



CITY OF TITUSVILLE

TITUSVILLE ENVIRONMENTAL COMMISSION

AGENDA

Regular Meeting

September 10, 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 August 13, 2025**

Approve Minutes

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

**7. OLD BUSINESS**

**A. Public Landscape Trust Fund**

**8. NEW BUSINESS**

**A. Project Planning**

Review the Natural Resources report and choose a recommendation to work on as the next project.

**9. PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT**

**10. REPORTS**

**11. FUTURE AGENDA ITEMS**

**12. ADJOURNMENT**

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

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

**City of Titusville**  
"Gateway to Nature and Space"

REPORT

**To:** Members of the Titusville Environmental Commission  
**From:** Bradley Parrish, Community Development Director  
**Subject:** **Minutes August 13, 2025**  
**Department/Office:** Planning

**Recommended Action:**

Approve Minutes

**Summary Explanation & Background:**

Minutes August 13, 2025

**Alternatives:**

**Item Budgeted:**

**Source/Use of Funds/Budget Book Page:**

**Strategic Plan:**

**Strategic Plan Impact:**

**ATTACHMENTS:**

1. 08.13.25 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, August 13, 2025, at 5:30 pm.

XXX

Vice Chairwoman Laurilee Thompson called the meeting to order at 5:30 pm. Present were, Member Jonathan Burdette, Member Michael Browning, Member Beth Ann Tucker and Alternate Member Joshua Koci. Chairman Michael Myjak, Member Robert Walter, Member Hector Delgado and Alternate Member William Young were absent. Staff present were Sustainability Program Coordinator Lily Galleo and Recording Secretary Laurie Dargie.

XXX

Vice Chairwoman Thompson asked about Member Walter and his absences. Chairwoman Thompson asked that staff reach out to Member Walter to find out why he has missed so many meetings.

XXX

Member Tucker made a motion to approve the July 9, 2025 meeting minutes as presented. Member Browning seconded. There was a unanimous voice vote in favor.

XXX

**Petitions and Requests from Public Present**

Toni Shifalo of Titusville, Florida made comments to the Titusville Environmental Commission about the Community Redevelopment Agency meeting on August 12, 2025. Ms. Shifalo wanted the Commission to be aware of the changes that have been made that impact protection of the environment.

XXX

**Old Business**

None

XXX

**New Business**

**Resolution #30-2001**

Vice Chairwoman Thompson made comments about the changes that have taken place since Resolution #30-2001.

Member Browning stated that he needs to correct some information in the third paragraph of the document he drafted that is provided in the agenda packet.

Vice Chairwoman Thompson provided the following language as a suggestion to change to the paragraph in the one-page document from Member Browning. The suggestion is as follows: “The city received an Urban Community Forestry Grant which will help create an Urban Forestry Plan.”.

Sustainability Planner Lily Galleo suggested to the Commission to work on making their intent clear about what changes they want to be made regarding Resolution #30-2001.

Member Browning stated that their intent is to have most of the landscape trust funds to be used on tree plantings.

Vice Chairwoman Thompson said that the one-page document is the Titusville Environmental Commission’s intent for the change to the Resolution #30-2001.

Member Browning brought up an email that Kay St. Onge sent to the Titusville Environmental Commission and asked if her email could be included as part of their intent.

Kay St. Onge of Titusville, Florida came to speak. Ms. St. Onge stated that just a portion of her email should be included and not the whole email. Ms. St. Onge read the portion of her email that she would suggest being included. Ms. St. Onge said simply stated; the funds should be used for the planting of canopy trees. Ms. St. Onge also said that streets trees provide the most bang for your buck.

Member Tucker stated that Resolution #30-2001 is useless and should be totally redone.

The Titusville Environmental Commission had discussion as to what changes should be made in Resolution #30-2001.

Kay St. Onge of Titusville, Florida said that the Commission may want to look at the language from the Conservation Element from the Comprehensive Plan to also include language it has regarding preserving trees.

Member Browning read from the fourth paragraph of the one-page document “Landscape Management Trust Funds can be financial mechanisms that support the sustainable management, conservation, and restoration of landscape, particularly in areas where ecosystems are under pressure from development.”. Member Browning said staff can continue from this.

XXX

Member Browning made a motion that he will re-write the one-page draft to include the corrections, references, and comments that have been made during the meeting and will produce another final draft which will be forwarded to Sustainability Program Coordinator, Lily Galleo and included in the September 10, 2025 agenda for review by the Titusville Environmental Commission. Member Tucker seconded. There was a unanimous voice vote in favor.

XXX

Kay St. Onge of Titusville, Florida came to make a comment that the Titusville Environmental Commission might want to consider including a recommendation to have funding for a full time Urban Forester to be on staff, so that they can implement the plan.

XXX

**Parks & Open Space Ordinance – Status report**

Sustainability Planner Lily Galleo gave an overview of this ordinance.

Vice Chairwoman Thompson said that staff did an excellent job on this ordinance, and she heard from Ms. Sphar that she was also pleased with it.

The Titusville Environmental Commission were all very pleased with the ordinance and had no recommendations for changes.

XXX

**Petitions and Requests from Public Present**

None

XXX

## **Reports**

Sustainability Program Coordinator Lily Galleo said that she has been working on the Energy Auditing Field, in efforts to have buildings get up to date on energy efficiency.

Sustainability Program Coordinator Lily Galleo said that the Urban Forestry Management Plan is being kicked off soon and she will provide the dates to the Titusville Environmental Commission.

Vice Chairwoman Thompson asked if the consultant is working on the Stormwater Feasibility Study. She would like the Titusville Environmental Commission to be given opportunity to give input with the consultant and see the data that is being collected. Ms. Galleo said that this is a project that Deputy Public Works Director Sandra Reller is overseeing.

Vice Chairwoman Thompson said she was at the dedication for the M1-Canal redirection of the water away from the Indian River Lagoon. Vice Chairwoman Thompson said Titusville needs this kind of project to be done to redirect the freshwater away from the Indian River Lagoon in Titusville. Vice Chairwoman Thompson asked if the consultant could be asked to come share with the Titusville Environmental Commission what they are working on and what has been found and allow for Titusville Environmental Commission to have input.

Member Burdette said he attended the tree planting at Blue Hole Park.

Member Browning said he also attended the tree planting at Blue Hole Park.

Member Browning asked for additional information regarding the grant. Vice Chairwoman Thompson gave additional information regarding the grant that the city obtained to do a study on what the City of Titusville can do to redirect some of the freshwater away from the Indian River Lagoon.

Member Browning asked Sustainability Program Coordinator Lily Galleo if she was able to look over the grant opportunity information that he emailed to her. Ms. Galleo said that she would review it, but she also emailed the information to the Deputy Public Works Director Sandra Reller who might be able to use the grant. Member Browning asked Ms. Galleo to tell him if the city does not proceed with pursuing this grant, the deadline is September 30, 2025.

Vice Chairwoman Thompson was excited to share that Titusville has seagrass growing on parts of the shoreline now. She encouraged the Titusville Environmental Commission members to go look at the seagrasses that are growing near Titusville's shoreline. She said you can see it off the pier near 4141 S. Washington Avenue.

XXX

**Future Agenda Items**

1. Public Landscape Trust Fund
2. TEC Goals from Sustainability Action Plan

XXX

**Adjournment 6:46 p.m.**

DRAFT

**City of Titusville**  
"Gateway to Nature and Space"

REPORT

**To:** Members of the Titusville Environmental Commission  
**From:**  
**Subject:** **Public Landscape Trust Fund**  
**Department/Office:** Planning

**Recommended Action:**

**Summary Explanation & Background:**

During the August 2025 meeting the commission reviewed Resolution 30-2001 and discussed potential changes

Member Browning made a motion that he will re-write the one-page draft to include the corrections, references, and comments that have been made during the meeting and will produce another final draft which will be forwarded to Sustainability Program Coordinator, Lily Galleo and included in the September 10, 2025 agenda for review by the Titusville Environmental Commission.

**Alternatives:**

**Item Budgeted:**

**Source/Use of Funds/Budget Book Page:**

**Strategic Plan:**

**Strategic Plan Impact:**

**ATTACHMENTS:**

1. Resolution 30-2001
2. LMTF 9-1-2025



RESOLUTION NO. 30-2001

A RESOLUTION OF THE CITY OF TITUSVILLE, FLORIDA IMPLEMENTING A PUBLIC LANDSCAPE TRUST FUND USING REVENUES OBTAINED FROM TREE MITIGATION EFFORTS, AND USING SAID FUNDS FOR BEAUTIFICATION EFFORTS ON PUBLICLY-OWNED OR PUBLICLY-MAINTAINED PROPERTY, AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City of Titusville currently has established a fund for tree mitigation efforts, entitled "Tree Mitigation Plan", and

WHEREAS, Section 35-4 of the *Land Development Regulations*, establishes a Public Landscape Trust Fund, and

WHEREAS, revenues are received as a result of tree mitigation efforts under said Section of the *Land Development Regulations*, and

WHEREAS, the City desires to beautify public properties by landscaping said properties and to create a pleasing and well-maintained esthetic atmosphere for the publicly-owned or publicly-maintained properties, and

WHEREAS, the City desires to utilize such funds to further these beautification efforts, and

WHEREAS, the City Council of the City of Titusville, Florida deems it wise, necessary and expedient that said funds be used for such purposes, and

WHEREAS, the City Council of the City of Titusville, Florida determines that the proposed projects shall be in compliance with applicable codes and regulations.

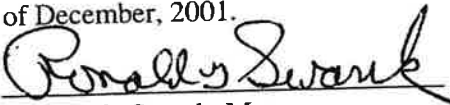
NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Titusville, Florida, as follows:

Section 1: The fund currently named Tree Mitigation Plan in the current year's budget, be renamed the "Public Landscape Trust Fund".

Section 2: That all funds received in accordance with Section 35-4 of the *Land Development Regulations* be used to beautify publicly-owned or publicly-maintained property.

Section 3: This resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED this 11<sup>th</sup> day of December, 2001.

  
Ronald G. Swank, Mayor

ATTEST:

  
Karan J. Rounsavall, City Clerk



## THE CASE FOR A REPURPOSED LANDSCAPE MANAGEMENT TRUST FUND

Over the last year, the Titusville Environmental Commission (TEC) has discussed the idea of a Landscape Trust Fund that would exemplify the city's support for site development prioritizing the use of native plants and natural systems. The term used for discussion was "Native Landscape Management Trust Fund" (NLMTF). This followed the city's recent, laudable efforts in establishing a Low Impact Development (LID) ordinance and other natural resource protection initiatives. While the name suggests the TEC prioritizes native plants in the landscape, it would trivialize the idea to suggest that simply requiring a percentage of native plants over exotic species is what the idea is all about. Native plants have a big part in resilient communities, in particular large canopy tree species. The city of Titusville has made important strides in the last decade towards understanding major challenges and planning for how to meet them. Building on this work, we know we cannot afford to use resources unwisely. If we are going to spend money on public planting, we think those funds mostly need to be on those large plants that provide the most benefits.

Since 2001 the City of Titusville has utilized Landscape Trust Funds primarily for various beautification efforts, with mixed success. Revenue going into these funds has mostly come from fees charged to developers for tree removal. Titusville is not the first community to trade tree removal for flower beds. Sometimes beautification type plantings have failed. Well-intentioned plantings can die in the best of circumstances. When landscape development intended to benefit the community fails, is that due to a lack of maintenance, or design, or both? Usually a combination, but most commonly a lack of maintenance. In this, the city is not unique. It seems like failed plantings must be a phase that all municipalities go through until the vital commitment to maintenance is made by city staff. Utilizing native plants in places hard to maintain is one way to minimize loss.

Embracing a systems approach, the TEC's focus on the last year has eventually turned to native canopy shade trees as primary infrastructural elements of the landscape. Trees are workhorses of site development. We know that the right trees, in the right place, can significantly affect air and water quality and help minimize the need for expensive manufactured stormwater management structures. At the same time large trees provide framework for the type of environment in which people and businesses thrive.

This year the city resolved to allocate \$50K of the uncommitted balance of the Landscape Trust Fund towards a required match for an Urban and Community Forestry Grant, which the city ultimately received. The city has now hired a consultant to help craft Titusville's first Urban Forestry Management Program. (UFMP) The TEC views the UFMP as a critical next step in the right direction. Likely, City Council will consider the Trust Fund as one of the allocated resources for the implementation of the UFMP. Should it be the major source of funding? Will it have enough funds to support a robust UFMP?

Landscape trust funds ensure that money is available over time to support the lofty ideas that attract businesses and tourists and promote livable communities. We recommend Council's consideration of repurposing the Trust Fund, to provide the lion's share of support for the UFMP.

**City of Titusville**  
"Gateway to Nature and Space"

REPORT

**To:** Members of the Titusville Environmental Commission  
**From:**  
**Subject:** **Project Planning**  
**Department/Office:** Planning

**Recommended Action:**

Review the Natural Resources report and choose a recommendation to work on as the next project.

**Summary Explanation & Background:**

In April 2025 Council formally adopted the Natural Resources plan for the Titusville Environmental Commission to use as a guide for their work.

**Background**

From 2017–2020, the City of Titusville worked on a partial update of its Comprehensive Plan, Titusville Tomorrow. The Council determined that further public input was needed to understand the community’s thoughts and ideas related to natural resource protection.

To gather feedback, the City hired Inspire Placemaking Collective to facilitate engagement through surveys, interviews, workshops, and data collection. The resulting report outlines community input and long-term strategies for natural resource protection within the Comprehensive Plan.

The Titusville Environmental Commission (TEC) reviewed the report in September 2024 and again in February 2025, recommending edits and incorporating what action items overlap with the actions called out in the City’s Sustainability Action Plan.

**Alternatives:**

**Item Budgeted:**

**Source/Use of Funds/Budget Book Page:**

**Strategic Plan:**

**Strategic Plan Impact:**

**ATTACHMENTS:**

1. ADOPTED Titusville Natural Resources Report
2. Sustainability Action Plan ADOPTED

# 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.

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# 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 9<sup>th</sup> 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

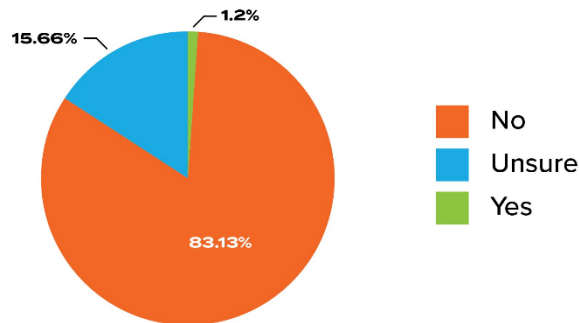
The project website launched on April 25, 2024 and provided residents with the project background and offered two forums where residents could provide feedback, the community idea wall and online survey. The community idea wall allowed participants to post ideas and comment on and like each other's ideas. 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?**



**TOP RESPONSES FOR WHAT NEEDS TO BE IMPROVED:**



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

- 
**1** Conservation land & wildlife habitat acquisition
- 
**2** Improving treatment and disposal of wastewater effluent
- 
**3** Wetland Protection
- 
**4** Tree preservation/protection
- 
**5** Low impact development methods (stormwater)

