SOUTHAMPTON TOWN TRUSTEES THREATENED AND ENDANGERED SPECIES MANAGEMENT AND PROTECTION PROGRAM

2016 Year End Report

2016 Threatened and Endangered Species Program Staff

Program Coordinator/Editor:	James Duryea
Crew Leader/Author:	John Papajohn
Coastal Stewards:	Julie Fithian
	Adam Piotrowski
	Megan Kennard

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Executive Summary

During the 2016 piping plover breeding season, areas managed and protected by the Southampton Town Trustees Threatened and Endangered Species Management and Protection Program (T&E Program) encompasses a total of 8 ocean sites and 15 bay sites. Within these sites, 43 nesting pairs of piping plover fledged a total of 86 young, for a total productivity of 2.0 fledges per pair. This year's piping plover productivity is the highest seen by this management program since 2004 when the productivity was matched. Piping plovers begin to arrive on our shorelines in mid-March to establish nesting territories, although inclement weather and an out of season cold snap early on delayed the breeding process for many of these birds. Like-wise, within the aforementioned management areas, there were 234 breeding pairs of least terns that were observed fledging 353 young for an overall productivity of 1.51 fledges per pair. The least terns first arrive to our shorelines in the beginning of May shortly after which they establish their nesting territories. The main hindrance with respect to the reproductive success of both of these species stemmed from predation. Additionally, a total of 88 seabeach amaranth plants were identified at 5 of the 8 ocean sites and a total of 2,578 seabeach knotweed plants were identified at 4 ocean sites and 3 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 the

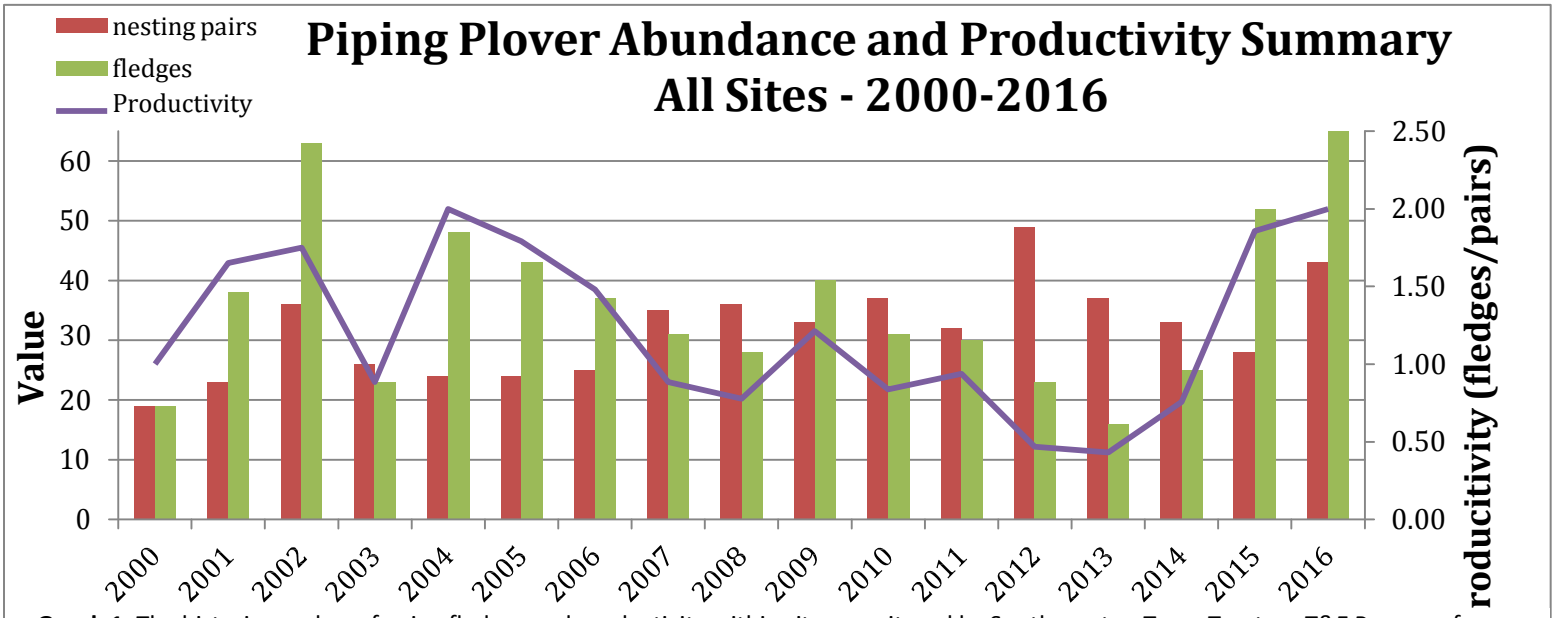
threatened and endangered species current populations are able to have the greatest reproductive success possible.

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 2016. 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 peering out from within a tire track at Sagaponack Pond Beach around mid-March.

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 if 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 exclosure will be installed around the nests to aid in their protection from predators.

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: 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 more shallow 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: Least tern chick recently hatched at Sagaponack Pond Beach

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: 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, pants 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 pant 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)

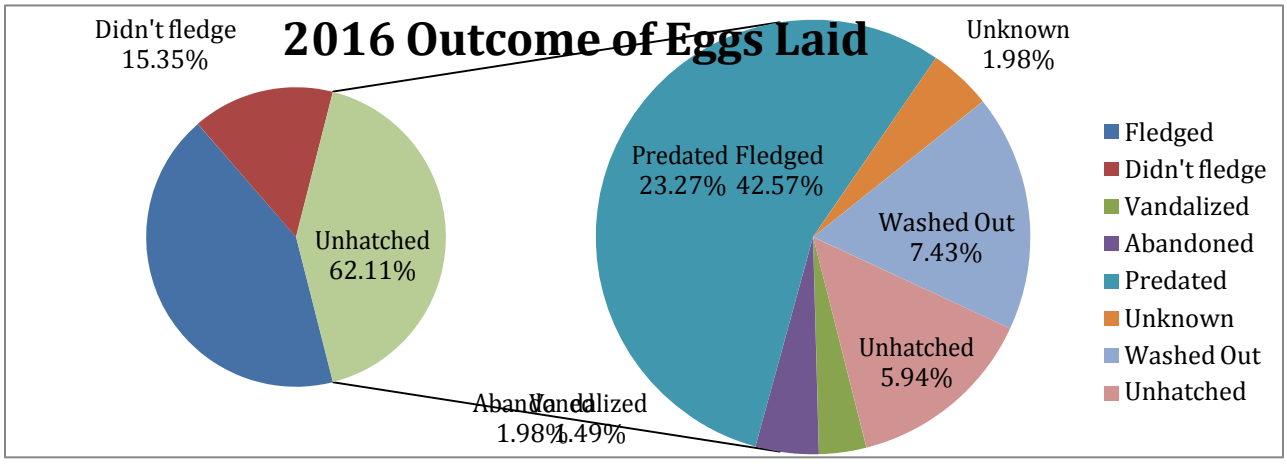
Figure 9: Seabeach knotweed photo courtesy of NY Natural Heritage Program

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 predation pressure, direct predation, washout events, un-hatched eggs due to low egg viability, or loss of chicks at a young age. Coastal development, recreational activities and storms lead to the loss of nesting and foraging habitat. Excessive recreational use, primarily off road vehicle use and beach events can lead to the disruption of nesting and foraging broods. Opportunistic predators are attracted by garbage and food left on the beach or at the access, 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 the breeding and wintering areas.

Over the course of the 2016 breeding season, 202 eggs were laid in 56 nests by the 43 pairs of piping plover that nested within our management sites. Of those 202 eggs 57.92% hatched with approx. ¾'s of those making it to fledge. The loss of the chicks was often by undetermined causes resulting in 15.35% 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 62.11% 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 23.27% of the eggs laid. Nests that were abandoned (1.98%) can be attributed to predatory pressures as well as frequent disturbances by beach recreation in close proximity to nest sites by pedestrians having little regard for symbolic fencing. A total of 7.43% 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. 5.94% of eggs were unviable and did not hatch most likely due to either infertility or exposure. One nest was vandalized accounting for 1.49% of the eggs and the remaining 1.98% 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 43 nesting pairs of piping plover fledged 86 young resulting in a total productivity of 2.0 fledges per pair. This year's piping plover productivity is the highest seen by this management program since 2004 when the productivity was matched. Additionally, 234 least tern pairs were observed nesting and fledging 353 fledges having a resultant productivity of 1.51 fledges per pair. For completed site reviews and data sets see the following tables in the appendix. Overall it was a very successful season having increases in both plover and tern productivity. The general sentiment of the community during the breeding season reflected positivity and support on the whole although there were a few instances in which staff members were approached in a negative manor. All encounters with public 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.

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, 21 fledge, 2.10 productivity
Tern Activity: 27 pair, 57 fledge, 2.11 productivity
Seabeach amaranth: 66 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 6 breeding pairs of plover who made 9 nesting attempts over the course of the season. 5 of these nests were successful fledging 13 young. One of these nests on the crest of the dune, was abandoned due to its proximity to a walkway that was frequently utilized. Two of the other failed nests were predated due to feral cats

in the Quogue area just to the west of Quogue Beach Club, and the last nest was unknown although assumed to have been either predated or abandoned due to predatory pressure from the cats. There were also two tern colonies within this site, one just east of Rogers pavilion with approximately 15 breeding pairs and one just west of Quogue Beach Club (QBC) with approximately 9 breeding pairs. They fledged 38 and 15 fledges respectively. The colony found just west of QBC originally contained many more birds although the predatory pressures from the cats forced many to abandon the nesting site early on in the season. 63 total amaranth plants were found within Hampton 67% of which were found within areas already symbolically fenced for nesting birds. Additionally, 1 seabeach knotweed plant was 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 or worse, tearing down fencing, as well as having bonfires in close proximity to these fenced areas. In one instance, the wooden stakes from the fencing were pulled up and utilized to make a fire.

