Southampton Town Trustees

Threatened and Endangered Species Management and Protection Program

Scientific Report 2019

Threatened and Endangered Species Program Staff

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TABLE OF CONTENTS

Executive Summary

During the 2019, piping plover breeding season areas managed and protected by the Southampton Town Trustees Threatened and Endangered Species Management and Protection Program (T&E program) encompassed a total of 9 ocean sites and 16 bay sites, covering approximately 26 miles of coastline. Within these sites, 54 nesting pairs of piping plover were observed throughout the breeding season. This notes an increase of 5 nesting pairs from the previous year. Although we saw an increase in the number of nesting pairs present on our sites, we unfortunately observed 8 less plover fledges than last year. Observed fledges totaled 71 giving an overall productivity of 1.31 fledges per pair. Piping plovers began to arrive on our shorelines in mid-March to establish nesting territories. However, inclement weather coupled with some extraordinarily high tides and high predator prevalence in the late spring delayed the breeding process. With respect to aforementioned management areas, there were approximately, 182 breeding pairs of least terns fledging 81 young least terns for an overall productivity of 0.45 fledges per pair. The least terns first arrived to our shorelines in the beginning of May shortly after which they established their nesting territories. The main hindrance with respect to the reproductive success of both of these species stemmed from human interference, high tides, and predation. Additionally, a total of 108 seabeach amaranth plants were identified at the 8 ocean sites and a total of 1,345 seabeach knotweed plants were identified at 5 ocean sites and 11 bay sites.

Current Species Status

The species protected by this program include two avian species; the federally threatened and New York State (NYS) endangered piping plover (*Charadrius melodus*), and the NYS threatened least tern (*Sternula antillarum)* along with two annual coastal plants: the federally and NYS threatened seabeach amaranth (*Amaranthus pumilus*) and the NYS listed rare species of special concern seabeach knotweed (*Polygonum glaucum*).

Program Objective

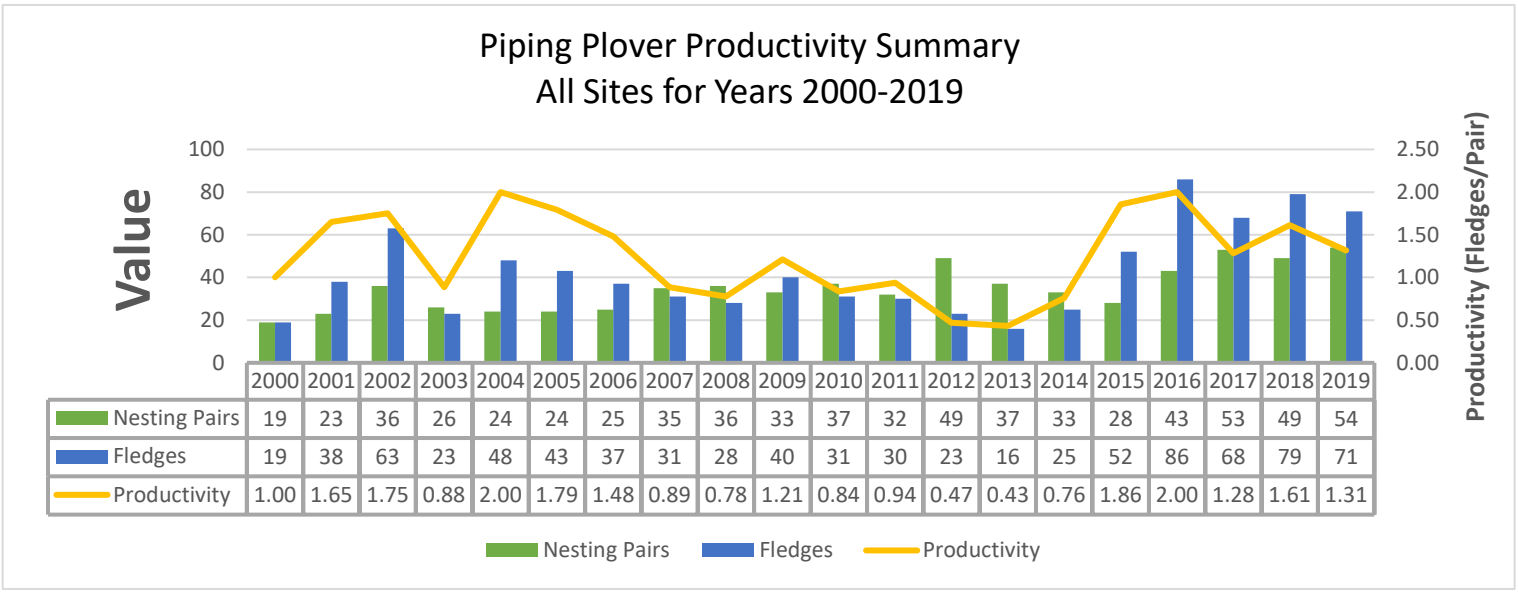
The T + E Program seeks to provide reasonable and adequate protection for the current populations of threatened and endangered flora and fauna that reside, breed and rely upon our coastal zones for their species longevity. As directed, management efforts toward increasing the annual productivity of these species by means of assessing the previous and current threats to the populations, applying the conclusions based on the assessment in the form of protective action by various methods of conservation, and through public education, so that the consequences of these threats can be effectively minimized or negated. We aim to maintain an appropriate balance between public access/recreational use of these sensitive areas provided in conjunction with the conservation and preservation efforts put forth by the program, to ensure threatened and endangered species current populations are able to have the greatest reproductive success possible.

History of the Program

Prior to 1998, the U.S. Fish and Wildlife Service (USFWS), the Nature Conservancy (TNC), and the New York State Department of Environmental Conservation (NYSDEC) jointly managed threatened and endangered species recovery in the Southampton area. However, due to a decrease in staffing and resources provided by the NYSDEC and TNC, the Southampton Trustees initiated their own threatened and endangered species program.

Prior to 2011, the Southampton Town Trustees were responsible for 13 miles of ocean beach and 16 bay sites. During the 2011 season, the Trustees worked cooperatively with The Nature Conservancy to become acquainted with the Westhampton Island sites. In 2012, the Trustees independently managed the 5.5 miles of ocean beach from Tiana Pavilion in Hampton Bays to Roger's Beach Pavilion in Westhampton Beach. The Trustees now manage a total of 18.5 miles of ocean beach and 15 bay sites. Management of the remaining sites in the Town of Southampton performed by TNC, NYSDEC, USFWS, Suffolk County Department of Parks, Recreation and Conservation (SCDPRC) and a private consulting firm.

Over the course of the last 15 years, additional sites added and removed altering the distance monitored. The total distance monitored has varied between 18.9 and 25.8 miles, and a reflection of this seen in abundance and productivity across the management area. (**Graph 1**) Fluctuations in abundance and productivity is likely due to a number of different factors: changes in the beach profile, growth and decline of predator populations, presence of foraging area on tidal mudflats as a result of water level and inclement weather to name a few.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Nesting Pairs	19	23	36	26	24	24	25	35	36	33	37	32	49	37	33	28	43	53	49	54
Fledges	19	38	63	23	48	43	37	31	28	40	31	30	23	16	25	52	86	68	79	71
Productivity	1.00	1.65	1.75	0.88	2.00	1.79	1.48	0.89	0.78	1.21	0.84	0.94	0.47	0.43	0.76	1.86	2.00	1.28	1.61	1.31

Graph 1: The historic number of pairs, fledges and productivity within sites monitored by Southampton Town Trustees T&E Program from 2000 to 2019. Abundances and productivities have fluctuated for a variety of reasons and factors over the years.

Life History, Conservation, and Recovery Efforts

Piping Plover Life History and Management

The piping plover is a small migratory shorebird that found on Long Island making use of our bay and ocean beaches for breeding purposes. They identified by a light grey to sand colored back with a white underside typically seen sporting a defined black neckband and brow band, especially during the breeding season. (**Figure 1**)

Figure 1: An adult piping plover performing a "broken wing" display to distract potential predators from a nest on Meadow Ln.

Males will typically arrive first, sometime around mid- March, followed shortly thereafter by the females. These solitary nesters utilize open, sparsely vegetated sandy and moderately rocky shoreline habitats such as over-wash areas, gently sloped foredunes and sand flats to make their nests. The ideal nesting habitat is usually located in close proximity to prime foraging grounds in preparation for brood rearing. Plovers display nesting site fidelity meaning that the birds will return to the same nesting grounds year after year. In preparation for the breeding season, historic and suitable nesting habitats are fenced with "symbolic fencing", seen as posts with string, flagging and signs attached (**Figure 2).** From their arrival through May, the courtship process begins and males will establish their nesting territories courting a female and forming a pair bond. During this process, males will create multiple scrapes in the hopes the female will select one as her nest. Scrapes are shallow depressions in the sand often later decorated with seashell fragments by the female. Scrapes are difficult to see in this environment and can often be mistaken for a footprint or a depression left by a shell. (**Figure 3**) The symbolic fencing rearranged to reflect the birds' behaviors during this time in order to provide them with an adequate buffer against disturbances. After copulation, during the first nest attempt the female will lay one egg every other day until a full clutch if formed, usually three to four eggs.

Figure 2: Symbolic fencing not only protects the nesting migratory shorebirds but also helps to vegetate and preserve the dune system.

Figure 3: A Piping Plover scrape found between Meadow Lane and Halsey Neck. As you can see if you weren't actively looking, a scrape could be easily overlooked and accidentally destroyed.

If a nest failure occurs, the pair will attempt to re-nest up to four times within a breeding season. Many factors including frequent disturbance while incubating, exposure, predation, abandonment, infertility, vandalism and nest washout caused by sand inundation or tidal inundation. It is typical to see fewer eggs in re-nesting attempts, which can lead to lower reproductive success and productivity. In areas with a high predatory presence, an exclosure installed around the nests to aid in their protection from predators **(Figure 4)**.

Figure 4: An exclosure is a 10-foot diameter, wire mesh cylinder with a plastic mesh topper installed around piping plover nests at risk of predation from terrestrial and avian predators

The parents share the responsibility of incubation, which commences with the laying of the final egg of the clutch. The incubatory period lasts for duration of approximately 25-28 days at which point the chicks hatch out **(Figure 5 & 6)**.

Figure 5 & 6: Piping plover chicks from the Meadow Lane picnic area hatching out and drying before beginning their first forage!

After estimating the hatch date of a nest, snow fencing will be placed perpendicular to the dune a distance of 1000m in either direction from the nest location restricting vehicles and dogs from the area, approximately 3-5 days in advance of the estimated hatch date. Piping plover chicks are precocial and therefore begin foraging within 24 hours of hatching, scurrying between the foredune and intertidal zones for foraging. This puts them at great risk without the ability to fly. Their sole defense is their camouflage which they use by crouching still when feeling threatened by a perceived predator (vehicles included). Post hatching, the chicks take approximately 25-35 days to fledge, during which the brood will remain close for protection from elements and predators. The chicks fledge and factored into the species' productivity at the age of 35 days or upon observation of the fledgling's ability to fly adequately for a minimum distance of 15m, they are. After fledging, plovers will begin to aggregate in small groups in preparation for the long migration back south as early as July and as late as October.

In order to remove the Atlantic Coast population from the Federal List of Endangered and Threatened Wildlife and Plants, the USFWS has developed recovery criteria. Delisting will occur when there are 2,000 breeding pairs, maintained over five years. Of the 2,000 pairs, 575 of those must be located within the New York/New Jersey region. Additional delisting criteria requires a five-year average productivity of 1.5 fledged chicks per pair throughout the region and instituting long term agreements among cooperating agencies, landowners, and conservation organizations in order to maintain populations and productivity (USFWS, 2009).

Least Tern Life History and Management

This small migratory water bird also utilizes the Long Island's shoreline for breeding purposes. These colonial nesters, found in groups ranging from 5 to upwards of 100 pairs, are identified by a grey back, white underside and a black capped head with a white brow band. They weigh in at 1oz compared to their larger 4oz relative, the common tern. Adult terns arrive to the nesting grounds between late April and mid-May, usually prior to the common terns and black skimmers. The least terns also nest in scrapes although their scrapes tend to be a bit shallower than a plover scrape. Selecting similar habitats to the piping plover for nesting areas, such as sand flats, gently sloped foredunes and flat expanses of beach above the high tide line, they can often be seen sharing nesting habitats, as they do not compete for food. Due to infringement on these habitats, they also observed taking to dredge spoils. Pairs will commonly lay a full clutch of one to three eggs per nest from late May through June and both parents share the incubatory responsibilities. Incubation will last approximately 20-23 days at which point the chicks will hatch out **(Figure 6)**.

Figure 6: A recently hatched least tern brood from this year's program! Courtesy of Coastal Steward Kaitlin Farrell.

Within a few days of hatching, chicks will begin to move outside of the nest although being semi-precocial they are still dependent upon their parents for feeding and protection. Terns are loud and extremely protective of their young and nesting territories known for swooping at intruders **(Figure 7).**

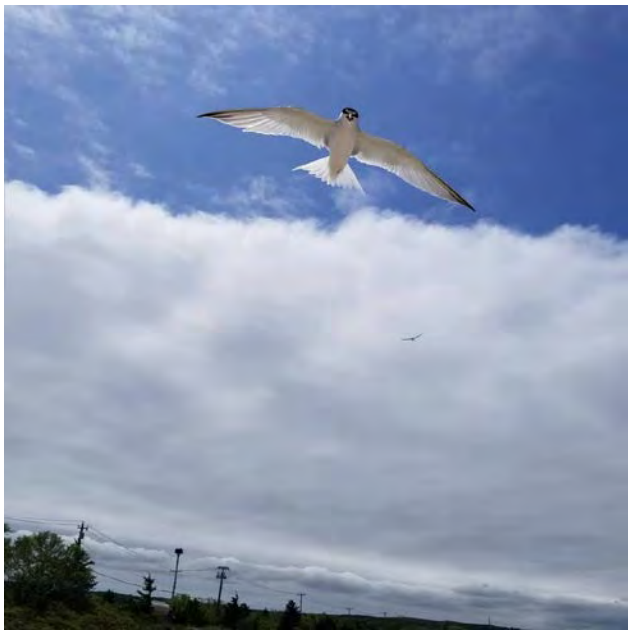


Figure 7: Least tern adult from the nesting colony at Long Beach in Sag Harbor performing its territorial swoop!

Plover chicks commonly seen sheltering in the shade of beach debris and foliage as well as in tire tracks and footprints. Nesting colonies protected in a similar fashion to the piping plover, having symbolic fencing arranged around the colony followed by snow fencing a few days prior to the hatching of nests. At approximately 20 days old, the chicks will fledge, and shortly thereafter, they depart for their wintering grounds, which can happen as early as August, and typically no later than the end of September.

