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

Figure 1. Piping plover chick monitored during the 2024 threatened and endangered species program at Westhampton Beach. This chick fledged along with two of its siblings after hatching from a re-nest.

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I. EXECUTIVE SUMMARY

Since 1998, the Board of Trustees of the Commonalty of the Town of Southampton has undertaken the Threatened and Endangered Species Management Program (T&E program). Throughout the years, the Board of Trustees has gained jurisdiction that was passed from organizations such as NYSDEC and The Nature Conservancy. As of 2024, the Town monitors 15 bay areas and 28 miles of coastline, from Rogers Pavilion up until Tiana's pavilion on Westhampton Island, and from Shinnecock County Park East up until East Hampton Townline Road.

The program aims for conservation efforts that contribute to the recovery and protection of two migratory shorebirds species: Piping Plovers (*Charadrius melodus*) and Least Terns (*Sternula antillarum)*. These efforts also entail preserving and protecting two species of native annual ocean plants: Seabeach Amaranth (*Amaranthus pumilus)* and Seabeach Knotweed (*Polygonum glaucum*).

In 2024, the T&E program monitored 75 piping plover pairs with 115 chicks that successfully fledged yielding a productivity of 1.53 for the species.

In addition, a total of 288 least terns nesting pairs with 157 chicks that successfully fledged, giving a productivity of 0.55 per pair. 45 seabeach amaranth plants were found along 8 ocean sites, 8 seabeach knotweed plants found at 4 ocean sites and around 1794 seabeach knotweed plants found at 7 bay areas.

Throughout the season, anthropogenic and environmental threats and disturbances were identified and addressed. Environmental threats include storm surge washing over nests and habitat, strong sustained winds, large rain events flooding nests, predator disturbance and foraging of nests. The most common anthropogenic threats and disturbances identified this season include unenforced off-leash dogs, ORVs driving around or crushing snow fencing, humans and off-leash dogs trespassing through shorebird protected areas, litter and hazardous marine debris, illegal firework displays, open-pit recreational holes or fire pits, and more.

II. CURRENT SPECIES STATUS

Piping plovers (*Charadrius melodus*) are currently listed as federally threatened and listed as (New York) State endangered. Additionally, least terns (*Sternula antillarum*) are considered as a NYS threatened species. The annual coastal plant, Seabeach amaranth *(Amaranthus pumilus),* is listed as federally threatened and state status, and Seabeach knotweed (*Polygonum glaucum*) is a NYS rare species of special concern (NYNHP, 2016).

III. PROGRAM OBJECTIVE

The T&E program provides protection to the populations of threatened and endangered flora and fauna that are found on coastal beaches and rely on these zones for breeding and for the continuation of their species longevity. Conservation efforts for these flora and fauna are focused on increasing the annual productivity rate of these species which consequently aims for the recovery of their population.

To achieve these efforts, the program assesses the current threats that affect each species' population and applies their findings to form protective actions that can effectively minimize the consequences of the threats for the species. The objective of this program is to protect the endangered species that rely on Southampton's shoreline habitat while working closely with the public, as well as educating visitors that frequently use these areas.

IV. HISTORY OF THE PROGRAM

Prior to 1998, the U.S. Fish and Wildlife Service (USFWS), the Nature Conservancy (TNC), and the New York State Department of Environmental Conservation (NYSDEC) jointly managed threatened and endangered species recovery in the Southampton area. However, due to a decrease in staffing and resources provided by the NYSDEC and TNC, the Southampton Board of Trustees initiated their own threatened and endangered species program. Preceding 2011, the Board of Trustees were responsible for 13 miles of ocean beaches in addition to 16 bay sites. During the 2011 season, the Board of Trustees worked with TNC to become familiarized with the Westhampton Island sites. In 2012, the Trustees began to manage the 5.5 miles of ocean beach from Roger's Beach Pavilion in Westhampton to Tiana Pavilion in Hampton Bays. Currently, the Trustees manage a total of 18.5 miles of ocean beach sites 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.

In 2023, T&E program monitored a total of 58 piping plover pairs that nested in Southampton township jurisdiction and 83 chicks that successfully fledged giving a productivity of 1.43 for the species. In comparison to 2024, the T&E program monitored 75 piping plover pairs with 115 chicks that successfully fledged yielding a productivity of 1.53 for the species. The net gain of roughly 34 breeding adult piping plovers over the course of one season may indicate the growth and recovery of breeding habitats that the Town of Southampton has to offer, or, the deteriorating health and quality of breeding habitats nearby.

V. Life History, Conservation, and Recovery Efforts

The Piping Plover is a small migratory shorebird with a grey sand upper body color and white underparts. They have orange legs, a single black or brown neck band which is often incomplete, and some of them can hold a black band across the forehead (USFWS). Their breeding plumage works as a method of camouflage on the sandy and rocky beaches where they annually spend their breeding season. (Fig 2).

Fig 2. Piping plover adult in breeding plumage at Westhampton Beach in 2023

These birds usually nest on the coastline and prefer locations with open grounds or sparse vegetation, with no erosion of the dunes. They have a high nesting preference for uniform sandy shorelines with no vegetation or depleted foredune, and moderate rocky locations away from water. The species site preferences make this shorebird a 'species indicator' which reflects the conditions and health of the coastal habitats where they nest (USGS 2017). Both the piping plover and seabeach amaranth prefer primary succession beach habitat, which lack vegetation and with little cover from other plants. In fact, piping plover's exhibit nesting site fidelity, meaning that they will return year after year to the same breeding locations. The high site fidelity of coastal piping plovers suggests that patches of coastal breeding habitats have remained suitable for long periods to return to, and those habitats where site fidelity starts decreasing, could indicate that habitat quality is poor or declining (Cohen, J. *et al.* 2006).

Based on T&E programs and the data collected in previous years, symbolic fences are installed in suitable or historic locations where piping plovers have shown nesting site fidelity. Symbolic fences are made up of wooden and metal posts linked by flagged string and informative signs attached to every corner post (fig. 3). The main purpose of the protective symbolic fence is to isolate breeding grounds to avoid any disturbances that cause nest abandonment or destruction, and represents a buffer protection for shorebird chicks when they hatch. (Fig 3) If a protected area with a nest or brood nearby has dog footprints through it, monitors are highly encouraged to double or triple string protected areas to deter this disturbance and possible predation.

Figure 3. Symbolic fencing at Sagaponack Lake made up of wooden post and flagged string with a fledgling beneath

Piping plovers migrate to southern shores to winter over, such as Texas, the Carolinas, the Bahamas, and other tropical or temperate shorelines. Piping Plover males are typically the first to arrive at Long Island's breeding grounds around mid-March to begin establishing their nesting and territory boundaries following the arrival of the females. Intra-species sexual selection behaviors typically consist of a male on the ground, the male approaches a female, stands upright with neck stretched, and rapidly stamps feet with odd high-stepping gait (National Audubon Society) and possibly accompanied by low-calling peeps. When the pair bond is formed, males will create multiple 'scrapes' which are shallow depressions that the female will choose as a potential nest site. Scrapes are often decorated with seashell fragments that the female will add before laying eggs and well camouflaged along the wrack line, near rocks or in the shadow of spare dune vegetation.

Figure 4. Piping Plover scrape in Westhampton that shows the footprints or 'plover highway' trail incubating or nesting plovers take to their scrape.

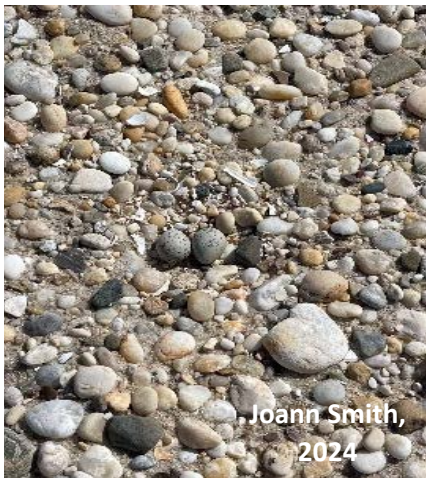


Figure 5. Two-egg nest well camouflaged amongst rocks and pebbles at Red Cedar Point. The plover laid two more eggs and the nest hatched fledging three plovers

After copulation, the female will lay one egg every other day until a full clutch is formed, which is usually three to four eggs and may take 4-7 days for a full clutch once the first egg is laid. Once the female has laid the first egg, behaviors may vary, but the pair often can be found foraging far from the nest until a third egg is laid or full clutch is completed. Once the clutch is complete, the incubation process starts, which is shared by both sexes and lasts for approximately 25-28 days before the chicks begin to hatch (USFWS)

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 disturbance while incubating, exposure, predation, abandonment, infertility, vandalism, and nest washout caused by wave or tidal. In areas with a high predatory presence, a predator enclosure may be installed around the nest for protection (Fig. 6).

Figure 6. A predator enclosure made up of 10 ft. of wire mesh and a mesh top installed around a piping plover nest that is at risk for predation.

Piping plovers have different ways of defending their nest or chicks: Broken wing display is one of the most common forms of defensive behavior, as the name implies, the bird will act injured, flailing around on the ground and alarming to distract the perceived predator. According to the Great Lakes Piping Plovers website, when chicks hatch, piping plovers give calls to warn the chicks to hide if danger is nearby, the chicks respond by flattening down and the sand color of their backs makes them nearly invisible.

After estimating the hatch date of a nest, snow fencing will be placed perpendicular to the dunes at a distance of 1,000 meters in either direction from the nest location, restricting vehicle access in the area (Fig 7). This is done 3-5 days in advance of the estimated hatch date. Piping Plover chicks are precocial, meaning that they will begin foraging within 24 hours of hatching, scurrying between the foredune and intertidal zones. Without the ability to fly, the chicks are at risk from predation, as well as human disturbance, especially from ORVs and frequent off leash dogs.

Figure 7. Snow Fence installed to protect chicks in Southampton Beach by closing access to ORV

After hatching, the chicks take approximately 25-35 days to fledge, during which the brood will remain within a close distance of each other for protection. Once a chick's ability to fly for a minimum distance of 15 meters is observed, they will be considered fledged. Finally, the snow fence will be removed and ORV access will be open.

After fledging, piping plovers may start congregating in small groups to prepare for their long migration departure south where they will over-winter, which starts as early as July, and as late as October. This season, plovers were seen congregating as early as July in sites such as Westhampton and Southampton Beach Village and can be seen often congregating with sanderlings and other small shorebirds.

Least Tern (*Sternula antillarum*)

The least tern is a small migratory coastal bird that utilizes Long Island's shoreline for breeding and reproduction. These colonial nesters can be found in groups ranging from 5 to upwards of 100 pairs or even just a single pair nesting alone if they are late breeders. They are identifiable by a grey back, white underside and a black capped head with a white brow band (Fig 8). Adult terns arrive at breeding grounds between late April and mid-May. Like piping plovers, least terns create scrapes, although they tend to be shallower (Fig 9).

Figure 8. Least Tern in breeding plumage at Long Beach

Figure 9. Least tern nest with footprints showing the different appearance Piping Plover nests and Least Tern nests have.

Least terns forage by hovering over shallow bodies of water until spotting prey, which is typically a small fish. The small fish they hunt off of Southampton's coastline include sand eels, they select similar habitats to the piping plover for nesting such as; sand flats, gently sloped foredune, and flat expanses of beach above the high tide line. Both species can be seen sharing nesting habitats, as they do not compete for food. Pairs will lay a full clutch of one to three eggs per nest from late May through June. During the incubation process, both least terns' parents will share the incubatory responsibilities, which lasts approximately 20-23 days, at which point the chicks will begin to hatch (Fig 10). Within a few days of hatching, chicks will begin to move outside of the nest. They are semi-precocial and depend on their parents for feeding and protection (National Audubon Society). Terns are loud and extremely protective of their young and nesting territories; they are known for swooping at intruders when they feel threatened, also known as 'dive-bombing'. During the summer, chicks can be seen sheltering in the shade of beach debris and foliage. Least tern chicks are more vulnerable than piping plover chicks due to their semi-precocial nature, as they are often seen waiting for their parents to return with food in the middle

to upper beach portion. Least tern chicks have been observed by monitors running to hide in the dunes after being approached much more delayed when compared to piping plover chicks, which highlights their vulnerability to predators, human foot traffic, and ORVs. Least tern nesting colonies are protected with symbolic fences like other threatened and endangered shorebird species. Symbolic fencing is arranged around the colony and rearranged based on their breeding behaviors, followed by snow fencing a few days prior to the hatching of nests. At approximately 20-25 days old, the chicks will fledge, and shortly thereafter, depart for their wintering grounds, which can happen as early as August and typically no later than the end of September. Least tern fledglings were often seen congregating with other tern species, such as the Common Tern. (NYNHP, 2016)

Figure 10. Least Tern chick waiting for its parent to return with a fish at the shoreline at Long Beach

Seabeach Amaranth (*Amaranthus pumilus*)

For many years, this annual beach grown plant had been extirpated from the coastal ecosystems of Long Island, however, it was found again in 1990 when beach conditions improved and the seed bank had viable seeds dormant. Unfortunately, this plant has lost approximately two-thirds of its historic range, with Long Island being one of the last most northern populations of the species. Natural population of seabeach amaranth currently occur on Long Island grounds growing in dynamic areas of the beach profile on accreting shorelines between the dunes edge and the high tide line, often in the same areas as nesting shorebirds. Germination of seabeach amaranth occurs between June and July on Long Island, coming to maturation between August and September. During the maturation period, plants will continue to grow, bloom, and disperse seeds by wind. This plant is an indicator species for healthy resilient dune and upper beach habitats which help to bind the sand and minimize erosion, fortifying the beach profile (Fig 11).

Several important threats remain, with the biggest threats being habitat degradation, overpopulation of whitetail deer, ORVs, and beach raking. Degradation and erosion of foredune and upper beach areas will

continue to decline the remaining populations of seabeach amaranth. Numerous amaranths were found then later excessively deer-browsed or rabbit-browsed in sites such as Westhampton and Southampton Beach. Some amaranths were found in Southampton Village but were washed out by the high tides from Hurricane Ernesto in mid-August. Whitetail deer and Northeastern Cottontails are the primary grazers of Seabeach Amaranth within the Town of Southampton. ORV usage and beach raking significantly alter the hydrology and geology of upper dunes which degrade potential habitat for seabeach amaranth. Invasive plant species present in the Town of Southampton such as Prickly Saltwort (*Salsola kali*) and Velvetweed (*Abutilon theophrasti*), will continue to thrive and populate in disturbed areas, which will eventually compete with seabeach amaranth.

Figure 11. Seabeach Amaranth (Amaranthus pumilus) in Southampton Beach

Seabeach amaranth plants are protected by a small flagged and signed symbolic fence to prevent ORV and pedestrians' traffic from damaging them. It's imperative for the plant to survive until it's mature enough to disperse its seeds. To be considered for delisting, seabeach amaranth must be found within a minimum of six states that fall within its historic range with plants occupying a minimum of 75% of this suitable habitat. These requirements must be met for 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 six of the states within its historical range, given that the data does not encompass the 10-year requirement (USFWS 2007).

Seabeach Knotweed (Polygonum glaucum)

Seabeach knotweed is considered a rare plant in NYS, annually found mostly in bay areas of the Town of Southampton between the foredune, shoreline, and bordering salt marshes. Long Island is home to most of the existing population for the entire species, with only 43 known populations and around half of those

populations only having less than 100 plants. It is typically located in middle to upper beach areas with a preference for rocky-pebble substrate that boasts wrack lines, are sparsely vegetated, and have a relatively flat topography, often within shorebird protection. Knotweed typically flowers from May to October and fruits from June to November. Knotweed has been observed with flowers this season as early as late April at Red Cedar Point. They disperse their seeds through wind, wave action and birds. In New York State, 43 existing populations are recognized, which are stable, although due to the dynamic environment these plants grow in, there are fluctuations in population numbers from year to year. Seabeach Knotweed faces similar threats as seabeach amaranth; however, knotweed is not nearly as threatened by deer grazing as much as amaranth is. Invasive Prickly saltwort (Fig. 13) and prostrate knotweed are both threats that will continue to compete with knotweed. To determine the quantity and quality, the populations are derived from 5-year averages for species evaluation (NYNHP 2016). Seabeach knotweed no longer receives protective symbolic fencing as of the 2024 season.

Figure 12. Seabeach Knotweed growing out of the wrack line at the sub-site: Road D to Halsey Neck Lane.

Figure 13. Invasive Prickly Saltwort (Left) and Seabeach Knotweed (Right). Prickly saltwort competes with Seabeach knotweed.

VI. MONITORING METHODS

Symbolic protective fences are installed at the end of March before piping plovers arrive at breeding grounds. April 1st is the official start of the courtship season which is when piping plover monitoring begins. Least terns arrive later in the season, and seabeach Knotweed and seabeach Amaranth begin growing around June to July.

Each site is visited at least once a week by coastal stewards, however, monitoring each site more than once a week is recommended. During the beginning of the season, pair bonds are identified while closely watching their behavior and possible nest sites (scrapes).

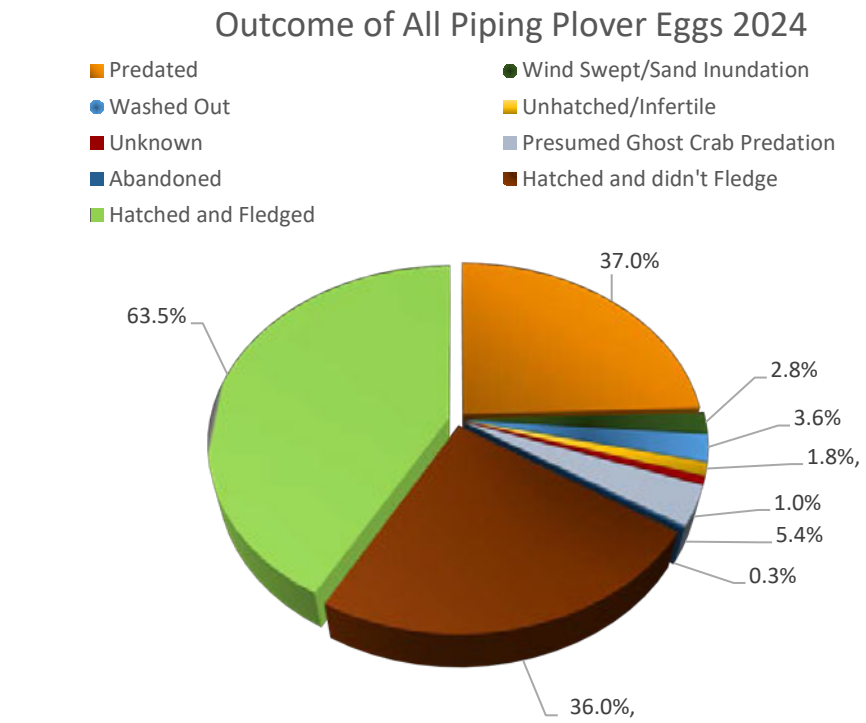
Coastal stewards record all details found during the visit using a notebook log. The main data collected includes detailed location of the nest, the breeding pair's behaviors, human disturbances, potential predators, other threats, and all threatened and endangered species activity. Stewards constantly monitor any activity outside of the protected area. Stewards will report activities outside of symbolic fencing that are considered disturbances to nesting or breeding shorebirds; common disturbances adjacent to symbolic fencing includes (erosion) snow fence installation or construction of walkways which will require a stop-work-order if considered a disturbance. If a scrape is located outside of symbolic fencing, stewards will adjust the symbolic fencing accordingly to minimize incubation disturbance. If multiple dog prints are seen in protected areas with a nest or brood nearby, double or triple string fencing the protected area at a low/medium height (1-3 feet off the ground) can minimize disturbance and is highly recommended. If a nest fails, coastal stewards will assess the loss event along

with a confidence rating to determine the reason and use the guidelines in the document “Categories of Piping Plover Nest & Egg Loss” from the DEC and the division of Fisheries and Wildlife.