Plover Activity: 6 pair, 13 fledges, .76 productivity
Tern Activity: 24 pair, 53 fledges, 2.21 productivity
Seabeach Amaranth: 63 plants
Seabeach Knotweed: 1

Tiana

This site encompasses Round Dune housing complex east to the Tiana Beach pavilion. There were a total of 4 pairs who called Tiana home and they fledged 8 young with a productivity of 2.0. There were a total of 5 nesting attempts by these birds, only two of which were successful. One of the successful nests, located just east of house #4 was exclosed, fledging 4 young. The other successful nest was just west of the Round Dune housing complex and also fledged 4 young. In close proximity to this nest, a small least tern colony was observed with 3 nesting pairs who fledged 4 young. A total of three seabeach amaranth plants were observed and protected here.

Plover Activity: 4 pair, 8 fledge, 2.0 productivity
Tern Activity: 3 pair, 4 fledge, 1.33 productivity
Seabeach Amaranth: 3 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: 7 pair, 9 fledge, 1.29 productivity
Tern Activity: 18 pair, 25 fledge, 1.39 productivity

Seabeach Amaranth: 8 plants
Seabeach knotweed: 13 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 only one egg was ever seen and was most likely 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

Rd. D to Halsey Neck Lane

Three nesting pairs were observed between Rd. D and Halsey Neck Lane fledging 3 young for a total productivity of 1.0 fledge per pair. There were a total of 6 nesting attempts one of which was located in front of a homeowner's walkway who was displeased by the nest's location as their walkway had to be redirected a short distance down the beach. Shortly after a negative confrontation with this homeowner, the nest was no longer found but proof or signs of vandalism could not be verified. A re-nest attempt was made by this pair in almost the same location and was also unsuccessful. A late season nesting attempt was exclosed late but was successful. Overall 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, 3 fledge, 1.0 productivity

Halsey Neck Lane to S. Main St.

This sub-site held three nesting pairs who made three nesting attempts, all three of which successfully hatched. Two of these nests were located in the area between the bulkhead east of Cooper's Beach and Cryder Lane, where successful nests have not been observed for many years due to high predatory presence. The first of these two nest was exclosed and the second was not, fledging a total of 5 fledges. There was also a substantial least tern colony in this same area consisting of 18 nesting pair and fledging 25 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 management was amenable to working with us 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: 3 pair, 6 fledge, 2.0 productivity
Tern Activity: 18 pair, 25 fledge, 1.39 productivity

Gin Lane Beach
This site stretches from S. Main St. to Old Towne Rd. and was inactive except for one seabeach amaranth plant found within the site. 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.

Seabeach Amaranth: 1 plant

Old Town Beach
This site stretches from Old Towne Rd. to Fowlers St. and was inactive.

Watermill Beach
The western extent of this site falls on 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 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: 6 pair, 16 fledge, 2.67 productivity
Tern Activity: 24 pair, 66 fledge, 2.75 productivity
Seabeach knotweed: 35 plants

Fowlers
This site stretches Fowlers St. to Flying Point pavilion. There were 3 nesting pairs who made 3 nesting attempts during the course of the season. They were responsible for fledging 6 chicks this year having a productivity of 2.0 fledges per pair. There was one least tern colony with 11 breeding pairs whom fledged 32 young. There was no plant activity here.

Plover Activity: 3 pair, 6 fledge, 2.0 productivity
Tern Activity: 11 pair, 32 fledge, 2.91 productivity

Flying Point
This site stretches from Flying Point pavilion to the Mecox Pond and was found to be inactive most of the site except 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 that frequent the area.

Scott Cameron
Extending from the end of Dune rd. to Jobs Lane, all plover nests were exclosed given the prevalence of predators and their success in predating nests. The type of predator was

not verified although some tracks were found and thought to be fox tracks. Out of 7 nesting attempts the 3 nesting pairs fledged 10 young having an overall productivity of 3.33 fledges per pair. There was also an extensive least tern colony consisting of 13 breeding pairs who fledged 34 fledges for a productivity of 2.62.

Plover Activity: 3 pair, 10 fledge, 3.33 productivity
Tern Activity: 13 pair, 34 fledge, 2.62 productivity

Sam's Creek

Extending from Jobs Lane to Ocean Rd., this site housed 2 breeding pairs of piping plovers who were able to fledge 3 of their young for a productivity of 1.5 fledges per pair. There were also 14 pairs of least terns who fledged 21 young for a productivity of 1.5 fledges per pair. Additionally, 1 seabeach amaranth and 1 seabeach knotweed plant were 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. Off leash dogs are a huge issue especially near the Ocean Rd. access.

Plover Activity: 2 pair, 3 fledge, 1.5 productivity
Tern Activity: 14 pair, 21 fledge, 1.5 productivity
Seabeach Amaranth: 1 plant
Seabeach Knotweed: 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 plovers who fledged 21 youngfor a productivity of 2.1 fledges per pair. There were also two least tern colonies totaling 70 pairs who fledged 105 young for a total productivity of 1.5 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, 21 fledge, 2.1 productivity
Tern Activity: 70 pairs, 105 fledge, 1.5 productivity
Seabeach Amaranth: 12 plants

Sagaponack Pond West

This site extends from Ocean Rd. to Surfside Dr. and contained 8 nesting pairs of piping plovers who fledged 16 young for a sub-site productivity of 2.0 fledges per pair. One of the least tern colonies was located in this section of the site at the midpoint of the sub-site All 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. On 6/19 it was discovered that a stretch of symbolic fencing had been vandalized that was protecting a least tern colony and two plover

broods. The posts had been ripped out, many of which were tossed into the ocean and others strewn throughout the fenced area all within close proximity to least tern nests and chicks. The following day a plover chick was found dead approximately 500m up the beach to the west of where his brood was typically located.

Plover Activity: 8 pair, 16 fledge, 2.0 productivity
Tern Activity: 14 pairs, 28 fledge, 2.0 productivity
Seabeach Amaranth: 12 plants

Sagaponack Pond East

This site stretches from Surfside Dr. to Gibson Lane and contained 2 nesting pairs of piping plover who fledged 5 of their young for a total productivity of 2.5 fledges per pair.

Plover Activity: 2 pair, 5 fledge, 2.5 productivity
Tern Activity: 56 pair, 77 fledge, 1.38 productivity

Fairfield Pond Lane Beach

Located between Gibson Lane and Townline Rd. this site contained 3 nesting pairs of piping plovers. Due too significant erosion, two of the early nests laid here were washed out by storm surges. The pairs successfully fledged 8 of their young for a total productivity of 2.67 fledges per pair. There was a small least tern "colony", of 3 pairs who made nesting attempts just to the east of Peters Pond Lane, none of which were successful. No seabeach amaranth or knotweed were found here. 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.

Plover Activity: 3 pair, 8 fledge, 2.67 productivity
Tern Activity: 3 pair, 0 fledge, 0 productivity

Bay Sites

Red Cedar Point

There were two pairs of piping plovers who made successful nests at Cedar Point fledging 7 of their young for a productivity of 3.50 fledges per pair. There was also a sizeable least tern colony of 28 nesting pairs who fledged 47 least terns for a productivity of 1.68 fledges per pair. Early in the season a pair of American oystercatcher was 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 had outdoor cats. Tidal fluctuations and boat landings are also common disturbances to the site. Only one seabeach knotweed plant was identified here.

Plover Activity: 2 pair, 7 fledge, 3.50 productivity
Tern Activity: 28 pair, 47 fledge, 1.68 productivity
Seabeach Knotweed: 1 plant

Red Creek Pond

This season, 1 pair of piping plovers took up residence late in the game and unfortunately had their nest predated only days before hatching. There was also a small and unsuccessful least tern colony of 3 pairs who only managed to hatch 1 chick that did not survive. It was undetermined what the predator was although it was thought to have been either a raccoon or crows as both had been seen in the area. Only 1 seabeach knotweed plant was identified at this location.

Plover Activity: 1 pair, 0 fledge, 0 productivity
Tern Activity: 3 pair, 0 fledge, 0 productivity
Seabeach Knotweed: 1 plant

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 Cove/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 plovers who were able to fledge 1 chick for a productivity of 1.0 fledges per pair. There were also 29 nesting pairs of least terns who fledged 32 fledges for a productivity of 1.10 fledges per pair. A total of 2,499 seabeach knotweed plants were also estimated to be at this site.

Plover Activity: 1 pair, 1 fledge, 1.0 productivity
Tern Activity: 29 pair, 32 fledge, 1.10 productivity
Seabeach Knotweed: 2,499 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
Tidal fluctuations and predations posed insurmountable hurdles for the nesting birds at this site. On 6/11 the site was monitored and 1 pair of nesting piping plover and 18 pair of nesting least terns were observed. On 6/16 the site was monitored again and all signs of any bird activity except for the symbolic fencing had been erased from the site. It was assumed that predation was the cause of site abandonment although it was never verified.

