses:
- New tree planting on public property, rights-of-way, and parks managed by the City
- Site preparation and establishment care (watering, mulching, staking) for the new trees
- Private property grants and tree giveaways, prioritizing canopy replacement in low-canopy areas
- Acquisition of land or easements for tree planting and canopy preservation
- Urban forestry program staffing, equipment, and administration
- Pruning of City-owned and managed trees
- Professional services directly focused on urban forestry

4. Add an exclusion

"Fund expenditures shall not be used for general landscape beautification, ornamental plantings, or hardscape improvements unless such improvements are directly associated with tree planting establishment."

5. Require demonstration of connection

"Expenditures shall demonstrate a clear connection between the trees removed that generated mitigation revenues deposited into the Trust Fund and the trees planted or preserved, consistent with the City's Urban Forest Management Plan."

Appendix K – Action Implementation Table

Objective	Action	Lead	Partners	Time	Priority	Cost
GOAL 1: Establish the Program Foundation						
1.1 Complete a full or sample GIS-based inventory of public trees and vacant planting locations within 2 years, capturing species, condition, size, and location.	1.1.a Determine inventory scope and method (complete vs. sample approach)	Public Works; Community Development	GIS	Yr 1	High	\$
	1.1.b Start inventory procurement if awarded (FL Urban & Community Forestry grant); identify supplemental funding sources to cover any gap	Public Works; Community Development	Finance	Yr 1	High	\$
	1.1.c Develop inventory Request for Proposal specifications	Public Works; Community Development	Finance; GIS	Yr 1	High	\$
	1.1.d Conduct inventory and load into City GIS system	Public Works; Consultant	GIS	Yr 1-2	High	\$\$\$
1.2 Designate a staff role responsible for coordinating public tree management, maintenance, interagency communication, and UFMP reporting within 6 months.	1.2.a Review existing staff roles and identify options for designating urban forestry coordination responsibilities	City Manager; Public Works	Community Development	Yr 1	High	\$
	1.2.b Develop written role description documenting urban forestry coordination responsibilities and reporting structure	City Manager; HR	Public Works; Community Development	Yr 1	High	\$
	1.2.c Present designation options with recommendation to City Manager	Public Works	Community Development	Yr 1	High	\$
	1.2.d Designate role and document in City organizational structure	City Manager	HR	Yr 1	High	\$
1.3 Establish a GIS-based data management system for urban forestry within 2 years, integrating inventory records, planting logs, maintenance history, and resident requests/complaints.	1.3.a Assess existing GIS and identify options for urban forestry data management	GIS	Public Works	Yr 1	High	\$
	1.3.b Establish data layers and fields for inventory records, planting logs, maintenance history, and resident requests	GIS	Public Works	Yr 1-2	High	\$
	1.3.c Integrate citizen tree reporting mechanism into chosen GIS system	GIS	Community Development	Yr 2	Medium	\$\$
	1.3.d Train staff on GIS system use and establish data entry protocols	GIS	Public Works	Yr 2	High	\$
	1.3.e Review and update GIS system on 5-year cycle	GIS	Public Works	5-Year	Medium	\$

1.4 Establish a tree risk management program for public trees, including inspections of all trees every 5 years, annual inspection of trees classified as monitor, and mitigation of high and extreme risk trees within 30 days.	1.4.a Research tree risk assessment methodology (ISA, USDA) and develop protocols	Public Works	Community Development	Yr 1	High	\$
	1.4.b Train relevant staff in chosen tree risk assessment protocols	Public Works	Community Development	Yr 1-2	High	\$\$
	1.4.c Develop mitigation response standards for high and extreme risk public trees	Public Works	Community Development	Yr 1-2	High	\$
	1.4.d Start risk inspection program upon inventory completion	Public Works	GIS	Yr 2-3	High	\$\$
	1.4.e Track and report inspection completion rates and mitigation actions annually	Public Works	GIS	Annual	Medium	\$
1.5 Develop staffing plan to bring Titusville more in line with benchmark of 5.25 FTEs involved in managing municipal trees, with recommendations presented to the City Manager within a year.	1.5.a Develop staffing plan with options for reaching benchmark levels (new hires, reassignment, contractor support, technology solutions)	Public Works	HR; Finance	Yr 1	High	\$
	1.5.b Present staffing plan with recommendations to City Manager	Public Works	Community Development	Yr 1	High	\$

