TREE PRESERVATION BOARD MEETING

City of Indian Harbour Beach, Florida

Wednesday, January 21, 2026, at 7:00 PM

Council Chamber | 2055 South Patrick Drive

AGENDA

Tree Preservation Board

Adam Lucey, Chairman
Leigh McElroy, Vice-Chair
Anastasia Doshna, Voting Member
Beth Mahoney, Voting Member
Paul Oliveri, Voting Member
Jelena Salonina, Alternate Member
Joanna Auter, Alternate Member

Staff

Orrie Covert, Assistant to the City Manager

1. Call to order
2. Pledge of allegiance followed by a moment of silent meditation
3. Roll call
4. Excusal of Board Members
5. Additions or deletions to the Agenda
6. Approval of Minutes
    a. Meeting December 10, 2025
    b. Workshop on January 7, 2025
7. Old Business
    a. Champion Tree Selection
    b. Tree Preservation Board Public Communications
    c. 2026 Arbor Day Planning
    d. Tree Management Plan
8. New Business
    a. Algonquin Sports Complex – Planting Suggestions
9. Board Member comments
10. Public comments

11. Adjournment

ALL PERSONS WISHING TO BE HEARD SHOULD APPEAR IN PERSON AT THESE HEARINGS OR SEND WRITTEN COMMENTS TO THE CITY CLERK. ALL PERSONS AND PARTIES ARE HEREBY ADVISED THAT IF THEY SHOULD DECIDE TO APPEAL ANY DECISION MADE BY THE CITY COUNCIL WITH RESPECT TO ANY MATTER CONSIDERED AT THE PUBLIC MEETING, HE OR SHE WILL NEED A RECORD OF THE PROCEEDINGS, AND FOR SUCH PURPOSE, HE OR SHE 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. FSS 286.0105. IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), ANYONE WHO NEEDS SPECIAL ACCOMMODATION FOR THIS MEETING SHOULD CONTACT THE CITY CLERK AT 321-773-3181 AT LEAST 48 HOURS IN ADVANCE OF THIS MEETING.

TREE PRESERVATION BOARD MEETING

City of Indian Harbour Beach, Florida

Wednesday, December 10, 2025, at 7:00 PM

Council Chamber | 2055 South Patrick Drive

MINUTES

Tree Preservation Board

Adam Lucey, Chairman
Leigh McElroy, Vice-Chair
Anastasia Doshna, Voting Member
Paul Oliveri, Voting Member
Beth Mahoney, Voting Member
Jelena Salonina, Alternate Member

Staff

Orrie Covert, Assistant to the City Manager

1. Call to order
   - Vice Chair Lucey called the meeting to order at 7:00 pm.

2. Pledge of allegiance followed by a moment of silent meditation
   - Vice Chair Lucey led the pledge of allegiance followed by a moment of silent meditation.

3. Roll call

   Adam Lucey - Present

   Anastasia Doshna - Present

   Leigh McElroy - Present

   Paul Oliveri – Present

   Beth Mahoney - Present

   Jelena Salonina - Present

4. Excusal of Board Members
   - N/A

5. Additions or deletions to the Agenda

- Member Doshna requested more information on the removal of the Martesia trees
  - Board discussed the States right of way and utility easement.

- Vice Chair Lucey requested the Board have a standing agenda item to address the action items from the Tree management Plan

6. Approval of Minutes
   - Meeting of November 5, 2025
     - Member Doshna shared a few minor corrections to the minutes.
   - Motion made by Member McElroy to approve the minutes with the identified changes, seconded by Member Oliveri motion carries 5-0.

7. Reorganization
   - Member Doshna nominated Adam Lucey to serve as Chairman of the Board, Member McElroy seconded, motion carried 5-0.
   - Chairman Lucey nominated Member McElroy to serve as Vice Chair of the Board, seconded by Member Doshna, motion carried 5-0.

Adam Lucey - Chairman

Anastasia Doshna – Voting Member

Leigh McElroy – Vice-Chair

Paul Oliveri – Voting Member

Beth Mahoney – Voting Member

Jelena Salonina - Alternate

8. Old Business
   a. Tree Preservation Board Public Communications
      - Vice Chair McElroy requested staff track social media TPB post performance.
      - Member Salonina suggested that the City create a database for tree alternatives for different species.
      - Vice Chair McElroy volunteered to be the point person for the Board's communications.

   b. Champion Tree Selection
      - Chairman Lucey noted Council Member Dyer's comment about the strangler fig and that the council wanted to increase education.

- Member Doshna noted a missing champion tree (105 poinciana drive) from this year.
- Member Salonina created a new Champion Tree Tracker and the Board had consensus to have Assistant to the City Manager Orrie Covert work from it moving forward.

c. 2026 Arbor Day Planning
   - Vice Chair McElroy suggested possibly changing the Arbor Day date so as to not conflict with Easter weekend. The Board had consensus to have Assistant to the City Manager Orrie Covert look into alternate dates.
   - The Board discussed when and how long to hold the event and came to the consensus to hold the event from 10:00 am to 1:00 pm.
   - The Board agreed to continue with the same timeline. 10:15 AM
   - The Board agreed to take a tour at 10:45 AM
   - The Board discussed included educational activity event(s)
   - Discussed potential vendors, including lagoon loyal, butterfly society, garden club, native plant society, rose mallow farms, ice cream truck, and food truck
     - Food trucks require inspection by the Fire Marshall on the day of the event.
   - Discussed possible activities including scavenger hunt (native tree related), face painting, canvas painting
   - Consensus on doing the tree giveaway again, Neil Yorio offered to handle it again.
   - The board discussed the type of tree to plant. Requested City Councils input on the type of tree to plant.
   - Discussed giving away magnets and/or stickers, purchasing tablecloths, include Water dispenser and directional signs, raffle for a nicer bigger tree.
   - Consensus to have ACM Covert reach out to Kristin Cusimano and send a survey to the Tree Board ranking the dates.
   - Consensus to hold a workshop on Jan 7 at 7:00 PM in the council chamber at City Hall.

9. New Business
   - N/A

10. Board Member comments
    - Chairman Lucey informed the board that their proposed Tree Management Plan was approved and adopted by the City Council.

11. Public comments

- N/A

12. Adjournment
    - Motion made by Vice Chair McElroy to adjourn the meeting at 8:26 pm, seconded by Member Oliveri. The motion was carried 5-0.

The next regularly scheduled meeting will be at 7:00 pm, Wednesday, January 21, 2025, at the City Hall Council Chamber.

_____

Adam Lucey, Chairman

TREE PRESERVATION BOARD MEETING

City of Indian Harbour Beach, Florida

Wednesday, January 7, 2026, at 7:00 PM

Conference Room | 1835 S Patrick Drive

AGENDA

Tree Preservation Board

Adam Lucey, Chairman
Leigh McElroy, Vice-Chair
Anastasia Doshna, Voting Member
Paul Oliveri, Voting Member
Beth Mahoney, Voting Member
Jelena Salonina, Alternate Member

Staff

Orrie Covert, Assistant to the City Manager

1. Call to order
    - Chairman Lucey called the meeting to order at 7:02 PM.

2. Pledge of allegiance followed by a moment of silent meditation

3. Roll call

    Adam Lucey - Present

    Leigh McElroy - Present

    Anastasia Doshna - Present

    Paul Oliveri - Present

    Beth Mahoney - Absent

    Jelena Salonina - Absent

4. Excusal of Board Members
    - Member Doshna made a motion to excuse Member Mahoney and Member Salonina from this January 7, 2025, workshop. Motion seconded by Member Oliveri. Motion carried 4-0.

5. Additions or deletions to the Agenda

   a. N/A

6. Planning for the City's 2026 Arbor Day Event

   - Assistant to the City Manager Covert Presented the Board with the results of the Arbor Day Date rankings, which are:
     - March 7th – 4th
     - March 14th – 3rd
     - **March 28th – 1st**
     - April 4th – 5th
     - April 18th – 2nd
   - The board was in a consensus to move arbor day to March 28th.
   - The board proceeded to identify duties, times, and other responsibilities for the major event activities.
   - Consensus to plant a Pigeon Plum as the ceremonial tree for the arbor day tree to planting.
   - To identify with staff a location for the tree planting and to preview it at the next Tree Preservation Board meeting.
   - Consensus to have a water setup/system for the public similar to last year.
   - Consensus to continue checking IDs to confirm residency for the tree giveaway.
   - Consensus to include a QR Code on the table that directs people to the TPB resources page on the IHB website.
   - Requested that staff inquire if recreation department staff would be willing and able to help with the kids corner.
   - Delegated members to reach out to various vendors such as the Garden Club, butterfly society, Rose mallow, and native plant society.
   - Assistant to the City Manager Covert to reach out to Lagoon Loyal for a rain barrel seminar.
   - Assistant to the City Manager Covert to look into possible food options (Danos and FD hot dogs).
   - Vice-Chair McElroy volunteered to create flyers for the event.
   - Board members and Assistant to the City Manager Covert to look into possible leading of the pledge.
   - Board came to consensus in ordering 50 trees for the giveaway of various species that would include small info cards.
   - Chairman Lucey to develop a draft itemized purchase list.

7. Board Member comments

   - N/A

8. Public comments

- N/A

9. Adjournment

- Member Doshna made a motion to adjourn the January 7, 2025, workshop at 8:13 PM. Motion was seconded by Vice-Chair McElroy. Motion carried 4-0.

_____

Adam Lucey, Chairman

Tree Preservation Board Meeting

City of Indian Harbour Beach, Florida

Wednesday, January 21, 2026

AGENDA ITEM

Champion Tree Selection

Attachments: Champion Tree Tracker

Staff Recommendation:
Review any nominated trees.

Background Information:
The board discussed the following on December 10, 2025:

- Chairman Lucey noted Council Member Dyer's comment about the strangler fig and that the council wanted to increase education.
- Member Doshna noted a missing champion tree (150 poinciana drive) from this year.
- Member Salonina created a new Champion Tree Tracker and the Board had consensus to work from it moving forward.

Tree Preservation Board Champion Tree Tracker

Date: January 21, 2026

275 Poinciana Drive, January/February 2026

Nominated on February 19, 2025

Selected as the January award on October 15, 2025

Selected as the January & February award on November 5, 2025

360 Eutau Court, December 2025

Nominated on May 21, 2025

Selected as the October award on October 15, 2025

Tree Preservation Board Champion Tree Tracker

202 Apache Drive, November/December 2025

Nominated on October 15, 2025

Selected as the November/December award on November 5, 2025

1110 Sioux Drive, October 2025

Nominated on May 21, 2025

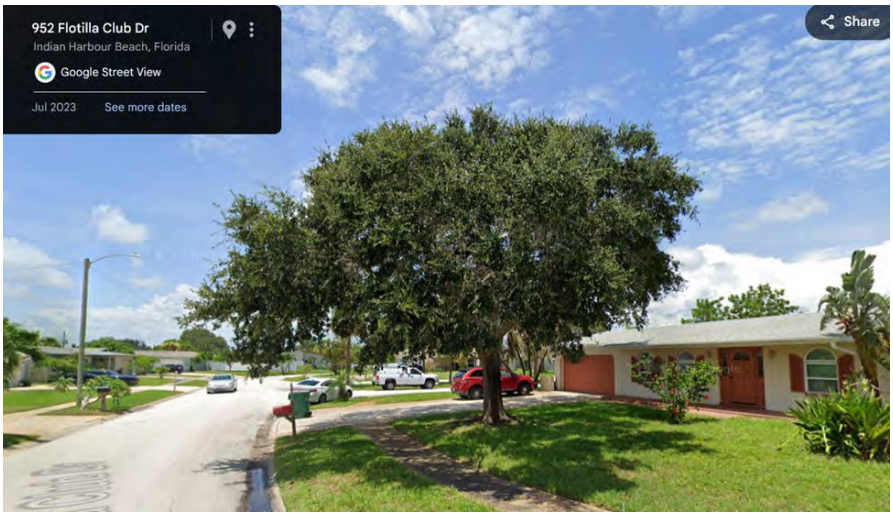
Selected as the June award on May 21, 2025 (award later moved to October)

