Crescent Park and Edgemere Park Stewardship Outline Plans April 2022

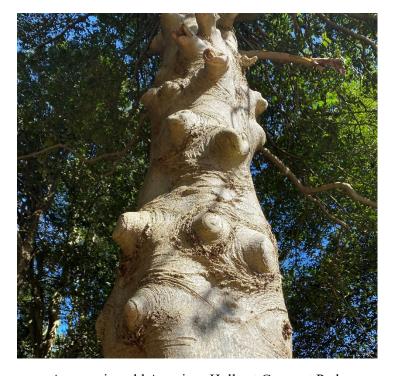
Prepared for Sea Girt Conservancy

Prepared by

Michael Van Clef, Program Director

FoHVOS New Jersey Invasive Species Strike Team





An amazing old American Holly at Crescent Park

Brief Narrative

Mike Matthews, Michael Meixsell, and Mike Van Clef visited Crescent Park and Edgemere Park on 4 April 2022. Previous activities and restoration plans were discussed, along with a general discussion of plant communities and species. This brief report is intended to guide overall stewardship of each park with specific attention on restoration projects to be completed in Spring 2022. Maps are provided for each park including 1930 and 2015 aerial photography.

Tables summarizing collected observations:

The following is a summary with notes on interpreting provided tables.

- Table 1 Site Descriptions
 - o Broad descriptions for each park
- Table 2 Invasive Species List
 - o There is a single table with presence/absence at each park. Each species is provided with Relative Threat Level (High, Moderate, Low), Stewardship Goal (1 = Eradicate all individuals, 2 = Control through long-term program, 3 = Do not treat unless resources allow), and a Stewardship Note indicating infestation levels and treatment suggestions.
- Table 3 Crescent Park Stewardship Recommendations
 - The eradication of emerging invasive species is considered the highest priority goal, followed by invasive species control within restoration areas. Four additional invasive species control goals are also provided. The restoration goal includes general guidance on plant costs by type.
 - The Conservancy should consider installing perimeter deer exclosure fencing to assure long-term recovery of forest health. This would be initially costly and require regular monitoring and maintenance but is the only practical way to allow natural tree regeneration and development of forest understory shrubs and wildflowers.
- Table 4 Edgemere Park Stewardship Recommendations
 - Invasive species control within restoration areas is considered the highest priority goal because no emerging species were detected. One additional invasive species control goal is also provided. The restoration goal includes general guidance on plant costs by type.
- Table 5 Potential Restoration Species
 - This table includes potential restoration species that may be used over time. Specific species nursery availability and pricing for spring 2022 is provided. Availability is quite reduced, primarily due to COVID-19 impacts, but also because of increased customer demand for native plants. It is hoped that availability will increase in 2023 and beyond.
 - Strawman' quantities were included, but this can be refined as necessary before orders are placed.

- Crescent Park Restoration Areas #1 and #2
 - Each area is 0.15 acres for a total of 0.3 acres or 13,000 square feet
 - If using wildflower plugs, planting density should be 1 plant per square foot or 13,000 plants.
 - This is defrayed by suggesting the purchase of seeds of Blackeyed Susan and Purpletop Grass that can be hand sown to form a more uniform meadow cover in the near term.
 - Wildflower plugs should be planted as 'randomly' as possible to provide a naturalistic appearance.
 - TIP: Provide 5 plugs of a single species to each volunteer and ask them to plant them in a group with 1 foot spacing between plants and a minimum of 3 feet between 5-plant groupings. Volunteers can return for another group of 5 plugs and repeat. This will lead to a more naturalistic planting pattern. In my experience, too much planning leads to regular plant placement that appears more garden-like.
 - Alternate Option: Purchase a complete seed mix. This can be sown by hand for fall planting or a contractor with a seed drill can apply in spring.
 - Woody plant options are provided in Table 4.
 - O Total of 100 trees are listed including 20 each of Blackjack Oak, Black Tupelo, Gray Birch, Persimmon, and Scarlet Oak. This would lead to a high planting density, especially if all are planted in Restoration Area #1. Reduced trees or replacement of some trees with shrubs may be considered (but many shrubs require protective cages). This level of woody plantings would preclude the "alternate option" of using a seed mix as meadow cover would be relatively short-lived due to shading.
- Edgemere Park Restoration Area
 - 0.3 acres or 13,000 square feet
 - If using wildflower plugs, planting density should be 1 plant per square foot or 13,000 plants.
 - This is defrayed by suggesting the purchase of seeds of Blackeyed Susan and Purpletop Grass that can be hand sown to form a more uniform meadow cover in the near term.
 - See note above on planting 'pattern' strategy
 - Alternate Option: Purchase a complete seed mix. This can be sown by hand for fall planting or a contractor with a seed drill can apply in spring.
 - Woody plant options are provided in Table 4
 - Includes 10 Sweetbay Magnolia