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 2016 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 Jannsen of the Nature Conservancy, Steve Sinkevich and Terra Dunlop of the USFWS, Kevin Jennings and Michelle Gibbons of the NYSDEC, James Gormley of the Town GIS Department, and the public that had patience, understanding and respect towards the work that we did. All photos were provided by John Papajohn except for the seabeach knotweed photo courtesy of NY Natural Heritage Program. None of this work would have been possible without all of your hard work and dedication, Thank-you!

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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

2016 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	10	14	54	25	0.46	21	0.84	2.10	-
a) Hampton	6	9	35	17	0.49	13	0.76	2.17	33
b) Tiana	4	5	19	8	0.42	8	1.00	2.00	36
2) Southampton Beach	7	10	31	15	0.48	9	0.60	1.29	43
a) County Park East to Rd. D	1	1	1	0	0.00	0	0.00	0.00	-
b) Rd. D to Halsey Neck Ln.	3	6	21	6	0.29	3	0.50	1.00	-
c) Halsey Neck Ln. to S. Main St.	3	3	9	9	1.00	6	0.67	2.00	-
3) Gin Lane Beach	0	0	0	0	0.00	0	0.00	0.00	24
4) Old Town Beach	0	0	0	0	0.00	0	0.00	0.00	25
5) Watermill Beach	6	10	34	21	0.62	16	0.76	2.67	38
a) Fowlers Beach	3	3	11	11	1.00	9	0.82	3.00	-
b) Flying Point Beach	0	0	0	0	0.00	0	0.00	0.00	-
c) Scott Cameron Beach	3	7	23	10	0.43	7	0.70	2.33	-
6) Sam's Creek	2	2	8	6	0.75	3	0.50	1.50	36
7) Sagaponack Lake	10	10	39	29	0.74	21	0.72	2.10	39
8) Fairfield Pond Ln. Beach	3	5	17	10	0.59	8	0.80	2.67	32
Total for Oceean Nest Sites	**38**	**51**	**183**	**106**	**0.58**	**78**	**0.74**	**2.05**	**-**
Peconic Bay Nesting Sites									
9) Red Cedar Point	2	2	8	8	1.00	7	0.88	3.50	27
10) Red Creek Pond	1	1	3	0	0.00	0	0.00	0.00	23
11) Squires Pond	0	0	0	0	0.00	0	0.00	0.00	15
12) Meschutt Beach E.	0	0	0	0	0.00	0	0.00	0.00	8
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	3
15) Towd Neck	1	1	4	3	0.75	1	0.33	1.00	32
16) Wooley Pond	0	0	0	0	0.00	0	0.00	0.00	7
17) Roses Grove	0	0	0	0	0.00	0	0.00	0.00	-
18) Fresh Pond	0	0	0	0	0.00	0	0.00	0.00	9
19) Pine Neck/Mill Creek	0	0	0	0	0.00	0	0.00	0.00	17
20) Long Beach	0	0	0	0	0.00	0	0.00	0.00	14
21) Short Beach	0	0	0	0	0.00	0	0.00	0.00	10
22) Genet Creek	0	0	0	0	0.00	0	0.00	0.00	15
Shinnecock Bay Nesting Sites									
23) Middle Pond	1	1	4	0	0.00	0	0.00	0.00	11
Total for Bay Nesting Sites	5	5	19	11	0.58	8	0.73	1.60	-
Total for All Nesting Sites	43	56	202	117	0.58	86	0.74	2.00	-

2016 Least Tern Abundance and Productivity

Site Name / Location	No. Nesting Pairs	No. Fledges	Productivity (Fledges/Pair)	No. Times Site Visited
Atlantic Ocean Nesting Sites				
1) Westhampton Island	27	57	2.11	
a) Hampton	24	53	2.21	33
Col. 1	15	38	2.53	
Col. 2	9	15	1.67	
b) Tiana	3	4	1.33	36
2) Southampton Beach	18	25	1.39	43
3) Gin Lane Beach	0	0	0.00	24
4) Old Town Beach	0	0	0.00	25
5) Watermill Beach	24	66	2.75	38
a) Fowlers	11	32	2.91	
b) Scott Cameron Beach	13	34	2.62	
6) Sam's Creek	14	21	1.50	36
7) Sagaponack Lake	70	105	1.50	39
Col. 1	14	28	2.00	
Col. 2	56	77	1.38	
8) Fairfield Pond Ln. Beach	3	0	0.00	32
Total for Ocean Nest Sites	156	274	1.76	-
Peconic Bay Nesting Sites				
9) Red Cedar Point	28	47	1.68	27
10) Red Creek Pond	3	0	0.00	23
11) Squires Pond	0	0	0.00	15
12) Meschutt Beach E.	0	0	0.00	8
13) Canoe Place	0	0	0.00	10
14) Fish Cove/N. Sea Harbor	0	0	0.00	3
15) Towd Neck	29	32	1.10	32
16) Wooley Pond	0	0	0.00	7
17) Roses Grove	0	0	0.00	-
18) Fresh Pond	0	0	0.00	9
19) Pine Neck/Mill Creek	0	0	0.00	17
20) Long Beach	0	0	0.00	14
21) Short Beach	0	0	0.00	10
22) Genet Creek	0	0	0.00	15
Shinnecock Bay Nesting Sites				
23) Middle Pond	18	0	0.00	11
Total for Bay Nesting Sites	78	79	1.01	-
Total for All Nesting Sites	234	353	1.51	-

2016 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	35		4	8		2	4	18	17	13	4
b) Tiana	19			7	4			11	8	8	0
2) Southampton Beach											
a) County Park East to Rd. D	1			1				1	0	0	
b) Rd. D to Halsey Neck Ln.	21	3		11		1		15	6	3	3
c) Halsey Neck Ln. to S. Main	9							0	9	6	3
3) Watermill Beach											
a) Fowlers Beach	11							0	11	9	2
b) Scott Cameron Beach	23			9	2	2		13	10	7	3
4) Sam's Creek	8					2		2	6	3	3
5) Sagaponack Lake	39			4	4	2		10	29	21	8
6) Fairfield Pond Ln. Beach	17				5	2		7	10	8	2
7) Red Cedar Point	8							0	8	7	1
8) Red Creek Pond	3			3				3	0	0	0
9) Towd Neck	4					1		1	3	1	2
10) Middle Pond	4			4				4	0	0	0
Totals For All Active Sites	202	3	4	47	15	12	4	85	117	86	31
Percentage of All Egg Outcomes		1.49%	1.98%	23.27%	7.43%	5.94%	1.98%	42.08%	57.92%	42.57%	15.35%

Appendix II: Site Maps

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 2,550 5,100 Feet

HAMPTON BEACH

Village of Quogue

Plover Nests

Amaranth

Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 1,300 2,600 Feet

TIANA BEACH

Hampton Bays

Plover Nests

Amaranth

Least Tern Colony

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2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 165 330 Feet

CANOE PLACE BEACH

Hampton Bays

Plover Nests

Amaranth
Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 650 1,300 Feet

FAIRFIELD POND LANE BEACH (EAST)