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

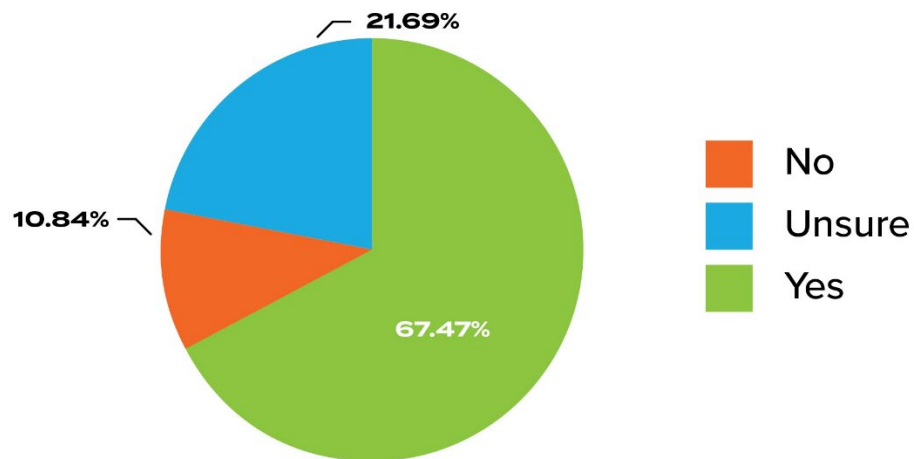
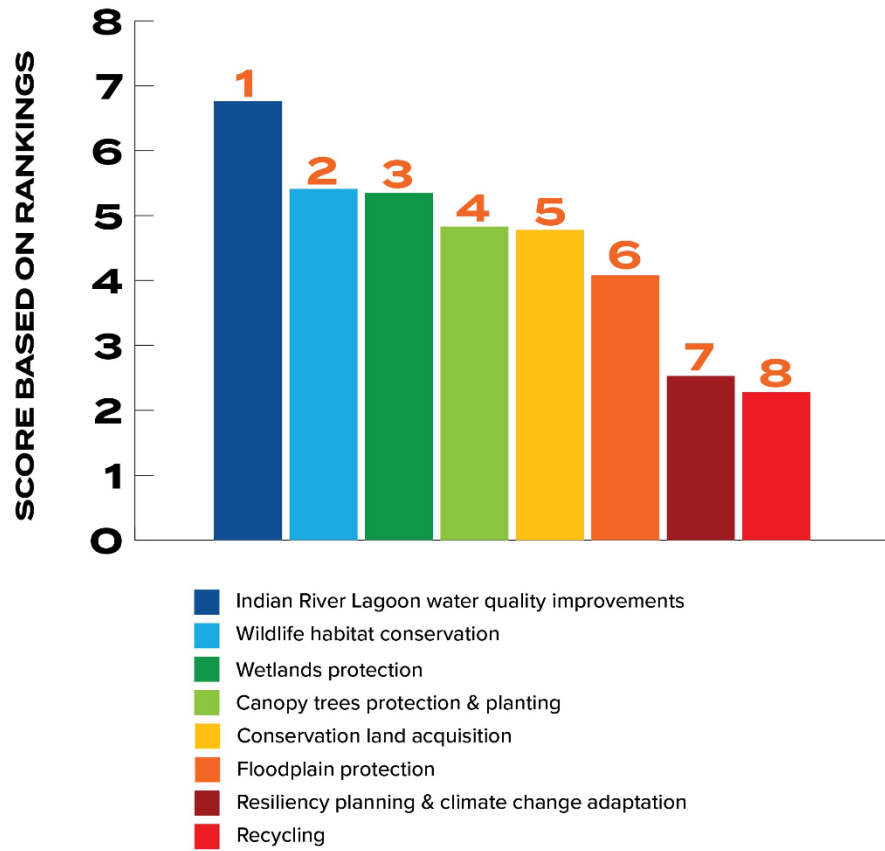
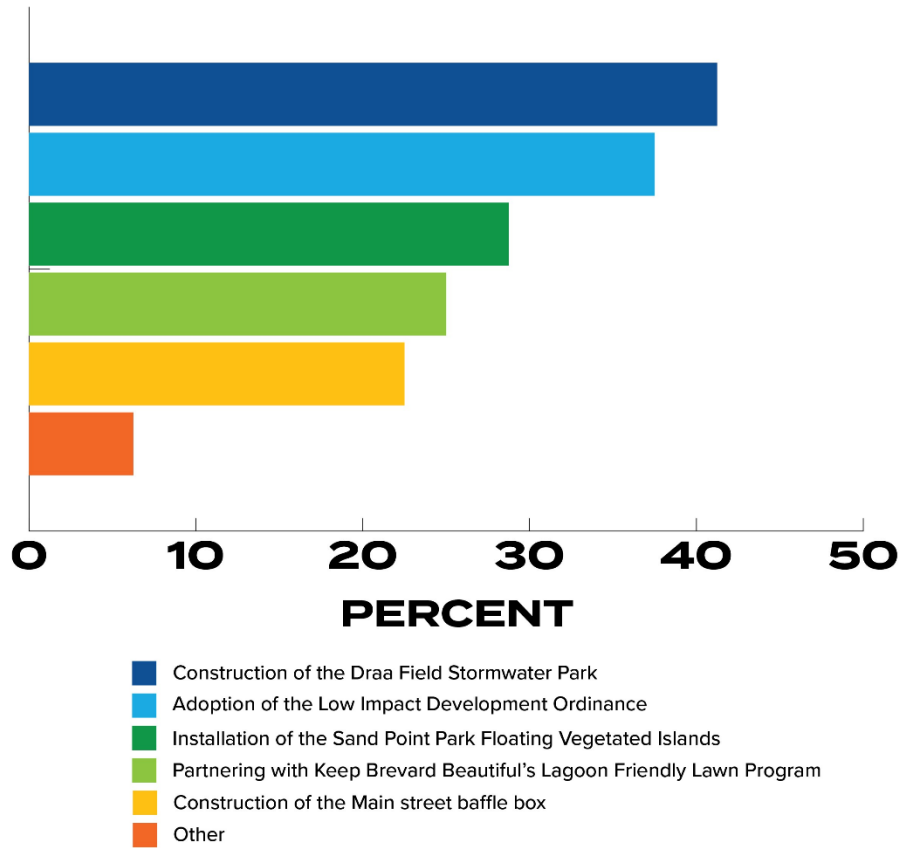


Figure 4: Rank the natural resource projects/programs the City should prioritize funding in the next 10-20 years



**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)
<p>Continue to prioritize funding and seek grant funding for projects that improve water quality of the Indian River Lagoon.</p> <p><b>Category:</b> IMP, SAP</p>	<p>Public Works will continue to seek partnerships (County or other agencies) to implement the IRL Basin Management Action Plan (BMAP) projects.</p> <p>The Sustainability Action Plan should be amended to include objectives oriented around grant funding and the health of the Indian River Lagoon.</p>	<p>This is already being implemented with over \$20 million in grants received for IRL BMAP projects. However, partnerships will help extend funding and resources.</p>	<p><b>CME Policy 1.1.5:</b> 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:</p> <ul style="list-style-type: none"> <li>• adequate sites for water-dependent uses</li> <li>• prevention of estuarine pollution</li> </ul>	<p><b>Ecosystems &amp; Resiliency 2.4.2</b> Collaborate with volunteer programs and organizations to assist with habitat restoration efforts on public and private properties.</p>



Advance Indian River Lagoon (IRL) Stormwater Quantity and Quality Improvement Projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan (SAP)
			<ul style="list-style-type: none"> <li>• control of surface water runoff</li> <li>• protection of living marine resources</li> <li>• reduction of exposure to natural hazards</li> <li>• public access</li> <li>• that required infrastructure is available to serve the development or redevelopment in the coastal area."</li> </ul>	
<p>Identify sources of stormwater discharge into the IRL and prepare plans to reduce the volume and improve the quality of the discharge.</p> <p><b>Category: IMP, CP</b></p>	<p>Public Works has already identified outfalls and water quality master plan and is in the process of implementing the master plan. The City is already ahead of its current BMAP reduction goal. However, more can be done, including testing of stormwater outfalls.</p>	<p>A comprehensive citywide stormwater study of this kind may be costly.</p>	<p><b>CME Policy 4.3.2:</b> 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.</p> <p><b>CME Policy 3.3.5:</b> Evaluate designing a “natural runoff” or “net-zero discharge” policy for stormwater in subdivision and site design."</p>	
<p>When feasible and funding has been identified, implement infrastructure improvements that will</p>	<p>Public Works is in the process of conducting a stormwater study that will address CIPs for</p>	<p>Construction costs may be significant to divert stormwater away from the IRL. There may be limited</p>	<p><b>CE Objective 1.12:</b> Stormwater Management To retrofit existing stormwater drainage</p>	<p><b>Ecosystems &amp; Resiliency 2.2.4</b> Evaluate current and planned stormwater infrastructure projects and</p>



<b>Advance Indian River Lagoon (IRL) Stormwater Quantity and Quality Improvement Projects.</b>				
<i>Strategy Considerations</i>	<i>Implementation</i>	<i>Future Considerations &amp; Resources</i>	<i>Comprehensive Plan Policy</i>	<i>Sustainability Action Plan (SAP)</i>
capture and treat or divert stormwater away from the IRL.  <b>Category: IMP</b>	future water quality projects.	opportunities to achieve this due to existing infrastructure. Eminent domain, if necessary, for this may be cost prohibitive.	systems, to redirect outfalls from environmentally sensitive areas, and to enhance environmentally sensitive areas through man-made wetlands which provide both renourishment of the wetlands system and wildlife habitat.	determine the feasibility of incorporating additional green infrastructure
Examine the feasibility of establishing additional stormwater parks to capture stormwater before it runs off into the IRL.  <b>Category: IMP</b>	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. Increase in maintenance costs would be costly.	<b>CME Policy 3.3.5</b> Evaluate designing a “natural runoff” or “net-zero discharge” policy for stormwater in subdivision and site design	<b>Ecosystems &amp; Resiliency 2.2.4</b> Evaluate current and planned stormwater infrastructure projects and determine the feasibility of incorporating additional green infrastructure
Prioritize funding to conduct restoration and maintenance of the shoreline on properties owned by the City when feasible.  <b>Category: IMP</b>	The City has partnered with the Zoo and The IRLNEP to receive a grant to install a living shoreline at Scobie Park. 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	Costs of construction and staffing would be minimal compared to comprehensive infrastructure projects.	<b>CME Policy 3.2.3:</b> To preserve the functionality of natural sea level rise barriers, the City shall: <ul style="list-style-type: none"> <li>• Examine the appropriate use of sediment-trapping vegetation, sediment mounds, etc., for coastal hazards; and</li> <li>• Implement shoreline restoration, plantings, and use of natural material, where feasible.</li> </ul> <b>CME Policy 3.2.4:</b>	<b>Ecosystems &amp; Resiliency 2.4.2</b> 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)
	consistent with Florida Department of Environmental Protection.		<p>The City will maintain shoreline protection and erosion control by:</p> <ul style="list-style-type: none"> <li>• Facilitating the installation and maintenance of native shoreline vegetation along appropriate areas of beach; and</li> <li>• Considering hard structures, such as seawalls, only when alternative options are unavailable.</li> </ul>	
<p>Continue to implement and promote the certification program for commercial lawn fertilizing services.</p> <p><b>Category: COO, IMP, PRC</b></p>	<p>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.”</p>	<p>Promote knowledge of the program, inform residents to report misconduct of best management practices.</p>		<p><b>Ecosystems &amp; Resiliency 2.2.3</b> Provide education and resources to homeowners on Florida Friendly Lawns and reducing the use of pesticides and garden chemicals</p> <p><b>Ecosystems &amp; Resiliency 2.3</b> Continue to make demonstrable progress towards Resilient Titusville’s Goals and Objectives</p>

Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
<p>Conduct testing to evaluate water quality degradation. This study should include an assessment of the magnitude of impact and recommendations for remediation.</p> <p><b>Category: IMP</b></p>	<p>Partner with One Lagoon to share information with other organizations in the Monitoring Network and potentially conduct testing at the municipal level. Testing is already being conducted at reclamation facilities (Osprey and Blue Heron). The City previously partnered with SOIRL and the SJRWMD to upgrade the Osprey plant, effectively reducing total nitrogen and phosphorus levels. Blue Heron is already an Advanced Wastewater Treatment Plant.</p>	<p>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.</p>	<p><b>CME Policy 1.1.2:</b> 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.</p> <p><b>Strategy 1.1.2.1:</b> 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.</p> <p><b>Strategy 1.1.2.2:</b> Periodic inspections shall be conducted on all wastewater treatment plants within the City to ensure that the facility is in good repair.</p>	
<p>Conduct a study to locate, assess, and identify repairs to all existing wastewater lines, particularly near surface waters <i>and begin to study long term plans and partnering with Brevard County and Space Florida</i></p>	<p>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</p>	<p>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</p>		

Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
<p>for future waste water services</p> <p><b>Category: IMP</b></p>	<p>environmental degradation. Current sewer projects include the Indian River Force Main Improvement (IRFMI), Bayview Lift Station Elimination, Riverside Dr Force Main Replacement, 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.</p>	<p>chain issues and inflation can substantially drive-up improvement costs. Additionally, a study of the whole system would be extremely costly. Water/sewer rates might need to be increased.</p>		
<p>Prepare a feasibility study to determine the cost of replacing aging wastewater lines.</p> <p><b>Category: IMP</b></p>	<p>The City has already contracted with and is in the process of implementing asset management software that will help with lifecycle costing of infrastructure. 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</p>	<p>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. Water/sewer rates might need to be increased.</p>		



Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
	another project of similar scale would cost.			
<p>Establish a priority list of wastewater line repairs and replacement.</p> <p><b>Category: IMP</b></p>	<p>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. Priority could consider benefits to the IRL and other surface waters, other environmental impacts, pipe material, groundwater levels, and infrastructure age.</p>	<p>See above. High-priority repairs may also be significantly more expensive than others. Water/sewer rates might need to be increased.</p>		
<p>When a wastewater line breaks, prioritize emergency communications to apprise the community.</p> <p><b>Category: PRC</b></p>	<p>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</p>	<p><i>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 and to stay up to date on current</i></p>		<p><b>Ecosystem &amp; Resiliency 2.3</b> Continue to make demonstrable progress towards Resilient Titusville's Goals and Objectives</p>



Prepare plans for addressing the City's aging wastewater infrastructure.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
	notifying news outlets that can reach residents through radio and television.	State notification protocols and requirements. Stay up to date on current State notification protocols and requirements.		

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.  <b>Category: IMP</b>	In FY2023-2024, the City had active projects that received over \$6 million in grant funding from the State and SOIRL programs. The City has already applied for multiple grants from the FDEP and SOIRL in FY25 for IRL projects.	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.	<b>CME Policy 1.1.5:</b> 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: <ul style="list-style-type: none"> <li>• adequate sites for water-dependent uses</li> <li>• prevention of estuarine pollution</li> <li>• control of surface water runoff</li> <li>• protection of living marine resources</li> <li>• reduction of exposure to natural hazards</li> <li>• public access</li> <li>• that required infrastructure is available to</li> </ul>	



Aggressively seek funding opportunities for IRL projects.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
			serve the development or redevelopment in the coastal area.	
<p>Continue to pursue grants and partnerships to provide funding for IRL improvement projects.</p> <p><b>Category: IMP</b></p>	<p>One Lagoon also distributes the Indian River Lagoon National Estuary Program’s (IRLNEP) small grant funding. 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 and will continue to do so in the future.</p>	<p>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, among other state, regional and federal partners. 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.</p>		
<p>Continue to utilize the ½ cent sales tax to secure future funding for IRL projects.</p> <p><b>Category: IMP, PRC</b></p>	<p>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.</p> <p>The city should educate the public on how that funding has enabled the implementation of million dollar projects.</p>	<p>Continued support for the sales tax will result in available funding opportunities for additional restoration projects.</p>		



<b>Develop a land acquisition program with a dedicated funding source.</b>				
<b>Strategy Considerations</b>	<b>Implementation</b>	<b>Future Considerations &amp; Resources</b>	<b>Comprehensive Plan Policy</b>	<b>Sustainability Action Plan</b>
Continue to coordinate with county, regional, and state partners for land acquisition and maintenance funding.  <b>Category: IMP, CP, SAP</b>	Continue to implement.	No change in resources.		
Continue to pursue grants and partnership agreements to fund land acquisition and maintenance needs.  <b>Category: IMP, CP, SAP</b>	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.		<b>Ecosystem &amp; Resilience</b> <b>2.1</b> 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, discretionary sales surtax, etc.).  <b>Category: IMP, CP</b>	There are a number of funding mechanisms available to the City. 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. Discretionary sales surtax is an additional tax levied by individual counties on top of the state's general sales tax.		
Prioritize the acquisition of lands identified as areas of critical concern or wetlands and create a plan to	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	<b>CE Policy 1.2.5:</b> The City shall ensure the protection and preservation of high quality native	<b>Ecosystem &amp; Resiliency</b> <b>2.1</b> Increase natural resource acreage and



Develop a land acquisition program with a dedicated funding source.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
<p>prioritize purchase and fund maintenance.</p> <p><b>Category: IMP, CP</b></p>		<p>acquisition is key when implementing this program. Maintenance could be costly.</p>	<p>ecosystems through acquisition whenever it is economically feasible. The City shall also support cooperative land acquisition efforts for protection of the environment.</p>	<p>habitat area for threatened species and wetlands</p>

Update Tree Preservation Ordinance to clarify and strengthen the regulations.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
<p>Evaluate the Tree Preservation ordinance every five years to assess its effectiveness and make necessary changes to prevent clearcutting of properties.</p> <p><b>Category: LDR</b></p>	<p>The Tree Canopy Preservation ordinance was adopted in 2021. Continue to monitor the ordinance and propose amendments that; prevent clearcutting and preserving the natural canopy.</p>	<p>Increasing tree preservation requirements could drive up the cost of construction and potentially negatively or positively affect other goals of the City like economic development and housing affordability.</p>		
<p>Consider updates to the Tree Preservation ordinance to include measures to retain natural subcanopy vegetation.</p> <p>Subcanopy consists of suppressed mature trees, regenerating tree saplings, shrubs, herbs, snags and coarse-woody-debris.</p>	<p>This is an optional requirement in the Code. It could be changed to mandatory and cite replanting as a last resort.</p>	<p>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.).</p>		