GOAL 2: Build a Sustainable Urban Forestry Program

2.1 Track the ratio of proactive vs. reactive tree maintenance annually, targeting 25% proactive by Year 2 and 75% by Year 5.	2.1.a Incorporate proactive vs. reactive categorization into work order system as GIS system is established (Obj 1.3)	Public Works	GIS	Yr 2	High	\$
	2.1.b Shift crew scheduling toward proactive maintenance as the scheduled maintenance cycle (Obj 2.2) starts, targeting 25% proactive by Yr 2 and 75% by Yr 5	Public Works		Yr 2-5	High	\$\$
	2.1.c Track proactive vs. reactive ratio annually through monitoring indicator	Public Works	GIS	Annual	Medium	\$

2.2 Develop a scheduled maintenance cycle for all inventoried public trees based on tree inventory findings and the 5-year tree inspection timeframe.	2.2.a Upon inventory completion, develop maintenance schedule prioritized by condition and risk rating	Public Works	Consultant	Yr 2-3	High	\$\$
	2.2.b Identify staffing, contract capacity, and funding needed for maintenance schedule	Public Works	Finance	Yr 2-3	High	\$
	2.2.c Implement scheduled maintenance cycle and track completion rate annually	Public Works		Yr 3+	High	\$\$\$\$
	2.2.d Review and update maintenance schedule following each 5-year inventory cycle	Public Works	GIS	5-Year	Medium	\$
2.3 Develop a Best Management Practices guide for public tree planting, maintenance, pruning, and removal consistent with ISA and ANSI A300 standards within 3 years.	2.3.a Draft BMP guide covering planting, pruning, maintenance, and removal standards using available industry resources	Public Works	Community Development	Yr 2	Medium	\$
	2.3.b Distribute BMP guide to City staff, contractors, and landscapers	Public Works	Community Development	Yr 2-3	Medium	\$
	2.3.c Review and update BMP guide at each 5-year cycle or when major ISA standard changes occur	Public Works		5-Year	Low	\$
2.4 Develop a long-term urban forest funding strategy within 2 years, including updated mitigation fees, LTF expenditure policy, and grant opportunities.	2.4.a Update LTF expenditure policy per 7.3 recommendations	Community Development	City Attorney	Yr 1	High	\$
	2.4.b Update mitigation fee schedule and bring to Council for adoption	Community Development	City Manager	Yr 1-2	High	\$
	2.4.c Identify and pursue state and federal grant opportunities annually	Community Development	Public Works	Annual	Medium	\$
	2.4.d Develop annual LTF report documenting revenues, expenditures, and grant activities	Finance	Community Development	Annual	Medium	\$
2.5 Develop and adopt an urban forestry storm plan, covering response and recovery, within 3 years.	2.5.a Review existing City emergency management and debris management plans for urban forestry integration opportunities	Public Works	Emergency Management	Yr 1-2	Medium	\$
	2.5.b Draft storm response and recovery plan covering inspection prioritization, debris protocols, and interagency coordination	Public Works	Community Development	Yr 2-3	Medium	\$\$
	2.5.c Coordinate with FPL and other utilities on post-storm tree response protocols	Public Works		Yr 2-3	Medium	\$
	2.5.d Adopt storm plan and distribute to relevant City departments	Public Works	City Manager	Yr 3	Medium	\$

2.5.e Review and update storm plan following any major storm event or at each 5-year cycle Public Works As Needed Low \$

GOAL 3: Expand & Enhance the Tree Canopy

3.1 Achieve a net increase in citywide canopy from 44.0% to X within 5 years with no net canopy loss in any census block.	3.1.a Meet canopy target of x% within 5 years through public planting (Obj 3.2), neighborhood planting plans (Obj 3.3), agency coordination (Obj 3.4), and residential assistance program (6.2)	Public Works	Community Development	Yr 1-5	High	\$\$\$\$
	3.1.b Identify and document significant canopy loss events (development, storm, disease) for tracking and mitigation	Public Works	Community Development	As Needed	High	\$
	3.1.c Track canopy cover by census block at each 5-year TCA cycle and flag any blocks showing net loss for targeted tree planting and giveaways	Public Works	Consultant	5-Year	High	\$\$\$
3.2 Increase number of trees planted on public property through City operations, volunteer and community group partnerships, and agreements with other agencies.	3.2.a Compile existing planting records and establish Year 1 planting baseline	Public Works	GIS	Yr 1	High	\$
	3.2.b Set annual planting targets based on inventory findings, available planting sites, and capacity	Public Works	Community Development	Yr 2	High	\$
	3.2.c Develop annual planting program including species selection, site preparation, and planting schedule	Public Works	Consultant	Yr 2-3	High	\$\$
	3.2.d Coordinate with Titusville Tree Team and community volunteers for supplemental planting events	Public Works	Community Development	Annual	Medium	\$
	3.2.e Track and report trees planted annually in GIS and by funding source	Public Works	GIS	Annual	Medium	\$
3.3 Develop planting plans, including species, amounts, and locations, for City-managed areas within 3 years.	3.3.a Develop neighborhood-level planting plans for highest-priority areas identified in TCA analysis	Public Works	Consultant	Yr 2-3	High	\$\$\$
	3.3.b Incorporate 3-30-300 equity analysis into planting plan prioritization, with emphasis on census blocks below 30% canopy threshold	Community Development	GIS; Public Works	Yr 2-3	High	\$
	3.3.c Update planting plans following each 5-year TCA cycle to reflect changed conditions	Public Works	GIS	5-Year	Medium	\$\$
3.4 Start coordination efforts with the County and FDOT within 2	3.4.a Identify County-managed parks and FDOT corridors within City limits where canopy enhancement is feasible and desirable	Community Development	GIS	Yr 1-2	Medium	\$