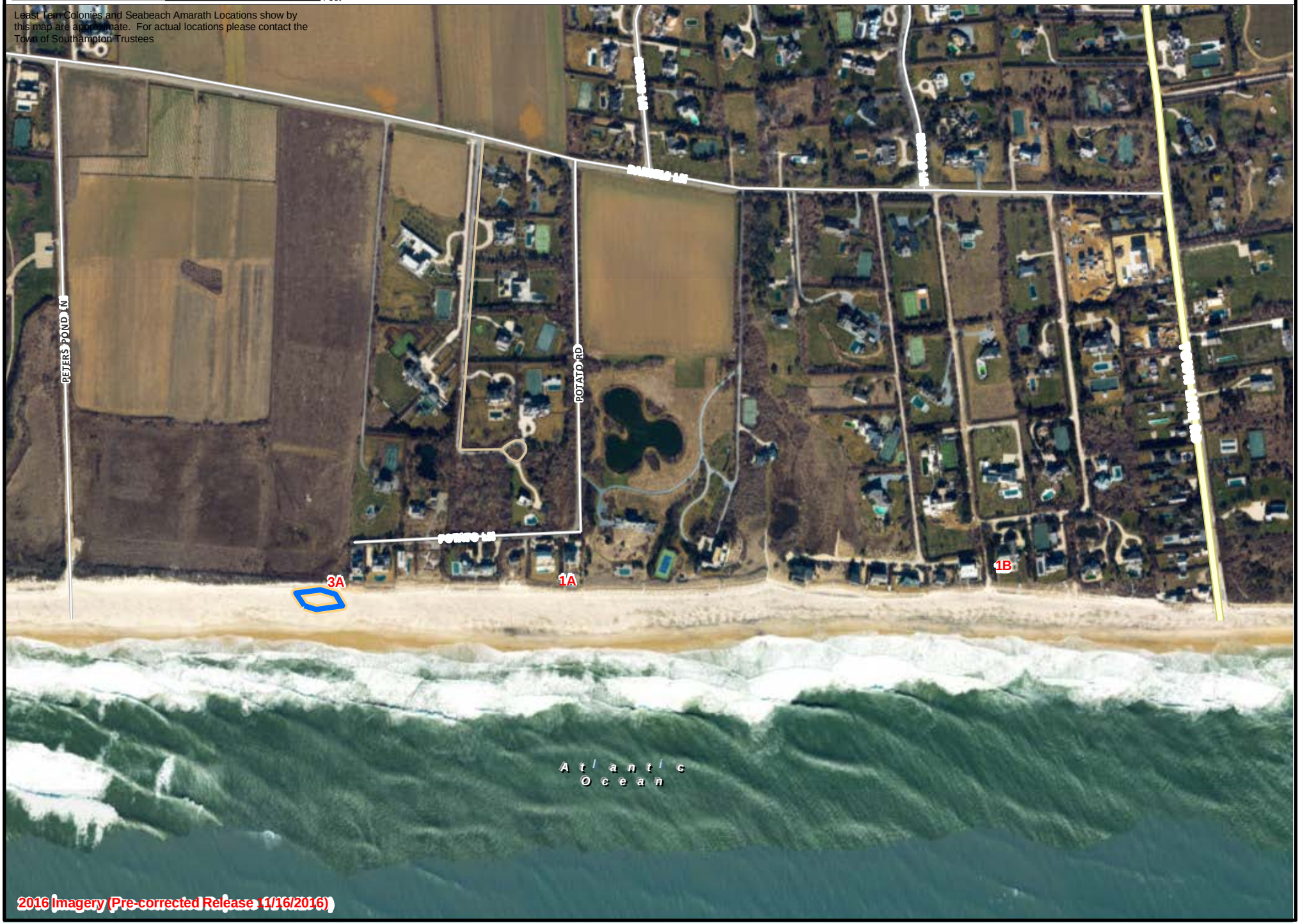
Peter's Pond Ln to Town line Rd

Plover Nests

Amaranth

Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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 2016

0 500 1,000 Feet

FAIRFIELD POND LANE BEACH (WEST)

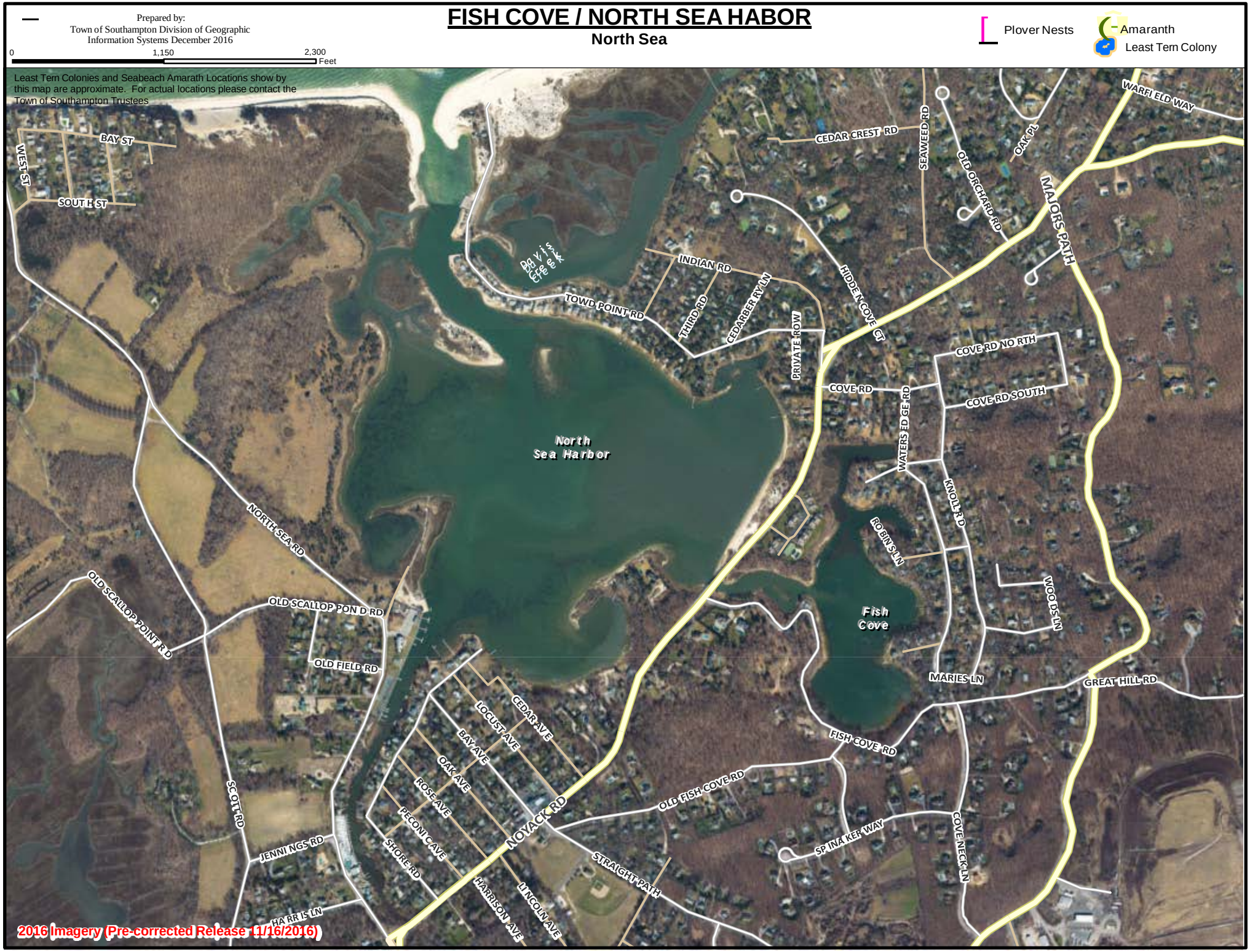
Gibson Ln to Peter's Pond

Plover Nests

Amaranth

Least Tern Colony

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


FISH COVE / NORTH SEA HABOR
North Sea
Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016
0
1,150
2,300
Feet
Plover Nests
Amaranth
Least Tern Colony
Least Tern Colonies and Seabeach Amarath Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
North Sea Harbor
Fish Cove
BAY ST
WEST ST
SOUTH ST
CEDAR CREST RD
SEAWEED RD
OLD ORCHARD RD
OAK PL
WARFIELD WAY
MAJORS PATH
INDIAN RD
TOWD POINT RD
THIRD RD
CEDARBERRY LN
HIDDEN COVE CT
PRIVATE ROW
COVE RD NORTH
COVE RD
COVE RD SOUTH
WATERSEDGE RD
KNOLL RD
ROBINS LN
WOODS LN
MARIES LN
GREAT HILL RD
NORTH SEA RD
OLD SCALLOP POINT RD
OLD SCALLOP POND RD
OLD FIELD RD
SCOTT RD
JENNINGS RD
HARRIS LN
CEDAR AVE
LOCUST AVE
BAY AVE
OAK AVE
ROSE AVE
PECONIC AVE
SHORE RD
NOYACK RD
HARRISON AVE
LINCOLN AVE
STRAIGHT PATH
FISH COVE RD
OLD FISH COVE RD
SPINAKER WAY
COVE NECK LN
2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
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Information Systems December 2016

0 330 660 Feet

FRESH POND

Bulkhead to Lake Dr.

Plover Nests

Amaranth

Least Tern Colony

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

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Town of Southampton Division of Geographic
Information Systems December 2016

0 462.5 925 Feet

GENET CREEK
North Haven

Plover Nests

Amaranth
Least Tern Colony

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

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0 875 1,750 Feet

GIN LANE BEACH (VILLAGE)

