



CITY OF TITUSVILLE

TITUSVILLE ENVIRONMENTAL COMMISSION

AGENDA

Regular Meeting

January 15, 2025 - 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 November 13, 2024

Approve Minutes

6. PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT (NON-AGENDA ITEMS)

7. OLD BUSINESS

- A. Natural Resources Public Engagement Project Report of Draft Recommendations

Recommend approval of the natural resources report to City Council.

8. NEW BUSINESS

9. PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

10. REPORTS

- A. **Staff Report - Draft ordinances**

Discuss and provide input on the draft ordinances.

11. 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 COUNCIL

To: Members of the Titusville Environmental Commission
From: Brad Parrish, Community Development Director
Subject: **Minutes November 13, 2024**
Department/Office: Planning

Recommended Action:

Approve Minutes

Summary Explanation & Background:

Alternatives:

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

1. 11.13.24 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, November 13, 2024, at 5:30pm.

XXX

Chairwoman Laurilee Thompson called the meeting to order at 5:30pm. Present were, Vice Chairman Michael Myjak, Member Hector Delgado, Member Thomas Perez, Member Beth Ann Tucker, Member Yvette Flis. Alternate Member William Young and Alternate Member Joshua Koci were absent. Staff present were Principal Planner Eddy Galindo and Recording Secretary Laurie Dargie.

XXX

Chairwoman Thompson requested that item 10A Reports be heard after item 6A Petitions & Requests on the agenda tonight. The Titusville Environmental Commission members agreed to this change.

XXX

Member Perez made a motion to approve the September 11, 2024 meeting minutes. Member Flis seconded. There was a unanimous voice vote in favor.

XXX

Petitions and Requests from Public Present

Stan Johnston of Titusville, Florida came to speak about his concerns with the fountains in stormwater ponds spraying sewage into the air and onto the public. Mr. Johnston read from an email that he sent out pertaining to his concerns. Mr. Johnston's speaking time was extended by one minute. Mr. Johnston asked the Titusville Environmental Commission to do something about this.

Chairwoman Thompson said that the Titusville Environmental Commission has made recommendations to City Council to have the fountains turned off if sewage is detected and to contact the Department of Environmental Protection to find out their policies regarding fountain use in stormwater ponds during sewage spills. Chairwoman Thompson said that she herself spoke

to City Council about these concerns, therefore in response to Mr. Johnston, his concerns have already been brought up to City Council.

Kay St. Ong of Titusville, Florida made a clarification in response to Mr. Johnston stating that Council Woman Jolynn Nelson is being replaced, Ms. St. Onge said she will remain as a Council person for two more years.

Member Delgado stated that the Titusville Environmental Commission made their recommendation to City Council regarding the stormwater sewage spill in September 2023.

Vice Chairman Myjak said that he would like for the Titusville Environmental Commission to have discussion regarding using bubblers in stormwater ponds in place of or in addition to fountains.

Toni Shifalo of Titusville, Florida presented a Plantings in the Park photo booklet to Kay St. Onge.

Kay St. Onge of Titusville, Florida came to speak about reef arches and encouraged the Titusville Environmental Commission to research the use of the reef arches.

XXX

Reports

Principal Planner Eddy Galindo said that staff is presenting the Commission with four draft ordinances and requesting “big picture” feedback as to whether they feel that staff is moving in the right direction for each ordinance.

Critical Root Zone (CRZ) Draft Ordinance Version 1

Mr. Galindo provided an overview of this item.

Mary Sphar of Cocoa, Florida came to speak about this item. Ms. Sphar provided a handout to the Commission. Ms. Sphar voiced her concerns with how the ordinance reads with creating a larger Critical Root Zone (CRZ) zone and cautioned the Commission to have a proper understanding of what the ordinance means.

Chairwoman Thompson provided a handout, which is an email from Michael Browning with his recommendations on the CRZ. Chairwoman Thompson said that Mr. Browning’s recommendations help bring the ordinance up to International Society of Arboriculture (ISA) standards.

Michael Browning of Titusville, Florida made comments relating to the CRZ from his email. Mr. Browning suggested that the TEC look to at least codify minimum ISA standards to protect trees. Member Delgado suggested that there be a city staff member who would work closely with the developers to help educate them on how to develop around critical root zones.

Mary Sphar of Cocoa, Florida suggested that there might be separate criteria for larger trees that have a large CRZ.

James Troutman of Titusville, Florida asked if the ordinance uses the word “should” or “shall”. Chairwoman Thompson stated that it uses “shall” in Section 3.

XXX

Member Myjak made a motion to recommend to city staff that Michael Browning’s recommendations that are in the email that Chairwoman Thompson provided at this November 13, 2024 Titusville Environmental Commission meeting be incorporated into the Critical Root Zone draft Ordinance. Member Flis seconded. There was a unanimous voice vote in favor.

XXX

Multifamily Canopy Draft Ordinance Version 2

Mr. Galindo provided an overview of this item.

Kay St. Onge of Titusville, Florida said she was in favor of this draft ordinance.

Mary Sphar of Cocoa, Florida brought up a concern with punctuation and inclusion of the word “and” in the ordinance on page 35 of the agenda packet.

The Titusville Environmental Commission had discussion.

XXX

Vice Chairman Myjak made a motion to recommend to city staff that the following language be removed from all places used in the draft ordinance: “(except projects with a single duplex unit)” and to eliminate the comma used in the language “including townhomes, multifamily projects” and replacing the comma with the word “and”. Member Flis seconded. There was a unanimous voice vote in favor.

XXX

Native Plant Draft Ordinance Version 2

Mr. Galindo gave an overview of this item.

Kay St. Onge of Titusville, Florida said she was in favor of this draft ordinance.

The Titusville Environmental Commission had discussions relating to using Brevard native only, correcting a scrivener error on page 40 of the agenda packet, (removing “Other areas” from end of (2) paragraph), and using 50% Brevard native.

Michael Browning of Titusville, Florida said that it should be very clearly stated as to what is expected for the Brevard native plantings, and to make a distinction of having mandatory 50% native trees and 50% native vegetation if that is what is being intended.

XXX

Chairwoman Thompson stated that the Titusville Environmental Commission’s recommendations to staff are that in the eight places where it talks about Brevard native trees, the word “Florida” native is removed leaving Brevard native only and everywhere there is shrubs, ground covers and grasses are mentioned, they want added to the language that says “50% Brevard native is required”.

Vice Chairman Myjak suggested that there be incentives for anyone who plants more than 50% Brevard native. Member Myjak suggested maybe a reduction to stormwater fees as an incentive for planting 80% Brevard natives.

Kay St. Onge of Titusville, Florida asked that the Commission not forget about the perennials.

XXX

Artificial Turf Draft Ordinance Version 3

Mr. Galindo provided an overview of this item.

Toni Shifalo of Titusville, Florida came to speak against this ordinance.

Kay St. Onge of Titusville, Florida came to speak against this ordinance.

Mr. Galindo stated that staff continues to receive requests for artificial turf and staff informs the public that it is prohibited and they would need to request a variance. The issue is that there are no standards as to the quality of the turf, location, etc. that can be used. Staff are looking to have

standards available for when it is allowed in certain areas. This is a policy decision by the City Council as to whether to adopt this ordinance.

Member Perez stated he is against all artificial turfs being used in Titusville.

Chairwoman Thompson referred to the report received from city staff that stated the direction from City Council to city staff for advisability directing staff to evaluate the use of synthetic or artificial turf in lawns and to propose an amendment to the Land Development Regulations (LDR) where applicable. Direction might provide clarity on the existing code regulations or expand its use in landscaping with criteria.

Toni Shifalo of Titusville, Florida stated that the towns using this are suburbs of Miami. Ms. Shifalo said that maybe the standards should be provided when a variance is granted.

Chairwoman Thompson stated that all references to artificial turf being anywhere near the Indian River Lagoon and any body of water be removed from the ordinance.

Vice Chairman Myjak asked Mr. Galindo if a Conditional Use Permit could be required when requesting to use artificial turf. Mr. Galindo said that artificial turf is not written out as a “use”, it is written out as a landscape material. This would need to be changed in the Land Development Code and be called out as a “use” for a Conditional Use Permit to be required. Mr. Galindo said that this can be researched. Vice Chairman Myjak suggested looking into making this a Conditional Use Permit.

The Titusville Environmental Commission all agreed that they do not want artificial turf used anywhere near bodies of water.

XXX

Mr. Galindo said that the new Sustainability Coordinator will start with the city in December and will attend the January 15, 2025, Titusville Environmental Commission meeting.

Chairwoman Thompson said that the Natural Resources Public Engagement Report will be heard at the January 15, 2025, Titusville Environmental Commission meeting.

XXX

Old Business

Native Municipal Tree, Canopy and Landscape Management Trust Fund

Vice Chairman Myjak said that what needs to be discussed is how the mechanics of this ordinance will work.

Chairwoman Thompson said that an entire meeting should be dedicated to this discussion.

XXX

Vice Chairman Myjak made a motion to table the Native Municipal Tree, Canopy and Landscape Management Trust Fund to the February 12, 2025, Titusville Environmental Commission meeting. Member Flis seconded. There was a unanimous voice vote in favor.

XXX

New Business

Election of Officers

Member Flis nominated Michael Myjak to be Chairman and Laurilee Thompson to be Vice Chairman. Member Perez seconded. There was a unanimous voice vote in favor.

XXX

Petitions & Requests from Public Present

Mary Sphar of Cocoa, Florida came to ask Mr. Galindo when the Parks & Open Space Ordinance will be presented. Mr. Galindo said that staff are working on this draft ordinance and will be meeting on it next week to determine whether it is ready to be presented in the coming months.

XXX

Discussion of Future Agenda Items

1. Discuss fountain functionality and the use of bubblers in stormwater ponds etc.

XXX

Reports

Member Delgado said he would like to request a leave of absence from City Council for January and February 2025 Titusville Environmental Commission meetings. Mr. Galindo advised Member Delgado to send an email to staff in writing with his request to be presented to the City Council.

Vice Chairman Myjak said he has an article that was sent to the Commission about the role of trees in urban stormwater management. He spoke about the article and said it is available on the 1000 Friends of Florida website 1000fof.org.

Member Delgado spoke about the extreme flooding in Spain and how the removal of trees increased the problems of flooding.

Chairwoman Thompson said she attended the Marine Resource Council Conference last week on Low Impact Development regarding coastal resiliency, living shorelines, and stormwater and it was the best conference she's been to from them.

XXX

Adjournment 8:05 p.m.

City of Titusville
"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Members of the Titusville Environmental Commission
From: Brad Parrish, Community Development Director
Subject: Natural Resources Public Engagement Project Report of Draft Recommendations
Department/Office: Community Development

Recommended Action:

Recommend approval of the natural resources report to City Council.

Summary Explanation & Background:

In 2017-2020 the City of Titusville completed a partial update of the Comprehensive Plan, known as *Titusville Tomorrow*. Due to significant deliberations over proposed changes to the natural resources policies in the plan, these recommendations were not adopted by the City Council. Instead, Council determined that further public discourse was needed to understand the community's thoughts and ideas related to natural resource protection. This report documents public engagement aimed to determine how the City can prioritize natural resource protection within the horizon of the Comprehensive Plan.

Inspire Placemaking Collective (Inspire) was hired by the City to help facilitate the discussion with the TEC and community. This project consisted of a kick-off meeting and extensive data collection, a website with a public survey and idea wall, interviews with TEC members, and a public workshop. The report summarizes the public engagement effort and includes long-term strategies to amend the City's comprehensive plan, standards and programs.

On September 11, 2024, the TEC reviewed the report and provided several recommendations. The consultant updated the report and submitted the final draft. The staff subsequently made changes to some of the recommendations and explanatory language in the report. In addition, the staff added to the report references to strategies from the City's Sustainability Action Plan (SAP). Enclosed for the TEC's review and approval is the final draft with revisions.

Alternatives:

- Recommend approval of the natural resources report to City Council with changes.
- Do not recommend approval of the natural resources report to City Council.

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Goal 1: Quality of Life. (a) Continue initiatives and measure actions using the BMAP to improve the IRL. (f) Ensure the quality of drinking water.

Goal 2: Efficient & Effective Services. (a) Commit to funding Capital Improvement Plan, including infrastructure. (b) Continue partnerships and coordination with public, private and nonprofit entities. (c) Continue implementation of the Sustainability Action Plan.

Goal 6: Community Design. (a) Preserve wetlands. (c) Encourage managed growth using low impact development principles as a means of developing an attractive built environment while protecting and conserving natural resources and green space.

Strategic Plan Impact:

ATTACHMENTS:

1. Titusville_Nat_Res_Report_010225
2. bridge photos

TITUSVILLE

NATURAL RESOURCES

PUBLIC ENGAGEMENT SUMMARY AND RECOMMENDED STRATEGIES





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EXECUTIVE SUMMARY



During 2017-2020 the City of Titusville completed a partial update of the Comprehensive Plan, known as TitusvilleTomorrow. Due to significant deliberation over proposed changes to the natural resources policies in the plan, these recommendations did not get adopted by the City Council. Instead, Council determined that further public discourse was needed to understand the community's thoughts and ideas related to natural resource protection. This report documents public engagement aimed to determine how the City can prioritize natural resource protection within the horizon of the Comprehensive Plan.

Inspire Placemaking Collective (Inspire) was hired by the City to help facilitate the discussion with the Titusville community. Along with City Staff, Inspire provided multiple outlets for the community to provide input on natural resource protection. The public engagement plan included a project specific engagement focused website, interview sessions with all Titusville Environmental Commission (TEC) members, an Open House where participants could provide strategies on specific Titusville centric issues/concerns, a TEC workshop where public input was heard, and a final workshop with the TEC to unveil draft recommendations generated from the process. Section 2 of the report provides a recap of the public engagement activities and their outcomes. Section 3 provides more context and information regarding focused topic areas utilized during the public open house. Section 4 provides recommendations and potential strategies, which can be found at the end of the report.

The public engagement strategy was developed to be an accumulation of efforts. Each engagement was built of the outcomes of the prior activities, so each activity included custom material based solely on the community's thoughts, ideas, and concerns. The following topic areas were synthesized from the online survey and initial interview sessions:

1. Water Quality and the Indian River Lagoon
2. Aging Infrastructure
3. Tree Canopy and Preservation
4. Land Acquisition and Conservation
5. Wetland and Floodplain Regulations

While the list of topic areas is not in order of prioritization, if a priority were to be identified, protecting and restoring the Indian River Lagoon would be at the top. Many of the specific issues described in this report are, to a degree, being addressed by the City today. However, in some cases the TEC and community members would like to see more restrictions in place to effectuate a better outcome. For example, our data indicate that the community would like to see Low Impact Development (LID) required rather than encouraged, stiffer penalties for violating tree protection regulations, spending more on land acquisition, and require Florida-Friendly landscaping. Many of the recommendations and





strategies provided reflect the community's desire to strengthen the existing policies, while other strategies would be new to the City. These recommendations come with implementation and future considerations to enable the City to implement such changes.

SUMMARY OF PUBLIC ENGAGEMENT



To understand what changes the community wanted to see within the City as it relates to natural resource protection, engaging and listening to the public was a critical step. The public engagement process included interviews with each member of the Titusville Environmental Commission (TEC), a community engagement project website, a public Open House, and a TEC workshop which was open to the public. A description and summary of each engagement is provided below.

Titusville Environmental Commission Interviews

April 18, 2024

On April 18th, Inspire Placemaking Collective, Exum Associates, and City Staff conducted interviews with 8 members of the TEC at City Hall. An additional interview with the 9th commissioner was conducted virtually on May 3rd. Interview questions and responses are summarized below:

1. Tell us about your background regarding natural resources and your involvement with the TEC. Do you have interest in a specific topic related to natural resources in the City?

Although commissioners discussed a wide range of interests related to natural resources, common themes included water quality, infrastructure, tree canopy and clear cutting, land use and communication with the public. Water quality and freshwater discharge into the Indian River Lagoon (IRL) emerged as pressing concerns, in addition to adequate sewer capacity, flooding, and stormwater. Compact growth and better transportation connectivity near the Downtown area were also discussed.

2. What do you think the City does well related to natural resource protection?

Through projects like its baffle box installation program, Titusville has exceeded 2025 milestones for Nitrogen and Phosphorus reduction set in the North Indian River Lagoon Basin Management Action Plan. The living shoreline efforts, parks system, and river cleanup are also strengths for which the City should be commended.