Additionally, stewards are heavily encouraged to engage with members of the public; visitors, homeowners, and workers. Public engagement has been shown to improve site conditions for breeding and nesting shorebirds. By speaking with members of the public or homeowners that may not be aware of how their actions cause disturbance, and educating them on the importance of leash laws, the threats the shorebirds face, and the conservation science behind it; typically, visitors will act accordingly and change their behavior when educated. In addition to this, stewards have received information from homeowners or frequent visitors about site conditions or threats members of the public witness that stewards would not have been aware of if they had not engaged in conversation. This is a crucial tool that should be utilized more often by stewards, which has been integral in discerning myths or beliefs about the program and shorebirds, and educating the public on conservation and wildlife. Therefore, coastal stewards should constantly educate the community about the importance of threatened and endangered species protection whenever given the chance.

VII. RESULTS

Over the course of 2024 breeding season, 75 piping plover pairs returned to Long Island with 115 chicks that made it to fledge-hood. Piping plovers reached a productivity of 1.53 this year, which refers to the number of chicks that reached fledge-hood from a breeding pair. The Threatened and Endangered species monitoring program aims for conservation efforts that promotes the piping plovers to be taken off from the endangered species list in New York State. To achieve that, a productivity of 1.5 fledges per pair for 5 years consecutively must be maintained for the entire region.



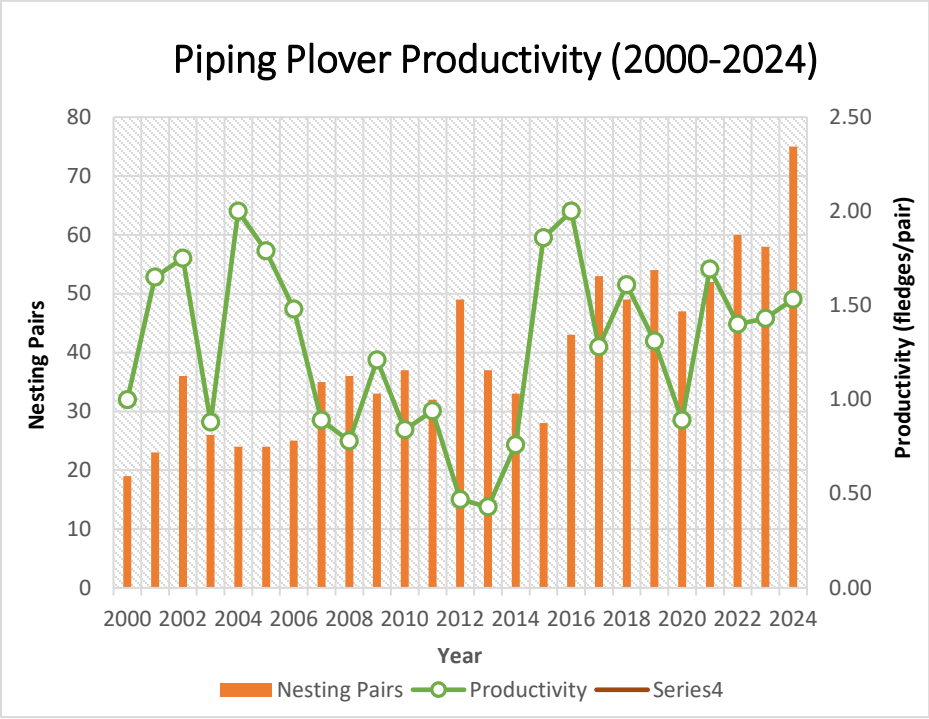


Figure 14 and 15. The graphs above depicts the productivity levels for piping plovers in the Southampton Township from 2000-2024. The productivity level for this season was 1.53, which meets the federal and

state guidelines for a recovery productivity rate of 1.50 per pair. The seasons that met this goal were 2001, 2002, 2004, 2005, 2015, 2016, 2018 and 2021, and 2024.

For the season, 102 piping plover nests were laid, and 49 of them failed; during 2024 program, the number of nest failures did increase compared to last season 2023 with only 28 nests lost. Overall, 384 eggs were laid, with 202 eggs that failed or were predated. 182 eggs successfully hatched; 36% of the chicks that hatched did not make it to fledge-hood, and around 64.1% of chicks reached fledge-hood.

As seen in figure 14, the percentage of loss categories that took place this season for piping plovers eggs failure include: 37.0% of eggs laid were predated by wildlife or a non-native predator (dog or feral cat). 2.8% of eggs laid were lost during storms that caused the eggs to be wind swept or sanded over resulting in nest abandonment. 3.6% of the eggs were washed out by high tides or flooding during storms or strong winds. Furthermore, 1.8% of the eggs never hatched due to infertility, and 1.0% of the eggs were lost for unknown circumstances which refers to the situation where coastal stewards did not find predator tracks or enough evidence to determine a possible reason for the loss. 5.4% of eggs laid were presumed ghost crab predation, which is not included in the predated egg loss category. Last season in 2023, a wildlife photographer at Westhampton Beach took this photo of a ghost crab predating a piping plover egg (Fig 16).

Figure 16. Ghost Grab (Ocypode quadrata) predating a piping plover egg. The Ghost Crab photograph was captured at the Westhampton Beach site in 2023

0.3% of the eggs were abandoned which corresponds to one egg that was from a plover pair that re-nested three times. The third re-nest had two eggs removed from ghost crabs 8 days before its estimated hatch date. The plover continued incubating the single egg up until 3 days before its hatch date and abandoned the area.

Finally, 182 piping plovers' chicks hatched in total, with 115 fledges in total corresponding to a fledge rate of 63.19%. The causes of chick's failure events were determined by carefully assessing the area for predator tracks, other shorebird behaviors/disturbances, and general site visit predator species,

frequencies, and predation-intensity. On four different occasions stewards witnessed a “take”; where an off-leash dog got within 10 meters of unfledged chicks, chasing and attempting to predate the chicks. The frequency and intensity for off-leash dogs at some sites, combined with stewards’ knowledge of non-complying homeowners with off-leash dogs, is the reason why two broods (or 5 chicks) were marked down to have been predated by off-leash dogs at Scott Cameron in Watermill and the sub-site Quogue Village Beach to Dolphin Lane in Westhampton.

The total amount of nesting least tern pairs for the 2024 season was 288 nesting pairs of least terns used Southampton breeding grounds with 157 chicks that fledged giving a productivity of 0.55 fledges per pair. These shorebirds faced the same threats mentioned in previous paragraphs for the piping plovers, however some threats were exacerbated due to foraging and breeding behaviors. This season in late June and early July, an upwelling effect led to the growth or algae bloom of coccolithophores, a species of phytoplankton. As the phytoplankton died, their shells made up of calcium carbonate decomposed and created a green/turquoise hue within the water for around 1 to 2 weeks in late June and early July. This event may be influential in the sudden colony abandonments, or low chick/fledge productivity during this time period at sites and sub-sites such as the Picnic Area and Tiana Beach. This colony-abandonment phenomenon was not observed at any bay sites this season in relation to the upwelling event.

At last, a total of 11 seabeach amaranths were found across 8 ocean sites and approximately 2031 seabeach knotweeds. Seabeach amaranth had an alarming decrease in population with only eleven plants found for the season, and half of those plants were later excessively deer or rabbit browsed. Seabeach plants experienced the following threats during the season: ORV drivers running over plants, over-browsing from deer and rabbits, storm surges that took out some amaranths, and invasive plant species such as prickly saltwort competition.

SITE AND SUB-SITES SUMMARY

Westhampton Island

Westhampton Island consists of approximately 5.5 miles of beach extending from Roger’s Beach pavilion to just east of the Round Dune housing complex. This site is broken down into two sub-sites: Hampton beach and Tiana beach.

The disturbances and challenges that these species constantly faced across the site includes unenforced off-leash dogs, people and dogs trespassing protected areas and ignoring the restricted area/No Dogs signs, ORV drivers that often removed snow fence, large recreational open-pit holes, and private firework displays in close proximity to protected areas. The predators identified either by witnessing the animal or by tracks across the locations were seagulls, crows, bald eagles, foxes, raccoons, dogs, feral cats, and ghost crabs.

Plover Activity: 25 pairs, 38 fledglings, 1.52 productivity
Terns Activity: 28 pairs, 24 fledglings, 0.85 productivity
Seabeach Amaranth: 6 plants
Seabeach Knotweed: 28 plants

Hampton Beach

The most western site of Westhampton Island extends from Roger's Beach pavilion to Dolphin Lane Beach. 18 breeding pairs of piping plovers nested in Hampton Beach with 23 nest attempts. A total of 31 chicks fledged, giving a productivity of 1.72 fledges per pair. During the season, 14 nests successfully hatched, and two pairs were able to successfully re-nest after losing their first nests to predation. Unfortunately, one brood was entirely predated and believed to be from a problematic homeowner with an off-leash dog as well as ghost crabs one week before their fledge date. The most common predators for nest failure at this site were ghost crabs, and other causes for nest failure were identified as eggs that were sanded over causing nest abandonment.

21 breeding least terns' pairs attempted to nest in the location with 22 chicks that fledged; giving a productivity of 1.04 fledges per pair.

This site experiences a high traffic of off-leash dogs that is accepted by local law enforcement even with Village and Town leash codes. Stewards witnessed off leash dogs chase shorebirds, only for dog owners to refuse to leash their dog even after being educated on the law. Educational enforcement is desperately needed for this site to explain to dog-walkers why they need to be leashed, or the reality that their dog can harm a chick. Although monitors are able to get some dog-walkers to leash, it is evident that increase in law enforcement for this site is needed. Incidents were reported, but the situation and disturbances remained the same throughout the season.

Other predators identified were: Bald eagles, seagulls, raccoons, dogs, and ghost crabs. Also, coastal stewards witnessed kites and drones in front of the broods or nesting pairs. During the season, coastal stewards had to rearrange symbolic fences since some homeowners were walking through their fenced areas even after being spoken to. There are repeat homeowners from years prior who continue to disrespect shorebird protected areas at this site. These individuals have been spoken to by law enforcement, however, the situation still continues. Coastal Stewards have faced harassment and threats from homeowners who are unaware of the program.

Three seabeach amaranths and twelve seabeach knotweeds were found in the area.

Plover Activity: 18 pairs, 30 fledglings, 1.67 productivity
Tern Activity: 21 pairs, 22 fledglings, 1.04 productivity
Seabeach Amaranth: 3 plants
Seabeach Knotweed: 12 plants

Tiana Beach

This site starts at Dolphin Lane Beach and ends at the Tiana Beach Pavilion. This site boasts some of the most healthy and biodiverse tall dunes and upper beach habitats that the Town of Southampton has to offer. Seven piping plover nesting pairs returned to Tiana Beach breeding grounds to lay a total of 36 eggs amongst nine nests. Three nests were successfully hatched on their first attempt, with nine eggs hatching and yielding five fledges. One re-nest was predated while the other re-nest successfully hatched four eggs yielding one fledgling.

In summary, a total of 7 pairs successfully brooded 8 piping plover chicks to fledge giving a productivity of 1.14 fledges per pair.

Seven Least tern pairs nested in the sub-site with two chicks that successfully fledged, giving a productivity of 0.3 fledges per pair. Most pairs abandoned the area around 7/06/24.

Throughout the season, piping plover nests and least tern nests failure was higher than expected; mammalian predators suspected to be either fox or raccoons were responsible for the loss of two plover nests. One plover nest lost to ghost crabs, and another plover nest was found sanded-over. A seagull colony and numerous ghost crab holes were present for a majority of the season which may be responsible for the loss of some chicks. The sub-site had a relatively moderate population and diversity of predators including feral cats, ghost crabs, foxes, off-leash dogs, and a nearby resident Bald Eagle pair. Additional threats reported by stewards includes, residents walking inside protected areas, numerous off-leash dogs throughout the season near broods and within symbolic fencing, ORV drivers who drove around the snow fence, firework debris near symbolic fencing, large dug holes that chicks can fall into, kites, and drones.

Finally, three seabeach amaranth and 14 seabeach knotweed plants were present at the site.

Plover Activity: 7 pairs, 8 fledglings, 1.14 productivity
Tern activity: 7 pairs, 2 fledgling, 0.29 productivity
Seabeach Amaranth: 3 plants
Seabeach Knotweed: 14 plants

Southampton Beach (Village)

Located within the Village of Southampton, this site extends from the east boundary of the Shinnecock East County Park to S. Main Street. This site ranges ecologically from extensive, diverse, and healthy dunes west of Halsey Neck Lane, to extremely degraded and eroded dunes from Halsey to Gin Lane. 16 Plover pairs returned to the area with 23 nest attempts. A total of 27 chicks fledged giving a productivity of 1.69 fledges per pair.

28 nesting least tern pairs were observed in the site with 9 fledglings giving a productivity of 0.32 fledges per pair.

Southampton Beach Village has three sub-sites: Shinnecock County Park to Rd D (Picnic area), Rd D to Halsey Neck Lane, and Halsey Neck Lane to S. Main Street. The main threats identified for the site include foxes, crows, off-leash dogs, residents walking through the protected area, beach visitors playing inside or next to symbolic fences, ORV drivers driving around snow fences, illegal firework displays, and litter. Dog footprints were documented in a majority of protected areas at this site.

Plover Activity: 16 pairs, 27 fledges, 1.69 productivity
Tern Activity: 29 pairs, 9 fledges, 0.31 productivity
Seabeach Amaranth: 5 plants
Seabeach Knotweed: 34 plants

Shinnecock County Park to Road D (a.k.a. The Picnic Area)

There were nine piping plover breeding pairs and 14 nest attempts, with a total of 12 chicks that fledged giving a productivity of 1.33 fledges per pair. This sub-site experienced a dramatic increase in nest predation compared to last season. Additionally, a chick from the County side crossed jurisdictional lines 24 hours after hatching in late July and remained on the Trustees side until its late fledge 36 days later (Fig. 17)

Figure 17. The County chick, attempting to fly at the Picnic area. The chick took a few more days to fledge on August 15th

11 pairs of least terns attempted to nest here with 0 chicks or fledges producing a productivity of 0.0. The upwelling effect that created a green hue to the ocean in late June and early July may be associated with the colony's abandonment of the area and subsequent low productivity. By July 14th, no least terns remained in the Picnic area and are believed to have moved to the sub-site Road D to Halsey Neck Lane, which documented an increase in nesting least tern pairs during this time period.

Across the sub-site, multiple threats and challenges for these species of shorebirds were documented throughout the season. Stewards frequently documented hazardous marine debris, firework displays, off-leash dogs, trespassing homeowners and residents, drones operating near nesting and breeding plovers, and ORVs driving around snow fencing at this site. This season experienced an unpredicted higher rate of nest predation from foxes, including a two-week period where five nests where predated by foxes within 1000 meters of each other.

Seabeach Amaranth and Seabeach Knotweed: Invasive Prickly saltwort present and growing in close vicinity to threatened and endangered plant species.

Plover Activity: 9 pairs, 12 fledges, 1.33 productivity
Tern Activity: 11 pairs, 0 fledges, 0 productivity
Seabeach Amaranth: 3 plants
Seabeach Knotweed: 16 plants

Road D to Halsey Neck Lane

Five piping plover pairs took up this sub-site to nest this season. Each pair successfully hatched their five nests on their first attempts, 19 eggs hatched yielding 12 fledges. This sub-site experienced an increase in both piping plover and least tern pairs, which may indicate the declining health of surrounding beaches or the growth and recovery of upper beach and dune habitats at this sub-site.

14 pairs of least terns nested in this sub-site with 14 chicks hatching and 9 fledges yielding a productivity of 0.64 for the sub-site.

Threats reported at this site include litter and fire pits left behind by homeowners next to protected areas, homeowners and dogs trespassing through protected areas, large open-pit recreational holes in front of protected areas, ORVs driving around snow fencing, and off-leash dogs.

Seabeach Amaranth and Seabeach Knotweed present: Threats include the tractor raking emergent dune vegetation and operating close to dunes, and Invasive Prickly saltwort present and growing in close vicinity to threatened and endangered plant species.

Plover Activity: 5 pairs, 12 fledges, 2.4 productivity
Tern Activity: 14 pairs, 9 fledges, 0.64 productivity
Seabeach Amaranth: 2 plants
Seabeach Knotweed: 18 plants

Halsey Neck Ln to S Main St

Two piping plover pairs established territory in the sub-site with four nest attempts, one nest successfully hatched four eggs yielding three fledges.

Three pairs of least terns attempted to nest early in the season here with 0 chicks hatching giving a productivity of 0.0 for the sub-site.

At last, predators such as seagulls, feral cats, dogs, raccoons, and crows were identified during the season. A considerable threat this year was the proximity the chicks were to one of the most popular beaches in America, Coopers Beach. Due to their location, beach operations were paused that include tractor raking and beach attendant ATV transport of chairs. The brood remained in close proximity to the popular beach up until fledge; and may have had a high fledge rate due to the flat, sparsely vegetated dunes east adjacent to Coopers beach, which they were frequently spotted foraging and hiding in during busy beach days. The second concern in this area was off-leash dogs running in protected areas and disturbing the brood from both homeowners and visitors.

