

# SOUTHAMPTON TOWN TRUSTEES THREATENED AND ENDANGERED SPECIES MANAGEMENT AND PROTECTION PROGRAM



## 2017 Year End Report

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## **Executive Summary**

Over the 2017 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 8 ocean sites and 15 bay sites, covering approximately 26 miles of coastline. Within these sites 53 nesting pairs of piping plover were observed throughout the duration of the breeding season. This is an increase of ten nesting pairs from the previous year. Although we saw an increase in the number of nesting pairs present on our sites we unfortunately saw less of the young fledge at only 68 observed fledges giving an overall productivity of 1.17 fledges per pair. Piping plovers began to arrive on our shorelines in mid-March to establish nesting territories, although inclement weather coupled with some extraordinarily high tides in the late spring delayed the breeding process for many of these birds. Like-wise within the aforementioned management areas there were approximately 335 breeding pairs of least tern that were observed fledging 260 young least terns for an overall productivity of 0.78 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 predation. Additionally, a total of 127 seabeach amaranth plants were identified at 7 of the 8 ocean sites and a total of 2,702 seabeach knotweed plants were identified at 7 ocean sites and 4 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*). Other migratory bird species are also monitored although none were observed nesting on our beaches this year.

### **Program Objective**

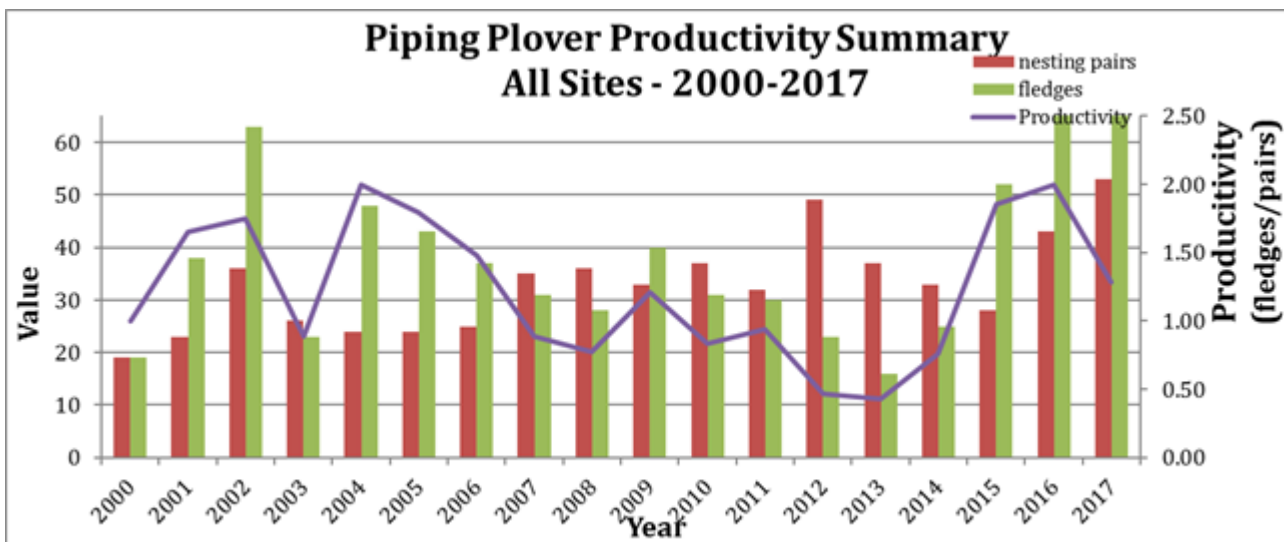
The T + E Program seeks to provide reasonable and adequate protection for the current populations of threatened and endangered flora and fauna that reside, breed and rely upon our coastal zones for their species longevity. Management efforts are directed toward increasing the annual productivity of these 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, threatened and endangered species recovery in the Southampton area was jointly managed by the U.S. Fish and Wildlife Service (USFWS), the Nature Conservancy (TNC), and the New York State Department of Environmental Conservation (NYSDEC). 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. The remaining sites in the Town of Southampton are managed by TNC, NYSDEC, USFWS, Suffolk County Department of Parks, Recreation and Conservation (SCDPRC) and a private consulting firm.

Over the course of the last 14 years, additional sites have been 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 can be 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.



Graph 1: The historic number of pairs, fledges and productivity within sites monitored by Southampton Town Trustees T&E Program from 2000 to 2017. 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 can be found on Long Island making use of our bay and ocean beaches for breeding purposes. They are 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.



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 that has been picked up or moved. **(Figure 3)** The symbolic fencing will be rearranged to reflect the birds’ behaviors during this time in order to provide them with an adequate buffer against disturbances. After copulation, the female will lay one egg every other day until a full clutch is formed, usually three to four eggs, which is considered a first nest attempt.



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



Figure 3: The first scrape of the year found between Surf Club in Quogue and the Quogue Beach Club. 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. Nest failure can be caused by many factors including frequent disturbance while incubating, exposure, predation, abandonment, infertility, vandalism and nest washout cause by wave 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 enclosure will be installed around the nests to aid in their protection from predators (**Figure 4**).



Figure 4: An enclosure 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**).



**Figure 5: Piping plover chicks from Towd Beach hatching out!**

After estimating the hatch date of a nest, snow fencing will be placed perpendicular to the dune a distance of 1000 m in either direction from the nest location restricting vehicles and dogs from the area. This is done 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. Once a chick has aged 35 days or upon observation of the fledgling's ability to fly adequately for a minimum distance of 15m, they will be considered fledged and factored into the species' productivity. 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 that must be met. 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 waterbird 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. 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 don't compete for food. Due to infringement on these habitats they have also been 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, consisting of 3 total chicks.

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 near Round Dune apartments coming in for the swoop'n'poop while protecting the colony!

The chicks will commonly be seen sheltering in the shade of beach debris and foliage as well as in tire tracks and footprints. Nesting colonies are 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 was presumed this annual beachfront plant had 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 range. 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 here on Long Island, coming to maturation between August and September. 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 are 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 should 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**

The annual beachfront plant, seabeach knotweed is found on bay and ocean shorelines of Southampton Town between the foredune, shoreline and bordering salt marshes. It is typically found in areas that are sparsely vegetated and have a relatively flat topography. Knotweed typically flowers from May to October and fruits from June to November dispersing seed via wind, wave action and birds. In NYS, 43 existing populations are currently recognized, which are relatively stable although due to the dynamic environment these plants grow in there are fluctuations in population numbers from year to year. In order to accurately determine the quantity and quality populations are derived from 5-year averages for species evaluation. (NYHP 2010)



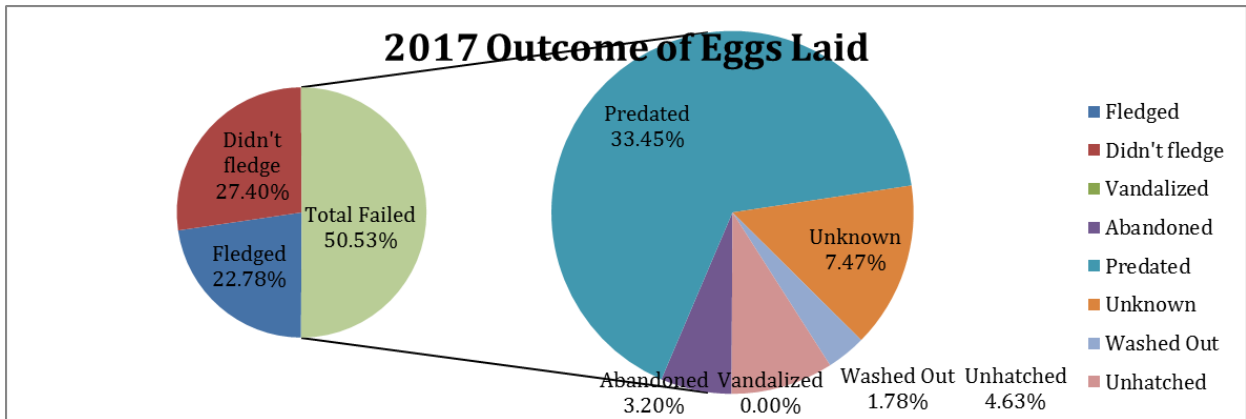
Figure 9: Seabeach knotweed photo courtesy of NY Natural Heritage Program

## Threats to Species

### Piping Plover and Least Tern

Within Southampton Town, shorebird reproductive success faces numerous challenges and threats. Generally speaking, 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 are not to be understated and are also 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 foraging broods' 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 are 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 2017 breeding season 281 eggs were laid in 74 nests by the 53 pairs of piping plover that nested within our management sites. Of those 281 eggs 48.75% hatched with just less than 1/2 of those hatchlings making it to fledge. The loss of the chicks was often by undetermined causes and resulted in a loss of about 56% of chicks that didn't fledge, although it is assumed they were either predated or died from exposure due to the low rate of corpse discovery. Additionally, 50.53% 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 33.45% of the eggs laid. Nests that were abandoned (3.2%) can be attributed to predatory pressures as well as frequent disturbances by beach recreation in close proximity to nest sites by pedestrians and homeowners having little regard for symbolic fencing. For example, intentionally unleashing a dog into a fenced nesting area in hopes to deter the birds from nesting. A total of 1.7% of eggs were washed out as a product of either tidal inundation or flooding due to high wave action, most of which took place in the early season due to inclement weather and lunar tides. 4.63% of eggs were unviable and did not hatch most likely due to either infertility or exposure. Although in one instance a homeowner took it upon himself to move the fencing to reclaim his beach and by doing so caused the abandonment of a least tern nest along with the overexposure of one egg that never hatched from the piping plover nest in the area. For the remaining 7.47% of eggs laid the cause of failure was unknown having no signs of any of the other factors.