3. What do you think the City needs to improve related to natural resource protection?

The City needs to focus on conservation/land acquisition and potentially create a wetland mitigation bank. Exemptions for clear cutting threaten Titusville's designation as a Tree City. Stormwater drainage, freshwater runoff into the IRL, and the sewer system need to be addressed. Communication and transparency could also be improved particularly related to health, safety and welfare concerns.

4. What do you feel are the biggest opportunities that the City could engage in related to natural resource protection?

The City could consider building a large stormwater treatment center on the west end and focus on more pedestrian friendly infrastructure. Tree preservation and water quality could also be improved.

5. What do you think are the top 3 priorities that the City should focus on related to natural resource protection?

Although answers varied from one commissioner to the next, common threads included water quality, the IRL, stormwater, flooding, sewage, tree protection, accountability, and communication.

6. Do you have any specific suggestions for projects or partnerships that could improve natural resources in, or near, the city?

Potential partnerships include NASA, Space Florida, the commercial space industry, a citizen-led Titusville Tree Team, Titusville Garden Tree Club, the Water Management District and the Brevard County Parks Department. Potential projects include additional testing at sewer plants and outfalls into the IRL, redirecting freshwater from IRL, and connecting greenspace and wetlands.

7. Is there any additional information you would like us to know?

Aging road and sewer infrastructure, Low Impact Development (LID), and increased connectivity for trails and bike lanes were additional areas of interest among the TEC.

Online Engagement

The project website launched on April 25, 2024 and provided residents with the project background and offered two forums where residents could provide feedback, the community idea wall and online survey. The community idea wall allowed participants to post ideas and comment on and like each other's ideas. Participants could share thoughts, pictures or links to express their opinions. The survey included ten questions that asked responders to provide insight on what natural resource protections/programs the participants think the city needs to prioritize and areas where the city should concentrate resources. Below, **Figures 1-5**, are the highlights of some of the online engagement. The specific results of each question can be found in the appendix.

Over the course of four months, the project had 83 respondents. Most of the respondents agreed that the city should do more to protect its Natural Resources, as shown in **Figure 1**. When asked to elaborate and provide reasons as to why the city does not do enough to protect its natural resources, respondents indicated sewage spills, clear cutting, and the IRL's poor water quality. Additionally, when asked if community members wanted the City to enforce stricter regulation than the St Johns Water Management district, **Figure 3**, almost 70% of survey responders said yes and another 20% were unsure.

As shown in **Figure 2** wetland protection, land acquisition, and improving stormwater runoff were the top three priorities respondents believed the City should prioritize. These themes also emerged when

asking survey respondents, **Figure 4**, where the City should prioritize funding. The top projects were improving the IRL water quality, wildlife habitat conservation/land acquisition, and enhancing wetland protection. The City along with many of their partnerships, has taken step to enhance the City's natural resources by creating the Draa Stormwater Park and adopting Low Impact Development Ordinance. **Figure 5** shows which initiatives community members believe has positively impacted the City's Natural Environment.

Figure 1: Do you think the City does enough to sufficiently protect natural resources?

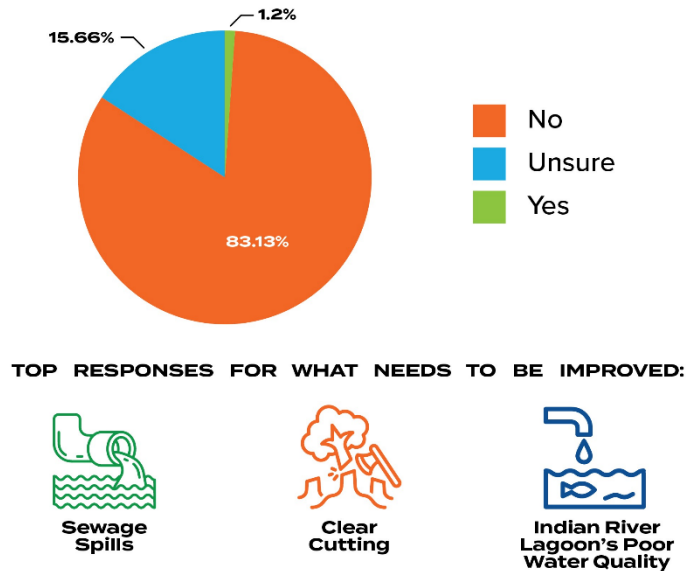


Figure 2: Select up to three initiatives the City should prioritize to protect natural resources. These are the top 5 results



Figure 3 Should the City provide more stringent wetland protection regulations than the St. Johns River Water Management District?

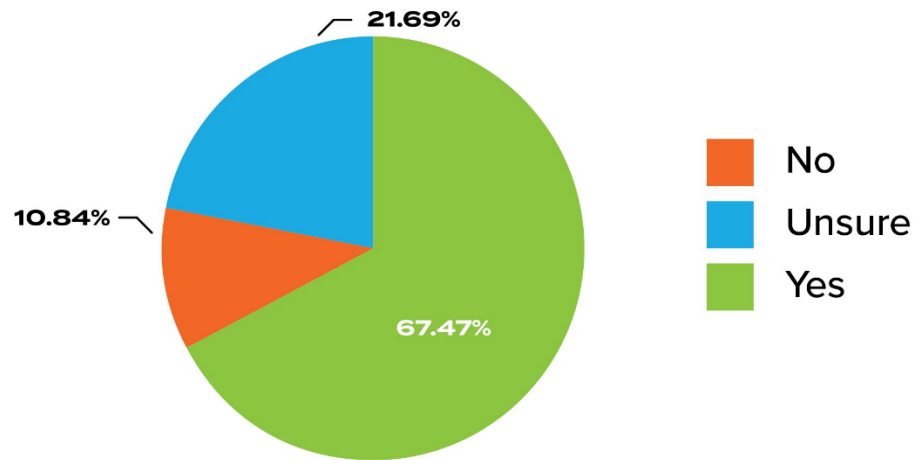


Figure 4: Rank the natural resource projects/programs the City should prioritize funding in the next 10-20 years

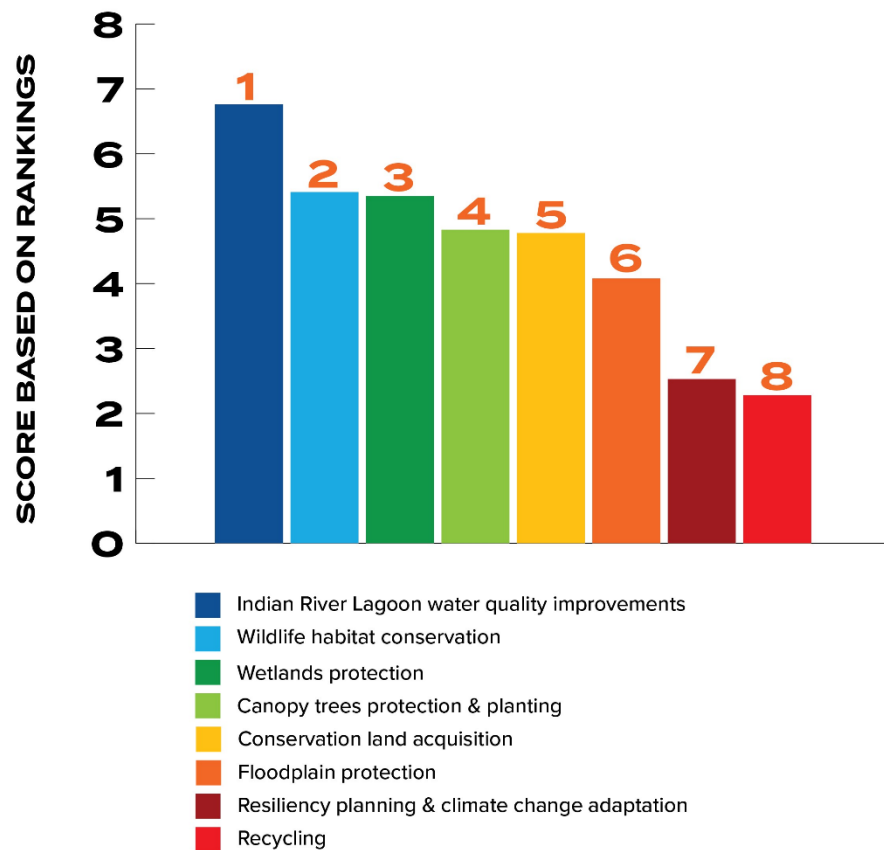
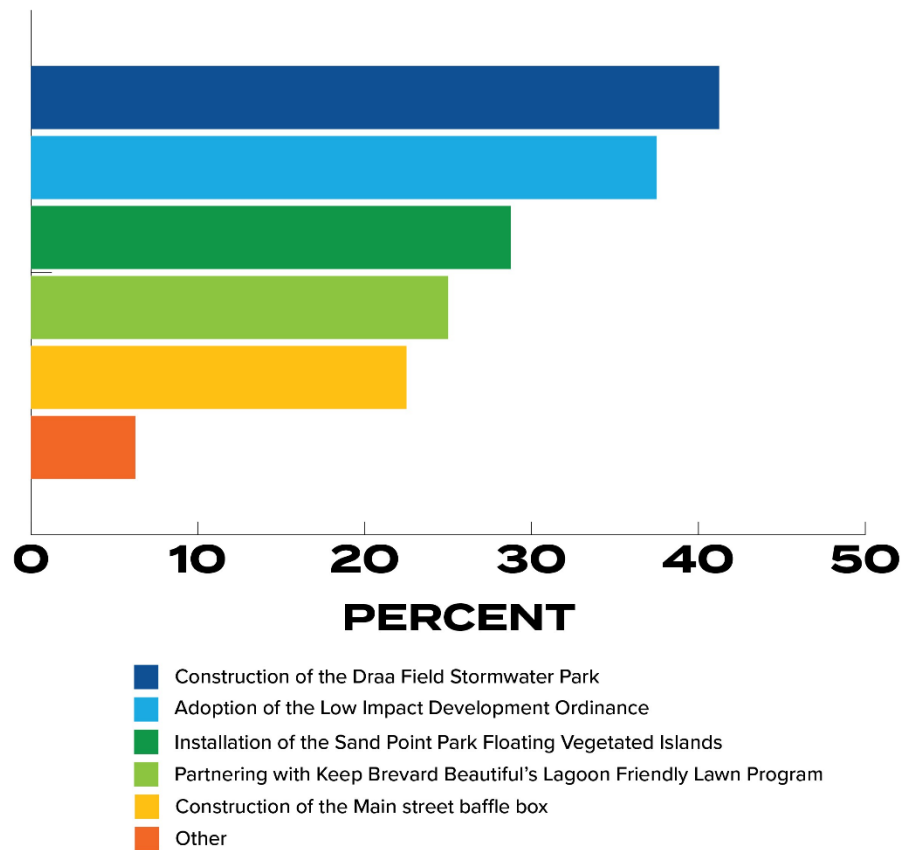


Figure 5 Which recently completed City project(s) do you feel benefits the environment the most?



Open House

May 30, 2024

On the evening of Thursday, May 30, 2024, Inspire and Exum Associates returned to Titusville City Hall with the purpose of gauging the community's concerns and goals related to natural resources, and developing proactive strategies based on five topic areas that would become the basis for updating the comprehensive plan. These five topic areas were crafted from the interviews and initial website results. The open house consisted of a brief presentation, which advertised our interactive project website and summarized the existing responses, followed by a participant-led breakout exercise which accounted for most of



the evening. Attendees were divided into three groups and given 12 minutes to develop recommendations related to each of the following topic areas:

- Water Quality and the Indian River Lagoon
- Aging Infrastructure
- Tree Canopy and Preservation
- Land Acquisition and Conservation
- Wetland and Floodplain Regulations

After the strategy development exercise was completed, participants were provided with stickers and asked to choose their top 20 strategies with no restrictions on how to allocate their stickers. The top-ranked strategies from each category are as follows:



Water Quality and Indian River Lagoon

- Half-cent sales tax to buy and maintain shoreline and collection of stormwater parks (18 votes)
- Reduce/address fresh water entering the lagoon (13)
- Partner with federal agencies to restore inflow of seawater (12)
- Bond referendum to preserve and acquire natural shoreline (5 votes)
- Maximize opportunities to partner with SOIRL and other agencies (5)

- Increase public outreach/education about water quality/restoration projects (social media) (5)

Wetland and Floodplain Regulations

- Don't allow conversion of conservation land use (9)
- Correct past mistakes through re-development (9)
- Assess total size of wetland rather than size of wetland on parcel (7)
- Educate the general public about wetlands (5)
- Recreate the natural flow/restore hydrology of IRL (5)

Land Acquisition and Conservation

- Stop rezoning areas that are designated as open space + recreation (21)
- Stop rezoning areas that are stormwater drainage (16)
- Create a connected green space master plan (7)
- Acquire wetlands greater than 5 acres in the city (4)
- Create a Titusville Park program in order to maintain parks (4)
- Seek partnerships (EELS, county, and other agencies) (4)



Aging Infrastructure

- Long-range study on existing aging infrastructure and the demands of new development (12)
- Charge significant impact fees for new development (11)
- Increase communications (7)
- Survey, assess, and quantify current infrastructure (6)
- Increase funding to fix infrastructure independent of development (3)
- Maintain wetland area (3)
- Investigate potential funding sources for infrastructure conditions studies (3)

Tree Canopy and Preservation

- Require tree canopy areas for multifamily developments (7)
- Increase tree fines significantly (7)
- Increase native plantings (6)
- Establish urban forestry program in comprehensive plan (6)
- Use the tree mitigation fund to plant trees not hardscape (5)

Titusville Environmental Commission Workshop

June 12, 2024

On Wednesday, June 12, 2024, the City of Titusville’s Environmental Commission held a special workshop in place of their regular monthly meeting, during which Inspire presented their findings from the project website as well as the open house. Commissioners and members of the public gave additional input on the themes outlined above, including new strategies that could be incorporated into the Conservation and Coastal Management elements of the Comprehensive Plan. Water quality proved to be an especially pressing topic; in particular, there is a strong concern about the potential for contamination in the IRL. Existing regulations of the St. John’s River Water Management District related to the volume of stormwater discharge are insufficient; the City should take a proactive role in pursuing higher goals and standards for factors that impact the IRL, such as LID. Stormwater should be diverted from the IRL through maintenance of the culverts under I-95 and conservation of wetlands, which store stormwater. The city should consider partnering with state and federal agencies as well as pursuing grant funding to implement measures to reduce stormwater discharge. Additional sample stations and more frequent water quality testing is needed, particularly at stormwater outfalls. Some of the water quality tests should include micro toxins and perfluoroalkyl and polyfluoroalkyl substances (PFAS - “forever chemicals”).

To adequately update aging infrastructure, participants suggested evaluating population growth, particularly in light of the Live Local Act, increasing wastewater treatment capacity and pursuing Build Back Better grants. New construction fees are preferable to increased property taxes as a funding source for infrastructure improvements.

The current tree ordinance is considered inadequate and should be strengthened to include 6” diameter trees. The city should require and/or incentivize new plantings of native species and follow ANSI A300/ISA minimum standards for tree preservation, which are roughly twice the current municipal standards. Additionally, the tree survey should document smaller trees.

In terms of land acquisition, suggestions included seeking grant funding, creating a stormwater park in the Royal Oaks Golf Course Area, conserving lands adjacent to wetlands of five or more acres and targeting areas of critical concern. Lastly, the Future Land Use and Conservation Elements contain a number of conflicting regulations and loopholes, which should be addressed.

Throughout the workshop, participants emphasized the importance of public education and engagement on natural resources, particularly regarding the value of wetlands and pollution in the IRL. Recommendations included utilizing social media and increased communication and transparency from the municipal government, such as through the consistent broadcasting of the TEC meetings.

TOPIC AREAS & FINDINGS



After the initial interviews with the TEC, initial survey responses, and review of existing City plans and projects, five topic areas became quite clear. The five focus areas include Water Quality and the Indian River Lagoon, Aging Infrastructure, Tree Canopy and Tree Preservation, Land Acquisition and Conservation, and Wetland and Floodplain Regulations.