Seabeach Amaranth Life History and Management

For a great deal of years, it presumed this annual beachfront plant been eradicated from the coastal ecosystems of Long Island until 1990 when it was rediscovered. Even so, it has lost approximately 2/3 of its historic rang e. The plant features a fleshy reddish pink stem with small round leaves that vary from red to green, the green being the more mature leaves **(Figure 8**). The flowers are a light yellowish color, appear in clusters, and are very small (New York Natural Heritage Program, 2019). This plant grows in the dynamic areas of the beach profile on accreting shorelines between the dunes edge and the high tide line, often in the same areas as nesting shorebirds. Germination of seabeach amaranth occurs between June and July on Long Island, coming to maturation between August and November. During the maturation period, plants will continue to grow, bloom and disperse seed by wind at the same time acting as a sand-binder fortifying the beach profile. Plants can range in size from a few inches to a few feet in diameter.

Figure 8: Seabeach Amaranth plant

Seabeach amaranth plants protected by small symbolically fenced and signed areas directly encompassing the plant to prevent ORV and pedestrian traffic from damaging the plant prior to end of its growth and seed dispersal. In order to be considered for delisting, seabeach amaranth needs to be found within a minimum of 6 states that fall within its historic range in conjunction with seabeach amaranth plants occupying a minimum of 75% of this suitable habitat found within each site for a minimum of 10 years. According to the most recent 5-year review of seabeach amaranth, it was suggested that no changes be made to the plants listing even though the plant is found within 6 of the states within its historical range given that the data does not encompass the 10-year requirement. (USFWS 2007)

Seabeach Knotweed Life History and Management

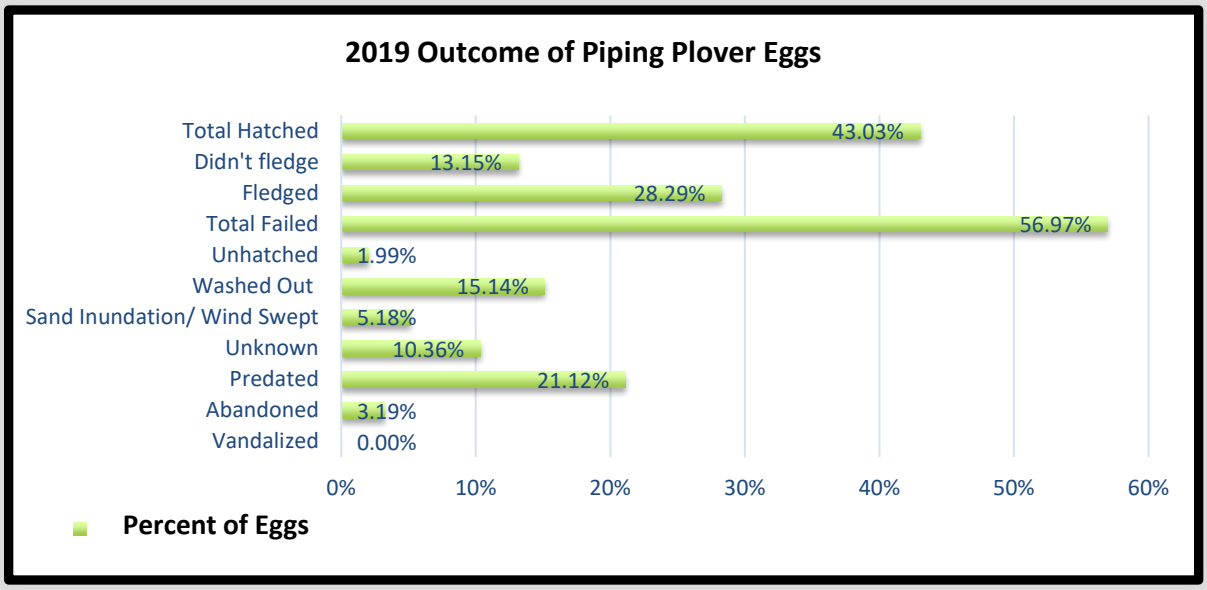
Seabeach knotweed is an annual plant found on bay and ocean shorelines between the foredune, shoreline and bordering salt marshes. On Southampton Town Trustee beaches, typically found in areas that are sparsely vegetated and have a relatively flat topography. The plant features long soft stems with quarter moon shaped leaves that give off a silvery glow. Knotweed flowers are white and emerge from the leaf axils in clusters from June to November and fruits reddish -brown, smooth, 3-sided achenes from August to November dispersing seed via wind, wave action and birds. In NYS, 43 existing populations are currently recognized and have been relatively stable, first documented in 1861 (New York Natural Heritage Program, 2019). However, due to the dynamic environment these plants grow in, populations coupled into 5-year averages accurately interpreting the health of the species. (NYHP 2010)

Threats to Species

Piping Plover and Least Tern

Within Southampton Town, shorebird reproductive success faces numerous challenges and threats. Success is impaired by nest abandonment (often due to predator pressures), direct predation, washout events, un-hatched eggs (due to low egg viability or overexposure), or loss of chicks at a young age. Simply put, the pressure these species face in finding suitable habitat understated and inflicted by coastal development, recreational activities and storms leading to the loss of physical nesting and foraging habitat. Additionally, excessive recreational use, primarily off road vehicle use and beach events can lead to the disruption of nesting and a foraging brood's ability to succeed. In congruence with anthropogenic impacts on their nesting areas opportunistic predators are attracted by garbage and food left on the beach or at the access point garbage cans, putting predators within close proximity of nests and foraging chicks. Predation by fox, crows, raccoons, rats, ghost crabs and cats are serious threats to shorebird nesting success. In addition to these threats, plovers faced with climate change, specifically sea level rise, which will result in a decrease of habitat within both their breeding and wintering grounds.

Over the course of the 2019 breeding season, 251 eggs laid in 72 nests by the 54 pairs of piping plover that nested within our management sites. Of those 251 eggs, 43.03% hatched with 65.74% of those hatchlings making it to fledge. The loss of the chicks was often by predation pressures and resulted in a loss of about 34.26% of chicks that did not fledge. Assumed the chicks predated or died from exposure due to the low rate of corpse discovery. Additionally, 56.97% of all eggs laid did not hatch for a variety of reasons. The primary cause of nest failure and chick loss this season was predation taking its toll on 21.12% of the eggs laid. Nests that were abandoned (3.19%) attributed to predatory pressures as well as frequent disturbances by beach recreation involving pedestrians and homeowners that have little regard to the symbolic fencing that protects nesting sites. For example, intentionally unleashing a dog into a fenced nesting area in hopes to deter the birds from nesting. Storms early in the season had a calamitous impact destroying of a total of 5.18% of eggs to sand inundation and 15.14% were washed out as a product of either tidal inundation or flooding due to high wave action from inclement weather and lunar tides. 1.99% of eggs were unviable and did not hatch most likely due to either infertility or exposure. For the remaining 10.36% of eggs laid the cause of failure was unknown having no signs of any of the other factors **(Graph 2)**.



Graph 2: The 2019 outcome percentages for all the Piping Plover eggs "2019 Outcome of Piping Plover Eggs"

Seabeach Amaranth and Seabeach Knotweed

Natural threats to seabeach amaranth and seabeach knotweed are storms, beach succession and predation by mammals and insects. Threats the human population imposes on this environment are persistent beach driving, coastal development, beach raking and non-native plant introduction.

Site Activity Summaries

Within our sites, 54 nesting pairs of piping plover fledged 71 young piping plover resulting in a total productivity of 1.31 fledges per pair. Additionally, 182 least tern pairs observed nesting and fledging 81 young least terns having a resultant productivity of .45 fledges per pair. For completed site reviews and data sets, please the see tables in the appendix. Overall, it was as successful of a season as could be achieved. Through the season coastal stewards would monitor(walk) on average 3 to 7 miles daily recording the health, behavior, nesting locations, disturbances, and threats to our threatened and endangered species. While monitoring, it was all too common to find unleashed dogs in restricted areas. When issues such as unleashed dogs would arise, our coastal stewards would then proactively educate the public in question on the breeding biology, chronology, importance, and impacts we have as recreational beachgoers. In some instances, the education would go well but on many occasions recreational beach goers would leash dogs upon engagement and once out of our vicinity, the owners would release the dogs back off the leash. The general sentiment of the community during the breeding season reflected positivity and support as a whole.

Coastal Steward and Crew Leader Shelby Turecamo after completing one his site monitors

Ocean Sites

Westhampton Island

Westhampton Island encompasses approximately 5.5 miles of beach extending from Roger's Beach pavilion to just west of the Round Dune housing complex. This site is broken down into two sub-sites: Hampton and Tiana. Common nesting disturbances were dogs off the leash, vandalism of fencing and ORV drivers ignoring/removing fencing during the entirety of the season. The majority of predatory disturbances were the presence of cats, ghost crabs, and crows.

Plover Activity: 13 pairs, 18 fledge, 1.38 productivity
Tern Activity: 23 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 14 plants

Hampton Beach

The most western site and western extend of WHI extends from Roger's Beach pavilion to just west of the Round Dune housing complex. Hampton contained 9 breeding pairs of plover who made 11 nesting attempts over the course of the season. However, only four (4) of these nests were successful and fledged 10 plovers. The area between Quogue Village Beach and Dolphin Lane experienced low

activity and is confidently the result of constant encroaching of water. The entire site faced constant threat from storms early in the season and issues with predation along with recreational and residential pressures. Three of the plover nests were predated, one of which did successfully hatch a chick. However, due to high predation, this chick did not survive. The predators most frequently observed were ghost crabs and cats. Interestingly, ghost crabs would constantly burrow near nests and seemed to predate within a week of expected hatch dates. Furthermore, the discussion of ghost crabs predating piping plover and least tern eggs is a new topic and methods to combat ghost crabs have not yet been developed. One journal does suggest the possible removal of the crabs from sensitive sites but further research needs to be conducted on the impact this would have on the environment (TWS Journals, 2018). The issue with removing ghost crabs however is the fact that they are a bio indicator species meaning they indicate the health of the environment effectively. Therefore, I would not recommend their removal, however, I recommend following these studies and adopting the first effective and coastally conscience method to protect the plovers and terns from ghost crabs. Three least tern colonies within this site struggled in our symbolic fences and all the colonies ended up abandoning their nests. We conclude ghost crabs and pedestrians were the culprit for the poor least tern activity and have noted on many occasions residents walking unleashed dogs around colonies. On one occasion, we witnessed a pedestrian running the shoreline attempting to scare away the terns from his family's beach picnic. Concerning endangered and threatened plants, we recorded 12 total amaranth plants. In conclusion of this site, concerns over the season were ghost crabs, cats, gaps in education among the public about the threatened and endangered species, residents often ignoring arranged walkways (in one instance having a party within the fencing for the 2nd year in a row), tearing down fencing, and having bonfires in close proximity to these fenced areas.

Plover Activity: 6 pairs, 10 fledges, 1.11 productivity
Tern Activity: 19 pairs, 0 fledges, 0.00 productivity
Seabeach Amaranth: 12 plants

Coastal Steward Joseph Zawada on his morning monitor

Tiana

This site encompasses Round Dune housing complex east to the Tiana Beach pavilion. Four Plover pairs who resided within the Tiana site and they fledged 8 plovers with a productivity of 2.00. There were 6 nesting attempts by these birds, two of which were successful. This year, the high volume pedestrian area of Ponquogue Pavilion hosted an environment for one of these successful 4 egg plover nests and ended up fledging the whole brood of 4 chicks. There were also two small least tern colonies in the Tiana area consisting of 27 adults and 4 nesting pairs but all nests failed following an abandonment to the area. Two seabeach amaranth plants observed here.

Plover Activity: 4 pairs, 8 fledge, 2.00 productivity
Tern Activity: 4 pairs, 0 fledges, 0.00 productivity
Seabeach Amaranth: 2 plants

Coastal Steward Keanu Hunter at the end of his site monitor at Tiana Pavilion

Southampton Beach (Village)

Located within the village of Southampton, this site extends from the eastern boundary of the Shinnecock County Park to South Main Street. There are 3 sub-sites that Southampton Beach is divided into, one that includes the most popular picnic area among year round residents. The sub-sites are broken down below in the next three site summaries. The concerns for this area were dogs off the leash, ORV drivers running over 4x4 barricades used to protect the precocial plover chicks, beach parties, bon fires, cats, gulls, and storms causing high winds and water encroaching of nests. The main concern was for the first time closing down the highly coveted Road G Picnic area to ORV.

Recommendation: The picnic area beach goers during the chick phase were engaged to learn and I believe this is a large step towards educating the public and I believe is a direct result for all 3 of the hatchlings fledging. I recommend the shuttle drivers go for coastal steward training if the piping plover nest in this vicinity next year. A properly certified shuttle driver would allow the shuttle to operate without the need for a t+e species coastal steward from our office and the t+e program could continue regular monitoring on weekends.

Plover activity: 10 pairs, 15 fledge, 1.36 productivity
Tern Activity: 11 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 13 plants

Shinnecock County Park to Road D

This site was abnormally active in comparison to years prior where activity was generally low, particularly near the picnic area. There were 4 nesting pairs in the area, 3 of which were within the 1000-meter vicinity of the picnic area. Two of the nests in the vicinity were lost; one to water encroaching and one is inconclusive on whether it was predated or vandalized. The possible vandalism stems from the frequent disturbance of recreational Para motors, which possibly blew out the "predated" nest. On one occasion, we witnessed the flying of a recreational Para motor into and touching down in the dune where the nest was located and happened to be on the same day the nest was lost; cat prints were also present at the location.

Plover activity: 4 pairs, 4 fledge, 1.00 productivity
Seabeach Knotweed: 2 plants

Road D to Halsey Neck Lane

Four piping plover nesting pairs were observed between Rd. D and Halsey Neck Lane fledging 7 young for a total productivity of 1.75 fledge per pair. There was a total of 6 nesting attempts one of which was abandoned due to predatory pressures from cats and one other of which was lost to indeterminate causes. One of the successful nests hatched but the brood of 1 chick was later lost to predation. Least terns were noted aggressive towards nesting plovers in this vicinity. Other threats to the pairs included ORV drivers disregarding our symbolically fenced areas and barricades. Off leash dogs, especially near Rd. D and Halsey Neck Lane access points were a constant concern.