### Seabeach Amaranth and Seabeach Knotweed

Threats to seabeach amaranth and seabeach knotweed propagation includes intense recreational use primarily beach driving, coastal development, predation by mammals and insects, beach stabilization efforts and non-native plant introduction.

## Site Activity Summaries

Within our sites a total of 53 nesting pairs of piping plover fledged 68 young piping plover resulting in a total productivity of 1.28 fledges per pair. Additionally, 335 least tern pairs were observed nesting and fledging 260 young least terns having a resultant productivity of .78 fledges per pair. For completed site reviews and data sets, see the following tables in the appendix. Overall, it was as successful of a season as could be achieved. Through the season, unfortunately several heinous acts by a few of our citizens had negative impacts on the breeding birds' success. However, these instances gave the staff a chance to provide valuable information educating the instigator on the breeding biology, chronology, behaviors, and importance of the work being done to achieve the recovery goals. It should be stated that the general sentiment of the community during the breeding season reflected positivity and support on the whole, and some great outreach was able to take place through a partnership with the South Fork Nature Museum.

### 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 subsites: Hampton and Tiana. Dogs off the leash, vandalism of fencing and ORV drivers ignoring/removing fencing were all concerns for the entirety of the site along with predatory presence of rats, crows and cats.

***Plover Activity: 10 pair, 14 fledge, 1.40 productivity***

***Tern Activity: 25 pair, 18 fledge, 0.72 productivity***

***Seabeach amaranth: 29 plants***

***Seabeach knotweed: 36 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 8 breeding pairs of plovers who made 12 nesting attempts over the course of the season. Four of these nests were successful fledging 9 plovers. This area has had chronic issues from predator pressures coupled with pedestrian/recreation pressures from homeowners and the public alike. Six of the nests here were predated and one was lost due to unknown causes although likewise was presumed to have been due to some form of predatory influence; primarily based on the noted presence of feral cats and the many crows throughout the site. There was also one tern colony within this site, one just east of Rogers pavilion with approximately 25 breeding pairs who fledged 18 young. This colony found just west of Quantuck Beach Club originally contained many more birds although the predatory pressures from the cats forced many to abandon the nesting site early on in the season. 29 total amaranth plants were found within Hampton 55% of which were found within areas already symbolically fenced for nesting birds. Additionally, 27 seabeach knotweed plants were found. Some concerns for the site over the season was the disregard by homeowners of the symbolically fenced areas often ignoring arranged walkways and simply passing

through fenced areas (in one instance having a party within) or worse tearing down fencing, as well as having bonfires in close proximity to these fenced areas. In one instance it was noted that a homeowner had been shooting pellets at the nesting tern colony in order to deter them from nesting.

***Plover Activity: 8 pair, 12 fledges, 1.13 productivity***

***Tern Activity: 22 pair, 12 fledges, .55 productivity***

***Seabeach Amaranth: 29 plants***

***Seabeach Knotweed: 36 plants***

### **Tiana**

This site encompasses Round Dune housing complex east to the Tiana Beach pavilion. There were a total of 2 pairs who called Tiana home and they fledged 5 plovers with a productivity of 2.5. There were a total of three nesting attempts by these birds only two of which were successful. One of the successful nests, located just inside of a rehabilitated overwash area was exclosed but, unfortunately was abandoned due to predatory influence. The two successful nests fledged a total of 5 young. There was also a very small least tern colony in the overwash area consisting of three nesting pairs who fledged 6 young constituting a 2.0 productivity. A total of nine seabeach knotweed plants were observed here.

***Plover Activity: 2 pair, 5 fledge, 2.50 productivity***

***Tern Activity: 3 pair, 6 fledges, 2.0 productivity***

***Seabeach knotweed: 9 plants***

### **Southampton Beach (Village)**

Located within the village of Southampton this site extends from the east boundary of the Shinnecock County Park out to South Main Street. There are 3 sub-sites that Southampton Beach is divided into, listed below. Persistent and excessive beach raking by both private and municipal entities within this site were a perpetual problem and threat all season long, along with dogs off the leash and ORV drivers taking down and driving around fenced areas where nesting and brood rearing was occurring.

***Plover activity: 8 pair, 11 fledge, 1.38 productivity***

***Tern Activity: 22 pair, 27 fledge, 1.23 productivity***

***Seabeach Amaranth: 4 plants***

***Seabeach knotweed: 12 plants***

### **Shinnecock County Park to Rd. D**

This site was predominately inactive most likely due to the heavy beach activity with 24-hour beach driving in the picnic area. There was one pair that nested here although after a full clutch of eggs was reached shortly thereafter the nest was predated. The pair remained in the area for two weeks post predation but did not re-nest and eventually relocated.

***Plover activity: 1 pair, 0 fledge, 0 productivity***

***Seabeach knotweed: 7 plants***

### **Rd. D to Halsey Neck Lane**

Three nesting pairs were observed between Rd. D and Halsey Neck Lane fledging four plovers for a total productivity of 1.33 fledge per pair. There were a total of four nesting attempts one of which was predated and another, which succumbed to excessive erosion causing the nest to be washed out. Other threats to the pairs included ORV drivers disregard for fencing as well as off leash dogs especially near Rd. D and Halsey Neck Lane access points.

***Plover Activity: 3 pair, 4 fledge, 1.33 productivity***

***Seabeach Amaranth: 1 plant***

***Seabeach knotweed: 5 plants***

### **Halsey Neck Lane to S. Main St.**

This sub-site held four nesting pairs who made five nesting attempts, three of which successfully hatched. All but one of these nests were located in the area between the bulkhead east of Cooper's Beach and Cryder Lane for the second year in a row. The first two of these nests were exclosed provided only two young and the other two nests ended up providing 5 young plovers. There was also a substantial least tern colony in this same area consisting of 22 nesting pair and fledging 27 fledges. Coopers Beach and a private club within this site were persistent in raking the beachfronts at least once a week, with the private club raking almost every day despite requests and warnings to cease raking without a monitor's presence. That being said Coopers Beach manager was amenable to working with me to ensure the plovers safety and success. Other threats consisted of ORV disregard for fencing as well as off leash dogs near the access points of Halsey Neck, Coopers Beach, Cryder Lane, and S. Main St.

***Plover Activity: 4 pair, 7 fledge, 1.75 productivity***

***Tern Activity: 22 pair, 27 fledge, 1.23 productivity***

***Seabeach amaranth: 3 plants***

### **Gin Lane Beach**

This site stretches from S. Main St. to Old Towne Rd. and was inactive. The majority of the properties between South Main Street and Old Town Lane have hard structures such as bulkheads that leave little suitable habitat for breeding birds.

### **Old Town Beach**

This site stretches from Old Towne Rd. to Fowlers St. and was unsuccessful for all nesting birds. Two nests were laid and both were exclosed although none of the chicks made it past a few days old due to high abundance of crows in the area. There were also three seabeach amaranth and two seabeach knotweed plants observed here.

***Plover Activity: 2 pair, 0 fledge, 0.00 productivity***

***Seabeach Amaranth: 3 plants***

***Seabeach knotweed: 2 plants***

### **Watermill Beach**

The western extent of this site fall on Fowlers St. and stretched 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 which provide ideal foraging habitat for piping plovers and other migratory shorebirds. Like most other sites that have a high frequency of beach recreation threats present here include ORV drivers ignoring fenced areas, bonfires in close proximity to fencing, boat landings, off leash dogs, and predators are prevalent.

***Plover Activity: 10 pair, 14 fledge, 1.40 productivity***

***Tern Activity: 119 pair, 64 fledge, 0.54 productivity***

***Seabeach Amaranth: 3 plants***

***Seabeach knotweed: 10 plants***

### **Fowlers**

This site stretches Fowlers St. to Flying Point pavilion. There were two nesting pairs who made four nesting attempts during the course of the season. They were responsible for fledging two chicks this year having a productivity of 1.0 fledges per pair. There was one least tern colony with 5 breeding pairs whom fledged 3 young. There was no plant activity here.

***Plover Activity: 2 pair, 2 fledge, 1.0 productivity***

***Tern Activity: 5 pair, 3 fledge, 0.33 productivity***

### **Flying Point**

This site stretches from Flying Point pavilion to the Mecox Pond and was found to be inactive most of the site save for foraging birds inside the ponds shoreline. Most of the site is bordered by hard structures and has limited suitable habitat. There is also a large number of off leash dogs in the area at any given point in time.