No threatened or endangered seabeach species present. Threats include; beach raking emergent dune vegetation and operating close to dunes, pedestrian and ORV traffic, and invasive prickly saltwort.

Plover Activity: 2 pairs, 3 fledges, 1.5 productivity
Tern Activity: 3 pairs, 0 fledges, 0 productivity
No threatened or endangered plant species present.

Gin Lane

This site encompasses South Main Street up until Old Town Road. This site has poor, degraded, flat dunes and a much narrower beach as compared to other Beach sites. This site has not experienced a nesting pair since the Town of Southampton began the T&E program in 1998. One pair attempted to nest in the areas which successfully hatched 4 chicks yielding 3 fledges for a productivity of 3.0.

No least tern activity for this sub-site.

This site experiences a high volume of off-leash dogs with minimal enforcement. One steward witnessed the brood at 7 days old get chased through a protected area and almost trampled and predated by off-leash dogs. With the lack of enforcement and high traffic of off-leash dogs frequently reported, one monitor remained at the site for 18 days out of the 27 days the brood were unfledged, which their high fledge rate can be attributed to. Other concerns for this site includes erosion, kites, drones, feral cats, and raccoons. Dog footprints were documented in the only protected area at this site.

No threatened or endangered seabeach species present. Threats include; tractor raking emergent dune vegetation and operating close to dunes, erosion, pedestrian and ORV traffic, and invasive prickly saltwort.

Plover Activity: 1 pair, 3 fledges, 3.0 productivity
Tern Activity: 0 pairs, 0 fledges, 0 productivity
No threatened or endangered plant species present.

Old Town Beach

This site stretches from Old Town Road to Fowlers beach, and ranges from eroded densely vegetated dunes to relatively healthy dunes and upper beach. Two piping plover pairs attempted to nest in this area. Out of the two nesting attempts from both pairs, only one nest hatched with 4 eggs hatching and 2 chicks reaching fledge. The other nest was found with eggs scattered around the scrape with mammal predator prints nearby, the pair left the area shortly after their nest failed.

No least tern activity for this sub-site.

Coastal stewards witnessed multiple unattended dogs that ran inside protected areas where the broods were located. Repeat problematic homeowners from last year continue to allow their off-leash dogs through protected areas which may be the cause for the brood's bizarre behavior when they were closer to fledge. Documented predators and threats for this site include feral cats, raccoons, dogs, foxes, crows, and ghost crabs. Other concerns at this site include erosion, ORVs driving around snow fencing, homeowners and dogs trespassing protected areas, large recreational holes in close proximity to broods, fire pits and charcoals left behind, and litter. Dog footprints were documented in a majority of protected areas at this site.

No threatened or endangered seabeach species present. Threats include; tractor raking emergent dune vegetation and operating close to dunes, ORV traffic, and invasive prickly saltwort.

Plover Activity: 2 pairs, 2 fledges, 1.0 productivity
Tern Activity: 0 pairs, 0 fledges, 0 productivity
No threatened or endangered plant species present.

Watermill

This site falls just west of Fowlers Street and extends east out to Jobs Lane and incorporates three sub-sites: Fowler's Street, Flying Point Pavilion and Scott Cameron Beach within approximately 2.38 miles. This site also includes Mecox Bay, which is located between the Flying Point Road access and Scott Cameron Beach. This site features healthy to severely eroded dunes and beach habitat; in addition to Mecox bay, otherwise referred to as 'The Cut', these ecological features provide exceptional foraging habitat for

breeding and migratory shorebirds. The site was dredged early in the season, in the middle, and at the end of the season due to flooding storm water exacerbating high amounts of Enterococci, a bacterium commonly found in the feces of humans and other warm-blooded animals which indicates the presence of fecal bacterial in the water. (Method 1600: Enterococci in Water by Membrane Filtration Using membrane Enterococcus Indoxyl-$-D-Glucoside Agar (mEI) December 2009)

Ten piping plover pairs nested in the site with 15 nests attempts and 11 fledglings, giving a productivity of 1.10 fledges per pair. 57 eggs were laid with only 20 eggs hatching, highlighting the heavy rates of nest predation and wash-out the site faced this season, with ten eggs in total being washed out due to high tides or storm surges (or 17% of eggs laid).

Throughout the site, 33 least tern pairs nested, with 13 chicks that fledged giving a productivity of 0.39 fledges per pair. A least tern nest was vandalized and destroyed by humans on the Flying Point side of the cut.

Figure 21: People removing snow fencing to illegally drive on the beach recorded through the Scott Cameron Beach Livestream on YouTube

This site faced a unique issue involving over-night illegal poaching and harvesting of Atlantic Blue Crabs, with many poachers trespassing through protected areas and disturbing piping plover broods and incubating least terns. One least tern nest was destroyed by the equipment the poachers would drag through the protected areas overnight. Marine constables who were patrolling the cut for poaching apprehended an ORV that drove around the snow fencing and was issued seven summonses. The snow fencing at this site was taken down or ran over six times by ORV drivers and some of the vandalism acts were recorded through the Scott Cameron Beach livestream on YouTube (Fig. 21).

Another pressing issue this entire site faces is misaligned dog laws and unenforced leash laws. Scott Cameron beach has a "No dogs after April 1st"sign, while Flying Point Beach has a No dogs after July 1st sign. These two beaches are 200 meters from each other and experience a 'free-for-all' of dozens of off-leash dogs every morning. Many dog-walkers and homeowners have been spoken to by monitors but continue bringing their off-leash dog to the beaches every day. Dog footprints were documented in a majority of protected areas at this site.

Predators documented across the site include seagulls, mockingbirds, ghost crabs, crows, a Bald Eagle pair, foxes, dogs, feral cats, and raccoons.

Plover Activity: 10 pairs, 11 fledges, 1.10 productivity
Tern Activity: 33 pairs, 13 fledges, 0.39 productivity
No threatened or endangered plant species present.

Fowlers Beach

This site was inactive for threatened or endangered species.

Flying Point Pavilion

This site extends from the Flying Point Pavilion to the west side of the Cut (Mecox Bay) and is partially eroded with steep tall dunes. Two pairs of piping plovers nested in the area with three nest attempts, the first nest successfully hatched four chicks with three reaching fledge. The second pair had their first nest predated in front of a steward by a Mockingbird, their re-nest successfully hatched three eggs with two chicks reaching fledge.

16 pairs of least terns nested in the area with 6 chicks that fledged, giving a productivity of 0.4 fledges per pair.

The majority of the breeding grounds were concentrated to the west side of Mecox Bay. Throughout the season, there were multiple human activities reported during the visits, including off-leash dogs running through protected areas, visitors trespassing through protected areas, Illegal shell fishing, paragliding, large gatherings next to and within protected areas, and drones. People continue to land their kayaks in the cut protected areas and drag their vessels through nesting grounds where threatened and endangered shorebirds were incubating their eggs. A Least Tern nest was destroyed and vandalized by poachers who dragged their shellfish equipment through the protected area on the Flying Point side of the Cut. (Fig. 22)

Figure 22. Least tern nest that was destroyed by Blue Crab poachers dragging equipment through the nest

Predators documented at the site include foxes, dogs, feral cats, ghost crabs, and a resident Bald Eagle pair. Also, off leash dogs were a daily threat for the nesting birds and their chicks as owners left dogs unattended running inside the protected areas. These repeated off leash dogs' events were reported to law enforcement and beach attendants, but the situation remained the same throughout the season.

Plover Activity: 2 pairs, 5 fledges, 2.50 productivity
Tern Activity: 18 pairs, 6 fledges, 0.33 productivity
No threatened or endangered plant species present.

Scott Cameron

This site extends from the end of Dune Road to Jobs Lane, and consists of a Salt Pond (Mecox Bay) that provides unique foraging, nesting, and breeding grounds to migratory shorebirds. The breeding and foraging grounds on the East side of Mecox Bay attracts various shorebirds and waterfowl. Shorebirds in this location faced the same threats that were mentioned above for the Flying Point sub-site on the west side of Mecox Bay. Eight pairs of piping plovers nested in the areas with 12 nests attempts, and six chicks that fledged giving a productivity of 0.50 fledges per pair. One plover pair did successfully nest and fledge three chicks on a section of dredged material as opposed to natural beach shoreline. Two nests and two eggs from another nest were lost to washout, and two other nests are believed to have been predated by off-leash dogs, which was frequently reported at this site with roughly 20 or more off-leash dogs on

average from 8 AM to 10 AM. The other four nests that were lost range from unable to determine cause of loss to possibly raccoon or feral cat predation.

17 pairs of least terns were able to nest within the Scott Cameron cut with 10 chicks hatching and 7 fledges giving a productivity of 0.4 for the sub-site.

Additionally, an annual party creates an immense amount of disturbance at this site. Drones flying over protected areas and broods at low heights later posted to social media, litter and garbage left on beach, loud music, large gatherings next to the protected area and near broods, and entertainment lights were all documented for the party this season. Broods were recorded to move large distances the day after this party, indicating a high amount of disturbance experienced by the broods.

The potential predators identified in the area for shorebird eggs and chicks were foxes, crows, seagulls, off-leash dogs, feral cats, and a resident Bald Eagle pair. This area faces the high traffic of off-leash dogs throughout the entire season regardless of the signage installed. Off leash dogs would even be present in the area after April 1st coming from Flying Point Beach (July 1st is the last date for dogs on beach at Flying Point Beach) when no domestic animals were allowed to be on the beaches. Coastal stewards reported the repeated cases, but the situation remained the same throughout the season with multiple visits by the Town of Southampton Animal Control, Marine Constables, and the Town of Southampton Police. Unfortunately, one brood with two chicks was most likely predated by off leash dogs, given the amount of off-leash dogs and fresh dog footprints in the protected area the chick was last seen. Scott Cameron beach has a large section of beach and dunes, offering extra buffer protection for shorebird nests and shorebird chicks, however, erosion later in the season with high tides are degrading the habitat and wide beach which will yield more anthropogenic disturbance for future piping plovers and least terns breeding and nesting in the area.

One seabeach amaranth was found for the sub-site.

Plover Activity: 8 pairs, 6 fledges, 0.75 productivity
Tern Activity: 17 pairs, 7 fledges, 0.41 productivity
No threatened or endangered plant species present.

Sam's Creek/Mecox Beach

This site was inactive for both endangered birds and plants.

This site encompasses from Mecox Beach to Ocean Road and is eroded with a heavy pedestrian and off-leash dog traffic on a narrow eroded beach which is most likely why the site is inactive for any threatened or endangered species.

Sagaponack Pond

This site stretches from Ocean Road to Gibson Lane. Sagaponack Pond, one of Southampton's Salt Ponds lies in the middle of this site which provides a critical foraging and breeding ground for both migratory and breeding shorebirds. The site is divided into two sub-sites; Sagaponack Lake West (Ocean Road to Surfside Drive/the West side of Sagg cut) and Sagaponack Lake East (Sagg main street/the East side of Sagg cut to Gibson Street). Four nesting pairs of piping plovers visited the area during breeding season, with eight nests attempts and two chicks that fledged, giving a productivity of 0.50 fledges per pair. The only nest to successfully hatch and fledge for this site was on dredged material as opposed to a natural beach shoreline, which was dredged and filled in January. Two nests were likely lost to off-leash dogs from visitors and a problematic homeowner, two others were lost to either suspected mammal predators (fox or raccoon), one to crows, another to ghost crabs, and one nest was found sanded over and abandoned (Fig. 23). The high rates of nest predation this season is associated to the immense amount of litter, food scraps, and garbage left at sites or in the parking lot which attracted predators. Off leash dogs would even be present in the area after July 1st past 9 AM when no domestic animals were allowed to be on the beaches. Dog footprints were documented in a majority of protected areas at this site.

Figure 23. Wind-swept nest with three eggs at Sagg Main Beach that remained for over a month following the pair abandoning the wind-swept nest. The pair was unable to successfully re-nest this season.

17 least terns pairs nested in total within the site with 5 fledges, giving a productivity of 0.29 fledges per pair. All least tern activity was recorded to be within the Sagaponack Pond Cut protected area.

Predators such as foxes, raccoons, crows, seagulls, ghost crabs, dogs, and feral cats were identified in the area. The majority of these predator tracks were found in the portion of Sagaponack Pond. Other threats include people and dogs trespassing through protected areas ignoring restricted signs, especially in the areas next to Sagaponack Pond. Towards the end of the season, people shoveled open the cut to Sagaponack Pond which changed the topography and tidal range, the brood in the area was safe and later fledged.

Figure 24. Litter overflowing at Sagg Main Beach, this was a common occurrence at this site with crows and gulls mobbing the area. Many least tern nests in the cut were predated by crows.

Predators such as foxes, raccoons, crows, seagulls, ghost crabs, dogs, and feral cats were identified in the area. The majority of these predator tracks were found in the cut of Sagaponack Pond.

Plover Activity: 4 pairs, 2 fledges, 0.50 productivity
Tern Activity: 17 pairs, 5 fledges, 0.29 productivity
Seabeach Amaranth: 0 plants
Seabeach Knotweed: 1 plant

Fairfield Pond Lane Beach

This site is located between Gibson Lane and Townline Road and contains two sub-sites; Fairfield Pond Lane Beach West (Gibson Lane to Peters Pond) and Fairfield Pond Lane Beach East (Peters Pond to Townline Road). The site varies ecologically from moderately healthy dunes to extremely eroded and degraded cliff-dunes and a narrow beach over the course of 1.65 miles. Four piping plover pairs nested in the area, seven nests with 27 eggs were laid and zero hatching yielding a productivity of 0.0 for the site. One nest is believed to be predated by dogs, another nest was suspected to be predated by fox, and one nest was a suspected unknown mammal predator. One nest was predated by a crow and another from a seagull. The last nest was washed out during a storm and high tide event. In the middle of the season, only one nest remained for the entire site around early July. Due to the extremely high rates of nest predation, coupled with the low productivity of the site and light traffic of pedestrians walking the beach, an enclosure was installed to protect the remaining nest. The enclosure took 12 minutes to install with the incubating adult entering the enclosure but not sitting down to incubate. After 26 minutes of no-incubation from the adult plover, it was decided that the enclosure was to be taken down and the adult returned 32 minutes after installation began and resumed incubating. Unfortunately, four days later the nest was predated by a crow.

Four pairs of least terns' nested in the location with 0 fledglings giving a productivity of 0 fledges per pair. In seasons prior, least terns were able to successfully nest here; however, this site now has extreme beach erosion with high tides and wrack reaching the dunes. This highlights the loss of habitat breeding shorebirds are facing here in Southampton.

Predators such as raccoons, foxes, dogs, crows, seagulls, ghost crabs, and feral cats were documented in this area.

Plover Activity: 4 pairs, 0 fledges, 0 productivity
Tern Activity: 4 pairs, 0 fledges, 0 productivity
Seabeach Amaranth: 0 plants
Seabeach Knotweed: 3 plants

BAY SITES

Red Cedar Point

Red Cedar Point extends out into the Great Peconic Bay, boasting an intertidal salt flat that attracts a diverse plethora of both waterfowl and shorebird visitors. Four pairs of piping plovers visited the area with four nests or 11 eggs in total laid and nine chicks that fledged, giving a productivity of 2.25 fledges per pair.

125 nesting pairs of least terns were present in the area with 63 chicks that fledged, giving a productivity of 0.504 fledges per pair. This bay site hosts the largest least tern colony in the Town of Southampton.

Two pairs of American Oystercatchers attempted to nest here, however, their nests could not be located after they were first seen.

The minimal disturbance that occurs at this site includes predators like raccoons, and off leash dogs. Additionally, boats and kayaks landed in the area, with a light presence of pedestrians walking in the location. However, the public that visited the area were mostly from the houses near the bay that seemed to keep out from symbolic fences, or were made aware by defensive behaviors of least terns. Off leash dog footprints were recorded within symbolic fencing multiple times.

Plover Activity: 4 pairs, 9 fledges, 2.25 productivity
Tern Activity: 125 pairs, 63 fledges, 0.504 productivity
Seabeach Knotweed: 87 plants

Red Creek Pond

One piping plover pair returned to the area this season with two nests attempts. The first and second nest failed, and predation by fox or raccoon was suspected to be the reason. Both nests failed within days of estimated hatch dates, with the pair seen foraging by the shore shortly after losing their second attempt, then not seen again for the rest of the season.

Six pairs of least terns nested with two chicks that fledged, giving a productivity of 0.33 fledges per pair.

The main disturbances these species faced during the season include predators such as raccoons, foxes, dogs, and ospreys. This site is also located beneath an air traffic descent area for Francis S Gabreski Airport which frequently has aircraft descending from above. There was a very light presence of pedestrians walking the area, including fishermen, and boats landing in the bay. Even though the area is not open for ORV drivers, ORV tire tracks were found throughout the season. This site is being overtaken by unmanaged Japanese Knotweed which will continue to degrade breeding and nesting potential for both Piping Plovers and Least Terns as the invasive species rapidly colonizes the native dune ecosystem, which is too dense of vegetation to nest nearby and outcompetes the threatened and endangered native seabeach plant species.

Figure 25. Invasive Japanese Knotweed rapidly spreads at Red Creek in areas where plovers and terns would typically nest, if left unmanaged, this will eliminate threatened and endangered species nesting and breeding habitat, as well as outcompete native seabeach plant species

Twelve seabeach knotweeds were found in this area in 2024. For comparison, Twenty-two seabeach knotweed were found in the area in 2023. Japanese knotweed may be the cause for the decline.

Plover Activity: 1 pair, 0 fledges, 0.00 productivity
Tern Activity: 6 pairs, 2 fledges, 0.33 productivity
Seabeach Knotweed: 12 plants

Squires Pond

Squires pond sits on the Great Peconic Bay in Hampton Bays, nestled on a salt pond with towering cliff dunes and wetlands tucked within. The nesting and breeding potential for this site exists, however, this site experiences extreme human foot traffic and disturbance given its narrow beach width which has led to this site remaining an inactive nesting or breeding site since 2008. Stewards were surprised to find a three egg nest on such a recreationally used beach in early May, which successfully hatched 3 out of 4 eggs and fledged all 3 chicks that hatched.

This brood had very little room to run or hide from predators, and faced a high traffic of off-leash dogs. One steward even witnessed an off-leash dog enter a stalking position as it focused on an extremely disturbed and defensive plover adult doing broken wing to distract the dog from their chicks just a few feet over on the other side of the inlet. This highlights the importance of leash law enforcement and proper educational signage at beach entrances.

The site had nine seabeach knotweeds present and are threatened by ORVs and human traffic.