Tree Preservation Board Champion Tree Tracker

1177 Bay Drive East, June 2025

Nominated on December 18, 2024

Selected as the June award on May 21, 2025



952 Flotilla Club, May 2025

Nominated on April 16, 2025

Selected as the May award on April 16, 2025

Tree Preservation Board Champion Tree Tracker

1208 Cheyenne (Mohawk) Blvd, April 2025

Nominated on December 18, 2024

Selected as the April award on February 19, 2025

230 Timpoochee Drive, January 2025 award

Nominated on December 18, 2024

Selected as the February award on December 18, 2024, and later made the December/January award

Tree Preservation Board Champion Tree Tracker

209 Micanopy Street

Nominated on October 15, 2025

Selected as the March/April award on November 5, 2025

153 Martesia Way

Nominated on May 21, 2025

Tree Preservation Board Champion Tree Tracker

1210 Yacht Club Blvd.

Nominated on March 19, 2025

250 Camellia Terrace

Nominated on February 19, 2025

Tree Preservation Board Champion Tree Tracker

270 Camellia Terrace

Nominated on February 19, 2025

200 Poinciana Drive

Nominated on February 19, 2025

Tree Preservation Board Champion Tree Tracker

245 Poinciana Drive

Nominated on February 19, 2025

255 Poinciana Drive

Nominated on February 19, 2025

Tree Preservation Board Champion Tree Tracker

265 Poinciana Drive

Nominated on February 19, 2025

280 Poinciana Drive

Nominated on February 19, 2025

Tree Preservation Board Champion Tree Tracker

1175 Bay Drive East

Nominated on December 18, 2024

1185 Bay Drive East

Nominated on December 18, 2024

Tree Preservation Board Champion Tree Tracker

150 Poinciana Drive

Tree Preservation Board Meeting

City of Indian Harbour Beach, Florida

Wednesday, January 21, 2026

AGENDA ITEM

Tree Preservation Board Public Communications

Attachments:

Staff Recommendation:
Review and discuss the Public Communication Initiative.

Background Information:
On May 15, 2024, the Board reached a consensus to have a standing agenda item to discuss possible public communications at future meetings.

On November 5, 2025, the following items were discussed:

- The creation of a spreadsheet of "plant this, not this" posts (staff to create and update each month)
- Member Doshna suggested each member create one for the next meeting
- Adding public information on a part of the City's website
- Chairman Yorio offered to be the person Board members email with proper names of trees.

On December 10, 2025, the following items were discussed:

- Vice Chair McElroy requested staff track social media TPB post performance.
- Member Salonina suggested that the City create a database for tree alternatives for different species.
- Vice Chair McElroy volunteered to be the point person for the Board's communications.

Tree Preservation Board Meeting

City of Indian Harbour Beach, Florida

Wednesday, January 21, 2026

AGENDA ITEM

2026 Arbor Day Planning

Attachments: Arbor Day Itemized Costs

Staff Recommendation:
Continue to develop a plan for the 4th annual IHB Arbor Day Celebration scheduled for Saturday March 28, 2026.

Background Information:
The Board identified key elements of the Arbor Day event planning and assigned responsibilities to board members, volunteers, and staff. The board will provide additional information and updates on their respective responsibilities for the event.

The Board hosted it's 3rd annual IHB Arbor Day Celebration on Saturday April 5, 2025. On April 16, 2025, the Board conducted an after-action review with the following comments:

- Chairman Yorio was pleased with the effort the Board and staff put into the event. Special recognition goes to Public Works Grounds Supervisor Smith for his efforts.
- All the giveaway trees were handed out.
- Member Salonina suggested starting earlier, possibly at 9 am.
- Chairman Yorio suggested an hour shorter, also.
- 2 hours' prep time seemed to work well.
- Member McElroy suggested all members visit the location before and have a more detailed layout printed for everyone to reference.
- City Manager Coffey suggested having a group site visit as part of a future meeting.
- Chairman Yorio suggested inviting more plant vendors.
- Chairman Yorio suggested having someone do a short presentation about the importance of native plants and how to plant a tree correctly and volunteered to make this presentation next year.
- Chairman Yorio suggested using the Recreation Center as part of the event, such as the How to Plant a Tree presentation.
- Member Salonina liked the water dispenser.
- Members McElroy and Oliveri agreed that the ice cream truck was well-received by attendees.
- Member McElroy stated that including activities for kids was a strength of the event.

- Member McElroy suggested adding some food next year.
- Chairman Yorio suggested a coffee truck.
- Chairman Yorio stated the Board needs to consider the time of the event, as vendors will want a longer event.
- Vice-Chairman Lucey suggested expanding the educational component of the event and having Public Works Grounds Supervisor Smith provide a short series of educational presentations.
- Member Salonina suggested the scavenger hunt include identifying native trees.

On December 10, 2025 the board discussed:

- Vice Chair McElroy suggested possibly changing the Arbor Day date so as to not conflict with Easter weekend. The Board had consensus to have Assistant to the City Manager Orrie Covert look into alternate dates.
- The Board discussed when and how long to hold the event and came to the consensus to hold the event from 10:00 am to 1:00 pm.
- The Board agreed to continue with the same timeline. 10:15 AM
- The Board agreed to take a tour at 10:45 AM
- The Board discussed included educational activity event(s)
- Discussed potential vendors, including lagoon loyal, butterfly society, garden club, native plant society, rose mallow farms, ice cream truck, and food truck
    - Food trucks require inspection by the Fire Marshall on the day of the event.
- Discussed possible activities including scavenger hunt (native tree related), face painting, canvas painting
- Consensus on doing the tree giveaway again, Neil Yorio offered to handle it again.
- The board discussed the type of tree to plant. Requested City Councils input on the type of tree to plant.
- Discussed giving away magnets and/or stickers, purchasing tablecloths, include Water dispenser and directional signs, raffle for a nicer bigger tree.
- Consensus to have ACM Covert reach out to Kristin Cusimano and send a survey to the Tree Board ranking the dates.

At the January 7, 2026 workshop the board had the following comments:

- The board was in a consensus to move arbor day to March 28th.
- The board proceeded to identify duties, times, and other responsibilities for the major event activities.
- Consensus to plant a Pigeon Plum as the ceremonial tree for the arbor day tree to planting.
- To identify with staff a location for the tree planting and to preview it at the next Tree Preservation Board meeting.
- Consensus to have a water setup/system for the public similar to last year.
- Consensus to continue checking IDs to confirm residency for the tree giveaway.
- Consensus to include a QR Code on the table that directs people to the TPB resources page on the IHB website.

- Requested that staff inquire if recreation department staff would be willing and able to help with the kids corner.
- Delegated members to reach out to various vendors such as the Garden Club, butterfly society, Rose mallow, and native plant society.
- Assistant to the City Manager Covert to reach out to Lagoon Loyal for a rain barrel seminar.
- Assistant to the City Manager Covert to look into possible food options (Danos and FD hot dogs).
- Vice-Chair McElroy volunteered to create flyers for the event.
- Board members and Assistant to the City Manager Covert to look into possible leading of the pledge.
- Board came to consensus in ordering 50 trees for the giveaway of various species that would include small info cards.
- Chairman Lucey to develop a draft itemized purchase list.

Item	Units	Unit Cost	Total Cost	Notes	Species (If Applicable)
Ceremonial Tree	1	$250.00	$250.00	Not to exceed cost	Pigeon Plum
Native tree/shrub giveaway	50	$10.00	$500.00	Target 5 species - 10 of each species; price may vary slightly depending on availability and species	Seagrape, Green Buttonwood, Bahama Cassia, Silver Buttonwood, Pigeon Plum, Simpson Stopper (Species may vary pending vendor availability)
Table Skirt	1	$275.00	$275.00	Confirm 6' or 8' table size	NA
IHB Magnets/Stickers	300	$0.75	$225.00	Approximated cost based on volume order	NA
		Total	**$1,250.00**		

INDIAN HARBOUR BEACH

TREE CITY USA®

TREE PRESERVATION BOARD®

I ♥ IHB

Tree City USA — Arbor Day Foundation™

Tree Preservation Board Meeting

City of Indian Harbour Beach, Florida

Wednesday, January 21, 2026

AGENDA ITEM

Tree Management Plan

Attachments: Tree Management Plan Final, ArborPro Indian Harbour Beach, FL UTC Report

Staff Recommendation:
The discussion and review of the Urban Tree Canopy Assessment and the Tree Management Plan.

Background Information:
On December 10, 2025, the Board reached a consensus to have a standing agenda item to discuss the Tree Management Plan.

ArborPro has completed its Urban Tree Canopy Assessment for the City of Indian Harbour Beach. This assessment was completed alongside the City's Tree Inventory project.

Previously discussed elements of the Tree Management Plan:

- Discussion of the purpose of the plan versus a typical ordinance
- Discussion of how the Board can work with the Planning and Zoning Board to encourage the use of natives in new development.
- Discussion of possibly entering into an agreement with one or more nurseries to purchase trees. Council Member Nutt discussed how a vendor program works.

Purpose and goal of the Tree Canopy Assessment:

- Provide the percentage of Live Tree Canopy (LTC) within the City.
- Break out these percentages by land use type and geographies. This allows for percentages to be tracked separately for different land classifications. Each of these presents unique challenges and opportunities for current and future tree canopy cover.
- Derive the Tree canopy projections and goals for each classification.
- Provide specific recommendations to help the City achieve these goals.

MUNICIPAL TREE MANAGEMENT PLAN

THE CITY OF INDIAN HARBOUR BEACH

INDIAN HARBOUR BEACH
TREE PRESERVATION BOARD

Table of Contents

A. INTRODUCTION

The City of Indian Harbour Beach, located on Florida's Space Coast, values the protection of its barrier island ecosystem, tree canopy, and high quality of life. This Municipal Tree Management Plan is intended to serve as a guiding document that outlines policy recommendations for the care, preservation, and enhancement of the City's public trees.

The plan is designed to support the City's efforts to increase the resilience, biodiversity, and sustainability of its urban forest. It provides a framework for voluntary practices, community engagement, and potential policy considerations aligned with recognized standards in urban forestry, tree care and maintenance, and environmental stewardship.

B. BENEFITS OF A HEALTHY URBAN FOREST

A healthy and well-managed urban forest contributes significantly to the environmental quality, visual character, and livability of Indian Harbour Beach. Mature trees provide shade, reduce localized flooding, improve air quality, and support the natural beauty of the City's coastal environment.

The following benefits may be considered in support of future tree-related initiatives and policy decisions:

- **Environmental Benefits:**
  - Improve air quality through the capture of pollutants and particulates
  - Sequester carbon and help moderate the effects of heat and sun exposure
  - Reduce stormwater runoff and erosion
  - Enhance water quality in the Indian River Lagoon, nearshore waterways, and local waterbodies.
  - Moderate microclimates and heat island effects
  - Provide habitat for native wildlife

- **Aesthetic and Economic Benefits:**
  - Enhance the visual appeal of parks, rights-of-way, and public spaces
  - Contribute to increased residential and commercial property values
  - Help extend the life of paved surfaces by providing shade and cooling
  - Potentially reduce municipal costs for stormwater management and pavement repairs

- **Social and Psychological:**
  - Promote public health and well-being by encouraging outdoor activity and reducing stress
  - Support community identity and civic pride
  - Provide educational and volunteer opportunities for residents
  - Encourage positive interactions with our natural environment

C. GOALS

The following goals are recommended to guide the care, preservation, and enhancement of the City of Indian Harbour Beach's urban forest. These goals may inform future policy development, build community engagement, and enhance public land management practices:

- Promote a proactive approach to the management of trees on City property.
- Support the adoption of policies and ordinances that protect public trees and establish criteria for tree species selection, removals, replacements, and long-term planning.
- Encourage the use of nationally recognized tree care standards, including the American National Standards Institute (**ANSI) A300 Parts 1-10** and their associated International Society of Arboriculture (ISA) Best Management Practices (BMPs), as appropriate to municipal needs.
- Preserve and enhance the existing tree canopy, with attention to species diversity, age diversity, and ecological resilience.
- Identify opportunities to plant trees along public sidewalks, bike paths, parks, and open spaces to provide shade, aesthetic value, and wildlife benefits.
- Foster public awareness and participation through education, volunteer planting events, and tree stewardship programs.
- Encourage infrastructure designs that provide adequate growing space for healthy trees.
- Maintain eligibility and good standing in the Tree City USA program.
- Explore strategies to reduce stormwater runoff and improve air and water quality through thoughtful tree placement.
- The Tree Management Plan shall be updated annually, as required by the Tree Preservation Board Ordinance to reflect changing conditions, best practices, and community input.
- Prioritize the use of Florida native tree species with a focus on trees that are currently or historically native to coastal Brevard County.
- Discourage the planting of edible fruit-bearing trees on city-owned property to reduce environmental and public risk and liability (Increase pest/diseases requiring pesticides, risk of falling fruit damage and injury, feeding vermin, injury to people climbing trees to harvest fruit, illness from eating pesticides or diseased fruit, etc.).