Water Quality and Indian River Lagoon

The water quality of the IRL has been degrading over time and many longtime Titusville residents have noticed the changes. The IRL has seen a loss of fish populations and a loss of seagrass. Algae blooms, high nutrient runoff from wastewater and stormwater affect water quality within the IRL. Initiatives such as the 2016 sales tax referendum, Save Our Indian River Lagoon (SOIRL), have provided funding for projects that remove and prevent pollutants from entering the IRL, with the goal of restoring water quality.



From the onset of launching the public engagement process, the primary concern for community members has been the IRL and initiatives to improve its water quality. Some residents suggest that more testing and communicating results is needed to bring awareness to the issue and potentially generate more public support and buy in. Some residents want to emphasize the importance of the projects being implemented to restore the water quality. Many suggestions listed within this report tie back to the IRL and how implementing steps to resolve issues will restore its overall health. As the overwhelmingly most visited natural resource amenity within the City, there is no question that a significant amount of community members want the IRL to be protected and the water quality restored.

Aging Infrastructure



As recently as 2020, failing sewer pipes in the City have contributed to sewage leaks and a point source of pollution in the IRL. Aging infrastructure has been a growing concern in many communities as the typical life expectancy of sewer lines is between 40 and 60 years. These leaks have not only been responsible for raw sewage seeping into the IRL but also local stormwater infrastructure and other surface waters. This affects the salinity, nutrient load, and biochemistry of the water making the IRL inhospitable for seagrass and

aquatic fauna. The City, in partnership with Save Our Indian River Lagoon (SOIRL), has made improvements including upgrading lift stations, replacing force mains, and improving the water reclamation plant to remove more nutrients from the wastewater effluent. Prioritizing replacing aging infrastructure will significantly reduce the number of sewer pipe leaks and in turn lead to improved water quality.

2023 Florida legislation now requires sewer providers to assess the feasibility of connecting residential developments of 50 or more units at density greater than one dwelling unit per one acre to a wastewater system. The new statutes require that any new septic system within the IRL Protection Program be installed with a nitrogen reducing Onsite Sewage Treatment and Disposal System (OSTDS). By 2030, any commercial or residential property must connect to central sewer or upgrade to the nutrient reducing system. Currently, there are approximately 1,160 septic systems within the City. In 2024, the City published an OSTDS remediation plan to identify potential projects and connection opportunities for those properties not on the City's central sewer system. The City has utilized SOIRL funding to advance septic-to-sewer conversions and other water treatment upgrades.

The City conducted a National Community Survey in 2024 that assessed the livability of Titusville. The survey identified ten main facets of community livability, three of which included utilities, natural environment, and parks and recreation that relate to this effort. The published results for Titusville indicate that 95% of City residents consider utility infrastructure to be essential or very important - the two highest priority selections. However, only 30% of residents felt the City's utilities system was good or excellent. With sewer system issues documented as recently as four years ago, prioritizing infrastructure remediation is a top priority for most residents.

Tree Canopy and Tree Preservation

For over 23 years, Titusville has been recognized as a "Tree City" through the Tree City USA program. Nearly 3,600 cities in the US are considered Tree Cities. The goal of Tree City USA is to encourage communities to plant and care for trees to make them more desirable places to live. The City has

leveraged their participation in the program to increase the number of trees throughout the City, and in 2023 performed an urban tree canopy assessment to prioritize the areas of the City that need the most trees. In 2021, the City updated its Tree Preservation ordinance to strengthen requirements to curtail the clear cutting of lots. The amendments established incentives to preserve trees with the goal of reducing the need for mitigation.



However, during the public engagement process, residents described their concern over the amount of clearing that occurs during the development process and want more protections in place to prevent clear cutting and preserve the native landscape. This is exacerbated by the replacement of large, older trees with young and smaller trees at the completion of construction. Retaining the existing tree canopy is a priority for many residents as the trees provide shade from the heat, improve air quality, and habitat for wildlife.

Land Acquisition and Conservation



The most effective tool a City has for preserving natural land for future generations is to acquire property for conservation purposes. It was mentioned that a property was recently developed in a portion of the City designated as an Area of Critical Concern. This property is located in a prime recharge area but was entitled to be developed as a residential subdivision. To prevent this from occurring, this property could have been acquired. The City does not have a land acquisition program, but it has benefited from the Brevard County Environmentally Endangered Lands (EEL) Program,

which was originally established in 1990 and is funded by a property tax assessment. The program has resulted in the acquisition of four properties within Titusville: South Lake Conservation Area, Dicerandra Scrub Sanctuary, Fox Lake Sanctuary and the Enchanted Forest Sanctuary. These four properties have preserved over 3,248 acres and are used not only for preservation and conservation purposes but also for passive recreation and educational opportunities.

Feedback from the national community survey indicated that residents felt that the natural environment for Titusville was lacking, especially in the quality of the preserved natural areas and open space. Residents expressed concern about the rapid pace of development and would like to see more areas being placed into conservation. Due to the significant cost of land acquisition, securing additional

funding will be beneficial to continue to preserve more areas for conservation, resiliency, and flood mitigation purposes.

Wetland and Floodplain Regulations

The benefits of wetland and floodplain protection in a community and the general ecosystem are numerous. These important assets have become imperiled due to development and lack of effective regulations. Although these features are protected by regulations today, residents expressed a desire for more stringent regulations in the City's Land Development Regulations (LDR) to create opportunities for more stormwater management and future flood controls.

Currently, the City's LDRs allow wetlands to be impacted as long as the applicant follows the stormwater management plan and the guidelines of the St. Johns River Water Management District (SJRWMD). The City does enforce more regulations if the wetland is greater than five acres. If the City implements stricter regulations, it should consider doing so prior to the next legislative session. The legislature has been contemplating a preemption on all local governments from adopting regulations that are more stringent than state statutes or water management district rules.

As tropical disturbances become more frequent and summer afternoon thunderstorms progressively drop more rainfall, flood prevention and stormwater management will continue to become a significant priority for property owners in the community and the City. Stormwater regulations require new construction to be built at higher elevations to accommodate these stronger rain events. However, much of the existing infrastructure was developed prior to stormwater



regulations and provide little or no floodplain protection or stormwater management. The City has taken initiative in finding locations for stormwater management by creating the Draa Field Stormwater Park which holds and treats stormwater. The Chain of Lakes Park is another great example of a park's dual functions, which features recreational facilities as well as wetlands that capture stormwater runoff, remove pollutants, and replenish the aquifer

RECOMMENDATIONS



The recommendations outlined in the following matrix were developed through the public engagement process and vetted by city staff and the project team. Each of the recommendations are formulated as a potential policy with a column discussing implementation, future considerations, and are further categorized by how it could be implemented. For example, a strategy could be a project, a comprehensive plan amendment, a code of ordinance revision, etc. Some strategies may have multiple implementation options due to the complexity of the task. Examples of future consideration may include requiring additional staffing, needing significant funding, or challenges with the built environment. The TEC and City Council will provide guidance to staff on how each of these recommendations will be implemented either in the comprehensive plan or through other means. To assist the TEC in implementing these strategies, a proposed decision tree has been provided in the **Appendix**.

Categories: CP – Comprehensive Plan / IMP – Implementation Project / LDR – Land Development Regulations / SAP – Sustainability Action Plan / COO – Code of Ordinances / PRC – Public Relations / Communication

Advance Indian River Lagoon (IRL) Stormwater Quantity and Quality Improvement Projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan (SAP)
Continue to prioritize funding and seek grant funding for projects that improve water quality of the Indian River Lagoon. Category: IMP, SAP	Public Works will <u>continue to</u> seek partnerships (County or other agencies) to implement the IRL Basin Management Action Plan (BMAP) projects. The Sustainability Action Plan should be amended to include objectives oriented around grant funding and the health of the Indian River Lagoon.	This is <u>already</u> being implemented <u>to a certain degree with over \$20 million in grants received for IRL BMAP projects</u>. However, partnerships will help extend funding and resources.	CME Policy 1.1.5: The City shall, in preserving the Indian River Lagoon system and other bodies of water within the City limits, coordinate with other local governments and the Marine Resources Council to ensure: • adequate sites for water-dependent uses • prevention of estuarine pollution	Ecosystems & Resiliency 2.4.2 Collaborate with volunteer programs and organizations to assist with habitat restoration efforts on public and private properties.



Advance Indian River Lagoon (IRL) Stormwater Quantity and Quality Improvement Projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan (SAP)
			• control of surface water runoff • protection of living marine resources • reduction of exposure to natural hazards • public access • that required infrastructure is available to serve the development or redevelopment in the coastal area."	
Identify sources of stormwater discharge into the IRL and prepare plans to reduce the volume and improve the quality of the discharge. Category: IMP, CP	Public Works has already identified outfalls and water quality master plan and is in the process of implementing the master plan. <u>The City is already ahead of its current BMAP reduction goal.</u>	A comprehensive citywide stormwater study of this kind may be costly.	CME Policy 4.3.2: Continue to update, maintain, and make available for public review flood risk maps and related information indicating risks associated with high tide events, storm surge, flash flood, stormwater runoff, and related impacts of sea level rise. CME Policy 3.3.5: Evaluate designing a "natural runoff" or "net-zero discharge" policy for stormwater in subdivision and site design."	
When feasible and funding has been identified, implement infrastructure improvements that will capture and treat or divert	Public Works is in the process of conducting a stormwater study that <u>could help achieve this strategy will address CIPs</u>	Construction costs may be significant to divert stormwater away from the IRL. There may be limited opportunities to achieve this	CE Objective 1.12: Stormwater Management To retrofit existing stormwater drainage systems, to redirect outfalls from	Ecosystems & Resiliency 2.2.4 Evaluate current and planned stormwater infrastructure projects and determine the feasibility of incorporating

Advance Indian River Lagoon (IRL) Stormwater Quantity and Quality Improvement Projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan (SAP)
stormwater away from the IRL. Category: IMP	<u>for future water quality projects.</u>	due to existing infrastructure. Eminent domain, if necessary, for this may be cost prohibitive.	environmentally sensitive areas, and to enhance environmentally sensitive areas through man-made wetlands which provide both renourishment of the wetlands system and wildlife habitat.	additional green infrastructure
Examine the feasibility of establishing additional stormwater parks to capture stormwater before it runs off into the IRL. Category: IMP	This could be included as criteria for acquiring property for conservation purposes.	The costs could be significantly less than diverting water away from IRL and the park could serve multiple recreational and ecological functions. <u>Increase in maintenance costs would be costly.</u>	CME Policy 3.3.5 Evaluate designing a “natural runoff” or “net-zero discharge” policy for stormwater in subdivision and site design	Ecosystems & Resiliency 2.2.4 Evaluate current and planned stormwater infrastructure projects and determine the feasibility of incorporating additional green infrastructure
Prioritize funding to conduct restoration of the shoreline on properties owned by the City when feasible. Category: IMP	<u>The City has partnered with the Zoo and The IRLNEP to receive a grant to install a living shoreline at Scobie Park.</u> Living shoreline projects would improve resiliency and re-establish unique habitats adjacent to the IRL. Prioritize comprehensive restoration of City owned shoreline properties and establish installation and maintenance standards consistent with Florida	Costs of construction and staffing would be minimal compared to comprehensive infrastructure projects.	CME Policy 3.2.3: To preserve the functionality of natural sea level rise barriers, the City shall: • Examine the appropriate use of sediment-trapping vegetation, sediment mounds, etc., for coastal hazards; and • Implement shoreline restoration, plantings, and use of natural material, where feasible. CME Policy 3.2.4:	Ecosystems & Resiliency 2.4.2 Collaborate with volunteer programs and organizations to assist with habitat restoration efforts on public and private properties.

Advance Indian River Lagoon (IRL) Stormwater Quantity and Quality Improvement Projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan (SAP)
	Department of Environmental Protection.		The City will maintain shoreline protection and erosion control by: • Facilitating the installation and maintenance of native shoreline vegetation along appropriate areas of beach; and • Considering hard structures, such as seawalls, only when alternative options are unavailable.	
Continue to implement and promote the certification program for commercial lawn fertilizing services. Category: COO, IMP, PRC	Through a City Ordinance, the City requires that all commercial and institutional applicators of fertilizer to abide by and complete training and continuing education "Florida-friendly Best Management Practices for Protection of Water Resources by the Green Industries."	Promote knowledge of the program, inform residents to report misconduct of best management practices.		Ecosystems & Resiliency 2.2.3 Provide education and resources to homeowners on Florida Friendly Lawns and reducing the use of pesticides and garden chemicals Ecosystems & Resiliency 2.3 Continue to make demonstrable progress towards Resilient Titusville's Goals and Objectives

Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Conduct testing to evaluate water quality degradation. This study should include an assessment of the magnitude of impact and recommendations for remediation. Category: IMP	Partner with One Lagoon to share information with other organizations in the Monitoring Network and potentially conduct testing at the municipal level. Testing should <u>is already</u> be conducted at reclamation facilities (Osprey and Blue Heron)-if this is not already being done. The City previously partnered with SOIRL and the SJRWMD to upgrade the Osprey plant, effectively reducing total nitrogen and phosphorus levels. This could potentially be done at Blue Heron as well <u>Blue Heron is already an Advanced Wastewater Treatment Plant..</u>	While SJRWMD already monitors water quality at the fishing pier - additional testing may require the City to increase staff and incur costs for the analyses.	CME Policy 1.1.2: Wastewater treatment plant effluent impacts shall be minimized or eliminated to the maximum extent feasible. The following measures will be utilized to implement this policy. Strategy 1.1.2.1: Wastewater treatment systems outfalling to all existing surface water shall be designed or retrofitted as soon as economically feasible to reduce nutrients in the discharge. Strategy 1.1.2.2: Periodic inspections shall be conducted on all wastewater treatment plants within the City to ensure that the facility is in good repair.	
Conduct a study to locate, assess, and identify repairs to all existing wastewater lines, particularly near surface waters. Category: IMP	The city has already performed an analysis and modeling of the sewerage system, leading to a number of pipe replacements and improvements to prevent breaks and leaks and associated environmental	More extensive projects, like the IRFMI project, may entail significant fiscal costs; the City took out a \$9 million loan from the State Revolving Fund after putting out a bid for the project, initially estimated at \$5 million. Factors like supply chain issues and inflation can		

Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
	degradation. Current sewer projects include the Indian River Force Main Improvement (IRFMI), <u>Bayview Lift Station Elimination, Riverside Dr Force Main Replacement</u>, which specifically targets threats to the IRL. The City should strive to keep these models accurate and up to date. The City should also prioritize improvements related to anticipated future capacity.	substantially drive-up improvement costs. Additionally, a study of the whole system would be extremely costly. <u>Water/sewer rates might need to be increased.</u>		
Prepare a feasibility study to determine the cost of replacing aging wastewater lines. Category: IMP	<u>The City has already contracted with and is in the process of implementing asset management software that will help with lifecycle costing of infrastructure.</u> The IRFMI project seeks to replace some of the City's aging sewerage system; the associated costs could provide a good estimate of what kind of funding another project of similar scale would cost.	The City will need to determine what qualifies as aging lines and when replacement is needed; sewer lines should generally last 40-60 years. While the cost of the study may not be of financial significance, the implementation of the improvements could be costly. <u>Water/sewer rates might need to be increased.</u>		

Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Establish a priority list of wastewater line repairs and replacement. Category: IMP	<u>Priority repairs and replacements are determined in the budget cycle. The City has already contracted with and is in the process of implementing asset management software that will help with lifecycle costing of infrastructure.</u> Priority could consider benefits to the IRL and other surface waters, other environmental impacts, pipe material, groundwater levels, and infrastructure age.	See above. High-priority repairs may also be significantly more expensive than others. <u>Water/sewer rates might need to be increased.</u>		
When a wastewater line breaks, prioritize emergency communications to apprise the community. Category: PRC	The City already follows proper notification protocols as required by the FDEP. However, the City should consider providing enhanced notice regarding sewer pipe breaks on its website and social media outlets, in addition to notifying news outlets that can reach residents through radio and television.	Consider accompanying precautions/health and safety advice and clarify what households/ businesses will be affected; describe what steps the City is taking to respond and what actions residents need to take<u>Stay up to date on current State notification protocols and requirements.</u>		Ecosystem & Resiliency 2.3 Continue to make demonstrable progress towards Resilient Titusville's Goals and Objectives

Aggressively seek funding opportunities for IRL projects.

Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Continue to coordinate with regional and state partners to seek funding opportunities for IRL projects. Category: IMP	In FY2023-2024, <u>the City had active projects that received over \$6 million in grant funding from the State and SOIRL programs.</u> Florida-DEP offered a grant specifically for projects targeting the IRL; while Titusville did not receive funding through this program, the City could consider other funding opportunities from DEP in the future. The City should also apply for funding through the SJRWMD's cost-sharing program. <u>The City has already applied for multiple grants from the FDEP and SOIRL in FY25 for IRL projects..</u>	Additional staff may be needed to pursue grants, and additional funds from the City may be requested to qualify for grants with a matching contribution requirement.	CME Policy 1.1.5: The City shall, in preserving the Indian River Lagoon system and other bodies of water within the City limits, coordinate with other local governments and the Marine Resources Council to ensure: • adequate sites for water-dependent uses • prevention of estuarine pollution • control of surface water runoff • protection of living marine resources • reduction of exposure to natural hazards • public access • that required infrastructure is available to serve the development or redevelopment in the coastal area.	
Continue to continue to pursue grants and partnerships to provide funding for IRL improvement projects. Category: IMP	Titusville could join One Lagoon's monitoring network, which includes Brevard County, SJRWMD, Florida Department of Environmental Protection and FAU's Harbor Branch Oceanographic Institute,	Additional staff may be needed to pursue grants, and additional funds from the City may be requested to qualify for grants with a matching contribution requirement.		

Aggressively seek funding opportunities for IRL projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
	among other state, regional and federal partners. One Lagoon also distributes the Indian River Lagoon National Estuary Program's (IRLNEP) small grant funding. <u>The City partnered with the IRLNEP to receive grant funding for Scobie Park, the project is underway. The City has applied for multiple grants from the FDEP and SOIRL in FY25 for IRL projects.</u>			
Encourage the County to promote the reissuance of <u>Continue to utilize</u> the ½ cent sales tax to secure future funding for IRL projects. Category: IMP, PRC	The current sales tax is set to expire in 2026 and is projected to collect \$586 million in funds to implement a total of 432 projects. The city should educate the public on how that funding has enabled the implementation of million dollar projects.	Continued support for the sales tax will result in available funding opportunities for additional restoration projects.		

Develop a land acquisition program with a dedicated funding source.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Continue to coordinate with county, regional, and state partners for land acquisition and maintenance funding. Category: IMP, CP, SAP	Continue to implement.	No change in resources.		
Continue to pursue grants and partnership agreements to fund land acquisition and maintenance needs. Category: IMP, CP, SAP	Continue to implement.	Additional staff may be needed to pursue grants, and additional funds from the City may be requested to qualify for grants with a matching contribution requirement.		Ecosystem & Resilience 2.1 Increase natural resource acreage and habitat area for threatened species and wetlands
Evaluate opportunities for a dedicated funding source for land acquisition and maintenance (e.g., assessment, impact fees, stormwater utility fee, <u>discretionary sales surtax</u> , etc.). Category: IMP, CP	There are a number of funding mechanisms available to the City. The sales tax has been a successful and equitable measure that should be explored. Additional funding from the City will enhance and extend outside funding sources.	Asking residents to tax themselves more than they pay will be a difficult proposition. Impact fees on new development would help; however, this will drive up the cost of new construction to the end user. <u>Discretionary sales surtax is an additional tax levied by individual counties on top of the state's general sales tax.</u>		
Prioritize the acquisition of lands identified as areas of critical concern or wetlands and create a plan to prioritize purchase and fund maintenance. Category: IMP, CP	Create or update a map that identifies areas of critical concern and wetlands.	Acquisition of property with development entitlements is generally expensive. Prioritization of land acquisition is key when implementing this program. <u>Maintenance could be costly.</u>	CE Policy 1.2.5: The City shall ensure the protection and preservation of high quality native ecosystems through acquisition whenever it is economically feasible. The City shall also support	Ecosystem & Resiliency 2.1 Increase natural resource acreage and habitat area for threatened species and wetlands

Develop a land acquisition program with a dedicated funding source.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
			cooperative land acquisition efforts for protection of the environment.	

Update Tree Preservation Ordinance to clarify and strengthen the regulations.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Evaluate the Tree Preservation ordinance every five years to assess its effectiveness and make necessary changes to prevent clearcutting of properties. Category: LDR	The Tree Preservation ordinance was updated recently; however, there is a perception that more can be done to prevent clearcutting and preserving the natural canopy.	Increasing tree preservation requirements could drive up the cost of construction and potentially negatively affect other goals of the City like economic development and housing affordability.		
Consider updates to the Tree Preservation ordinance to include measures to retain natural subcanopy vegetation. Subcanopy consists of suppressed mature trees, regenerating tree saplings, shrubs, herbs, snags and coarse-woody-debris. Category: LDR	This is an optional requirement in the Code. It could be changed to mandatory and cite replanting as a last resort.	Increasing the percent of retained natural subcanopy vegetation in lieu of new landscaping could be a good compromise; however, this may impact the type of development (i.e., taller buildings, higher density products, etc.).		

Evaluate the effectiveness of fines levied as a result of violations of the Tree Preservation Ordinance. Category: LDR, COO	Staff should research cities and counties that enforce fines on “after the fact” tree violations and propose a new fine structure.	If the amount of the fines are set appropriately, this could be an effective method of preserving tree canopy.		
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Update Landscaping Ordinance to strengthen regulations.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Amend the Land Development Regulations to require all plantings in new developments to be identified as native or Florida Friendly species. Category: LDR, COO	Update the comp plan and code to require native landscaping only. Many communities implement this.	Would result in lower water use for irrigation, the lack of a need for pesticides or fertilizers, and provide habitat for native animals. The City could also consider incentivizing native landscaping. <u>IFAS recommends Florida Friendly Landscaping.</u>		Ecosystems & Resiliency 2.1.3 Promote UF/IFAS Brevard County Extension Florida-Friendly Landscaping Program
Incorporate Low Impact Development (LID) methods for innovative stormwater management in the Land Development Regulations (LDRs). Category: LDR	This is already included in the LDRs. May consider <i>requiring</i> it for all development rather than encouraging its use.	LID is more cumbersome to maintain than traditional stormwater methods. A commitment to maintaining all stormwater infrastructure should be a priority.		Ecosystems & Resiliency 2.2 Prioritize the use of green infrastructure, low impact development, and nature-based solutions
Establish and pursue funding for an Urban Forestry Plan. Category: CP	A policy should be added to the Conservation Element to require the City to pursue this program. The City is currently pursuing a grant to create an urban forestry plan.	Continued participation in this will help elevate the City's desires to increase its urban tree canopy.		Ecosystems & Resiliency 2.1.2 Develop an Urban Forestry Management Plan to manage tree infrastructure and canopy
Actively participate in the Tree City USA program. Category: CP	A policy should be added to the Conservation Element to require the City to pursue this program <u>The City is currently actively participating in the Tree City Program.</u>	Being a Tree City can help the City secure funding for promoting tree preservation, Arbor Day events, and tree giveaways. To date, the City has not taken full advantage of this program, specifically		

Update Landscaping Ordinance to strengthen regulations.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
	Tree City USA has additional standards and recognitions that exceed the Tree City status and could be explored.	with respect to planting trees. The City should evaluate whether the program is important to implement.		
Evaluate the LDRs to determine if all uses are achieving the goals of the Urban Forestry Plan. Category: CP, LDR	The City is currently pursuing a grant to create an urban forestry plan. As part of the Urban Forestry Study, an evaluation of the City's Comprehensive Plan and LDRs should be undertaken to determine if more can be done to implement the urban forestry plan.	After the evaluation, recommendations may require additional staffing.		Ecosystems & Resiliency 2.1.2 Develop an Urban Forestry Management Plan to manage tree infrastructure and canopy

Develop or amend existing wetland policies to clarify and create more limitation on wetland impacts.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Evaluate the LDRs to identify opportunities to clarify or strengthen City wetland regulations. Category: CP, LDR	Strategy 1.6.3.2 needs to be clarified to limit the loopholes and how land is subdivided to circumvent this requirement. The wetland should be evaluated based on its overall importance and size rather than if it's less than 5 acres on a single site.	This provision has caused confusion with its implementation and developers have circumvented the requirement. More clarity on this will create more predictability and protect wetlands of high value.		

Develop or amend existing wetland policies to clarify and create more limitation on wetland impacts.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Evaluate wetlands for preservation and pursue funding to create a plan to prioritize purchases and fund maintenance. Category: IMP	Secure and establish a funding source to purchase wetlands.	Land acquisition and maintenance requires significant funding. Depending on the surrounding land uses, the freshwater input to the wetland could be detrimental to the functionality of the ecosystem and potentially require treatment before entering the wetland system, if utilized for stormwater purposes.		
No net loss of wetlands. Category: CP, LDR	This is already required in Strategy 1.6.2.1 for conditional uses. This could be implemented citywide.	This may require additional staff resources or could be assisted by Brevard County through an interlocal agreement.	CE 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;	Ecosystem & Resiliency 2.1 Increase natural resource acreage and habitat area for threatened species and wetlands

Develop or amend existing wetland policies to clarify and create more limitation on wetland impacts.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
			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.	
Implement a 1.8% maximum wetland impact for developments based on a threshold used at Viera for residential lots. Category: LDR, CP	This proposition may require a study to determine how this approach would affect development in the City.	Implementation may require additional staff resources or could be assisted by Brevard County through an interlocal agreement. The City may also consider conducting a study to determine a maximum wetland impact for developments.		
Clarify the intent of the 5-acre rule to include adjacent properties. Wetlands 5 acres or larger are currently required to be designated by Conservation land use. Category: CP	Strategy 1.6.3.2 needs to be clarified to limit the loopholes and how land is subdivided to circumvent this requirement. The wetland should be evaluated based on its overall importance and size rather than if it's less	This provision has caused confusion with its implementation and developers have circumvented the requirement. More clarity on this will create more predictability and protect wetlands of high value.		Ecosystem & Resiliency 2.1 Increase natural resource acreage and habitat area for threatened species and wetlands

Develop or amend existing wetland policies to clarify and create more limitation on wetland impacts.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
	than 5 acres on a single site. An update of wetland protections should be considered. Functional values and better wetland delineation is needed. Explore the possibility of wetland protection through increased buffer requirements.			
Reconsider allowing conservation easements in Planned Developments in lieu of Conservation land use designations. Category: LDR, CP	Amend the Comprehensive Plan and LDRs to require conservation easements instead of designating it conservation land use.	Conservation easements would need to be dedicated to an entity (i.e. City, SJRWMD, or other entities) in perpetuity on a plat or binding document. Conservation easements would require maintenance of the land, and occasional monitoring.		

Increase public education and outreach throughout the City.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Review and amend its current public outreach strategy to increase resident awareness about how the City is addressing environmental issues.	The City currently provides information on environmental issues and resources on its website and social media outlets. However, additional	Physical publication and distribution would add printing and mailing costs. If the City creates or establishes an app or a text alert system, annual service costs need to be considered.	CE Policy 1.15.7: The City shall continue its public education and outreach in regard to stormwater management and its National Pollution	Community & Livability 1.1.3 Develop a public engagement strategy to engage the entire community in the implementation of the SAP

Category: PRC	avenues could be explored such as a quarterly mailers, text alerts, or app notifications.	The City is currently exploring improving their story maps located on the City's website.	Discharge Elimination System (NPDES) permit best management practices.	
Expand their educational series to increase resident awareness of the environmental programs the City is actively engaged in. Category: PRC	Monthly or bi-monthly speakers or curated activities could increase awareness and citizen engagement. The city should consider looking into IDEAS For Us and their educational "hives" as a model for this program.	Availability of hosting facilities and the cost of additional staffing should be considered.		Ecosystems & Resiliency 2.4.1 Continue education and outreach initiatives about sea level rise, climate change, and the Indian River Lagoon
Develop a branded social media initiative to educate residents about important environmental topics. Category: PRC	Create a campaign for a consistent social media message, posting regularly, and providing city insights.	This may require additional staff or a social media coordinator/communication department to collaborate on this effort. The sustainability planner could establish a social media presence dedicated to environmental topics.		

Assess impact fees.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Evaluate all impact fees every five years to ensure the fees are adequate to construct needed facilities.	Include a policy in the Capital Improvements Element to require the evaluation of all impact fees every 5 years. The City	This will enable the City to adequately fund construction of needed facilities.		

Category: IMP	<u>has contracting with a consultant to review all impact fees.</u> Staff is currently evaluating the CIP list.			
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Create a green space master plan.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
Create a connected green space inventory and master plan that identifies all open space and recreation facilities within the City. Category: IMP, CP, SAP	Establish a policy in the Conservation Element to require the creation of a connected green space plan. The Sustainability Action Plan should be amended to include this strategy and expanded upon the existing objectives within the Community & Livability section.	Initial implementation will require a comp plan amendment and then creation of the green space plan. This will help in identifying land acquisition priorities and enhance the recreation priorities of the City.		Community & Livability 1.3.3 Develop a community parks initiative to ensure all residents and local schools have access within a half mile to parks, greenspace, and recreation that are barrier free for people with disabilities in coordination with the NRSAP.
Identify properties to expand the City's open space inventory as part of the green space master plan. Category: IMP	Create criteria to determine how to prioritize properties to expand the City's Open Space Inventory.	Land acquisition <u>and maintenance</u> costs can be significant; however, the costs to identify such land is minimal.	ROSE Strategy 2.1.1.1: The City shall develop a short term and long term land acquisition plan for park, recreation, conservation and open space areas.	

Appendix

Decision Tree for Prioritizing Actions, Funding, and Staffing

As this study shows, there are many actions that the city of Titusville can take to improve the value of natural resources within the city and in those areas affected by the city's actions (particularly the Indian River Lagoon). The recommendations provided in this study are focused on the key aspects of environmental protection relevant to both the significance of the natural resource and the city's role in protecting it. These recommendations involve a long-term horizon, collaboration with multiple partners, and a consistent commitment to resolution. The recommendations provide a blueprint for a long-term strategy for improving and sustaining natural resources within, and in areas affected by, the city.

A process for prioritizing how to move forward with these recommendations needs an assessment of the cost and benefit for engaging with any given recommendation. The decision tree assumes the recommendations are adopted by those responsible for improving or protecting the resource. There should also be clear objectives for each recommendation, metrics to evaluate success, and staff and funding in place to monitor progress. Priorities should be assigned to each of the recommendations provided in the report. Whether a recommendation is funded and initiated would depend upon its priority, the ease of accomplishment, the benefit to natural resources, the time frame for completion, expense, and likelihood of partnerships for funding or staffing.

Given all that, a concept for prioritizing actions might follow a process like the following:

1. Can the City's involvement make a difference?
Yes (Proceed to Question 3) No (Proceed to Question 2)
2. Encourage action by those responsible for the issue.
3. Does the City have existing funds and staff to achieve the objectives?
Yes (Proceed to Question 5) No (Proceed to Question 4)
4. Seek additional funds or partners to assist with actions to achieve objectives.
5. Create a plan, budget and timeline to accomplish the objectives.
6. Does the initiative provide short-term, cost-effective results associated with priority actions identified in the 2024 Inspire report?
Yes (Proceed to Question 7) No (Proceed to Question 4)
7. Consider budgeting this initiative in next year's annual budget.
8. Does the initiative provide long-term, low-cost results associated with priority actions identified in the 2024 Inspire report?
Yes (Proceed to Question 9) No (Proceed to Question 4)

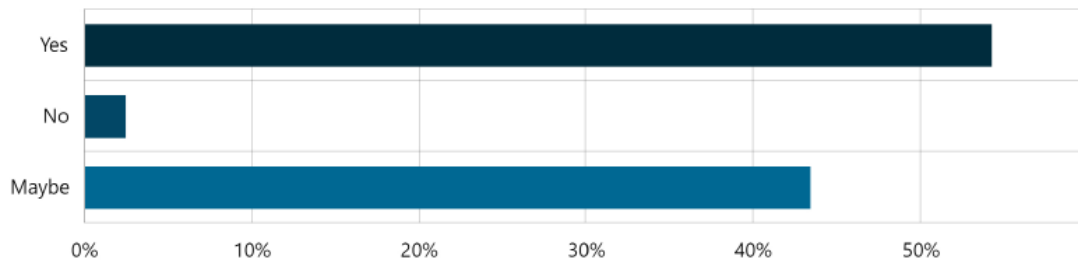
9. Consider providing long-term funding in the City's annual budget. Seek grants and partnerships to help fund the long-term effort. Create a timeline for proceeding, assign staff to manage the project and track results.
10. Is the initiative a high priority, but both long-term and costly? (Proceed to Question 11)
11. Assign staff to proactively work with natural resource agencies, Brevard County and others with potential for funding to make progress on long-term priority issues.