<p><b>Category: LDR</b></p>				
<p>Evaluate the effectiveness of fines levied as a result of violations of the Tree Preservation Ordinance.</p> <p><b>Category: LDR, COO</b></p>	<p>Staff should research cities and counties that enforce fines on “after the fact” tree violations and propose a new fine structure.</p>	<p>If the amount of the fines are set appropriately, this could be an effective method of preserving tree canopy.</p>		



Update Landscaping Ordinance to strengthen regulations.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
<p>Amend the Land Development Regulations to require all plantings in new developments to be identified as Brevard native.</p> <p><b>Category: LDR, COO</b></p>	<p>Update the comp plan and code to require native landscaping only.</p>	<p>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 Brevard native landscaping..</p>		<p><b>Ecosystems &amp; Resiliency</b>  <b>2.1.3</b> Promote UF/IFAS Brevard County Extension Florida-Friendly Landscaping Program</p>
<p>Incorporate Low Impact Development (LID) methods for innovative stormwater management in the Land Development Regulations (LDRs).</p> <p><b>Category: LDR</b></p>	<p>This is already included in the LDRs. May consider <i>requiring</i> it for all development rather than encouraging its use.</p>	<p>LID is more cumbersome to maintain than traditional stormwater methods. A commitment to maintaining all stormwater infrastructure should be a priority.</p>		<p><b>Ecosystems &amp; Resiliency</b>  <b>2.2</b> Prioritize the use of green infrastructure, low impact development, and nature-based solutions</p>
<p>Establish and pursue funding for an Urban Forestry Plan.</p> <p><b>Category: CP</b></p>	<p>The City is currently pursuing a grant to create an urban forestry plan.</p>	<p>Continued participation in this will help elevate the City's desires to increase its urban tree canopy.</p>		<p><b>Ecosystems &amp; Resiliency</b>  <b>2.1.2</b> Develop an Urban Forestry Management Plan to manage tree infrastructure and canopy</p>
<p>Actively participate in the Tree City USA program.</p> <p><b>Category: CP</b></p>	<p>The City is currently actively participating in the Tree City Program. Tree City USA has additional standards and recognitions that exceed the Tree City status and could be explored.</p>	<p>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 with respect to planting trees. The City should evaluate whether the</p>		



Update Landscaping Ordinance to strengthen regulations.				
Strategy Considerations	Implementation	Future Considerations & Resources	Comprehensive Plan Policy	Sustainability Action Plan
		program is important to implement.		
<p>Evaluate the LDRs to determine if all uses are achieving the goals of the Urban Forestry Plan.</p> <p><b>Category: CP, LDR</b></p>	<p>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.</p>	<p>After the evaluation, recommendations may require additional staffing.</p>		<p><b>Ecosystems &amp; Resiliency 2.1.2</b> Develop an Urban Forestry Management Plan to manage tree infrastructure and canopy</p>

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
<p>Evaluate the LDRs to identify opportunities to clarify or strengthen City wetland regulations.</p> <p><b>Category: CP, LDR</b></p>	<p>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</p>	<p>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.</p>		

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.			
<p>Evaluate wetlands for preservation and pursue funding to create a plan to prioritize purchases and fund maintenance.</p> <p><b>Category: IMP</b></p>	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.		
<p>No net loss of wetlands.</p> <p><b>Category: CP, LDR</b></p>	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.	<p><b>CE Strategy 1.6.2.1:</b></p> <p>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:</p>	<p><b>Ecosystem &amp; Resiliency 2.1</b> Increase natural resource acreage and habitat area for threatened species and wetlands</p>



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
			1. The use is ecologically sound; 2. The use is water dependent or water related and there is a documented public need; 3. The use is the least environmentally damaging alternative; 4. There is no practical alternative to insure reasonable use of the applicant's property; and 5. Any unavoidable damage or loss of wetland shall be mitigated to insure no net loss of wetlands and no loss of functional value.	
Implement a 1.8% maximum wetland impact for developments based on a threshold used at Viera for residential lots.  <b>Category: LDR, CP</b>	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	Strategy 1.6.3.2 needs to be clarified to limit the loopholes and how land is subdivided to	This provision has caused confusion with its implementation and developers have		<b>Ecosystem &amp; Resiliency</b> <b>2.1</b> Increase natural resource acreage and



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
<p>required to be designated by Conservation land use.</p> <p><b>Category: CP</b></p>	<p>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.</p> <p>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.</p>	<p>circumvented the requirement. More clarity on this will create more predictability and protect wetlands of high value.</p>		<p>habitat area for threatened species and wetlands</p>
<p>Consider removing the FLUE Policy 1.16.2 that allows conservation easements in Planned Developments in lieu of Conservation land use designations for wetlands 5 acres or more in size.</p> <p><b>Category: LDR, CP</b></p>	<p>Amend the Comprehensive Plan and LDRs to delete and clarify outdated language..</p>	<p>Conservation easements are <i>no longer guaranteed to be permanent</i>. 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.</p>		



<b>Increase public education and outreach throughout the City.</b>				
<i>Strategy Considerations</i>	<i>Implementation</i>	<i>Future Considerations &amp; Resources</i>	<i>Comprehensive Plan Policy</i>	<i>Sustainability Action Plan</i>
<p>Review and amend its current public outreach strategy to increase resident awareness about how the City is addressing environmental issues.</p> <p><b>Category: PRC</b></p>	<p>The City currently provides information on environmental issues and resources on its website and social media outlets. However, additional avenues could be explored such as a quarterly mailers, text alerts, or app notifications.</p>	<p>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.</p> <p>The City is currently exploring improving their story maps located on the City's website.</p>	<p><b>CE Policy 1.15.7:</b> The City shall continue its public education and outreach in regard to stormwater management and its National Pollution Discharge Elimination System (NPDES) permit best management practices.</p>	<p><b>Community &amp; Livability</b> <b>1.1.3</b> Develop a public engagement strategy to engage the entire community in the implementation of the SAP</p>
<p>Expand their educational series to increase resident awareness of the environmental programs the City is actively engaged in.</p> <p><b>Category: PRC</b></p>	<p>Monthly or bi-monthly speakers or curated activities could increase awareness and citizen engagement.</p> <p>The city should consider looking into IDEAS For Us and their educational "hives" as a model for this program.</p>	<p>Availability of hosting facilities and the cost of additional staffing should be considered.</p>		<p><b>Ecosystems &amp; Resiliency</b> <b>2.4.1</b> Continue education and outreach initiatives about sea level rise, climate change, and the Indian River Lagoon</p>
<p>Develop a branded social media initiative to educate residents about important environmental topics.</p> <p><b>Category: PRC</b></p>	<p>Create a campaign for a consistent social media message, posting regularly, and providing city insights.</p>	<p>This may require additional staff or a social media coordinator/communication department to collaborate on this effort.</p> <p>The sustainability planner could establish a social media presence dedicated to environmental topics.</p>		

<b>Assess impact fees.</b>				
<i>Strategy Considerations</i>	<i>Implementation</i>	<i>Future Considerations &amp; Resources</i>	<i>Comprehensive Plan Policy</i>	<i>Sustainability Action Plan</i>
<p>Evaluate all impact fees every five years to ensure the fees are adequate to construct needed facilities.</p> <p><b>Category: IMP</b></p>	<p>Include a policy in the Capital Improvements Element to require the evaluation of all impact fees every 5 years. The City has contracting with a consultant to review all impact fees. Staff is currently evaluating the CIP list.</p>	<p>This will enable the City to adequately fund construction of needed facilities.</p>		

<b>Create a green space master plan.</b>				
<i>Strategy Considerations</i>	<i>Implementation</i>	<i>Future Considerations &amp; Resources</i>	<i>Comprehensive Plan Policy</i>	<i>Sustainability Action Plan</i>
<p>Create a connected green space inventory and master plan that identifies all open space and recreation facilities within the City.</p> <p><b>Category: IMP, CP, SAP</b></p>	<p>Establish a policy in the Conservation Element to require the creation of a connected green space plan.</p> <p>The Sustainability Action Plan should be amended to include this strategy and expanded upon the existing objectives within the Community &amp; Livability section.</p>	<p>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.</p>		<p><b>Community &amp; Livability</b>  <b>1.3.3</b> 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.</p>
<p>Identify properties to expand the City's open space inventory as part of the green space master plan.</p>	<p>Create criteria to determine how to prioritize properties to expand the City's Open Space Inventory.</p>	<p>Land acquisition and maintenance costs can be significant; however, the costs to identify such land is minimal.</p>	<p><b>ROSE Strategy 2.1.1.1:</b>            The City shall develop a short term and long term land acquisition plan for park, recreation,</p>	



Category: IMP			conservation and open space areas.	
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## 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)

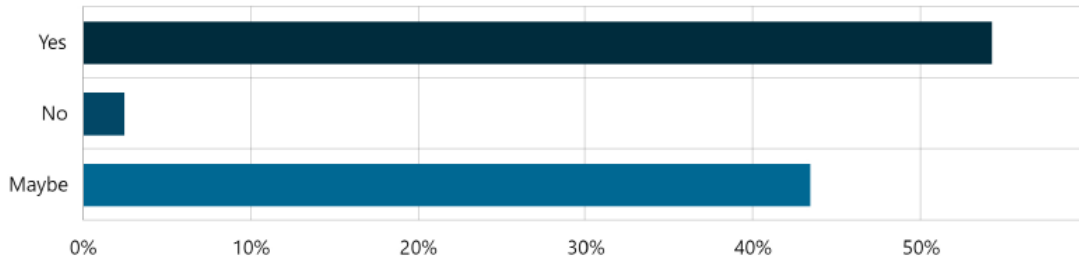
9. Consider providing long-term funding in the City’s annual budget. Seek grants and partnerships to help fund the long-term effort. Create a timeline for proceeding, assign staff to manage the project and track results.
10. Is the initiative a high priority, but both long-term and costly? (Proceed to 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

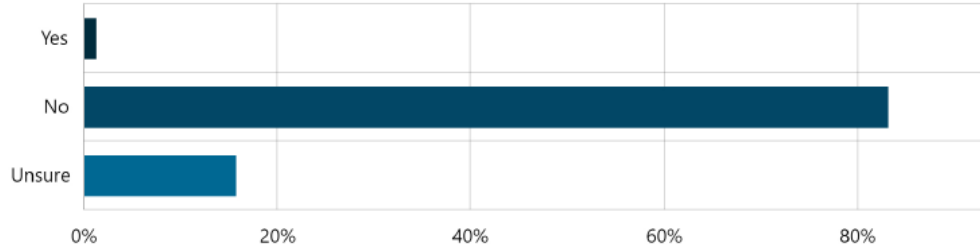
### 2. Would you be interested in attending public meetings to discuss Natural Resources



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

### 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
<b>Total</b>	<b>100.00%</b>	<b>83</b>

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

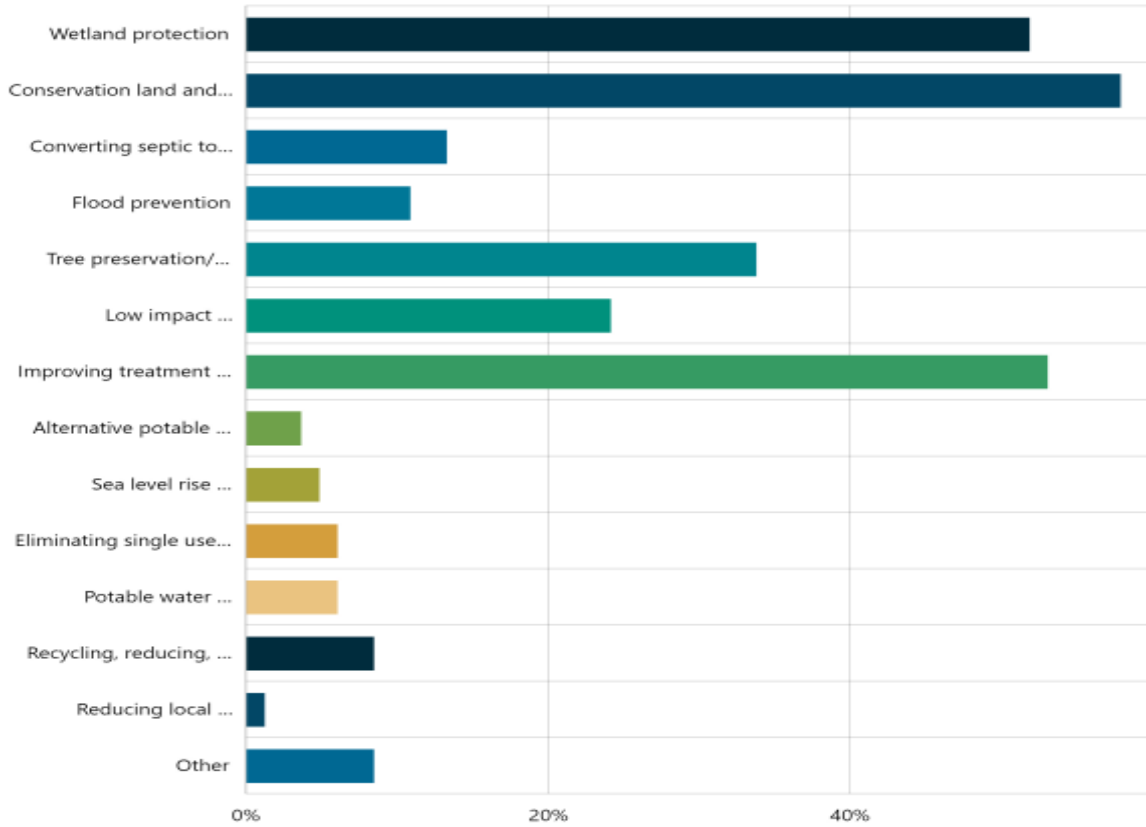
- COT is still “accidentally” spilling sewage into the river. Too many new home building permits while Not updating infrastructure such as roads. When roads deteriorate then it rains, pollution rolls into the river!
- You allow wastewater (even though you say it's safe) into our lagoon. Our water quality 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. l
- 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 coverag
- 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.