D. TREE MANAGEMENT POLICY RECOMMENDATIONS

The following recommendations are offered to guide the City's future urban forestry policies, programs, and public engagement. These measures may help preserve the urban tree canopy, support best practices in tree care, and encourage public involvement.

1. **Tree Protection and Preservation**
    a. Consider adopting a tree protection policy to reinforce the City's commitment to preserve trees on public property.
    b. Policy may include procedures for mitigation or replacement in cases of removal or significant impact.

2. **Tree Replacement and Planting Coordination**
    a. Coordinate municipal tree planting projects in consultation with the Tree Preservation Board and Appropriate City staff to prioritize species diversity, native trees, and site-appropriate selections.

3. **Tree Debris and Recycling**
    a. Explore policies that support the reuse of tree debris as natural mulch for municipal landscaping or public distribution.

4. **Staff Training and Safety**
    a. Provide opportunities for continuing education in arboriculture and tree risk assessment for relevant City personnel.
    b. Support continuing education and training in arboriculture and tree safety for City personnel aligned with industry standards (e.g., **ANSI Z133 for arboricultural safety**).

5. **Public Education and Outreach**
    a. Outreach efforts and educational giveaways may be organized or supported by the Tree Preservation Board in collaboration with City staff.

E. ACTION PLAN

The following policy recommendations represent priority actions that support the long-term health, safety, and sustainability of the City's urban forest. These initiatives will be reviewed annually by the Tree Preservation Board to evaluate progress, adjust priorities, and reflect changing needs and available resources.

1. **Maintain and Utilize the Comprehensive Tree Inventory (Completed 2025)**
    a. In 2025, the City – through a grant-funded and competitively awarded contract with ArborPro, Inc. – completed a comprehensive Geographic Information Systems (GIS)-based inventory of all City-owned and maintained trees. This inventory establishes baseline data to support canopy analysis, risk management, maintenance scheduling, and ecological benefit.
    b. The ArborPro inventory should serve as a long-term reference for tracking tree health and canopy distribution on City-owned property.
    c. City staff should retain the inventory data as a planning tool and update it as new trees are added or removed through normal municipal operations.
    d. Refer to **Appendix III** for the detailed scope of work and deliverables, including the ArborPro Final Summary Report

2. **Establish and Monitor Tree Canopy Coverage Goals (2026 – 2027)**
    a. Using information from the completed ArborPro inventory, evaluate canopy coverage by property type and location.

b. Identify City-owned properties with less than one percent (< 1%) canopy coverage and establish a target to increase canopy coverage in those areas through strategic tree planting, where space and site conditions allow.
c. Canopy coverage goals may guide and assist the City with future planting efforts, park improvements, and public-land management decisions.

3. **Prioritize Tree Maintenance Based on Condition and Risk (Ongoing)**
    a. As staffing and resources allow, the City may work toward implementing a data-driven maintenance schedule that prioritizes trees in poor condition, those with high-risk ratings, or those impacting public safety or infrastructure.
    b. Utilizing the ArborPro report, prioritize the removal of poor, dead, and critical trees and replace with Florida native species.
    c. Maintenance activities should align with **ANSI A300 standards and ISA BMPs**, as resources allow.

4. **Encourage Native and Resilient Species Planting (Ongoing)**
    a. Adopt planting guidelines that emphasize native species and those with strong resistance to drought, wind, and salt.
    b. Update species lists and educational materials accordingly.

5. **Increase Public Awareness and Engagement (Annual/Recurring)**
    a. Expand outreach programs and opportunities related to tree planting, maintenance, and invasive species removal.
    b. Collaborate with schools, neighborhood groups, and civic organizations to promote tree stewardship.

6. **Coordinate with Planning and Zoning Board and Departments (2026 and Ongoing)**
    a. Encourage coordination between the Tree Preservation Board, Planning and Zoning Board, and other departments to incorporate native tree-planting considerations into land-development codes, site-plan review standards, and landscaping requirements.
    b. Recommend policy updates that promote preservation of existing canopy and the inclusion of Florida native species in future development, redevelopment, and infrastructure projects.

F. TREE PLANTING STANDARDS

Municipal trees—those located on City-owned land such as parks, medians, rights-of-way, and public facilities—play an important role in supporting community aesthetics, environmental health, and resilience. The following policy recommendations are intended to guide tree planting practices across the City and may be referenced in future planning, ordinance updates, or program development.

1. **Tree Selection Guidelines**
    a. Tree species selected for planting on public property are encouraged to be native or regionally adapted Florida natives, with consideration for site conditions, growth habits, long-term maintenance needs, and environmental benefit.
    b. The City may reference the Florida Grades and Standards for Nursery Stock (*5th Edition, Florida Department of Agriculture and Consumer Services*) to ensure the selection of high-quality nursery trees. Trees meeting Florida Grade No. 1 or better are generally recommended for municipal planting projects.

2. **Recommended Planting Practices**
    a. Tree installation practices may follow **ANSI A300 (Part 6 – Planting and Transplanting) and the corresponding ISA BMPs** to promote healthy establishment and survivability.
    b. Considerations may include planting season timing, planting hole preparation, irrigation methods, and early care routines. These practices may be further detailed in a technical guide or internal policy reference.
    c. Training of appropriate staff responsible for planting operations and have a qualified arborist/horticulturist on staff to supervise planting, care, and maintenance.

3. **Young Tree Establishment**
    a. Newly planted trees may benefit from routine inspection and structural pruning during the first several years following installation to ensure healthy form and minimize future maintenance needs.
    b. Consistent mulching, watering, fertilization, and protection from mechanical damage are recommended to improve establishment success rates.

4. **Supplemental Support**
    a. When supplemental support systems such as staking or guying are necessary, it is recommended they follow **ANSI A300 (Part 3 – Supplemental Support Systems)** and be removed as soon as conditions allow to prevent long-term damage.

G. TREE MAINTENANCE

Proper tree maintenance supports public safety, tree health, and long-term canopy resilience. The following recommendations may serve as a policy framework to guide pruning, watering, mulching, and risk assessment for trees on City property. These practices are intended to align with nationally recognized arboricultural standards and may be adapted to site-specific conditions as needed.

1. **Pruning and Structural Care**
    a. Pruning of municipal trees is encouraged to follow **ANSI A300 (Part 1 – Pruning) standards and associated ISA BMPs.**
    b. Routine pruning cycles may be determined based on species, age, location, and risk potential. Examples include:

i. Young trees: structural pruning on an annual basis for the first 10–15 years
ii. Mature hardwoods: every 2–3 years
iii. Palms: as needed
iv. Flowering or fast-growing trees: annually

2. **Tree Risk Assessment**
    a. Trees located on public property may be evaluated periodically for structural health and risk. It is recommended that assessments be conducted by an ISA Certified Arborist with Tree Risk Assessment Qualification(TRAQ) if resources allow or as budget permits.
    b. Level 2 assessments may follow the ISA Tree Risk Assessment BMP and use the standard Tree Risk Assessment form.

3. **Watering and Fertilization**
    a. Newly planted and young trees should receive consistent irrigation, where available, to support healthy establishment.
    b. Fertilization practices, if pursued, may follow the guidance in **ANSI A300 (Part 2 – Soil Management)** and consider species-specific needs.

4. **Mulching**
    a. Mulching is recommended for moisture retention, weed suppression, and mechanical damage prevention.
    b. Application may follow ISA standards: 2–4 inches deep, spread beyond the root ball, and kept away from direct contact with the trunk.
    c. Recommended seasonal mulch application, typically between October and April, may be considered where feasible with seasonal rotation by location (e.g., City buildings, parks, medians).

5. **Pest and Disease Monitoring**
    a. Tree health monitoring programs may help identify signs of pest infestation, disease, or nutrient deficiency.
    b. If dead, dying, or diseased trees are identified, they may be assessed for treatment, removal, or replacement recommendations by City staff trained in tree maintenance or a certified arborist.

H. ROADWAY AND PEDESTRIAN CLEARANCE

Maintaining adequate clearance around streets, sidewalks, signage, and intersections is essential for public safety, visibility, and accessibility. The following recommendations are intended to guide clearance-related tree maintenance practices on City property.

- Recommended pruning for roadway and pedestrian clearance may consider visibility requirements for traffic signs, streetlights, intersections, and pedestrian corridors, in coordination with the Public Works Department.

- Tree maintenance for safety and access may follow **ANSI A300 (Part 1 – Pruning)** standards and applicable ISA BMPs.

- Utility line clearance is managed by Florida Power & Light (FPL). The City does not conduct pruning or maintenance near energized lines.

- For locations near overhead utilities, utility-compatible tree species may be recommended for future plantings to minimize long-term conflicts.

I. TREE REMOVALS

While preserving the City's existing tree canopy is a primary goal, the removal of trees may be necessary under certain conditions, including declining health, structural failure risk, or the presence of pests or disease. The following policy recommendations are intended to guide how removals are assessed, documented, and mitigated on City property.

Tree removals on public property should be limited to instances where trees present a safety hazard, are in severe decline or poor health, interfere with critical infrastructure, or are identified as invasive and ecologically disruptive species. Removal decisions should be based on certified arborist assessments and, where applicable, public safety concerns or ecological restoration goals.

1. **Removal Criteria**
    a. Tree removals may be considered when a tree is determined to be dead, dying, structurally unsound, or affected by disease or infestation that presents a public hazard or risk of spreading.
    c. It is recommended that a qualified professional, such as an ISA Certified Arborist or designated Urban Forester assess trees prior to any removal decision if resources allow or as budget permits.
    b. Concerns or inquiries regarding tree removals may be referred to the Tree Preservation Board for discussion or guidance.
    c. Invasive species planted on public property that are determined to be invasive should also be considered for removal to avoid further spread and establishment.
    d. Encourage private property owners to remove invasive species growing on their property or rights-of-way adjacent to their property.

2. **Wildlife and Habitat Consideration**
    a. In cases where dead trees (snags) do not present a risk to public safety, the City may consider retaining them as wildlife habitat if deemed ecologically beneficial.

3. **Removal Process Recommendations**
    a. Tree removal may include disposal of all above-ground debris, stump removal or grinding, and restoration of the site with clean fill or suitable landscaping materials.

b. When a stump cannot be removed immediately, stump grinding may be scheduled within a reasonable timeframe.

4. **Replacement Recommendations**
    a. A tree replacement guideline may recommend planting two new trees for every tree removed, where space and site conditions allow.
    b. Replacement trees may be planted either at or near the removal site or elsewhere on City property, based on canopy goals and site suitability.

5. **Planning for Replanting**
    a. Removal sites may be evaluated for future planting potential and logged as part of ongoing tree inventory efforts.