### **Scott Cameron**

Extending from the end of Dune rd. to Jobs Lane. Although there was still heavy predator activity in the area the least tern colony was extensive enough to prove adequate protection to the nesting plovers within the colony so only two of the nests were exclosed. Out of 11 nesting attempts the eight nesting pairs fledged 12 plovers having an overall productivity of 1.50 fledges per pair. The extensive least tern colony consisted of 55 breeding pairs who fledged 61 fledges for a productivity of .55 fledges per pair.

***Plover Activity: 3 pair, 10 fledge, 3.33 productivity***

***Tern Activity: 55 pair, 61 fledge, .55 productivity***

### **Sam's Creek**

Extending from Jobs Lane to Ocean Rd. this site housed two breeding pair of piping plover who were able to fledge 3 of their young for a productivity of 1.5 fledges per pair. There

were also 4 pairs of least tern who fledged 2 young for a productivity of .5 fledges per pair. Additionally, 1 seabeach plant was observed at this site. ORV drivers taking down fencing and driving through the fenced areas was a threat all season long as well as homeowners rearranging fencing to suit their convenient access to the ocean and allowing pets and children to run through fenced areas cause the abandonment of many least terns from the site. Off leash dogs are a huge issue especially near the Ocean Rd. access.

***Plover Activity: 2 pair, 3 fledge, 1.5 productivity***

***Tern Activity: 4 pair, 2 fledge, 0.5 productivity***

***Seabeach Amaranth: 1 plant***

### **Sagaponack Pond**

This site stretches from Ocean Rd. out to Gibson Lane and is broken down into a west and east sub-site. Sagaponack Pond lies in the middle section of the overall site and provides a tremendous amount of foraging and nesting grounds for both the plovers and least terns. Sagaponack Pond acts as the site divider. There were a total of 10 pairs of plover who fledged 12 fledges for a productivity of 1.2 fledges per pair. There were also two least tern colonies totaling 121 pairs who fledged 51 young for a total productivity of 0.42 fledges per pair. 12 seabeach amaranth plants were identified site-wide. Like most other sites that have a high frequency of beach recreation threats present here include ORV drivers ignoring fenced areas, bonfires in close proximity to fencing, boat landings, off leash dogs, and predators are prevalent.

***Plover Activity: 10 pair, 12 fledge, 1.2 productivity***

***Tern Activity: 121 pairs, 51 fledge, 0.42 productivity***

***Seabeach Amaranth: 86 plants***

***Seabeach knotweed: 9 plants***

### **Sagaponack Pond West**

This site extends from Ocean Rd. to Surfside Dr. and contained 5 nesting pairs of piping plover who fledged only two plovers for a sub-site productivity of 0.4 fledges per pair. One of the least tern colonies was located in this section of the site at the midpoint of the sub-site although the site was essentially abandoned by all but 12 adults who were unsuccessful in fledging any young. All but 5 of the seabeach amaranth plants that were accounted for were located within this sub-site. The public considers Ocean Rd. a dog beach and therefore off leash dogs are a perpetual problem at this site.

***Plover Activity: 5 pair, 2 fledges, 0.4 productivity***

***Tern Activity: 6 pairs, 0 fledge, 0.00 productivity***

***Seabeach Amaranth: 81 plants***

### **Sagaponack Pond East**

This site stretches from Surfside Dr. to Gibson Lane and contained 5 nesting pairs of piping plover who fledged 10 of their young for a total productivity of 2.0 fledges per pair. The majority of the nesting activity for both the populations of piping plover and least terns took place on the eastern sand flats of the Sagaponack Pond.

There were also 5 seabeach amaranth on these same sand flats.

***Plover Activity: 5 pair, 10 fledges, 2.0 productivity***

***Tern Activity: 115 pair, 51 fledge, 0.44 productivity***

***Seabeach amaranth: 5 plants***

### **Fairfield Pond Lane Beach**

Located between Gibson Lane and Townline Rd. this site contained 7 nesting pairs of piping plover. Due too significant erosion many of the plovers had difficulty maintaining their nests and were often predated. There also is a very large feral cat colony in the eastern extent of the site. The pairs successfully fledged 6 of their young for a total productivity of 0.86 fledges per pair. There was a small least tern colony, of 16 pairs who made nesting attempts directly in the middle of Peter's Pond Lane and Gibson Lane. High tides and storm surges due to changes in beach profile made nesting difficult for all birds here. Other threats to the site included significant numbers of off leash dogs and ORV drivers regularly taking down snow fencing and driving through restricted areas., which resulted in two dead least tern chicks.

***Plover Activity: 7 pair, 6 fledge, 0.86 productivity***

***Tern Activity: 16 pair, 26 fledge, 1.63 productivity***

***Seabeach amaranth: 1 plant***

***Seabeach knotweed: 2 plants***

### **Bay Sites**

#### **Red Cedar Point**

There were two pairs of piping plover who made successful nests at Cedar Point fledging 3 of their young for a productivity of 1.5 fledges per pair. There was also a sizeable least tern colony of 44 nesting pairs who fledged 32 least terns for a productivity of 0.73 fledges per pair. Early in the season a pair of american oystercatcher were seen hanging around acting suspicious but eventually they pushed off. In past years, predation was a serious problem inhibiting nesting birds' reproductive success. This year predation was not as big of an issue although we came to learn that one of the homeowners right near the access has out door cats. Both piping plover nests were exclosed due to the presence of crows irritating the nesting birds. Tidal fluctuations and boat landings are also common disturbances to the site.

***Plover Activity: 2 pair, 3 fledge, 1.5 productivity***

***Tern Activity: 44 pair, 32 fledge, .73 productivity***

#### **Red Creek Pond**

There was a small least tern colony of 4 pairs who only managed to fledge 6 young. Early in the season American oystercatcher were also noted here but eventually left the site.

***Tern Activity: 4 pair, 6 fledge, 0 productivity***

#### **Squires Pond**

This site was inactive for both birds and plants probably due to high frequency of intensive beach recreation and ORV usage as well as off leash dogs.

### **Meschutt Beach East**

Bordered to the west by the county park, the majority of the site is backed by hard structures leaving extremely limited amount of critical habitat for any breeding birds. The site was inactive for both plants and birds.

### **Canoe Place**

The site was inactive for both plants and birds.

### **Fish Cover/N. Sea Harbor**

The site was inactive for both plants and birds.

### **Towd Neck**

#### **Towd Neck West**

This site has limited suitable habitat and has frequent 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 disregard for restricted areas, in one instance driving over the dune around the fencing to drive onto the beach, as well as off leash dogs whom also pose a significant threat to nesting birds at this location. There was one pair of nesting piping plover who were able to fledge 2 young for a productivity of 2.0 fledges per pair. There were also 32 nesting pairs of least tern who fledged 28 fledges for a productivity of 0.88 fledges per pair. A total of 2,520 seabeach knotweed plants were also estimated to be at this site.

***Plover Activity: 1 pair, 2 fledge, 2.0 productivity***

***Tern Activity: 32 pair, 28 fledge, 0.88 productivity***

***Seabeach Knotweed: 2,520 plants***

### **Wooley Pond**

The site was inactive for both plants and birds.

### **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 was inactive for both plants and birds.

### **Long Beach**

The site was inactive for both plants and birds.

**Short Beach**

The site was inactive for both plants and birds.

**Genet Creek**

The site was inactive for both plants and birds.

**Middle Pond**

This site was inactive for both plants and birds

### **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 2017 season a possibility and a success. Thank-you Board of Trustees; President Edward Warner, Secretary/Treasurer Scott Horowitz, Eric Shultz, William Pell, and Bruce Stafford, Trustee Staff; Lisa Dunlap, James Duryea, Brandy Campbell, Jessica Goleski, Rachel Longobardi, the Southampton Town Bay Constables, Trustees Marine Maintenance division, Joe Janssen of the Nature Conservancy, Steve Sinkevich and Terra Dunlop of the USFWS, Kevin Jennings and Michelle Gibbons of the NYSDEC, James Gormly of the Town GIS Department, and the public that had patience, understanding and respect towards the work that we perform. We also want to throw a huge thank-you to the young birders, Eleni Nikolopolous, and Frank Quevedo of the South Fork Nature Museum for working with us in bringing the beauty of the nesting season to the youth of our township! None of this work would have been possible without all of your hard work and dedication, Thank-you!

**Literature Cited**

- New York Natural Heritage Program. 2010. Biotics database. New York Natural Heritage Program. New York State Department of Environmental Conservation. Albany N.Y.
- U.S. Fish and Wildlife Service. 2007. Seabeach Amaranth 5 year Review: Summary and Evaluation. Raleigh N.C.
- U.S. Fish and Wildlife Service. 2009. Piping plover 5 year review: Summary and Evaluation. Raleigh N.C.
- U.S. Fish and Wildlife Service. 2010. Abundance and productivity estimates – 2010 update atlantic coast piping plover population. Raleigh N.C.