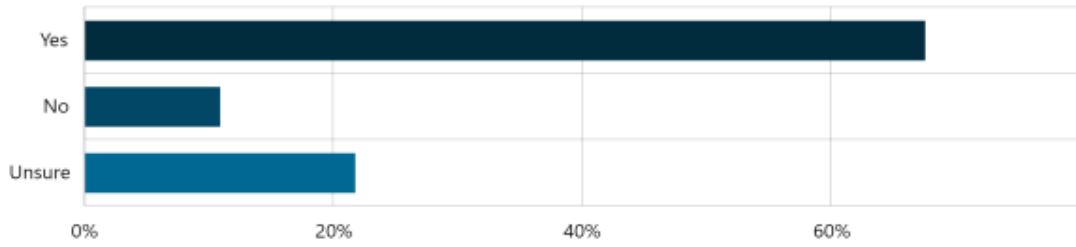
- too many developments straining our already overburdened area. cutting down mini pockets of vegetation, home to many species of wildlife and not fixing the sewage problem to help restore the river.
- Trash easily gets into the river from trash trucks. All septic tanks should be removed and attached 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

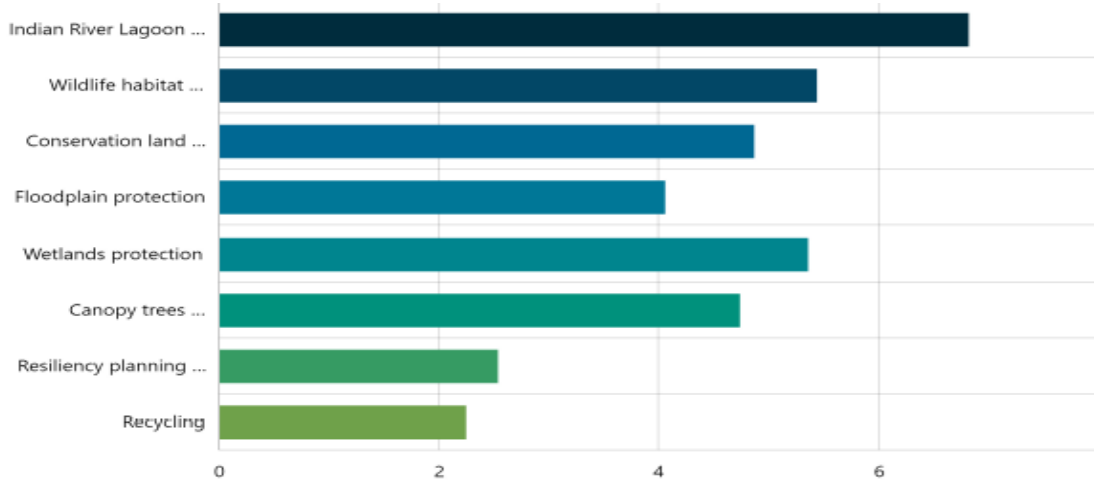
**6. Should the City provide more stringent wetland protection regulations than the St. Johns River Water Management District?**



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



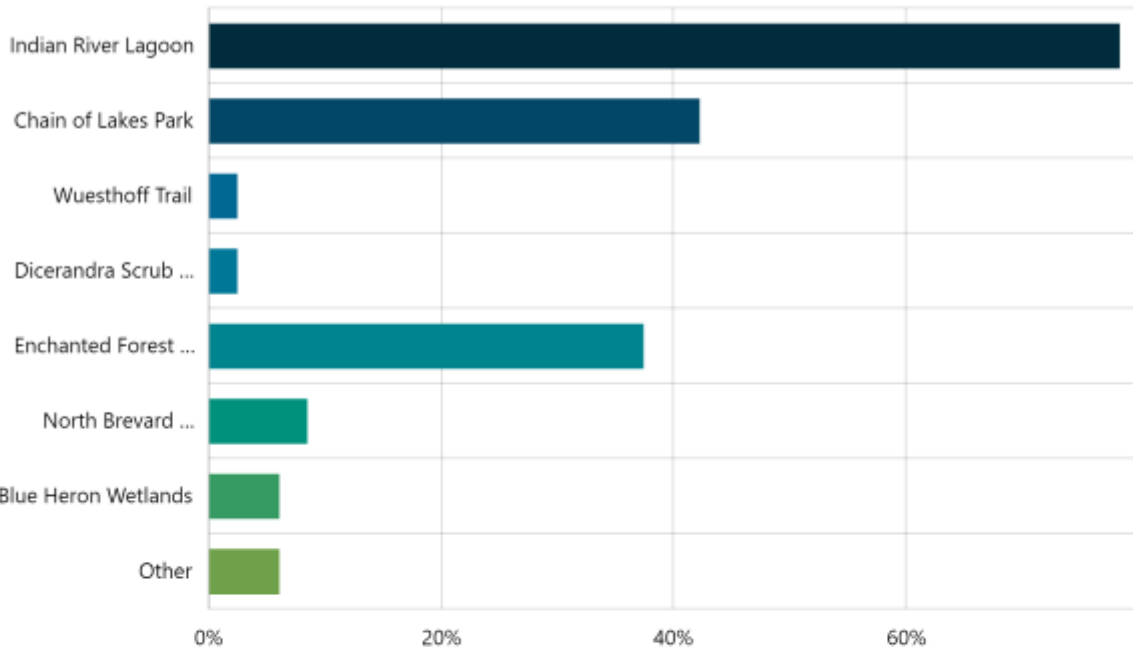
**7. Please list in order of importance the natural resource projects/programs the City should prioritize funding in the next 10-20 years**



	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

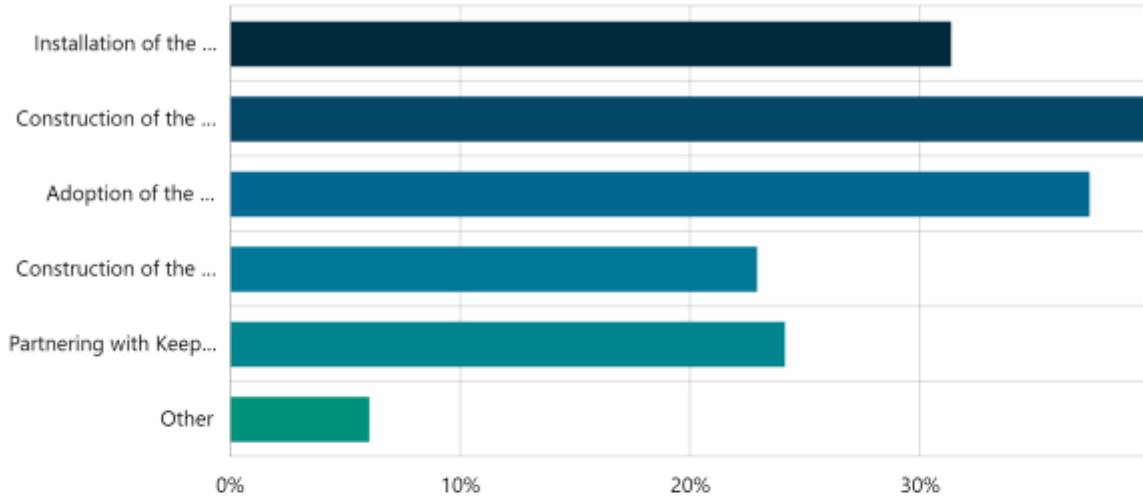
Score - Sum of the weight of each ranked position, multiplied by the response count for the position choice, divided by the total contributions. Weights are inverse to ranked positions.  
Avg Rank - Sum of the ranked position of the choice, multiplied by the response count for the position choice, divided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





# Sustainability

ACTION PLAN

**ADOPTED: 4/25/2023**



# 2023

[Titusville.com/Sustainability](https://www.titusville.com/Sustainability)



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# Acknowledgements

## **Mayor and City Council**

Daniel E. Diesel - Mayor

Joe C. Robinson - Vice Mayor

Herman A. Cole, Jr. COL USAF, Retired

Dr. Sarah Stoeckel

Jo Lynn Nelson

## **City Leadership**

Scott Larese - City Manager

Tom Abbate - Assistant City Manager

Richard Broom - City Attorney

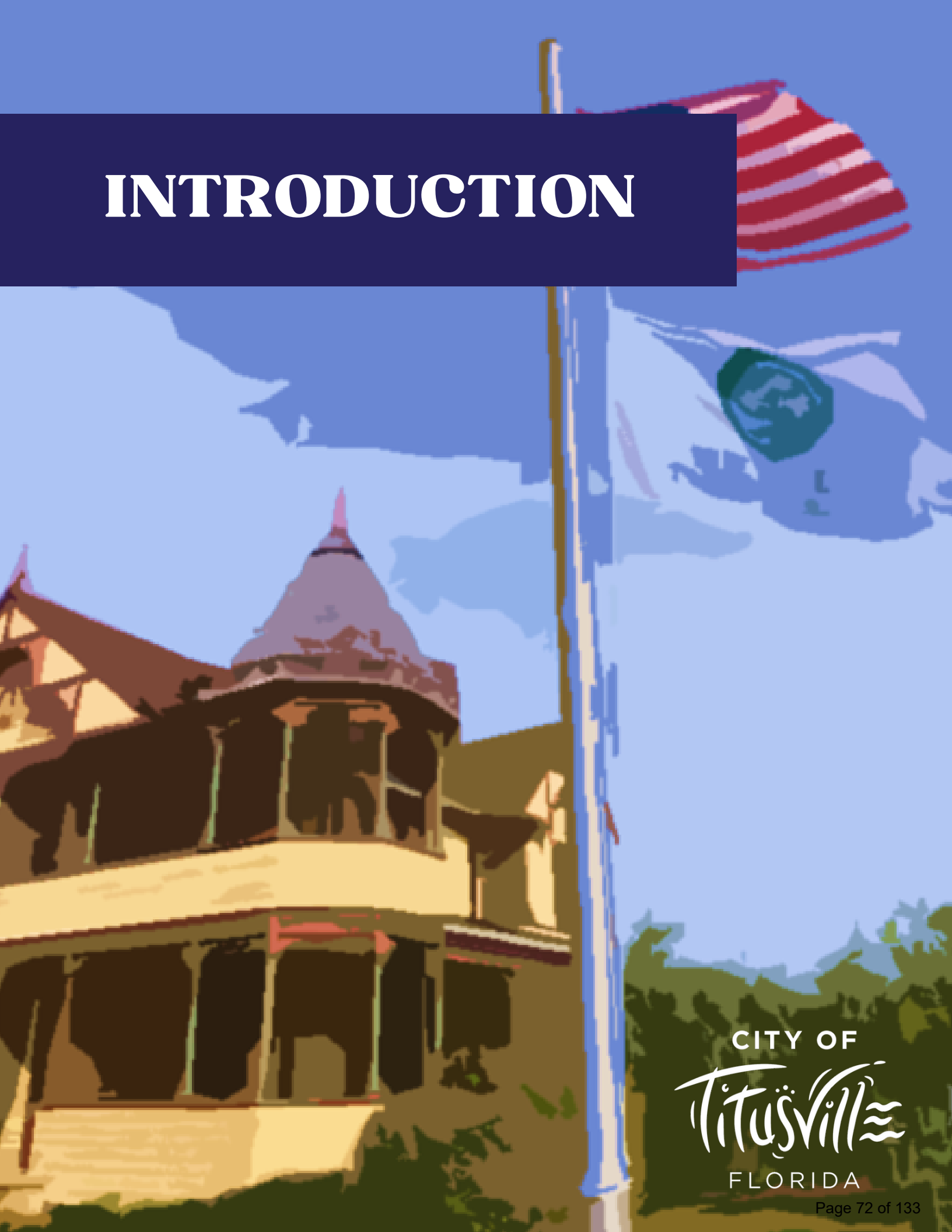
Special thanks to S&ME of Orlando, the City of Titusville Community Development Department and Public Works Department.

Thank you to our partners: Brevard County, East Central Florida Regional Planning Council, Florida Power and Light, North Brevard Economic Development Zone, Space Coast Transportation Planning Organization, Titusville Chamber of Commerce, Titusville Housing Authority, & UF/IFAS Brevard County Extension.

Authored By Rachel Muller



# INTRODUCTION



CITY OF  
*Titusville*  
FLORIDA

# Introduction

The creation of Titusville's first Sustainability Action Plan (SAP) has been a multi-phased project incorporating extensive community engagement, collaborative departmental communication, and ambitious goal setting to guide all aspects of city operations and investments to ensure sustainable, inclusive, climate-friendly options are implemented.

Titusville is a coastal community on the east coast of Florida, well known for its close proximity to the Kennedy Space Center. The City was incorporated in 1887 and has seen substantial changes over the decades with several busts and booms due to the Space Program, including the most recent boom of commercial and residential development. This has come with increased traffic, a growing demand for housing, and better services. At the same time challenges have persisted, including the deterioration of the Indian River Lagoon, loss of tree canopy, threats of sea level rise, storm surge and more intense flooding events. These economic, environmental, and quality of life changes require forward thinking and planning to help the City continue to develop in a safe, accessible, and responsible manner.

City Council directed staff to develop a Sustainability Action Plan to better understand current and future challenges to be better equipped to make smart and innovative decisions that keep the city vibrant for future generations.

# Titusville Today

Nestled along the Indian River Lagoon on Florida's Space Coast, the City of Titusville provides unique opportunities and an array of public amenities that demonstrate the City's resiliency. It's close proximity to the Canaveral National Seashore, NASA and other Space Industries, and numerous recreational activities makes Titusville an unparalleled place to call home.

48,847 Population

\$48,118 Median Household Income

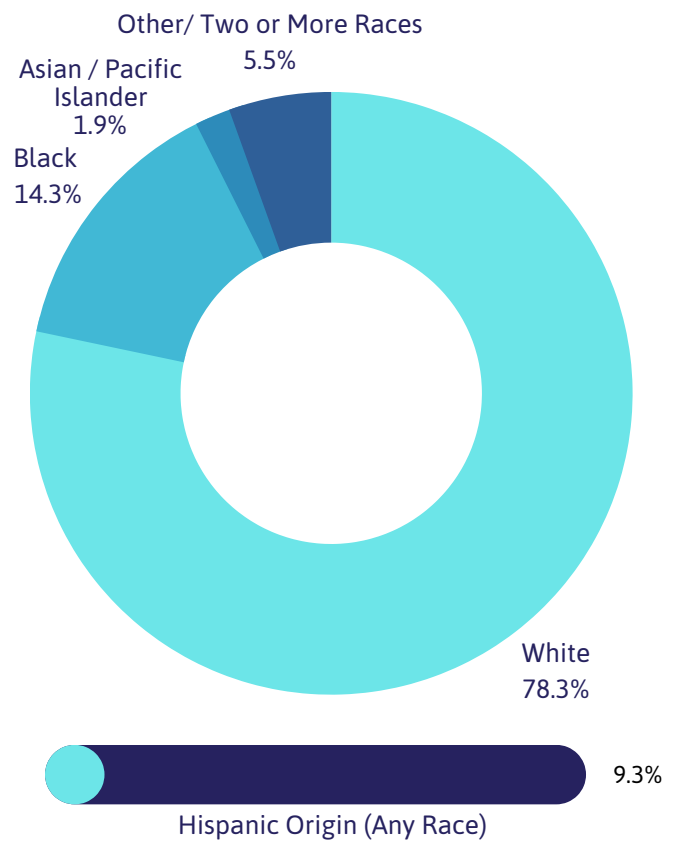
2,032 Total Businesses

24% Higher Education Degree

47 Median Age

21,093 Total Households

## Race and Ethnicity

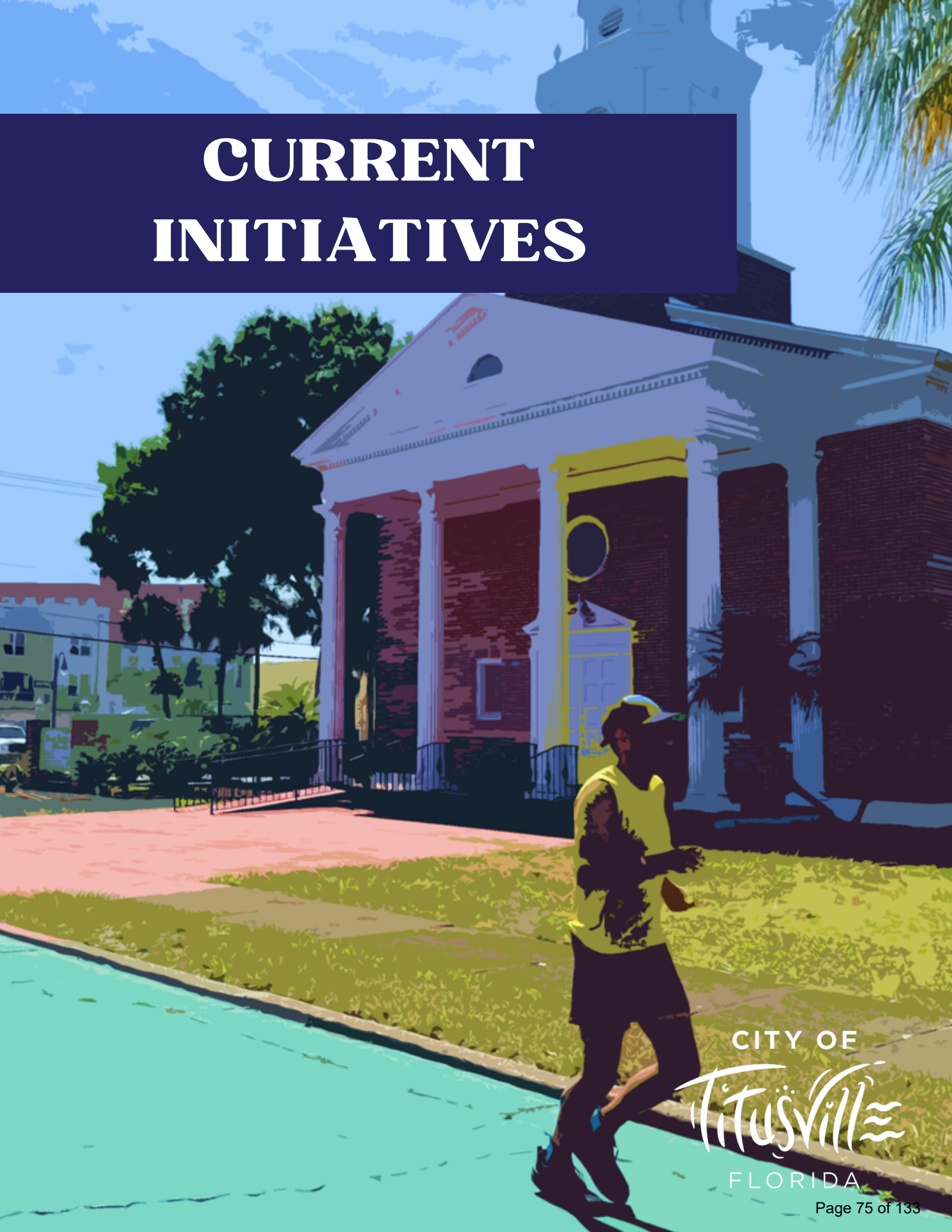


## Population Growth



Source: City of Titusville Economic Development Office, [www.titusville.com/1146/Demographic-Regional-Information](http://www.titusville.com/1146/Demographic-Regional-Information)

# CURRENT INITIATIVES



# Current Initiatives

The adoption of the Sustainability Action Plan symbolizes the formal beginning of sustainability programming within the City. Previous and current initiatives embody many of the components of sustainability and will help guide the implementation of new programs and policies. The following section highlights current and recent achievements that will provide the foundation for successful implementation of future projects that incorporate sustainability within decision-making and daily operations.