Sea Girt Conservancy Table 1. Site Descriptions

Site Name	Broad Description	Native Species Observed
	Rare American Holly coastal maritime forest; Heavy	
	infestations of English Ivy throughout the area, but some	
	areas are mostly free of infesttion. Deep shade and excessive	
	deer browsing have led to a virtually empty understory (i.e.,	
	regenerating trees - except for small amounts of Sassafras,	
	mature shrubs, and wildflowers). Emerging invasive species	
	include Wintercreeper and Japanese Holly. Two heavily	
	infested areas along the eastern boundary were treated in	
	2021 (Japanese Knotweed, English Ivy, and native briar	
	species) with planned restoration to occur in 2022. Generally,	
	invasive species infestations (other than English Ivy) occur in	Dominated by American Holly. Forest Stewardship
	areas shown to be disturbed areas in 1930's aerial	Plan mentions Red Oak, Black Oak, Red Maple, Wild
Crescent Park	photography.	Black Cherry, Black Gum, and Scrub Oak.
	Coastal Plain forest largely free of invasive species; Presence	
	of species such as Black Huckleberry suggest a dry, sandy	
	habitat that tends to resist invasiion; Narrow strip along	Forest (upland): Dominated by Oak species,
	Wreck Pond contains wetland species Heavily infested area	Bigtooth Aspen, Hickory species, Wild Black Cherry,
	in southern end of the Property was treated in 2021	Sassafras, Briar sp., Lowbush Blueberry, Black
	(Japanese Knotweed, English Ivy, Japanese Honeysuckle,	Huckleberry; <u>Lake edge (wetland)</u> : Red Maple, Pitch
	Multiflora Rose) with planned restoration to occur in 2022.	Pine, Highbush Blueberry, Maleberry, Swamp
	Generally, invasive species infestations occur in areas shown	Azalea, Rose Mallow, Swamp Rose, Boxelder,
Edgemere Park	to be disturbed areas in 1930's aerial photography.	goldenrod species