Project Website Survey Results

1. Please provide your zip code

Zip Code	Total Count
32754	1
32780	46
32796	25
32901	1
32926	1
32927	4
32935	1
32952	1

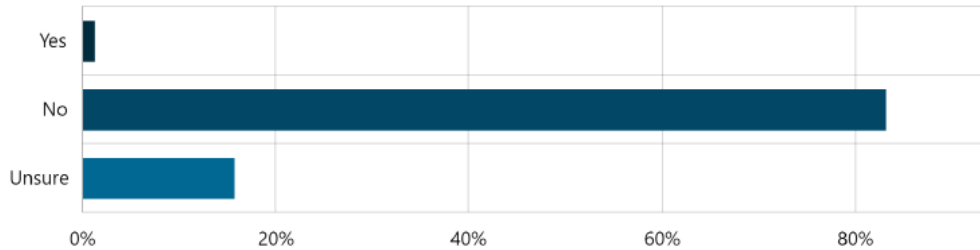
2. Would you be interested in attending public meetings to discuss Natural Resources



Answer choices	Percent	Count
Yes	54.22%	45
No	2.41%	2
Maybe	43.37%	36
Total	100.00%	83

3. Do you think the City does enough to sufficiently protect Natural Resources?

3. Do you think the City does enough to sufficiently protect Natural Resources? Required
Select Box | Skipped: 0 | Answered: 83 (100%)



Answer choices	Percent	Count
Yes	1.20%	1
No	83.13%	69
Unsure	15.66%	13
Total	100.00%	83

4. If you don't think the City sufficiently protects Natural Resources, please explain why

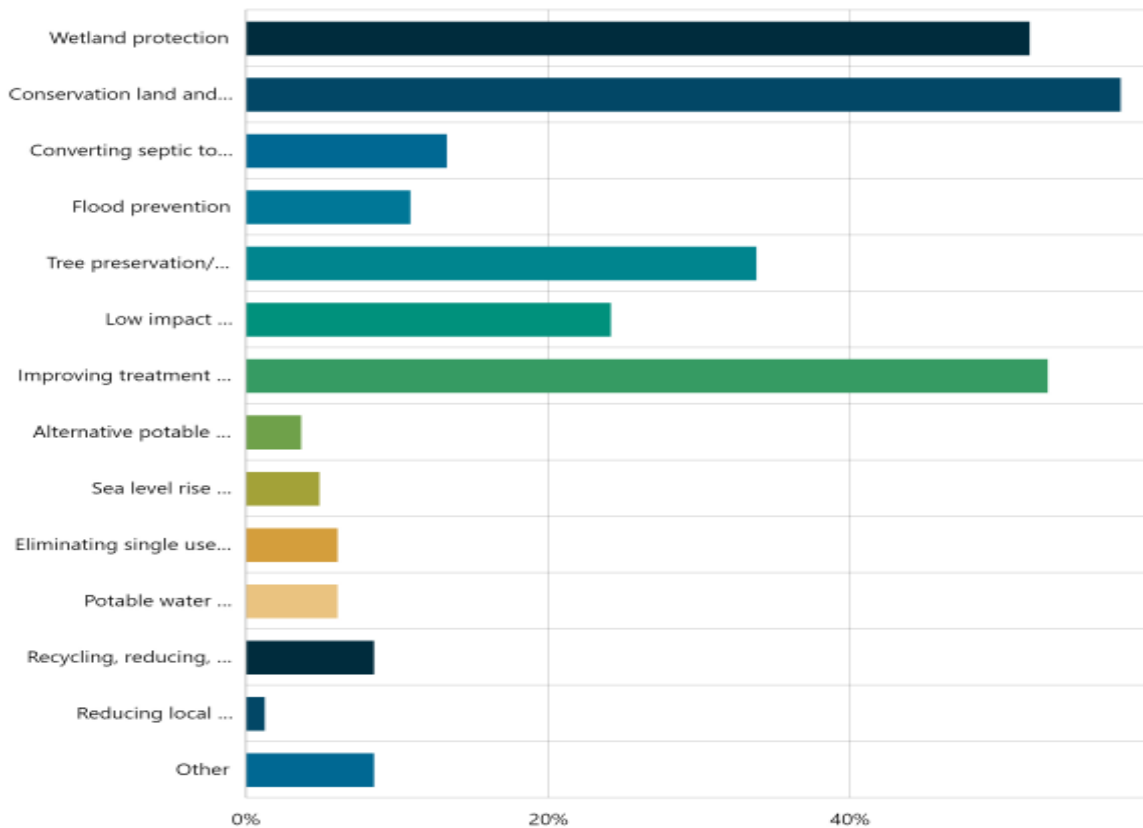
- COT is still “accidentally” spilling sewage into the river. Too many new home building permits while Not updating infrastructure such as roads. When roads deteriorate then it rains, pollution rolls into the river!
- You allow wastewater (even though you say it's safe) into our lagoon. Our water quality is very poor!
- Lagoon health is poor and dumping not controlled
- The City of Titusville does what it is at its reach! Pressure from the outside and the overwhelming growth desire of people and companies to move to Titusville is beyond the City's ability to control its growth! Therefore, nature is being sacrificed.
- They have pipes that run from the lift stations along Indian River Dr, into the middle of the Lagoon and the city still INTENTIONALLY releases RAW SEWAGE into the Lagoon and and then calls it a spill.
- Too many projects encroaching on wetlands w.o. shoring up infrastructure. Hence the sewage discharges
- Sewer spills and the Indian River
- Sewage spills, uncontrolled growth that stains the already maxed out sewage system.
- Too many adult trees cut down with minimal put back and then it's mostly ornamental stuff and half of it dies. The roadways and storm drain offs are not tended to. They are blocked with debris and street sweepers are not out enough. The sewage issue.
- Trees are being removed and the river is dying
- Have you looked or tried standing in the river, its gross, not clean and should be a priority
- Let's start with the sewage dumps and disregarding wetlands

- Not enough money allocated to the need.
- Sewage dumps
- No. The seer leaks have been going on for decades. It should have been addressed and handled decades ago. Actions speak louder than words. There has been little to no action ever.
- Consideration of preservation of existing landscape appears to not be enforced or even considered with new construction.
- I've seen firsthand pollution, sewage and bad water quality
- Sewage spills in the Indian river lagoon. I heard a kid had a cut on his leg and went swimming and now he's paralyzed
- Drainage should not go into river. Building permits need to stop.
- Abandoned city owned lots are filled with garbage, sewage and drainage issues effect the IRL
- Lack of communication education and action. Water quality in the lagoon is failing.
- Approved destruction of wetlands, lack of preservation of natural ecosystems, approved plans that allow drainage into Indian River lagoon. Etc
- Still having sewage spills in the IRL, and the tree protection ordinance, intended to preserve canopy shade, is not working. That is because the critical root zone (CRZ) formula does not meet minimum standards set by ISA and ANZI-300
- lack of leadership
- I lived here over 40 years & the City keeps “accidentally “ discharging seer into the River.
- Continued over development, clear cutting trees, not honoring it's citizens input, wasting tax pay dollars on frivolous lawsuits and counter suits. I
- Too much development, cutting of old growth trees, outdated sewer pipes.
- It seems as though the focus is on housing development which completely destroys natural resource areas.
- They do the opposite. Examples include, changes made at Parrish Park, the continued clear cutting of trees (Winn Dixie's parking lot), the over pruning of palms (reducing survival of a stressful weather event, refusal to dredge ponds
- The city spends more resources on city marketing than it does on making leadership available for crucial discussions on natural resources with residents. The city will not even Livestream its TEC mtgs. City needs to engage in relevant 2-way engagement.
- They let companies strip the lands clean and should replace with trees native but trees and or plants are not list is outdated! Leave the large trees might get less homes on the property their loss!
- There is far too much housing being built in a short amount of time.
- Keeping green spaces green with no development. Areas for animals to move about. Restoring the Indian River Estuary. Having green tourism. Education for both people who live here and visitors for what a treasure our nature resources are .
- Tree removal, river pollution, trash everywhere around town
- There is trash everywhere, we continue to have sewage spills, land is still being clear cut for developers.
- They are allowing too much development in the city.

- Need to update riverfront infrastructure so fewer to no leaks. City parks full of homeless and drugs.
- It seems that all of the green space on the west side of town is being rezoned and bulldozed to house people on welfare.
- The building is out of control. There is not enough water as it is, aren't we buying from Cocoa, of all places? Fresh water is the enemy of our Indian River Lagoon, besides rain water. Storm water run off and sewage spills and the fresh water from the cape
- Continuing loss of tree canopy due to development policies and lack of enforcement. Failure of the City to stop allowing sewage and fresh water to flow into the IR Lagoon.
- Rezoning threats to parts of Titusville, traffic and roads already problematic, have more community involvement by putting together community cleanup days,
- Clean water initiatives, waste management stricter recycling sorting, low walk ability from parts of town, no community gardens or shared co working spaces, minimal renewable energy infrastructure, soil degradation and high run off, minimal canopy coverage
- Developers continue to clear cut areas, for homesites. Existing ordinances apparently do not have sufficient penalties for this practice.
- The city has not adequately protected the lagoon. The incredible increase in development projects does not take into consideration the poor quality of the infrastructure. There needs to be a moratorium on new developments until the existing problems are
- Over the last few years the city has constantly polluted the river with sewage. This needs to STOP.
- Too much land be demolished for big projects such as housing developments and apartments.
- Our Indian river lagoon is polluted. Our green space is being turned into multi-family projects. We have one of the most pristine waterways in the country and we fail to protect.
- Because what has been done does not seem to reflect what was given, nor what was communicated to the public from the concept (which is beginning again here now!). And that's from us poor outsiders (public) and the little we get to see.
- City leaders have fought against local residents who overwhelmingly voted in favor for our right to clean water.
- The infrastructure is insufficient to handle the growth and developers are not required to make necessary updates on their properties beyond the bare minimum, take their profits and leave.
- The waste dumps into the river is the opposite of protecting nature.
- "Accidentally" discharging sewage to effluent to IRL has been going on since I moved here in 1985.
- too many developments straining our already overburdened area. cutting down mini pockets of vegetation, home to many species of wildlife and not fixing the sewage problem to help restore the river.
- Trash easily gets into the river from trash trucks. All septic tanks should be removed and attached to sewer
- A need to implement better urban forestry and water management practices ie tree planting via underprivileged areas and water reclamation for ALL residents.

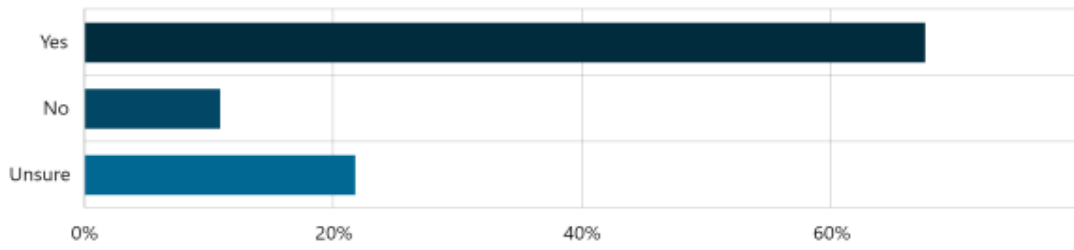
- On Earth Day you brag that Titusville had been a tree City for many years. What kind of tree City allows homeowners to cut down every tree in sight? Even obviously healthy trees with no permit needed. Developers clear-cut property saving no trees. And the They provide no shade, wildlife
- Allowing the destruction and construction of practically every inch of available property which is mostly wooded areas. All for adding housing that we don't need well ahead of any consideration of the natural resources or logistics to support it.
- Frequent spills and pollution into the IRL
- Our Lagoon,
- The city constantly dumps wastewater into our river.
- Water clean up not sufficient
- The City (Manager and Council) have constantly ignored the good scientific and ethical advice from its own Environmental Commission. Our precious wetland areas, the IRL, trees, etc. have all been neglected or even degraded by bad government.
- Indian River Sewage
- Planning issues permits allowing too much development and Council approves zoning changes that allow ecological degradation
- If the city did enough there would be enough seagrass for the manatees, no flooding, no sewer spills, no infections from wading in the lagoon. There would be shady streets and shorelines wouldn't erode.
- Titusville refuses to test their stormwater ponds and sewers. The IRL in Titusville is so polluted with nutrients that the marine life is dying.
- The degraded condition of the North IRL and its inability to support seagrass, oysters, fish, and manatees, as well as the current rate of clear cutting of wooded acreages/bird habitat for development indicate City doesn't protect Nat'l resources.

5. Which of the following initiative(s) should the City prioritize to protect natural resources?



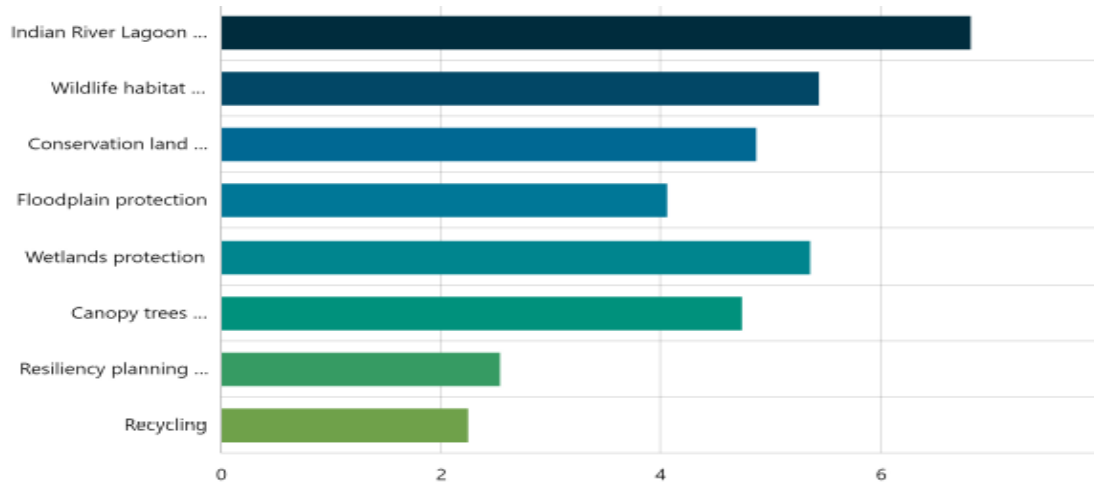
Answer choices	Percent	Count
Wetland protection	51.81%	43
Conservation land and wildlife habitat acquisition	57.83%	48
Converting septic to sewer	13.25%	11
Flood prevention	10.84%	9
Tree preservation/protection	33.73%	28
Low impact development methods (stormwater)	24.10%	20
Improving treatment and disposal of wastewater effluent	53.01%	44
Alternative potable water supply	3.61%	3
Sea level rise adaption projects	4.82%	4
Eliminating single use plastics	6.02%	5
Potable water conservation	6.02%	5
Recycling, reducing, or reusing materials	8.43%	7
Reducing local greenhouse gas emissions	1.20%	1
Other	8.43%	7

6. Should the City provide more stringent wetland protection regulations than the St. Johns River Water Management District?