South Main St to Old Town Rd

Plover Nests

Amaranth

Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

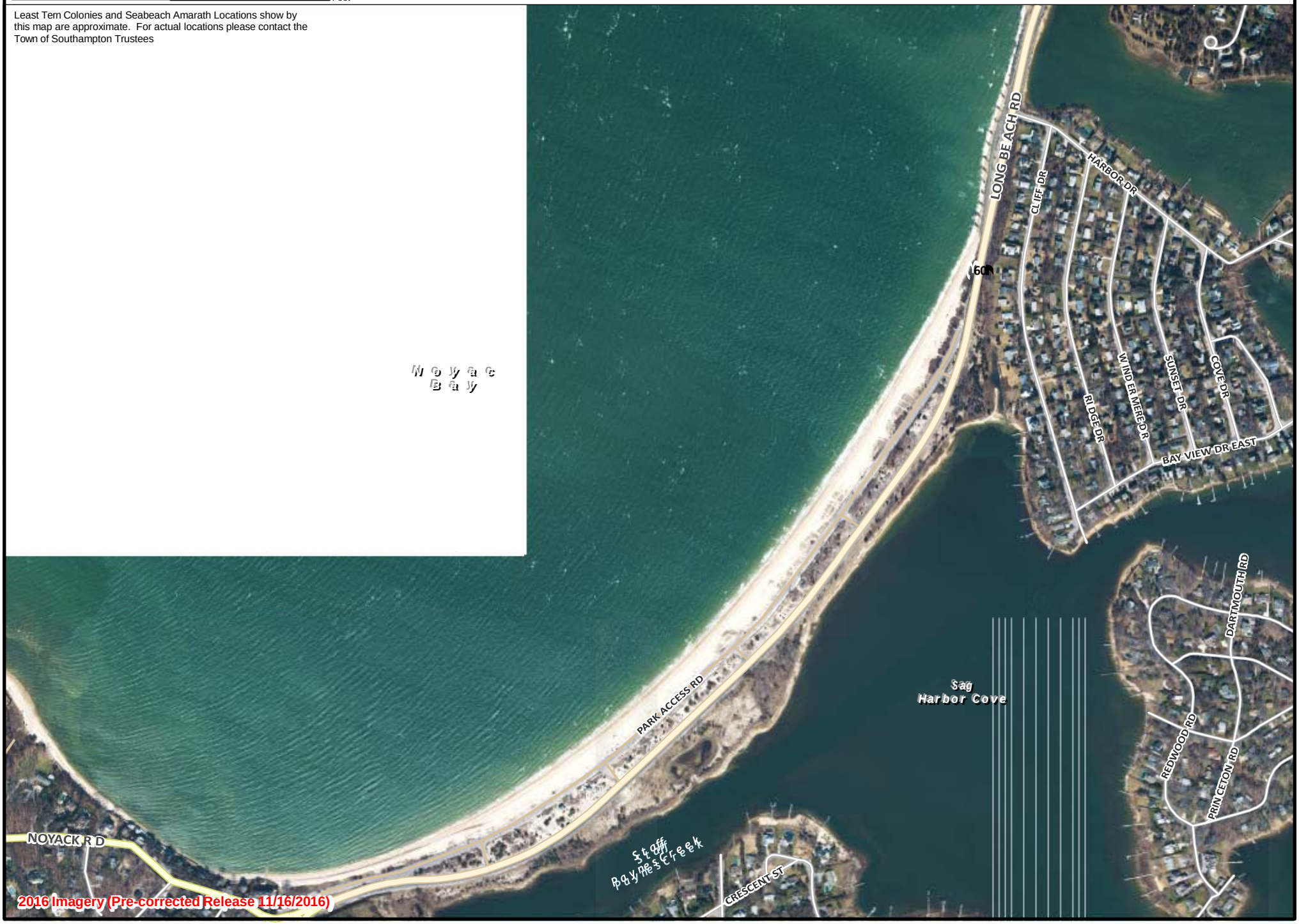
0 900 1,800 Feet

LONG BEACH
Noyac / Sag Harbor

Plover Nests

Amaranth
Least Tern Colony

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



2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 375 750 Feet

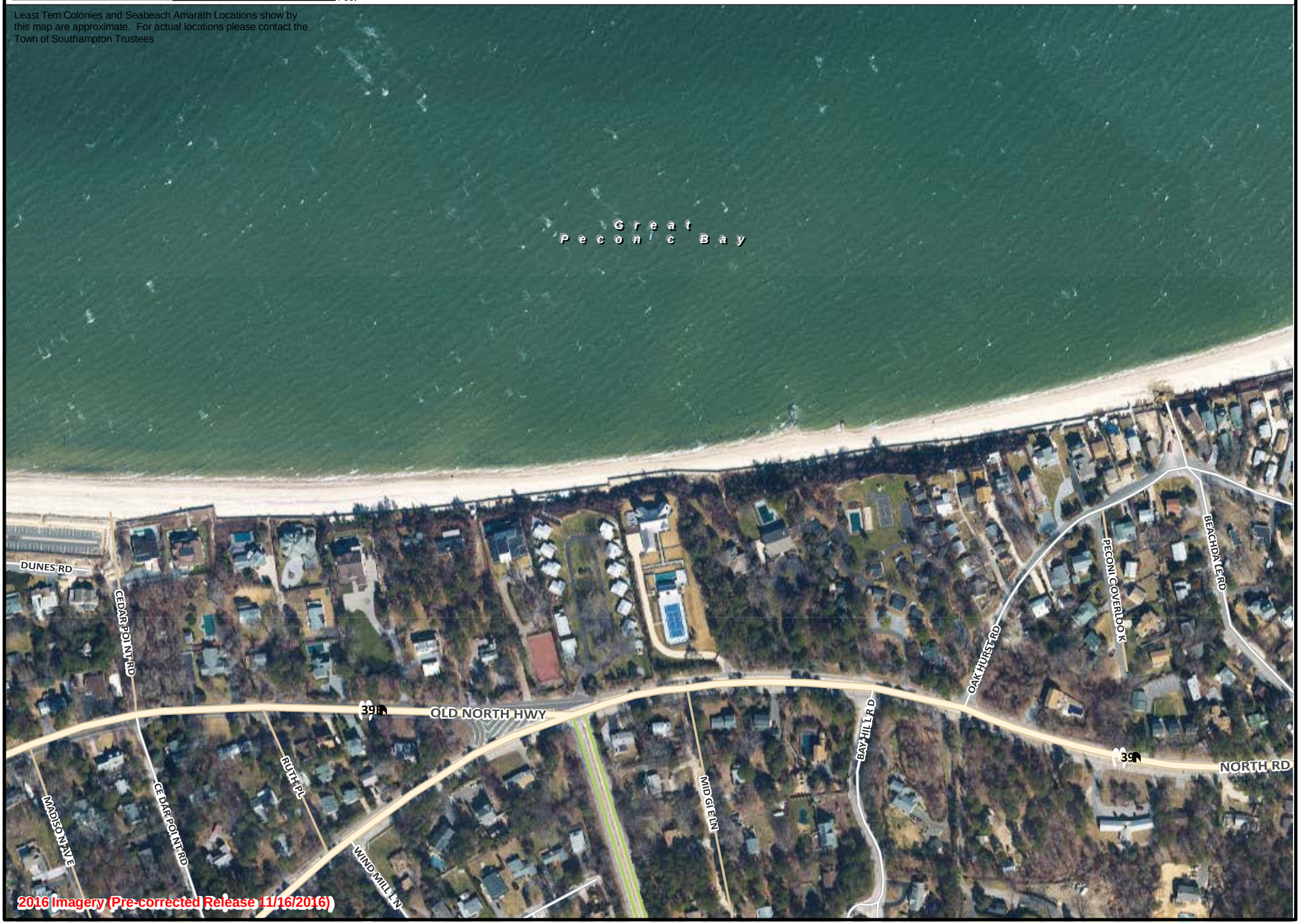
MESCHUTT BEACH

Hampton Bays

Plover Nests

Amaranth
Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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 2016

0 275 550 Feet

MIDDLE POND
Shinnecock Hills

Plover Nests

Amaranth
Least Tern Colony

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

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Information Systems December 2016

0 750 1,500 Feet

OLD TOWN ROAD (VILLAGE)

Old Town Rd to Fowlers St

Plover Nests

Amaranth

Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)


Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016
0
500
1,000
Feet
PINE NECK / MILL CREEK
Noyac
Plover Nests
Amaranth
Least Tern Colony
Least Tern Colonies and Seabeach Amarath Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Noyac Bay
Mill Creek
HAMPTON RD
NOYACK AVE
OAK ST
CEDAR ST
MAPLE ST
RIGHT OF WAY (NOYACK AVE)
PINE RD
OAK RD
BRIAR LN
PINE NECK AVE
CHESTNUT ST
POPLAR ST
BIRCH ST
WALNUT ST
DOGWOOD ST
NOYACK BAY AV E
BERNARD PL
OAK DR NORTH
TREDWELL LN
MILL RD
LOCUST LN
HARRYS LN
MUNCHOGUE DR
NORTHVIEW DR
NOYACK RD
2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 250 500 Feet

RED CEDAR POINT

Flanders

Plover Nests

Amaranth

Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

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Town of Southampton Division of Geographic
Information Systems December 2016

0 320 640 Feet

RED CREEK POND

Hampton Bays

Plover Nests

Amaranth

Least Tern Colony

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

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Information Systems December 2016

0 450 900 Feet

ROSES GROVE

Peconic Bay Ave to Oak Grove Rd

Plover Nests

Amaranth

Least Tern Colony

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

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Town of Southampton Division of Geographic
Information Systems December 2016

0 650 1,300 Feet

SAGAPONACK LAKE (EAST)

Sagg Main St to Gibson Ln

Plover Nests

Amaranth

Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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
Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016
0
550
1,100
Feet
Plover Nests
Amaranth
Least Tern Colony
Least Tern Colonies and Seabeach Amarath Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
MEADOWLARK LN
SANDPIPER LN
SURFSIDE DR
Sagaponack Lake
Atlantic Ocean
1A
2A
3A
4A
6A
7A
8A
10A
2016 Imagery (Pre-corrected Release 11/16/2016)

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Town of Southampton Division of Geographic
Information Systems December 2016