Note: Click for short list of maritime forest species

Note: Maritime Forest Overview Video

		Relative			Crescent Park	Edgemere Park
Common Name	Growth Form	Threat Level	Stewardship Goal	Stewardship Note		Edgeme
Asiatic Bittersweet	Vino	Uigh	2	Low to moderate occurrences at Crescent Park - large vines have been cut from trees. Many stems found within restoration area at Edgemere Park, requiring treatment to ensure restoration success - spot treatments using foliar spray or basal bark		Vos
Asiatic Bittersweet	Vine	High	2	applications recommended. Heavy infestations along roadway at Crescent Park; Treat via cut stump or basal bark application, especially those immediately adjacent to restoration areas. Few plants were observed in	res	Yes
Border Privet	Shrub	High	2	forest areas. Few plants, highly aggressive invasive species located in planned restoration areas at Crescent Park; Spot treatments using foliar spray or 'bloody glove' method required to ensure restoration	Yes	No
Chinese Bushclover	Herb	Very High	1	success. Multiple plants, highly aggressive invasive species located in planned restoration areas at Crescent Park; Spot treatments using foliar spray or 'bloody	Yes	No
Common Mugwort	Herb	Very High	1	glove' method required to ensure restoration success.	Yes	Yes
English Ivy	Vine	Very High	2	Forms extensive ground cover at Crescent Park. Treatment efforts have been initiated, but extensive additional treatments required throughout the park. Many larger vines climbing trees at Crescent Park have been cut. Species was treated in restoration areas at both parks.		Yes
Garlic Mustard	Herb	High	2	Virtually absent from forest areas, but present in small amounts in Crescent Park restoration areas. A carpet of seedlings occurs in the Edgemenere Park restoration area. Treatment ahead of planting is strongly recommended. Hand pulling may still be practical at Crescent Park, but foliar spray required at Edgemere Park.		Yes

Sea Girt Conservancy Table 2. Invasive Species List

Common Name	Growth Form	Relative Threat Level	Stewardship Goal	Stewardship Note	Crescent Park	Edgemere Park
Japanese Holly	Shrub	Moderate	1	Potential emerging invasive species, noted at one location at Crescent Park (2- 10 plants, 40.12914875, -74.03217807)	Yes	No
	Mina	11:-1	2	Most frequent in disturbed areas, especially restoration areas at both parks where treatment has been initiated. Within forest, spot treat recommended using foliar spray during late autumn to reduce non-target	V	V
Japanese Honeysuckle Japanese Knotweed	Vine	High Very High	2	impacts. Most frequent in disturbed areas, especially restoration areas at both parks. Plants also observed along RR tracks at Edgemere Park. Treatment initiated in 2021 and follow up required for 1-2 years.		Yes
Multiflora Rose	Shrub	Moderate	2	Most frequent in disturbed areas, especially restoration areas at both parks. Treatment initiated in 2021 and follow up required for 1-2 years.		Yes
Wintercreeper	Vine	Very High	1	Highly threatening emerging invasive species noted at one location at Crescent Park (2-10 plants, 40.12947187, -74.03203944). Possibly more mixed within English Ivy infestations.	Yes	

Additional species note: Norway Maple and an unconfirmed observation of Doublefile Viburnum were noted in the Forest Stewardship Plan. Small amounts of either species should be eradicated to limit future spread.

Stewardship Goal Notes:

- 1 = Eradicate all observed individuals
- 2 = Control through a long-term program
- 3 = Do not treat unless resources allow (only Very High, High or Moderate Threat species)

See Strike Team website for "Species List and Control Recommendations" and "Herbicide Use Suggestions and Mixing Table"