Plover Activity: 4 pairs, 7 fledge, 1.75 productivity
Tern Activity: 8 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 9 plants
Seabeach Knotweed: 1 plant

Halsey Neck Lane to South Main Street

This sub-site held 3 nesting pairs who made four nesting attempts, three of which successfully hatched. All of these nests were located in the area between the bulkhead east of Cooper's Beach and Cryder Lane for the fourth year in a row. This re-nest attempt occurred in the same vicinity and is consistent with normal re-nesting patterns. The predatory pressures east of Coopers were low this year so nests were not exclosed and the pairs successfully fledged 4 young. We do believe the total is 5 fledges because the final chick hatched late in the season and was estimated to become a fledge near the beginning of the migration. The assumption is the bird became a fledge and began migration with the adults just before one of our final site visits. The reason the fledge is not included in our final number is because the plover was not observed fledging. There was a small least tern colony consisting of 25 adults and 3 nesting pairs but unfortunately, they did not fledge any birds due to high tides and pedestrian pressure. Other threats consisted of unpermitted recreational ORV use and off leash dogs near the access points of Halsey Neck, Coopers Beach, Cryder Lane, and South Main Street. Beach raking

within the Coopers Beach vicinity was performed weekly but by certified threatened and endangered species monitors and was

Plover Activity: 3 pairs, 4 fledge, 1.0 productivity
Tern Activity: 3 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 4 plants

Gin Lane Beach

This site stretches from S. Main Street to Old Town Road and was inactive. The majority of the vicinity between South Main Street and Old Town Road is prone to extremely high pedestrian and dog walking traffic and does not provide a healthy wrack line for foraging. However, the beach is wide and has potential to host a nesting pair despite not having activity this year.

Old Town Beach

This site stretches from Old Town Rd. to Squabble Ln. and was successful this year. One piping plover nest immediately east of Old Town fledged 2 young while the other nest hatched 1 chick and was our first chick of the year. Unfortunately, this chick was predated a few days after hatching. A small colony of least tern consisting of 3 nesting adults were also unsuccessful. In addition, present at the site was one seabeach amaranth and one seabeach knotweed plant.

Plover Activity: 2 pairs, 2 fledge, 1.00 productivity
Tern Activity: 3 pairs, 0 fledges, 0.00 productivity
Seabeach Amaranth: 1 plants
Seabeach Knotweed: 1 plants

Watermill Beach

The western extent of this site falls just to the west of Fowlers St. and stretches out to Jobs Lane. This site is comprised of 3 sub-sites and measures approximately 2.38 miles. There are 3 town beaches and 2 additional access roads that provide public access to the beach. Mecox Bay is located between the Flying Point Road access and Scott Cameron Beach. When the water level in the bay is low, mudflats are exposed and it becomes an ideal foraging habitat for piping plovers and other migratory shorebirds. Unfortunately, this year the direct vicinity of The Cut Beach only hosted one plover pair and a 4 egg plover nest. Years prior least tern have attempted and successfully nested. This year even after carefully timed cut openings and symbolically fenced areas, the site did not do well. We observed two least tern colonies set up on this stretch of beach and were shocked to observe another abandonment of the area just 2 weeks later. Three of our undoubtedly highest disturbances were irresponsible ORV drivers removing and stealing our symbolic fencing and barricades, high predation from cats and fox, and destructive storms early on in the season. Other disturbances were off leash dogs and high pedestrian volume.

Plover Activity: 9 pairs, 8 fledge, .89 productivity
Tern Activity: 13 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 52 plants
Seabeach Knotweed: 13 plants

Fowlers

This site stretches from just west of Fowlers St. to the Flying Point pavilion. Four nesting pairs made five nesting attempts during the course of the season. They were responsible for fledging 4 young this year having a productivity of 1.33 fledges per pair. A small least tern colony attempted to nest immediately west of Fowlers Beach with 12 adults and 1 nest which hatched 1 chick. We do have reason to believe this chick fledged but we did not have a visual confirmation and therefore will not be added to our final activity count.

Plover Activity: 3 pairs, 4 fledge, 1.33 productivity
Tern Activity: 1 pair, 0 fledge, 0.00 productivity
Seabeach Amaranth: 1 plant
Seabeach Knotweed: 3 plants

Flying Point

This site stretches from Flying Point pavilion to the Cut Beach. At this site, we observed moderate early piping plover activity resulting in 1 successful nest with 3 fledges. No least tern activity observed and excessive beach erosion in the area is believed to be the culprit. We did have a successful patch of Seabeach Knotweed that was not observed last year.

Plover Activity: 1 pair, 3 fledge, 3.00 productivity
Seabeach Knotweed: 6 plants

Scott Cameron

This site extends from the end of Dune Road to Jobs Lane. This site was one of our highest predated locations and is in direct correlation with a high number of residents expressing their concern of feral cats and fox. This location was also the site of a couple construction projects in which construction was put to a halt to provide a healthier nesting environment for the threatened endangered species. Even with all the effort to provide a successful environment including exclosure, which helped with hatching, only one plover fledged. An abnormally high number of Seabeach Amaranth in the area, and can contribute this to a strong and healthy foredune.

Recommendation: Feral cats are an extreme problem at this location and action to remove them to reduce predation.

Plover Activity: 5 pairs, 1 fledge, .20 productivity
Tern Activity: 12 pairs, 0 fledge, .00 productivity
Seabeach Amaranth: 51 plants
Seabeach Knotweed: 4 plants

Sam's Creek

This site is located between Jobs Lane to Ocean Road. Within the sites vicinity, one breeding pair successfully fledged 4 piping plover chicks. There were also 13 least tern adults and of these adults, we observed 3 breeding pairs. The least tern pairs were unsuccessful and fell victim to irresponsible ORV drivers taking down and driving through fenced areas. ORV also vandalized this site and tracks from local beach clubs UTVs observed on many occasions driving around 4x4 barricades and into the dune and going through 4x4 barricades. Off leash dogs were also a huge issue especially near the Ocean Road beach access point.

Plover Activity: 1 pair, 4 fledge, 4.0 productivity
Tern Activity: 3 pairs, 0 fledge, 0.00 productivity

Sagaponack Pond

This site stretches from Ocean Rd. out to Gibson Lane. Within this site, Sagaponack Pond lies in the middle section and provides a tremendous amount of foraging and nesting grounds for both the plovers and least terns but with this abundance comes many predators. During the entirety of this sites activity, all 7 Seabeach knotweed were predated to deer, rabbit, and possibly geese due to the large amount of geese feces observed at the predated knotweed location. Least tern eggs found on multiple occasions predated via pecked and broken open **(Figure 10)**. Predators to the threatened and endangered avian species at this site were, crow, gulls, fox, and cat (small mammalian tracks were constantly found but on a few occasions they were found next to unwarranted pedestrian prints inside symbolic fencing). Unfortunately, due to predator prevalence and pedestrian traffic especially around Sagaponack Pond, an extremely high amount of nesting was unsuccessful. This location is similar to the Cut Beach area in that Sagaponack pond is also at risk to storms and flooding and unfortunately crippled with predation this year. This year the factors stated above resulted in all least tern nests failing and 71% of the piping plover eggs failing. There was 7 pairs of piping plover who fledged 5 chicks for a productivity of .71 fledges per pair. There were two least tern colonies totaling 107 adults and 46 pairs who very unfortunately fledged 0 young. 7 seabeach amaranth plants were identified site-wide. Like most other sites that have a high frequency of beach recreation threats present, this location consists more specifically of ORV drivers ignoring fenced areas, bonfires in close proximity to fencing, pedestrians

Figure 10. Predated Least Tern egg from Sagaponack Cut.

walking inside symbolic fencing, constant boat landings inside symbolic fencing, the infamous drum circle, and off leash dogs. All site activity took place between Ocean Rd. and Sagg Main Beach.

Recommendation: More enforcement keeping pedestrians out of symbolically fenced areas and the removal of feral cats would greatly improve the success of this location.

Plover Activity: 7 pairs, 5 fledge, .71 productivity
Tern Activity: 46 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 7 plants
Seabeach Knotweed: 7 plants

Fairfield Pond Lane Beach

This site is located between Gibson Lane and Townline Road. Within this site, 6 nesting pairs of piping plover resided for the spring and summer. Due to erosion and slight predation, many of the piping plovers had difficulty maintaining their nests. In fact, almost all nests within this site occurred approximately 25 feet of each other. The piping plover pairs successfully fledged 11 of their young for a total productivity of 1.83 fledges per pair. There was one small least tern colony consisting of 17 individuals and 3 nesting pairs who made nesting attempts on the east side of Peter's Pond Ln. Sadly, the least terns had 0 success like the other ocean sites. The poor nesting success for least terns at this location seems directly associated with their habit of nesting closer to shorelines compared to the plovers and due to beach erosion, they faced constant water inundation during higher tides. Other threats to the site included significant numbers of off leash dogs, ORV drivers regularly taking down snow fencing, driving through restricted areas, and surf camps.

Plover Activity: 6 pairs, 11 fledge, 1.83 productivity
Tern Activity: 3 pairs, 0 fledge, 0.00 productivity
Seabeach Amaranth: 18 plants

Bay Sites

Red Cedar Point

There were 2 pairs of piping plover who made 2 nesting attempts at Cedar Point, although one pair was unsuccessful and lost to water inundation, 2 piping plover were fledged providing a productivity of 1.00 fledges per pair. There was also a medium sized least tern colony of approximately 30 individuals during the height of the season who fledged 12 least terns for a productivity of 0.71 fledges per pair. The main predator observed at this location was a hawk that was visually seen diving and predating chicks on multiple occasions. Other predators and disturbances were crows, gulls, light pedestrian traffic, recreational angler, and kayak landings. Our seabeach knotweed population was higher than prior years and we observed 57 plants.

Plover Activity: 2 pairs, 2 fledge, 1.00 productivity
Tern Activity: 17 pairs, 12 fledge, .71 productivity
Seabeach Knotweed: 57 plants

Red Creek Pond

This site was home to one pair of piping plover who had an ideal foraging environment and the pair managed to fledge 2 young from a brood of 4. We have reason to believe the hawk

from Red Cedar Point was present since it is in close proximity and predated 2 of the piping plover chicks. There was a small least tern colony of 25 adults and 6 nesting pairs who managed to fledge 3 young.

Plover Activity: 1 pair, 2 fledge, 1.00 productivity
Tern Activity: 6 pairs, 3 fledge, 0.50 productivity
Seabeach Knotweed: 1 plants

Squires Pond

This site was inactive for birds and contained only 2 seabeach knotweed plants. The highest disturbance factors observed were recreational beach activities and ORV usage as well as off leash dogs.

Seabeach Knotweed: 2 plants

Canoe Place Beach

The site was inactive for birds. We did observe a population of 10 seabeach knotweed that was new to the location this year.

Seabeach Knotweed: 10 plants

Meschutt Beach East

Bordered to the west by the county park, the majority of the site backed by hard structures leaving extremely limited amount of critical habitat for any breeding birds and attributed to the inactivity of birds this year. The site did contain 2 seabeach knotweed.

Seabeach Knotweed: 2 plants

Middle Pond

This site has significant erosion and does not provide an ample nesting environment. A moderately sized least tern colony of 66 individuals foraged for a short period at this location but no nesting activity occurred.

Fish Cove/N. Sea Harbor

The site was inactive for both plants and birds.

Towd Neck

This site encompasses an area with an inlet that separates the location into a western and eastern area. The western area is generally desolate in terms of wildlife activity whereas the eastern area holds our highest population of least tern out of all our bay sites.

Towd Neck West

This site has limited suitable habitat and has an extremely high amount of recreational angler, ORV use, and bonfires. This sub-site was inactive for birds and plants.

Towd Neck East

This sub-site has a high frequency of recreational use especially near the Towd Point Rd. access point. Threats to the site involved ORV drivers as well as off leash dogs

whom also pose a significant threat to nesting birds at this location. With the current disturbances, we observed two pairs of nesting piping plover who were able to fledge 4 chicks for a productivity of 2.0 fledges per pair. Approximately 66 least tern individuals that comprised of 30 nesting pairs who fledged 35 young for a productivity of 1.17 fledges per pair. Unlike years prior, predation was not as high and recreational ORV use not observed in restricted areas. Approximately 1,127 seabeach knotweed plants counted at this site.

Plover Activity: 2 pairs, 4 fledge, 2.0 productivity
Tern Activity: 30 pairs, 35 fledge, 1.17 productivity
Seabeach Knotweed: 1,127 plants

Wooley Pond

The site was inactive birds and contained 29 seabeach knotweed.

Seabeach Knotweed: 29 plants

Roses Grove

The site was inactive for both plants and birds.

Fresh Pond

The site was inactive for both plants and birds.

Pine Neck

The site contained 17 seabeach knotweed plants.

Seabeach Knotweed: 17 plants

Long Beach

At the northeast end of Long Beach, one least tern colony set up to breed and consisted of 60 individuals and 27 pairs who fledged 35 of their young. This location also produced 45 seabeach knotweed plants. Disturbances at this site were pedestrians, unleashed dogs, recreational camps, triathlons, and flooding. The largest triathlon we observed consisted of over 100 youth and utilized the parking lot and shoreline. Predators in the vicinity were crows and gulls.

Tern Activity: 27 pairs, 35 fledge, 1.15 productivity
Seabeach Knotweed: 45 plants

Short Beach

24 seabeach knotweed plants were observed at this site.

Seabeach Knotweed: 24 plants

Genet Creek

This site is on an upswing and had 7 seabeach knotweed compared to no activity last year.

Seabeach Knotweed: 7 plants

Acknowledgements

The staff of the Southampton Town Trustee's Threatened and Endangered Species program would like to give a huge thanks to everyone who supported our program and made the 2019 season a possibility and a success. Thank you Board of Trustees; President Edward Warner, Secretary/Treasurer Scott Horowitz, William Pell, Bruce Stafford, and Ann Welker for all of your continued support; Lisa Dunlap, James Duryea, Brandy Campbell, Jessica Goleski, Rachel Longobardi, Stephanie Doran, Jordan King, Jessica Treco, the Southampton Town Bay Constables, Trustees Marine Maintenance division, Joe Jannsen of the Nature Conservancy, Steve Sinkevich of the USFWS, Kevin Jennings of the NYSDEC, Frederick "Chip" Hamilton of the NYSDEC, Michelle Gibbons of the NYSDEC, the Southampton Town GIS Department and the public that had patience, understanding and respect towards the work that we perform. We also would like to thank the Suffolk County Threatened and Endangered Species program consisting of Diana Lynch, Andrew Cushman, Samantha Fishman, Kelly McKenna, Amber Hubert, and Annabel Posimato for collaborating and making this year's first Picnic Area nest a success! None of this work would have been possible without all of you, your hard work and dedication, Thank you!