0 500 1,000 Feet

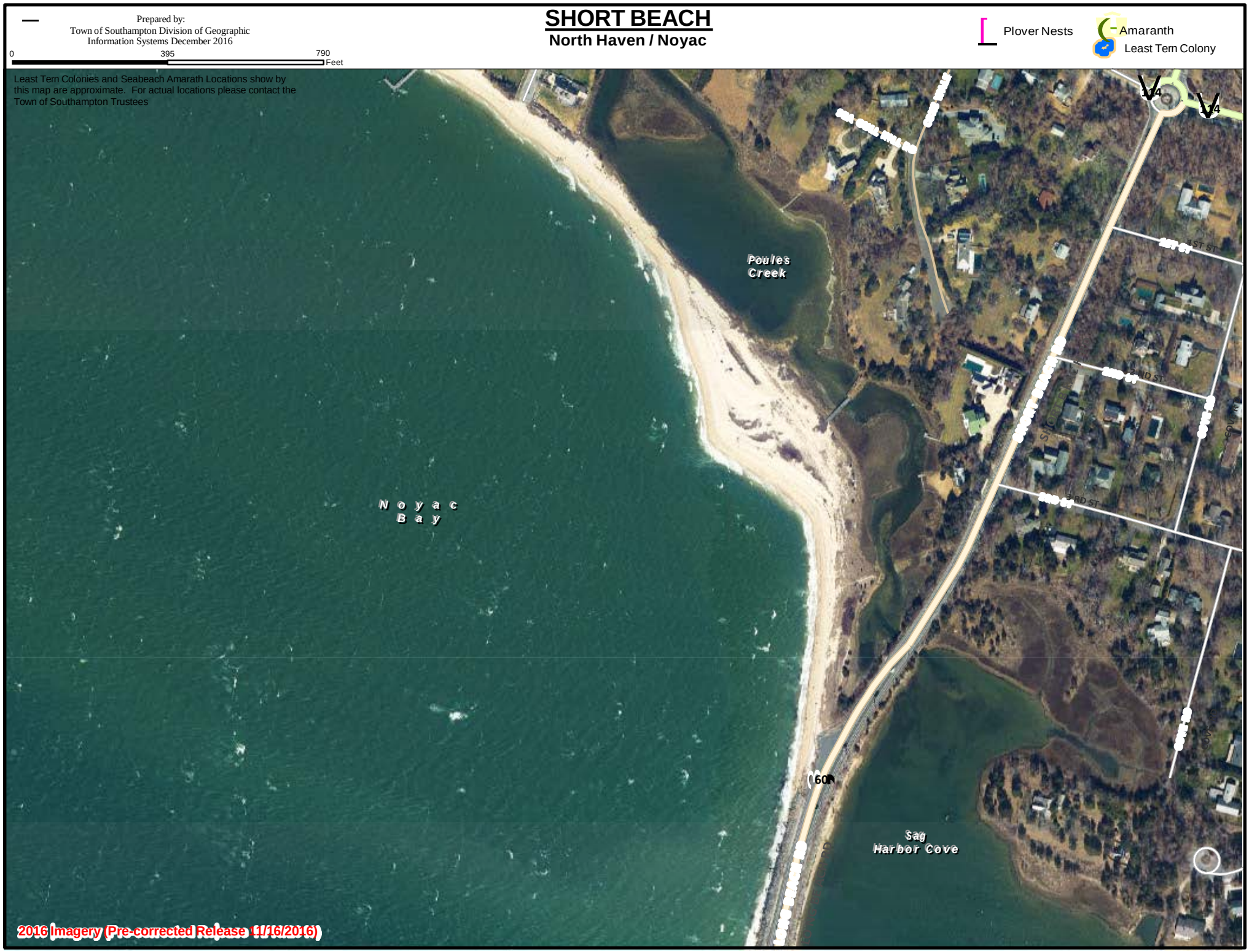
SAM'S CREEK / MECOX BEACH

Jobs lane to Ocean Rd

Plover Nests

Amaranth
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 2016
0
395
790
Feet
SHORT BEACH
North Haven / Noyac
Plover Nests
Amaranth
Least Tern Colony
Least Tern Colonies and Seabeach Amarath Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Poules Creek
Noyac Bay
Sag Harbor Cove
114
114
1ST ST
2ND ST
3RD ST
COVE
COVE
60
2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 1,250 2,500 Feet

SOUTHAMPTON BEACH (VILLAGE)

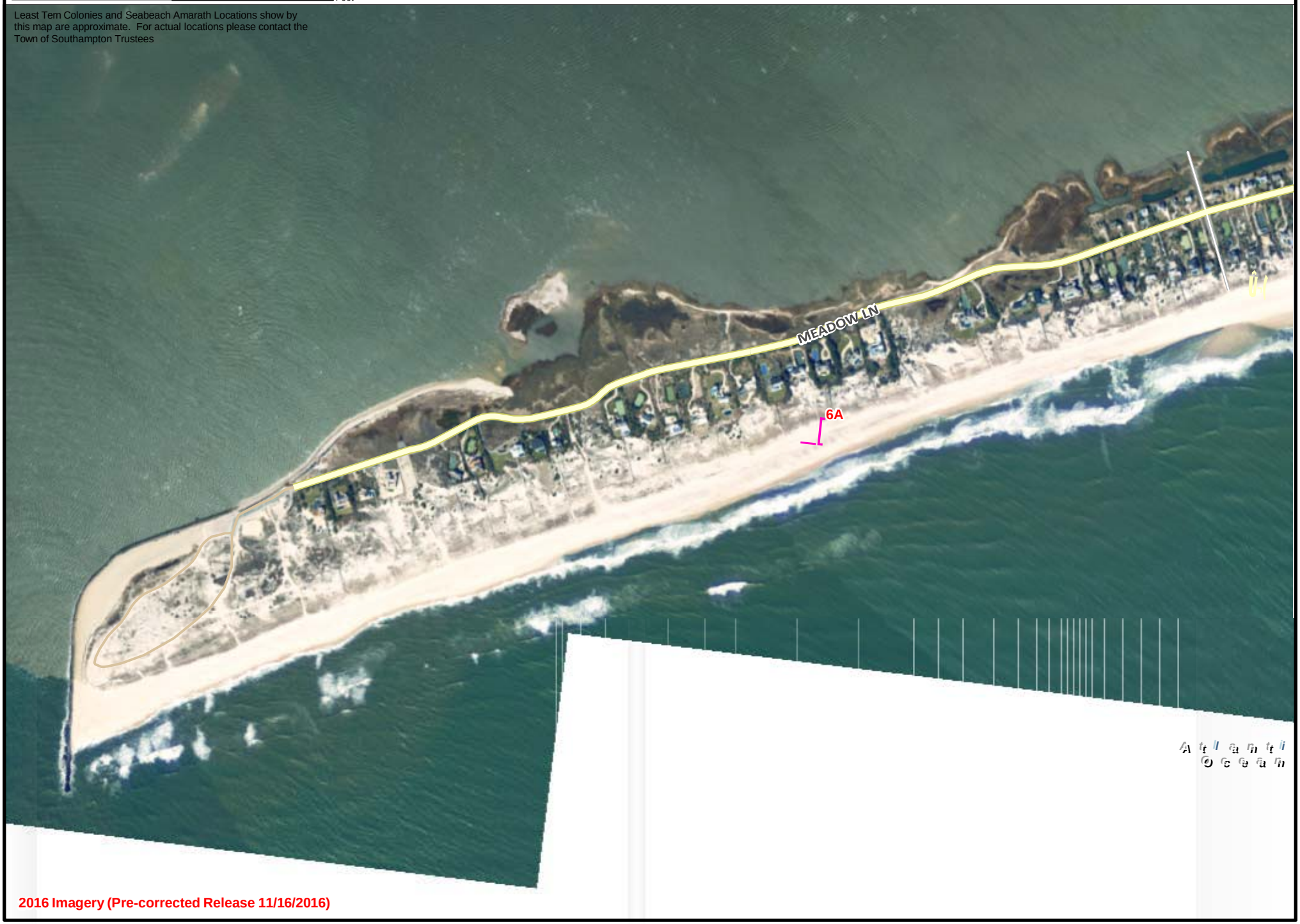
Shinnecock East to Road D

Plover Nests

Amaranth

Least Tern Colony

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



2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 1,350 2,700 Feet

SOUTHAMPTON BEACH (VILLAGE)