Sea Girt Conservancy

Table 3. Stewardship Recommendations - Crescent Park

	Relative			
Goal	Priority	Description	Volunteers	Contractors
		Eradicate Wintercreeper and Japanese Holly to avoid future damage. Small		
		amounts of Norway Maple and possibly Doublefile Viburnum were reported		
		in the Forest Stewardship Plan - both species should be eradicated as	Searching,	Herbicide
1	Very High	detected. Foliar spraying conducted by contractors is recommended.	Monitoring	treatments
		Control all invasive species within restoration areas, especially before		
		planting/seeding and during early establishment. Spot foliar treatments		Herbicide
2	Very High	conducted by contractors is recommended.	Monitoring	treatments
		Restoration plantings - See recommended planting list. Each restoration area		
		is approximately 0.15 acres or 6,500 square feet. Approximate plant material		
		unit costs (including estimated shipping costs): wildflowers and grasses		
		(plugs = \$80 per tray of 50 plants, quart pot = \$12/plant), trees and shrubs (1		
		gallon pot = \$12/plant, 2 gallon pot = \$20/plant, 3 gallon pot = \$25/plant,		
		and 7 gallon pot = \$60/plant). Trees in 7 gallon pots (ca. 6-7' trees, protected		
		from buck rubbing) and less palatable shrubs in 1 or 2 gallon pots are		
		recommended (but some species will require cages until they reach 5' tall).	Dlamtina	
3	Von High	Seed mixes should also be utilized to assure uniform cover - See	Planting,	N/A
3	Very High	recommended planting list.	Monitoring	N/A
		Control all invasive species within forestry mowed areas (i.e, old ROW and	Searching,	Herbicide
4	High	spots throughout park) to prepare for future restoration efforts.	Monitoring	treatments
·		Control English Ivy throughout the forest. Long-term effort focusing on foliar		creatification
		spray applications in late autumn / winter to mitigate potential non-target		Herbicide
5	High	impacts.	Monitoring	treatments
		p		Control -
				Herbicide
		Continue vine control efforts to remove all mature individuals throughout		treatments as
		the park. If resprouting occurs, hire contractors to apply herbicide as either		necessary to avoid
6	High	basal bark or cut stump applications.	Control - Cutting	re-growth
				-
			Monitoring, Pre-	
		Control Border Privet (concentrated along roadsides), especially areas	treatment Cutting	
		adjacent to restoration areas. Treatment could provide future restoration	to reduce	Herbicide
7	High	opportunities.	contractor costs	treatments
		Consider installation of deer exclosure fencing (7.5' woven wire fencing on		
		wooden posts) to signficantly improve forest health - it will be the only way		
		to assure tree regeneration and healthy forest wildflower populations. This		
		could be 2-5 acre areas within the forest or the entire park perimeter.		
8	Moderate	Quotes required to obtain cost estimates.	Monitoring	Fence installation

Sea Girt Conservancy Table 4. Stewardship Table - Edgemere Park

	Relative			
Goal	Priority	Description	Volunteers	Contractors
		Control all invasive species within restoration area, especially before		
		planting/seeding and during early establishment. Spot foliar treatments		Herbicide
1	Very High	conducted by contractors is recommended.	Monitoring	treatments
2	Voru Hielo	Restoration plantings - See recommended planting list. Each restoration area is approximately 0.15 acres or 6,500 square feet. Approximate plant material unit costs (including estimated shipping costs): wildflowers and grasses (plugs = \$80 per tray of 50 plants, quart pot = \$12/plant), trees and shrubs (1 gallon pot = \$12/plant, 2 gallon pot = \$20/plant, 3 gallon pot = \$25/plant, and 7 gallon pot = \$60/plant). Trees in 7 gallon pots (ca. 6-7' trees, protected from buck rubbing) and less palatable shrubs in 1 or 2 gallon pots are recommended (but some species will require cages until they reach 5' tall). Seed mixes should also be utilized to assure uniform	Planting,	N/A
2	very High	cover - See recommended planting list. Control all invasive species detected in forest areas, relatively low cover at	Monitoring	N/A
3	High	present, complete eradication of all species is possible to present future damage. Control all invasive species between trail and RR tracks (multiple species).	Searching, Monitoring	Herbicide treatments
4	Moderate	Plant visual shield between RR and trail. Species indicated in Table 4 may be utlized for this purpose. There are two native evergreen species that may be considered higher planting priority, American Holly and Eastern Red Cedar.		

