

MAPLE LEAF 2023-2027 TREE REPLACEMENT PLAN

FOLLOWING HURRICANE IAN

Maple Leaf
Natural Resources Committee Report
September 2023

“MLG&CC PROUD RECIPIENT OF TWO AUDUBON GREEN NEIGHBORHOOD AWARDS

Importance of Trees

The State of Florida estimates urban trees contribute \$6.4 billion to the realty value of communities. Trees provide important environmental benefit such as carbon sequestration, air purification, flood mitigation, climate moderation, oxygen production, wind relief, soil preservation, shade, and wildlife habitat.

Overview

The NRC 2018 Maple Leaf tree census (*NRC, 2018*) counted eight thousand seven hundred and twenty-seven trees. Of these, 7668 trees were in the park domain and 1059 were on the golf course. The park had 6063 palms, 1257 deciduous/evergreen/conifer trees and 348 fruit trees. The golf course had 514 deciduous/evergreen/conifer trees and 545 palms. We identified 41 different tree types, 32 types of palms and 21 varieties of fruit tree.

The golf course had 205 Slash Pine, 107 Oak (mostly Live Oaks), 44 Cypress, 22 Tallow, 22 Black Olive, 19 Myrtle (Crepe, Wax & Salt), 17 Bottlebrush, 14 Holly and 10 Green Buttonwoods. There were 431 Cabbage Palms, 50 Saw Palmettoes, 30 Queen Palms and 18 Washingtonian Palms.

Following hurricane Ian on September 28, 2022, NRC assessed a loss of about 1100 trees. The number of lost palm trees was arrived at using the difference in pruning data, with 3800 palms trimmed in 2021 compared to 3100 palms in October 2023, yielding a net loss of 700 palms (a significant portion belonging to homeowners). A post storm count recorded another 132 trees lost in 17 green spaces, 65 trees lost on the golf course, an estimate of 70 trees lost in 11 canopy zones, and another 20-30 trees missing in habitat areas and common grounds. The remaining tree loss (200) was incurred by homeowners. This may be an underestimate, as many fruit trees were difficult to quantify. Eleven hundred trees represent 12.6% of our tree inventory, a loss which appears typical with published hurricane data.

The projected replacement value of the pre-Ian Maple Leaf tree inventory was calculated at about nine million dollars (*≈ 4% of MLG&CC realty value*). The replacement dollar loss due to IAN was determined to be around \$1.2 million. These amounts were based on the values estimated for different tree sizes; >65 feet (\$3500); >35 feet (\$2000); >15 feet (\$1000); <15 feet (\$500), mature palm (\$600) and mature fruit tree (\$150).

Tree Replacement Funding

The Corporation established a Maple Leaf Tree Fund (Table 1) to track resident and group donations for tree replacement. A special mention to the Flea Market for their contribution of over \$11,000. In addition, the Garden Club deposited its year 2023 contribution of \$6000 into the Tree Fund account.

Table 1. Summary of Donations to Maple Leaf Tree Fund

Contributor	Donation
Anonymous (multiple donors)	\$3090
F. Messina	\$515
Rounders	\$500
Bingo	\$300
Flea Market	\$11056
Pickleball	\$300
January Hop	\$1,200
Mixed Golf League	\$500
Nipigon Block Party	\$222
Spring Fling	\$1200
Party-in-the-Park	\$1,217
Mardi Gras	\$1,400
ML Squares/ML Keyboard	\$450
Yoga Club	\$400
Duplicate Bridge	\$500
Storm Stoppers	\$550
History Book	\$1900
Tennis Club	\$2500
Garden Club	\$6000
Weights	\$280
Total Contributions April 30, 2023	\$34080

Based on donations and realistic budget inputs, the plan proposes a five-year horizon with a cost of \$130,000, which excludes personal homeowner expenditures. Around 250-300 trees are expected to be replaced during the project at a rate of 60-65/year. The rate is based on the capacity of Golf and Grounds to plant, water and maintain that number of trees. Trees require weekly

watering during the dry season for one year and biweekly watering in the second year.