# Appendix I: Summary Tables

## 2017 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
<b><u>Atlantic Ocean Nesting Sites</u></b>									
1) Westhampton Island	10	15	46	23	0.50	14	0.61	1.40	24
a) Hampton	8	12	46	23	0.50	9	0.39	1.13	24
b) Tiana	2	3	12	7	0.58	5	0.71	2.50	24
2) Southampton Beach	8	10	35	20	0.57	11	0.55	1.38	22
a) County Park East to Rd. D	1	1	4	0	0.00	0	0.00	0.00	
b) Rd. D to Halsey Neck Ln.	3	4	12	7	0.58	4	0.57	1.33	
c) Halsey Neck Ln. to S. Main St.	4	5	19	13	0.68	7	0.54	1.75	
3) Gin Lane Beach	0	0	0	0	0.00	0	0.00	0.00	12
4) Old Town Beach	2	2	8	4	0.50	0	0.00	0.00	18
5) Watermill Beach	10	15	56	28	0.50	14	0.50	1.40	23
a) Fowlers Beach	2	4	15	2	0.13	2	1.00	1.00	
b) Flying Point Beach	0	0	0	0	0.00	0	0.00	0.00	
c) Scott Cameron Beach	8	11	41	26	0.63	12	0.46	1.50	
6) Sam's Creek	2	4	16	4	0.25	3	0.75	1.50	22
7) Sagaponack Lake	10	18	60	23	0.38	12	0.52	1.20	24
8) Fairfield Pond Ln. Beach	7	9	32	16	0.50	6	0.38	0.86	23
<b>Total for Ocean Nest Sites</b>	<b>49</b>	<b>76</b>	<b>265</b>	<b>125</b>	<b>0.47</b>	<b>60</b>	<b>0.48</b>	<b>1.22</b>	
<b><u>Peconic Bay Nesting Sites</u></b>									
9) Red Cedar Point	2	2	8	7	0.88	3	0.43	1.50	19
10) Red Creek Pond	0	0	0	0	0.00	0	0.00	0.00	15
11) Squires Pond	0	0	0	0	0.00	0	0.00	0.00	10
12) Meschutt Beach E.	0	0	0	0	0.00	0	0.00	0.00	6
13) Canoe Place	0	0	0	0	0.00	0	0.00	0.00	10
14) Fish Cove/N. Sea Harbor	0	0	0	0	0.00	0	0.00	0.00	5
15) Towd Neck	1	1	4	3	0.75	2	0.67	2.00	17
16) Wooley Pond	0	0	0	0	0.00	0	0.00	0.00	10
17) Roses Grove	0	0	0	0	0.00	0	0.00	0.00	6
18) Fresh Pond	0	0	0	0	0.00	0	0.00	0.00	4
19) Pine Neck/Mill Creek	1	1	4	4	1.00	3	0.75	3.00	16
20) Long Beach	0	0	0	0	0.00	0	0.00	0.00	15
21) Short Beach	0	0	0	0	0.00	0	0.00	0.00	6
22) Genet Creek	0	0	0	0	0.00	0	0.00	0.00	9
<b><u>Shinnecock Bay Nesting Sites</u></b>									
23) Middle Pond	0	0	0	0	0.00	0	0.00	0.00	10
<b>Total for Bay Nesting Sites</b>	<b>4</b>	<b>4</b>	<b>16</b>	<b>14</b>	<b>0.88</b>	<b>8</b>	<b>0.57</b>	<b>2.00</b>	
<b>Total for All Nesting Sites</b>	<b>53</b>	<b>80</b>	<b>281</b>	<b>139</b>	<b>0.49</b>	<b>68</b>	<b>0.49</b>	<b>1.28</b>	

### 2017 Least Tern Abundance and Productivity

Site Name / Location	No. Nesting Pairs	No. Fledges	Productivity (Fledges/Pair)	No. Times Site Visited
<b><u>Atlantic Ocean Nesting Sites</u></b>				
1) Westhampton Island (Hampton)	22	12	0.55	24
2) Westhampton Island (Tiana)	3	6	2.00	24
3) Southampton Beach	22	27	1.23	22
4) Gin Lane Beach	0	0	0.00	12
5) Old Town Beach	0	0	0.00	18
6) Watermill Beach	60	64	1.07	23
7) Sam's Creek	4	2	0.50	22
8) Sagaponack Lake	121	51	0.42	24
9) Fairfield Pond Ln. Beach	16	26	1.63	23
<b>Total for Ocean Nest Sites</b>	248	188	0.76	-
<b><u>Peconic Bay Nesting Sites</u></b>				
10) Red Cedar Point	44	32	0.73	19
11) Red Creek Pond	4	6	1.50	15
12) Squires Pond	0	0	0.00	10
13) Meschutt Beach E.	0	0	0.00	6
14) Canoe Place	0	0	0.00	10
15) Fish Cove/N. Sea Harbor	0	0	0.00	5
16) Towd Neck	32	28	0.88	17
17) Wooley Pond	0	0	0.00	10
18) Roses Grove	0	0	0.00	6
19) Fresh Pond	0	0	0.00	4
20) Pine Neck/Mill Creek	0	0	0.00	16
21) Long Beach	7	6	0.86	15
22) Short Beach	0	0	0.00	6
23) Genet Creek	0	0	0.00	9
<b><u>Shinnecock Bay Nesting Sites</u></b>				
24) Middle Pond	0	0	0.00	10
<b>Total for Bay Nesting Sites</b>	87	72	0.83	-
<b>Total for All Nesting Sites</b>	335	260	0.78	-

2017 Outcomes of Eggs												
Site Name / Location	No. Of Eggs	Vandalized	Abandoned	Predated	Washed out	Unhatched	Unknown	Total Failed	Total Hatched	Fledged	Didn't Fledge	
1) Westhampton Island												
a) Hampton	46			16	2	1	4	23	23	9	14	
b) Tiana	12		4				1	5	5	2	7	
2) Southampton Beach												
a) County Park East to Rd. D	4			4				4	0	0		
b) Rd. D to Halsey Neck Ln.	12			2	2	1		5	7	4	3	
c) Halsey Neck Ln. to S. Main St.	19			4		2		6	13	7	6	
3) Old Town	8						4	4	4	0	4	
3) Watermill Beach												
a) Fowlers Beach	15			11		2		13	2	2	0	
b) Scott Cameron Beach	41			11		4		15	26	12	14	
4) Sam's Creek	16		4	8				12	4	3	1	
5) Sagaponack Lake	60		1	29	1	1	5	37	23	12	11	
6) Fairfield Pond Ln. Beach	32			9			7	16	16	6	10	
7) Red Cedar Point	8					1		1	7	3	4	
8) Towd Neck	4					1		1	3	1	2	
9) Pine Neck	4							0	4	3	1	
<b>Totals For All Active Sites</b>	<b>281</b>	<b>0</b>	<b>9</b>	<b>94</b>	<b>5</b>	<b>13</b>	<b>21</b>	<b>142</b>	<b>137</b>	<b>64</b>	<b>77</b>	
Percentage of All Egg Outcomes			3.20%	33.45%	1.78%	4.63%	7.47%	50.53%	48.75%	22.78%	27.40%	

## **Appendix II: Site Maps**



Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017

# HAMPTON BEACH

## Village of Quogue

-  Amaranth
-  2012
-  2014
-  2016
-  Least Tern Colony
-  2013
-  2015
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees






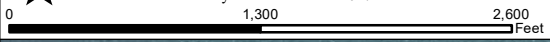


Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017

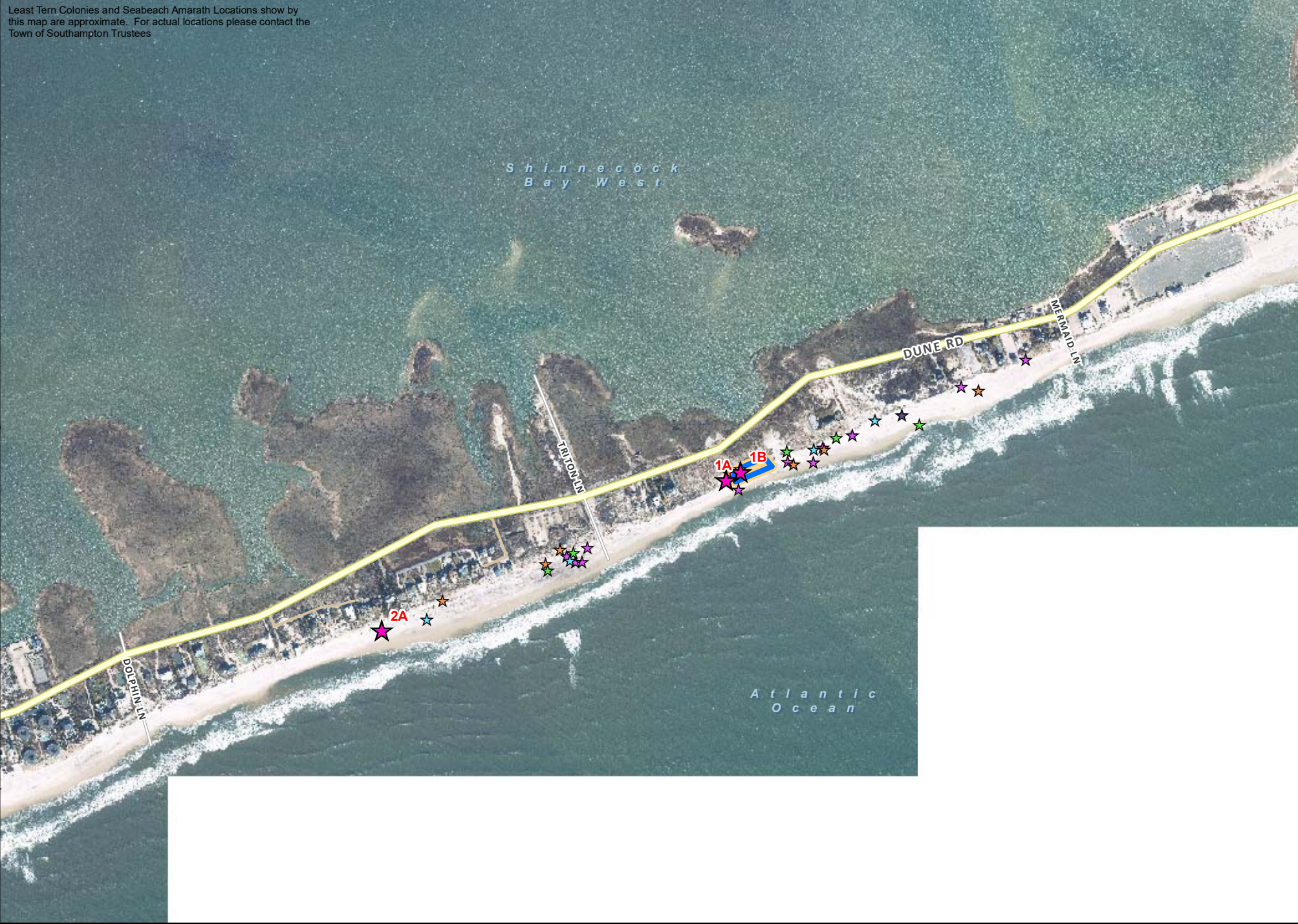
# TIANA BEACH

## Hampton Bays

-  Amaranth
-  2012
-  2014
-  2016
-  2013
-  2015
-  2017
-  Least Tern Colony



Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees





Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017

# CANOE PLACE BEACH

## Hampton Bays



Amaranth



Least Tern Colony

★ 2012

★ 2014

★ 2016

★ 2013

★ 2015

★ 2017

0 165 330 Feet

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



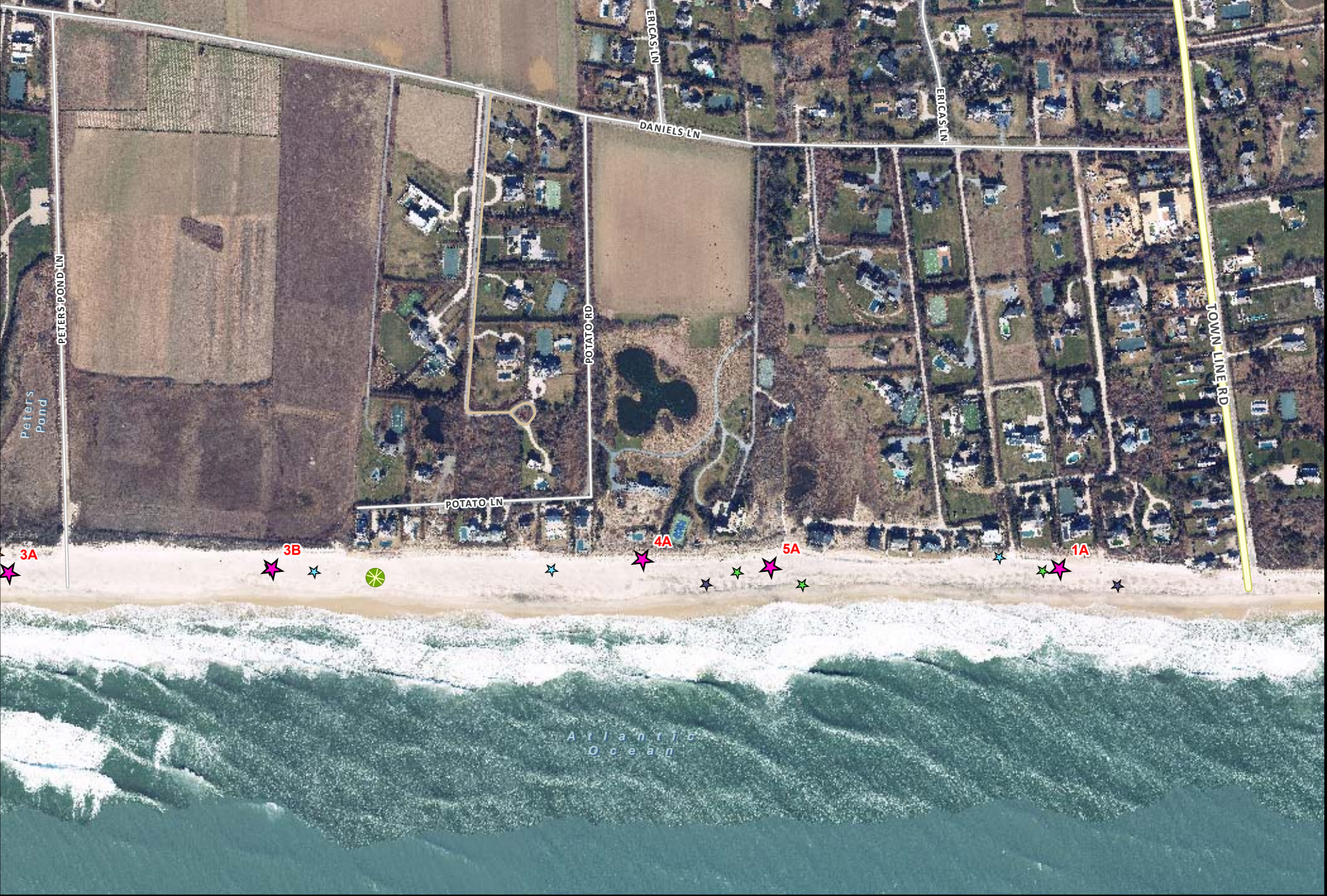
# FAIRFIELD POND LANE BEACH (EAST)

## Peter's Pond Ln to Town line Rd

 Amaranth  
 Least Tern Colony



	2012		2014		2016
	2013		2015		2017




Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# FAIRFIELD POND LANE BEACH (WEST)

## Gibson Ln to Peter's Pond

 Amaranth  
 Least Tern Colony









	2012		2014		2016
	2013		2015		2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# FISH COVE / NORTH SEA HARBOR

## North Sea

-  Amaranth
-  Least Tern Colony
-  2012
-  2013
-  2014
-  2015
-  2016
-  2017

Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017

0 1,150 2,300  
Feet

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees





Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017

# FRESH POND

## Bulkhead to Lake Dr.



Amaranth



Least Tern Colony

★ 2012

★ 2014

★ 2016

★ 2013

★ 2015

★ 2017

0 330 660 Feet

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# GENET CREEK

## North Haven


-  Amaranth
-  Least Tern Colony
-  2012
-  2013
-  2014
-  2015
-  2016
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# GIN LANE BEACH (VILLAGE)

## South Main St to Old Town Rd


- |                                                                                    |                   |                                                                                    |      |                                                                                    |      |                                                                                    |      |
|------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|------|
|   | Amaranth          |   | 2012 |   | 2014 |   | 2016 |
|  | Least Tern Colony |  | 2013 |  | 2015 |  | 2017 |