Answer choices	Percent	Count
Yes	67.47%	56
No	10.84%	9
Unsure	21.69%	18
Total	100.00%	83

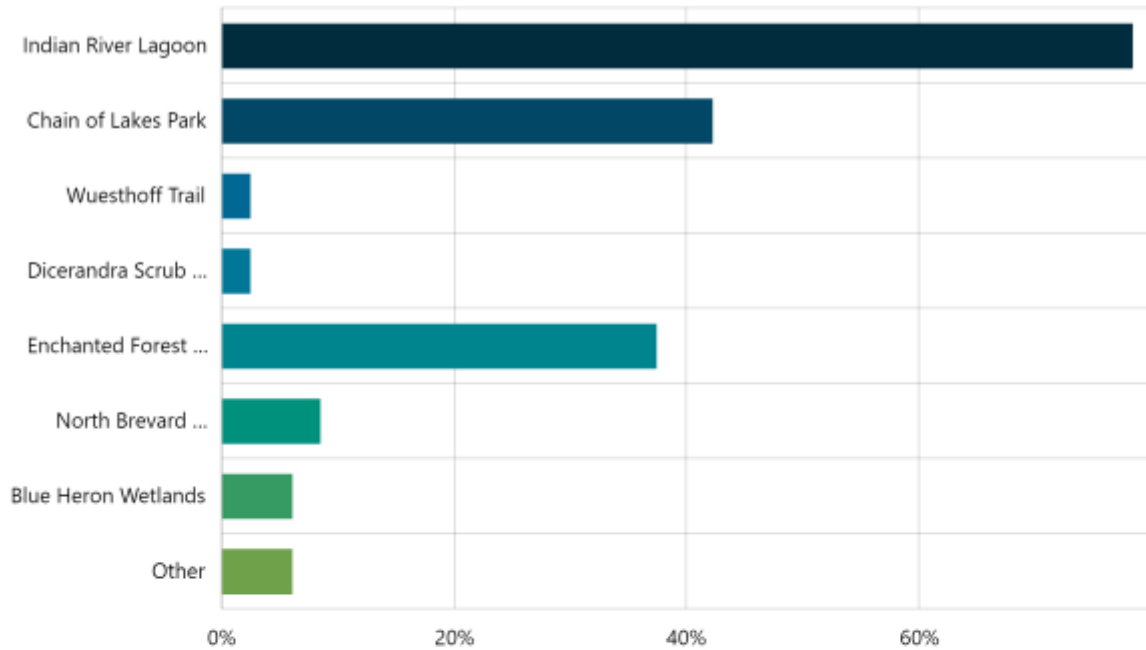
7. Please list in order of importance the natural resource projects/programs the City should prioritize funding in the next 10-20 years



	1	2	3	4	5	6	7	8	Count	Score	Avg Rank
Indian River Lagoon water quality improvements	55.42% 46	14.46% 12	13.25% 11	6.02% 5	1.20% 1	4.82% 4	2.41% 2	2.41% 2	83	6.81	2.19
Wildlife habitat conservation	8.43% 7	24.10% 20	18.07% 15	19.28% 16	15.66% 13	12.05% 10	1.20% 1	1.20% 1	83	5.43	3.57
Conservation land acquisition	9.64% 8	14.46% 12	18.07% 15	19.28% 16	14.46% 12	6.02% 5	8.43% 7	9.64% 8	83	4.86	4.14
Floodplain protection	4.82% 4	9.64% 8	8.43% 7	8.43% 7	21.69% 18	27.71% 23	16.87% 14	2.41% 2	83	4.05	4.95
Wetlands protection	8.43% 7	20.48% 17	22.89% 19	14.46% 12	19.28% 16	8.43% 7	6.02% 5	0% 0	83	5.35	3.65
Canopy trees protection and planting	8.43% 7	10.84% 9	14.46% 12	22.89% 19	15.66% 13	16.87% 14	4.82% 4	6.02% 5	83	4.73	4.27
Resiliency planning and climate change adaptation	3.61% 3	3.61% 3	3.61% 3	3.61% 3	7.23% 6	12.05% 10	27.71% 23	38.55% 32	83	2.53	6.47
Recycling	1.20% 1	2.41% 2	1.20% 1	6.02% 5	4.82% 4	12.05% 10	32.53% 27	39.76% 33	83	2.24	6.76

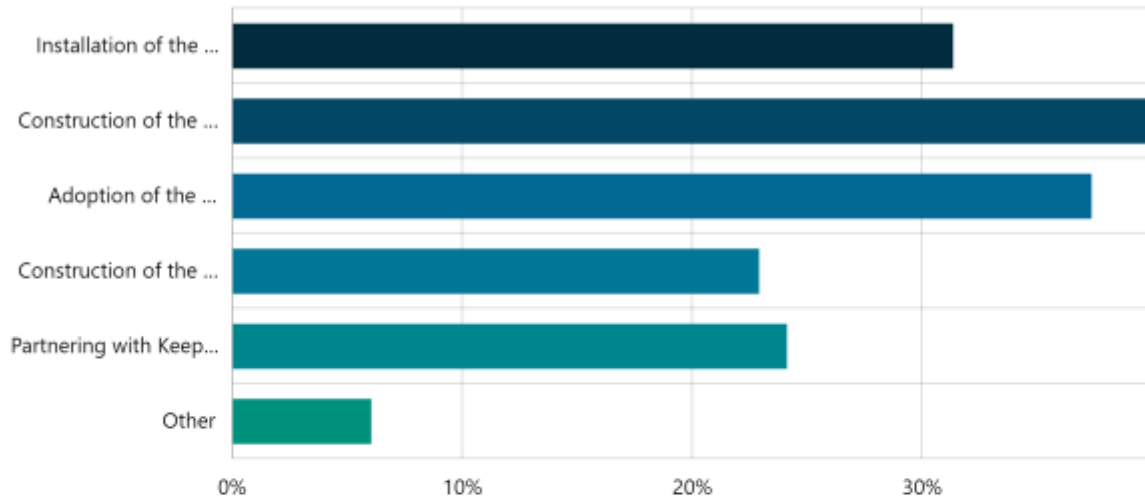
Score - Sum of the weight of each ranked position, multiplied by the response count for the position choice, divided by the total contributions. Weights are inverse to ranked positions.
Avg Rank - Sum of the ranked position of the choice, multiplied by the response count for the position choice, divided by the total 'Count' of the choice.

8. Which of the following natural resource park(s) do you frequent the most?



Answer choices	Percent	Count
Indian River Lagoon	78.31%	65
Chain of Lakes Park	42.17%	35
Wuesthoff Trail	2.41%	2
Dicerandra Scrub Sanctuary	2.41%	2
Enchanted Forest Sanctuary	37.35%	31
North Brevard Walking Trail	8.43%	7
Blue Heron Wetlands	6.02%	5
Other	6.02%	5

9. Which recently completed City project(s) do you feel benefits the environment the most?



Answer choices	Percent	Count
Installation of the Sand Point Park Floating Vegetated Islands	31.33%	26
Construction of the Draa Field Stormwater Park	39.76%	33
Adoption of the Low Impact Development Ordinance	37.35%	31
Construction of the Main street baffle box	22.89%	19
Partnering with Keep Brevard Beautiful's Lagoon Friendly Lawn Program	24.10%	20
Other	6.02%	5

10. Do you want to stay engaged with the project?

Out of 83 survey respondents 52 respondents indicated that they wanted to remain informed of the project.

Project Website Idea Wall

12 Posts and 28 Contributions

1. **Title:** Eliminate Herbicides, Post Metrics, Expand Littoral Bands @ City Ponds

Post: Florida has a reliance on herbicide usage to manage vegetative growth in and around storm water ponds. Herbicides are contaminants that should be reduced and removed whenever possible. In order to make progress on reduction of chemical treatments that is visible to residents, precise tracking is needed.

- 1) Recommend that the city document and publish the current usage of herbicides, current use of mechanical harvesting, and locations of current littoral bands around ponds where vegetation is permitted to grow.
 - 2) Recommend the city publish specific goals for reducing herbicides, increasing mechanical harvesting, and expanding littoral bands around ponds. These efforts reduce the number of manmade pollutants that flow into the ponds and migrate to the rivers.
 - 3) Recommend that the goals and updates against goals are published annually so that residents can track the city's progress. If we can't see the progress, how can we believe it?
- Once the city revises its annual strategic planning process into a relevant, visible process, these goals can be incorporated into the city manager's performance measures and targets tracking list that is currently available only by public records request.

Comment: No comment

2. **Title:** Organic Fertilizer

Post: Eaton Worms produces Certified Organic Fertilizer that is safe for the environment and especially our waterways. We need to stop using synthetics and treat our earth with organic solutions. Not to mention it's a local company based in Titusville and a member of the Chamber of Commerce. Eaton Worms products are sold all across the state already, not to mention all the lectures they give to all the Garden Clubs and Wildlife Associations along with UF/IFAS and other colleges. This is a no brainer!! Get Eaton Worms involved and let their beneficial bacteria clean our lands and waterways!!

Comment: Brilliant

Comment: This product should be used and recommended by the City of Titusville and by Brevard County.

3. **Title:** Low Impact Development (LID) Implementation Guidebook with Ordinance Recomm

Post: Here is an excellent educational video that covers many aspects of LID and other items that should be in Titusville's Conservation Element of the Comprehensive Plan. It covers many aspects of LID and how to write ordinances. It even discusses converting an abandoned golf course into the Ocala Wetlands Recharge Park (a cost sharing project) for public enjoyment. It mentions the Cape Canaveral LID Guide. This video mentions many LID aspects in brief detail. However, it mentions what counties are doing and would be a good source of where to go for more details

Comment: No comment

4. **Title:** Free Mural

Post: I am born and raised in Titusville, and I've watched the Indian river lagoon water quality change substantially in my short amount of time here. I don't have any proper ideas to save it and I won't act like I know the best and right way to fix things.

But I would like to offer my services an artist and muralist to the town, as a way to inform and educate the public on the natural, bountiful beauty that Titusville has and why it's so important to take actions, as everyday citizens, to preserve it.

I am offering a free mural or painting to the town in a public space in order to spread awareness to locals and tourists.

All I need is the paint and permission to paint on a local wall space, the image is up to the community what they would like depicted.

5. **Title:** Get the word out - our lagoon will not survive

Post: I moved onto the river in 2011 having already lived in Titusville for 30 years.

When I bought my house, I had a beautiful vibrant riverfront and within three years, it changed from a healthy brackish coastal waterfront to a mucky barren area, TOTALLY devoid of plant life and wildlife as seen when I moved in.

It is to this day, still murky and mucky and often times smelly.

I was relieved to see our river and Lagoon health addressed by our citizens in the 1/2 cent tax vote in 2016.

I am hearten to see the progress that the "save our Indian River Lagoon program" has made over these eight years .

Few are aware of these efforts and the progress being made. How is this being communicated?

Surveying most people I know, no one knew of these efforts. Talking to the space community - the entities who will ultimately decide whether to allow SpaceX to expand their operations on the cape, not one person was aware of any recovery efforts. After speaking to officials with SpaceX, FAA, LEIDOS, NASA, the Wildlife & Conservation I found that not one person was aware past or current cleanup efforts. Nor the participating entities. Nor the inherent problems with our lagoon.

Our lagoon in north Brevard is the source, the incubation and breeding ground of the healthy Flora and fauna needed to improve the health of the ENTIRE Indian river. It starts here and with unchecked space program expansion, it would be cutting our nose, to spite our face and jeopardizing the health and future of our lagoon and river FOREVER.

We need to do a better job to get the word out - to get the cooperation and support of those in power to pass referendums, convince officials to act and to engage our citizens and voters.

Comment: I firmly believe that the solution I must clean up the Lagoon is effective. Despite the challenges I face in gaining support due to my status as a candidate for the office of Brevard County Commissioner, I am confident that my plan is worthwhile. Those interested in discussing my ideas can reach out to me at dwightseigler@gmail.com and let's collaborate on finding the best ways to fix our Lagoon.

6. **Title:** Incorporate Natural Resource Goals In the City's Strategic Planning Process

Post: The City of Titusville would benefit by completing a 5-year strategic plan to assist residents in understanding the city's plan for itself. The current pieces of a strategic planning process could be pulled into a cohesive whole for the benefit of the city and the residents.

The City of Titusville currently has an annual strategic planning process that lacks visibility and participation. The process results in the updating of the city's goals and objectives (by council members),

and subsequently performance measures and targets (by the city manager). There is currently no process in place for the Titusville Environmental Commission or for residents to weigh in directly on the city's performance measures and targets which are updated each year by the city manager after the city council spring workshop.

This year the city cancelled its Community Engagement Event, and did not allow residents to speak until the end of their workshop. Citizen suggestions were not incorporated into the updating of the city council goals and objectives. The resident survey that was completed in lieu of the Community Engagement Event was only superficially incorporated into the updating of the goals and objectives. Much more could be done with this survey and compared year over year to reflect improvement and citizen confidence. There needs to be a process where the TEC and interested citizens can weigh in on the city's annual performance metrics and targets, and where these metrics are posted on the city website. Currently the spreadsheet that is used is only available upon records request to the city. The city manager should host a workshop for citizens to review the city's measurements and to receive input and questions directly from residents. The TEC has also discussed having the city manager come to a TEC meeting and explain the performance measures and targets

Comment: If this doesn't sound like the people being IGNORED

7. **Title:** Expand Public Access to TEC Meetings

Post: Public engagement starts with public access to environmental meetings. Despite years of citizen requests and (3) unanimous votes of the TEC commissioners, the City of Titusville currently Livestreams only 5 of the 10 meetings per year. This provides inconsistent access for remote viewing of meetings. Please codify the Livestreaming of all TEC meetings to assist the public in being informed on the actions of this important advisory board.

Comment: The live-streaming of TEC meetings began in 2024. The importance of having the public informed of TEC deliberations cannot be overly stated. Those discussions provide context and the science behind TEC's recommendations to City Council. Having a truly functional Commission is dependent on its ability to have meetings that are available for all to see.

Comment: The 50% livestreaming began in 2024, and citizens appreciate the ones that are Livestreamed, but the consistency is not there when we cannot depend on each of the meetings to be available to viewers via Livestream.

Additionally, at the May 28th city council meeting, city council declined to allow Member Myjak to participate remotely during the months that he is away. This denial occurred despite the city manager and the city attorney stating that it was possible to include Member Myjak. This decision further impacts the continuity of an effective advisory board and reflects that city council does not value the contributions of each member sufficiently to expand access opportunities for all that wish to participate.

Comment: This sounds like a VERY EASY FIX, just livestream all 10 meetings.

8. **Title:** Comments for the Titusville Planning Workshop, April 30, 2024

Post: Titusville conducted a survey to develop many simple goals that can be completed without much effort. This ensures that Staff will receive excellent ratings and good increases in salaries. No measurements of stormwater and IRL pollution and temperature increases will be made. Titusville will brag about exceeding their goals even though the IRL pollution and Heat Island Effect increases.

Past loss of wetlands, natural protective shorelines, and trees has caused the excessive IRL pollution has killed the seagrasses, destroyed the marine habitat, killed most of the marine life, and made IRL water contact recreation unsafe. The Heat Island Effect and flooding have greatly increased because good LID

design has not been required for all developments. Titusville has been more interested in Growth and increasing the density of homes per acre than sustainability. Lack of LID has created flooding and polluted runoff that has greatly damaged the environment.

Titusville needs to hire consultants that will:

1. Measure the water quality in stormwater ponds and stormwater outfalls to the IRL.
2. Measure the actual water quality in the IRL where people recreate and where marine life habitat is critical.
3. Compare these measurements to safe government regulations, optimum marine life requirements, and determine what needs to be done to restore the IRL.
4. Determine the Heat Island Effect created by the loss of trees in Titusville using temperature measurements on roads, sidewalks, buildings, etc. and record the tree canopy of each section measured in the various sections of Titusville.
5. Determine the minimum tree canopy needed to reduce the temperature by 10 degrees or to an acceptable level for each area.
6. Determine the flooding created by the lack of proper LID requirements. No stormwater should runoff from any Development for the maximum annual expected 24-hour rain event.
7. Determine retrofits needed to correct inadequate LID design.

Comment: The statement made by Bill Kline reflects years of citizens bringing these issues before the TEC and City Council. The TEC has discussed these issues and made relevant science based recommendations to City Council. The fact that we are still trying to bring these changes about is a reflection on a City Council that is not in tune with what its citizens are telling them.

Comment: Such a TRUE statement. Now we see two of those Council members Mayor Dan Diesel and former Vice-Mayor Robert Jordan are both running for the office of Brevard County Commissioner for District #1. If the citizens of Titusville and North Brevard vote for people like this tells you a lot about how out of touch some of the voters are. Now is the time to vote for someone who has experience in getting things done. Stop voting for people with the most and largest signs or who were the local losingest football coaches. Even in sports, you don't hire a losing coach. So get this done we are going to have to start making better decisions about the people we vote for. Vote for candidates who have experience and who are going to be a voice for the people and just a voice of him or herself. I have some ideas and I'm willing to work with anyone to help improve our community.