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Appendix 1:

2019 Piping Plover Abundance and Productivity

Site Name / Location	No. Nesting Pair	No. Nests	No. Eggs	No. Chicks	Hatch Rate (Chicks/Eggs)	No. Fledges	Fledge Rate (Fledges/Chicks)	Productivity (Fledges/Pair)	No. Times Site Visited
Atlantic Ocean Nesting Sites									
1) Westhampton Island	13	17	55	22	0.40	18	0.82	1.38	25
a) Hampton	9	11	37	12	0.32	10	0.83	1.11	25
b) Tiana	4	6	18	10	0.56	8	0.80	2.00	23
2) Southampton Beach	11	14	51	24	0.47	15	0.63	1.36	24
a) County Park East to Rd. D	4	4	13	6	0.46	4	0.67	1.00	24
b) Rd. D to Halsey Neck Ln.	4	6	22	12	0.55	7	0.58	1.75	24
c) Halsey Neck Ln. to S. Main St.	3	4	14	8	0.57	4	0.50	1.33	24
3) Gin Lane Beach	0	0	0	0	0.00	0	0.00	0.00	17
4) Old Town Beach	2	2	7	4	0.57	2	0.50	1.00	21
5) Watermill Beach	9	12	45	13	0.29	8	0.62	0.89	24
a) Fowlers Beach	3	3	12	5	0.42	4	0.80	1.33	24
b) Flying Point Beach	1	1	4	3	0.75	3	1.00	3.00	24
c) Scott Cameron Beach	5	8	29	5	0.17	1	0.20	0.20	24
6) Sam's Creek	1	1	4	4	1.00	4	1.00	4.00	20
7) Sagaponack Lake	7	10	28	8	0.29	5	0.63	0.71	21
8) Fairfield Pond Ln. Beach	6	10	37	17	0.46	11	0.65	1.83	17
Total for Ocean Nest Sites	**49**	**66**	**227**	**92**	0.41	**63**	**0.68**	**1.29**	
Peconic Bay Nesting Sites									
9) Red Cedar Point	2	2	8	4	0.86	2	0.33	1.33	19
10) Red Creek Pond	1	1	4	4	0	2	0	0	16
11) Squires Pond	0	0	0	0	0	0	0	0	17
12) Meschutt Beach E.	0	0	0	0	0	0	0	0	18
13) Canoe Place	0	0	0	0	0	0	0	0	17
14) Fish Cove/N. Sea Harbor	0	0	0	0	0	0	0	0	14
15) Towd Neck	2	3	12	4	0.5	4	0.5	2	17
16) Wooley Pond	0	0	0	0	0	0	0	0	17
17) Roses Grove	0	0	0	0	0	0	0	0	17
18) Fresh Pond	0	0	0	0	0	0	0	0	17
19) Pine Neck/Mill Creek	0	0	0	0	0	0	0	0	17
20) Long Beach	0	0	0	0	0	0	0	0	16
21) Short Beach	0	0	0	0	0	0	0	0	16
22) Genet Creek	0	0	0	0	0	0	0	0	17
Shinnecock Bay Nesting Sites									
23) Middle Pond	0	0	0	0	0	0	0	0	19
Total for Bay Nesting Sites	5	6	24	12	0.62	8	0.67	1.6	
Total for All Nesting Sites	54	72	251	104	0.41	71	0.68	1.31	

2019 Least Tern Summary

Site Name/Location	No. Nesting Pairs	No. Fledges	Producttivity (Fledges/ Pairs)	No. Times Site Visited
Atlantic Ocean Nesting Sites				
Village Beaches				
1. Southampton Beach	11	0	0.00	24
2. Gin Lane Beach	0	0	0.00	17
3. Old Town Beach	3	0	0.00	21
Town Beaches				
4. Westhampton Island	23	0	0.00	25
5. Watermill Beach	13	0	0.00	24
6. Sam's Creek	3	0	0.00	20
7. Sagaponack Lake Beach	46	0	0.00	21
8. Fairfield Pond Lane Beach	3	0	0.00	17
Total for Ocean Nesting Sites	**102**	**0**	**0.00**	**-**
Peconic Bay Nesting Sites				
9. Red Cedar Point	17	12	0.71	19
10. Red Creek Pond	6	3	0.5	16
11. Squires Pond	0	0	0	17
12. Meschutt Beach East	0	0	0	18
13. Canoe Place Beach	0	0	0	17
14. Fish Cove/N. Sea Harbor	0	0	0	14
15. Towd Neck	30	35	1.17	17
16. Wooley Pond	0	0	0	17
17. Roses Grove	0	0	0	17
18. Fresh Pond	0	0	0	17
19. Pine Neck/Mill Creek	0	0	0	17
20. Long Beach	27	31	1.15	16
21. Short Beach	0	0	0	16
22. Genet Creek	0	0	0	17
Shinnecock Bay Nesting Site				
23. Middle Pond	0	0	0	19
Total for Bay Nesting Sites	**80**	**81**	**1.01**	**-**
Totals for All Sites	**182**	**81**	**0.45**	**-**

2019 Outcome of Piping Plover Eggs

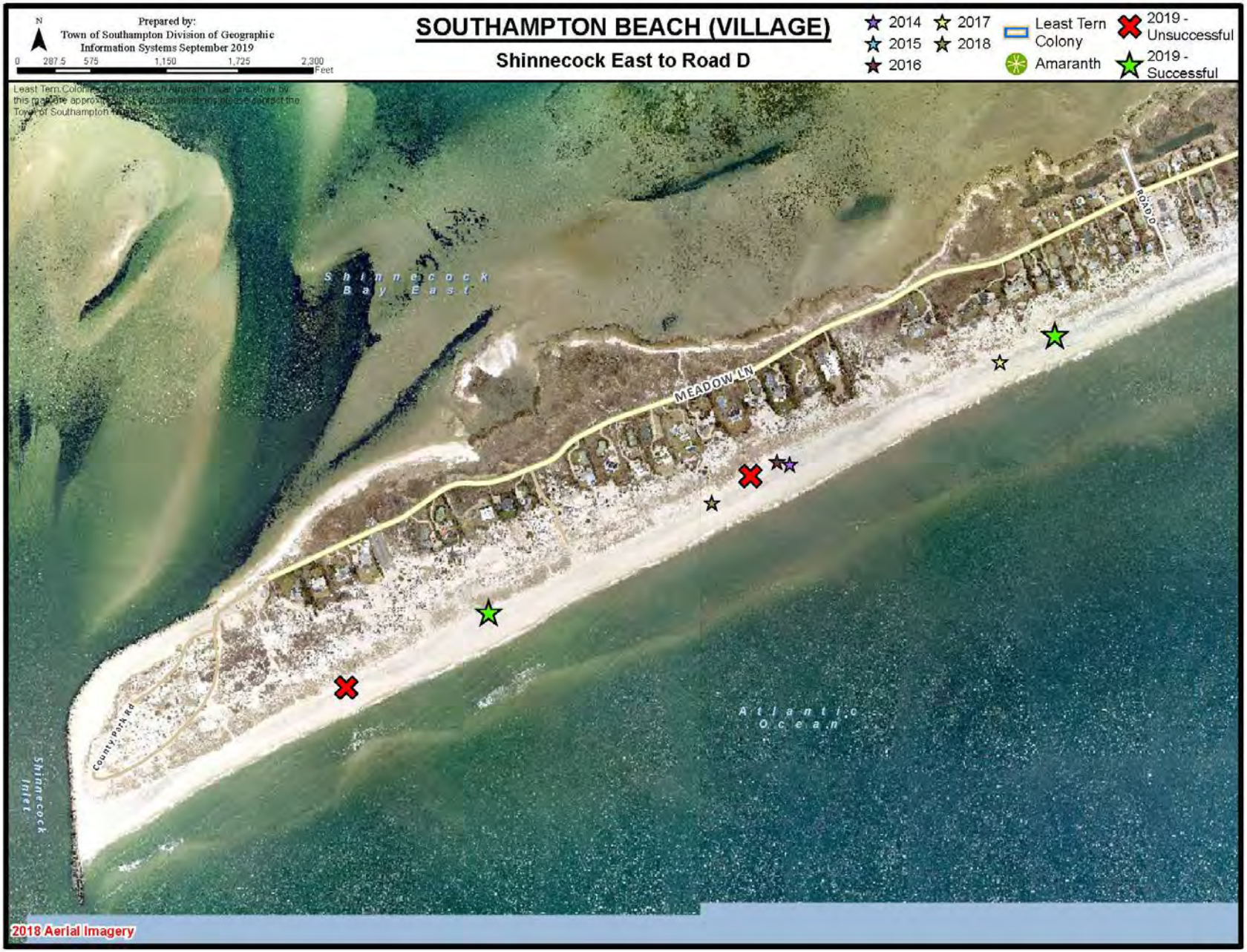
Site Name/Location	Number of Eggs	Vandalized	Abandoned	Predated	Unknown	Sand Inundation/ Wind Swept	Washed Out	Unhatched	Total Failed	Fledged	Didn't Fledge	Total Hatched
Southampton Beach	51		4	10	10	0	3		27	15	1	24
Gin Lane Beach	0											0
Old Town Beach	7			2				1	3	2		4
Westhampton Island - Hampton	37			11			14		25	10	8	12
Westhampton Island - Tiana	18			1	3	4			8	8	4	10
Watermill Beach	45			14	3	1	12	2	32	8	5	13
Sam's Creek	4			0					0	4		4
Sagaponack Lake Beach	28			7	6		5	2	20	5	6	8
Fairfield Pond Lane Beach	37			8	4	8			20	11	3	17
Red Cedar Point	8						4		4	2	2	4
Red Creek Pond	4									2		4
Squires Pond	0											0
Meschutt Beach East	0											0
Canoe Place Beach	0											0
Fish Cove/N. Sea Harbor	0											0
Towd Neck	12		4						4	4	4	8
Wooley Pond	0											0
Roses Grove	0											0
Fresh Pond	0											0
Pine Neck/Mill Creek	0											0
Long Beach	0											0
Short Beach	0											0
Genet Creek	0											0
Shinnecock Bay Nesting Site	0											0
Middle Pond	0											0
Total for Ocean Nesting Sites	227	0	4	53	26	13	34	5	135	63	27	92
Total for Bay Nesting Sites	24	0	4	0	0	0	4	0	8	8	6	16
Totals for All Sites	251	0	8	53	26	13	38	5	143	71	33	108
Percent of All Egg Outcome		0.00%	3.19%	21.12%	10.36%	5.18%	15.14%	1.99%	56.97%	28.29%	13.15%	43.03%

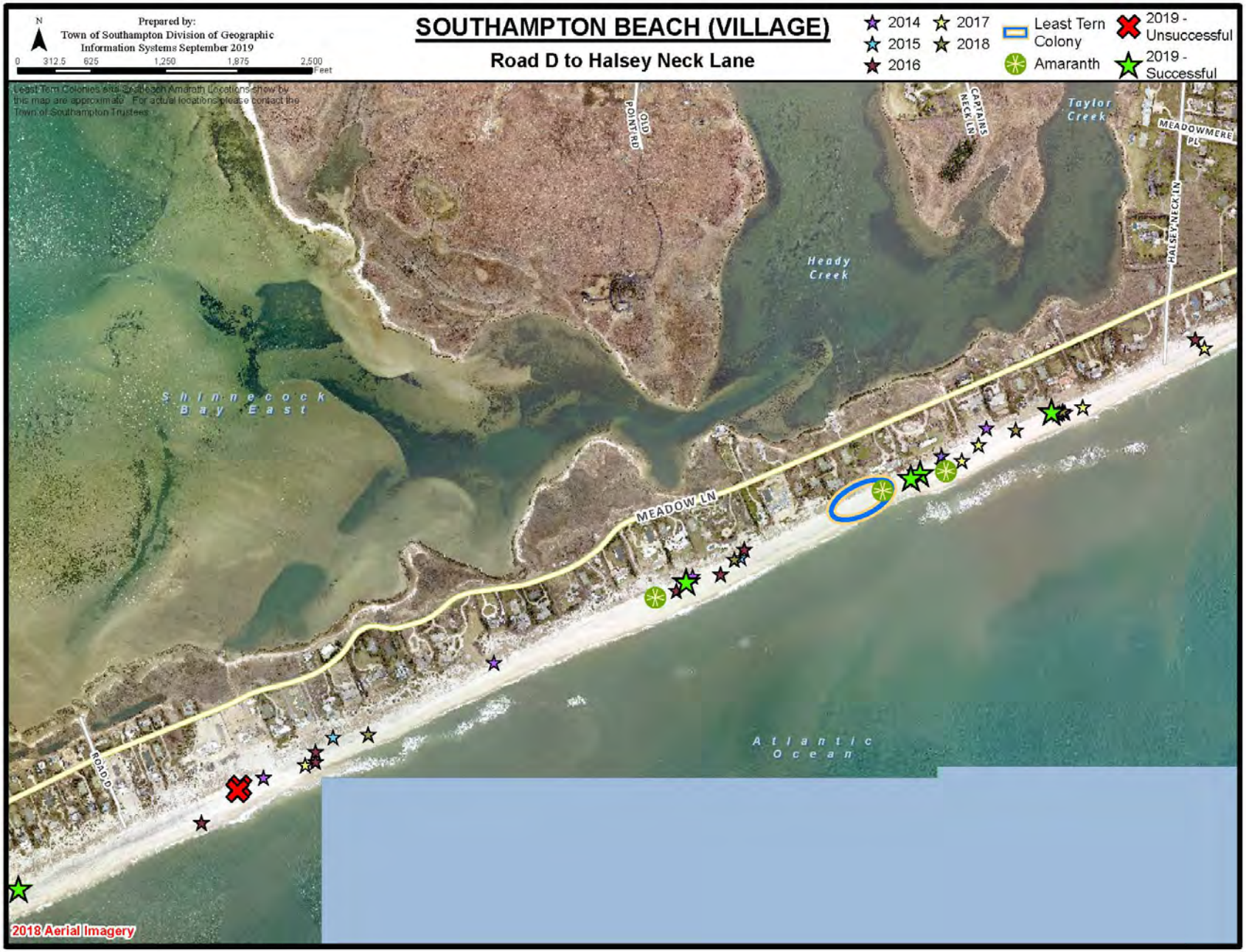
Appendix 2:

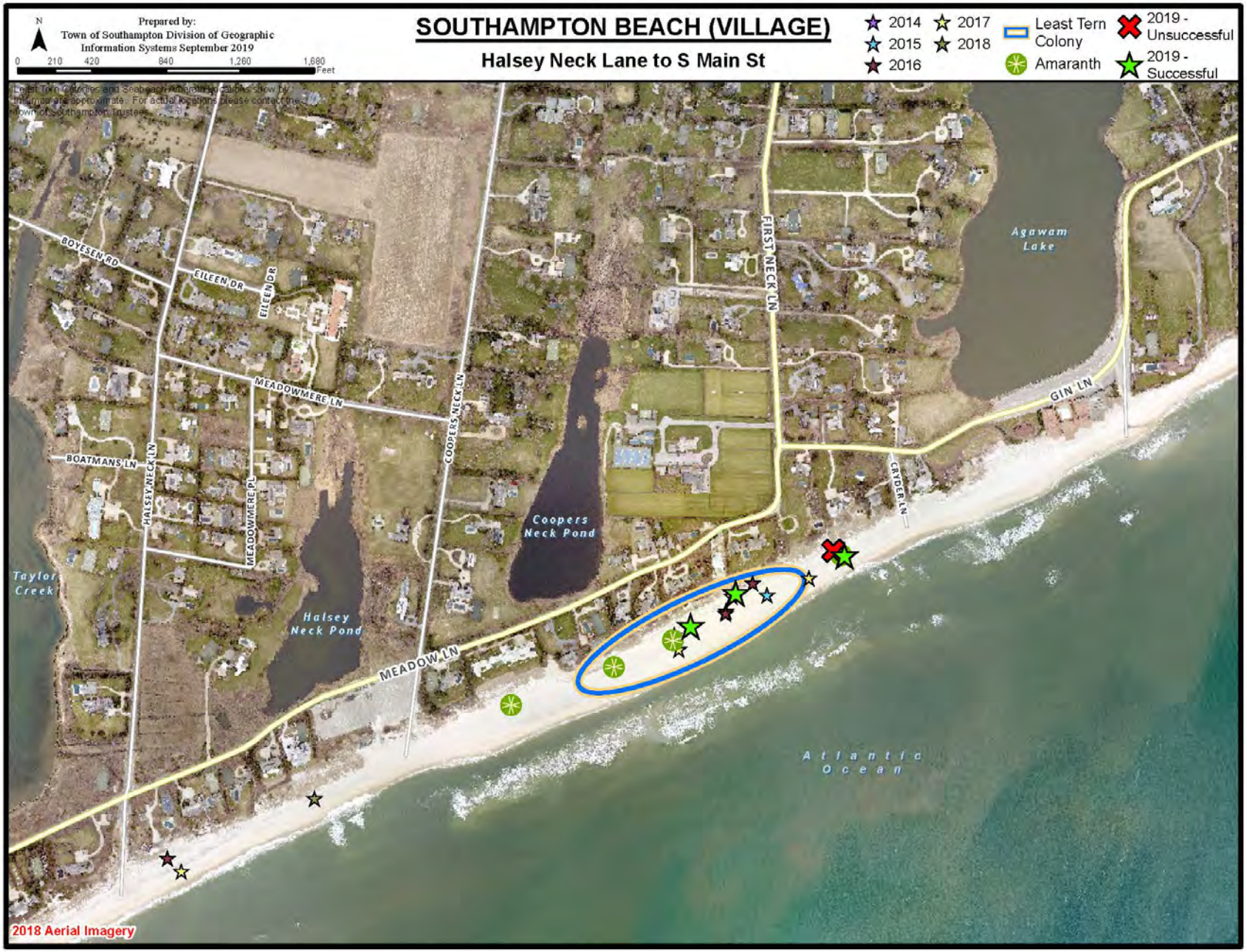

HAMPTON BEACH
Village of Quogue
2014 2015 2016
2017 2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
2018 Aerial Imagery
Shinnecock Bay West
Penniman Creek
Quogue Canal
Ogdens Pond
Quantuck Creek
Upper Quantuck Creek
Quantuck Bay
Atlantic Ocean
DUNE RD
BEACH LN
PRIVATE RD
DOLPHIN LN
MONTAUK HWY
104
80
SOUTH COUNTRY RD
WATERS EDGE DR

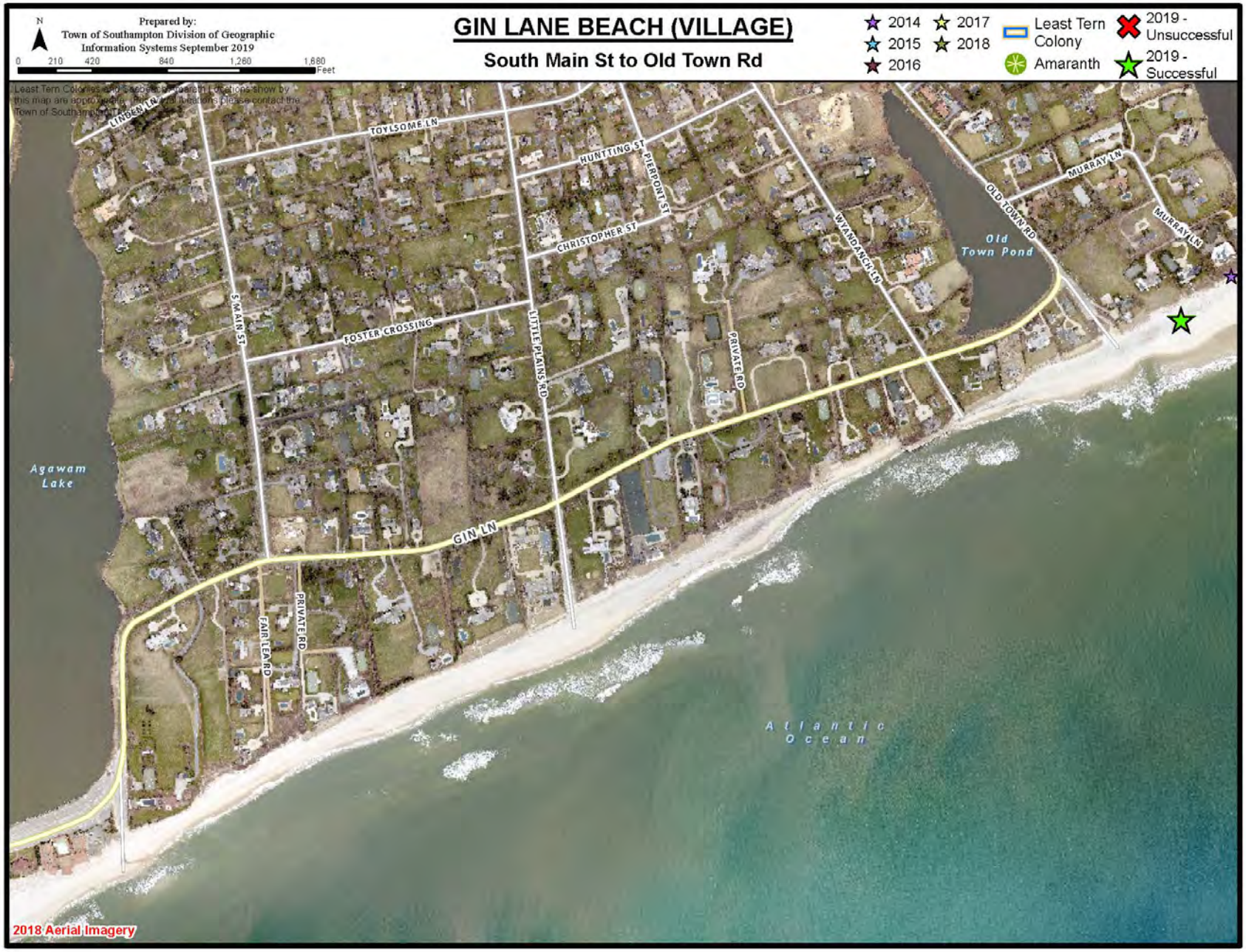

Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 312.5 625 1,250 1,875 2,500 Feet
TIANA BEACH
Hampton Bays
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Shinnecock Bay West
MERMAID LN
TRITON LN
DUNE RD
PRIVATE RD
PRIVATE RD
DOLPHIN LN
Atlantic Ocean
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 180 360 720 1,080 1,440
Feet
PONQUOGUE BEACH
Hampton Bays
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by
symbols are approximate. For actual locations please contact the
Town of Southampton Trustees
Shinnecock Bay East
Shinnecock Bay West
32B
PONQUOGUE BRIDGE
OLD PONQUOGUE BRIDGE
DUNE RD
ROAD I
ROAD K
Atlantic Ocean
2018 Aerial Imagery


Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 287.5 575 1,150 1,725 2,300 Feet
SOUTHAMPTON BEACH (VILLAGE)
Shinnecock East to Road D
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Shinnecock Bay East
MEADOW LN
ROAD D
County Park Rd
Atlantic Ocean
Shinnecock Inlet
2018 Aerial Imagery


SOUTHAMPTON BEACH (VILLAGE)
Road D to Halsey Neck Lane
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 312.5 625 1,250 1,875 2,500 Feet
N
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
Shinnecock Bay East
Heady Creek
Taylor Creek
OLD POINT RD
CAPTAINS NECK LN
MEADOWMERE PL
HALSEY NECK LN
MEADOW LN
ROAD D
Atlantic Ocean
2018 Aerial Imagery


SOUTHAMPTON BEACH (VILLAGE)
Halsey Neck Lane to S Main St
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 210 420 840 1,260 1,680 Feet
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth locations shown by triangles are approximate. For actual locations please contact the Town of Southampton Trustees.
BOYESEN RD
EILEEN DR
EILEEN DR
MEADOWMERE LN
COOPERS NECK LN
FIRST NECK LN
Agawam Lake
GIN LN
BOATMANS LN
HALSEY NECK LN
MEADOWMERE PL
CRYDER LN
Coopers Neck Pond
Taylor Creek
Halsey Neck Pond
MEADOW LN
Atlantic Ocean
2018 Aerial Imagery


GIN LANE BEACH (VILLAGE)
South Main St to Old Town Rd
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
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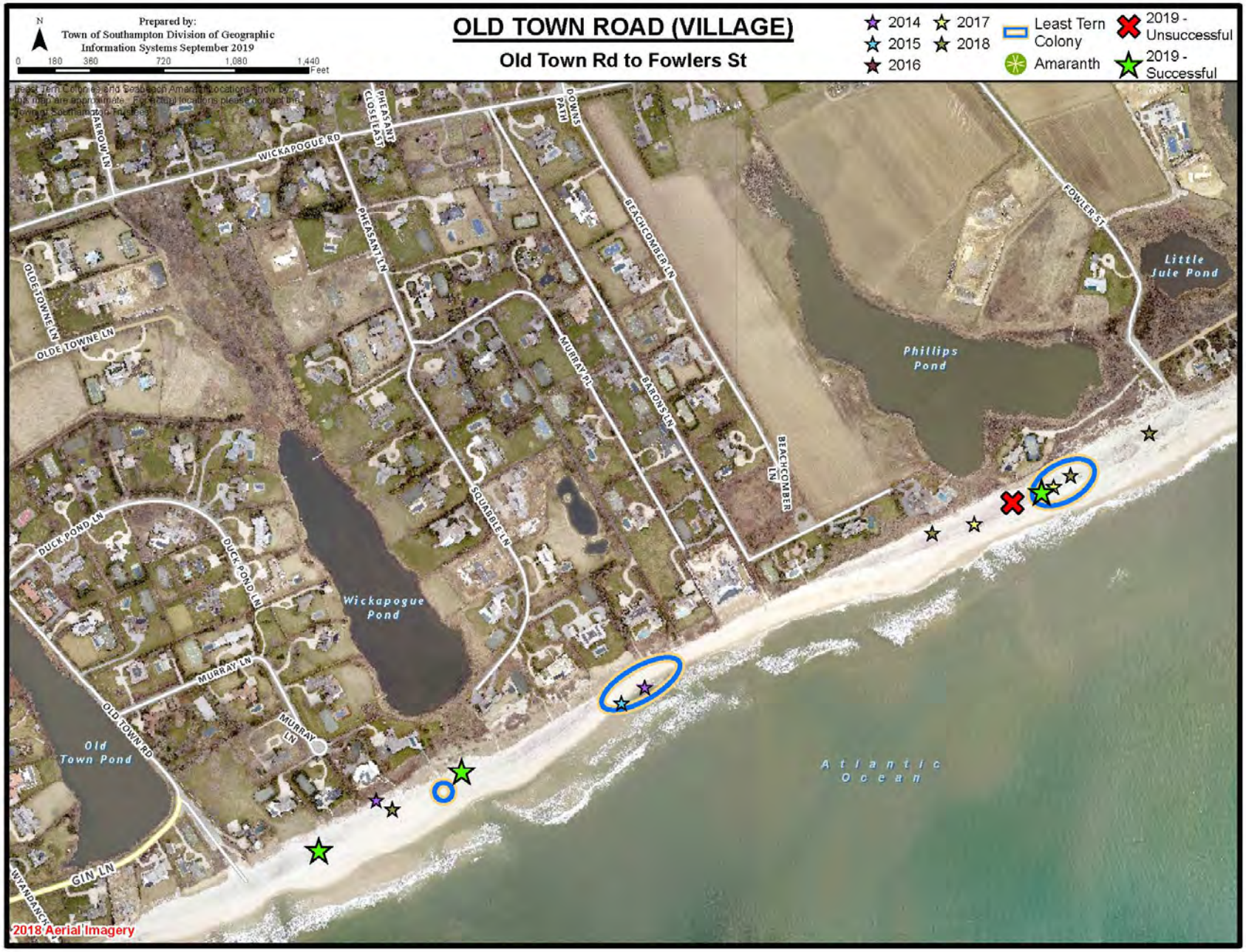
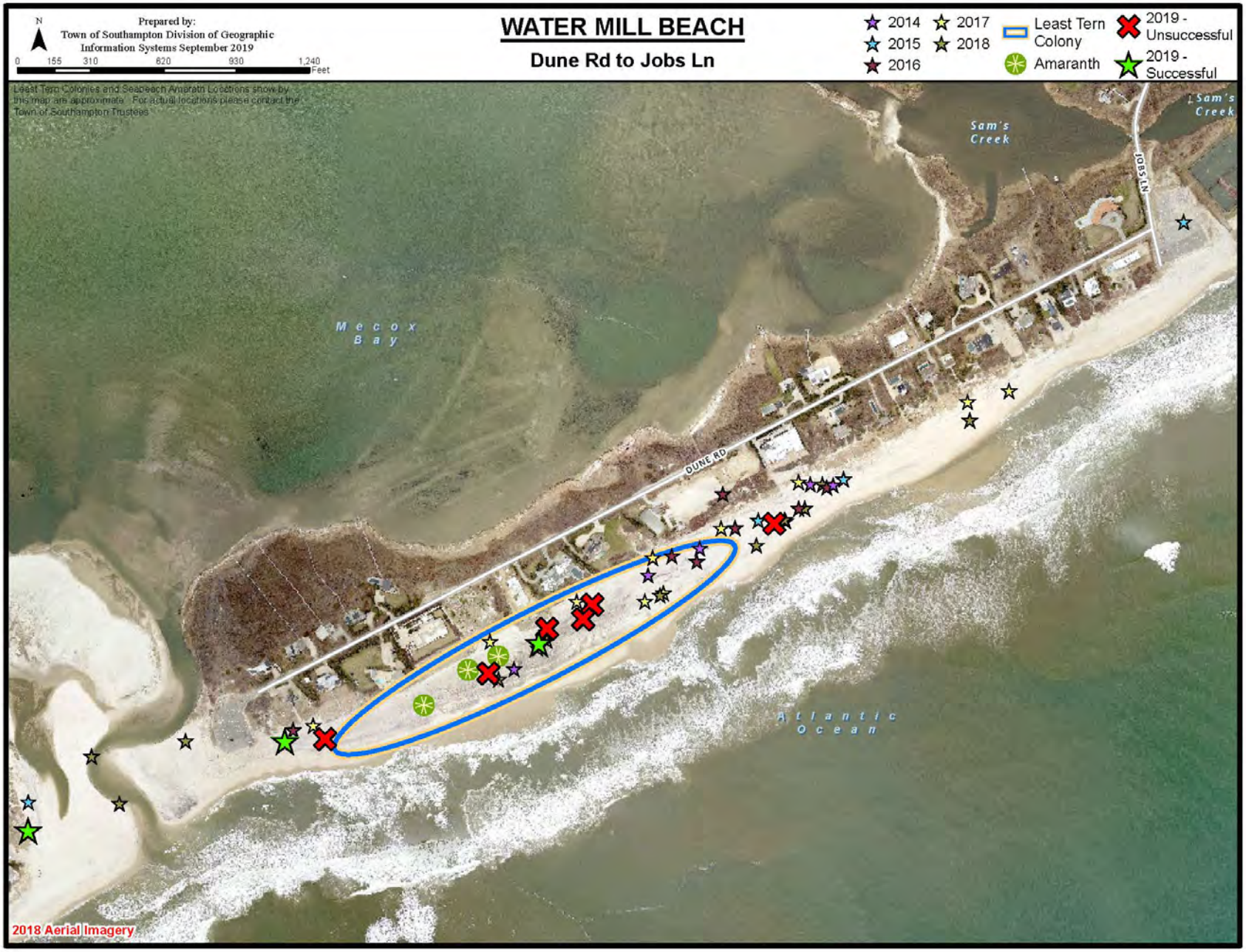
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
LINDEN LN
TOYLSOME LN
HUNTTING ST
PIERPONT ST
CHRISTOPHER ST
WYANDANCH LN
OLD TOWN RD
MURRAY LN
MURRAY LN
Old Town Pond
S MAIN ST
FOSTER CROSSING
LITTLE PLAINS RD
PRIVATE RD
Agawam Lake
GIN LN
FAIR LEA RD
PRIVATE RD
Atlantic Ocean
2018 Aerial Imagery