6. **Invasive Species**
    a. Trees listed as invasive species by the Florida Invasive Species Council (FISC) and University of Florida (UF)/Institute of Food and Agricultural Sciences (IFAS) may be prioritized for removal due to their negative impacts on native ecosystems. These include, but are not limited to, species such as Brazilian pepper, melaleuca, Australian pine, and carrotwood. For the City's full list of invasive species of concern, refer to Appendix I.
    b. Whenever possible, tree removals should be followed by replanting with native or non-invasive species in suitable locations, aligned with the City's reforestation and canopy goals.

J. PROTECTION AND CONSERVATION

Tree preservation plays a vital role in maintaining canopy cover and ecological value during construction or maintenance activities on City-owned property. The following policy recommendations are intended to guide protective practices that help avoid unnecessary damage to trees and their root systems.

1. **Tree Protection During Construction and Site Work**
    a. Tree protection measures may be incorporated into the planning and execution of public infrastructure or facility projects where trees are present.
    b. In accordance with the City's Land Development Code and related regulations, project teams and contractors must identify trees and tree protection zones to be retained early in the planning process and implement appropriate protection measures during construction.

2. **Standards and Best Practices**
    a. Tree protection efforts may follow guidance in **ANSI A300 (Part 5 – Management During Site Planning, Design, and Construction)** and its associated ISA BMPs.
    b. Protection zones should extend beyond the dripline of the tree when feasible, with root zone preservation prioritized over convenience of access.

3. **Applicability**
    a. These policies may apply to City-led projects, and contracted operations on public land where City trees may be affected.
    b. The City may also encourage developers and private contractors working adjacent to City property to consider voluntary tree protection measures and use the Tree Management Plan as a resource and guide for tree selection and care.
    c. The City encourages private landscape projects to consider using the Tree Preservation Board (TPB) as a resource in identifying suitable species for landscaping plans.

K. EDUCATION AND COMMUNITY INVOLVEMENT

Public education and community participation are key components of a resilient and sustainable urban forest. The following policy recommendations aim to encourage engagement, foster stewardship, and improve awareness of the benefits and responsibilities of urban tree care. This responsibly is managed by the Tree Preservation Board in collaboration with City Staff.

1. **Public Education and Awareness**
    a. The City may consider developing educational resources to inform residents about tree planting, care, native species, invasive plant identification, and the role of trees in stormwater and habitat management.
    b. Public communication efforts could include website materials, signage in parks or rights-of-way, workshops, and outreach during community events, e.g., “Plant this…Not That!”

2. **Incentive and Give-Away Programs**
    a. The City may consider offering a periodic free or low-cost native tree giveaway program to encourage residents to plant and care for trees on private property. This would be an expansion of the tree giveaway program during Arbor Day.
    b. Participation in such programs could be tied to public education efforts, tree care guidance, and opportunities for long-term canopy tracking.

L. ARBOR DAY CELEBRATION

Arbor Day is both a symbolic and practical opportunity to promote the value of trees in Indian Harbour Beach. As part of the City’s commitment to maintaining its Tree City USA designation, an annual Arbor Day celebration is held each year. This event fulfills one of the four core requirements of the Tree City USA program, along with maintaining a tree board, having a public tree ordinance, and meeting the program’s minimum funding level for urban forestry.

Arbor Day activities may include a ceremonial tree planting, public outreach, educational materials, and participation from City staff, volunteers, local vendors, and community

organizations. The event also serves to promote awareness of native species, tree care practices, and conservation topics relevant to the local environment. In addition, the Arbor Day celebration may support other elements of the Tree Management Plan, such as encouraging volunteer participation and distributing native trees to residents through educational giveaways or planting events.

M. TREE CITY USA

The City of Indian Harbour Beach was recently awarded Tree City USA designation by the Arbor Day Foundation in recognition of its ongoing commitment to sound urban forestry practices and community engagement. To maintain this designation, the City must meet four core standards annually:

1. **Maintain a Tree Board or Department**
   A designated board or staff role must be responsible for overseeing the care, planning, and protection of public trees. This helps ensure accountability, professional oversight, and public engagement.

2. **Have a Public Tree Care Ordinance**
   A municipal ordinance must establish policy guidance for planting, maintenance, and removal of public trees. The ordinance provides legal authority and promotes consistent practices across City properties.

3. **Allocate a Minimum of $2 Per Capita to Urban Forestry**
   The City must demonstrate a financial commitment by spending at least $2 per resident annually on tree planting, maintenance, education, or management. This funding can include staff time, contracts, supplies, or program costs.

4. **Celebrate Arbor Day with a Proclamation and Event**
   The City must observe Arbor Day each year through an official proclamation and a public tree-related activity, such as a planting event, educational program, or volunteer day.

Maintaining Tree City USA status affirms the City's dedication to long-term canopy stewardship, enhances public visibility, and may improve eligibility for grants and support from forestry partners. This Tree Management Plan provides policy guidance that supports these standards through recommendations related to tree planting, care, education, and public involvement. The City intends to maintain its Tree City USA status each year through continued adherence to these four core standards.

N. CONCLUSION

The Indian Harbour Beach Tree Management Plan provides a framework of policy recommendations designed to support the preservation, enhancement, and responsible

stewardship of the City's urban forest. By focusing on best practices in planting, maintenance, protection, and community involvement, the Plan serves as a guide for sustaining the environmental, aesthetic, financial, and social benefits that trees provide to residents and future generations.

This document reflects the City's ongoing commitment to maintaining Tree City USA status and strengthening its natural infrastructure. The recommendations contained herein are intended to inform and guide future planning decisions, ordinance updates, program development, and public engagement efforts related to urban forestry.

The Tree Management Plan may be reviewed and updated annually in accordance with City Ordinance and to reflect emerging best practices, changing environmental conditions, and community priorities. Through continued collaboration among City staff, advisory boards, volunteers, and residents, Indian Harbour Beach can maintain a resilient and thriving urban tree canopy for years to come.

APPENDIX I: Invasive Tree Species

The following tree species are identified as invasive and ecologically disruptive to native plant communities in coastal Florida. These species are recognized by the Florida Invasive Species Council (FISC) and UF/IFAS as Category I invasives and may be considered for removal from public properties as part of long-term restoration and tree management efforts:

- Brazilian Pepper (Schinus terebinthifolius)
- Melaleuca (Melaleuca quinquenervia)
- Australian Pine (Casuarina equisetifolia)
- Carrotwood (Cupaniopsis anacardioides)

These species are known to outcompete native vegetation, disrupt wildlife habitats, and alter natural hydrological processes. The City may prioritize the gradual removal and replacement of these trees with native or non-invasive alternatives on City-owned lands.
Private property owners are encouraged to voluntarily remove invasive tree species and replace them with native trees that support the ecological integrity of the region.

Additional guidance and a current list of invasive species may be found at:
https://www.floridainvasives.org/

APPENDIX II: Recommended Tree Species

(Reference or include the recommended tree list in IHB Tree Ordinance)

APPENDIX III: Tree Inventory Scope and Deliverables

The City of Indian Harbour Beach has completed a comprehensive, city-wide tree inventory with funding support from a competitive grant. This initiative is part of a broader strategy to improve urban forestry planning, support the City's new Tree City USA designation, and establish baseline metrics for canopy coverage and tree health.

1. **Project Purpose**
    a. The tree inventory will identify and catalog every tree located on City-owned or managed properties—including parks, medians, rights-of-way, and public facilities. The data collected will provide a foundation for long-term tree management planning, maintenance scheduling, risk assessment, and analysis of ecological services such as carbon sequestration and stormwater mitigation.

2. **Scope of Work**
    a. A certified arborist, qualified under International Society of Arboriculture (ISA) standards and preferably holding a Tree Risk Assessment Qualification (TRAQ), will lead the inventory process. The project deliverables include:
        i GIS Mapping and Geolocation – Every tree will be assigned a unique ID number, mapped using GPS coordinates, and included in an ArcGIS-compatible database.
        ii Tree Characteristics – Data collected will include species (common and botanical name), DBH (diameter at breast height), estimated height, canopy size, estimated age category, condition rating (ISA standards), and minimum growing space.
        iii Observations and Maintenance Needs – The inventory will document up to three observed tree issues (e.g., decay, pest damage, root constraints) and identify up to two maintenance needs per tree, following ANSI A300 and ISA BMPs.
        iv Utilities and Infrastructure Conflicts – Overhead utility presence and potential tree/infrastructure conflicts will also be noted.

3. **Training and Dynamic Maintenance**
    a. The selected consultant will train City staff in data collection and maintenance procedures to ensure the inventory becomes a living, continually updated database that supports future decision-making and grant applications.

4. **Data Collected**
    a. Each tree will be recorded with the following attributes:
        i Tree ID and GPS location
        ii Species (common and botanical name)
        iii DBH (Diameter at Breast Height)
        iv Estimated height and canopy spread
        v Age category

vi Minimum growing space
vii Overall condition rating (ISA scale)
viii Observed issues (e.g., decay, root constriction)
ix Maintenance needs (e.g., pruning type, removal, pest treatment)
x Presence of overhead utilities

5. **Reporting and Deliverables**
    a. Upon completion, the consultant will provide:
        i A summary report assessing overall tree condition by location
        ii Maps with tree IDs over aerial imagery
        iii Digital datasets in ArcGIS Shapefile and PDF format
        iv An ecological services estimate (carbon storage, stormwater interception, energy savings, etc.)

The inventory was completed in late 2025, with periodic updates encouraged thereafter.

APPENDIX IV: References

The following documents, standards, and publications informed the development of this Tree Management Plan. They represent widely accepted industry guidance, regulatory frameworks, and best practices for municipal tree care and urban forestry planning.

NATIONAL AND INDUSTRY STANDARDS

- **ANSI A300 Standards for Tree Care Operations**
    - Part 1: Pruning
    - Part 9: Tree Risk Assessment
    - Part 6: Planting and Transplanting
    - Published by the Tree Care Industry Association (TCIA)

- **ANSI Z133 Safety Requirements for Arboricultural Operations**

- **International Society of Arboriculture Best Management Practices**
    - Tree Pruning
    - Tree Risk Assessment
    - Tree Planting
    - Utility Pruning of Trees
    - Managing Trees During Construction

FLORIDA-SPECIFIC GUIDELINES

- **Florida Grades and Standards for Nursery Stock**
    - Published by the Florida Department of Agriculture and Consumer Services (FDACS)
    - Referenced in Section F: Municipal Tree Management
- **FPL Line Clearing Standards**

    - Florida Power & Light utility clearance and vegetation management guidelines
- **Florida Urban Forestry Council Publications**
- **Florida-Friendly Landscaping™ Program Principles**
    - University of Florida IFAS Extension

CITY OF INDIAN HARBOUR BEACH DOCUMENTS

- **Tree Inventory RFP (RFP No. 2025-03)**
    - Included to supplement the Action Plan and Appendix III
- **Tree Preservation Ordinance** (2024)
    - Establishes the Tree Preservation Board and local tree protection policies

URBAN TREE CANOPY

UTC

ASSESSMENT REPORT

Prepared for:

Indian Harbour Beach FLORIDA

Prepared by: ArborPro URBAN FOREST MANAGEMENT

1574 N Batavia St., Suite 2
Orange, CA 92867

(714) 694-1924
www.ArborProUSA.com

December 2025

Contents

Executive Summary

In 2025, ArborPro, Inc. conducted a GPS-based tree inventory of parks, facilities, and other City-selected areas in Indian Harbour Beach. Data collection was performed by a Certified Arborist with over 30 years of experience and included GPS location, species (botanical and common names), general health, maintenance recommendations, and species composition.

A total of 2,784 tree sites representing over 100 species were recorded. The most common species were Palmetto (1,040), Southern Live Oak (417), Sand Live Oak (167), Bismarck Palm (132), Southern Slash Pine (111), and Foxtail Palm (108), together accounting for 71% of the inventoried trees.