Sea Girt Conservancy
Table 5. Potential Restoration Species

Common Name	Scientific Name	Growth Form	Pot Size	Unit Price	Quantity	Total Price	Nursery	Notes	Crescent Park Area #1	Crescent Park Area #2	Edgemere Park
Anise Hyssop	Agastache foeniculum	Herb	Plug	1.31	50	\$65.50	New Moon		Yes	Yes	Yes
								Can be divided between both Parks or used at a single			
Black-eyed Susan	Rudbeckia hirta	Herb	Seeds	\$31.20	1	\$31.20	Ernst Seed Supply (1 pound)	park.	Yes	Yes	Yes
Broomsedge	Andropogon virginicus	Grass	Plug	\$1.38	50	\$69.00	North Creek	June Delivery	Yes	Yes	Yes
Butterfly Milkweed	Asclepias tuberosa	Herb	Plug	1.53	50	\$76.50	New Moon	July Delivery	Yes	Yes	Yes
Common Milkweed	Asclepias syriaca	Herb	Plug	\$1.54	50	\$77.00	North Creek		Yes	Yes	Yes
Foxglove Beardtongue	Penstemon digitalis	Herb	Plug	1.31	50	\$65.50	New Moon		Yes	Yes	Yes
Heath Aster	Aster ericoides	Herb	Plug	1.31	50	\$65.50	New Moon		Yes	Yes	Yes
Hoary Mountain-mint	Pycnanthemum incanum	Herb	Plug	1.31	50	\$65.50	New Moon		Yes	Yes	Yes
Hyssop-leaved Boneset	Eupatorium hyssopifolium	Herb	Plug	1.31	50	\$65.50	New Moon		Yes	Yes	Yes
Little Bluestem	Schizachyrium scoparium	Grass	Plug	\$1.43	50	\$71.50	North Creek	June Delivery	Yes	Yes	Yes
Maryland Goldenaster	Chrysosopsis mariana	Herb	Plug	\$1.42	50	\$71.00	New Moon		Yes	Yes	Yes
								Can be divided between both Parks or used at a single			
Purpletop Grass	Tridens flavus	Grass	Seeds	\$43.20	1		Ernst Seed Supply (1 pound)	park.		Yes	_
Silverrod	Solidago bicolor	Herb	Plug	1.42	50	\$71.00	New Moon		Yes		
Sweet Goldenrod	Solidago odora	Herb	Plug	\$1.42	50	\$71.00	New Moon		Yes	Yes	Yes
Woodland Sunflower	Helianthus divaricatus	Herb	Plug	1.53	50	\$76.50	New Moon		Yes	Yes	
Yarrow	Achillea millefolium	Herb	Plug	1.31	50	\$65.50	New Moon		Yes	Yes	Yes
OPTION: Wildflower Mix	OPTION: Wildflower Mix	Herb	Seeds	\$37.47	x7x	x\$262.39x	Ernst Showy Northeast Wildflower Mix	Requires professional installation. Seven pounds per Park.	Yes	Yes	Yes