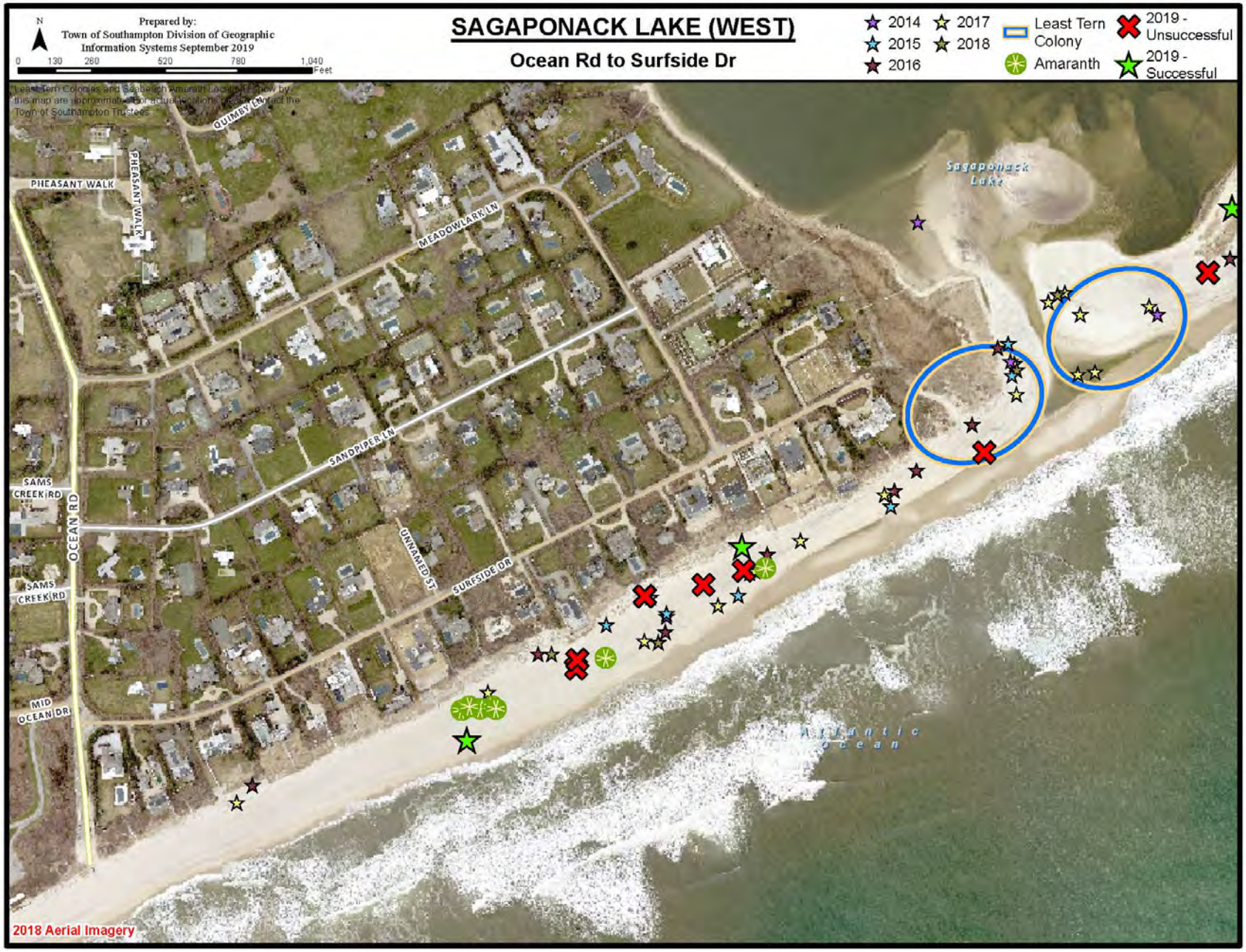

OLD TOWN ROAD (VILLAGE)
Old Town Rd to Fowlers St
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 180 360 720 1,080 1,440
Feet
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth locations shown by this map are approximate. For exact locations please contact the Town of Southampton Trustees.
WICKAPOGUE RD
PHEASANT CLOSE EAST
PHEASANT LN
DOWNS PATH
BEACHCOMBER LN
FOWLER ST
Little Jule Pond
Phillips Pond
OLDE TOWNE LN
MURRAY PL
BARONS LN
BEACHCOMBER LN
SQUABBLE LN
DUCK POND LN
Wickapogue Pond
MURRAY LN
OLD TOWN RD
Old Town Pond
GIN LN
WHANDANNCK
Atlantic Ocean
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 155 310 620 930 1,240
Feet
WATER MILL BEACH
Fowlers St to Flying Pt Rd
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
CHANNEL POND CT
JULE POND DR
FLYING POINT RD
FLYING POINT RD
Mecox Bay
Channel Pond
Jule Pond
FOWLER ST
Little Jule Pond
Phillips Pond
Atlantic Ocean
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 130 260 520 780 1,040
Feet
WATER MILL BEACH
Flying Point Rd to Dune Rd
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Mecox Bay
Burnets Cove
BURNETTS COVE RD
DUNE RD
FLYING POINT RD
FLYING POINT RD
Channel Pond
Atlantic Ocean
2018 Aerial Imagery

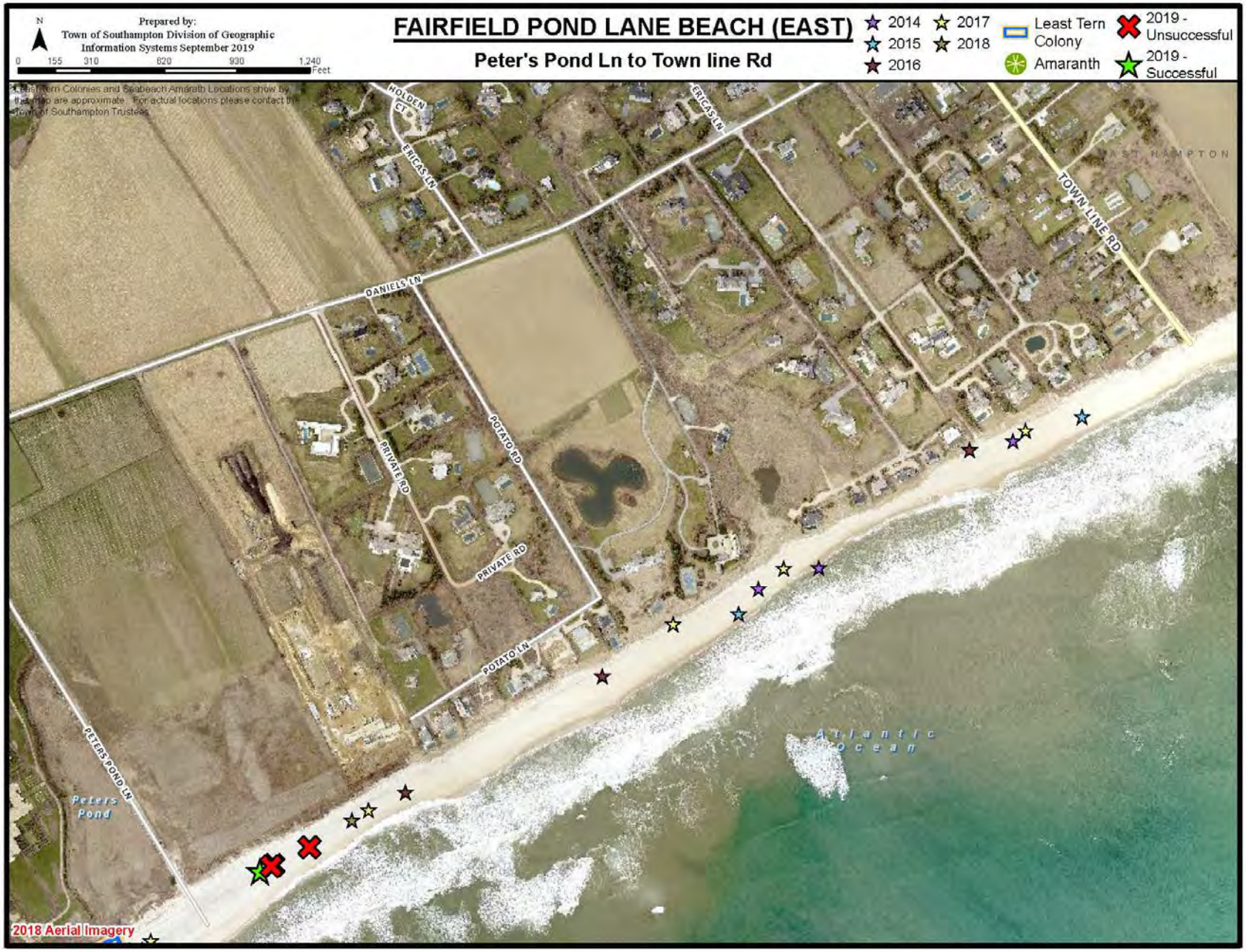

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 155 310 620 930 1,240
Feet
WATER MILL BEACH
Dune Rd to Jobs Ln
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Sam's Creek
Sam's Creek
JOBS LN
DUNE RD
Mecox Bay
Atlantic Ocean
2018 Aerial Imagery

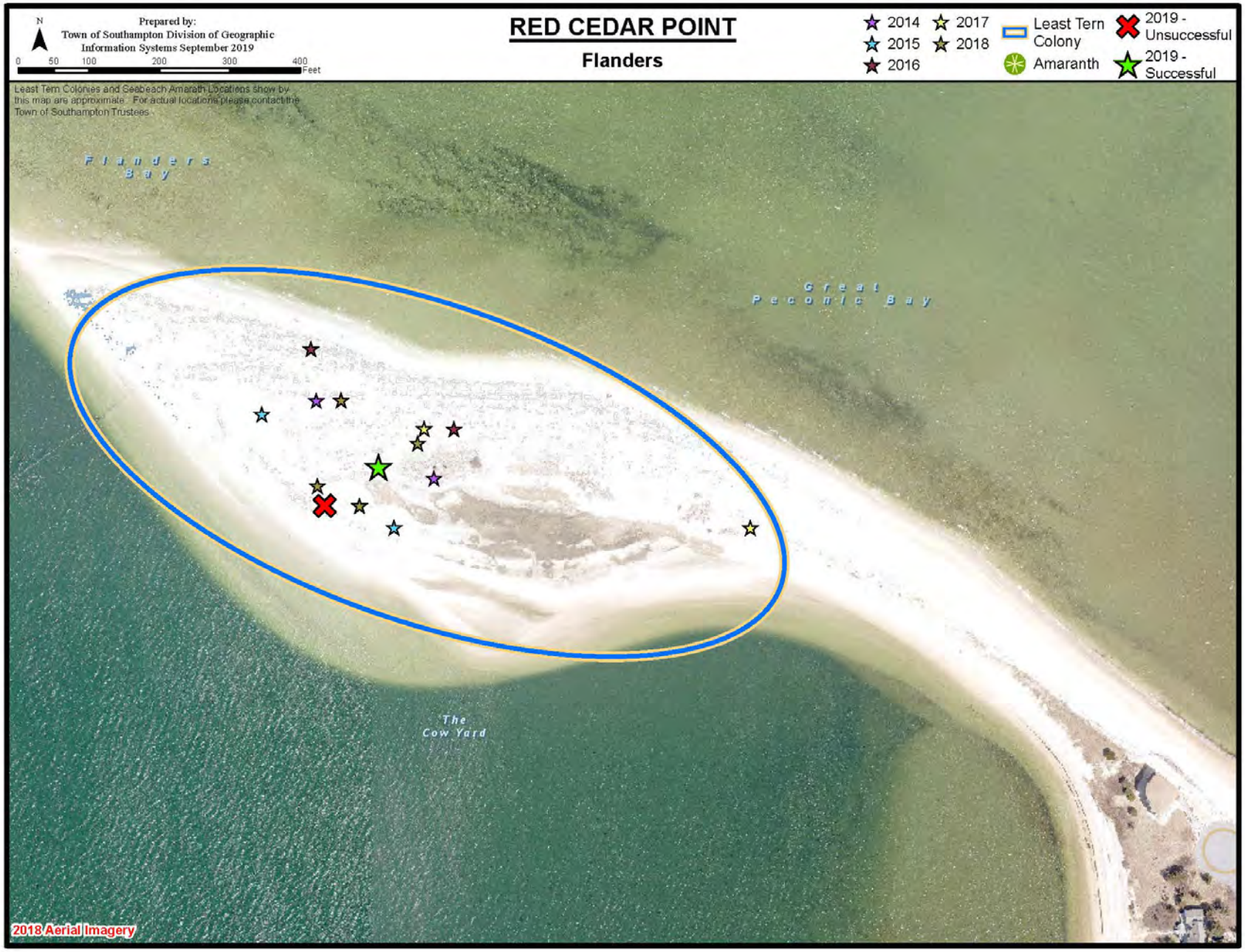

SAM'S CREEK / MECOX BEACH
Jobs lane to Ocean Rd
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 155 310 620 930 1,240 Feet
N
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations shown on this map are approximate. For actual locations please contact the Town of Southampton Trustees.
2018 Aerial Imagery
Swan Creek
AMBLESIDE LN
ROSE WAY
ROSE WAY
MEADOWLARK LN
SANDPIPER LN
SAMS CREEK RD
OCEAN RD
SURFSIDE DR
POINTE MECOX LN
POINTE MECOX LN
JOBS LN
Sam's Creek
Sam's Creek
MID OCEAN DR
DUNE RD
Mecox Bay
Atlantic Ocean