## Greenhouse Gas Emissions Inventory

Greenhouse gases (GHG) include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), water vapor (H<sub>2</sub>O), nitrous oxide (N<sub>2</sub>O), and several fluorinated gases. They exist naturally in Earth's atmosphere and help regulate the planet's temperature by retaining heat from the sun. Similar to how the glass in a greenhouse retains heat to allow plants to flourish, greenhouse gases make our planet habitable. Too much of a good thing can backfire, like putting on a blanket to keep you warm but not being able to take the blanket off once you warm up. Adding more greenhouse gases into the atmosphere acts like putting a thicker blanket on the planet. The thicker the blanket, the more heat gets trapped and causes the planet to warm. Common sources of GHG emissions include the burning of fossil fuel for cars, trucks, ships, trains, and planes, as well as the use of coal and natural gas for electricity generation.

In 2019, a municipal operations greenhouse gas (GHG) emissions inventory was compiled for the City with the assistance from the International Council for Local Environmental Initiatives (ICLEI) – Local Governments for Sustainability USA. In 2022, a community wide greenhouse gas emissions inventory was derived with the assistance from the East Central Florida Regional Planning Council and the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) for Cities program. These inventories act as a baseline from which to measure the city’s current and future emissions reduction progress. The standard unit for measuring emissions is metric tons of carbon dioxide equivalents (MTCO<sub>2e</sub>). These inventories provide the framework for greenhouse gas reductions goals and metrics for future updates.

As shown in Figure 1, emissions from municipal operations only account for 1.8% of the total community-wide GHG emissions. For Titusville to meet reduction goals, the focus must be on community-wide strategies to reduce emissions. Nonetheless, the City will lead by example and reduce emissions within municipal operations and use demonstration projects to educate the larger community on ways to reduce private, commercial, and industrial emissions.

Community-wide emissions are broken down into six sectors. These sectors include transportation, residential, solid-waste, commercial, public, and industrial emissions. Transportation emissions are a combination of vehicle miles traveled (VMT) from gasoline and diesel vehicles.

### MUNICIPAL OPERATIONS AS A SHARE OF COMMUNITY WIDE GHG EMISSIONS

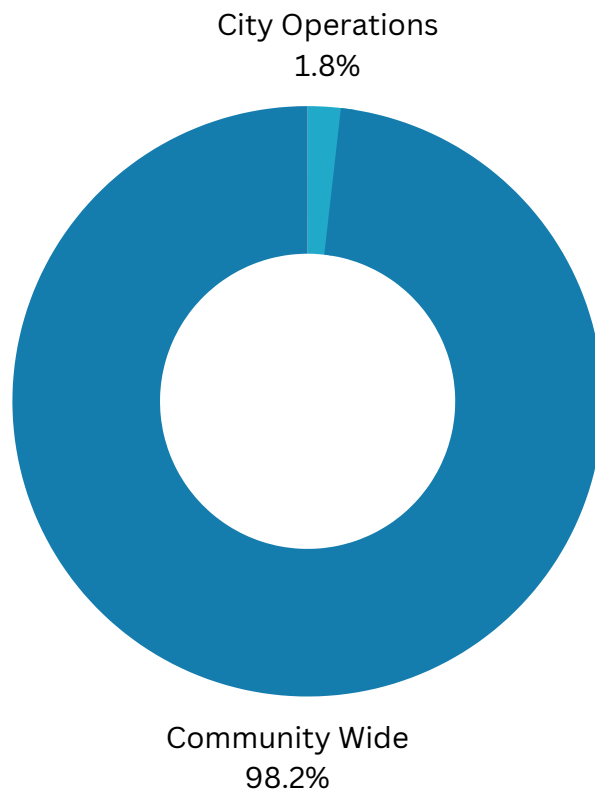


Figure 1. Municipal Operations as a share of community wide GHG emissions



This is the largest share of emissions within the City, representing 31% of emissions. The second largest share is residential emissions with 28% of the total community-wide emissions. Residential emissions include electricity use and natural gas. Solid Waste emissions accounts for 23% of community-wide emissions and is a derivative of Brevard County’s emissions for waste generated by Titusville’s population. Together, these three sectors account for 82% of the community-wide emissions. Figure 2 shows the percentage breakdown of each sector.

### 2019 COMMUNITY WIDE EMISSIONS BY SECTOR

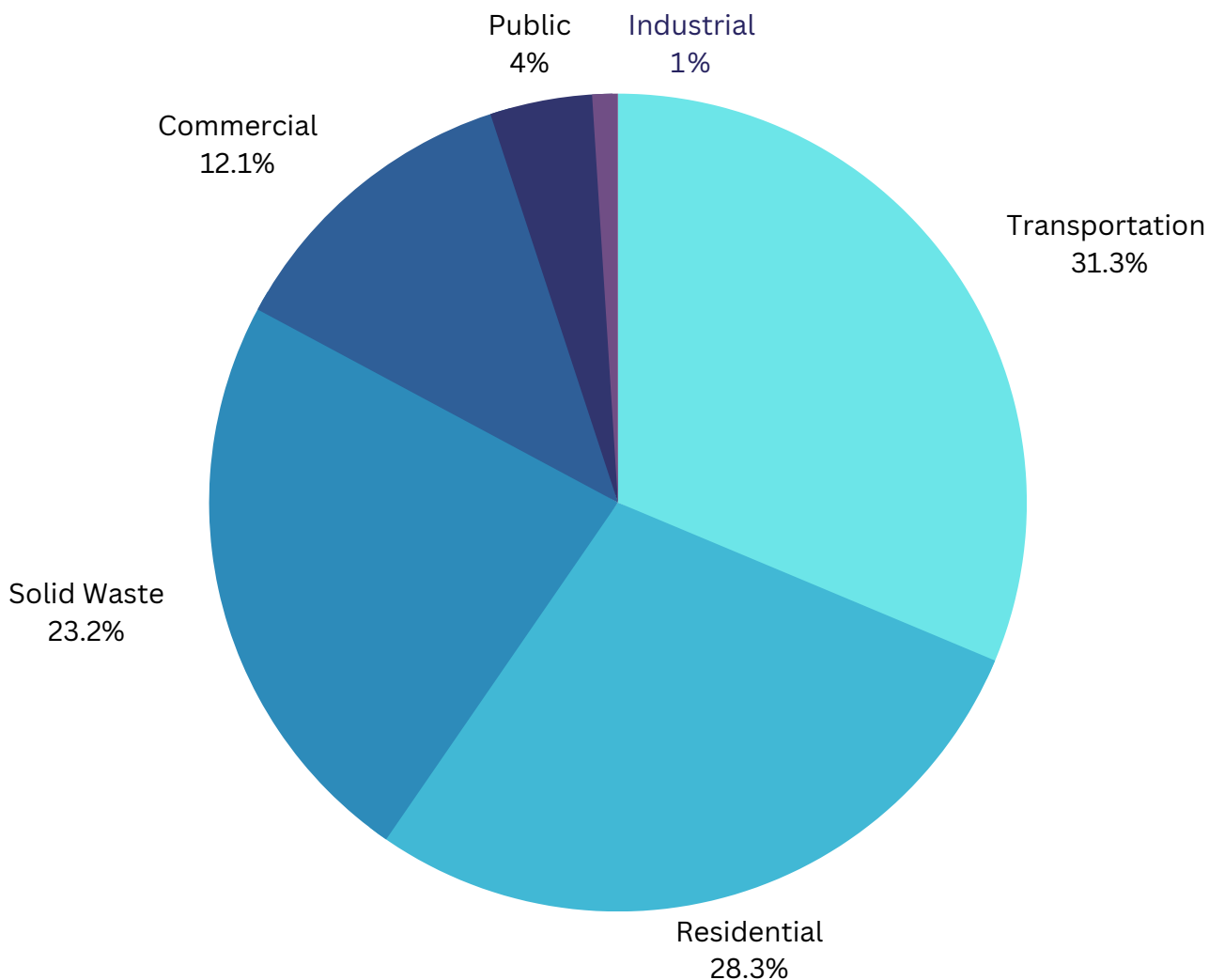


Figure 2. Pie Chart breakdown of 2019 Community Wide Emissions by sector

Data provided by the East Central Florida Regional Planning Council, Regionwide GHG Inventory, <https://www.ecfrpc.org/regional-ghg-inventory>

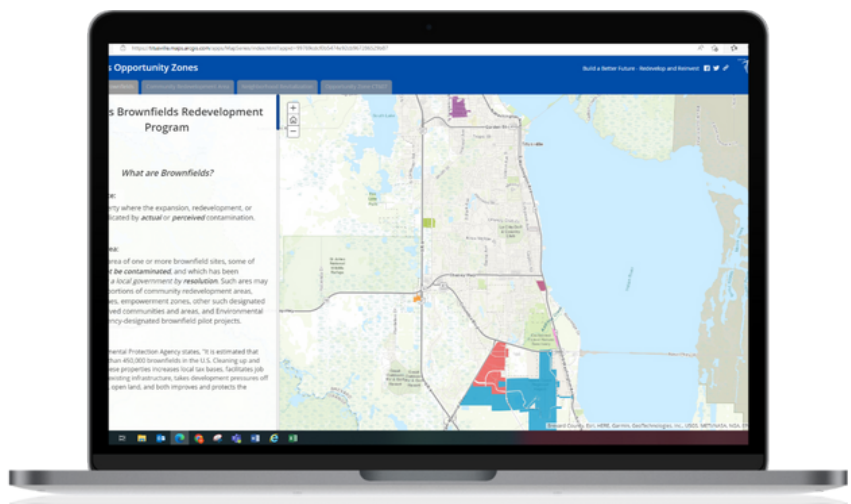


# Brownfields Assessment Program

A brownfield is a property in which the redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Prior site uses that are commonly associated with brownfield determination are auto repair, dry cleaning, or fueling station.

In October 2021, the City received grant funding from the Environmental Protection Agency (EPA) to fund Phase I and Phase II environmental site assessments (ESA). A Phase I ESA is the recommended first step in obtaining information on the condition of a property to assess any potential contamination and source. A Phase II ESA evaluates the presence or absence of hazardous substances like petroleum products in the subsurface of the site. This includes testing soil, soil gas, and/ or the groundwater to identify sources of contamination. On April 6, 2022 the Titusville's Office of Economic Development hosted a community workshop to acquire input from the public on identification of potential brownfield sites.

The City's Brownfields Assessment Program provides funds for eligible brownfield activities within the city limits. As part of this program the City is able to directly fund eligible projects for ESAs that support redevelopment efforts. For more information on identified brownfields, visit the City's [storymap](#).



# Low Impact Development

Low Impact Development (LID) is an approach to land development that works with nature to manage and treat stormwater as a resource rather than a waste product. Low impact development refers to systems and practices that use or mimic natural processes to mimic natural movement of water within a watershed.

The City continues to prioritize low impact development (LID) on two-fronts: city operations and development incentives. The former includes a bundle of techniques and systems throughout the City designed to work with nature to remove excess pollutants from stormwater to protect local waterbodies including the Indian River Lagoon. In an effort to prevent nutrients from entering the lagoon, several projects aimed at removing nitrogen and phosphorous have been completed and others are lined up for construction, including two new baffle boxes.

On October 20, 2021 City Council passed Ordinance 30-2021 and established an incentive program in the site plan review process to encourage new development, infill, and redevelopment to use a mix of LID techniques to manage site specific stormwater runoff. The City's technical manual has been updated to



Figure 4. Floating Treatment Wetland at Sandpoint Park

include a list of approved LID techniques and incentives offered.



# Neighborhood Revitalization Strategy Area

A neighborhood revitalization strategy area (NRSA) is an incentive-based program created by the U.S. Department of Housing and Urban Development (HUD) to revitalize the most distressed neighborhoods within a community. Funded through the Community Development Block Grant a NRSA is a means to create communities of opportunity by stimulating reinvestment by empowering low income residents.

Titusville has one designated neighborhood revitalization strategy area (NRSA) incorporating Census Tract 604, Blocks 1 through 4, and Census Tract 607, Blocks 1 and 2. Approximately, 7,395 residents live within the NRSA and a majority of those residents qualify as low- or moderate-income residents (60%). Residents within the NRSA experience a set of interrelated challenges at a higher rate than the city as a whole. Those challenges span from low educational attainment to housing insecurity.

The NRSA planning process was community-driven and embodies many elements discussed in the Sustainability Action Plan including enhancing park space, open space and recreational opportunities; prioritizing walkability and alternative modes of transportation; and equitable economic development that supports the growth of local small businesses.



Figure 5. Community Engagement Event

# Certified Florida Green Local Government

The Certified Florida Green Local Government is a program offered by the Florida Green Building Council (FGBC) to recognize outstanding environmental stewardship in designated cities and counties.

Titusville received recognition as a Certified Green Local Government in 2019 after going through an extensive evaluation process. The City received bronze certification for achieving 83 eligible credits. This included initiatives from providing new hires with reusable water bottles to utilizing renewable energy at city facilities.



Figure 6. Titusville City Council receives Florida Green Local Government Certification

# Traffic Calming Program

Traffic Calming is a street design method aimed at reducing vehicle speed and volume on a single street or throughout a street network. Through the use of physical and/or perception, traffic calming features are a self-enforcing mechanism to improve safety, mobility and comfort resulting in enhanced livability in the surrounding area.

The City of Titusville Public Works Department gets numerous citizen requests to review local traffic conditions and has developed a five step process to identify the proper solution for each location. To be eligible for the program the street must: be a residential neighborhood; have a traffic volume greater than 300 vehicles per day with a posted speed limit of 30 MPH; and be at least 500 feet in length. Cul-de-sacs are not eligible for this program. Residents must obtain signatures from at least 50% plus 1 property owners within the impacted area to move forward with the request. A phase one solution usually consists of the least restrictive measures possible that fall into three categories: Education, Enforcement, and



Engineering. If phase one efforts do not achieve the desired results, a priority ranking process allows the Public Works department to prioritize traffic calming projects. There are over 15 acceptable identified engineering solutions for local streets that range from a cost of \$1,000 to \$60,000 to implement.

Figure 7. A corner extension slows vehicle turning speed

# Education and Outreach Programs

Education and outreach is a tool for local municipal governments to engage in dialogue with the broader community. Incorporating education and outreach into the city operations allows for decision-makers to be better informed and well equipped to meet community needs.

The City currently hosts many education and outreach programs throughout the different departments and appointed-boards to better educate residents, businesses, and visitors alike on the wide variety of programs and resources provided. Below is a list of some of the current programs and offerings to better educate and engage with the community on issues related to sustainability.

1. Free Bike Helmets for Youth 16 and younger offered by the Fire Department.
2. Kirk Point Park Educational Series by the Public Works Department on ways the City is restoring the Indian River Lagoon.
3. Bag it Trash It Dog Waste Program by the Water Resources Conservation Program.
4. Water Conservation retrofits including aerators, replacing older toilets, and showerheads by the Water Resources Conservation Program.
5. Resiliency Stewardship and Education Program by the Community Development Department in collaboration with East Central Florida Regional Planning Council.
6. Titusville Environmental Commission Elementary School Education Grant.
7. Bicyclist and Boaters Business-Friendly Program by the Community Redevelopment Agency.

# FOCUS AREAS



# Focus Areas

The development of Focus Areas allows the City to create structure and organization to achieve sustainability goals. The City encouraged the community to determine the Focus Areas of the SAP over the several month community engagement process between October to December 2021. The first part of the public engagement process focused on creating an inventory of sustainability ideas, principles, and practices provided by the community. After the Preliminary Focus Areas were determined in the first half of the public engagement process, the next step was to empower the community to prioritize which of the Focus Areas should receive the most attention within the SAP. The Consultant S&ME of Orlando provided the following six Focus Areas: Community and Livability, Ecosystem and Resiliency, Infrastructure and Energy, Water, Smart Growth, and Sustainable Economy. Each Focus Area is explained throughout this section with their respective objectives and action items to drive future sustainability progress in Titusville.