The replacement cost is based on supplier prices for trees of ten-to-twelve-foot height.

For 2023 the proposal calls for planting 63 trees (Table 3) at a cost of \approx \$30,000 to be covered by the “Tree Fund”. The remaining \$100,000 is anticipated to be expensed by a Garden Club motion to members seeking approval for \$4,000/year over the remaining 2024-2027 period in combination with Golf and Grounds budgeting \$20,000/year over the same period. The Tree Fund is anticipated to have residual funding of \$4000-\$6000 going forward.

NRC Involvement

At the NRC January 2023 meeting the Board liaison (Ila Stoffel) recommended NRC prepare a tree replanting plan and coordinate the project. This made sense since NRC membership includes representation from Maple Leaf BoD, Golf Course and Grounds, Garden Club, Flea Market, The Leaf, Lawn Bowling, Fire Club (*presently vacant*) and residents with specific skill sets suited to this project. Also, any tree replacement strategy needs to consider the park’s natural settings, the realty value of green spaces and our Audubon International membership commitments, factors already dealt with under NRCs’ mandate.

The park’s environmental zones were previously defined by NRC. They consist of high and mid-sized tree canopies for bird nesting, mixed tree and shrub combinations for wildlife habitat or green spaces and vegetated shorelines for wading birds and reptiles. Without ecological corridors resident homes become the source of food and lodging for many of our wildlife neighbors. Green spaces are important settings for neighborhood activities and picnics. Habitat areas are located on the golf course and provide wildlife shelter away from homes.

The Committee reviewed data and input from published materials, arborists, University of Florida consultants, growers, and homeowners. The plan researched tree types, soil requirements, zone 10 suitability, hurricane resistance, potential allergies, availability, and homeowner acceptance. In addition, nursery trees grown in other zones have a poor survival rate in southern Florida. Table 2 provides a list of recommended trees based on this research.

Table 2. Recommended Tree Replacements.

Large Tree	Mid-Size Tree	Bush	Palms	Ground Cover
Slash Pine	Black Olive	Holly	Royal	Saw Palmetto
Eastern Red Cedar	Tabebuia	Bottlebrush	Date	Bougainvillea
Jacaranda	Hong Kong Orchid	Magnolia	Fox Tail	Elephant Ear
Red Maple	Mahogany	Wax Myrtle	Bismarck	Aboricola
Live Oak	Viburnum	Firebush	Pygmy	Ferns
Laurel Oak	Royal Poinciana		Cabbage	Jasmine
Green Buttonwood				Mimosa

Tree Replacement Assessment and Proposal

NRC members (*Co-chair, Garden Club and Golf and Grounds*) conducted several surveys to assess tree loss and tree replacement. The results are tabulated in Tables 4-8, with the recommended tree replacement data. No specific area or timing is given, as many of these factors will depend upon future supply, funding, and weather conditions. It should be noted that the Garden Club had already been funding tree rejuvenation in Green Spaces 1-11 since 2013 at a cost of \$15,000.

Maple Leaf Environmental Corridors and Replanting

The environs at Maple Leaf had previously been defined by NRC. These areas comprise 17 Green spaces (Figure 1), 11 Canopy zones (Figure 2), 8 Habitat areas (Figure 3) and the 12 ponds (*not discussed here*). Replanting Green Spaces 1-11 will be overseen (*and funded*) by the Garden Club in addition to 35 parkettes under the club's control. Replanting Green Spaces 12-17 will be overseen by NRC. All Habitat areas are managed by Golf and Grounds as are the Canopy zones. Tree procurement, replacement and watering will be performed by Golf and Grounds. A copy of the Garden Club March 2023, meeting report on tree replacement is attached as Appendix 1 for reference.

References:

NRC 2018. Maple Leaf Tree Census Report, NRC, February 2018.
<https://mapleleafgcc.net/beautification-committee>

Table 3. Projected tree replacements in 2023.