The inventory provides actionable insights to support urban forest management, including visualization of tree locations, assessment of tree health and risk, and identification of dominant species. While this dataset supports localized canopy analysis, it does not represent total citywide canopy coverage, as many trees—particularly those on private property—were outside the inventory scope.

Building on the field-based tree inventory, an Urban Tree Canopy (UTC) Assessment was conducted using high-resolution aerial imagery to evaluate overall canopy cover across the City. This top-down analysis allows for a comprehensive assessment of both Live Tree Canopy (LTC) and Potential Planting Areas (PPA) across public and private properties, providing a citywide perspective.

While aerial imagery does not allow for identification of individual tree species or condition, it enables calculation of the percentage of land currently covered by tree canopy and identification of areas suitable for future planting. These data support the development of long-term canopy projections, including a 20-year canopy goal based on modeled growth and planting potential.

This Assessment also outlines targeted recommendations to help achieve canopy goals, including actions for public and private property managers, homeowners, and the City to support new tree planting and the long-term care of existing trees.

The objectives of this Assessment are to:

1. Quantify the percentage of Live Tree Canopy (LTC).
2. Analyze canopy coverage by land use type and geographies.
3. Establish canopy projections and goals for each classification.
4. Provide actionable recommendations to support goal achievement.

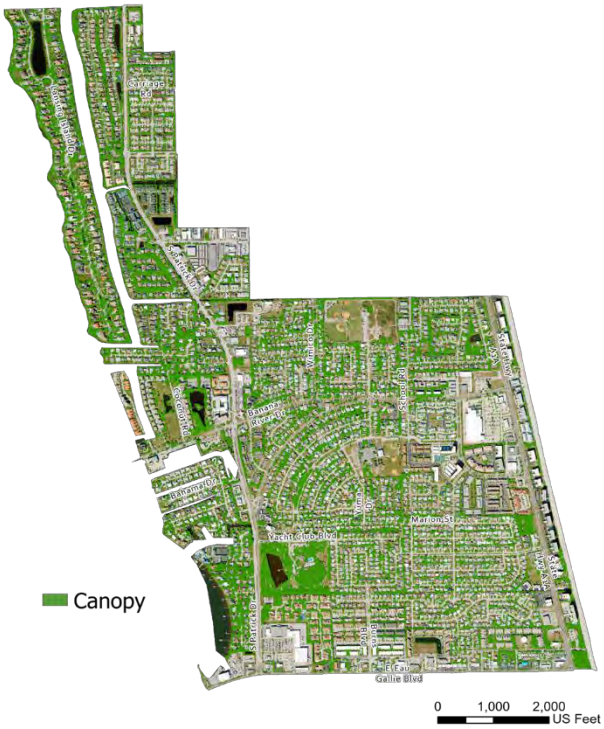
Tree Canopy by the Numbers

Indian Harbour Beach – Percent Tree Canopy Cover

26%

358 acres

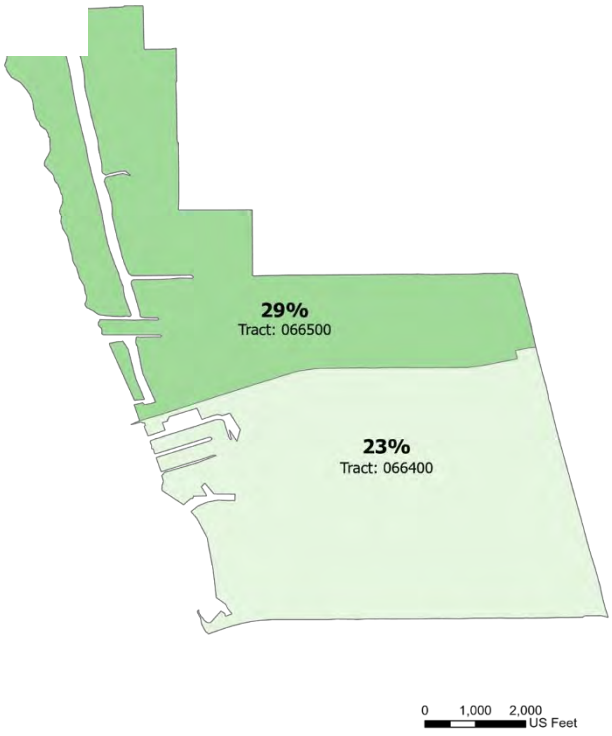
Indian Harbour Beach – Tree Canopy Cover



Recommendations

- Landowner Tree Education
- Grant Funding & Support
- Public Outreach Program
- Community Event Engagement
- Proactive Tree Planting
- Five-Year Canopy Updates

Indian Harbour Beach Census Tracts – Percent Total Canopy Cover



Urban Tree Canopy (UTC) Assessment Goals

The goals of this Assessment are to:

1. Provide the percentage of Live Tree Canopy (LTC) within the City of Indian Harbour Beach.
2. Break out these percentages by land use type and geographies. This allows for percentages to be tracked separately for different land classifications. Each of these presents unique challenges and opportunities for current and future tree canopy cover.
3. Derive the Tree canopy projections and goals for each classification.
4. Provide specific recommendations to help the City achieve these goals.

Benefits of the Urban Forest

Trees offer a wide range of environmental, social, and economic benefits, serving as a cornerstone for healthy, livable, and resilient communities. By shading streets, buildings, and open spaces and releasing water through transpiration, trees help moderate local temperatures, which in turn improves energy efficiency and reduces cooling costs for nearby structures. Beyond cooling, trees play a vital role in enhancing air and water quality: they absorb pollutants, capture airborne particulates, release oxygen, and help lower ground-level ozone concentrations. Their root systems also stabilize soil, reduce erosion, and slow stormwater runoff, mitigating flood risks and protecting water resources. Additionally, trees provide essential habitat for birds, pollinators, and other wildlife, supporting urban biodiversity and ecological resilience.

Maximizing tree benefits requires a comprehensive inventory of each tree's location, species, size, and condition, along with an assessment of current and potential canopy. This approach quantifies existing benefits and identifies opportunities to strategically expand the urban forest, enhancing ecological, social, and economic value.

Challenges

As the City strives to sustain and enhance its urban forest and canopy, it will face several common challenges:

- Climate Stress: Warmer summers and drought conditions increase stress on new and established trees, raising the need for irrigation and making trees more susceptible to pests and diseases.
- Financial Challenges: Planting and maintaining urban trees require additional time, staffing, and resources, including irrigation and ongoing care.
- Private Property Canopy: Much of the tree canopy on residential and commercial properties is outside the City's direct control; outreach and education programs can encourage property owners to plant and maintain recommended tree species.

Methodology

The following industry-standard methodology was employed to perform this Urban Tree Canopy (UTC) Assessment. The specific steps are outlined here to ensure the process can be repeated in the future, which is critical for conducting reliable change assessments over time.

1. Acquiring Imagery Data

Imagery for the project area was obtained from the U.S. Geological Survey's (USGS) Earth Explorer platform (https://earthexplorer.usgs.gov/), which provides remotely sensed data, including satellite and aerial imagery and LiDAR. For this assessment, multispectral imagery from the National Agriculture Imagery Program (NAIP) was used, enabling the identification and classification of features that might otherwise blend with their surroundings. NAIP images from 2023 were acquired for this assessment.

2. Image Classification

The acquired images were classified into distinct land-use and land-cover classes to identify canopy cover and locate potential planting areas. The chosen land-use classes were:

- Buildings
- Other Pavement
- Bare Soil
- Water
- Vegetative Cover
- Tree Canopy

A deep learning model was developed to classify these categories using training data created from manually selected representative samples. The model was iteratively trained until achieving a desirable accuracy, which was then evaluated with a confusion matrix. The targeted overall accuracy for all classes was 90%.

3. Canopy Cover by Land Use

To develop the Canopy Cover by Land Use map, multiple spatial datasets were integrated. The tree canopy layer, derived from the 2023 image classification, was combined with a parcels layer categorized by land use. Indian Harbour Beach includes eight primary land use classes: Industrial, Commercial, Commercial Mix-Use, Multi-Family Residential, Single-Family Residential, Public and Semi-Public, Recreation and Open Space, and Vacant Lots. By overlaying the canopy layer with these land use categories, the extent of canopy cover within each class was calculated.

4. Potential Planting Areas (PPA)

Potential Planting Area (PPA) assessment was conducted to support future canopy expansion efforts. Successful tree planting in urban environments requires accurate land-use classification and the integration of supporting datasets to ensure trees are planted in locations where they can grow without interference.

Additional datasets incorporated into the PPA analysis included:

- Parcels
- Roads and rights-of-way
- Buildings
- Powerlines
- Water boundaries

The parcels dataset was filtered to include only public lands owned and maintained by the City, excluding athletic fields, cemeteries, and school grounds. A 20-foot buffer was applied around existing buildings to represent the canopy radius of a mature tree, thereby maintaining adequate spacing between trees and structures.

By overlaying the 2023 canopy cover with the additional datasets, suitable areas for potential tree planting were identified.

---

5. Potential Planting Sites (PPS)

The PPA dataset was then used to generate Potential Planting Sites (PPS). These spots were designed for the planting of large, mature trees, assuming an average crown diameter of 40 feet (equivalent to a 20-foot radius). The previously applied 20-foot building buffer thus represents the maximum canopy extent if a mature tree were planted along that line.

Using the PPA as the area of interest, a tessellation was created based on the 40-foot crown diameter to distribute potential planting locations. This approach maximized the number of feasible planting sites and identified areas with the greatest potential for future canopy expansion.

Results

The following areas and percentages were calculated based on the 2023 urban tree canopy data captured from this report.

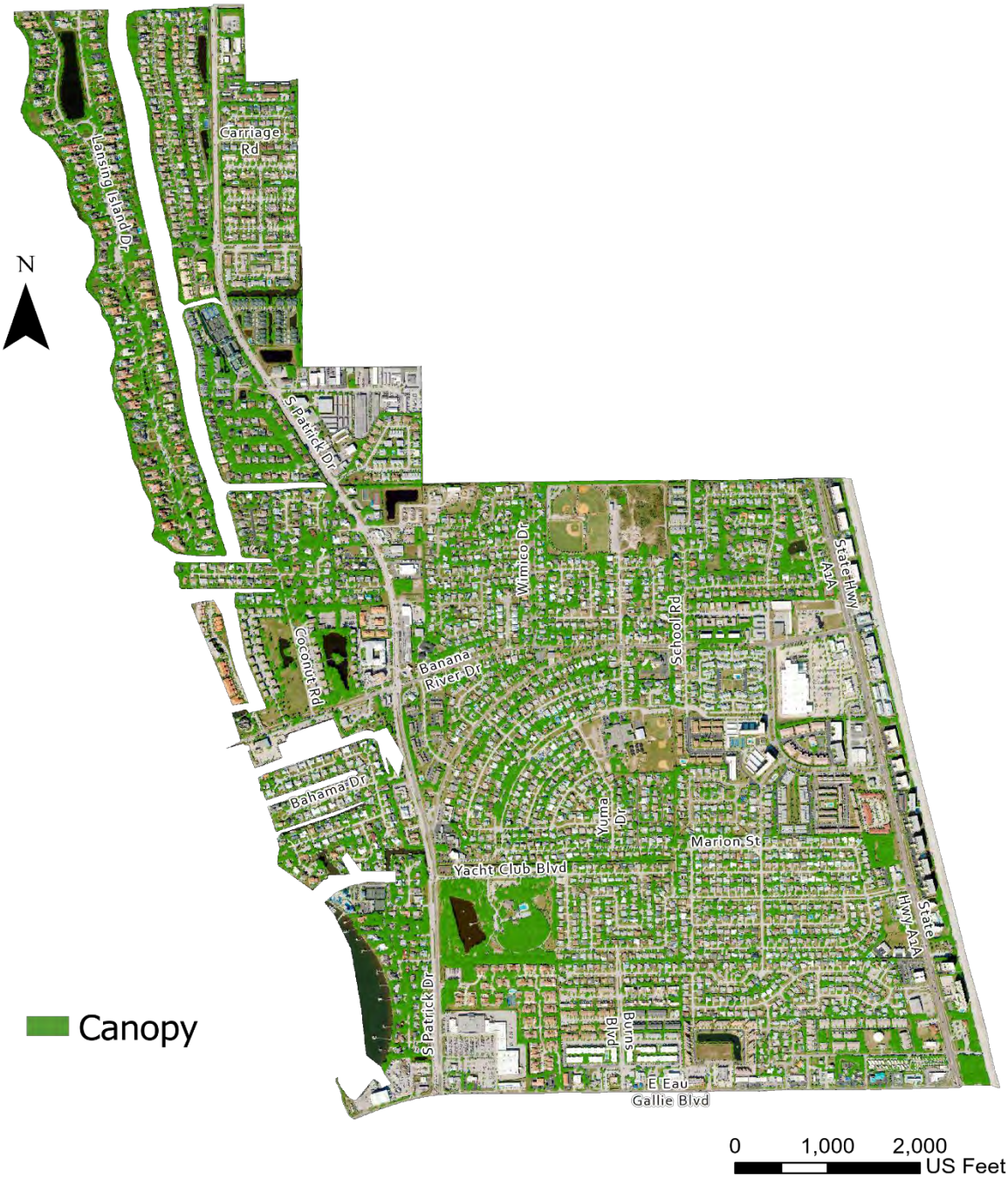
	2023			
LAND USE	Total Area (Acres)	% of Land Use	Canopy (Acres)	% Canopy Coverage
Commercial	95.5	9	13.86	15
Commercial Mix-Use	50.1	5	5.36	11
Industrial	16.0	1	0.67	4
Single-Family Residential	583.8	53	194.44	33
Multi-Family Residential	265.3	24	55.44	21
Public and Semi-Public	23.7	2	3.96	17
Recreation and Open Space	56.4	5	20.42	36
Vacant	0.5	0.05	0.26	49

The City of Indian Harbour Beach is predominantly residential, with single and multi-family areas comprising roughly 77% of the land use and supporting approximately 250 acres of the City's tree canopy. These residential areas hold most of the existing canopy but also present significant opportunities for expansion.

- Single-Family Residential (53% of the City's land use): Homeowners can be encouraged to plant additional trees in their yards, focusing on species that provide shade, edible fruit, or other short-term benefits. Outreach programs, planting guides, and incentives can help residents increase canopy coverage while improving personal and neighborhood benefits. The Recommendations section of this report outlines specific actions and species suggestions for these areas.
- Multi-Family Residential (24% of the City's land use) and Other Land Uses (15%): These areas, including multi-family, industrial, and commercial sites, typically feature professionally designed landscaping with limited space for new trees. However, property managers and landscape teams can benefit from educational resources on tree health, proper pruning techniques, and replacement of dead trees to maintain and enhance existing canopy.
- City-Maintained Spaces (7% of developed area): Strips of land under City management offer strategic opportunities for proactive canopy management. The City can monitor tree health, maintain its urban forest inventory, and plant new trees in vacant sites to steadily increase overall canopy coverage.

By targeting residential outreach, supporting property managers, and strategically utilizing City-maintained land, Indian Harbour Beach can enhance both the quantity and quality of its urban forest, maximizing ecological, social, and aesthetic benefits for the community.

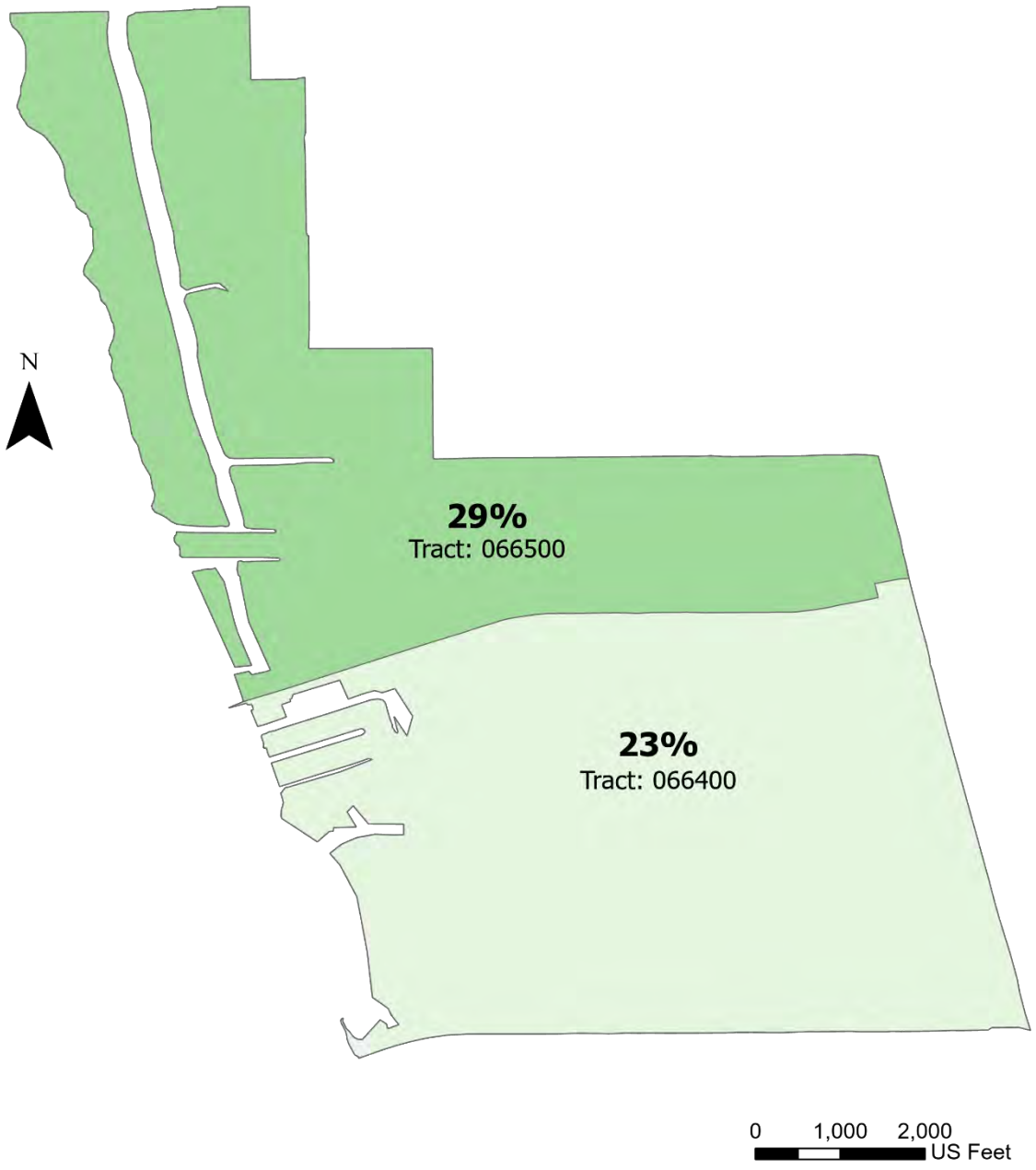
Indian Harbour Beach Canopy Cover



2023

The map illustrates the live tree canopy cover across Indian Harbour Beach in 2023. Overall, tree canopy occupies approximately 358 acres, accounting for roughly 26% of the City's total census tract area. This coverage reflects the distribution of trees across residential, commercial, and public spaces and provides a snapshot of the urban tree canopy current extent.

Census Tracts Percent Total Canopy Cover



2023

The City is divided into two U.S. Census tracts, enabling a more detailed analysis of total canopy cover. This division allows each half of the City to be evaluated independently, highlighting unique conditions, challenges, and opportunities for increasing live tree canopy.

Canopy Cover - Tract 066500

2023

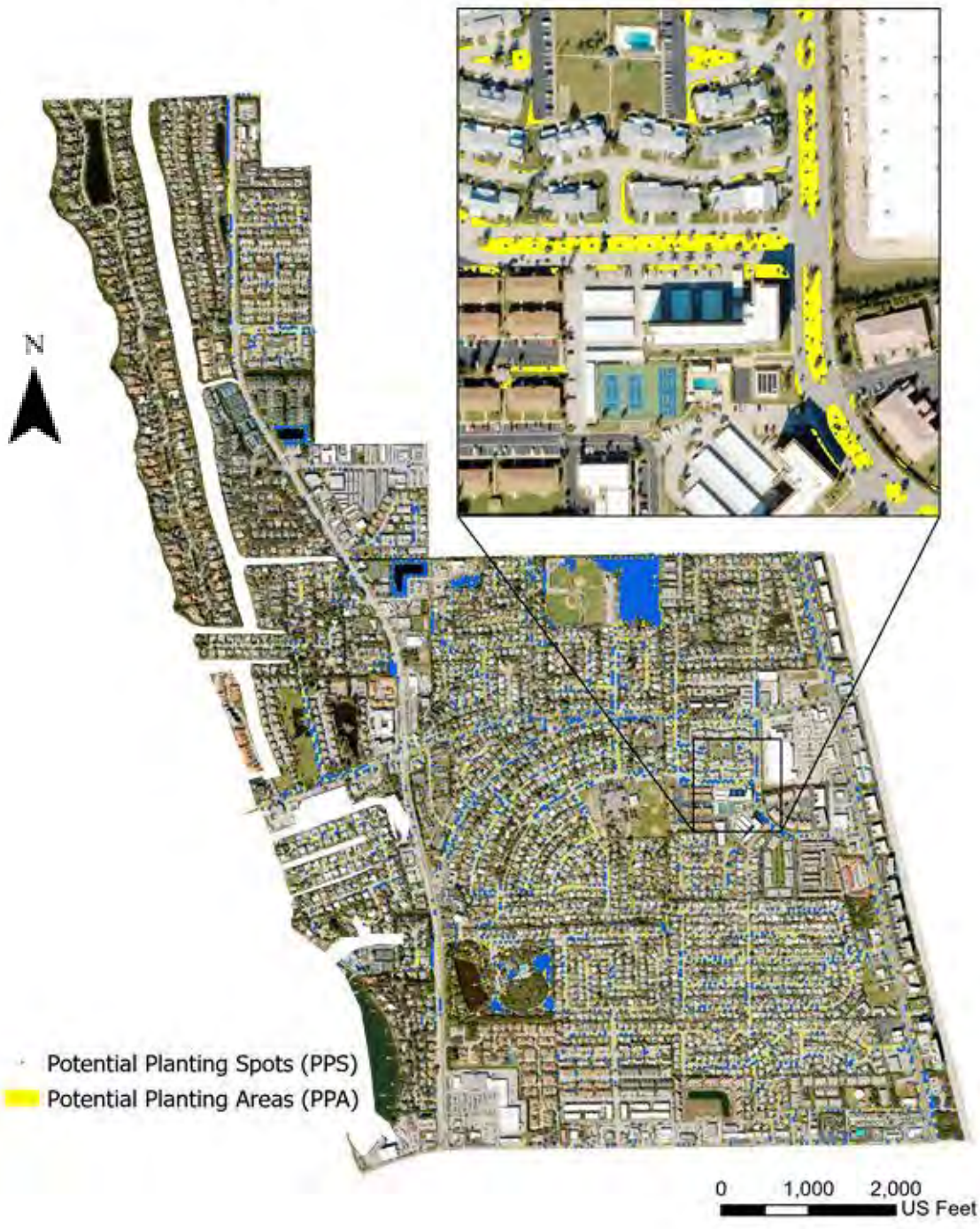
Live tree canopy covers approximately 29% of Census Tract 066500, reflecting a substantial level of tree coverage within this area.

Canopy Cover - Tract 066400

2023

Live tree canopy covers approximately 23% of Census Tract 066400, which is notably lower than the roughly 29% canopy coverage observed in Census Tract 066500. This difference suggests that Tract 066400 may present greater opportunities for targeted tree planting and canopy expansion to achieve more balanced coverage across the City.