9. **Title:** Natural Shorelines

Post: I posted a comment regarding the Sea Grant program for natural shorelines earlier today. Now, I see my comment has been removed. I suggested the city read and study the article and use its recommendations in their planning. I thought it was a really good idea and I am insulted that it was removed.

Comment: Brevard County Department of Natural Resources has a lot of good information about the advantages of natural shorelines over seawalls and rock hardened shorelines. This is something that Titusville should do with all their parks and other shoreline properties for the benefit of the IRL.

Comment: Our natural shorelines, mangroves and wetlands, are what protects us from the storms that are getting more frequent and stronger. That politicians can railroad their pet projects (such as the development of Parrish Park) through without being accountable to the many citizens who have objected to them demonstrates their contempt for the people they represent.

10. **Title:** Where is the Tree Planting and Maintenance Budget of \$99,660?

Post: Titusville must have a Tree Planting and Maintenance Budget of \$99,660 (2 x 49,830) to qualify as a Tree City. Titusville does not have a Tree Planting and Maintenance Budget in their 2025 Budget. Please add a Tree Planting and Maintenance Budget of \$99,660 to the 2025 Budget.

Comment: The pillaging of moneys set aside for tree planting and maintenance by the creation of a "Beautification Fund", to repurpose those funds for other City needs, such as signage, is another example of the City taking resources to meet its own predetermined needs. The creation of a beautification fund to replace the intent of the original fund close to 20 years ago is another example of the City acting to subvert the needs of the citizens by repurposing the use of those resources.

11. **Title:** Living Shorelines

Post: I think City Council, city staff, citizens, and all stakeholders should study the following short blog post from 2017 and use what is recommended to improve our city shorelines and the IRL.
<https://www.flseagrant.org/restoring-floridas-coast-with-living-shorelines/#:~:text=Key%20Components%20of%20Florida%E2%80%99s%20Living%20Shorelines%201%20Oysters,About%20Living%20Shorelines%20in%20Florida%20by%20Region%20>

Comment: Our natural shorelines, mangroves and wetlands, are what protects us from the storms that are getting more frequent and stronger. That politicians can railroad their pet projects (such as the development of Parrish Park) through without being accountable to the many citizens who have objected to them demonstrates their contempt for the people they represent. The recommendations made by citizens, based on available science would have been beneficial and practical. Instead we have a parking lot pushed through that will be vulnerable to extreme weather and limit its use by citizens and the horseshoe crabs depending on those spawning grounds.

12. **Title:** Urban Forest Plan - trees on public lands

Post: I commend the City for the following Comprehensive Plans language pertaining to tree protection on private lands:

"Policy 1.2.3:

The City will not allow the total removal of vegetation during land development. New development applications and landscape plans shall emphasize the maintenance of indigenous vegetation, rather than clearing and replanting.

Strategy 1.2.1.1:

The City will prevent clear cutting of land by requiring new developments to integrate existing healthy non-exotic vegetation into landscape plans."

However, the Comprehensive Plan has no language regarding increasing trees on publicly owned lands, such as streets, parks, and other public areas.

The Conservation Element indicates:

"Objective 1.2:

Native Vegetation and Trees.

The City shall preserve and protect trees and native vegetation.

Policy 1.2.1:

Assure the maintenance and conservation of trees and native vegetation within the City, through the continued maintenance of trees within City properties."

Objective 1.2 should refer to the City's intent not only to preserve and protect trees and native vegetation but to increase tree canopy by planting trees along streets, in parks, and other public spaces as part of a comprehensive Urban Forest Plan. In August, 2023, City Council direct staff to apply for a grant for an



Urban Forest Plan to develop a vision for an Urban Forest Plan with a canopy goal, and specific actions. Titusville has been a designated Tree City USA for 23 years. To be a Tree City USA, a community is to have an effective long-term plan for planting, care, and removal of trees from streets, parks and other public spaces. Yet the City admits it planted no trees in 2023, and very few trees in the previous years. Please consider adding language to the Conservation Element regarding an intent to develop an Urban Forest Plan with a tree canopy goal in the City by planting trees in streets, parks, and public areas.

Yes, Kay, the comp plan does have language encouraging to not demanding tree & vegetation conservation, but the actions of city planners & Council do not enforce this intention. Stricter interpretation of the Comp Plan is needed--thus requiring more citizen information & participation to make certain the Comp Plan reflects the dreams, desires, needs & practicalities of living here.















City of Titusville
"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Members of the Titusville Environmental Commission
From: Brad Parrish, Community Development Director
Subject: **Staff Report - Draft ordinances**
Department/Office: Community Development

Recommended Action:

Discuss and provide input on the draft ordinances.

Summary Explanation & Background:

Several draft text amendments to the City's Land Development Regulations are enclosed for the TEC's review.

On November 13, 2024, the TEC provided input and suggestions the draft vegetation and canopy ordinances. Specifically, the following changes were requested. In addition, the reference to the seawall was removed from the artificial turf ordinance.

- CRZ ordinance. Motion to recommend to city staff that Michael Browning's recommendations that are in the email that Chairwoman Thompson provided at this November 13, 2024 Titusville Environmental Commission meeting be incorporated into the Critical Root Zone draft Ordinance. Member Flis seconded.

The staff is still researching the costs and benefits of the new CRZ.

- Canopy and Multifamily ordinance. Motion to recommend to city staff that the following language be removed from all places used in the draft ordinance: "(except projects with a single duplex unit)" and to eliminate the comma used in the language "including townhomes, multifamily projects" and replacing the comma with the word "and".

The staff disagrees with the TEC's recommendation and with including duplexes in the canopy requirement. The City Council approved an advisability directing the staff to identify barriers to infill development in the code and provide remedies. Additional canopy requirements on small lots will discourage the development of small multifamily units such as duplexes on infill lots.

- Native landscaping ordinance. *** This was not a motion*** Chairwoman Thompson stated that the Titusville Environmental Commission's recommendations to staff are that in the eight places where it talks about Brevard native trees, the word "Florida" native is removed leaving Brevard native only and everywhere there is shrubs, ground covers and grasses are mentioned, they want added to the language that says "50% Brevard native is required".

The staff is still researching the costs and benefits of the new 50% native landscaping and Brevard native only vegetation requirement.

- Artificial turf ordinance.

The staff requests the TEC carefully evaluate the draft artificial turf ordinance and determine if additional standards are necessary.

Alternatives:

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

1. Multifamily Canopy Ord Ver4
2. Artificial Turf Ordinance Ver11

ORDINANCE NO. XX-2025

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE LAND DEVELOPMENT REGULATIONS TO PROVIDE FOR STANDARDS OF TREE CREATION OF TOTAL CANOPY AND PRESERVED CANOPY REQUIREMENTS FOR MULTIFAMILY DEVELOPMENTS AND CLARIFYING THAT RESIDENTIAL SUBDIVISIONS INCLUDE THOSE CONTAINING TOWNHOMES, BY AMENDING CHAPTER 30 “DEVELOPMENT STANDARDS” SPECIFICALLY AMENDING SECTIONS 30-31 “INTENT”, 30-31.5 “CANOPY AREA REQUIREMENTS” AND 30-34 “MITIGATION PLAN, INCENTIVES”; PROVIDING FOR GRANDFATHER PROVISION, SEVERABILITY, REPEAL OF CONFLICTING ORDINANCES, INCORPORATION INTO THE CODE AND EFFECTIVE DATE.

WHEREAS, pursuant to Article VII, Section 2, The Florida Constitution, and Chapter 166, Florida Statutes, the City of Titusville is authorized to protect the public health, safety, and welfare of its residents and has the power and authority to enact regulations for valid government purposes that are not inconsistent with general or special law; and

WHEREAS, the retention of trees and vegetation reduces erosion, provides natural water retention and filtration, provides shade, buffers incompatible uses, aids in urban temperature control, provides wildlife habitat, and improves the aesthetic quality of a community; and

WHEREAS, the preservation of trees and natural vegetation increases property values and contributes to human health; and

WHEREAS, the establishment and implementation of policies, regulations and standards are necessary to ensure that the City of Titusville continues to realize benefits provided by trees as recognized through the “Tree City USA” designation by the Florida Department of Urban Forestry; and

WHEREAS, *Florida’s Urban Forest: A Valuation of Benefits* (University of Florida Institute of Food and Agricultural Sciences (IFAS) Publication #ENH1331, November 3, 2020) estimates that based upon 2019 leaf-on aerial imagery from National Agricultural Imagery Program in 2019, the Palm Bay-Melbourne-Titusville area had a canopy cover of 37.3% +/- 2.1% (95% confidence interval); and

WHEREAS, the Titusville City Council desires to encourage development of infill lots to reduce urban sprawl, maximize efficient use of existing infrastructure, and reduce impacts to existing natural areas by decreasing setbacks for multi-family medium (R-2) and high (R-3) density residential properties two (2) acres or less consistent with Future Land Use Policy 1.7.7 defining infill development; and

WHEREAS, the requirements of this ordinance generally maintain a balance between important environmental concerns and compatible development by allowing development while encouraging the establishment of an acceptable amount of tree coverage on public and private lands within the City while protecting property rights; and

WHEREAS, the City Council has considered the recommendations of the Titusville Environmental Commission, the Planning and Zoning Commission and interested members of the public during their review of the ordinance, and

WHEREAS, Future Land Use Policy 1.7.9 states that the “City shall provide standards and administrative process to facilitate infill development. The Land Development Regulations shall be amended to provide flexibility in site development”; and

WHEREAS, the City Council find this ordinance to be in the best interests of the public health, safety and welfare of the citizens of Titusville by encouraging infill development and appropriate tree canopy standards.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

Section 1. Recitals. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

Section 2: That Chapter 30 “Development Standards”, Article II “Environmental”, Division 2 “Trees and Vegetation (Preservation and Mitigation)”, Section 30-31 “Intent, general standards and definitions” of the Land Development Regulations of the City of Titusville is hereby amended to read as follows:

Sec. 30-31. Intent, general standards and definitions.

- (a) *Intent.* This article is intended to improve and protect the environment, character and value of surrounding properties. The provision of landscaping and the retention of natural plant growth reduces erosion, provides natural water retention and filtration, provides shade, buffers incompatible uses, aids in urban temperature control, provides wildlife habitat, and improves the aesthetic quality of a community, thereby promoting the public health, safety and general welfare.
- (b) *General standards.*
 - (1) Residential subdivisions, including townhomes and multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development), are required to meet the minimum requirements of preserved and total tree canopy areas, and associated reduced tree mitigation requirements. Incentives are also provided for those developments that satisfy and exceed tree canopy requirements.
 - (2) Other developments described in Subsection 30-31.5(b), "Canopy area requirements", have the option to either meet the minimum requirements of preserved and planted tree canopy areas, and associated reduced tree mitigation requirements, or meet the full tree mitigation requirements. For those projects for which tree canopy requirements are optional, mitigation requirements are provided which are greater than those required for residential subdivisions including townhomes, and multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development). The applicant can choose either option, but cannot mix the two (2) approaches. Incentives are also provided for developments exceeding tree canopy area requirements.
 - (3) Except as described in this Article, all developments are required to meet the provisions related to heritage trees.

(c) *[Protected tree designation.]* Protected trees are designated as follows:

Tree Designation	Species	Size—Diameter at Breast Height
Significant	Native or IFAS-designated Florida-friendly, excluding palms	Equal to or greater than fourteen (14) inches and less than twenty (20) inches
Specimen	Native or IFAS-designated Florida-friendly, excluding palms	Equal to or greater than twenty (20) inches and less than forty-six (46) inches
Heritage	Native or IFAS-designated Florida-friendly, excluding palms	Equal to or greater than forty-six (46) inches

- (d) *Canopy* means the area consisting of a tree's branches in all directions from its trunk, the outer edge of which is the dripline.
- (e) *Canopy area* is the combined total area covered by tree canopy after the removal of invasive species, dead or diseased trees. The canopy area shall be set aside for the purpose of preserving and planting trees as identified on the site plan/plot.
- (f) *Critical root zone (CRZ)* is also called the "tree protection zone" is often defined as an imaginary circle on the ground that corresponds with the "dripline" of the tree. However, the dripline is very irregular and misleading, so the trunk diameter is referred to:
- (1) To determine a CRZ:
 - a. Measure tree diameter four and one-half (4.5) feet above grade.
 - b. Multiply this by twelve (12) inches.
 - c. The calculation gives the diameter of the CRZ centered on the tree. For example, a twenty-five-inch diameter tree would have a twenty-five-foot diameter CRZ.
 - (2) Limited development in the CRZ is allowed as follows:
 - a. Impervious surfaces are allowed in the CRZ if no more than twenty-five (25) percent of the CRZ area is impervious. Additional impervious surface may be approved by the Development Review Committee when methods are utilized that would permit water to adequately penetrate the root zone to allow the continued viability of the tree. Grade changes within the CRZ shall not exceed a difference of three (3) inches between the pre-development grade and the post-development grade.
 - b. If new development or a grade change occurs in the CRZ, except as described in (a) above, the tree shall be considered as being fully impacted and mitigation/replacement as required by code shall be applied; no mitigation credit shall be allowed.
 - c. The CRZ of a preserved tree may include existing impervious area(s) not adversely affecting the viability of the tree.

- (g) *Development area* is the total site area to be utilized in canopy area calculations as determined by the applicant. Land that may be excluded from the development area includes wetlands, drainage or utility easements, water bodies, or any other land which will not be altered. Only land included within the development area may be utilized to meet canopy area requirements.

Section 3: That Chapter 30 “Development Standards”, Article II “Environmental”, Division 2 “Trees and Vegetation (Preservation and Mitigation)”, Section 30-31.5 “Canopy area requirements” of the Land Development Regulations of the City of Titusville is hereby amended to read as follows:

Sec. 30-31.5. Canopy area requirements.

- (a) Residential subdivisions, including townhomes, and multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development) shall meet required tree canopy area as a percentage of the development area. Minimum canopy area requirements may be met through a combination of preserved and planted trees as provided below:
- (1) In the event there is insufficient preserved canopy area to meet the required minimum preserved canopy area, the applicant shall be required to plant additional trees to meet the total tree canopy area requirement. Any trees planted to address a shortfall of preserved canopy area shall not receive mitigation credit.
 - (2) Within subdivisions, required canopy areas shall not include portions of individual residential lots.

Development Type	Total Canopy Area as a Percentage of Development Area	Minimum Preserved Canopy Area as a Percentage of Development Area
Residential subdivision, <u>including townhomes, and multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development)</u>	25%	15%
Developments listed in (b) below	20%	10%

- (b) Optional canopy area requirements. The following categories of development are not required to satisfy the canopy area requirements shown above, but may voluntarily satisfy the canopy area requirements to benefit from reduced mitigation requirements as set forth in Section 30-34, "Mitigation plan, incentives". In the event there is insufficient preserved canopy area to meet the required minimum preserved canopy area, the applicant shall be

required to plant additional trees to meet the total canopy area. Any trees planted to address a shortfall of preserved canopy area shall not receive mitigation credit.

- (1) ~~Residential development not located in a subdivision and s~~Single family lots located outside of a subdivision.
 - (2) Single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development.
 - (2) Commercial development.
 - (3) Industrial development.
 - (4) All development in the Downtown Mixed-Use zoning district.
- (c) An aerial photograph not more than one (1) year old may be utilized to determine the tree canopy area.
- (d) Canopy area requirements.
- (1) Canopy coverage is calculated by adding together the canopy area of single trees and tree clusters, which are defined as three (3) or more trees which canopies are within five (5) feet of each other. The entire area within tree clusters shall be considered within the canopy area calculation.
 - (2) Undisturbed vegetated scrub habitat consisting of, but not limited to, chapman oak, scrub oak and sand live oak, in excess of an average of thirty-six (36) inches in height may be considered as part of the tree canopy area.
 - (3) Category I invasive plant species as listed by the Florida Exotic Pest Plant Council shall not be counted toward canopy area requirements.
 - (4) All required tree canopy areas shall be permanently protected in a recorded plat condition, or declaration of covenants recorded in the official records of Brevard County, Florida, or with sufficient protective language, noted on the approved site plan as a condition of approval, in property records maintained by the City of Titusville.
 - (5) Loss of canopy area to a level below the required total canopy area requirements shall require replacement.
 - (6) Canopy areas may include portions of Low Impact Development (LID) stormwater management features incorporating existing and/or planted trees and native vegetation.
 - (7) Canopy areas may include areas of planted trees in stormwater retention or detention areas and other nutrient removal mechanisms when utilizing LID techniques.
 - (8) Canopy areas may be located in code required buffers, wetlands and wetland buffers, and any preservation areas or buffers required by zoning, conditional use permit, master plan, planned development or development agreement approval.
 - (9) Up to fifty (50) percent of canopy area containing preserved trees may be forested wetlands provided the wetlands are free of invasive species.
 - (10) Canopy areas may contain passive recreation areas, boardwalks, trails, decks and paths as long as these areas are pervious and will not cause damage to the CRZ required in Section 30-31, "Intent, general standards and definitions."