Tree Type	# Needed	Cost	Area Planted
Royal Palm	2		#1 Tee Box
Foxtail Palm	15		Hole 2,7 and 10, GS #10, Parkette 70-71
Crape Myrtle	1		GS #10
Hong Kong Orchid	1		GS #10
Yellow Tabebuia	1		Parkette 70-71
Royal Poinciana	6		Hole 18, GS#11
Yellow Cassia	1		Hole 9 Memorial Tree
Magnolia	2		Hole 13, Memorial Park
Black Olive	5		GS #10,11
Bottle Brush	2		Hole 4,5
Cabbage Palm	3		Hole 4,13,18
Orange Geiger	1		GS #10
Slash Pine	5		Canopy area 1, 5 pine on SW corner near bridge.
Slash Pine	8		Canopy area 2, 5 pine around saw palmetto area
Cabbage Palm	2		4 pine in clump with 2 cabbage palms NW corner
Laurel Oak	1		Canopy area 2, NE side
Red Maple	2		Canopy area 5
Slash Pine	4		Canopy area 5
Enid's house			remove stump, FPL box?
Shade tree (black olive)	1		Canopy area 1, NE side near horseshoe pit
Number of trees	63		



Figure 1. Tree Replacement Green Spaces 2023-2027

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Figure 2. Tree Replacement Canopy Areas 2023-2027

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Figure 3. Tree Replacement Habitat Areas 2023-2027

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Table 4. Tree Replacement Assessment Green Spaces 1-11.

	PRESENT	LOST	NEEDED	REPLACEMENTS	
AREA 1: Scotia	10	5	8	2 Pindo Palms, 2 Tabebuia, 2 Black Olive, 2 Maple	
			2	2 Royal palms (memorial trees)	done
AREA 2: Sherbrooke	7	7	8	3 Foxtail Palms, 1 Oak, 1 Maple, 1 Hong Kong Orchid, 2 Black Olive.	
AREA 3: Iroquois	11	3	3	1 Maple, 1 Oak, 1 Royal Poinciana	
AREA 4: King	28	10	8	1 Double Pygmy, 1 Crape Myrtle, 2 Sea Grape, 1 Oak, 1 Maple, 2 Tabebuia	
AREA 5: Sumac (north)	2	1	3	1 Royal Poinciana, 1 Pigeon Plum, 1 Shady Lady	
AREA 6: Rampart Corner (NE)	26	5	6	3 Hollies, 1 Oak, 2 Red Maples	
AREA 7: Victoria	6	1	3	3 Foxtail Palms	
AREA 8; Nanaimo Cres	9	2	3	2 Magnolia, 1 Royal Poinciana	
AREA 9: Trillium	3	1	2	2 Bottle Brush	
AREA 10: York Trail	8	5	8	1 Foxtail Palm, 1 Crape Myrtle, 1 Hong Kong Orchid, 4 Black Olive, 1 Orange Geiger	
Area 11: Nanaimo Circle	14	1	2	1 Black Olive, 1 Royal Poinciana	
Parkette 70- 71	3	2	2	1 Foxtail Palm, 1 Tabebuia	
		43	58		

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Table 5. Tree Replacement Assessment Green Spaces 12-17

	PRESENT	LOST	NEEDED	REPLACEMENTS
AREA 12: Sumac/Selkirk	16	8	6	1 Live Oak, 1 Maple, 1 Black Olive, 3 Date Palms may have a seedling Seagrape
AREA 13: Cabot Trail	5	4	3	1 Maple, 1 Oak 1 Black Olive
AREA 14: Nipigon (East)	11	6	4	Red cedars Poinciana Black Olive Hollies
AREA 15: Nipigon (West)	14	7	8	Oak, Poinciana, Maples Pines, Buttonwoods
AREA 16: York/Queensway	5	6	8	3 Maple, Oak, Buttonwood, 3 Black Olive
AREA 17: Queensway 981	12	8	8	Cabbage Palm, Poinciana, 2 Black Olive, 3 Maples, Habitat Materials
		39	37	