## Community Outreach & Engagement

From October to December 2021;



# Community & Livability

The act of community building requires communicating, educating, and working towards a sense of place that fosters shared values and ideals. Sustainability could not be accomplished without a strong community and it is therefore imperative that any action to promote the economy and protect the environment, must also protect and promote the local population as well. The following goal, objectives and action items seek to improve the quality of life and livability of Titusville. These actions target enhanced communication, collaboration, and opportunity.

Planning efforts to enhance Titusville's sense of community and livability occur at various scales and involves strong collaborations with community stakeholders. To strengthen connectivity while also efficiently conserving land, compact and dense development with ample access to community resources (including schools, parks, recreational greenspace, commercial centers, public transit, and more) must be prioritized moving forward.

Providing equitable access to community resources strengthens community identity and resiliency. Walkable and connected neighborhoods that inspire activity and engagement foster a sense of place that the community can proudly embrace.





## Community & Livability

*The provision of services and programming to improve Titusville's community identity and quality of life for all of Titusville's residents.*

**Goal 1: Improve sense of community and quality of life through services and programming that targets promoting inclusivity, equity, and empowerment.**

**Objective 1.1: Increase citizen participation & engagement**

1.1.1.	Develop a public engagement guide.
1.1.2	Collaborate with County agencies and local groups to conduct public education campaigns for social equity improvements.
1.1.3	Develop a public engagement strategy to engage the entire community in the implementation of the SAP.

**Objective 1.2: Expand access to healthy foods & active lifestyles**

1.2.1	Provide incentives to healthful food retailers to locate in underserved areas.
1.2.2	Pilot an Urban Agriculture Program on Public Land.
1.2.3	Amend the zoning code to permit urban agriculture uses.
1.2.4	Partner with community groups to sponsor programs that encourage active living for adults and children.
1.2.5	Partner with local health agencies to develop a Community Health Improvement Plan.

**Objective 1.3: Promote Complete Neighborhoods**

1.3.1	Provide safe and comfortable sidewalks, bikeways, crosswalks, and public places that are unobstructed and barrier free for cyclists, pedestrians, and people with disabilities.
1.3.2	Identify and plan for future compact and complete neighborhoods.
1.3.3	Develop a feasibility study for 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 Neighborhood Revitalization Strategy Area Plan.

**Objective 1.4: Demonstrate progress towards reducing poverty & homelessness**

1.4.1	Collaborate with the Housing Authority and other local housing developers and providers to ensure residents have access to all available resources.
1.4.2	Develop a City-wide assessment of housing needs and strategic recommendations for improving housing affordability.

# Targets

1.1: Demonstrate higher turnout to public workshops, City sponsored engagement events, and response rate to community-wide City surveys.

1.2: Measure baseline access to healthy food and work to increase access to healthy food to within ½ mile of every resident.

1.3: Measure baseline access to pedestrian pathways and bikeways and increase the miles of pedestrian pathways and sidewalks.

1.4: Demonstrate increased density and the number of businesses located within compact and complete neighborhoods.

1.5: Measure baseline and demonstrate progress toward reducing the number of residents living in poverty.



# Ecosystems & Resiliency

Cities are engines for development, innovation, close connections, and opportunity. At the same time, cities can exacerbate environmental challenges by attempting to carve a place for humans outside of nature. For Titusville to be a smart, resilient, and sustainable city, it must harness the power of nature and embrace nature-based solutions. Examples of nature-based solutions include low impact development, connected ecosystem corridors, living shorelines, and much more.

The care and stewardship of natural lands and waterways has been a top priority for the people of Titusville for many years. The Indian River Lagoon has seen declines in sea grass growth, fish and other marine life, and the quality of water. On land, the City continues to see loss of tree canopy as development continues to boom. For the City to continue to grow in a sustainable manner while require evaluating the state of current natural resources and prioritize ecosystem health and resiliency in decision making.

The protection of natural resources is essential to maintain healthy air, water, and protecting residents and businesses from the impacts of natural disasters. The continued care of our environment will continue to attract tourism, economic growth, and a high quality of life.





## Ecosystems & Resiliency

*The holistic protection, preservation, and expansion of Titusville's natural resources from the impacts of development and natural disasters*

### **Goal 2: Protect natural resources and ecosystems and develop an ecologically resilient community**

#### **Objective 2.1: Increase natural resource acreage and habitat area for threatened species and wetlands**

2.1.1	Manage a database of natural resources and collaborate with local agencies to promote environmental stewardship.
2.1.2	Develop an Urban Forestry Management Plan to manage tree infrastructure and canopy.
2.1.3	Promote UF/IFAS Brevard County Extension Florida-Friendly Landscaping™ Program.

#### **Objective 2.2: Prioritize the use of green infrastructure, low impact development, and nature-based solutions**

2.2.1	Continue to develop an inventory of low impact development public projects and establish a network of demonstration sites with educational material and signage.
2.2.2	Offer incentives for residents that implement green infrastructure projects including rain barrels, rain gardens, pervious pavement, etc.
2.2.3	Provide education and resources to homeowners on Florida Friendly Lawns and reducing the use of pesticides and garden chemicals.
2.2.4	Evaluate current and planned stormwater infrastructure projects and determine the feasibility of incorporating green infrastructure.

#### **Objective 2.3: Continue to make demonstrable progress towards Resilient Titusville's Goals and Objectives**

2.3.1	Identify and designate Adaptation Action Areas within the City.
2.3.2	Develop annual reports and update the plan on a 5-year basis.

#### **Objective 2.4: Foster ecosystem and resiliency education and empowerment**

2.4.1	Continue education and outreach initiatives about sea level rise, climate change, and the Indian River Lagoon.
2.4.2	Collaborate with volunteer programs and organizations to assist with habitat restoration efforts on public and private properties.
2.4.3	Create native plants demonstration and education sites with plant details at local parks.

# Targets

2.1: Measure baseline natural resources acreage and work to increase natural resource acreage, habitat areas, and protected wetlands.

2.2: Measure baseline application of low impact development, green infrastructure, and nature-based solutions and demonstrate increase in use on municipal projects

2.3: Measure baseline community understanding of resiliency and work to increase community awareness



# Infrastructure & Energy

There is a significant opportunity to reduce energy waste and increase efficiency city-wide. Coupled with strategic infrastructure investments, strategies listed in the infrastructure and energy focus area can lead to a smart, resilient, and innovative city. Titusville's transition to clean, renewable, and energy-efficient resources will help minimize environmental impacts and progress towards reducing Greenhouse Gas (GHG) emissions in the coming years and decades. The transition to cleaner energy will have additional economic benefits and job creation to keep the city up to speed with regional, state, and national goals and policies.

Infrastructure improvements will contribute to Titusville's goal of reducing Greenhouse Gas Emissions. By committing to reducing the amount of waste headed to landfills, the city will not only reduce emissions but also reduce the demand for virgin resources and promote a circular economy. Achieving waste reduction goals will require a shift in perception and lifestyles. However, it presents opportunities to be innovative and build a stronger community.

Implementing smart technology and multimodal transportation solutions will further enhance the sustainability and resiliency of the community. Together they will move people and goods more efficiently, reduce traffic congestion and associated air pollution.





## Infrastructure and Energy

*The support of policies, practices, and projects which limit energy consumption and improves the provision of services and infrastructure within Titusville*

### **Goal 3: Reduce energy consumption and transition to clean energy**

#### **Objective 3.1: Reduce Greenhouse Gas (GHG) Emissions**

3.1.1	Develop a plan for increasing the green municipal fleet including EV, Hybrid, and Fuel-Efficient vehicles.
3.1.2	Report GHG emissions for municipal operations and community-wide at minimum every 5 years.
3.1.3	Study pathways to achieve net zero GHG by 2050.
3.1.4	Engage local businesses and industries to reduce GHG emissions through outreach, education, and advisory services.

#### **Objective 3.2: Reduce Energy Consumption**

3.2.1	Collect and report annual, city-wide energy consumption.
3.2.2	Study current municipal energy consumption and implement energy efficiency practices.
3.2.3	Implement building code provisions that support energy efficiency improvements, renewable energy, and EV readiness.
3.2.4	Develop an educational campaign to reduce household energy consumption.

#### **Objective 3.3: Make progress towards obtaining electricity from renewable energy sources**

3.3.1	Develop a renewable energy study for municipal operations.
3.3.2	Install a municipal solar and battery storage demonstration project.
3.3.3	Develop incentives to increase renewable energy installations for new projects and retrofits.
3.3.4	Determine viability of renewable energy installations for all municipal facilities.
3.3.5	Partner with Florida Power and Light on opportunities to expand and promote renewable energy for residential and commercial use.
3.3.6	Prioritize future EV charging stations based at City facilities are powered by renewable energy through the use of battery storage systems.



## Infrastructure and Energy

*The support of policies, practices, and projects which limit energy consumption and improves the provision of services and infrastructure within Titusville*

### **Goal 4 Continue to improve and adopt innovative infrastructure to improve quality of life**

#### **Objective 4.1: Achieve a 75% diversion rate from recycling, composting, reducing consumption, and reusing materials**

4.1.1	Develop and implement a Sustainable Waste Management Plan.
4.1.2	Study feasibility of implementing a Commercial Food Waste Collection Program.
4.1.3	Establish construction & demolition (C&D) recycling standards to serve as a guideline to divert recoverable materials and products from landfills.
4.1.4	Implement a residential backyard composter program.
4.1.5	Explore the long-term opportunity for a Materials Recovery Facility in Titusville.

#### **Objective 4.2: Reduce Citywide Vehicle Miles Traveled (VMT) through multimodal transportation Planning**

4.2.1	Adopt a Complete Street program to formalize the City's intent to plan, design, and maintain streets for users of all ages and abilities.
4.2.2	Research viability of micromobility options including car-sharing and bicycle rentals.
4.2.3	Implement Mobility Plan to install and maintain bicycle and pedestrian infrastructure city-wide.
4.2.4	Educate and encourage residential, municipal, and commercial carpooling initiatives.
4.2.5	Prioritize funding for alternative transportation over capacity improvements for vehicles.

#### **Objective 4.3: Develop a Smart Cities Initiative to Boost Urban Innovation**

4.3.1	Develop a strategic EV charging network throughout the City and adopt an EV readiness ordinance.
4.3.2	Deploy smart technology solutions at appropriate locations throughout the City including, smart solar-powered trash compactors, air quality sensors, smart irrigation systems, and smart streetlights.
4.3.3	Partner with the Space Coast TPO on the implementation of the regional Intelligent Transportation System Master Plan and other smart technology

# Targets

3.1: Incrementally reduce GHG emissions and set an achievable timeline to reach a GHG emission goal.

3.2: Incrementally reduce energy consumption and set an achievable timeline to reach energy consumption goals.

3.3: Determine a goal and timeline to have a certain percent of city operations on renewable energy.

4.1 Make considerable progress towards a 75% diversion rate from landfill use.

4.2 Make considerable progress towards reducing the number of vehicles per household by the next census count.



# Water

The current and long-term availability of water is a top priority of the community. Throughout the engagement process, the availability and quality of drinking water was listed as a top concern.

National and International headlines continue to show the severity of mismanaged and outdated water supply systems. It is therefore imperative that the City of Titusville continue to communicate to and educate residents on the city's approach to managing water resources.

Drinking water resources face stresses of population growth, frequency and intensity of precipitation, and saltwater intrusion. The city manages its own drinking water and has remained resilient by designating the wellfield areas as Areas of Critical Concern with special land use considerations including maximum impervious regulations. However, as water insecurity becomes more of a threat within the State and Nationally, it is important that Titusville continues to manage water demand by reducing water consumption in the City to sustainable levels. The following objectives and action items will continue the City's effort to provide the highest quality drinking water and keep the supply of drinking water at secure levels.





## Water

*The continued provision, protection, and treatment of Titusville's sources of drinking water*

### **Goal 5: Reduce gross potable water consumption and continue provisions to provide safe and reliable drinking water.**

#### **Objective 5.1: Reduce per capita daily water consumption**

5.1.1	Continue and expand rebate opportunities for water efficient fixtures and water-saving technology.
5.1.2	Implement an educational home leak detection repair program.
5.1.3	Explore additional opportunities for implementing water conservation programs and initiatives.

#### **Objective 5.2: Reduce water consumption of City Operations**

5.2.1	Explore opportunities to reduce indoor and outdoor potable water use at city facilities.
5.2.2	Study municipal water usage to identify high consumption operations within the City and strategically target water conservation efforts at city facilities.
5.2.3	Incorporate low-flow fixtures and fittings to future improvements to City-owned facilities kitchens and restrooms.

#### **Objective 5.3: Maintain clean and reliable sources of drinking water**

5.3.1	Continue to upgrade/replace water mains based on Water Master Plan.
5.3.2	Promote the use of reusable water bottles by installing clean and reliable hydration stations.
5.3.3	Continue to provide accessible and regular water quality testing analysis.

#### **Objective 5.4: Ensure adequate water supply as the City continues to grow**

5.4.1	Develop a plan and protocols for future water quality threats and water hazard mitigation.
5.4.2	Continue to review and update drought contingency policies in the event of future emergencies, as necessary.

#### **Objective 5.5: Continue education programs for water conservation**

5.5.1	Continue to provide water conservation outreach and initiatives in neighborhoods with older plumbing and infrastructure or well water.
5.5.2	Develop and partner with local organizations on an enhanced public education campaign to encourage water conservation with a focus on peak water use times.

# Targets

5.1: Measure baseline water consumption and work to decrease water consumption to sustainable levels.

5.2: Demonstrate reductions in water consumption at city facilities and operations.

5.3: Demonstrate effectiveness of water conservation education programs.



# Smart Growth

Where we live impacts our health, economic opportunity, quality of life, and our children's futures. Smart growth is an approach to development that encourages a mix of building types, land uses, multi-modal transportation options, diverse housing stock, and robust community engagement. Smart growth principles prioritize compact design, walkable neighborhoods, and a strong sense of place. The objectives and action items in the Smart Growth focus area are designed to make the fabric of our community one that prioritizes sustainability at all levels- from the design of each individual street to our collaboration with partner organizations to provide regional transportation options.

Many of the action items are complimentary, by increasing access to pedestrian and bicycle infrastructure, we can make steps towards reducing the household cost on transportation by providing easily accessible alternatives to our personal vehicles.

Smart growth also requires for us to be more thoughtful in our approach to building. Green building standards are critical to minimize the environmental impacts of new construction and redevelopment. It ensures more efficient use of energy, water, and other valuable resources. Buildings that utilize sustainable or green building standards are better equipped to provide climate resiliency.





## Smart Growth

*The support of policies which discourage the proliferation of urban sprawl by encouraging sustainable land use and transportation practices and directing growth away from environmentally-sensitive areas*

### **Goal 6: Utilize Smart Growth policies to promote sustainable land use**

#### **Objective 6.1: Increase the number of buildings using sustainable practices**

6.1.1	Implement LEED or equivalent designation for all new city facilities.
6.1.2	Create a green building toolkit for new construction and existing buildings.
6.1.3	Adopt green building standards and incentives for new construction, affordable housing, and infill/redevelopment.

#### **Objective 6.2: Increase the number of residents living within Complete Neighborhoods**

6.2.1	Promote the use of Compact and Complete Communities principles for all new development and redevelopment efforts.
6.2.2	Develop Small Area Plans for key corridors of the City to concentrate development.

#### **Objective 6.3: Promote policies and programs that will reduce household spending on housing and transportation combined**

6.3.1	Measure location efficiency through the combined cost of housing and transportation and encourage affordable housing in areas where transportation costs are lower due to accessible public transit.
6.3.2	Develop appropriate strategies for new civic and commercial development in low- and moderate-income neighborhoods.

#### **Objective 6.4: Increase housing units at all price points**

6.4.1	Amend Land Development Regulations (LDRs) to allow for a larger range of housing options in development and higher densities.
6.4.2	Support initiatives and/or developments that provide permanent supportive housing for low-income households, and target populations such as seniors, veterans, and homeless."

#### **Objective 6.5: Increase access to pedestrian and bicycle infrastructure**

6.5.1	Provide safe and comfortable sidewalks, bikeways and crosswalks that are unobstructed and barrier free for people with disabilities, including wheelchair users and people with low vision.
6.5.2	Prioritize safe pedestrian and bicycle infrastructure in high injury corridors through a Vision Zero Action Plan.

# Targets

- 6.1: Continuously track buildings using sustainable practice and show year over year growth in building using said practices.
- 6.2: Demonstrate higher densities in key areas within the city.
- 6.3: Make progress towards reducing the City's average (H+T®) index.
- 6.4: Demonstrate equitable distribution of housing types and price points.
- 6.5: Measure baseline access to pedestrian and bicycle infrastructure and show improvements in access.