(11) Canopy from planted trees shall be calculated at fifty (50) percent of the size at maturity as referenced in Table 1-A, Tree Size Classifications and Expected Mature Canopy Area, to the extent that the expected canopy coverage would be contained within the designated, legally-protected canopy area.

(12) Placement of canopy areas within the interior of the development is encouraged.

Section 4: That Chapter 30 “Development Standards”, Article II “Environmental”, Division 2 “Trees and Vegetation (Preservation and Mitigation)”, Section 30-34 “Mitigation plan, incentives” of the Land Development Regulations of the City of Titusville is hereby amended to read as follows:

Sec. 30-34. Mitigation plan, incentives.

(a) As a condition of granting a permit, the applicant is required to prepare a Mitigation Plan for all protected trees designated for removal based on tree dbh being removed as provided below.

(1) For residential subdivisions, including townhomes and multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development) and developments meeting the optional minimum preserved and total canopy area:

- a. Significant tree: Fifty (50) percent mitigation replacement based on trunk dbh.
- b. Specimen tree: One hundred (100) percent replacement based on trunk dbh.
- c. Heritage tree: Two hundred (200) percent mitigation replacement based on trunk dbh.

(2) For developments that do not meet minimum preserved and total canopy area, required mitigation shall be a two-to-one replacement based on tree dbh of specimen and heritage trees being removed. No mitigation is required for significant trees.

(b) All replacement mitigation trees shall be depicted on the mitigation plan with identification of the type of tree. The replacement mitigation tree plantings on site shall be in addition to any landscape planting required by the land development regulations.

(c) Mitigation plantings are permitted within preserved and planted canopy areas if there is sufficient room to ensure viability of canopy and mitigation plantings. Caliper inches planted above the minimum size for canopy areas and required landscape areas may be credited toward mitigation planting requirements.

(d) The mitigation plan shall include a list (including species and size) of all protected trees proposed for removal, a list of all protected trees to be preserved, and the location of any required canopy areas.

(e) For residential subdivisions, including townhomes, multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development) and those projects meeting the minimum canopy requirements established in Section 30-31.5 "Canopy area requirements", the applicant may in lieu of replanting, preserve native vegetation on the site consisting of at least one hundred (100) square feet per tree dbh-inch lost. The preservation of native vegetation shall be in addition to any required landscaping or preservation required by the land development regulations, with the

exception of preserved wetlands and natural buffer areas which may be counted as part of preserved area credited toward mitigation. Native vegetation preservation credit may be allowed in preserved wetlands not to exceed a maximum of fifty (50) percent of the total required mitigation inches. The mitigation plan shall include designation of proposed areas to be preserved and specifications of the kind of existing vegetation in such areas.

- (f) For those projects choosing not to meet optional canopy area requirements (described in Section 30-31.5(b) "Canopy area requirements"), the applicant may in lieu of replanting preserve native upland vegetation on the site consisting of at least of one hundred (100) square feet per tree dbh-inch lost. The preservation of native vegetation shall be in addition to any required landscaping or preservation required by any other regulation.
- (g) As a last resort for sites which cannot accommodate the plantings required by this section (as determined by the Administrator), the applicant shall contribute to the City's Public Landscaping Trust Fund an amount equal to seventy-five dollars (\$75.00) per net dbh-inch lost where canopy requirements are met. For those developments which do not choose to fulfill the optional tree canopy requirements established in Section 30-31.5, Canopy area requirements, the contribution shall be one hundred dollars (\$100.00) per net dbh inch lost.
- (h) When mitigation trees are removed to address requirements established by floodplain compensatory storage regulations (Section 30-103(f)(3)), the mitigation criteria for that portion of the development shall be enforced as shown below:
 - (1) The replacement ratio shall be one-to-one replacement based on tree caliper.
 - (2) The contribution to the City's Public Landscape Trust Fund shall be an amount equal to one hundred dollars (\$100.00) per net dbh-inch lost for those developments which do not choose to fulfill the optional tree canopy area requirements established in Section 30-31.5, Canopy area requirements. For residential subdivisions, the contribution to the City's Public Landscape Trust Fund shall be an amount equal to seventy-five dollars (\$75.00) per net dbh-inch lost.
- (i) The provision of payment into the City's Public Landscaping Trust Fund shall not be eligible for a variance before the Board of Adjustment and Appeals.
- (j) Appeals. Appeals of the Administrator's determination as to the practicality of installing required mitigation trees shall be processed as described in Section 34-248(b), Appeals of site plan. If the appeal is granted by the Board of Adjustment and Appeals, the applicant shall make the required payment as stipulated by Section 30-34, "Mitigation plan, incentives", into the City's Public Landscaping Trust Fund.
- (k) Incentives to preserve canopy areas and reduce mitigation are shown below.
 - (1) *Incentive 1.* Developments satisfying all requirements for minimum preserved canopy area and total canopy area are exempt from further mitigation for significant trees that are removed. In addition, a fifty-percent reduction in mitigation of specimen trees shall be granted. On developments where this is achieved, a tree survey of significant trees is not required outside of the total canopy area.
 - (2) *Incentive 2.* If a site plan or subdivision plan provides for a total canopy area increase of five (5) percent of the site in accordance with the table below, then no further tree mitigation or payment in lieu of mitigation is required, with the exception of heritage trees.

	Total Canopy Area
Residential subdivisions, <u>including townhomes, and multifamily projects (excluding single duplex units and properties meeting one of the specified characteristics described in Comprehensive Plan Future Land Use Element Policy 1.7.7 for infill development)</u>	30% or greater
Development described in Section 30.31.5 choosing to meet canopy requirements	25% or greater

- (l) If trees four (4) inches dbh or larger are used to satisfy required landscape requirements of Division 10 of the Land Development Regulations, one hundred (100) percent of the tree caliper shall be eligible for mitigation credits.

Section 5. GRANDFATHER PROVISION. All lawful existing development shall be entitled to complete development that has been previously authorized and the City recognizes the right of any person to complete the following development in compliance with the former regulations:

- (a) Building permits approved as of the effective date of this ordinance, which remains valid consistent with the Florida Building Code and requirements of this Code.
- (b) Development that has received final plat approval, site plan approval, sketch plat, preliminary plat approval which remains valid consistent with all Code requirements.
- (c) Development that has on file with the City a completed application for a building permit, site plan, sketch plat, preliminary plat or final plat, including acceptance of all required exhibits and payment of all applicable fees and the application continues to remain active and processed consistent with the requirements of the Code. Issuance of a permit from an outside agency is not required for compliance with this grandfathering provision.
- (d) The City may recognize other applications for vested rights consistent with Chapter 34 Procedures, Division 3 Vested Rights Determination, of this Code.

Any person who has a right to complete said development and has secured a building permit, final plat approval, final site plan approval, preliminary plat or sketch plat approval as provided above shall lose its right to complete said development if said development does not maintain a current building permit, or current site plan or development approval as provided for by the Code of Ordinances of the City. Once a development has lost its current approval, then in that event, future development shall comply with applicable regulations.

Section 6: SEVERABILITY. If any provisions of this Ordinance are for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

Section 7: REPEAL OF CONFLICTING ORDINANCES. All ordinances or parts of ordinances, and all resolutions and parts of resolutions, in conflict herewith are hereby repealed to the extent of such conflict.

Section 8: INCORPORATION INTO CODE. This ordinance shall be incorporated into the City of Titusville Code of Ordinances and any section or paragraph, number or letter, and any heading may be changed or modified as necessary to effectuate the foregoing. Grammatical, typographical, and like errors may be corrected and additions, alterations, and omissions, not affecting the construction or meaning of this ordinance and the Code may be made.

Section 9: EFFECTIVE DATE. This Ordinance shall be in full force and effect upon adoption by the City Council in accordance with the Charter of the City of Titusville, Florida.

PASSED AND ADOPTED this _____ day of _____ 2025.

Andrew Connors, Mayor

ATTEST:

Wanda F. Wells, City Clerk

ORDINANCE NO. X-2025

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA AMENDING THE CODE OF ORDINANCES TO PRESCRIBE THE USE OF ARTIFICIAL TURF BY AMENDING SECTIONS 30-321 “PLANT MATERIALS” AND 37-1 “DEFINITIONS” AND CREATING LANDSCAPING TECHNICAL MANUAL SECTION 5.3 “ARTIFICIAL TURF” PROVIDING FOR SEVERABILITY, REPEAL OF CONFLICTING ORDINANCES, INCORPORATION INTO THE CODE AND AN EFFECTIVE DATE.

WHEREAS, the City Council has become aware of the increased use of artificial turf based upon variances granted by the Board of Adjustments and Appeals; and

WHEREAS, the City Council desires to provide guidelines for the use of artificial turf within the City.

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF TITUSVILLE, FLORIDA as follows:

SECTION 1: Recitals. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2: That Chapter 30 “Development Standards”, Article III “Improvements”, Division 10 “Landscaping”, Subdivision 2 “Landscape Materials”, Section 30-321 “Plant Materials” of the Code of Ordinances of the City of Titusville is hereby amended to read as follows:

Sec. 30-321. Plant materials.

- (a) *Quality*: Plant material used in conformance with the provisions of this article shall be good, healthy and sturdy plants. All plant material shall be Florida #1 grade or better. Plant materials which are known to be intolerant of paving environments or whose physical characteristics may be injurious to the public or which produce a quantity and/or quality of debris so as to present maintenance difficulties shall not be specified for use under this article.
- (b) *Native vegetation*: The applicant is encouraged to utilize plant material native to Brevard County in meeting these landscaping requirements. The existing vegetation that is native to Brevard County with the exception of that listed in Section 30-4(d) shall be preserved and utilized except when removal is justified and determined to be acceptable by the enforcement official (see Landscape Technical Manual).
- (c) *Ground cover*: Ground covers, other than grass, shall be planted in such a manner so as to present a finished appearance and reasonably complete coverage within six (6) months after planting (see Landscape Technical Manual).
- (d) *Lawn grass*: Grass areas shall be planted in species normally grown as permanent lawns in Brevard County. Seeding and sprigging may be used if grass cover is

complete within six (6) months, or sodding will be required (see Landscape Technical Manual).

- (e) *Hedges*: Hedges, where required, shall be planted in sufficient number and maintained so as to form a continuous, unbroken, solid screen within a maximum of six (6) months after time of planting (see Landscape Technical Manual).
- (f) *Synthetic plants prohibited*: Synthetic or artificial material in the form of trees, shrubs, ground covers, ~~or vines~~ are prohibited in landscaping and yards. ~~or a~~ Artificial turf shall not be used in lieu of the plant requirements in this section. Artificial turf may only be used consistent with the requirements of Section 30-325 "Artificial Turf".
- (g) *[Overstory trees:]* Overstory trees shall be species having an average mature spread of crown of greater than twenty (20) feet and reach a mature height of at least sixty (60) feet, and having a trunk which can be maintained in a clean condition with over five (5) feet of clear wood (no branches). Trees, including palms, having an average mature spread of crown less than twenty (20) feet may be arranged in groupings so as to create the equivalent of twenty-foot crown spread and shall count as one (1) required tree. Invasives shall not be used to fulfill the requirements of this article (see Landscape Technical Manual).
- (h) *Caliper*: Plant materials required by this section shall comply with the minimum size requirements of Table 30-5, Minimum landscape planting specifications at the time of installation. Plant height shall be measured from the average grade level of the immediate planting area to the top horizontal plane of the shrub at planting; for single-trunk trees, the measurement shall be taken six (6) inches above grade level; for multitrunk trees, the tree shall be measured from the average grade level of the immediate planting area.
- (i) *Planting areas and shrubs*: Planting areas shall consist of permeable surface areas only. The permeable surface areas for shrubs may be included with permeable surface areas required for trees.
- (j) *Pavement edges*: Each overstory, coniferous, understory [tree] or shrub shall be planted at least twelve (12) inches from the edge of any paved surface.
- (k) *Irrigation*: Irrigation must be indicated on the landscape plan. Any landscape area must be shown by water tolerant usage area.

SECTION 3: That Chapter 37 "Definitions", Section 37-1 "Definitions" of the Code of Ordinances of the City of Titusville is hereby amended to add a new definition which reads as follows:

Artificial turf: A surface of synthetic fibers consisting of green life-like individual blades that emulate natural turf or turfgrass in color, texture and size.

SECTION 4: SECTION 9: That the Code of Ordinances, City of Titusville is hereby amended by adding a section, to be numbered Section 30-325 "Artificial Turf", which said section reads as follows:

Sec. 30-325. Artificial Turf.

- (a) Synthetic or artificial turf may be used consistent with the following conditions: Artificial turf may be placed in side or rear yards when concealed from view from the adjacent right-of-way.
- (1) Artificial turf shall not be used in lieu of the plant requirements of this Article.
 - (1) Artificial turf is prohibited in any public right-of-way.
 - (2) Artificial turf shall be installed to have a minimum permeability of thirty (30) inches per hour per square yard. Artificial turf that does not meet the permeability minimum shall be considered as 100% pervious area.
 - (3) Artificial turf shall have a minimum 15-year manufacturer's warranty that protects against color fading and decrease in pile height.
 - (4) Artificial turf shall be lead-free.
 - (5) Artificial turf shall come with "total content leach protocol" (TCLP) test documentation declaring that the yarn and backing material are disposable under normal conditions at any U.S. landfill station.
 - (6) Infill materials for artificial turf must be organic or sand, with a non-toxic coating.
 - (7) The use of "indoor/outdoor" carpeting as a replacement or substitute for artificial turf is strictly prohibited.
 - (8) Any reasonable deviation from these minimum standards must be approved as a variance by the Board of Adjustments and Appeals. No variance may be granted for use within the shoreline protection buffers as established in Section 30-63, Shoreline Protection Setbacks.
 - (9) Installation shall be, at a minimum, in accordance with manufacturer's specifications.
 - (10) Artificial turf shall be anchored in order to withstand the effects of wind.
 - (11) Seams shall be nailed and glued (not sewn) and all edges shall be trimmed to fit against all regular and irregular edges in order to present a natural look.
 - (12) Sufficient drainage shall be provided in order to prevent excess runoff or pooling of water.
 - (13) Artificial turf shall be maintained in a "like new" condition free of weathering and fading. Artificial turf areas shall be kept free of dirt, debris, stains, and weeds. Tears, holes, ruts, depressions and the like shall be repaired immediately with like for like materials, from the same manufacturer if possible. Edges shall be properly anchored and shall not present a "loose" appearance.
 - (14) Artificial turf installed in compliance with this code shall NOT count toward the required minimum landscape area.

SECTION 5. SEVERABILITY. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 6. REPEAL OF CONFLICTING ORDINANCES. All ordinances or parts of ordinances, and all resolutions and parts of resolutions, in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 7. INCORPORATION INTO THE CODE. This ordinance shall be incorporated into the City of Titusville Code of Ordinances and any section or paragraph, number or letter, and any heading may be changed or modified as necessary to effectuate the foregoing: Grammatical, typographical, and like errors may be corrected and additions, alterations, and omissions, not affecting the construction or meaning of this ordinance and the Code may be made.

SECTION 8. EFFECTIVE DATE. This Ordinance shall become in full force and effect upon adoption by the City Council in accordance with the Charter of the City of Titusville, Florida.

PASSED AND ADOPTED, this ____th day of _____, 2025.

Andrew Connors, Mayor

ATTEST:

Wanda F. Wells, City Clerk