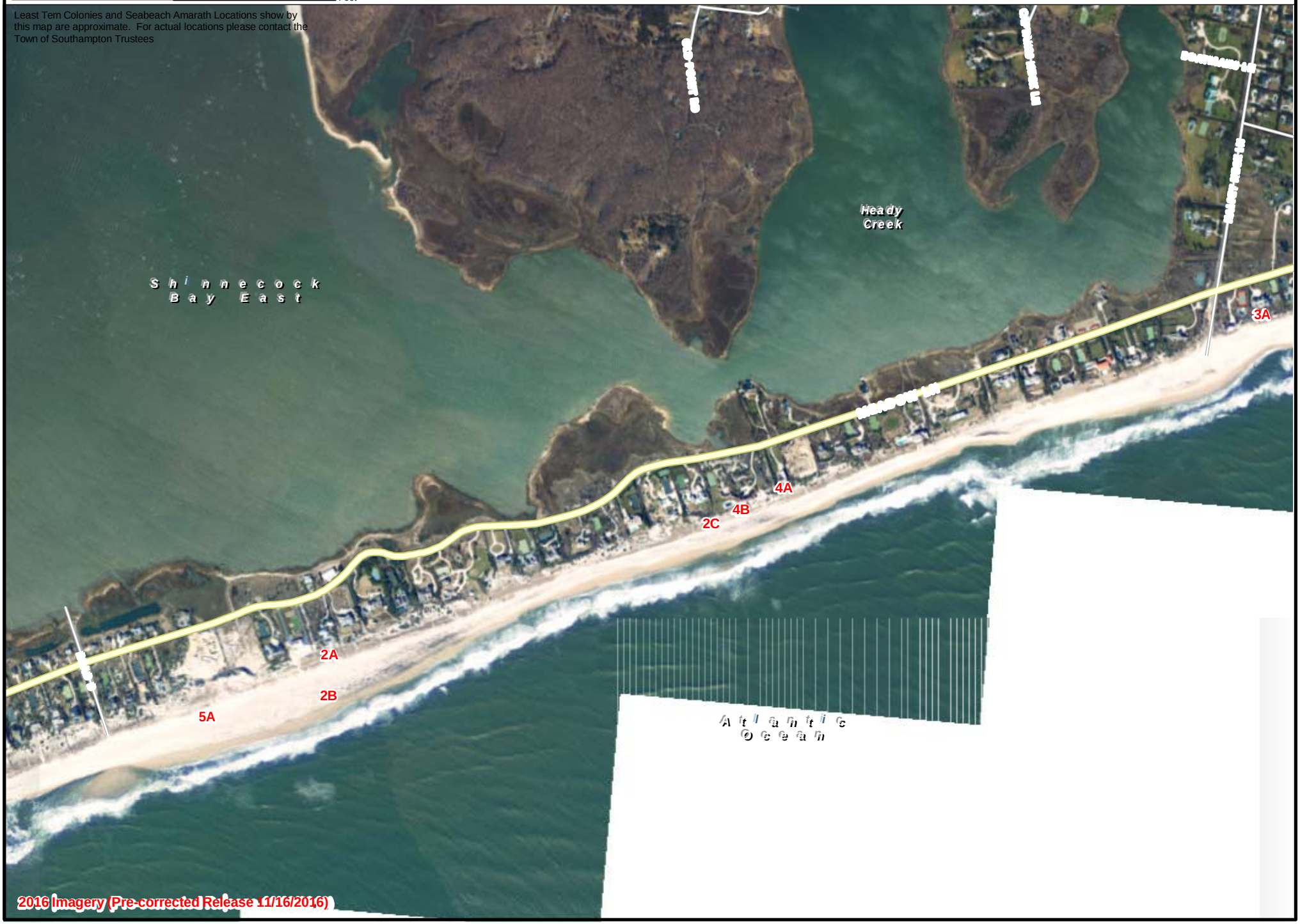
Road D to Halsey Neck Lane

Plover Nests

Amaranth

Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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 2016
0
875
1,750
Feet
SOUTHAMPTON BEACH (VILLAGE)
Halsey Neck Lane to S Main St
Plover Nests
Amaranth
Least Tern Colony
Least Tern Colonies and Seabeach Amarath Locations show by this map are approximate. For actual locations please contact the Town of Southampton Trustees
Agawam Lake
1A
7A
3A
Atlantic Ocean
2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 285 570 Feet

SQUIRES POND
Hampton Bays

Plover Nests

Amaranth
Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 550 1,100 Feet

TOWD NECK (EAST)

East Towd Point (Inlet) to Scotts Landing Rd

Plover Nests

Amaranth

Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 1,000 2,000 Feet

TOWD NECK (WEST)

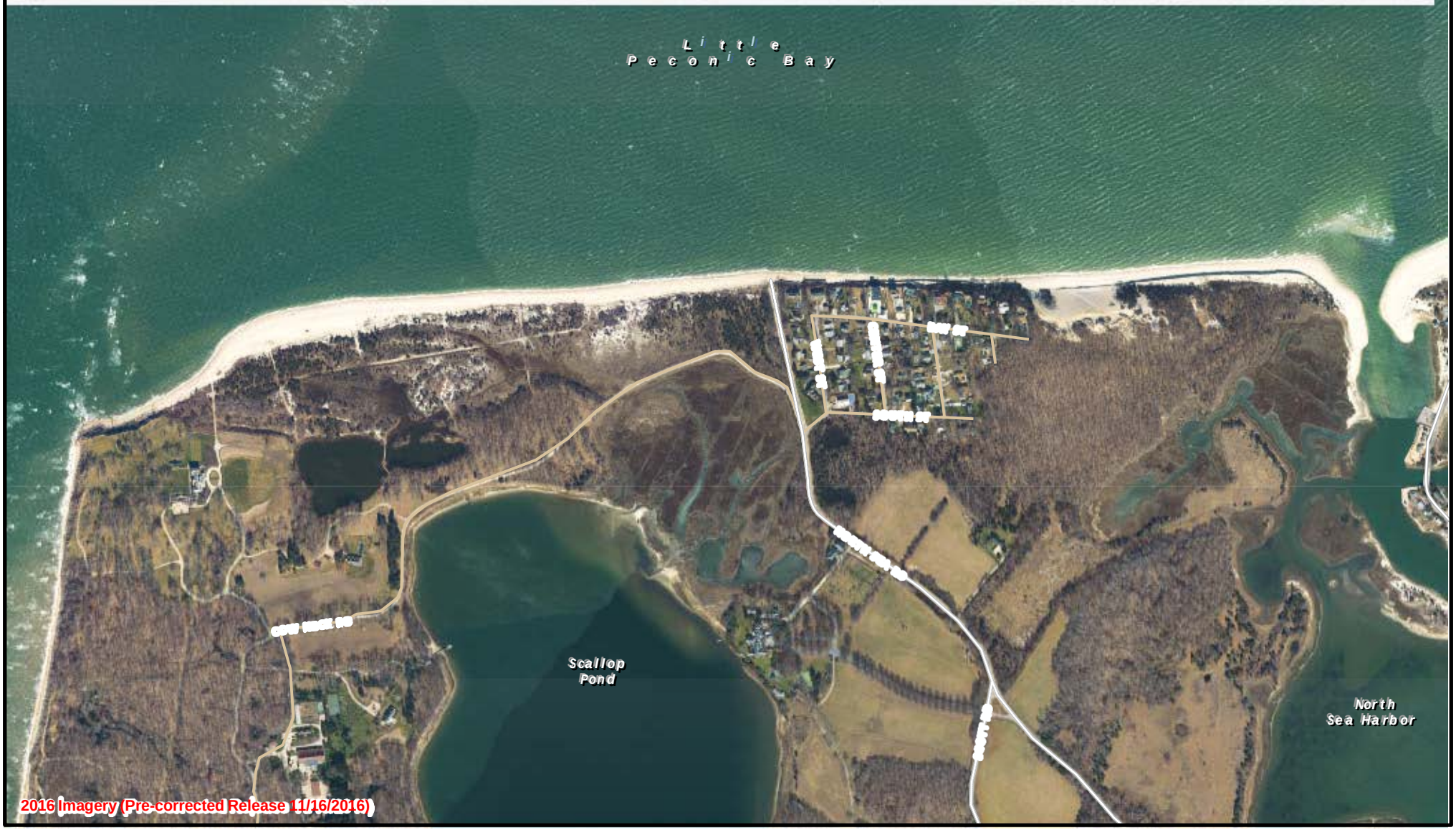
West Cow Neck Point to Towd Point

Plover Nests

Amaranth

Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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 2016

0 700 1,400 Feet

WATER MILL BEACH

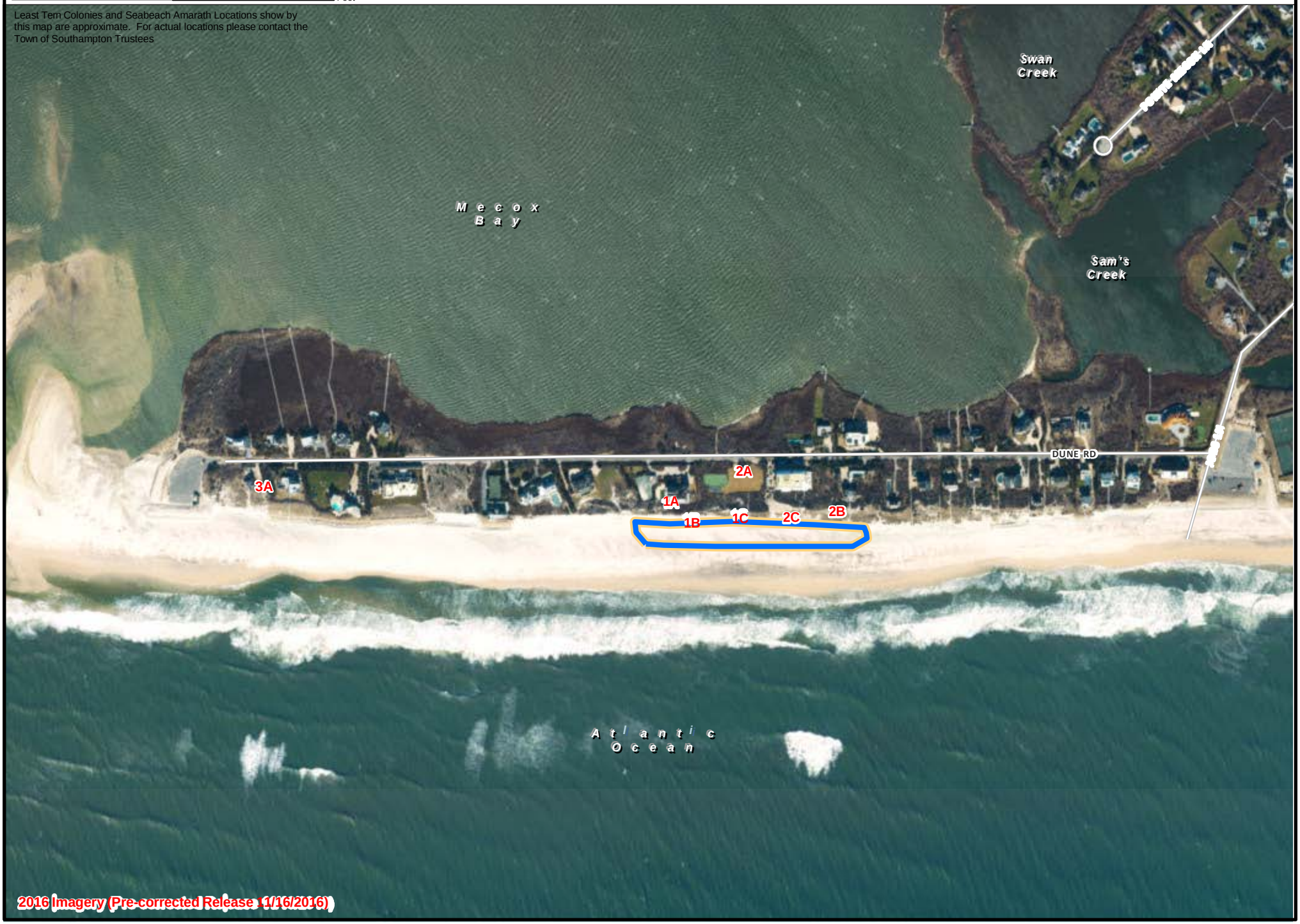
Dune Rd to Jobs Ln

Plover Nests

Amaranth

Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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 2016