# Sustainable Economy

A sustainable, resilient, and thriving local economy is a critical aspect to making progress towards a future-ready Titusville. Equitable access to quality jobs, prioritizing the local economy over importing goods and services, and connecting local residents to local jobs all have direct and meaningful impact on the City's sustainability and resiliency.

Titusville is in the midst of an economic boom with the continuous advancements and investments in space exploration. It's important that the city is a place where one can Live, Work, and Play. Now is the time to celebrate economic success but also focus on challenges, such as economic mobility, access to jobs, and the type of work available for local residents.

A circular economy is one that not only eliminates negative environmental impacts, but also creates new pathways by prioritizing new sources of value. A circular economy requires a systemic transportation of business models, technologies, and collaboration. The City will demonstrate leadership in achieving this transition through alternative business models and purchasing patterns. This transition will require a shared vision and strong leadership from government, civic society, and business partners. Together, we will create high value and pathways towards a better, more sustainable and resilient future.





## Sustainable Economy

*The development of a vibrant and diverse economy which supports workforce development, educational attainment, entrepreneurship*

### **Goal 7: Promote a diverse and resilient local economy and workforce**

#### **Objective 7.1: Demonstrate City Leadership in Sustainability**

7.1.1	Develop a sustainable purchasing policy with a list of standard recommended consumable products for compliance with the policy.
7.1.2	Strengthen procurement standards that encourage purchases of local goods and services first.
7.1.3	Develop a greater alliance and partnership with local high schools, universities, technical colleges, training centers, etc.

#### **Objective 7.2: Advance equitable employment**

7.2.1	Provide workforce training opportunities and resources for residents seeking employment.
7.2.2	Provide resources for local small businesses including access to high-speed internet, networking opportunities, trainings, etc.

#### **Objective 7.3: Support a local circular economy**

7.3.1	Encourage land use and economic development policies that support neighborhood retail and Titusville-based startups, to build a local, circular economy.
7.3.2	Develop a strategic plan for a Circular Titusville including feasibility for projects including a Circular Titusville Community Grant Program, Circular Titusville Ambassador program.
7.3.3	Empower citizens to reduce material consumption and reuse/recycle materials and goods through marketing, demonstration projects, and social media campaigns.

#### **Objective 7.4: Promote Green Businesses and Ecotourism**

7.4.1	Develop sustainable financial incentive programs to prioritize the proliferation of green businesses within the CRA.
7.4.2	Develop a Green Business Voluntary Program to assist and promote, recognize, and help develop local businesses committed to improving sustainability in Titusville.
7.4.3	Encourage cleantech and low-carbon technology startups and other sustainable and circular R&D and innovation within the City.

# Targets

7.1: Demonstrate that the unemployment rate for key sociocultural groups is within 5 percentage points of the overall unemployment rate.

7.2: Create metrics for the determination of green businesses and demonstrate growth in the number of business that are green within the city.



# ATTACHMENTS



# Definitions

Adaptation Action Areas are an optional comprehensive plan designation for areas that experience coastal flooding and are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning. (Source: <https://floridajobs.org/community-planning-and-development/programs/community-planning-table-of-contents/adaptation-planning>)

Brownfield Sites are the property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. (Source: <https://www.epa.gov/brownfields/overview-epas-brownfields-program>)

Circular Economy keeps materials, products, and services in circulation for as long possible. A circular economy reduces material use, redesigns materials, products, and services to be less resource intensive, and recaptures “waste” as a resource to manufacture new materials and products. (Source: <https://www.epa.gov/recyclingstrategy/what-circular-economy>)

Community Health Improvement Plan as a long-term, systematic effort to address public health problems on the basis of the results of community health assessment activities and the community health improvement process. This plan is used by health and other governmental education and human service agencies, in collaboration with community partners, to set priorities and coordinate and target resources. A community health improvement plan is critical for developing policies and defining actions to target efforts that promote health. It should define the vision for the health of the community through a collaborative process and should address the gamut of strengths, weaknesses, challenges, and opportunities that exist in the community to improve the health status of that community. (Source: <https://www.cdc.gov/publichealthgateway/cha/plan.html>)



# Definitions

Compact and Complete Neighborhoods provides residents safe and convenient access to the goods and services they need on a daily or regular basis. This includes a range of housing options, grocery stores and other neighborhood-serving commercial services, quality public schools, public open spaces, recreational facilities and access to frequent transit. A complete neighborhood also includes an interconnected network of streets, sidewalks and trails that makes walking and bicycling within and to these places safe and relatively easy for people of all ages and abilities. (Source: <https://sacompplan.com/complete-neighborhoods/>)

Green Infrastructure is the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters. (Source: <https://www.epa.gov/green-infrastructure/what-green-infrastructure>)

Greenhouse Gases (GHG) include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), water vapor (H<sub>2</sub>O), nitrous oxide (N<sub>2</sub>O), and several fluorinated gases. They exist naturally in Earth's atmosphere and help regulate the planet's temperature by retaining heat from the sun. (Source: <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>)

The Housing and Transportation (H+T®) Affordability Index provides a comprehensive view of affordability that includes both the cost of housing and the cost of transportation at the neighborhood level. (Source: <https://htaindex.cnt.org/>)

Low Impact Development specific to Titusville is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. (Source: <https://www.epa.gov/nps/urban-runoff-low-impact-development>)

# Definitions

Nature Based Solutions are sustainable planning, design, environmental management and engineering practices that weave natural features or processes into the built environment to promote adaptation and resilience. (Source: <https://www.fema.gov/emergency-managers/risk-management/nature-based-solutions>)

Resiliency is the capacity of individuals, communities, institutions, businesses, and systems within a region to plan, sustain, adapt, recover, improve and grow collaboratively – regardless what kind of chronic stresses and acute shocks they experience – through specific actions and implementation strategies geared to address specific vulnerabilities.. (Source: <https://www.ecfrpc.org/resiliency>)

Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations. (Source: <https://www.epa.gov/sustainability/learn-about-sustainability>)

Traffic Calming is a street design method aimed at reducing vehicle speed and volume on a single street or throughout a street network. Through the use of physical and/or perception, traffic calming features are a self-enforcing mechanism to improve safety, mobility and comfort resulting in enhanced livability in the surrounding area. (Source: <https://www.transportation.gov/mission/health/Traffic-Calming-to-Slow-Vehicle-Speeds>)

Tree Infrastructure is a key part of green infrastructure in many cities. Trees provide benefits that promote sustainability and help alleviate environmental problems. Urban areas often experience higher temperatures than their surrounding areas, due to the urban heat island effect. Trees can help combat this problem by providing shade and decreasing building energy use. Additionally, trees can help cities control stormwater runoff. Trees can provide other benefits, such as improved air quality, carbon storage, reduced noise, and aesthetic value. (Source: <https://www.epa.gov/water-research/urban-street-trees-and-green-infrastructure>)



# Definitions

Urban Heat Island Effect occurs when structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas. (Source: <https://www.epa.gov/heatislands/learn-about-heat-islands>)

Vehicle Miles Travelled (VMT) per capita is calculated as the total annual miles of vehicle travel divided by the total population in a state or in an urbanized area. (Source: <https://www.transportation.gov/mission/health/vmt-capita>)

Vision Zero acknowledges that even one death on our transportation system is unacceptable and focuses on safe mobility for all road users. This idea was first adopted in Sweden in 1997. (Source: <https://highways.dot.gov/safety/zero-deaths>)



# Acronyms

<b>Acronym</b>	<b>Definition</b>
CRA	Community Redevelopment Agency
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FGBC	Florida Green Building Council
GHG	Greenhouse Gas
HUD	Housing and Urban Development
ICLEI	Local Governments for Sustainability
LDR	Land Development Regulation
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Development
NRSA	Neighborhood Redevelopment Strategy Area
SAP	Sustainability Action Plan
USGBC	United States Green Building Council
VMT	Vehicle Miles Traveled

# Implementation Matrix



# Sustainability Action Plan Implementation Matrix






Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Community &amp; Livability</b>							
<b>Goal 1:</b> Improve sense of community and quality of life through services and programming that targets promoting inclusivity, equity, and empowerment.							
<b>1.1</b>	<b>Objective: Increase citizen participation &amp; engagement</b>						
1.1.1	Develop a public engagement guide	Planning Document	Community Development	Community Groups	SHORT 0-5 Years	\$	
1.1.2	Collaborate with County agencies and local groups to conduct public education campaigns for social equity improvements.	Partnership	Community Development	Brevard County / Community Groups	SHORT 0-5 Years	\$	
1.1.3	Develop a public engagement strategy to engage the entire community in the implementation of the SAP.	Planning Document	Community Development	Community Groups	SHORT 0-5 Years	\$	
<b>1.2</b>	<b>Objective: Expand access to healthy foods &amp; active lifestyles</b>						
1.2.1	Provide incentives to healthful food retailers to locate in underserved areas.	Incentives	Community Development	Chamber of Commerce	SHORT 0-5 Years	\$	
1.2.2	Pilot an Urban Agriculture Program on Public Land.	Partnership	Community Groups	Public Works / Brevard County	MEDIUM 5-10 Years	\$\$	
1.2.3	Amend the zoning code to permit urban agriculture uses.	Land Development Regulations	Community Development	Community Groups	SHORT 0-5 Years	\$	

Implementation timeframe estimated at ongoing, short term (0-5 years), medium term (5-10 years), or long term (10-15 years) based on workloads and anticipated budget needs.

## LEVEL OF CAPITAL AND O&M COSTS ESTIMATES

\$ = Under \$25,000 | \$\$ = \$25,000 - \$100,000 | \$\$\$ = Over \$100,000





- Community & Livability
- Water
- Ecosystems & Resiliency
- Smart Growth
- Infrastructure and Energy
- Sustainable Economy

Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Community &amp; Livability</b>							
<b>Goal 1:</b> Improve sense of community and quality of life through services and programming that targets promoting inclusivity, equity, and empowerment.							
<b>1.2</b>	<b>Objective: Expand access to healthy foods &amp; active lifestyles</b>						
1.2.4	Partner with community groups to sponsor programs that encourage active living for adults and children.	Partnership	Community Development	Community Groups	SHORT 0-5 Years	\$	
1.2.5	Partner with local health agencies to develop a Community Health Improvement Plan.	Partnership	Community Development	Community Groups	MEDIUM 5-10 Years	\$\$	
<b>1.3</b>	<b>Objective: Promote Complete Neighborhoods</b>						
1.3.1	Provide safe and comfortable sidewalks, bikeways, crosswalks, and public places that are unobstructed and barrier free for cyclists, pedestrians, and people with disabilities.	Infrastructure Improvements	Public Works	Community Development	LONG 10-15 Years	\$\$\$	
1.3.2	Identify and plan for future compact and complete neighborhoods.	Planning Document	Community Development	Community Groups	SHORT 0-5 Years	\$\$	
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.	Partnership	Community Development	Public Works	LONG 10-15 Years	\$\$\$	

Implementation timeframe estimated at ongoing, short term (0-5 years), medium term (5-10 years), or long term (10-15 years) based on workloads and anticipated budget needs.

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Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Community &amp; Livability</b>							
<b>Goal 1:</b> <i>Improve sense of community and quality of life through services and programming that targets promoting inclusivity, equity, and empowerment.</i>							
<b>1.4</b>	<b>Objective: Demonstrate progress towards reducing poverty &amp; homelessness</b>						
1.4.1	Collaborate with the Housing Authority and other local housing developers and providers to ensure residents have access to all available resources.	Partnership	Community Development	Titusville Housing Authority	<b>MEDIUM</b> 5-10 Years	\$\$	
1.4.2	Develop a City-wide assessment of housing needs and strategic recommendations for improving housing affordability.	Planning Document	Community Development	Titusville Housing Authority	<b>SHORT</b> 0-5 Years	\$	

Implementation timeframe estimated at ongoing, short term (0-5 years), medium term (5-10 years), or long term (10-15 years) based on workloads and anticipated budget needs.

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Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Ecosystems &amp; Resiliency</b>							
<b>Goal 2: Protect natural resources and ecosystems and develop an ecologically resilient community.</b>							
<b>2.1</b>	<b>Objective: Increase natural resource acreage and habitat area for threatened species and wetlands</b>						
2.1.1	Manage a database of natural resources and collaborate with local agencies to promote environmental stewardship.	Partnership	Community Development	Brevard County	SHORT 0-5 Years	\$	
2.1.2	Develop an Urban Forestry Management Plan to manage tree infrastructure and canopy.	Planning Document	Community Development	Public Works	SHORT 0-5 Years	\$\$	    
2.1.3	Promote UF/IFAS Brevard County Extension Florida-Friendly Landscaping™ Program.	Education & Outreach	Community Development	UF/IFAS Brevard County Extension	SHORT 0-5 Years	\$	 
<b>2.2</b>	<b>Objective: Prioritize the use of green infrastructure, low impact development, and nature-based solutions</b>						
2.2.1	Continue to develop an inventory of low impact development public projects and establish a network of demonstration sites with educational material and signage.	Online Interactive Database / Infrastructure Improvements	Community Development	Public Works	ONGOING 0-15 Years	\$\$\$	
2.2.2	Offer incentives for residents that implement green infrastructure projects including rain barrels, rain gardens, pervious pavement, etc.	Incentives	Community Development	Community Groups	SHORT 0-5 Years	\$	 

Implementation timeframe estimated at ongoing, short term (0-5 years), medium term (5-10 years), or long term (10-15 years) based on workloads and anticipated budget needs.

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-  Community & Livability
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Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Ecosystems &amp; Resiliency</b>							
<b>Goal 2: Protect natural resources and ecosystems and develop an ecologically resilient community.</b>							
<b>2.2</b>	<b>Objective: Prioritize the use of green infrastructure, low impact development, and nature-based solutions</b>						
2.2.3	Provide education and resources to homeowners on Florida Friendly Lawns and reducing the use of pesticides and garden chemicals.	Education & Outreach	Public Works	UF/IFAS Brevard County Extension	SHORT 0-5 Years	\$\$	
2.2.4	Evaluate current and planned stormwater infrastructure projects and determine the feasibility of incorporating additional green infrastructure.	Infrastructure Improvements	Public Works	Community Development	ONGOING 0-15 Years	\$\$	
<b>2.3</b>	<b>Objective: Continue to make demonstrable progress towards Resilient Titusville's Goals and Objectives</b>						
2.3.1	Identify and designate Adaptation Action Areas within the City.	Planning Document	Community Development	Community Groups	LONG 10-15 Years	\$\$	    
2.3.2	Develop annual reports and update the plan on a 5-year basis.	Planning Document	Community Development	East Central Florida Regional Planning Council	SHORT 0-5 Years	\$	    
<b>2.4</b>	<b>Objective: Foster ecosystem and resiliency education and empowerment</b>						
2.4.1	Continue education and outreach initiatives about sea level rise, climate change, and the Indian River Lagoon.	Partnership	Community Development	Community Groups	SHORT 0-5 Years	\$	    

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Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Ecosystems &amp; Resiliency</b>							
<b>Goal 2: Protect natural resources and ecosystems and develop an ecologically resilient community.</b>							
<b>2.4</b>	<b>Objective: Foster ecosystem and resiliency education and empowerment</b>						
2.4.2	Collaborate with volunteer programs and organizations to assist with habitat restoration efforts on public and private properties.	Partnership	Community Development	Community Groups	<b>MEDIUM</b> 5-10 Years	\$\$\$	
2.4.3	Create native plants demonstration and education sites with plant details at local parks.	Infrastructure Improvements	Public Works	Brevard County	<b>MEDIUM</b> 5-10 Years	\$\$	

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Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Energy &amp; Infrastructure</b>							
<b>Goal 3: Reduce energy consumption and transition to clean energy</b>							
<b>3.1</b>	<b>Objective: Reduce Greenhouse Gas (GHG) Emissions</b>						
3.1.1	Develop a plan for increasing the green municipal fleet including EV, Hybrid, and Fuel-Efficient vehicles.	Planning Document	Public works / Fire Department / Police Department	Community Development	SHORT 0-5 Years	\$\$	
3.1.2	Report GHG emissions for municipal operations and community-wide at minimum every 5 years.	Planning Document	Community Development	East Central Florida Regional Planning Council	LONG 10-15 Years	\$	
3.1.3	Study pathways to achieve net zero GHG by 2050.	Agreements & Resolutions	Community Development	East Central Florida Regional Planning Council	LONG 10-15 Years	\$\$	
3.1.4	Engage local businesses and industries to reduce GHG emissions through outreach, education, and advisory services.	Education & Outreach	Community Development	North Brevard Economic Development Zone	SHORT 0-5 Years	\$\$	
<b>3.2</b>	<b>Objective: Reduce energy consumption</b>						
3.2.1	Collect and report annual, city-wide energy consumption.	Planning Document	Community Development	Florida Power and Light	ONGOING 0-15 Years	\$	