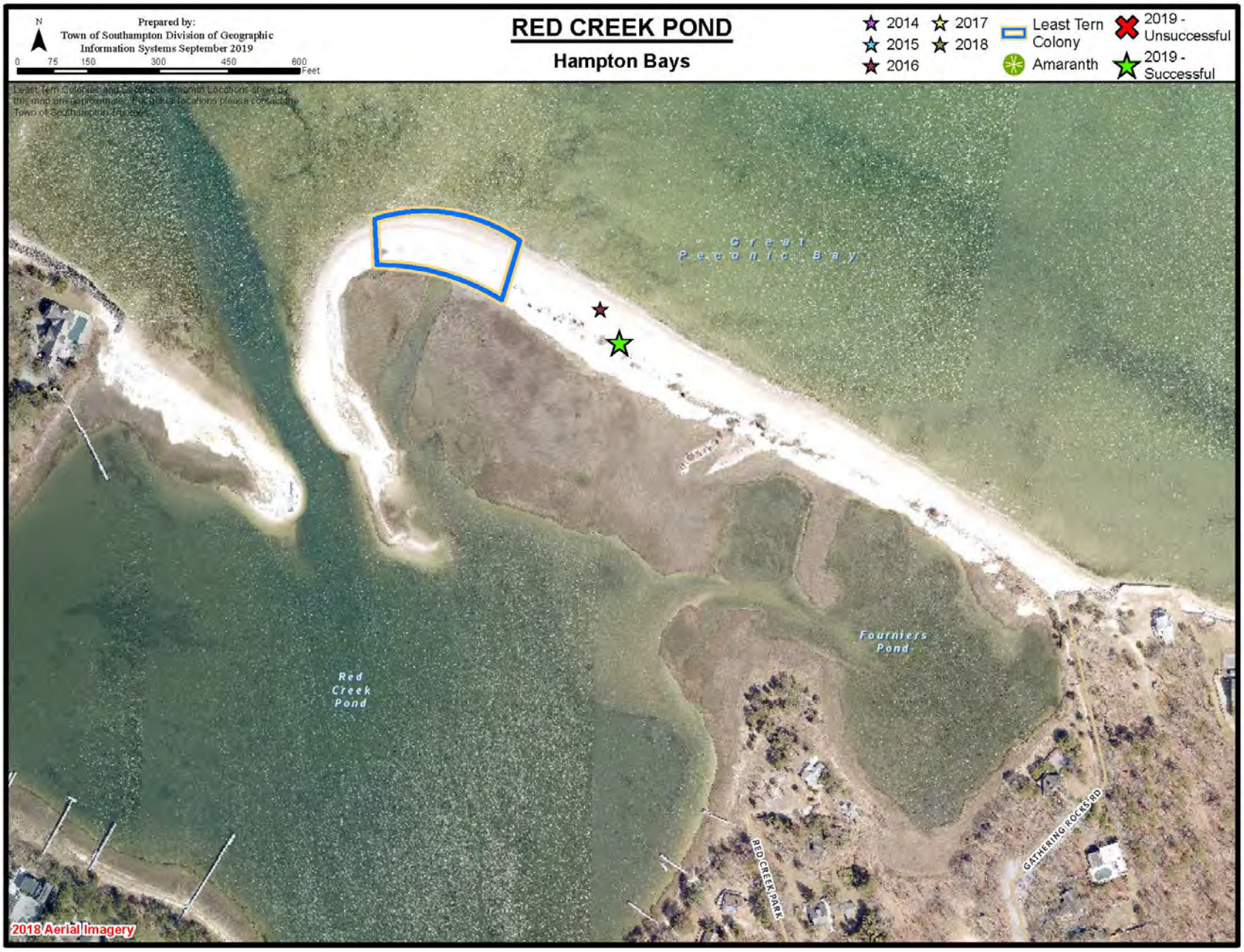

SAGAPONACK LAKE (WEST)
Ocean Rd to Surfside Dr
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 130 260 520 780 1,040 Feet
N
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations Shown by this map are approximate for actual locations, please contact the Town of Southampton Trustees
QUIMBY LN
PHEASANT WALK
PHEASANT WALK
MEADOWLARK LN
SANDPIPER LN
SAMS CREEK RD
OCEAN RD
SAMS CREEK RD
UNNAMED ST
SURFSIDE DR
MID OCEAN DR
Sagaponack Lake
Atlantic Ocean
2018 Aerial Imagery

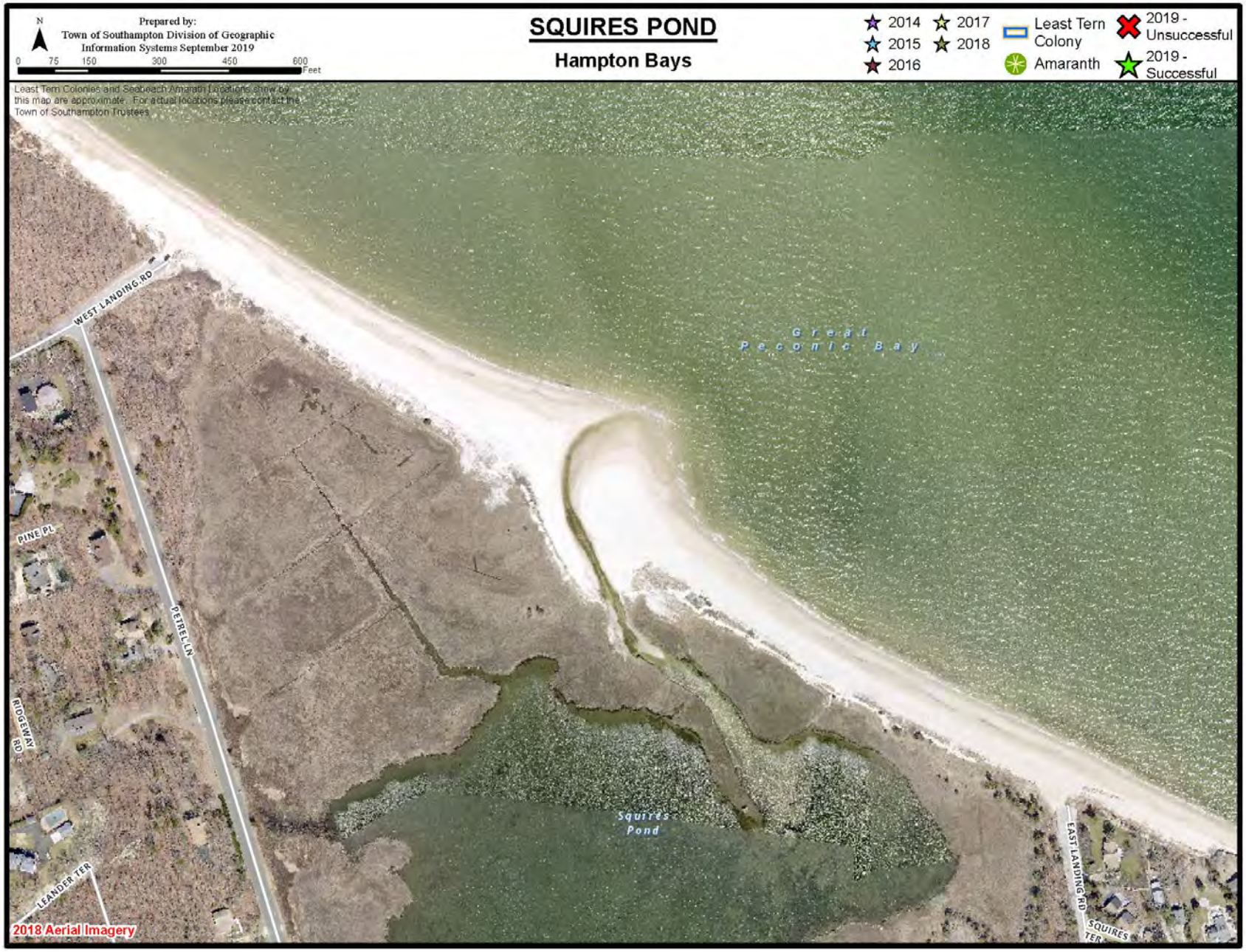

SAGAPONACK LAKE (EAST)
Sagg Main St to Gibson Ln
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 180 360 720 1,080 1,440
Feet
N
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations shown by this map are approximate. For actual locations please contact the Town of Southampton Trustees
BRIDGE LN
SAGAPONACK MAIN ST
SAGG POND CT
SEASCAPE LN
TREES LN
CRESTVIEW LN
GIBSON LN
ROW OFF GIBSON LN
SANDDUNE CT
Sagaponack Lake
Atlantic Ocean
2018 Aerial Imagery


FAIRFIELD POND LANE BEACH (WEST)
Gibson Ln to Peter's Pond
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
N
0 155 310 620 930 1,240 Feet
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
DANIELS LN
FAIRFIELD POND LN
PETERS POND LN
Peters Pond
Fairfield Pond
CRESTVIEW LN
GIBSON LN
TREES LN
ROW OFF GIBSON LN
Atlantic Ocean
2018 Aerial Imagery


FAIRFIELD POND LANE BEACH (EAST)
Peter's Pond Ln to Town line Rd
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 155 310 620 930 1,240 Feet
N
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
HOLDEN CT
ERICAS LN
ERICAS LN
DANIELS LN
TOWN LINE RD
EAST HAMPTON
POTATO RD
PRIVATE RD
PRIVATE RD
POTATO LN
PETERS POND LN
Peters Pond
Atlantic Ocean
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 50 100 200 300 400
Feet
RED CEDAR POINT
Flanders
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Flanders Bay
Great Peconic Bay
The Cow Yard
2018 Aerial Imagery

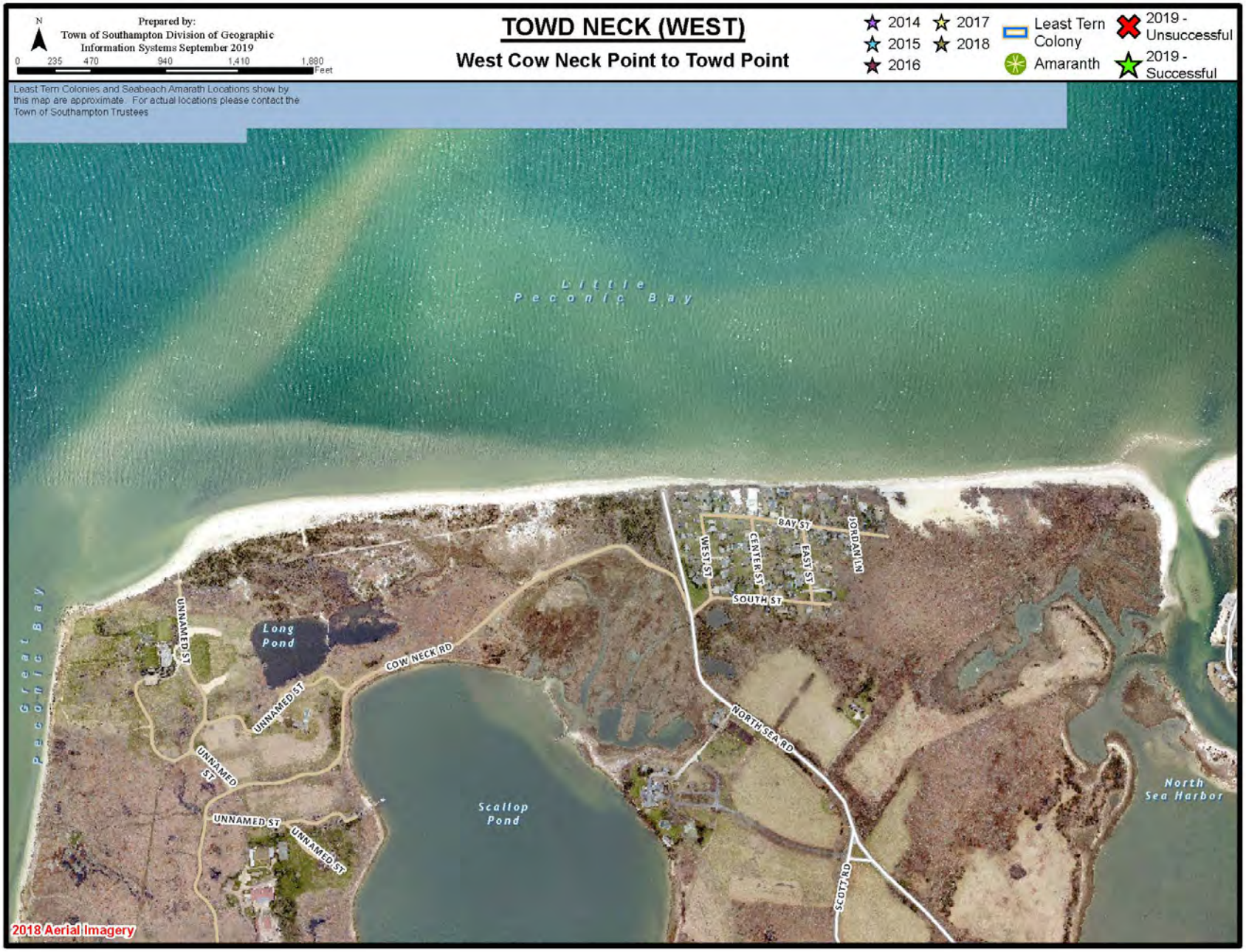

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 75 150 300 450 600
Feet
RED CREEK POND
Hampton Bays
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
Great Peconic Bay
Red Creek Pond
Fourniers Pond
RED CREEK PARK
GATHERING ROCKS RD
2018 Aerial Imagery