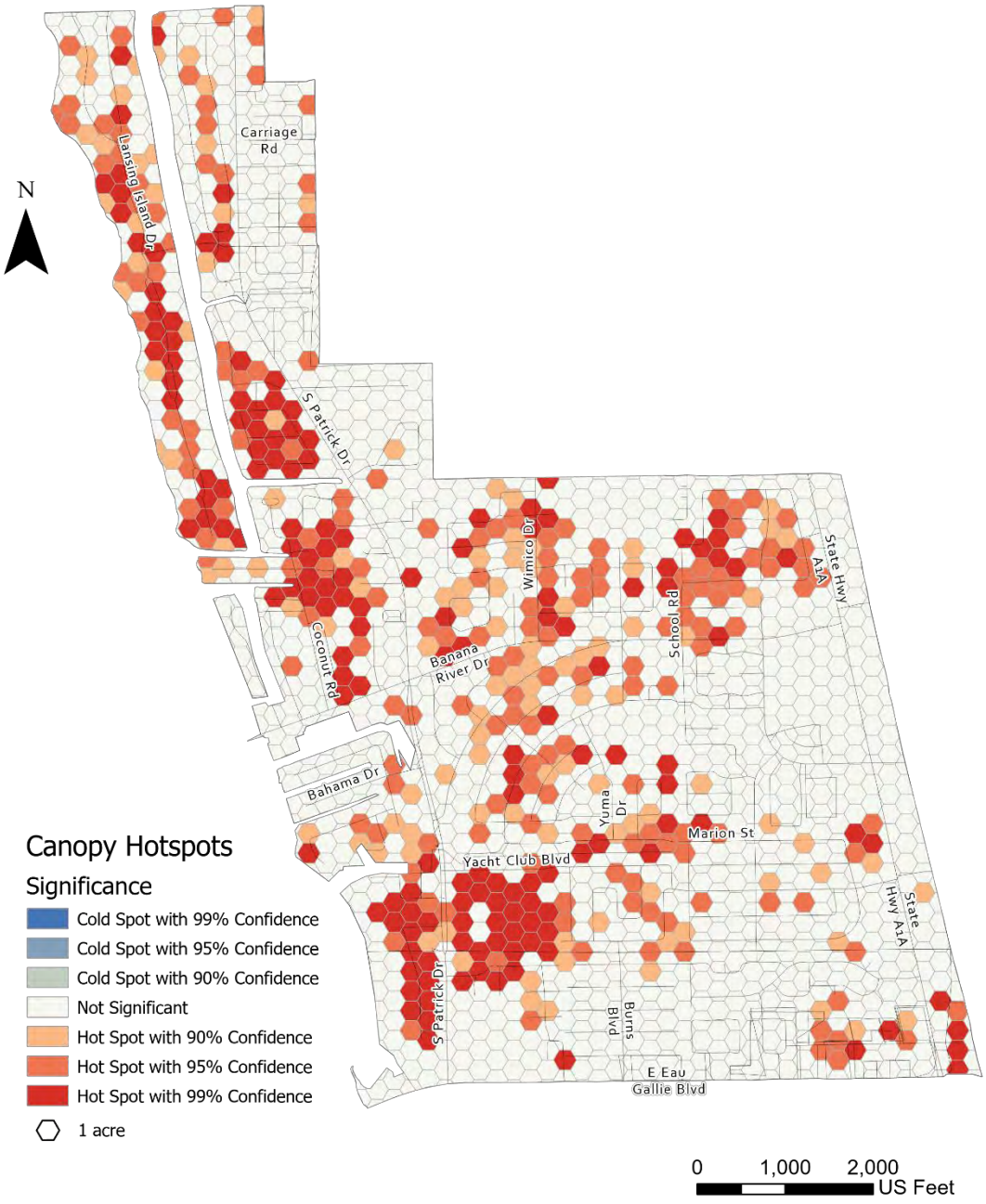
Potential Planting Sites (PPS)



2023

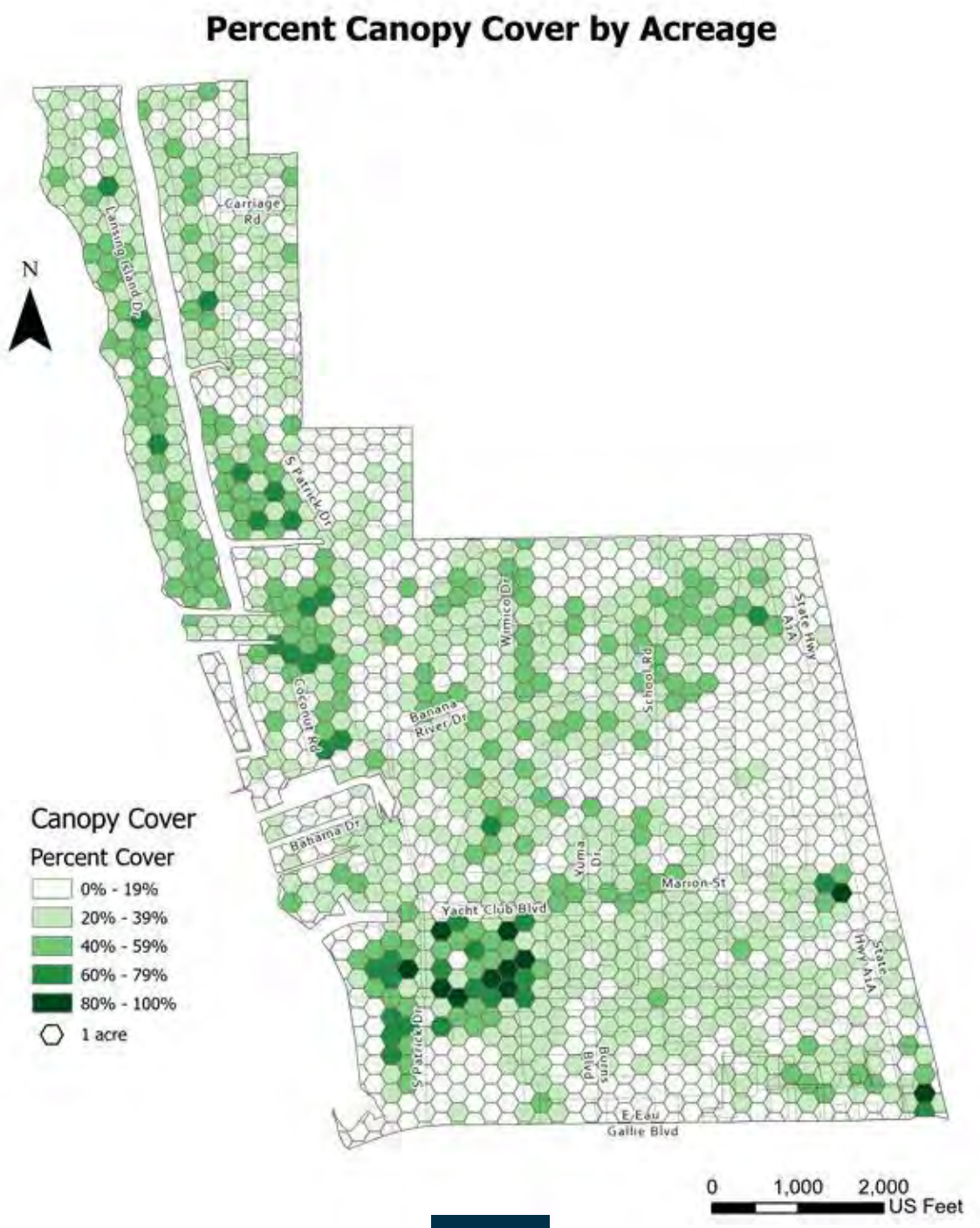
This map identifies both broad areas and specific locations suitable for new tree planting. Potential Planting Areas (PPAs) are City-controlled lands that are free of structures and not currently used for other purposes, such as athletic fields or golf courses. Potential Planting Sites are individual locations within these PPAs where sufficient space exists to successfully establish new trees.

Significant Canopy Cover by Acre



2023

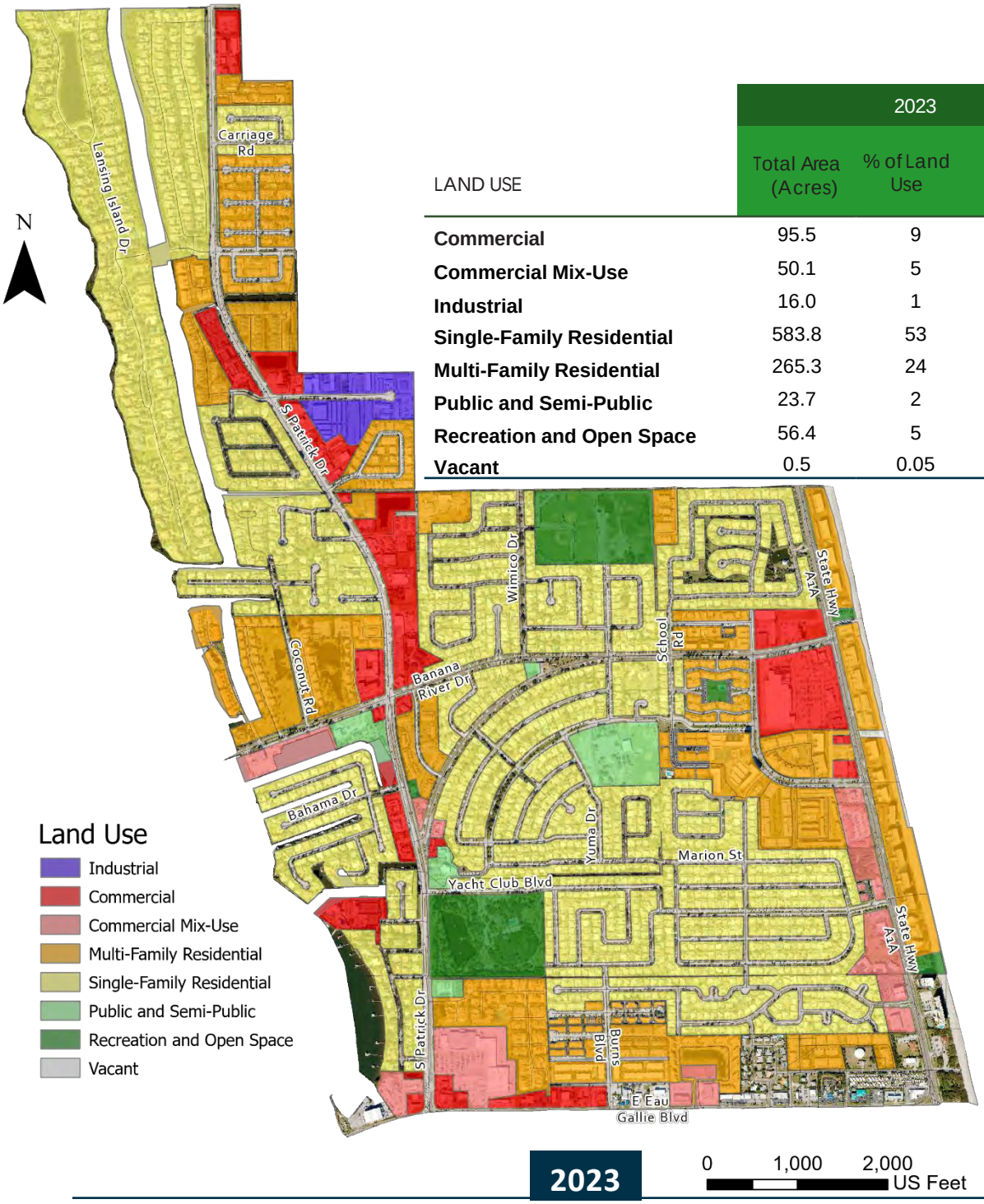
This tree canopy hotspot map highlights areas of relatively higher and lower tree canopy density across the city using a hexagonal grid. Warmer colors (orange to red) indicate canopy "hotspots," where tree cover is more concentrated, while lighter colors show areas with lower canopy coverage. The hexagon-based approach provides a consistent spatial unit for comparing canopy patterns and helps reveal clusters of strong canopy as well as gaps where trees are sparse. Identifying these hotspots and gaps supports targeted planning by showing where existing canopy should be protected and where new tree planting efforts could most effectively increase overall canopy coverage and associated benefits.