Sea Girt Conservancy
Table 5. Potential Restoration Species

Common Name	Scientific Name	Growth Form	Pot Size	Unit Price	Quantity	Total Price	Nursery	Notes	Crescent Park Area #1	Crescent Park Area #2	Edgemere Park
Bear or Scrub Oak	Quercus ilicifolia	Shrub	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	Yes	No	No
Beach Plum	Prunus maritima	Shrub	1 gallon	\$9.99	10	\$99.90	Pinelands Nursery	·	_	No	
Black Chokeberry	Photina melanocarpa	Shrub	N/A	N/A	N/A	399.90 N/A	Not Available Spring 2022	Cage	_	No	-
Highbush Blueberry	Vaccinium corymbosum	Shrub	2 gallon	\$9.99	10	\$99.90	Pinelands Nursery	Cage	_	No	
Northern Bayberry	Morella pensylvanica	Shrub	N/A	۶۶.۶۶ N/A	N/A	N/A	Not Available Spring 2022	Cage	_	No	_
Serviceberry	Amelanchier canadensis	Shrub	N/A	N/A	N/A	N/A	Not Available Spring 2022	Cago	_		_
Sweet Pepperbush	Clethra alnifolia	Shrub	N/A	N/A	N/A	N/A	Not Available Spring 2022	Cage Cage	_		-
Sweetfern	Comptonia peregrina	Shrub	N/A	N/A	N/A	N/A	Not Available Spring 2022	Cage	Yes	No	_
Virginia Rose	Rosa virginiana	Shrub	N/A	N/A	N/A	N/A	Not Available Spring 2022	Cage	_	No	_
Winged Sumac	Rhus copallina	Shrub	2 gallon	\$9.25	20	· ·	Octoraro Nursery	Cage	Yes		
Willged Julliac	Kilus copalilla	Siliub	2 gailoii	33.23	20	\$165.00	Octoraro Nursery	Cage	163	NO	INO
American Holly	llex opaca	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022		Nο	No	Yes
Black Cherry	Prunus serotina	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	Yes	No	_
Black Oak	Quercus velutina	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	_		
Blackjack Oak	Quercus marilandica	Tree	2 gallon	\$16.49	20	\$329.80	Pinelands Nursery	Cage		No	_
Black Tupelo	Nyssa sylvatica	Tree	7 gallon	\$54.99	20		Pinelands Nursery	Buck protection	_		
Eastern Red Cedar	Juniperus virginiana	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022		_		
Flowering Dogwood	Cornus florida	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	Yes		Yes
Gray Birch	Betula populifolia	Tree	3 gallon	\$19.99	20	\$399.80	Pinelands Nursery	Buck protection	Yes		_
Persimmon	Diosypros virginiana	Tree	7 gallon	\$54.99	20		Pinelands Nursery	Buck protection	Yes	No	-
Post Oak	Quercus stellata	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	Yes		_
Sassafrass	Sassafrass albidum	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	Yes		-
Scarlet Oak	Quercus coccinea	Tree	7 gallon	\$39.95	20	\$799.00	Octoraro Nursery	Buck protection	Yes		No
Southern Red Oak	Quercus falcata	Tree	N/A	N/A	N/A	N/A	Not Available Spring 2022	Buck protection	Yes	No	No
Sweetbay Magnolia	Magnolia virginiana	Tree	7 gallon	\$54.99	10	\$549.90	Pinelands Nursery	Buck protection	_	No	Yes