years to explore planting opportunities in County-managed parks and along State-managed roads within Titusville.

3.4.b Initiate coordination meetings with Brevard County Parks and FDOT to discuss planting opportunities	City Manager	Community Development	Yr 2	Medium	\$
3.4.c Pursue interlocal agreement or MOU with Brevard County for planting coordination in City-adjacent parks	Community Development	City Attorney; City Manager	Yr 2-3	Medium	\$
3.4.d Track coordination activities and plantings achieved through agency partnerships annually	Community Development	Public Works	Annual	Low	\$

GOAL 4: Protect & Preserve Existing Trees

4.1 No net loss of public trees on City-managed land, tracked annually.	4.1.a Establish protocol for tracking public tree removals	Community Development	Public Works	Yr 1	High	\$
	4.1.b Integrate public tree removal tracking into GIS system and work order records	GIS	Public Works; Community Development	Yr 1-2	High	\$
	4.1.c Require replacement planting for all City-initiated public tree removals and document replacement in GIS	Public Works	GIS	Ongoing	High	\$\$
	4.1.d Report net public tree gain or loss annually in urban forestry progress report	Public Works	GIS	Annual	Medium	\$
4.2 Strengthen tree protections and align the LTF with canopy goals through policy and ordinance updates per Chapter 7 Section 3 recommendations.	4.2.a Coordinate with Obj 2.4 LTF expenditure policy adoption to ensure tree protection and canopy priorities are reflected in eligible fund uses	Community Development	Finance	Yr 1	High	\$
	4.2.b Evaluate and pursue code updates per priority recommendations in 7.3, including soil volume, species diversity, construction protection, and stormwater integration	Community Development	City Attorney; Public Works	Yr 1-4	High	\$\$
	4.2.c Bring recommended ordinance revisions through Council adoption process per 7.3 implementation timeline	Community Development	City Manager	Yr 2-4	High	\$
	4.2.d Monitor adopted code effectiveness and flag issues at each 5-year review	Community Development	Public Works	5-Year	Low	\$

GOAL 5: Manage the Urban Forest for Environmental Health & Benefits

5.1 Increase the urban forest's stormwater interception, carbon, and air quality benefits relative to the 2025 TCA reported benefits.	5.1.a Conduct environmental benefits study using i-Tree Canopy or similar with each TCA cycle	Public Works	Consultant	5-Year	High	\$\$
	5.1.b Coordinate with Stormwater Utility program to identify opportunities to formalize tree-stormwater integration in capital project planning	Public Works	Stormwater; Community Development	Yr 2-3	Medium	\$
5.2 Increase species diversity in public tree plantings, where no single species exceeds 10%, genus 20%, or family 30% of the total City-managed public tree inventory.	5.2.a Upon inventory completion, assess current species composition and identify any existing monocultures	Public Works	Consultant	Yr 2	High	\$
	5.2.b Apply diversity standards to all planting plans and contractor specifications	Public Works		Ongoing	High	\$
	5.2.c Track species composition in GIS annually; flag species, genus, families over 10/20/30% diversity threshold	Public Works	GIS	Annual	Medium	\$
5.3 Plant 50% native species in all new public tree plantings starting next planting season, with 25% minimum wildlife value species (identified in UFMP species guide).	5.3.a Establish native species and wildlife/pollinator value criteria for tracking using the approved plant list and UF/IFAS guidance	Public Works	Community Development	Yr 1	High	\$
	5.3.b Ensure species selected for all City-led planting programs meet native and wildlife criteria to the extent practicable	Public Works		Ongoing	High	\$
	5.3.c Track and report species composition and wildlife value percentages of new plantings annually	Public Works	GIS	Annual	Medium	\$
	5.3.d Review and update approved plant list to reflect climate adaptation needs and emerging species guidance every 5 years, or when notable UF/IFAS updates occur	Community Development	Consultant	5-Year	Low	\$
5.4 Increase tree canopy shade in high heat index census blocks identified in the TCA, prioritizing streets and pedestrian corridors.	5.4.a Develop heat-priority planting list of large-canopy species suited to street and corridor conditions	Public Works	Community Development; Consultant	Yr 1-2	High	\$
	5.4.b Incorporate heat index priority areas into annual planting program and planting plans developed under Objective 3.3	Public Works	GIS	Yr 2-3	High	\$
	5.4.c Track and report number of trees planted in high heat census blocks annually	Public Works	GIS	Annual	Medium	\$