2023

This map illustrates percent tree canopy cover summarized by acre across the City using a hexagonal grid. Each hexagon represents approximately one acre, and the color gradient indicates the proportion of that acre covered by tree canopy—lighter shades represent lower canopy cover, while darker green shades indicate higher canopy density. The pattern shows that canopy cover is not evenly distributed: higher concentrations appear clustered in certain areas, while other sections have sparse or minimal tree cover. Using hexagons rather than traditional boundaries helps reduce visual bias from parcel size and provides a consistent, easy-to-compare view of canopy distribution across the landscape. Overall, the map highlights where tree canopy is most abundant and where opportunities for canopy expansion may exist.

Land Use Canopy Cover



LAND USE	2023 Total Area (Acres)	% of Land Use	Canopy (Acres)	% Canopy Coverage
Commercial	95.5	9	13.86	15
Commercial Mix-Use	50.1	5	5.36	11
Industrial	16.0	1	0.67	4
Single-Family Residential	583.8	53	194.44	33
Multi-Family Residential	265.3	24	55.44	21
Public and Semi-Public	23.7	2	3.96	17
Recreation and Open Space	56.4	5	20.42	36
Vacant	0.5	0.05	0.26	49

As summarized in the Canopy Cover by Land Use table, several land use categories offer meaningful opportunities to increase tree canopy. While Recreation and Open Space has one of the highest percentage of existing canopy, it represents only about 5% of the City's total land use area, and its canopy coverage is only slightly greater than that of Single-Family Residential areas. Single-Family Residential accounts for approximately 53% of the City and currently has tree canopy covering about one-third of its area, indicating significant potential for additional planting. A similar trend is seen in Multi-Family Residential areas, which comprise nearly one-quarter of the City's land area and have roughly 21% canopy coverage.

Recommendations

To improve livability in the City of Indian Harbour Beach and deliver long-term energy efficiency and climate benefits, the following actions are recommended to expand live tree canopy while addressing the City's coastal setting and community needs.

- Leverage the findings of this Urban Tree Canopy Assessment to guide both private and public landowners in the effective establishment, care, and management of the City's urban forest, encompassing trees on public and private properties.
- Apply for grant funding to support tree planting initiatives. Through the U.S. Forest Service Urban and Community Forestry Matching Grant Program, funding is available to help organizations develop or enhance urban and community forestry programs. Grants are typically awarded on a 50/50 matching basis (50% federal, 50% applicant) and are open to local governments, educational institutions, Native American tribal governments, and legally organized nonprofit organizations. Eligible categories include Public Tree Canopy Improvement (Tree Planting).
  - More information is available at https://www.nj.gov/dep/parksandforests/forest/urbanandcommunity/grants.html
- Proactively plant new trees in City-managed rights-of-way and on City property. Priority planting locations can be identified using vacant planting sites in the ArborPro software and the Potential Planting Sites (PPS) identified in this Assessment.
- Develop a comprehensive public outreach program that includes:
  - An enhanced City webpage to share assessment results and promote tree planting and proper tree care
  - Community events that provide education and resources, including tree giveaways and assistance with tree planting; Appendix I lists recommended tree species known to thrive in the City of Indian Harbour Beach
  - Access to City urban forestry staff to answer questions and provide educational guidance
  - Proactive public engagement through participation in community events and local outreach activities
- Update the Urban Tree Canopy Assessment every five years to track progress and recalibrate long-term canopy goals. Evaluating changes over time provides valuable insight into the effectiveness of the City's urban forest management practices and outreach efforts that encourage tree planting and maintenance on private property.

Appendix I: Recommended Species

The following tree species are known to live and thrive within the City and can contribute to increased live tree canopy within developed areas.

Common Name	Botanical Name	Comments
Areca Palm	*Dypsis lutescens*	
Bald Cypress	*Taxodium distichum*	
Bismarck Palm	*Bismarckia nobilis*	
Canary Island Date Palm	*Phoenix canariensis*	
Christmas Palm	*Adonidia merrillii*	
East Palatka Holly	*Ilex x attenuata 'East Palatka'*	
Florida Elm	*Ulmus americana*	
Florida Maple	*Acer saccharum 'floridanum'*	
Flowering Dogwood	*Cornus florida*	
Foxtail Palm	*Wodyetia bifurcata*	
Gumbo Limbo	*Bursera simaruba*	
Laurel Oak	*Quercus laurifolia*	
Peregrina	*Jatropha integerrima*	
Queen Palm	*Syagrus romanzoffiana*	
Sand Pine	*Pinus clausa*	
Shumard Oak	*Quercus shumardii*	
Southern Live Oak	*Quercus virginiana*	
Southern Magnolia	*Magnolia grandiflora*	
Southern Slash Pine	*Pinus elliottii*	
Sparkleberry	*Vaccinium arboreum*	
Spindle Palm	*Hyophorbe verschaffeltii*	

Appendix II: Confusion Matrix

ClassValue	C_1	C_2	C_3	C_4	C_5	C_6	Total	U_Accuracy	Kappa
C_1	77	8	1	0	1	1	88	0.88	0
C_2	1	62	4	1	0	0	68	0.91	0
C_3	0	3	5	0	0	0	8	0.63	0
C_4	0	0	0	9	0	0	9	1	0
C_5	0	1	0	0	45	4	50	0.90	0
C_6	0	0	1	0	6	70	77	0.91	0
Total	78	74	11	10	52	75	300	0	0
P_Accuracy	0.99	0.84	0.45	0.9	0.87	0.93	0	0.89	0
Kappa	0	0	0	0	0	0	0	0	0.86

To evaluate the accuracy of the classified image, a comparison was conducted between the classified values and ground truth derived from the original imagery. Random sample points were generated within each land cover class and initially assigned the value of their corresponding class. These points were then overlaid on the original imagery to verify their accuracy.

If a point's assigned class matched the ground truth, its value remained unchanged; if it did not match, the class value was updated to reflect the correct ground-truth classification. The results from this comparison were used to calculate accuracy statistics via a confusion matrix, as shown in the tables above.

The *ClassValue* column represents the land cover classes within the classified image: C_1: Buildings, C_2: Other Pavement, C_3: Bare Soil, C_4: Water, C_5: Vegetative Cover, and C_6: Tree Canopy. For this analysis, the tree canopy class was of particular interest.

Tree canopy class achieved an accuracy over 91%. This high value indicates strong confidence that areas classified as tree canopy accurately represent actual canopy cover on the ground. Therefore, the results of this analysis provide a reliable representation of land use and land cover in Indian Harbour Beach.

Tree Preservation Board Meeting

City of Indian Harbour Beach, Florida

Wednesday, January 21, 2025

AGENDA ITEM

Algonquin Sports Complex – Planting Suggestions

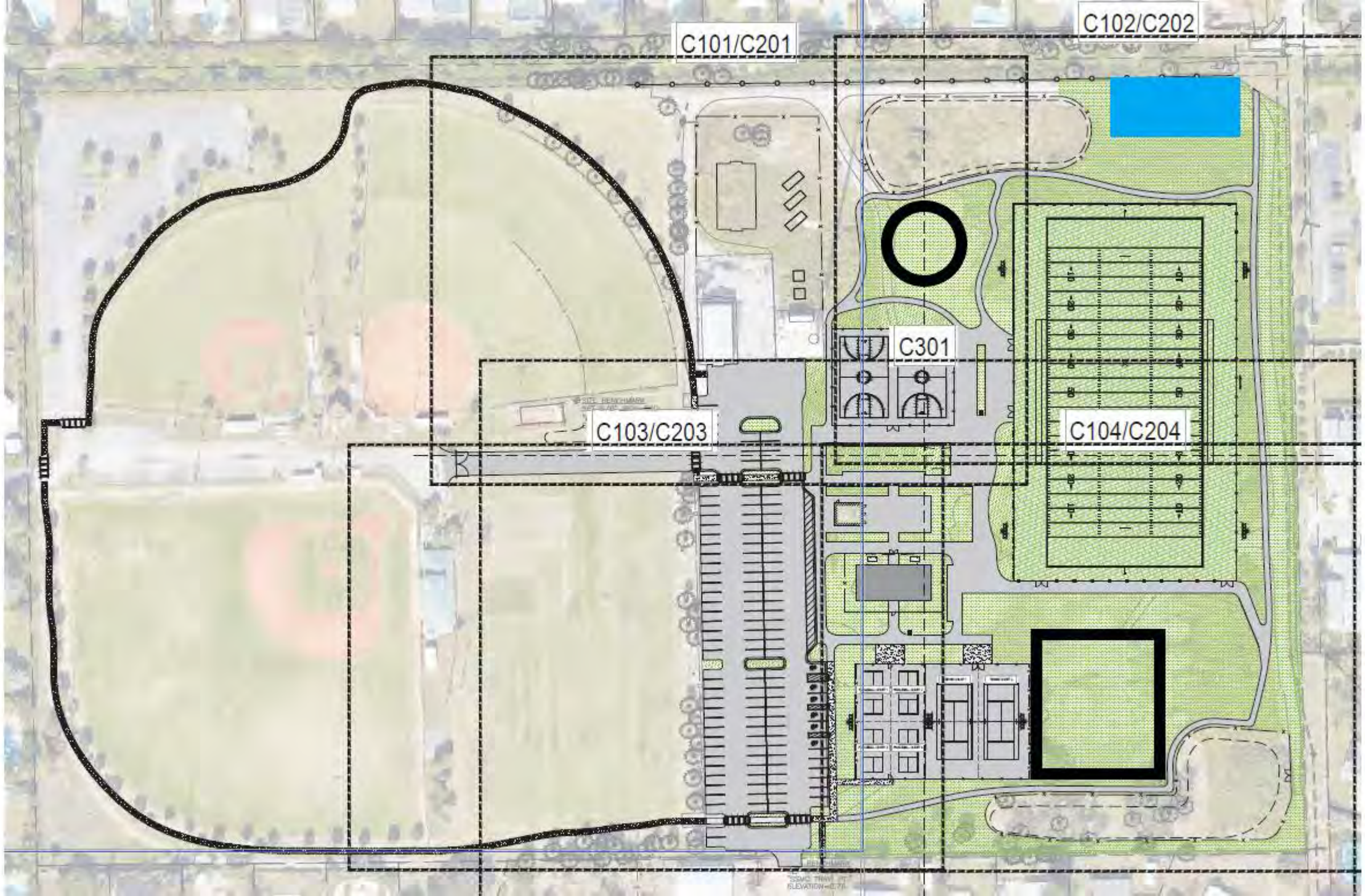
Attachments: ASC Planting Suggestion Map

Staff Recommendation:
Develop a recommended tree list alongside City staff for the outlined areas of the Algonquin Sports Complex by the middle of March.

Background Information:
City leadership has requested that the Tree Preservation Board discuss their collective ideas with Todd and Quincy regarding the interior plantings and vegetative parameter buffer, while understanding that the opinions of the adjacent homeowners will weigh heavily on the decision. The opinion of the Tree Preservation Board will be taken into strong consideration and would allow staff to have Tree Preservation Board approved recommendations before meeting with the homeowners.

Please note:

- The blue rectangle is reserved for a future baffle box to treat stormwater runoff into the Indian River Lagoon
- The black circle is reserved for a possible pavilion in the future
- The black square is reserved for possible future additional tennis courts
- The size and locations of the retention ponds has shifted slightly from this map


C101/C201
C102/C202
C301
C103/C203
C104/C204