0 600 1,200 Feet

WATER MILL BEACH

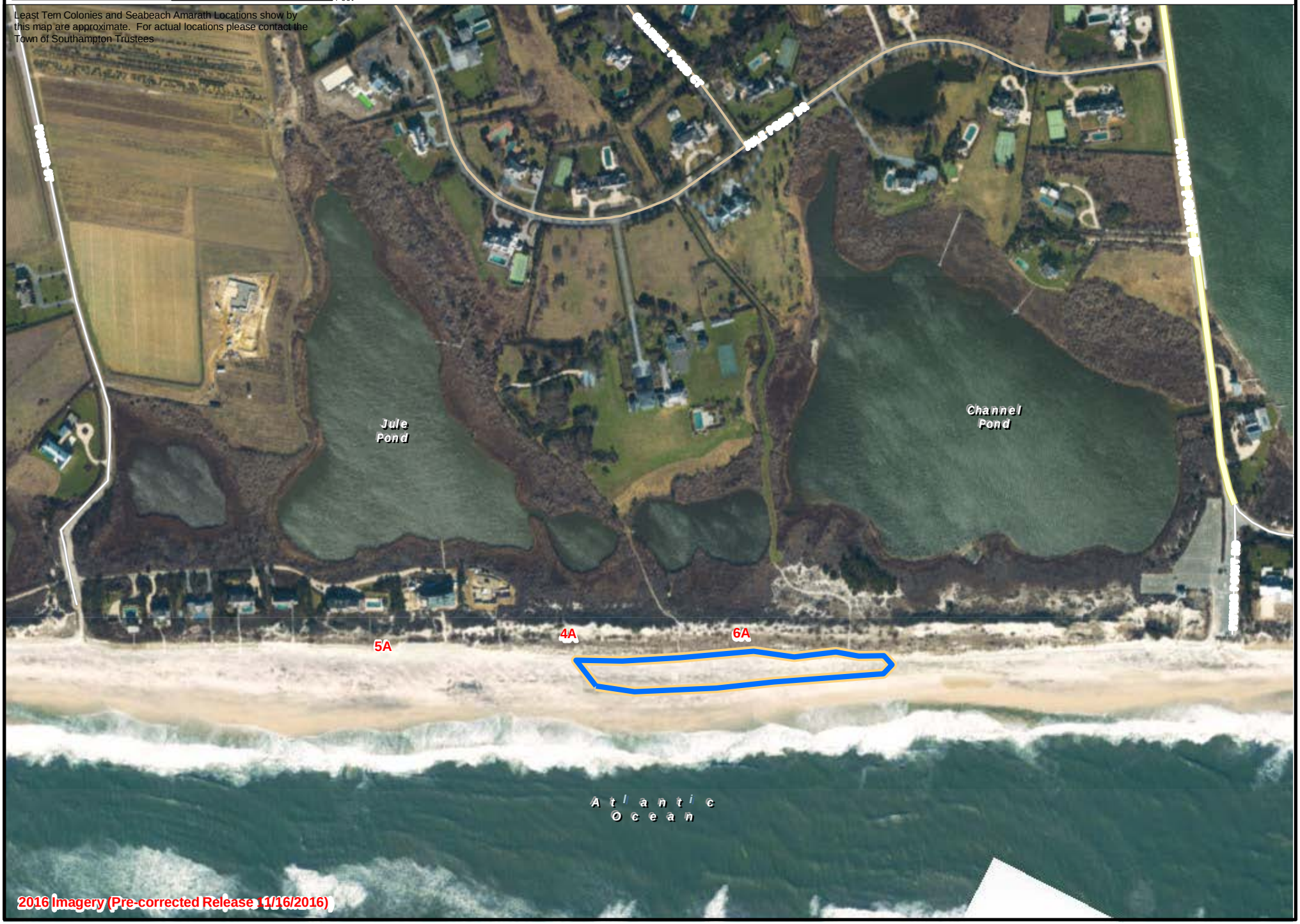
Fowlers St to Flying Pt Rd

Plover Nests

Amaranth

Least Tern Colony

Least Tern Colonies and Seabeach Amarath 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 2016

0 485 970 Feet

WATER MILL BEACH

Flying Point Rd to Dune Rd

Plover Nests

Amaranth
Least Tern Colony

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

2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 162.5 325 Feet

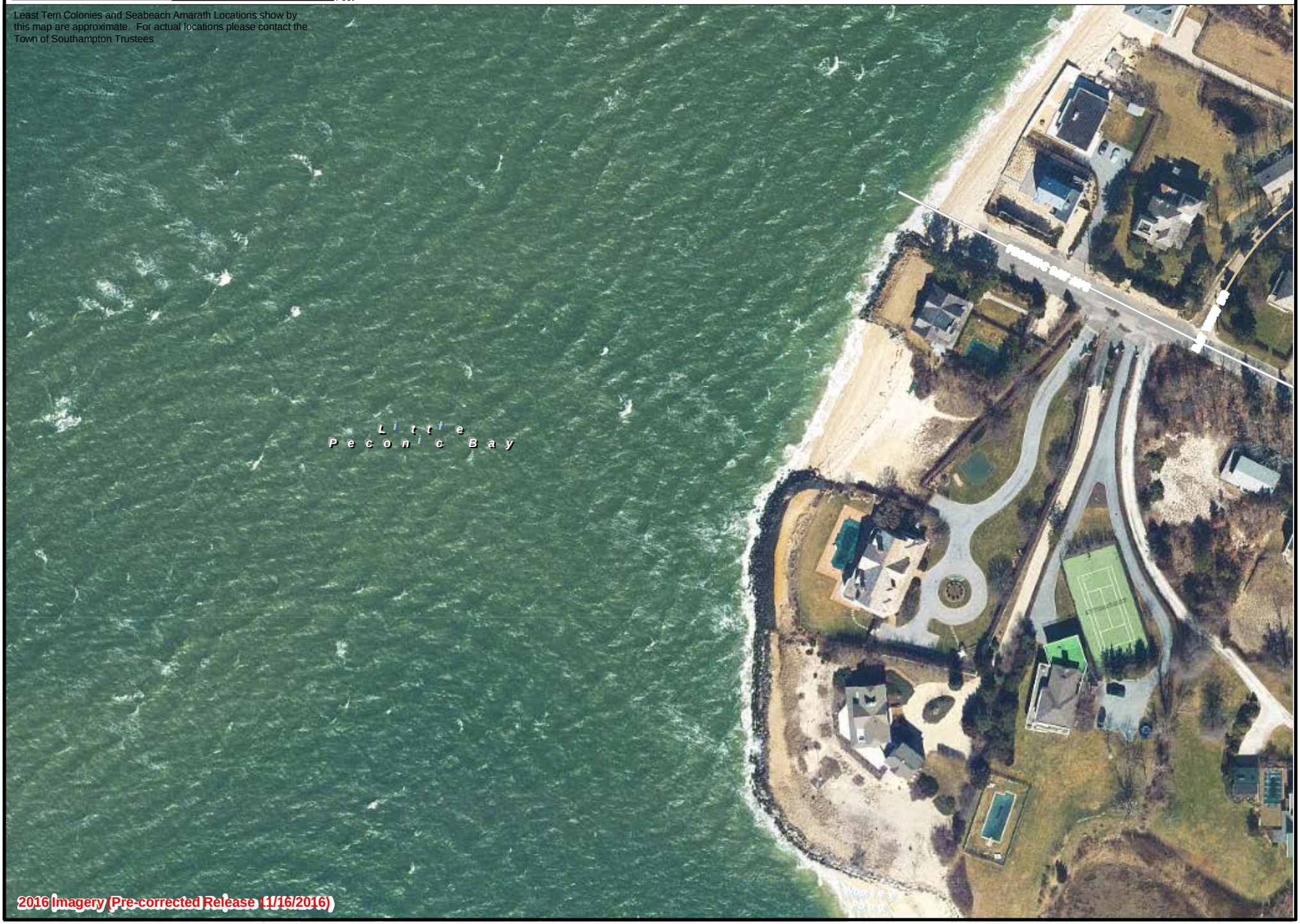
WOOLEY POND (EAST)

East/North Point to Peconc Bay Ave

Plover Nests

Amaranth
Least Tern Colony

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



2016 Imagery (Pre-corrected Release 11/16/2016)

Prepared by:
Town of Southampton Division of Geographic
Information Systems December 2016

0 300 600 Feet

WOOLEY POND (WEST)

West Scotts Landing to Bulkhead

Plover Nests

Amaranth

Least Tern Colony

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