Plover Activity: 1 pair, 3 fledges, 3.00 productivity
Tern Activity: 0 pairs, 0 fledges, 0 productivity
Seabeach Knotweed: 9 plants

Meschutt Beach
This site was inactive for both endangered birds and plants.

Canoe Place Beach
This site was inactive for both endangered birds and plants.

Fish Cove/North Sea Harbor
The site was inactive for both endangered birds and plants. The state ranked rare plant (S3) Sickle-leaved golden aster (*Pityopsis falcata*) is present at this site with roughly 30-50 plants.

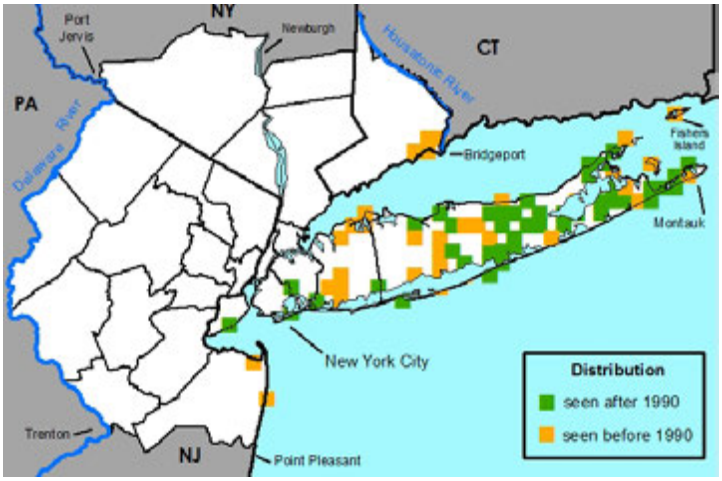


Figure 26 Map depicting the remaining sites of Sickle-leaved golden aster (Source= Chrysopsis falcata (Pursh) Elliott Brooklyn Botanical Garden NY Metro Flora) which does not appear to include data from Fish Cove/North Sea Harbor

Towd Neck

This site encompasses an area with an inlet that separates the location into two sites; Towd Neck West and Towd Neck East. The western area has a large eroding bluff dune with no vegetation which may be a cause for the lack of nesting attempts on this side. The eastern area is a popular location for piping plover and least tern colonies to breed, with a flat grade rocky site and dune vegetation swaddled by tidal wetlands. In total, four piping plover pairs returned to breed and successfully hatched 16 eggs with 14 chicks reaching fledge producing a productivity of 3.50 for the site.

There was a decrease in nest and chick predation as compare to seasons prior which may be attributed to loss of predator habitat or a decrease in predator population. Threats and predators documented at the

site include ospreys, raccoons, crows, drones, an RC car, and dogs. ORV fencing was driven through twice this season; however, the broods and least tern chicks were unharmed.

Seabeach Knotweed: 1777 plants

Towd Neck West

This sub-site is not a suitable habitat for breeding shorebirds possibly due to the eroding bluff dune and narrow width beach with little to no vegetation. Seabeach knotweed is present and threatened by invasive prickly saltwort, and invasive velvet weed competition.

Plover Activity: 0 pairs, 0 fledges, 0 productivity
Tern Activity: 0 pairs, 0 fledges, 0 productivity
Seabeach Knotweed: 287 plants

Towd Neck East

Four Piping plover pairs nested in the area with four nest attempts, 16 chicks hatching and 14 chicks that fledged, giving a productivity of 3.50 fledges per pair.

28 least tern pairs visited the area with 22 fledglings giving a productivity of 0.79 fledges per pair.

Threats and predators to the site include ospreys, crows, dogs, drones, RC cars, and ORVs driving through fencing were identified as potential threats in the area. This sub-site had high traffic of pedestrians and off leash dogs that ran up on multiple occasions inside protected areas. A homeowner also illegally operated a drone that disturbed least terns and piping plovers and RC car that was moving over 25 MPH through dune vegetation next to protected areas that could have killed or seriously injured a chick or adult if collided. Law Enforcement responded to the scene, however no tickets or summonses were dispersed.

Plover Activity: 4 pairs, 14 fledges, 3.50 productivity
Tern Activity: 28 pairs, 22 fledges, 0.79 productivity
Seabeach Knotweed: 1490 plants

Wooley Pond West and East
The site was inactive for both endangered birds and plants.

Roses Grove
The site was inactive for endangered birds.
Seabeach Knotweed: 5 plants

Fresh Pond
The site was inactive for both endangered birds and plants.

Pine Neck/Mill Creek
The site was inactive for endangered shorebirds.
Seabeach Knotweed: 4 plants

Long Beach

Long beach is a 1.08 mile stretch of beach tucked between Noyac Bay and Sag Harbor Cove; with three pairs of piping plovers nested at the site which is an increase of two pairs from seasons prior, and 11 chicks hatched with 6 reaching fledge. This season, an extremely rare event was documented. Stewards arrived 7/24 to monitor a brood that hatched four eggs on 7/10 and was 14 days old at the time and located three chicks. Four chicks were last seen on 7/13 two days after their hatch date, but only three chicks were seen from 7/13 onwards. The 4th chick likely failed or was predated around or after 7/13. Immediately following the sighting of the brood with three 14-day old chicks on 7/24, monitors saw two random chicks roughly five days old foraging alone roughly 60 meters from the known brood (for a total of five chicks seen at the site in total). 7/25 and 7/27, monitors went back to locate the parents or nest for the random unknown brood and located a single chick alone and foraging roughly 7-10 days old, as well as the three chicks from the known brood roughly 16-19 days old with a single parent a few meters from each other. On 7/29, stewards located four chicks with one adult foraging together, the three older chicks and the young random chick were defended and protected by the adult plover. The difference in size and behavior was apparent to stewards for each subsequent visit to the site. From that day on, the younger random chick was consistently spotted with the older brood and parent. Following the early fledge on 8/2 of two of the known older chicks, the random younger chick remained with the parent and another older chick until it's fledge on 8/12. Due to the uncertainty of the unknown nest and no confirmed sighting for the parents of the random brood, data was implied or hypothesized for this rare event that should not alter or severely impact the data from this site. Although an extremely rare and under-documented occurrence, Piping Plover adoption has been recorded before in 1983 according to the article 'Natural and Experimental Adoption of Piping Plover Chicks'.

(Figure 27) Adopted chick on the left shows significant difference in plumage, size, and other characteristics when compared to its foster sibling on the right (Figure 28) (Photos were taken the same day with the chicks all congregating together as a single brood and a defensive parent nearby).

21 pairs of least terns nested in the area with 22 chicks that fledged giving a productivity of 1.04 fledges per pair.

Long Beach is a popular area during the summer season and has a share of threats and predators. With a high traffic of pedestrians, off leash dogs that frequent the location regardless of signage, illegal fireworks and litter, drones, parasailers, and kites are frequent at this site and also disturb the nesting ospreys within the Long Beach parking lot. ORV access is not permitted here, however, ORV tracks were found while a brood was present, and no chicks were harmed. Predators identified include ospreys, dogs, and raccoons.

234 seabeach knotweed plants were found in the area.

Plover Activity: 3 pairs, 6 fledges, 2.00 productivity
Tern Activity: 21 pairs, 22 fledges, 1.05 productivity
Seabeach Knotweed: 234 plants

Short Beach
The site was inactive for both endangered birds
Seabeach Knotweed: 34 plants

Genet Creek
The site was inactive for both endangered birds and plants.

Middle Pond
The site was inactive for both endangered birds and plants.

VIII. DISCUSSION

The Town of Southampton is blessed with some of the most biologically productive coastal grounds located on the South Shore of Long Island. Long Island is the #1 most populated island in the United States, with biodiverse coastlines, and a unique ecology and geology molded from the retreat of the Laurentide ice sheet roughly 150,000 years ago. The sandy and rocky beaches along Southampton's Ocean shoreline consists of heavy minerals in a mixed-substrate from glaciation processes that is primarily Garnet, Magnetite, and Zircon (U.S. National Park Service 1996). Sand along the ocean sites of the south shore is moved in the direction of East to West and undergoes seasonal erosion and accretion cycles, meaning, some sites may be wide in the summer and narrow in the winter. The ecoregion of the Towns coastline is primarily Atlantic Coastal Pine Barren Barrier Islands, Coastal Marshes, and Coastal Lowlands, which influences the ecology and topology of the coastline.

Development along the coastline within the past 40 years have contributed to the degradation of dunes, foredune, and wildlife populations. As both anthropogenic and climate change impacts continue to modify the Town of Southampton's shoreline, potential breeding and nesting habitat diminishes each year. This program is effective at protecting natural resources, such as threatened and endangered wildlife, due to the rigorous monitoring, outreach, and education performed by both the coastal stewards and the Board of Trustees.

I. Threats and Predators

For the 2024 season, predation was the number one cause for nest failure at 36.95%, or 143 total eggs predated by predators not including ghost crabs. Present-day native predators to Southampton's shoreline that were recorded during the season include Red Foxes (*Vulpes vulpes)*, Atlantic ghost crabs (*Ocypode quadrata)*, Virginia opossums (*Didelphis virginiana)*, Bald eagles (*Haliaeetus leucocephalus),* Fish crows (*Corvus ossifragus)*, mockingbirds (*Mimus polyglottos)*, Gulls (Laridae) and Herons (Ardeidae). Non-native invasive predators introduced to the local coastal ecosystem include Common raccoons (*Procyon lotor)*, dogs, and feral cats (Cortes, E *et al.* 2021).

According to Ivan, J & Murphy R. 2005, avian raptors, and especially mammals, are considered direct predators of eggs during the incubation stage. These predators represent a threat from the day the first egg is laid until the chick fledges, and have been recorded predating a nest on the estimated hatch date (Southampton Beach Village). Avian species are a main threat for the survival of the chicks, especially gulls (Ivan, J & Murphy R. 2005). A low presence of gulls at Red Cedar and Towd Point subsequently, or coincidentally, had a higher productivity and fledge rate for both nests and chicks.

Additionally, our results show that locations such as Southampton Beach Village, Fairfield Pond, and Sagaponack all faced a heavy density of predators this season, specifically an uptick in nest predation by foxes and raccoons were recorded compared to last year. Sites that experienced higher nest predation rates than the 2023 season include Fairfield Pond, Sagaponack, Watermill Beach, and Tiana.

Every day of the monitoring season from March 15th to September 15th, stewards recorded seeing at least one off-leash dog daily across all sites. Every single site with symbolic fencing, including bay sites, were reported to have dog footprints going through fencing. Additionally, two broods are hypothesized to have been predated by off leash dogs, at Scott Cameron and Hampton Beach. Some locations with extensive dunes (Road D to Halsey, Picnic Area, and sections of Hampton Beach), coupled with a large beach area, provided an extra buffer protection to the nesting shorebird pairs and chicks during these types of events which possibly increased the chances of remaining unharmed from off-leash dogs. Cortes, E. *et al.* 2021 emphasizes how domestic dogs become direct predators and a major source of disturbance for shorebirds and chicks. Disturbance involves situations where dogs harass or scare other animals without causing death or injuries but leading to behavioral changes and energetic or reproductive costs for the affected individuals.

Hampton Beach, Watermill Beach, and Southampton Beach Village were sites with an enormous amount of off leash dogs and very little to no law enforcement present to enforce leash laws. Coastal stewards would constantly witness numerous dogs running inside symbolic fences where chicks were present, causing broods to move further from their hatch site.

Figure 29 Village of Sagaponack Leash law sign

Figure 30 Village of Southampton Leash law sign

Figure 31 Town of Southampton Leash law sign

The Village of Sagaponack Leash law sign, the Village of Southampton Leash law sign, and the Town of Southampton leash law sign, showing stark differences between how noticeable the law is, the lack of education behind leash laws, and how illegible the "No unleashed dogs" in small font hidden in an excessive amount of small writing towards the bottom of the sign.

Some of the beach visitors ignore pets' restrictions and environmental regulations that protect threatened and endangered wildlife from any harassment. Stewards had various occasions where local law enforcement advised stewards they do not enforce leash laws or the code regarding off-leash dogs. Stewards explained to officers Section 9 of the Endangered Species Act which states '(B) take any such species within the United States or the territorial sea of the United States'. An example of a take otherwise known as a disturbance also includes interruption of incubation, which was noted several times by monitors who witnessed incubating plovers stop incubating, stand up, and begin defending their nest against nearby off-leash dogs. All of these cases were reported to local, state and federal law enforcement, however, no fines or tickets were dispersed. Several off-leash dog owners continued bringing their dog off-leash to sites even after being educated by stewards about the law and conservation, highlighting the need for law enforcement to be present in the area.

Figure 32 Two ORVs that drove around ORV snow fencing and got stuck on the beach at Gin Lane.

ORV drivers were also a concern. Drivers would drive around snow fences or remove 4x4 barricades that protected shorebird chicks during the hatching season. To deter people from removing snow fencing at access roads, staggering two snow fences one meter from each other has shown to be effective. Throughout the monitoring season, stewards found human footprints inside protected areas. One least tern nest was destroyed by blue crab poachers at the Mecox cut, and another failed plover nest in Hampton beach is unable to be determined for the cause of loss due to the homeowner trespassing through the protected area in close vicinity to the nest.

Finally, litter such as balloons, fishing lines, gill nets, human clothes, firework debris, food leftovers, and garbage from social gatherings or parties were reported for both beaches and bay locations; it represented a huge threat for the shorebirds. Other human disturbances reported were drones, RC cars, kites, entertainment lights, and paragliding activities.

Beach and dune erosion was recorded throughout the season at various sites. In the beginning of the season, significant sections of Fairfield Beach, Hampton Beach, Southampton Beach Village, including Road D to Gin; had large portions of beach missing, eroded dunes, and dangerous tide/sandbar patterns that have the potential to wash away foraging chicks. Towards the middle of the season in June and July, strong storm surges coupled with a new moon led to some nests being washed away at sub-sites including Gibson to Peters Pond in Fairfield and Jobs Lane to Dune Road in Watermill Beach. One nest at Watermill Beach had two eggs washed out from the tide, scattered next to the scrape. The adult continued incubating the remaining two eggs which both hatched however only 1 chick reached fledge. Wash-outs as a cause for nest lost this season was slightly higher than previous years at 3.62%. In addition to nest loss, proving chick failure related to wash out is incredibly difficult.

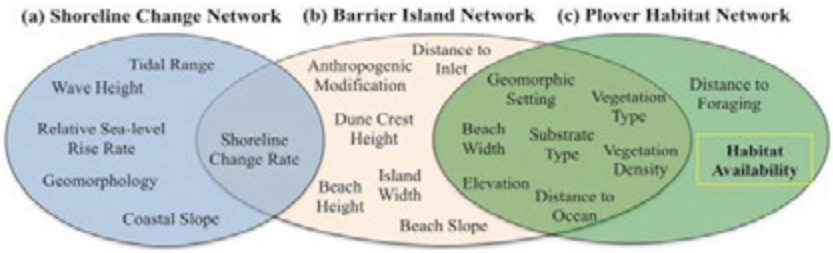


Figure 33 USGS Coastal and Marine Hazards and Resources Program

Climate change coupled with human interventions presents a great concern for the reduction in quality of shorebirds nesting sites, forcing the birds to nest in less desirable areas, such as smaller, busier beaches with limited options for foraging (Department of Energy & Environmental Protection in Connecticut. 2021). Sites that have not experienced activity in years, such as Gin Lane Beach and Squires Pond, had successfully nested and fledged all chicks that hatched at both sites, a rare occurrence when coupled with the significant anthropogenic stressors that occur at both sites. Although plovers had successfully nested and fledged chicks at these sites this season, the future of these sites for nesting potential remain uncertain as Gin Lane Beach experiences large swaths of beach erode during minor storms as well as Squires Pond with its extremely narrow beach and high volume of pedestrian and off leash dogs. Throughout the program, the need for constant environmental education that include the important role the communities play in conservation programs and mitigation plans, was seen as a necessity for these popular locations to support the integrity of the coastal structure.

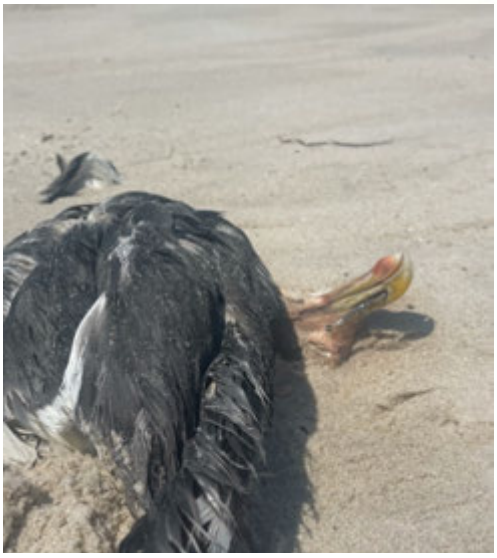


Figure 34 Firework debris and litter left at Towd Point that was set off 30 meters from an active Osprey Nest. Two piping plover broods later fledged unharmed. Figure 35 a dead Great Black-Backed Gull entangled in fishing line that washed ashore during monitoring at Hampton Beach.

Within the human activities reported in the 2024 T&E program, litter across the coastal ecosystems was present at every site regardless of human presence. Stewards recorded the presence of litter at multiple sub-sites, particularly Sagg Main Beach, Coopers Beach, and the Picnic Area. Additionally, stewards reported both litter that was left on the beach as well as washing ashore, dangerous for wildlife as well as pedestrians such as derelict crab cages, gill nets, metal and wooden boards with nails, and other hazardous marine debris. The most common marine debris or litter found during monitoring was single use plastics, plastic food/drink containers/wrapping, and balloons. Charcoals and firewood are also considered litter on the beach considering it does not naturally occur in beach environments, and was commonly seen at almost all sites which can kill or seriously injure adult and chick shorebirds. This season, stewards at the Picnic area witnessed a non-breeding adult struggle to pull an unknown fiber off its foot, it limped on its foot until it eventually flew off and down the beach. This was reported to authorities however efforts to catch the fledgling remain untaken. In order to protect our wildlife and beaches, a more effective litter management program is necessary for the Town of Southampton coastal ecosystems which must involve community education and law enforcement for careless people that do not practice correct garbage disposal. More yellow bins that are designated to collecting litter on the beach is needed at Town and Village beaches.

II. Invasive species

Invasive species identified during monitoring can provide insight into local population dynamics, threats to native species, and illuminate the impacts climate change will have on the local ecology.