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



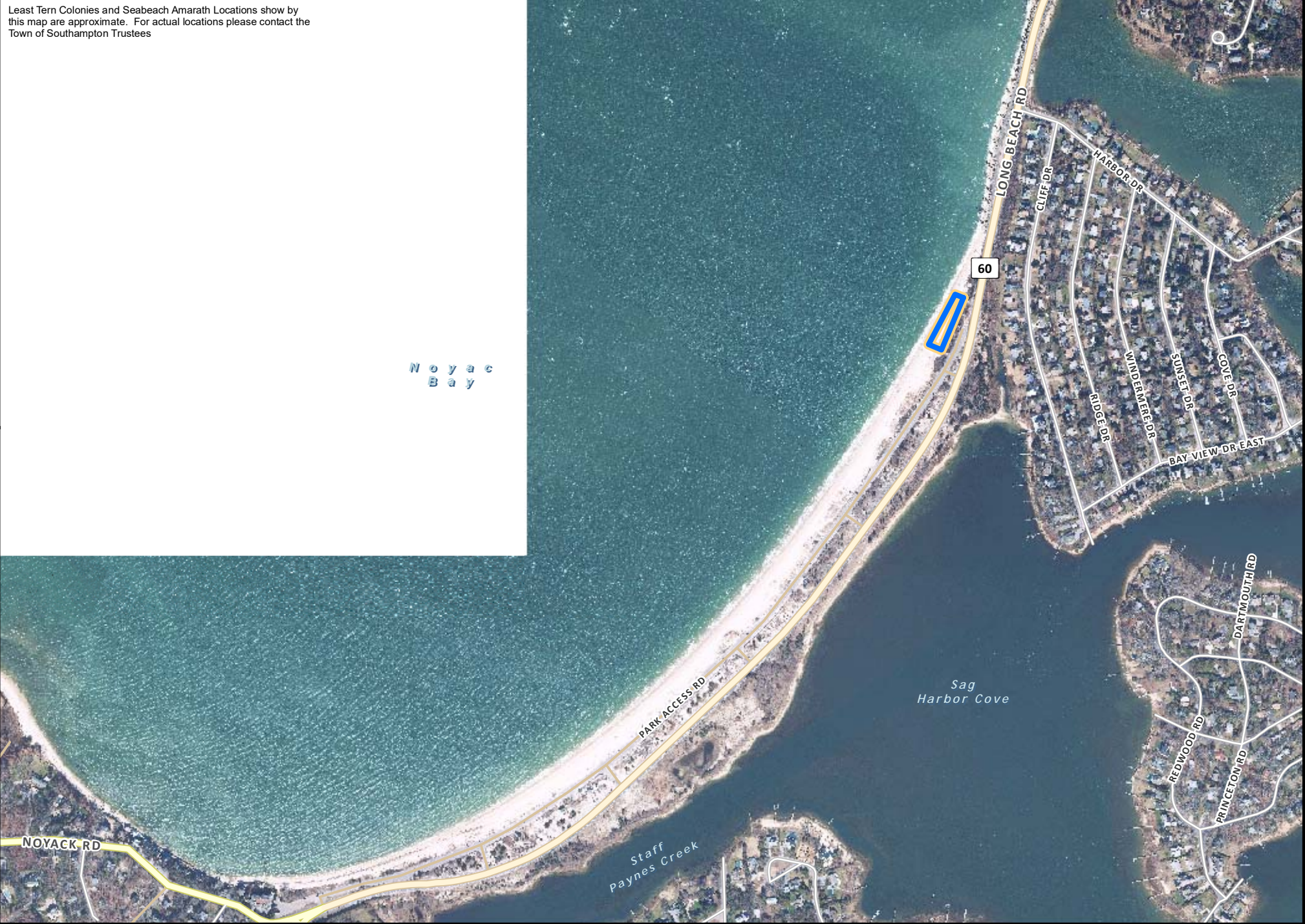
# LONG BEACH

## Noyac / Sag Harbor

-  Amaranth
-  Least Tern Colony
-  2012
-  2013
-  2014
-  2015
-  2016
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees

Noyac Bay





Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017  
375

750  
Feet

# MESCHUTT BEACH

## Hampton Bays



Amaranth



Least Tern Colony

★ 2012

★ 2014

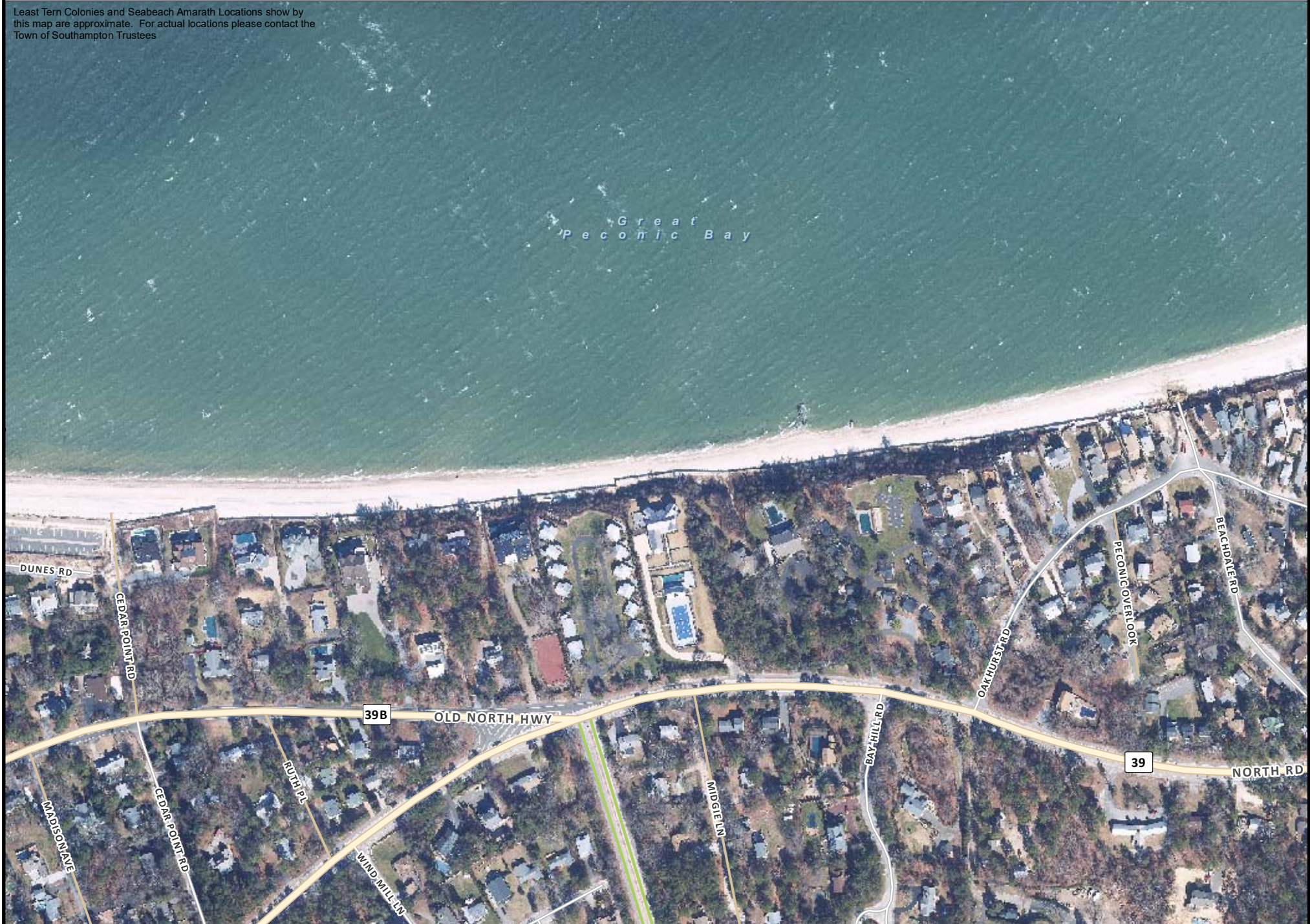
★ 2016

★ 2013

★ 2015

★ 2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees





Prepared by:  
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Information Systems December 2017  
275

550  
Feet

# MIDDLE POND

## Shinnecock Hills



Amaranth



Least Tern Colony

★ 2012

★ 2014

★ 2016

★ 2013

★ 2015

★ 2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# OLD TOWN ROAD (VILLAGE)

## Old Town Rd to Fowlers St

-  Amaranth
-  Least Tern Colony
-  2012
-  2013
-  2014
-  2015
-  2016
-  2017

Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017

0 750 1,500  
Feet



Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



Atlantic  
Ocean

# PINE NECK / MILL CREEK

## Noyac

- |                                                                                    |                   |                                                                                     |      |                                                                                     |      |                                                                                     |      |
|------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------|------|
|   | Amaranth          |    | 2012 |    | 2014 |    | 2016 |
|  | Least Tern Colony |  | 2013 |  | 2015 |  | 2017 |

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# RED CEDAR POINT Flanders



Amaranth ★ 2012 ★ 2014 ★ 2016  
Least Tern Colony ★ 2013 ★ 2015 ★ 2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# RED CREEK POND

## Hampton Bays









-  Amaranth
-  Least Tern Colony
-  2012
-  2013
-  2014
-  2015
-  2016
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# ROSES GROVE

## Peconic Bay Ave to Oak Grove Rd

	Amaranth		2012		2014		2016
	Least Tern Colony		2013		2015		2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# SAGAPONACK LAKE (EAST)

## Sagg Main St to Gibson Ln

-  Amaranth
-  2012
-  2014
-  2016
-  Least Tern Colony
-  2013
-  2015
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees

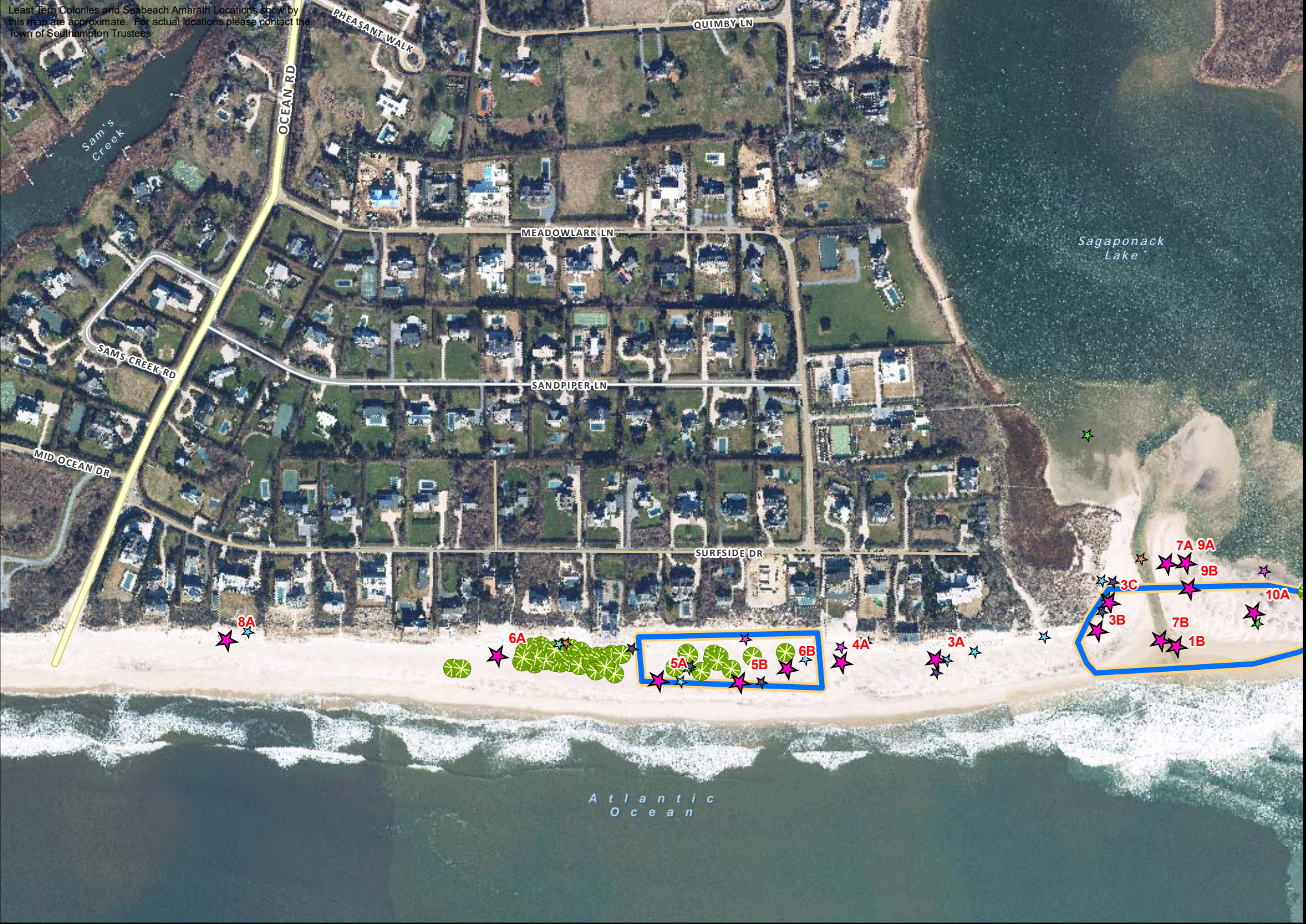


# SAGAPONACK LAKE (WEST)

## Ocean Rd to Surfside Dr

-  Amaranth
-  2012
-  2014
-  2016
-  Least Tern Colony
-  2013
-  2015
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



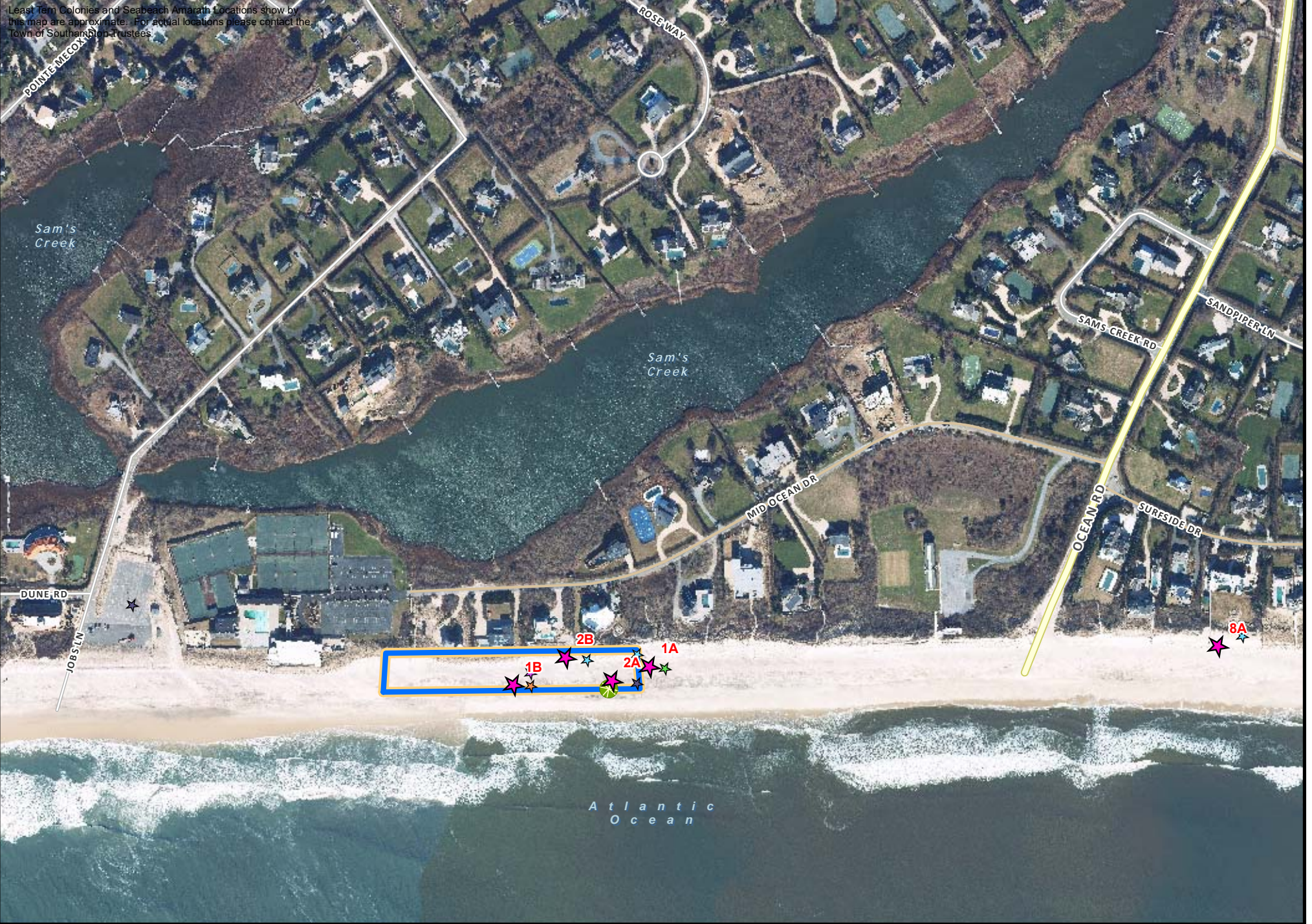
Atlantic  
Ocean

# SAM'S CREEK / MECOX BEACH

## Jobs lane to Ocean Rd

-  Amaranth
-  Least Tern Colony
-  2012
-  2014
-  2016
-  2013
-  2015
-  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees





Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017  
395

790  
Feet

# SHORT BEACH

## North Haven / Noyac



Amaranth



Least Tern Colony

★ 2012

★ 2014

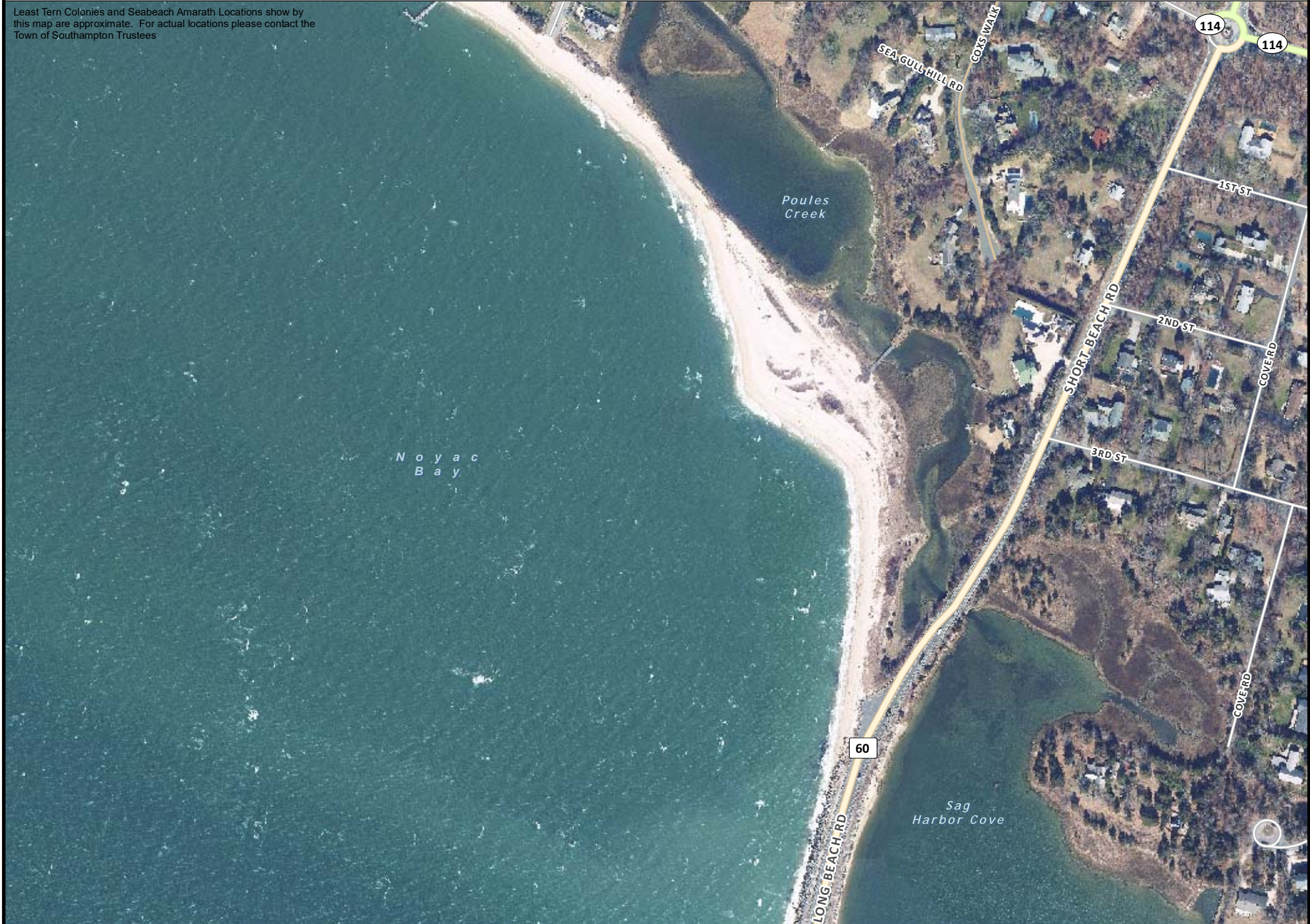
★ 2016

★ 2013

★ 2015

★ 2017






Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees





# SOUTHAMPTON BEACH (VILLAGE)

## Road D to Halsey Neck Lane









	Amaranth		2012		2014		2016
	Least Tern Colony		2013		2015		2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# SOUTHAMPTON BEACH (VILLAGE)





## Halsey Neck Lane to S Main St

	Amaranth		2012		2014		2016
	Least Tern Colony		2013		2015		2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# SQUIRES POND Hampton Bays

 Amaranth  2012  2014  2016  
 Least Tern Colony  2013  2015  2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# TOWD NECK (EAST)

## East Towd Point (Inlet) to Scotts Landing Rd

-  Amaranth
-  Least Tern Colony
-  2012
-  2014
-  2016
-  2013
-  2015
-  2017

Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017


0 550 1,100 Feet

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees

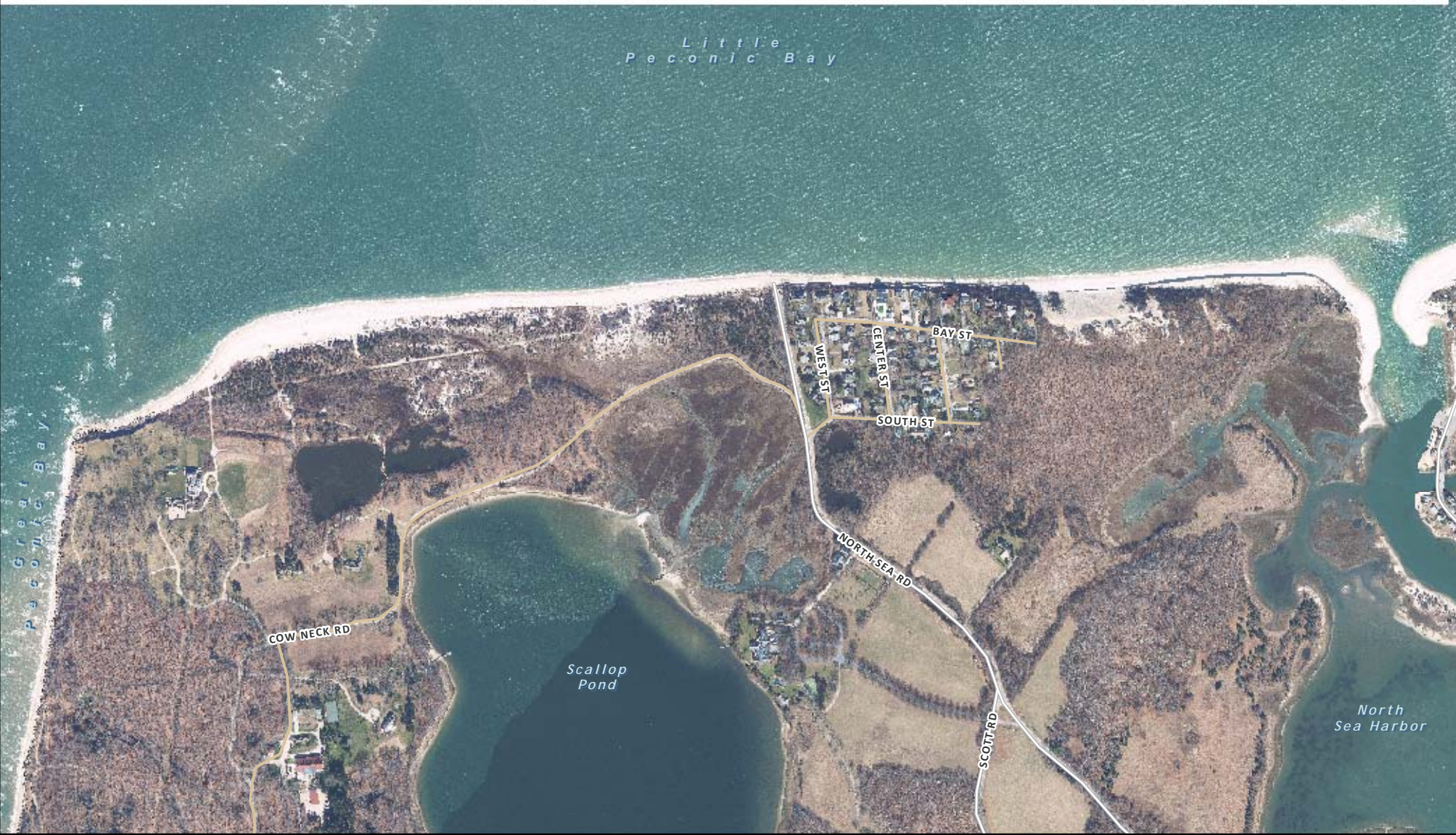


# TOWD NECK (WEST)

## West Cow Neck Point to Towd Point

	Amaranth		2012		2014		2016
	Least Tern Colony		2013		2015		2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# WATER MILL BEACH

## Dune Rd to Jobs Ln





	Amaranth		2012		2014		2016
	Least Tern Colony		2013		2015		2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# WATER MILL BEACH

## Fowlers St to Flying Pt Rd








- |                                                                                    |                   |                                                                                    |      |                                                                                    |      |                                                                                    |      |
|------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|------|
|   | Amaranth          |   | 2012 |   | 2014 |   | 2016 |
|  | Least Tern Colony |  | 2013 |  | 2015 |  | 2017 |

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# WATER MILL BEACH

## Flying Point Rd to Dune Rd




- |                                                                                    |                   |                                                                                    |      |                                                                                    |      |                                                                                    |      |
|------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------|------|
|   | Amaranth          |   | 2012 |   | 2014 |   | 2016 |
|  | Least Tern Colony |  | 2013 |  | 2015 |  | 2017 |

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# WOOLEY POND (EAST)

## East/North Point to Peconic Bay Ave

-  Amaranth
-  Least Tern Colony
-  2012
-  2013
-  2014
-  2015
-  2016
-  2017

Prepared by:  
Town of Southampton Division of Geographic  
Information Systems December 2017  
162.5  
325  
Feet

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees



# WOOLEY POND (WEST)

## West Scotts Landing to Bulkhead

- Amaranth
- Least Tern Colony
- ★ 2012
- ★ 2013
- ★ 2014
- ★ 2015
- ★ 2016
- ★ 2017

Least Tern Colonies and Seabeach Amaranth Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees