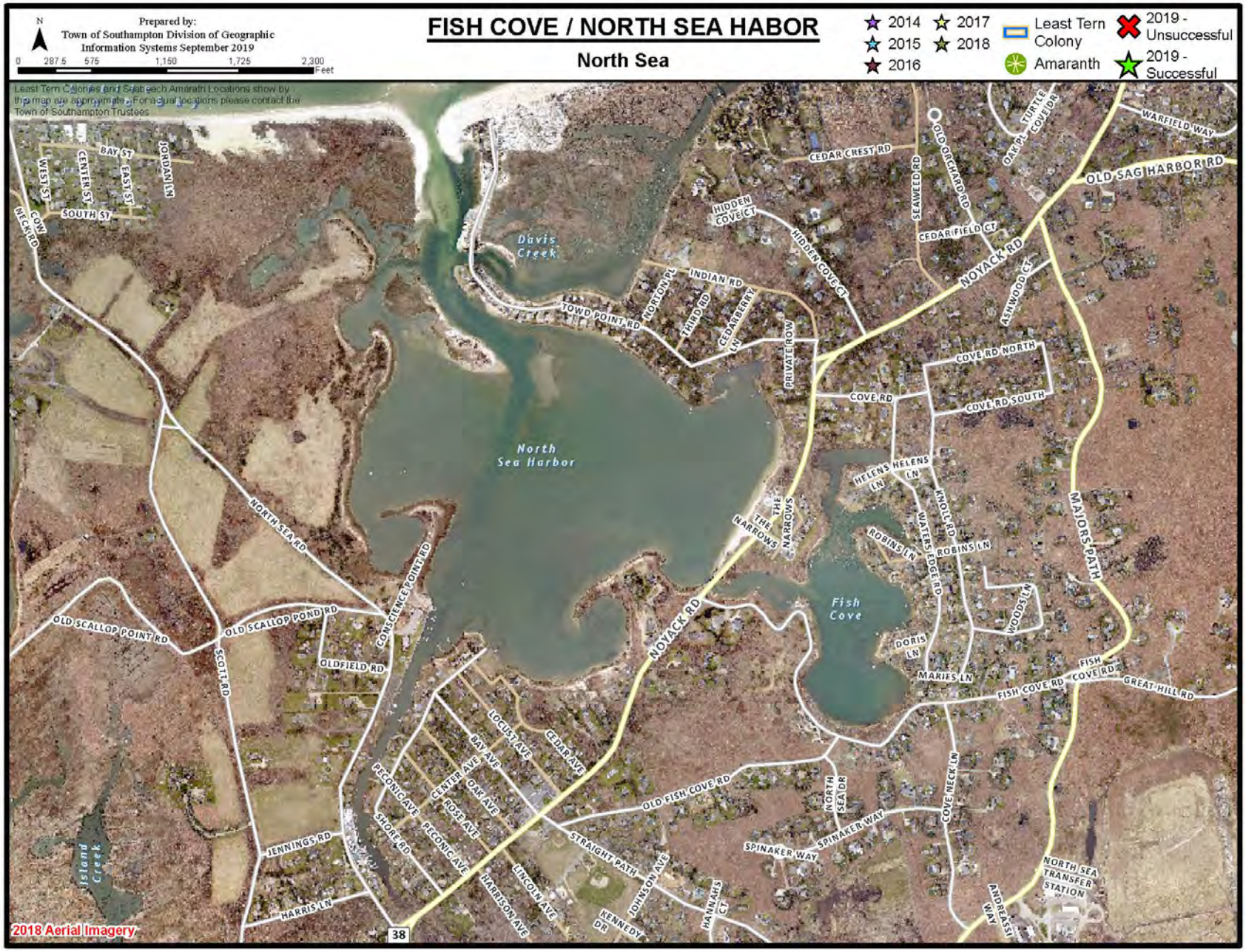

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 75 150 300 450 600
Feet
SQUIRES POND
Hampton Bays
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations shew by this map are approximate. For actual locations please contact the Town of Southampton Trustees
WEST LANDING RD
Great Peconic Bay
PINE PL
PETREL LN
RIDGEWAY RD
LEANDER TER
Squires Pond
EAST LANDING RD
SQUIRES TER
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 50 100 200 300 400
Feet
CANOE PLACE BEACH
Hampton Bays
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations Shown By This Map are Approximate. For actual locations please contact the Town of Southampton Trustees
Great Peconic Bay
Shinnecock Canal
BAYVIEW AVE
SUNSET AVE
62
SHINNECOCK PL
PINE TREE PL
HAMPTON PL
2018 Aerial Imagery


Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 75 150 300 450 600 Feet
MESCHUTT BEACH
Hampton Bays
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Great Peconic Bay
NORTH RD
39
39B
OLD NORTH HWY
CEDAR POINT RD
RUTH PL
WIND MILL LN
MIDGIE LN
BAY HILL RD
OAKHURST RD
PECONIC OVERLOOK
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 75 150 300 450 600
Feet
MIDDLE POND
Shinnecock Hills
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations shown by this map are approximate. For actual location please contact the Town of Southampton Trustees.
Far Pond
BAYBERRY COVE LN
FAR POND RD
Honey Pot
Middle Pond
LITTLE NECK RD
Shinnecock Bay East
2018 Aerial Imagery

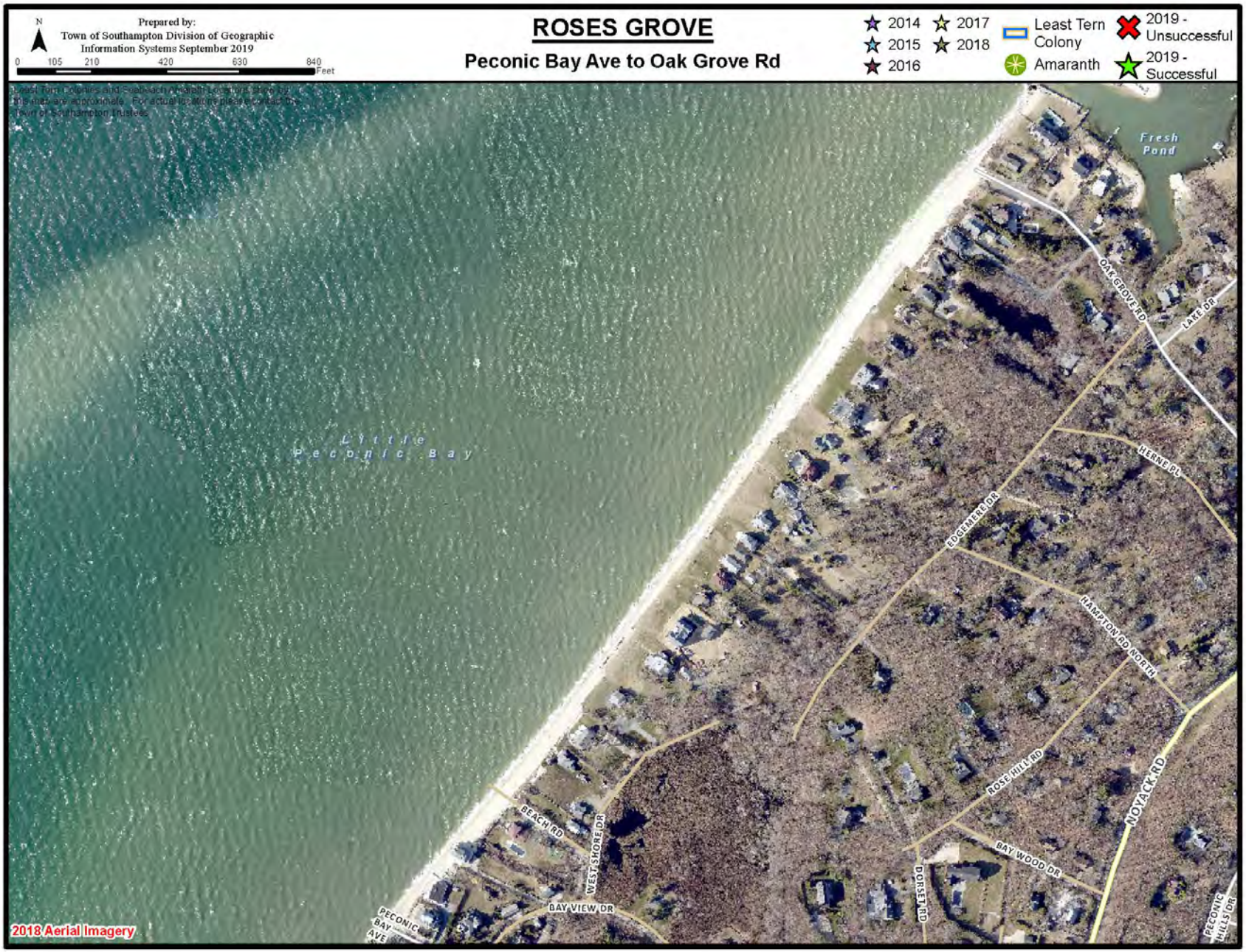

N
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 235 470 940 1,410 1,880 Feet
TOWD NECK (WEST)
West Cow Neck Point to Towd Point
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amarath Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Little Peconic Bay
Great Peconic Bay
Long Pond
Scallop Pond
North Sea Harbor
COW NECK RD
NORTH SEA RD
SCOTT RD
SOUTH ST
BAY ST
WEST ST
CENTER ST
EAST ST
JORDAN LN
UNNAMED ST
2018 Aerial Imagery


FISH COVE / NORTH SEA HABOR
North Sea
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 287.5 575 1,150 1,725 2,300 Feet
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Davis Creek
North Sea Harbor
Fish Cove
Island Creek
NOYACK RD
OLD SAG HARBOR RD
NORTH SEA RD
OLD SCALLOP POINT RD
OLD SCALLOP POND RD
SCOTT RD
CONSCIENCE POINT RD
OLDFIELD RD
JENNINGS RD
HARRIS LN
SHORE RD
RECONIC AVE
CENTER AVE
OAK AVE
ROSE AVE
BAY AVE
LOCUST AVE
CEDAR AVE
LINCOLN AVE
HARRISON AVE
KENNEDY DR
JOHNSON AVE
HANNAHS CT
STRAIGHT PATH
OLD FISH COVE RD
NORTH SEA DR
SPINAKER WAY
COVE NECK LN
ANDREASSI WAY
NORTH SEA TRANSFER STATION
FISH COVE RD
GREAT HILL RD
MARIES LN
DORIS LN
WOODS LN
ROBINS LN
WATERS EDGE RD
KNOLL RD
HELENS LN
THE NARROWS
MAJORS PATH
COVE RD
COVE RD NORTH
COVE RD SOUTH
PRIVATE ROW
TOWD POINT RD
NORTON PL
THILO RD
CEDARBERRY LN
INDIAN RD
HIDDEN COVE CT
HIDDEN COVE CT
CEDAR CREST RD
SEAWEED RD
OLD ORCHARD RD
CEDAR FIELD CT
ASHWOOD CT
TURTLE COVE DR
OAK PL
WARFIELD WAY
WEST ST
CENTER ST
BAY ST
EAST ST
JORDAN LN
SOUTH ST
COW NECK RD
2018 Aerial Imagery
38


N
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 130 260 520 780 1,040 Feet
TOWD NECK (EAST)
East Towd Point (Inlet) to Scotts Landing Rd
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
Little Peconic Bay
Turtle Cove
Davis Creek
SCOTTS LANDING RD
TWIN VIEW DR
W BEACH DR
SEAWEED RD
OLD ORCHARD RD
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 75 150 300 450 600 Feet
WOOLEY POND (WEST)
West Scotts Landing to Bulkhead
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees.
Little Peconic Bay
Wooley Pond
EAST BEACH DR
SCOTTS LANDING RD
EDGEMERE DR
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 50 100 200 300 400
Feet
WOOLEY POND (EAST)
East/North Point to Peconc Bay Ave
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
BEACH RD
BAY VIEW DR
PECONIC BAY AVE
Little Peconic Bay
Wooley Pond
2018 Aerial Imagery


ROSES GROVE
Peconic Bay Ave to Oak Grove Rd
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 105 210 420 630 840
Feet
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations shown by
this map are approximate. For actual locations please contact the
Town of Southampton Trustees.
Little Peconic Bay
Fresh Pond
OAK GROVE RD
LAKE DR
HERNE PL
EDGEMERE DR
HAMPTON RD NORTH
ROSE HILL RD
NOYACK RD
BAY WOOD DR
DORSET RD
WEST SHORE DR
BEACH RD
BAY VIEW DR
PECONIC BAY AVE
PECONIC HILLS DR
2018 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 75 150 300 450 600
Feet
FRESH POND
Bulkhead to Lake Dr.
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual location, please contact the Town of Southampton Trustees.
Little Peconic Bay
Fresh Pond
EAST SHORE RD
EAST SHORE DR
BAY VIEW RD
BAY VIEW RD NORTH
BAY VIEW RD WEST
LAKE DR
LAKE DR NORTH
TERN RD
OAK GROVE RD
RED CEDAR RD
2018 Aerial Imagery


Prepared by:
Town of Southampton Division of Geographic Information Systems September 2019
0 130 260 520 780 1,040 Feet
PINE NECK / MILL CREEK
Noyac
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Least tern colonies and seabeach amaranth locations shown on this map are approximate. For actual locations please contact the Town of Southampton Trustees.
Noyac Bay
Mill Creek
PRIVATE RD
PINE NECK AVE
HAMPTON RD
OAK RD
OAK ST
CEDAR ST
PINE RD
NOYACK AVE
MAPLE ST
RIGHT OF WAY (NOYACK AVE)
BRIAR LN
PINE NECK AVE
CHESTNUT ST
POPLAR ST
BIRCH ST
WALNUT ST
DOGWOOD ST
NOYACK BAY AVE
BERNARD PL
OAK DR NORTH
TREDWELL LN
MILL RD
HARRYS LN
LOCUST LN
MUNCHOGUE DR
NOYACK RD
NORTHVIEW DR
BURKESHIRE DR
2018 Aerial Imagery


GENET CREEK
North Haven
Prepared by:
Town of Southampton Division of Geographic
Information Systems September 2019
0 105 210 420 630 840
Feet
2014
2015
2016
2017
2018
Least Tern Colony
Amaranth
2019 - Unsuccessful
2019 - Successful
Shelter Island Sound
Genets Creek
NORTH DR
WEST DR
SOUTH DR
EZEKILLS HOLLOW
STOCK FARM LN
SEAPONACK DR
WIDOW COOPERS PATH
NORTH HAVEN WAY
FAIRLEIGH CT
2018 Aerial Imagery


TRUSTEES
OF THE COMMONALTY OF SOUTHAMPTON TOWN, N.Y.