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		Lead	Support				
<b>Energy &amp; Infrastructure</b>							
<b>Goal 3: Reduce energy consumption and transition to clean energy</b>							
<b>3.2</b>	<b>Objective: Reduce energy consumption</b>						
3.2.2	Study current municipal energy consumption and implement energy efficiency practices.	Planning Document / Infrastructure Improvements	Public Works	--	<b>MEDIUM</b> 5-10 Years	\$\$\$	
3.2.3	Implement building code provisions that support energy efficiency improvements, renewable energy, and EV readiness.	Land Development Regulations	Community Development	--	<b>SHORT</b> 0-5 Years	\$	
3.2.4	Develop an educational campaign to reduce household energy consumption.	Partnership	Community Development	Florida Power and Light	<b>SHORT</b> 0-5 Years	\$	
<b>3.3</b>	<b>Objective: Make progress towards obtaining electricity from renewable energy sources</b>						
3.3.1	Develop a renewable energy study for municipal operations.	Planning Document	Public Works	Community Development	<b>SHORT</b> 0-5 Years	\$\$	
3.3.2	Install a municipal solar and battery storage demonstration project.	Infrastructure Improvements	Public Works	Florida Power and Light	<b>LONG</b> 10-15 Years	\$\$	
3.3.3	Develop incentives to increase renewable energy installations for new projects and retrofits.	Incentives	Community Development	North Brevard Economic Development Zone	<b>MEDIUM</b> 5-10 Years	\$	

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		Lead	Support				
<b>Energy &amp; Infrastructure</b>							
<b>Goal 3: Reduce energy consumption and transition to clean energy</b>							
<b>3.3</b>	<b>Objective: Make progress towards obtaining electricity from renewable energy sources</b>						
3.3.4	Determine viability of renewable energy installations for all municipal facilities.	Planning Document	Public Works	Community Development	<b>MEDIUM</b> 5-10 Years	\$\$	
3.3.5	Partner with Florida Power and Light on opportunities to expand and promote renewable energy for residential and commercial use.	Partnership	Community Development	Florida Power and Light	<b>SHORT</b> 0-5 Years	\$	
3.3.6	Prioritize future EV charging stations based at City facilities are powered by renewable energy through the use of battery storage systems.	Infrastructure Improvements	Public Works	Community Development	<b>MEDIUM</b> 5-10 Years	\$\$	
<b>Goal 4: Continue to improve and adopt innovative infrastructure to improve quality of life</b>							
<b>4.1</b>	<b>Objective: Achieve a 75% diversion rate from recycling, composting, reducing consumption, and reusing materials</b>						
4.1.1	Develop and implement a Sustainable Waste Management Plan.	Planning Document / Partnership	Public Works	Brevard County	<b>MEDIUM</b> 5-10 Years	\$\$	
4.1.2	Study feasibility of implementing a Commercial Food Waste Collection Program.	Partnership	Public Works	Brevard County / Community Groups	<b>MEDIUM</b> 5-10 Years	\$\$	

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		Lead	Support				
<b>Energy &amp; Infrastructure</b>							
<b>Goal 4:</b> Continue to improve and adopt innovative infrastructure to improve quality of life							
<b>4.1</b>	<b>Objective: Achieve a 75% diversion rate from recycling, composting, reducing consumption, and reusing materials</b>						
4.1.3	Establish construction & demolition (C&D) recycling standards to serve as a guideline to divert recoverable materials and products from landfills.	Partnership	Public Works	Brevard County / Community Development	LONG 10-15 Years	\$\$	 
4.1.4	Implement a residential backyard composter program.	Infrastructure Improvements	Public Works	Community Development	MEDIUM 5-10 Years	\$\$	 
4.1.5	Explore the long-term opportunity for a Materials Recovery Facility in Titusville.	Infrastructure Improvements	Public Works	Brevard County	LONG 10-15 Years	\$\$\$	
<b>4.2</b>	<b>Objective: Reduce Citywide Vehicle Miles Traveled (VMT) through multimodal transportation Planning</b>						
4.2.1	Adopt a Complete Street program to formalize the City's intent to plan, design, and maintain streets for users of all ages and abilities.	Planning Document	Community Development	Public Works / Space Coast TPO	SHORT 0-5 Years	\$	 
4.2.2	Research viability of micromobility options including car-sharing and bicycle rentals.	Partnership	Community Development	Space Coast TPO / Public Works / Brevard County	MEDIUM 5-10 Years	\$\$	 

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		Lead	Support				
<b>Energy &amp; Infrastructure</b>							
<b>Goal 4:</b> Continue to improve and adopt innovative infrastructure to improve quality of life							
<b>4.2</b>	<b>Objective: Reduce Citywide Vehicle Miles Traveled (VMT) through multimodal transportation Planning</b>						
4.2.3	Implement Mobility Plan to install and maintain bicycle and pedestrian infrastructure city-wide.	Planning Document / Infrastructure Improvements	Public Works	Community Development	<b>ONGOING</b> 0-15 Years	\$\$\$	 
4.2.4	Educate and encourage residential, municipal, and commercial carpooling initiatives.	Program & Policy	Community Development	Space Coast TPO	<b>SHORT</b> 0-5 Years	\$	
4.2.5	Prioritize funding for alternative transportation over capacity improvements for vehicles.	Planning Document / Comprehensive Plan	Community Development	Public Works / Space Coast TPO	<b>SHORT</b> 0-5 Years	\$	 
<b>4.3</b>	<b>Objective: Develop a Smart Cities Initiative to Boost Urban Innovation</b>						
4.3.1	Develop a strategic EV charging network throughout the City and adopt an EV readiness ordinance.	Land Development Regulations	Community Development	Space Coast TPO	<b>MEDIUM</b> 5-10 Years	\$\$	
4.3.2	Deploy smart technology solutions at appropriate locations throughout the City including, smart solar-powered trash compactors, air quality sensors, smart irrigation systems, and smart streetlights.	Infrastructure Improvements	Community Development	Public Works	<b>ONGOING</b> 0-15 Years	\$\$\$	 

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		Lead	Support				
<b>Energy &amp; Infrastructure</b>							
<b>Goal 4:</b> <i>Continue to improve and adopt innovative infrastructure to improve quality of life</i>							
<b>4.3</b>	<b>Objective: Develop a Smart Cities Initiative to Boost Urban Innovation</b>						
4.3.3	Partner with the Space Coast TPO on the implementation of the regional Intelligent Transportation System Master Plan and other smart technology including smart traffic lights, Smart phone applications to improve public transportation services.	Partnership	Public Works	Space Coast TPO / Brevard County	<b>ONGOING</b> 0-15 Years	<b>\$\$\$</b>	 

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Community & Livability



Water



Ecosystems & Resiliency



Smart Growth



Infrastructure and Energy



Sustainable Economy









Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Water</b>							
<b>Goal 5:</b> Reduce gross potable water consumption and continue provisions to provide safe and reliable drinking water.							
<b>5.1</b>	<b>Objective: Reduce per capita daily water consumption</b>						
5.1.1	Continue and expand rebate opportunities for water efficient fixtures and water-saving technology.	Program & Policy	Public Works	Community Groups	ONGOING 0-15 Years	\$\$\$	
5.1.2	Implement an educational home leak detection repair program.	Program & Policy	Public Works	Community Groups	MEDIUM 5-10 Years	\$\$	
5.1.3	Explore additional opportunities for implementing water conservation programs and initiatives.	Planning Document	Public Works	Community Development	ONGOING 0-15 Years	\$\$	    
<b>5.2</b>	<b>Objective: Reduce water consumption of City Operations</b>						
5.2.1	Explore opportunities to reduce indoor and outdoor potable water use at city facilities.	Program & Policy	Public Works	--	MEDIUM 5-10 Years	\$\$	
5.2.2	Study municipal water usage to identify high consumption operations within the City and strategically target water conservation efforts at city facilities.	Planning Document	Public Works	--	SHORT 0-5 Years	\$\$	
5.2.3	Incorporate low-flow fixtures and fittings to future improvements to City-owned facilities kitchens and restrooms.	Infrastructure Improvements	Public Works	--	ONGOING 0-15 Years	\$\$	

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		Lead	Support				
<b>Water</b>							
<b>Goal 5:</b> Reduce gross potable water consumption and continue provisions to provide safe and reliable drinking water.							
<b>5.3</b>	<b>Objective: Maintain clean and reliable sources of drinking water</b>						
5.3.1	Continue to upgrade/replace water mains based on Water Master Plan.	Infrastructure Improvements	Public Works	--	<b>ONGOING</b> 0-15 Years	\$\$\$	
5.3.2	Promote the use of reusable water bottles by installing clean and reliable hydration stations.	Infrastructure Improvements	Public Works	Community Development	<b>MEDIUM</b> 5-10 Years	\$\$	 
5.3.3	Continue to provide accessible and regular water quality testing analysis.	Program & Policy	Public Works	Community Development	<b>ONGOING</b> 0-15 Years	\$	 
<b>5.4</b>	<b>Objective: Ensure adequate water supply as the City continues to grow</b>						
5.4.1	Develop a plan and protocols for future water quality threats and water hazard mitigation.	Planning Document / Program & Policy	Public Works	Community Development	<b>SHORT</b> 0-5 Years	\$\$	
5.4.2	Continue to review and update drought contingency policies in the event of future emergencies, as necessary.	Program & Policy	Public Works	Community Development	<b>ONGOING</b> 0-15 Years	\$	 

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		Lead	Support				
<b>Water</b>							
<b>Goal 5:</b> Reduce gross potable water consumption and continue provisions to provide safe and reliable drinking water.							
<b>5.5</b>	<b>Objective: Continue education programs for water conservation</b>						
5.5.1	Continue to provide water conservation outreach and initiatives in neighborhoods with older plumbing and infrastructure or well water.	Education & Outreach	Public Works	Community Groups	<b>ONGOING</b> 0-15 Years	\$	 
5.5.2	Develop and partner with local organizations on an enhanced public education campaign to encourage water conservation with a focus on peak water use times.	Education & Outreach	Public Works	Community Development / Community Groups	<b>MEDIUM</b> 5-10 Years	\$	 

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		Lead	Support				
<b>Smart Growth</b>							
<b>Goal 6:</b> Utilize Smart Growth policies to promote sustainable land use							
<b>6.1</b>	<b>Objective: Increase the number of buildings using sustainable practices</b>						
6.1.1	Implement LEED or equivalent designation for all new city facilities.	Infrastructure Improvements	Public Works	Community Development	ONGOING 0-15 Years	\$\$\$	
6.1.2	Create a green building toolkit for new construction and existing buildings.	Education & Outreach	Community Development	Community Groups	SHORT 0-5 Years	\$\$	
6.1.3	Adopt green building standards and incentives for new construction, affordable housing, and infill/redevelopment.	Land Development Regulations	Community Development	Community Groups	SHORT 0-5 Years	\$\$	
<b>6.2</b>	<b>Objective: Increase the number of residents living within Complete Neighborhoods</b>						
6.2.1	Promote the use of Compact and Complete Communities principles for all new development and redevelopment efforts.	Program & Policy	Community Development	Space Coast TPO	SHORT 0-5 Years	\$	
6.2.2	Develop Small Area Plans for key corridors of the City to concentrate development.	Planning Document	Community Development	Community Groups	LONG 10-15 Years	\$\$	

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		Lead	Support				
<b>Smart Growth</b>							
<b>Goal 6:</b> Utilize Smart Growth policies to promote sustainable land use							
<b>6.3</b>	<b>Objective: Promote policies and programs that will reduce household spending on housing and transportation combined</b>						
6.3.1	Measure location efficiency through the combined cost of housing and transportation and encourage affordable housing in areas where transportation costs are lower due to accessible public transit.	Planning Document	Community Development	Space Coast TPO	MEDIUM 5-10 Years	\$\$	
6.3.2	Develop appropriate strategies for new civic and commercial development in low- and moderate-income neighborhoods.	Program & Policy	Community Development	North Brevard Economic Development Zone	SHORT 0-5 Years	\$	
<b>6.4</b>	<b>Objective: Increase housing units at all price points</b>						
6.4.1	Amend Land Development Regulations (LDRs) to allow for a larger range of housing options in development and higher densities.	Land Development Regulations	Community Development	Community Groups	SHORT 0-5 Years	\$	
6.4.2	Support initiatives and/or developments that provide permanent supportive housing for low-income households, and target populations such as seniors, veterans, and homeless.	Program & Policy	Community Development	Community Groups	SHORT 0-5 Years	\$	

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		Lead	Support				
<b>Smart Growth</b>							
<b>Goal 6:</b> Utilize Smart Growth policies to promote sustainable land use							
<b>6.5</b>	<b>Objective: Increase access to pedestrian and bicycle infrastructure</b>						
6.5.1	Provide safe and comfortable sidewalks, bikeways and crosswalks that are unobstructed and barrier free for people with disabilities, including wheelchair users and people with low vision.	Infrastructure Improvements	Public Works	Space Coast TPO	<b>ONGOING</b> 0-15 Years	\$\$	
6.5.2	Prioritize safe pedestrian and bicycle infrastructure in high injury corridors through a Vision Zero Action Plan.	Planning Document	Community Development	Public Works	<b>MEDIUM</b> 5-10 Years	\$\$	 

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Community & Livability



Ecosystems & Resiliency



Infrastructure and Energy



Water



Smart Growth



Sustainable Economy









Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Sustainable Economy</b>							
<b>Goal 7: Promote a diverse and resilient local economy and workforce</b>							
<b>7.1</b>	<b>Objective: Demonstrate City Leadership in Sustainability</b>						
7.1.1	Develop a sustainable purchasing policy with a list of standard recommended consumable products for compliance with the policy.	Program & Policy	Support Services	Community Development	SHORT 0-5 Years	\$	
7.1.2	Strengthen procurement standards that encourage purchases of local goods and services first.	Program & Policy	Support Services	--	SHORT 0-5 Years	\$	
7.1.3	Develop a greater alliance and partnership with local high schools, universities, technical colleges, training centers, etc.	Partnership	Community Development	Support Services	SHORT 0-5 Years	\$	
<b>7.2</b>	<b>Objective: Advance equitable employment</b>						
7.2.1	Provide workforce training opportunities and resources for residents seeking employment.	Education & Outreach	Community Development	Community Groups	ONGOING 0-15 Years	\$	
7.2.2	Provide resources for local small businesses including access to high-speed internet, networking opportunities, trainings, etc.	Partnership	Community Development	Chamber of Commerce	ONGOING 0-15 Years	\$\$	

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Action	Implementation Tool	Acting Agency		Estimated Time-frame	Estimated Cost	Focus Area Co-benefits	
		Lead	Support				
<b>Sustainable Economy</b>							
<b>Goal 7: Promote a diverse and resilient local economy and workforce</b>							
<b>7.3</b>	<b>Objective: Support a local circular economy</b>						
7.3.1	Encourage land use and economic development policies that support neighborhood retail and Titusville-based startups, to build a local, circular economy.	Program & Policy	Community Development	North Brevard Economic Development Zone / Chamber of Commerce	<b>MEDIUM</b> 5-10 Years	\$	
7.3.2	Develop a strategic plan for a Circular Titusville including feasibility for projects including a Circular Titusville Community Grant Program, Circular Titusville Ambassador program.	Planning Document	Community Development	Community Groups	<b>MEDIUM</b> 5-10 Years	\$\$	
7.3.3	Empower citizens to reduce material consumption and reuse/recycle materials and goods through marketing, demonstration projects, and social media campaigns.	Education & Outreach	Community Development	Community Groups	<b>MEDIUM</b> 5-10 Years	\$	    
<b>7.4</b>	<b>Objective: Promote Green Businesses and Ecotourism</b>						
7.4.1	Develop sustainable financial incentive programs to prioritize the proliferation of green businesses within the CRA.	Program & Policy	CRA	Community Development	<b>MEDIUM</b> 5-10 Years	\$	

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		Lead	Support				
<b>Sustainable Economy</b>							
<b>Goal 7: Promote a diverse and resilient local economy and workforce</b>							
<b>7.4</b>	<b>Objective: Promote Green Businesses and Ecotourism</b>						
7.4.2	Develop a Green Business Voluntary Program to assist and promote, recognize, and help develop local businesses committed to improving sustainability in Titusville	Program & Policy	Community Development	Chamber of Commerce	<b>SHORT</b> 0-5 Years	\$	    
7.4.3	Encourage cleantech and low-carbon technology startups and other sustainable and circular R&D and innovation within the City.	Program & Policy	Community Development	North Brevard Economic Development Zone	<b>ONGOING</b> 0-15 Years	\$\$\$	

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