Table 6. Tree Replacement Assessment Canopy Areas 1-8

Area	Description	REPLACEMENTS
1	Humpback bridge-east	Cenotaph area, 5 slash pines,
2	Humpback bridge-west	3-4 slash pine
3	Rampart north	Enid Lunt canopy area OK
4	Rampart NE	Enid Lunt canopy area, Garden club green space
5	Queensway north	3 pines 3 red maples
6	Maintenance berm	64 slash pine okay
7	Fairway 12	may need 3-4 filler trees pending survival rate
8	Fairway 14	northside of creek 8-10 pines, 1 oak
9	Fairway 17 NE corner	5-6 slash pines
10	Fairway 17 west side	4-5 slash pines
11	Fairway 15-16	middle separator 2-3 oaks and 2-3 maples.
	50 TREES	

Table 7. Tree Replacement Assessment for Golf Course.

HOLE #	
1	2 Royal palms at tee box
2	1 Oak back right of tee, 3 foxtails left side right of cart path
3	N/A
4	1 Hong Kong Orchid right side, 1 Cabbage palm and 1 bottle brush
5	2 Royal Palms behind tee, 1 Bottle Brush right side rough, 2 magnolias left side 2 Shady Lady's by green
6	
7	2 queen palms behind green
8	3 Oak trees right rough
9	1 Yellow Cassia (memorial tree)
10	5 to 10 palm trees right of tees, 4 queen palms right side along cart path
11	2 Shady Lady's right rough (memorial trees)
12	3 Shady Lady 2 by tee box 1 in bed near cart path, 1 Oak in bed between 12 and 13
13	1 Cabbage palm behind green, 1 Magnolia (memorial tree)
14	2 Bottle Brush by tee box
15	5 Cabbage palms by black tee, Bottle brush right of green
16	N/A
17	5 to 10 cabbage palms
18	5 Royal Poinciana right rough, 1 Cabbage palm behind green.
	65 trees

Table 8. Tree Replacement Assessment for Habitat Areas

Area	Description	Actions
1	Fairway 5-6, separator	Rejuvenation of existing vegetation
2	Fairway 7-8	Rookery. Maintain as is.
3	hole 8 and westside hole 10	needs trees and ground cover, increase size.
4	SW side of berm	has significant ground cover and canopy pines
5	NW side of berm	buttonwood grove, and shrubs. Southeast corner
6	NE side berm	damaged during IAN. Tree additions in 2026-28
7	SE side of berm (new)	2023 will be sodded. 2027-28 will add ground cover gardens
8	Rear green 3	nesting area, add trees on NE golf course green space
	15-30 trees	

APPENDIX 1.

Maple Leaf Garden Club Tree Regeneration Plan

March 2023 Report to membership.

A five-year plan will be required in order to achieve our goal of 60 trees to replenish the Green Spaces under the Garden Club's care. All eleven Green Spaces and one Parkette (71-72) were affected by Hurricane Ian, but in different ways and losses sustained varied from one Green Space to the next. Therefore, more trees will be directed and planted in certain areas than others.

At least three inspections of G.S. has been done to ascertain damage. A compilation list was created showing trees present prior to Ian, post Ian, trees needed and varieties best suited for our southern region. Much thought has gone in the process of choosing trees...

Our regeneration plan is research based on the Florida Friendly Landscaping principles which are to reduce impact on the environment, careful use of water, fertilizer, and pesticides; putting in plants that are preventing erosion and creating wildlife habitats while also filtering the air and embellishing our environment. Based on a list of trees, plants, bushes best suited for our Florida zone and in keeping in mind which varieties were less severely affected by wind and runoff, a number of trees made our short list.

This list has been researched and recommended by the University of Florida Extension office here in Port Charlotte, through reports and in person when a group of well qualified specialists came for a tour of Maple Leaf. Present, on February 2, 2023, were Sara Weber, Ralph Mitchel, Holly Bates and members of the G. C., the N.R.C. and our Grounds Superintendent, Chris Spence.