Invasive species currently present in the Southampton Township that were identified during monitoring: Prickly Saltwort (*Salsola kali*), Velvetleaf (*Abutilon theophrasti*), Common mullein (*Verbasum Thapsus*), Common chicory (*Cichorium intybus*), Black Locust (*Robinia pseudoacacia*), Japanese Knotweed (*Reynoutria japonica*), Prostrate Knotweed (*Polygonum aviculare*), Asian shorecrab (*Hemigrpsus sanguineus),* Spotted lanternfly (*Lycorma delicatula)*

iii. Umbrella Species Effect

Figure 36: A cliff swallow fledgling rests outside its nest situated in eroded dunes within a protected area at Scott Cameron. Figure 37: Northern Diamondback Terrapin tracks heading into the only protected area at Squires to nest.

The Umbrella species effect refers to a species with large area requirements for which protection offers protection to other species that share the same habitat. This season, stewards recorded numerous species of shorebirds, songbirds, mammals, reptiles, and insects occupying protected shorebird areas at various sites. One black skimmer was seen at Sagg Main cut in early July. American Oystercatchers were reported with nests at Tiana, Red Cedar, and the Picnic area, however the nests most likely failed, predated, or abandoned. At Red Cedar Point, a pair of Eastern willets nested within the protected area encompassing a small tidal salt marsh. At Squires Pond and Towd Point, the state special concern Northern Diamondback Terrapin was documented nesting within the protected shorebird areas. Sub-sites including Scott Cameron, Triton to Tiana pavilion, and Peters Pond to Townline, experienced extreme erosion early in the season which created large cliff-dunes. These recently eroded dunes

provided nesting habitats for cliff swallows, a species listed as least concern, however is currently rapidly declining to presumed insect population declines. Overall, hundreds of species were documented within protected shorebird areas this season, highlighting the benefits of protected shorebird areas and their Umbrella protection effect on other species.

The Threatened and Endangered species program this year identified areas of concern for future seasons that must be addressed to effectively execute the programs objectives; environmental and conservation education, public engagement, and the enforcement of regulations.

IX. CONCLUSIONS

- In order to maintain the ocean and coastal ecosystem integrity and ensure the provision of goods and services it offers to the communities; it is crucial to support conservation efforts that pursue the protection of the threatened and endangered species of flora and fauna that inhabits these ecosystems.

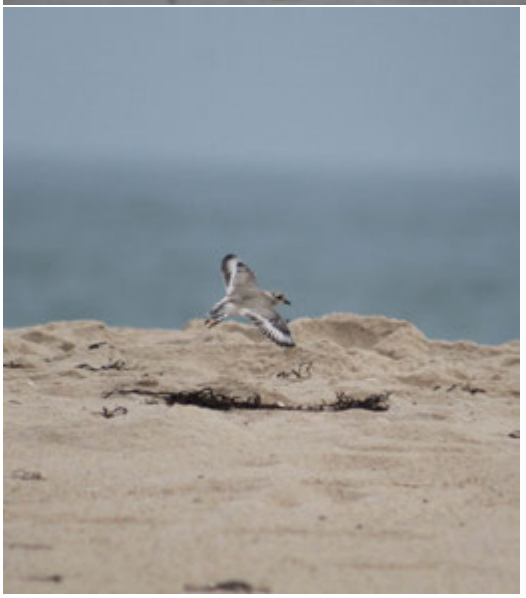
- Threatened and endangered species are indicator species that reveal the health and condition of the ecosystems. The presence of these species suggests an area has remained suitable and quality has not declined throughout time.

- Environmental education and outreach is highly encouraged by monitors to the public and any visitors of the Town of Southampton Beaches.

- Responsive and educated enforcement of village and town codes is needed. Law enforcement must be willing to patrol areas by foot during 4x4 closures if necessary.

X. GALLERY

These photos are from the 2023 and 2024 monitoring seasons, submitted by coastal steward Matthew Mazzella and a generous photographer, Jeffrey Gross. All photographs featured were taken within the Town of Southampton; and showcase the productivity and biodiversity of our coastlines.



XI. ACKNOWLEDGEMENT

The staff of the Southampton Town Trustees Threatened and Endangered Species program would like to give a huge thanks to everyone who supported our program during the 2024 season. Thank you, Board of Trustees; President Scott Horowitz., Edward Warner Jr., and Richard Maran, Joseph McLoughlin and Matthew Parsons for all of your continued support. Thank you Trustee Office Staff Jessica Feldman, James Duryea, Shakira Fothergill, Lisa Koehne, and Charlotte Dickinson, Stephanie Shea, Charlotte Van Houten, , Theresa Cannone, Laura Parmigiani; Tim Wilson and the Marine Maintenance staff; Joe Jannsen of the Nature Conservancy, Steve Sinkevich of the USFWS, Michelle Gibbons, Casey Pendergast of the NYSDEC, the Southampton Town GIS Department, Southampton Village Trustees, Village Department of Public Works Superintendent and the public that had patience, understanding and respect towards the work that we perform. We also would like to thank the Suffolk County Threatened and Endangered Species program consisting of Diana Lynch and her endangered species staff, for collaborating and monitoring Southampton's Picnic Area. Thank you to the Surf Club of Quogue and Quantuck Beach Club for allowing our stewards to use their private facilities and quickly access the beach. Thank you to members of the community whom had patience, understanding, and those who offered assistance to stewards. None of this work would have been possible without all of you, your hard work and dedication, Thank you.