GOAL 6: Cultivate Community Stewardship, Education, & Equitable Access

6.1 Engage a minimum of 50 volunteers, partner organizations, or educational groups in urban forestry activities annually by Year 2, building on existing partnerships with the Titusville Tree Team, local garden clubs, and area schools.	6.1.a Inventory existing volunteer and partner relationships and establish baseline engagement numbers in Year 1	Community Development	Public Works	Yr 1	High	\$
	6.1.b Develop annual volunteer engagement calendar including planting events, educational programming, and stewardship activities	Community Development	Tree Team	Yr 1-2	High	\$
	6.1.c Develop an Adopt-a-Tree program for residents and community groups to commit to the care of designated City street trees, including watering, weeding, mulching, and monitoring	Community Development	Public Works	Yr 2	Medium	\$\$
	6.1.d Explore development of a commemorative or memorial tree program	Community Development	Public Works; Finance	Yr 2	Medium	\$
	6.1.e Establish partnership agreements or MOUs with key community organizations including Tree Team	Community Development	City Manager	Yr 2	Medium	\$
	6.1.f Recruit school and youth group participation in urban forestry programming	Community Development	Schools; Tree Team	Yr 2-3	Medium	\$
	6.1.g Track and report volunteer events, participants, and hours donated annually	Community Development		Annual	Medium	\$
6.2 Launch a residential urban forestry assistance program within 3 years, with partial funding from the LTF, focused on priority equity areas. Distribute a minimum of 50 trees and include guidance on planting, species selection, and follow-up care.	6.2.a Ensure LTF expenditure policy (Obj 2.4) establishes private property planting grants as an eligible use per Chapter 7 Section 3.	Community Development	City Attorney	Yr 1-2	High	\$
	6.2.b Design residential assistance program including eligibility, services offered, application process, and technical assistance provided by the City or partners	Community Development	Public Works; Tree Team	Yr 2	High	\$
	6.2.c Use TCA equity analysis and 3-30-300 threshold data to identify and prioritize program target areas	Community Development		Yr 2	High	\$
	6.2.d Pilot program in highest-priority census blocks	Community Development	Tree Team	Yr 2-3	High	\$\$\$
	6.2.e Evaluate pilot outcomes and adjust program based on funding and demand	Community Development	Finance	Yr 3+	Medium	\$
	6.2.f Track participants, trees distributed, and locations annually; report percentage in priority equity areas	Community Development	GIS	Annual	Medium	\$
6.3 Ensure the majority of residents can access tree care	6.3.a Establish dedicated urban forestry web page on City website with reporting link, resources, and program information	Community Development	IT	Yr 1	High	\$

and urban forestry resources and know how to report tree concerns to the City.	6.3.b Develop and distribute public tree reporting mechanism (online form, phone line, or integrated with existing 311 system)	Community Development	IT	Yr 1	High	\$
	6.3.c Launch public awareness campaign through City social media, email newsletter, and community events	Community Development		Yr 1-2	High	\$
	6.3.d Integrate urban forestry awareness into existing City communications channels and community events	Community Development		Ongoing	Medium	\$
	6.3.e Measure public awareness in community surveys; reduce inability to identify reporting channels from 41% survey baseline	Community Development		Yr 2+	Medium	\$
6.4 Publish an annual staff-evaluated urban forestry progress report that assesses performance related to KPIs and make it publicly available.	6.4.a Compile annual monitoring data from implementation monitoring tables across all six goals	Public Works	Community Development	Annual	High	\$
	6.4.b Calculate goal and overall program grades using On Track percentage methodology	Community Development		Annual	High	\$
	6.4.c Prepare progress report using adopted template; update all placeholders with current year data	Community Development	Public Works	Annual	High	\$
	6.4.d Present progress report to TEC and City Council as part of annual urban forestry reporting	Community Development	City Manager	Annual	High	\$
	6.4.e Publish progress report on City website and distribute through community channels	Community Development	IT	Annual	High	\$