Sea Girt Conservancy

Crescent Park

2015 Aerial Photography

Legend

C

Crescent Park Boundary

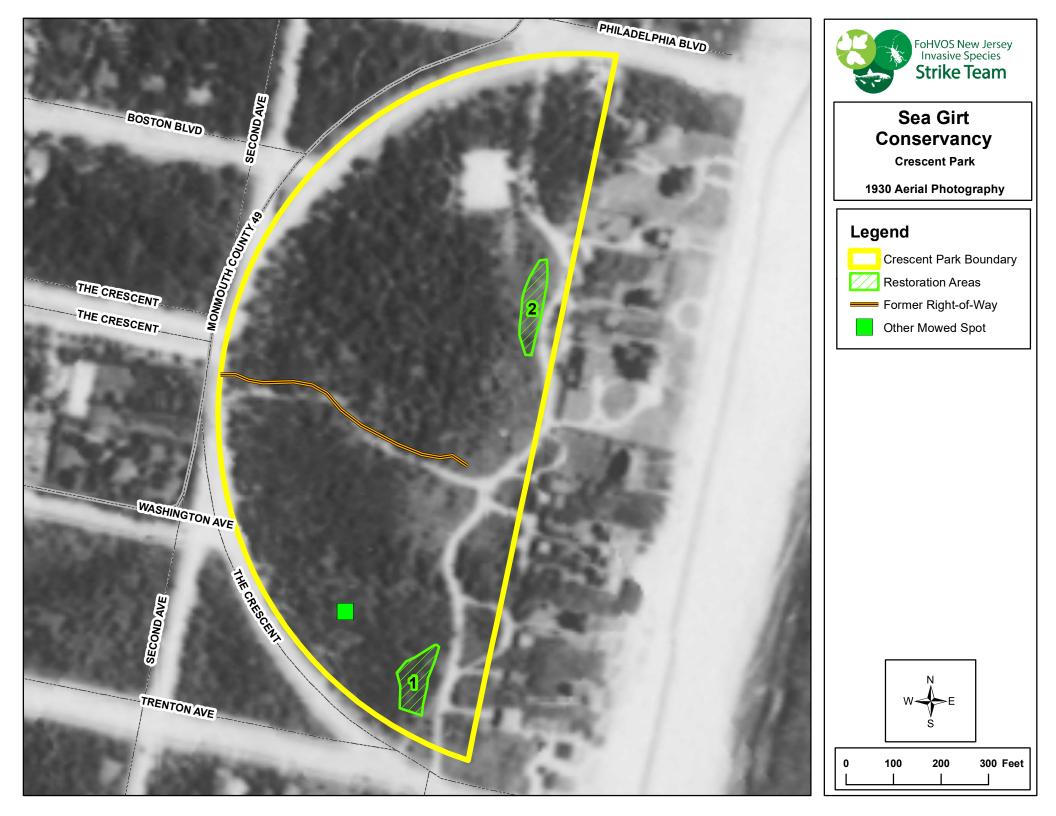
Restoration Areas

Former Right-of-Way

Other Mowed Spot



0 100 200 300 Feet







Sea Girt Conservancy

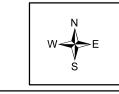
Edgemere Park

2015 Aerial Photography

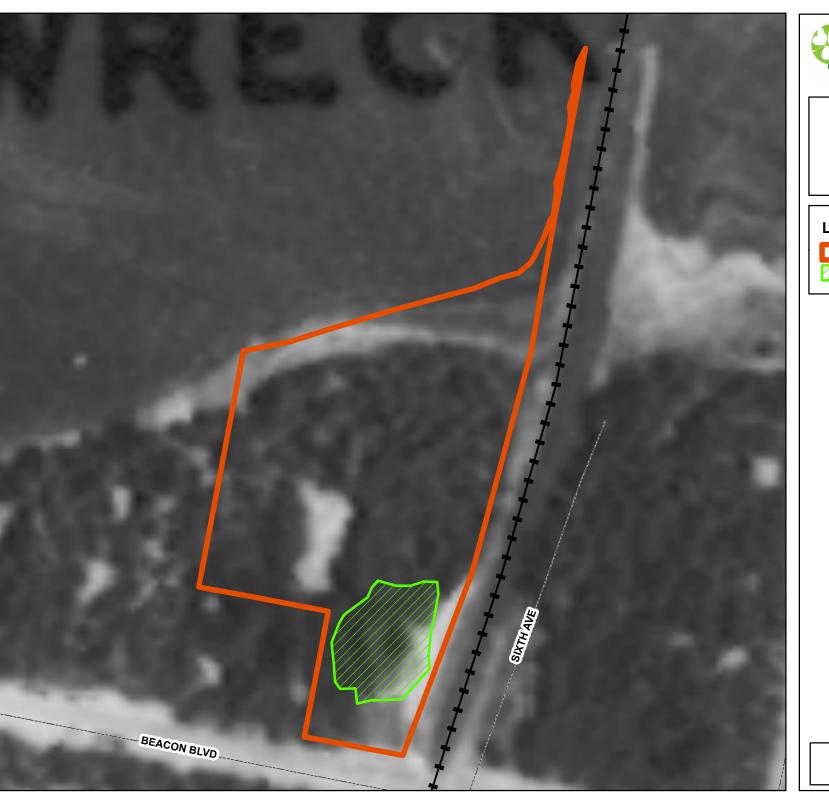
Legend

Edgemere Park Boundary

Edgemere Restoration Area



150 Feet 50 100





Sea Girt Conservancy

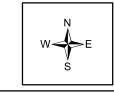
Edgemere Park

2015 Aerial Photography

Legend

Edgemere Park Boundary

Edgemere Restoration Area



50 150 Feet 100