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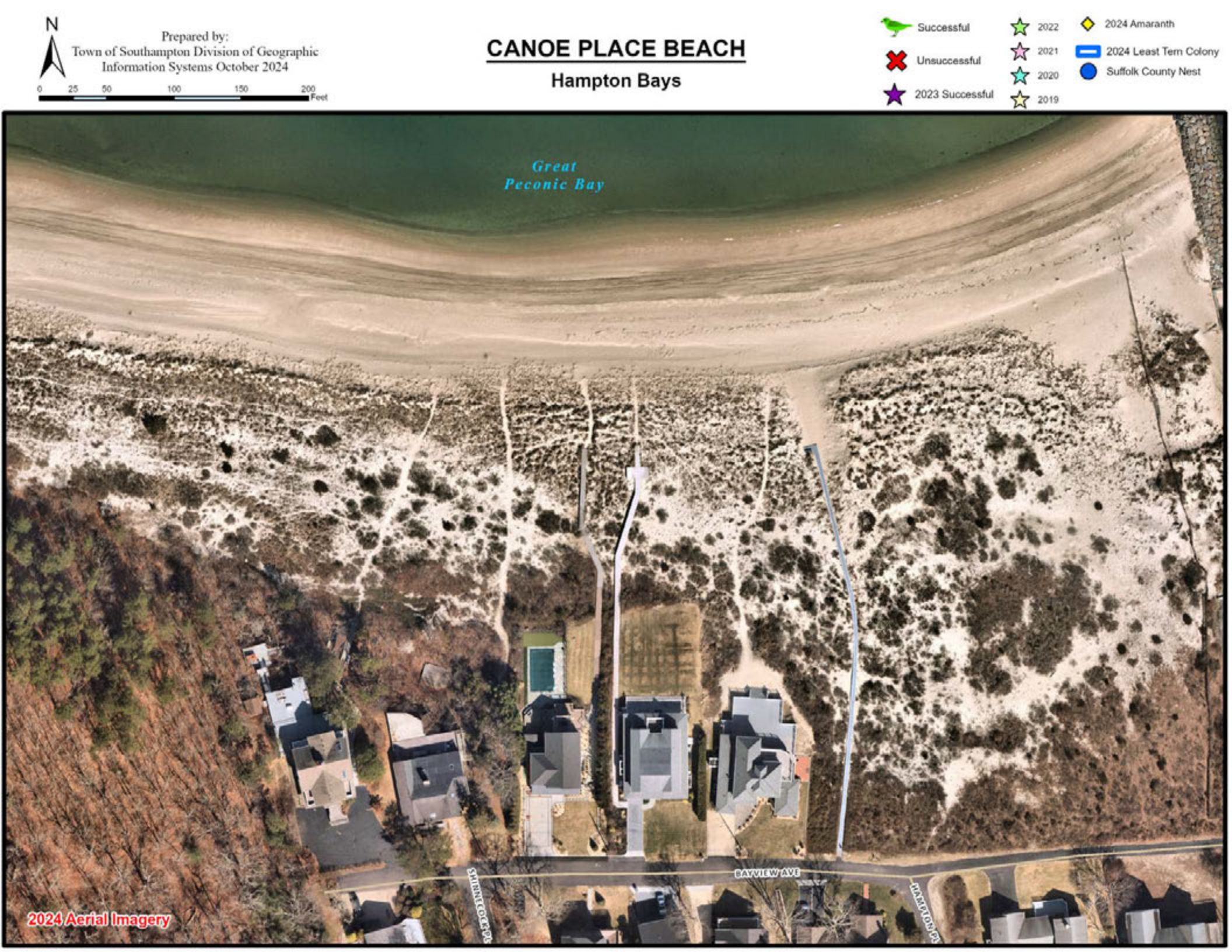
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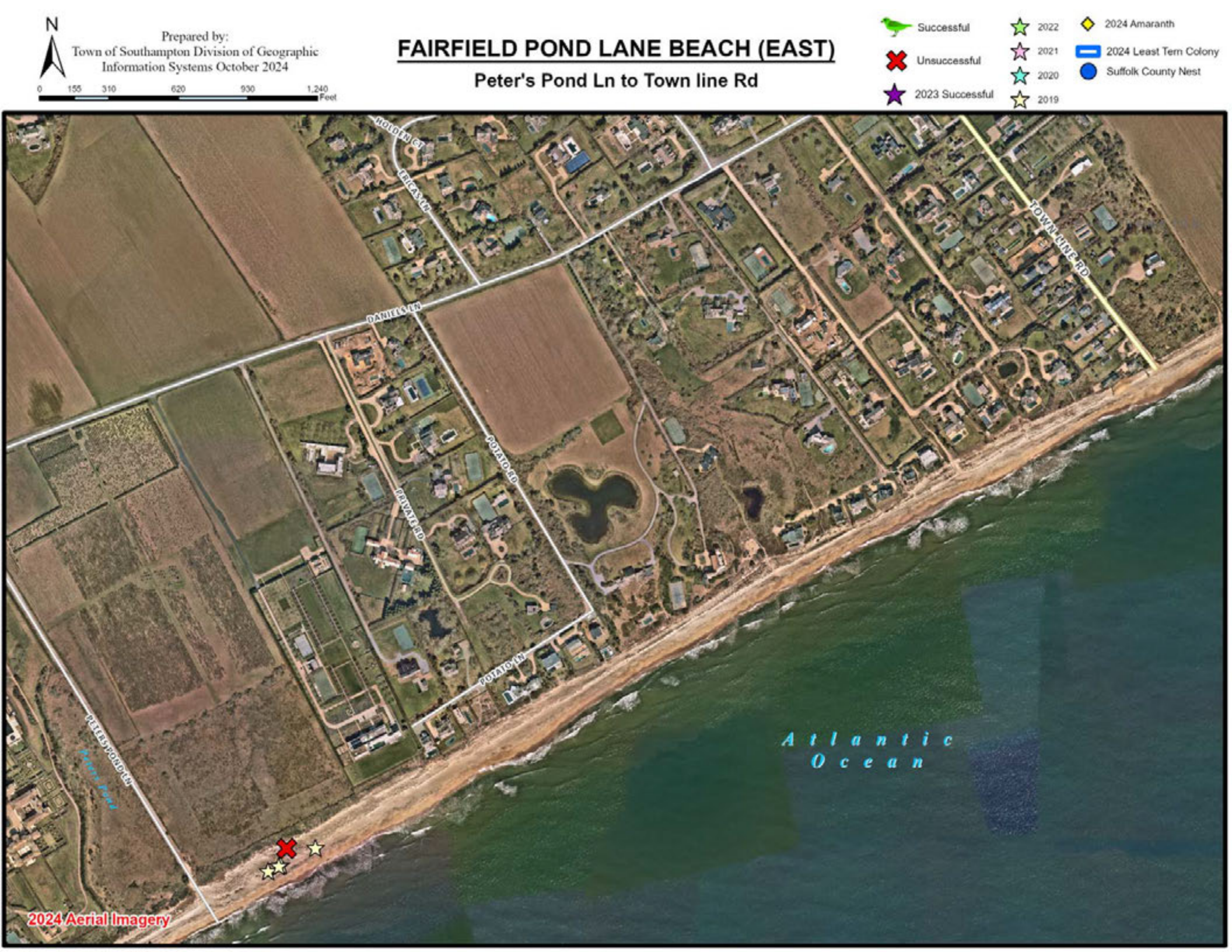
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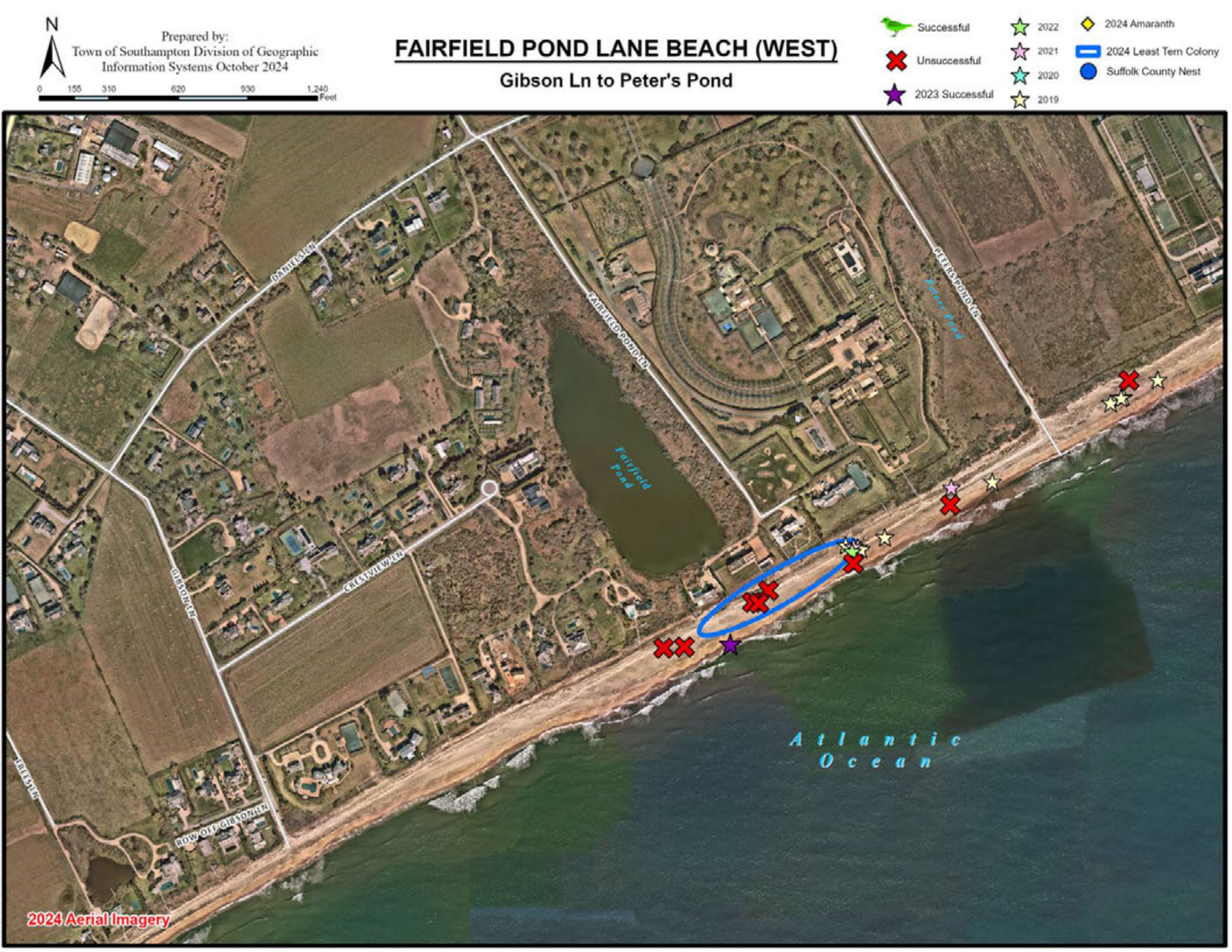
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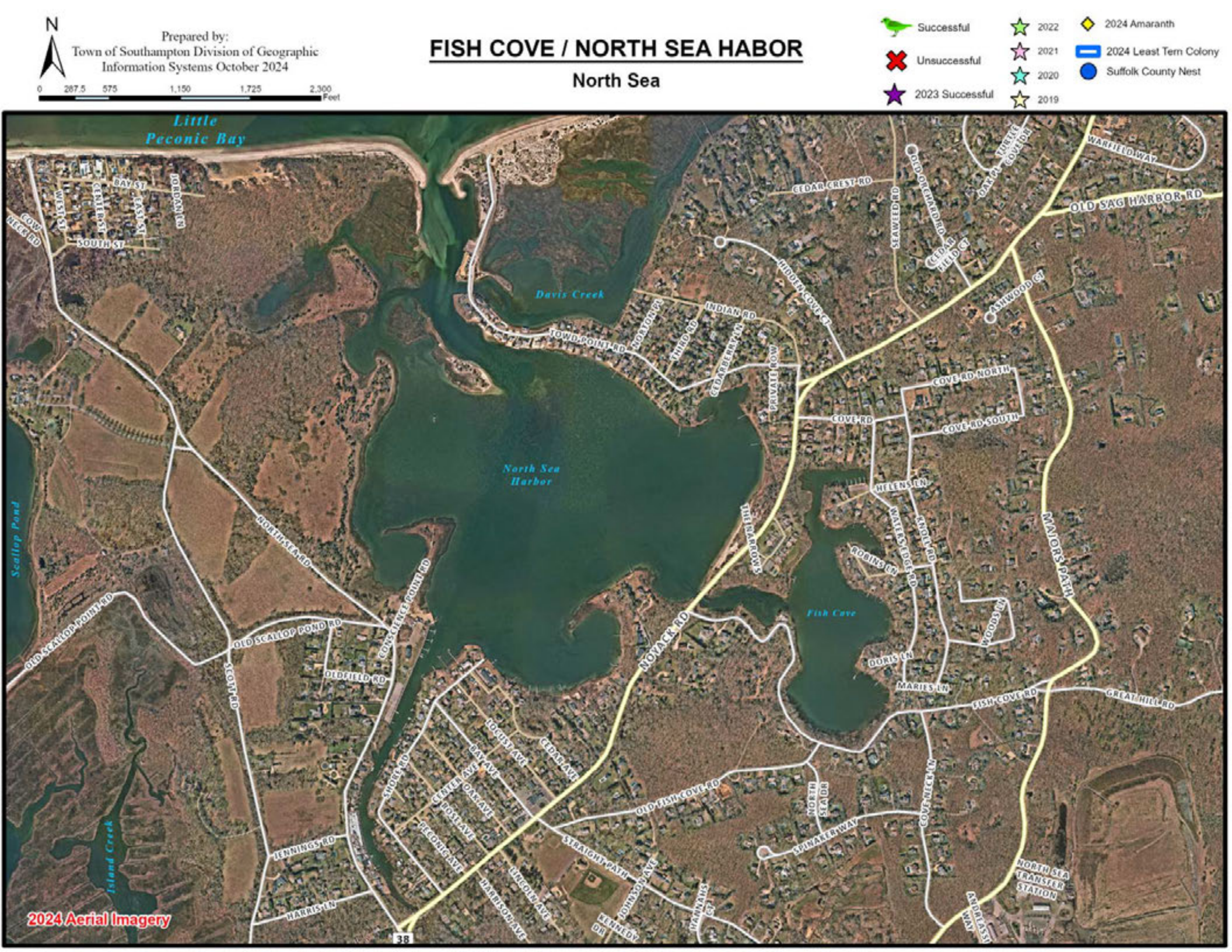
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HELEN SLN
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CHOLY RD
ROBINS LN
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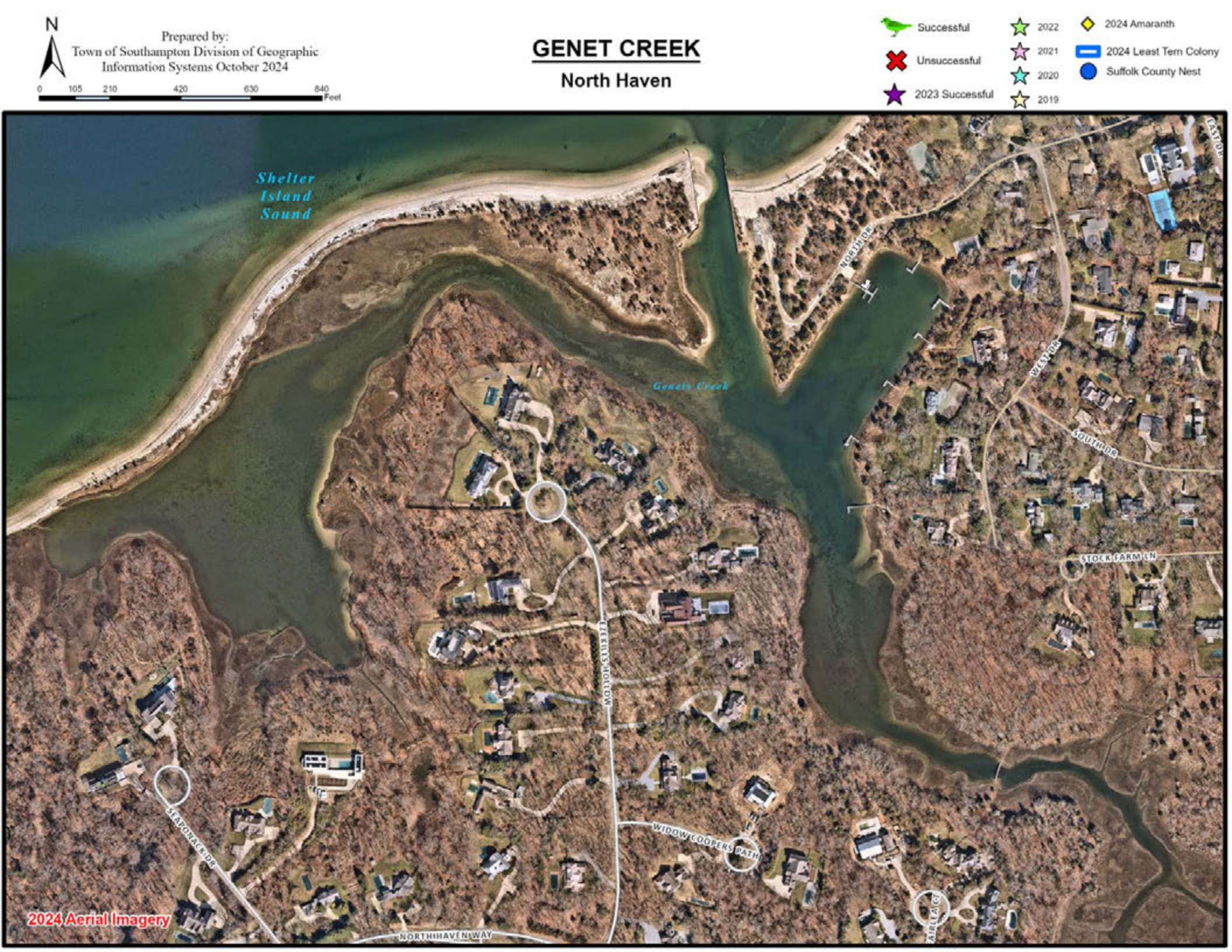
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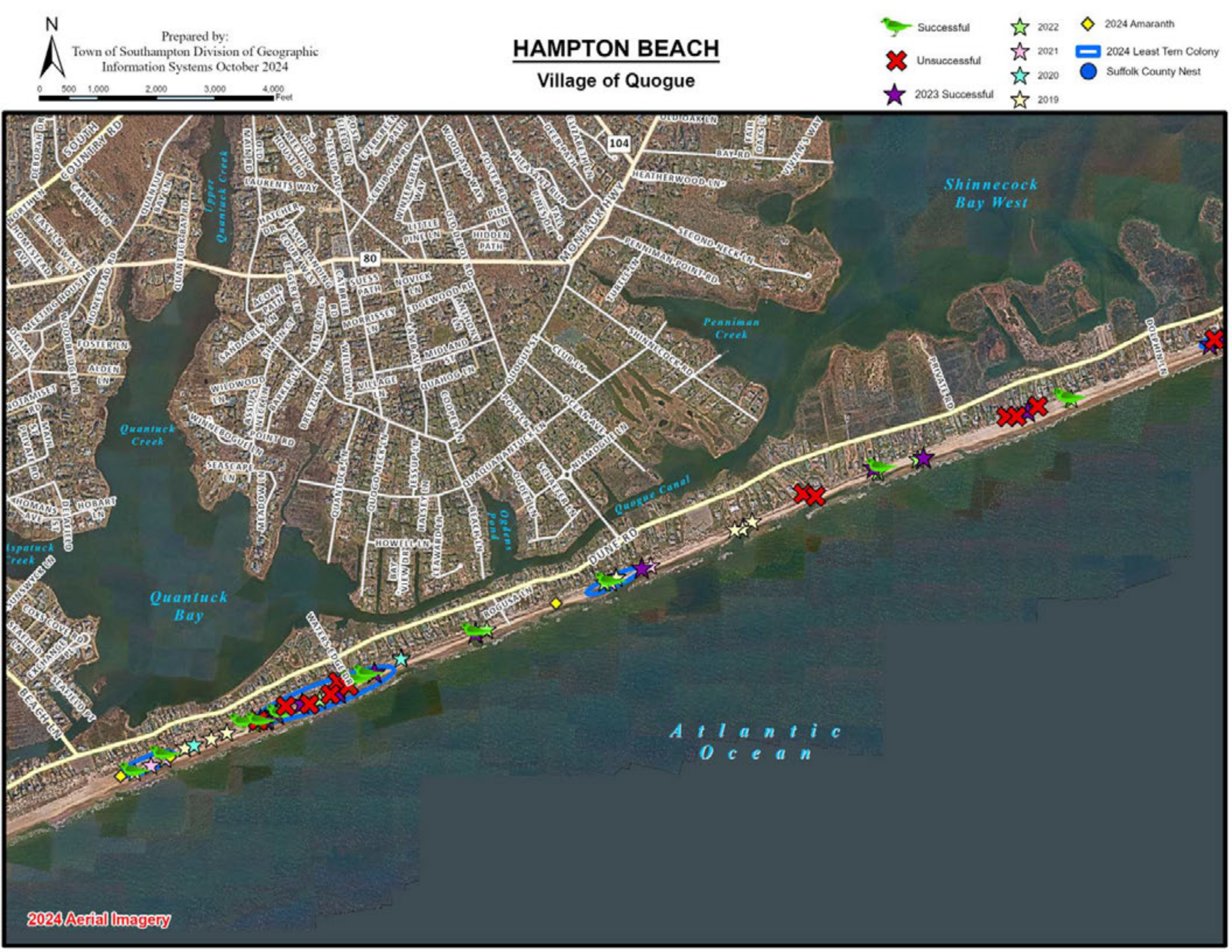
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Unsuccessful
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Quantuck Creek
Upper Quantuck Creek
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MONTAUK HWY
104
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DUNE RD
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Noyac / Sag Harbor
Successful
Unsuccessful
2023 Successful
2022
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COVE DR
WHALES WALK
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DARTMOUTH RD
REDWOOD RD
AMHERST RD
PRINCETON RD
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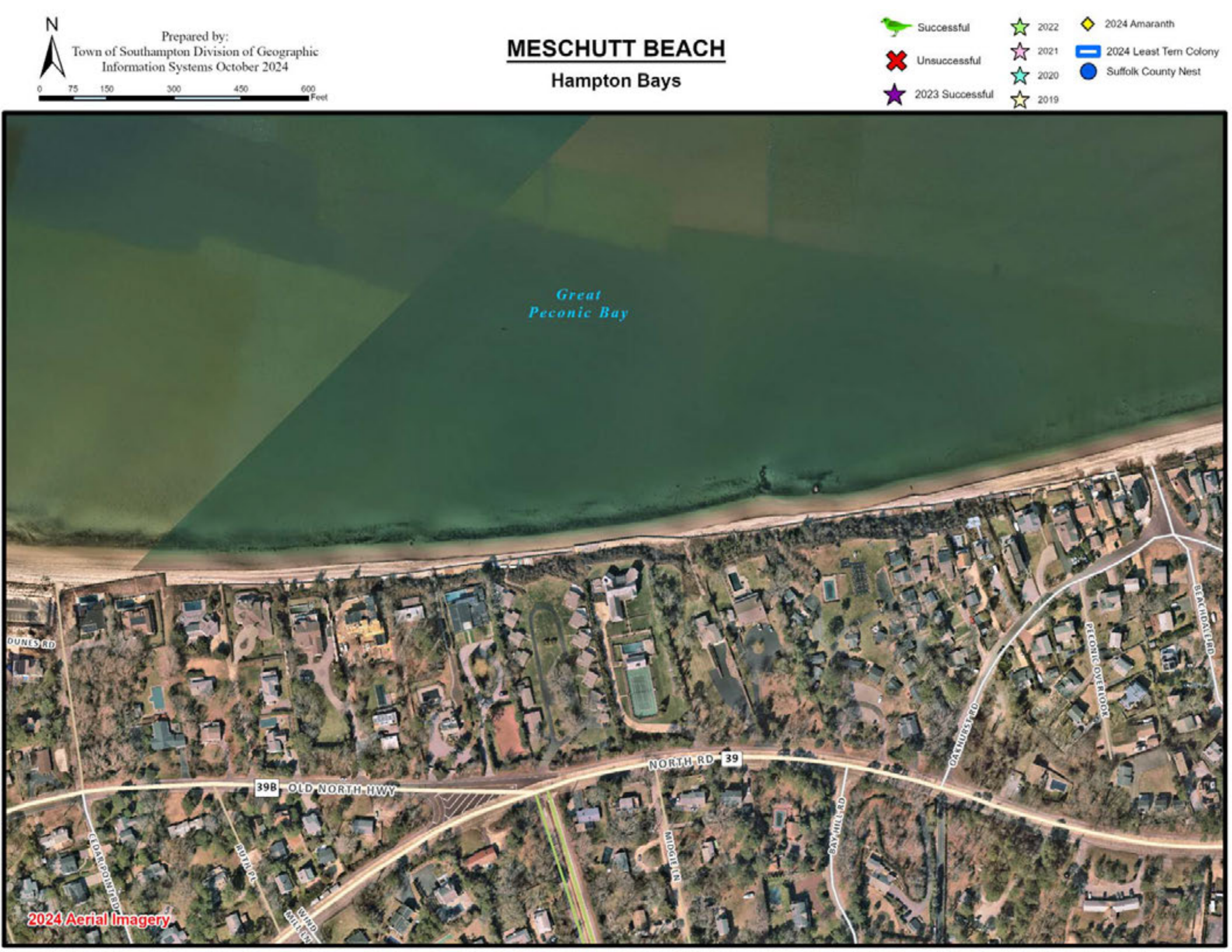
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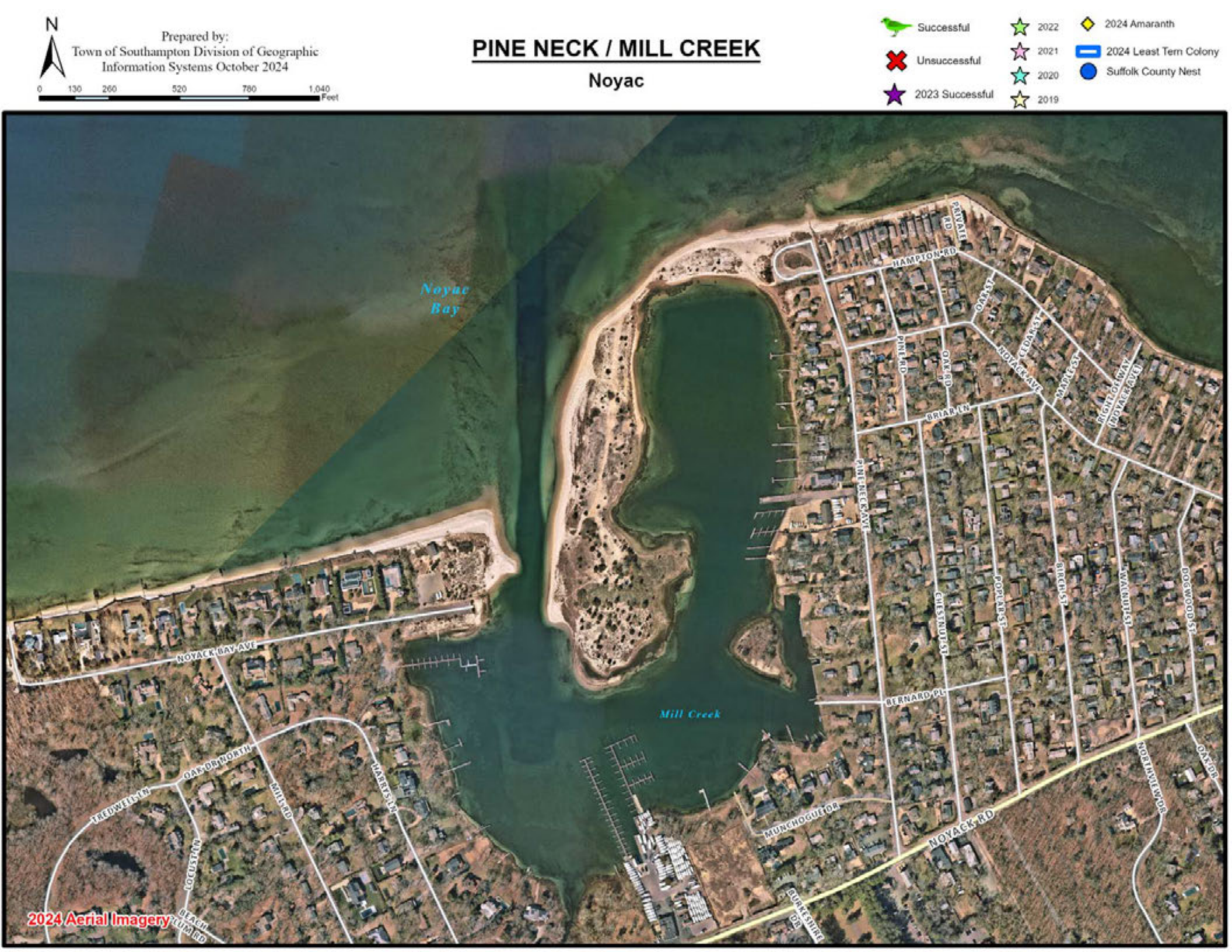
0 75 150 300 450 600 Feet
MESCHUTT BEACH
Hampton Bays
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Great Peconic Bay
DUNES RD
39B OLD NORTH HWY
NORTH RD 39
CLOAR POINT RD
RUTH PL
WIND MILL LN
MIDGE LN
BAY HILL RD
OAKHURST RD
PECONIC OVERLOOK
BEACH BOAT LRD
2024 Aerial Imagery

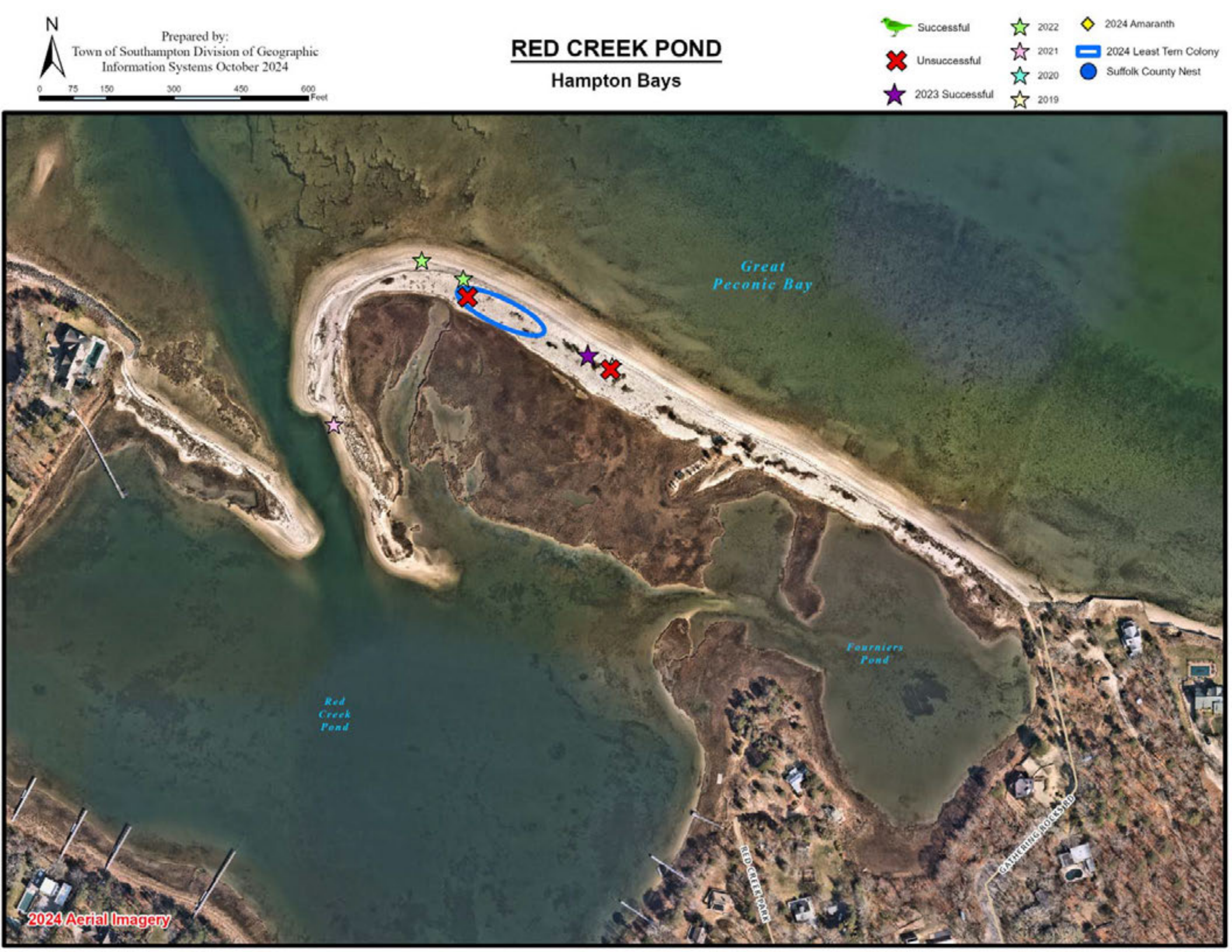

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 50 100 200 300 400
Feet
MIDDLE POND
Shinnecock Hills
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
BAYBERRY COVE DR
FAR POND RD
Far Pond
Honey Pot
Middle Pond
Shinnecock
Bay East
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 180 360 720 1,080 1,440 Feet
OLD TOWN ROAD (VILLAGE)
Old Town Rd to Fowlers St
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
NARROW LN
WICKAPOGUE RD
PHEASANT CLOSE EAST
PHEASANT LN
GROFF TOWER LN
DUCK POND LN
MURRAY LN
OLD TOWN RD
GIN LN
WYANDANCH LN
SCOOBEE LN
BEACHCOMBER LN
GARDINER LN
FOWLER ST
Wickapogue Pond
Old Town Pond
Phillips Pond
Little Jule Pond
Jule Pond
Atlantic Ocean
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 130 260 520 780 1,040 Feet
PINE NECK / MILL CREEK
Noyac
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Noyac Bay
Mill Creek
HAMPTON RD
PRIVATE RD
OAK ST
CEDAR ST
NOYACK AVE
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
OAK DR
NORTHVIEW DR
BERNARD PL
NOYACK BAY AVE
OAK DR NORTH
TREDWELL LN
LOCUST LN
MILL RD
HARRIS LN
BEACH PLUM RD
MUNCHOGUE TER
BLAKE SHORE DR
NOYACK RD
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 155 310 620 930 1,240
Feet
PONQUOGUE BEACH
Hampton Bays
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Shinnecock
Bay East
Shinnecock
Bay West
PONQUOGUE BRIDGE
32B
OLD PONQUOGUE BRIDGE
DUNE RD
ROAD A
ROAD I
Atlantic
Ocean
2024 Aerial Imagery

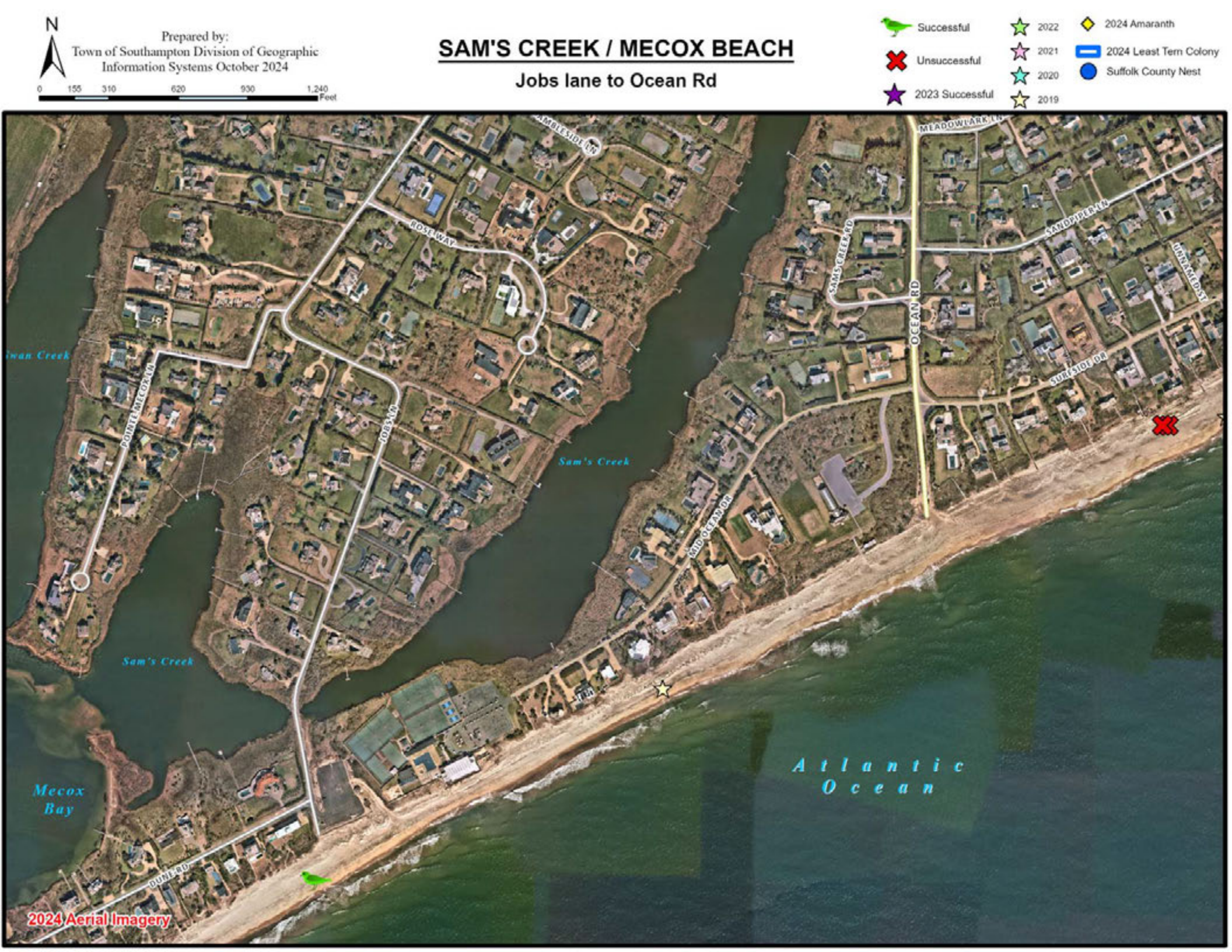

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 50 100 200 300 400
Feet
RED CEDAR POINT
Flanders
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Flanders
Bay
Great
Peconic Bay
The Cow Yard
2024 Aerial Imagery

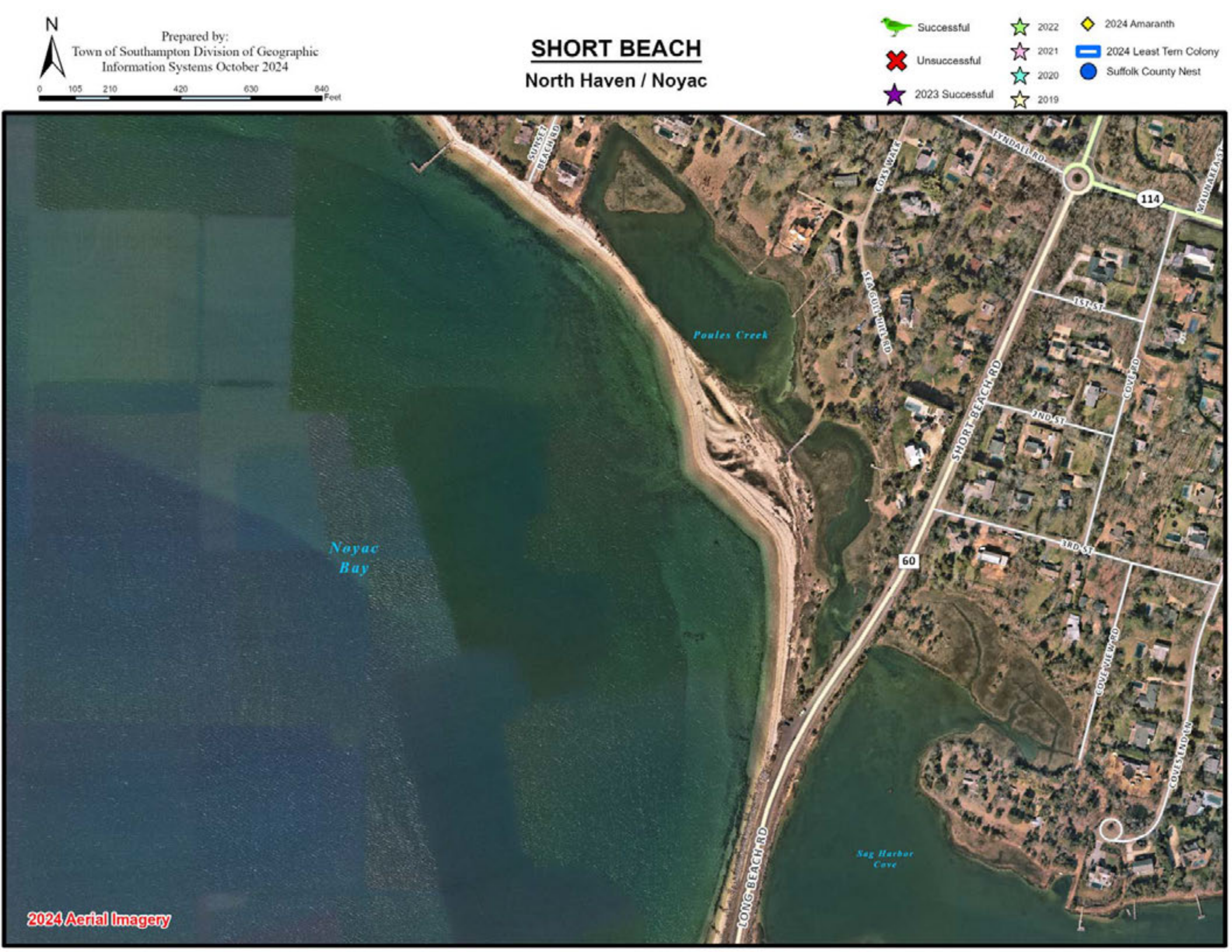

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 75 150 300 450 600
Feet
RED CREEK POND
Hampton Bays
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Great
Peconic Bay
Fourniers
Pond
Red
Creek
Pond
RED CREEK PARK
GATHERING ROCKS RD
2024 Aerial Imagery

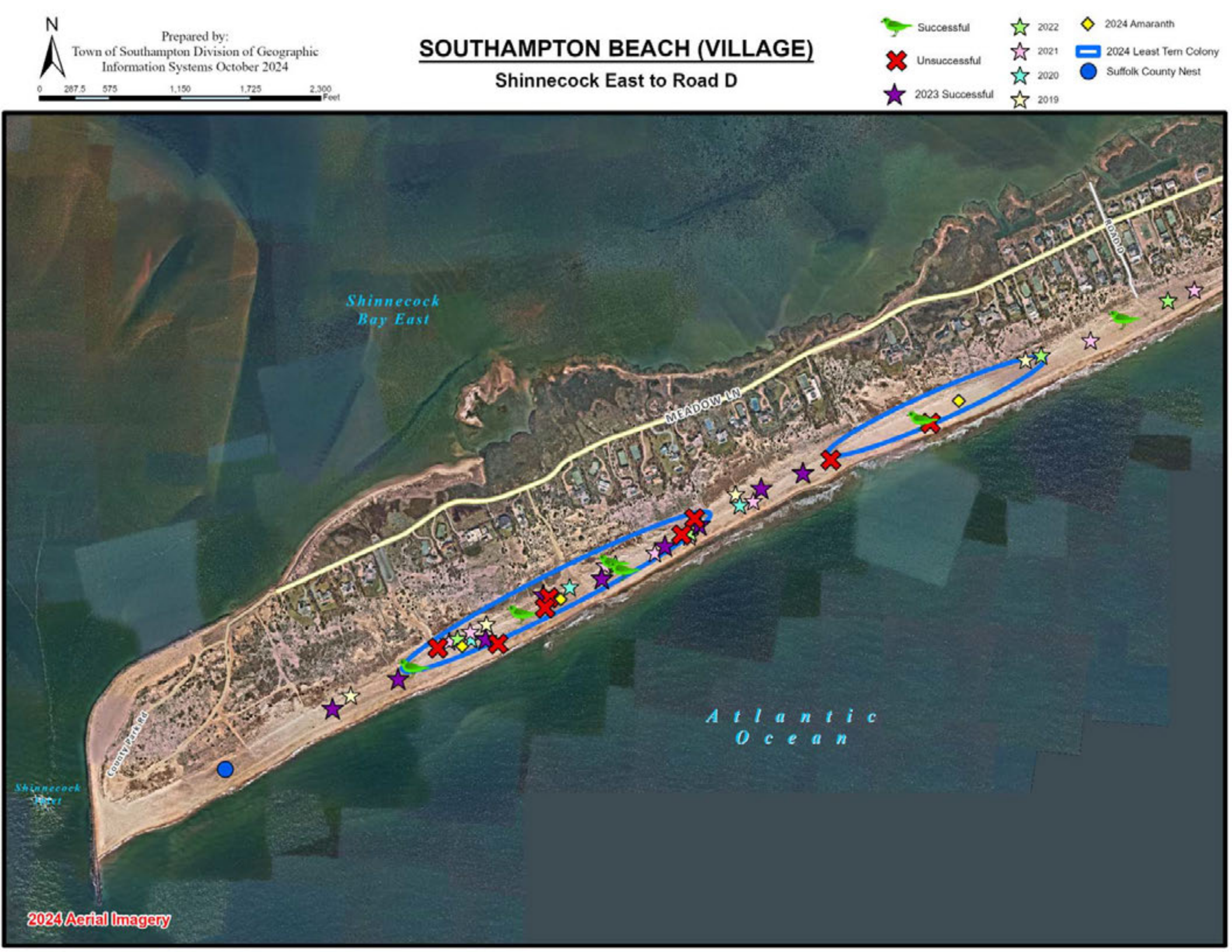

N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 105 210 420 630 840 Feet
ROSES GROVE
Peconic Bay Ave to Oak Grove Rd
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Fresh Pond
Little Peconic Bay
OAK GROVE RD
LAKE DR
PINE TREE RD
HERNE PL
EDGEMERE DR
HAMPTONS RD NORTH
ROSE HILL RD
NOYACK RD
BAY WOOD DR
DORSET RD
OAK VIEW RD
PECONIC HILLS CT
PECONIC HILLS DR
BEACH RD
WEST SHORE DR
BAY VIEW DR
PECONIC BAY AVE
2024 Aerial Imagery

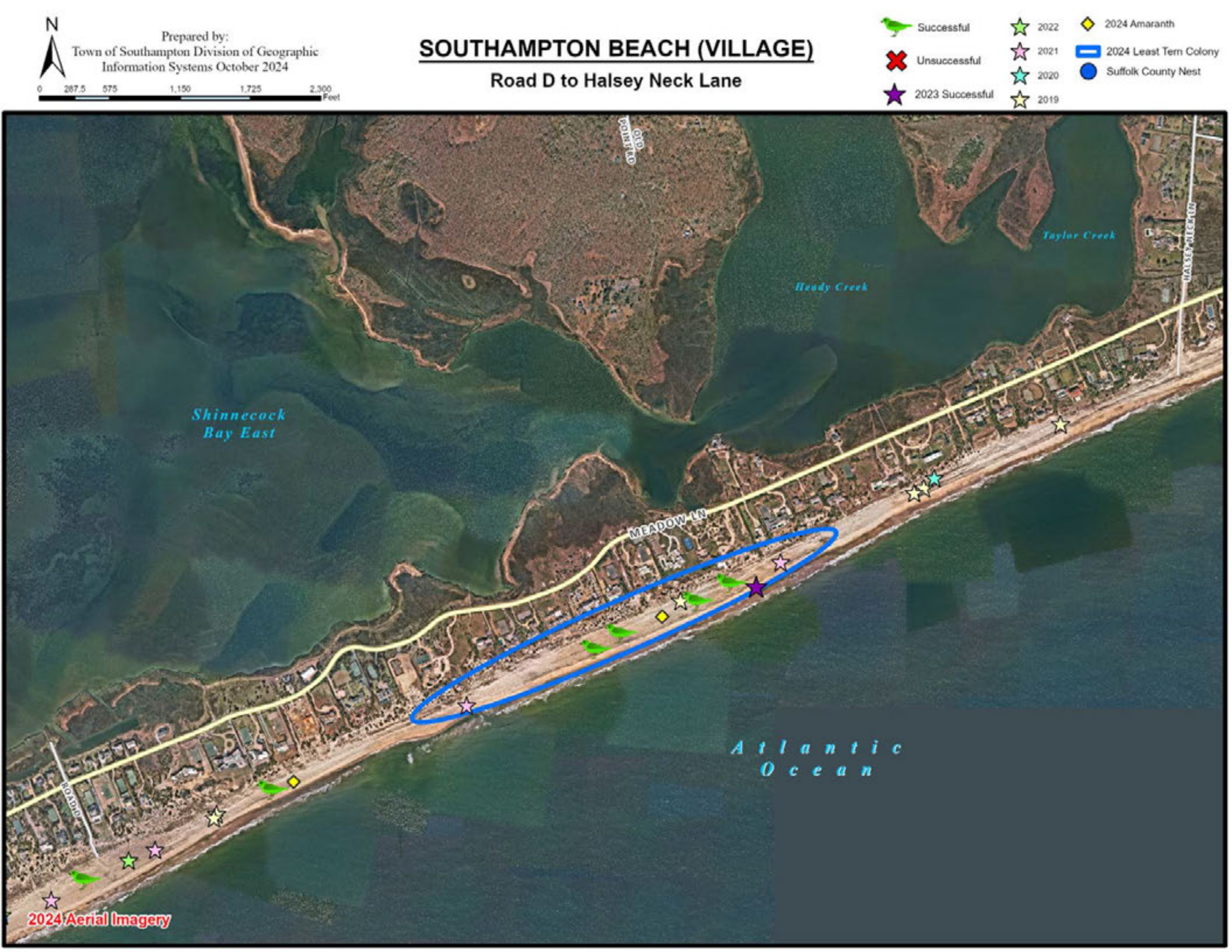

N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 180 360 720 1,080 1,440 Feet
SAGAPONACK LAKE (EAST)
Sagg Main St to Gibson Ln
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
BRIDGE LN
SAGAPONACK MAIN ST
SAGG POND CT
SEASCAPE LN
SAGAPONACK MAIN ST
SANDUNE CT
TREES LN
GIBSON LN
CRESTVIEW LN
HOW OFF GIBSON LN
Sagaponack Lake
Atlantic Ocean
OAKSIDE DR
2024 Aerial Imagery

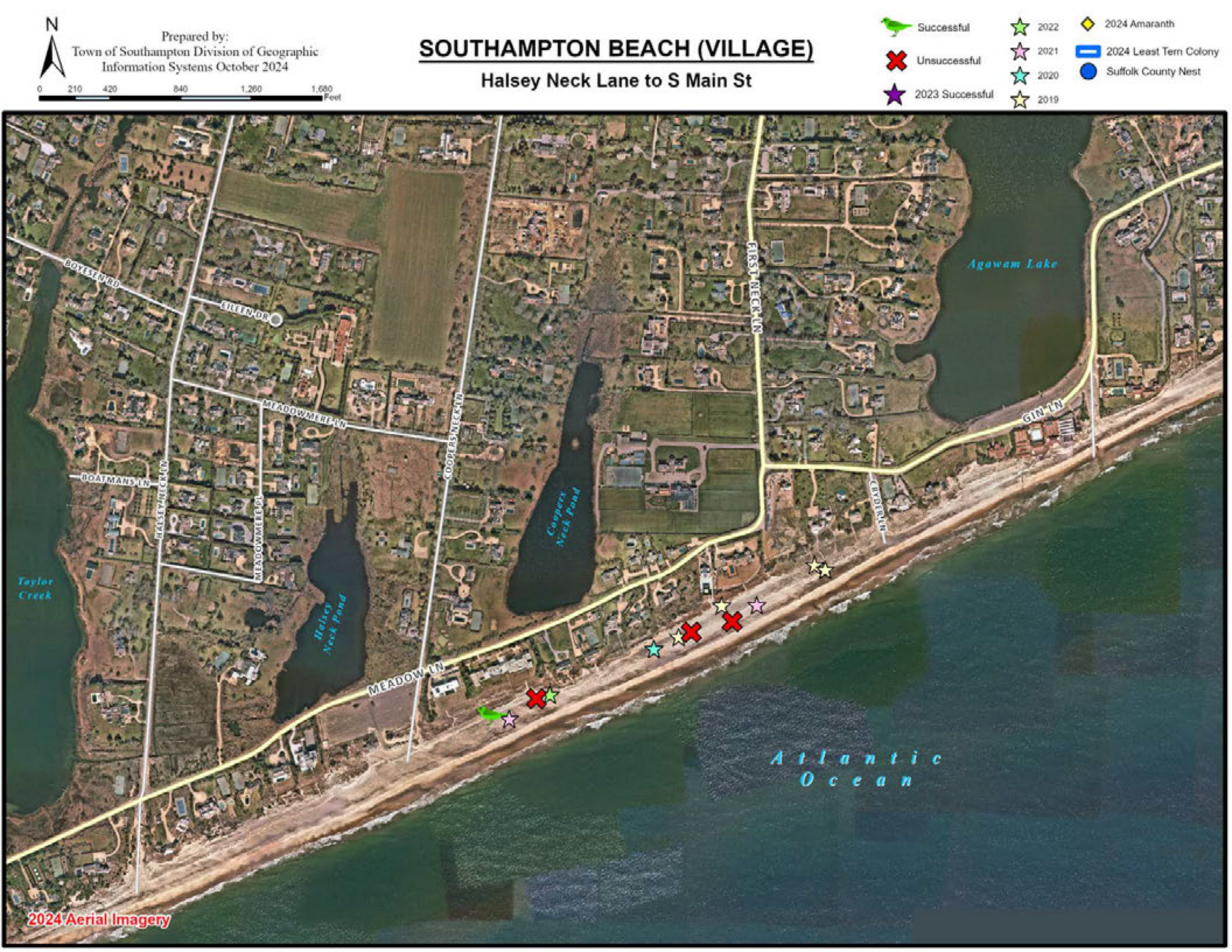

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 130 260 520 780 1,040 Feet
SAGAPONACK LAKE (WEST)
Ocean Rd to Surfside Dr
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
QUIMBY LN
PHEASANT WALK
MEADOWLARK LN
SANDPIPER LN
OCEAN RD
SAMS CREEK RD
MID OCEAN DR
UNNAMED ST
SURFSIDE DR
Sagaponack Lake
Atlantic Ocean
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 155 310 620 930 1,240 Feet
SAM'S CREEK / MECOX BEACH
Jobs lane to Ocean Rd
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
AMBLESIDE LN
ROSE WAY
MEADOWLARK LN
SANDPIPER LN
SAMS CREEK RD
OCEAN RD
SURFSIDE DR
MID OCEAN DR
POINT MECOX RD
JOBS LN
DUNE RD
Sam's Creek
Sam's Creek
Mecox Bay
Atlantic Ocean
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 105 210 420 630 840
Feet
SHORT BEACH
North Haven / Noyac
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
SUNSET BEACH RD
COSS WALK
LYNDALL RD
114
KAUMAKEAST
SEA GULL VIEW RD
Poules Creek
1ST ST
SHORT BEACH RD
COVE RD
2ND ST
3RD ST
60
COVE VIEW RD
COVE END LN
LONG BEACH RD
Noyac
Bay
Sag Harbor
Cove
2024 Aerial Imagery

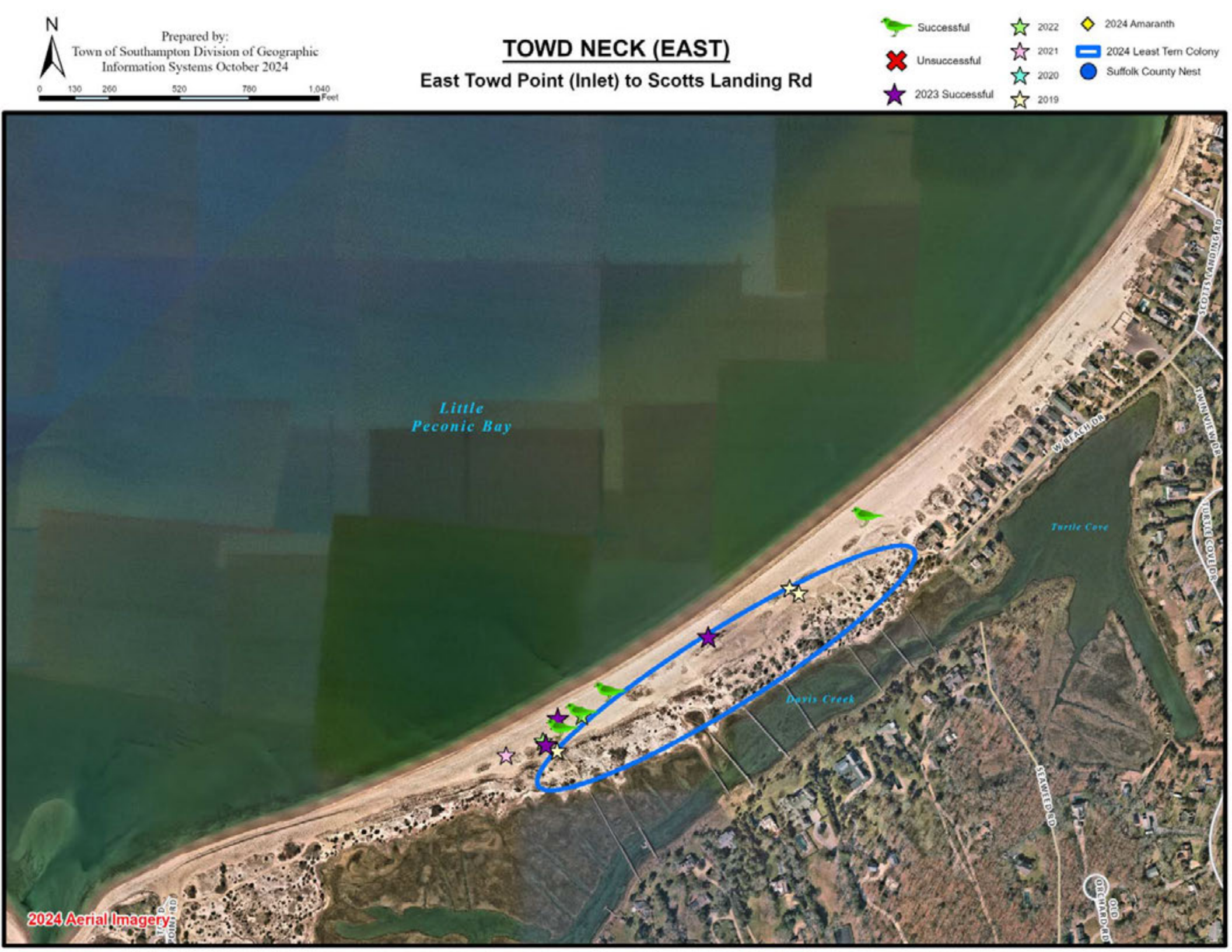

N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 287.5 575 1,150 1,725 2,300 Feet
SOUTHAMPTON BEACH (VILLAGE)
Shinnecock East to Road D
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Shinnecock Bay East
MEADOW LN
ROAD D
Atlantic Ocean
County Park Rd
Shinnecock Inlet
2024 Aerial Imagery

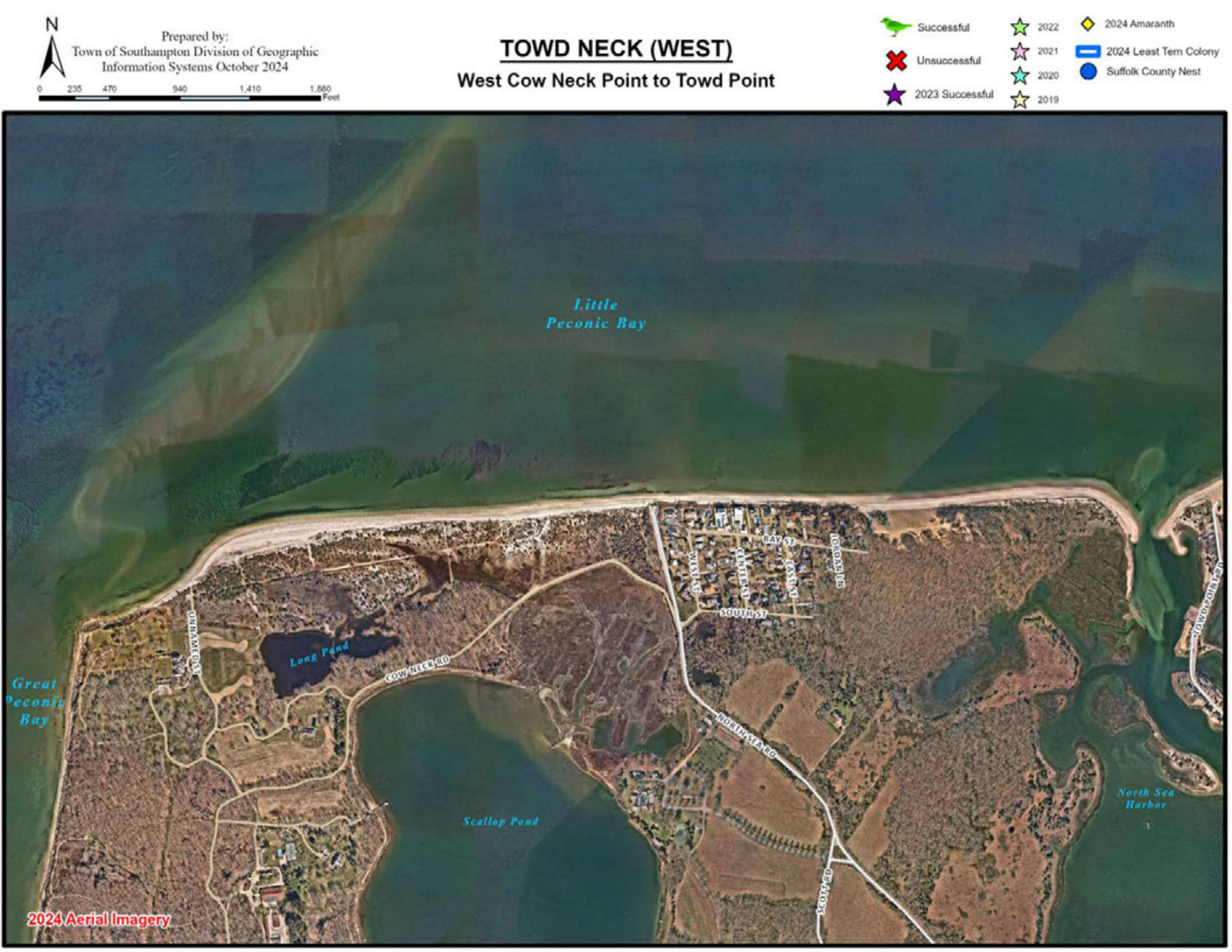

N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 287.5 575 1,150 1,725 2,300 Feet
SOUTHAMPTON BEACH (VILLAGE)
Road D to Halsey Neck Lane
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Taylor Creek
Heady Creek
Shinnecock Bay East
MEADOW LN
ROAD D
Atlantic Ocean
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 210 420 840 1,260 1,680 Feet
SOUTHAMPTON BEACH (VILLAGE)
Halsey Neck Lane to S Main St
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
BOYLSEN RD
EILEEN DR
MEADOWMERE LN
COOPERS NECK LN
FIRST NECK LN
GIN LN
BOATMANS LN
HALSEY NECK LN
MEADOWMERE PL
CRYDER LN
MEADOW LN
Agawam Lake
Coopers Neck Pond
Halsey Neck Pond
Taylor Creek
Atlantic Ocean
2024 Aerial Imagery

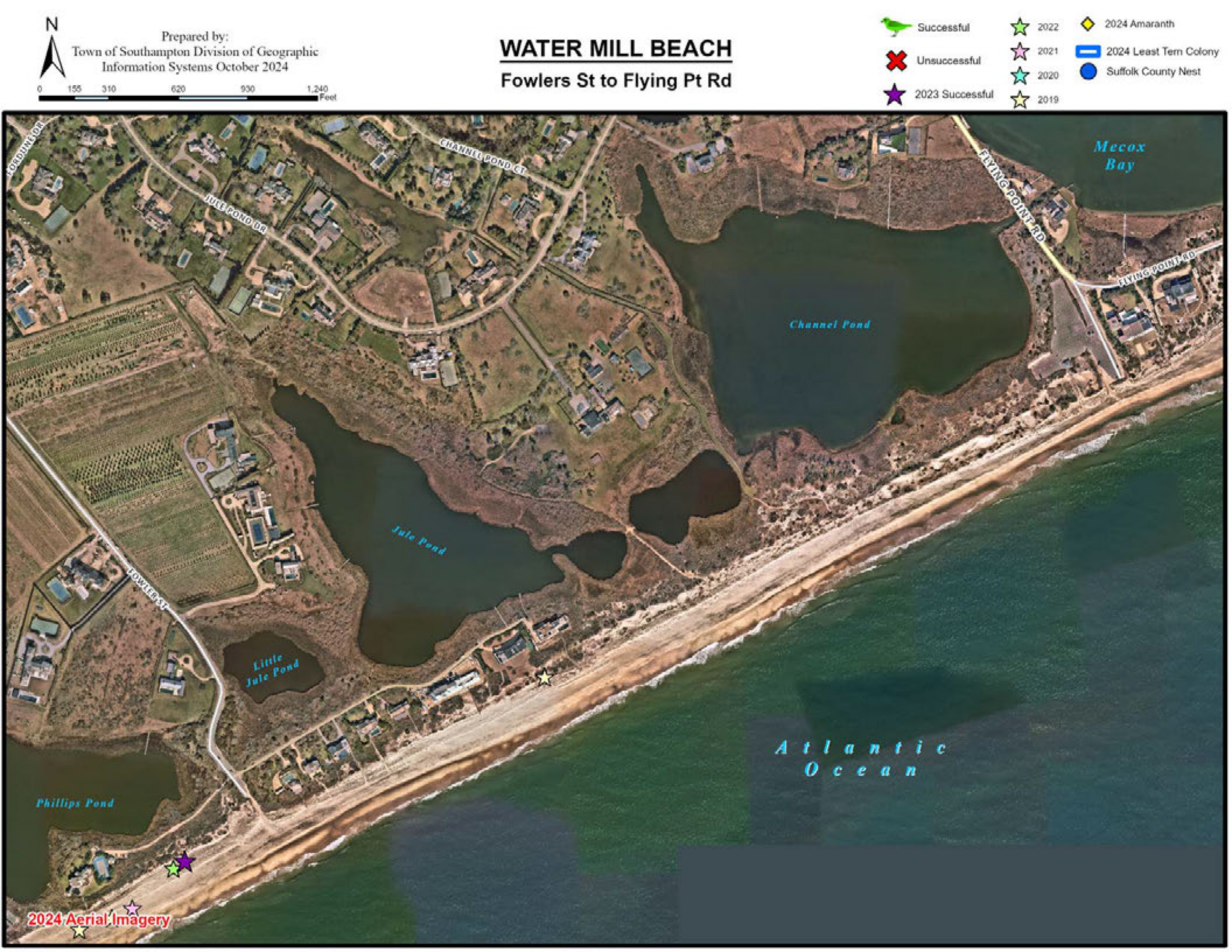

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 75 150 300 450 600
Feet
SQUIRES POND
Hampton Bays
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
WEST LANDING RD
PINE PL
PETRELLA
RIDGEWAY RD
LEANDER TER
Great
Peconic Bay
Squires Pond
EAST LANDING RD
SQUIRES
TER
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 287.5 575 1,150 1,725 2,300
Feet
TIANA BEACH
Hampton Bays
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Shinnecock
Bay West
ETHIOPIA LN
DUNE RD
MERMAID LN
PRIVATE RD
DOLPHIN LN
Atlantic
Ocean
2024 Aerial Imagery

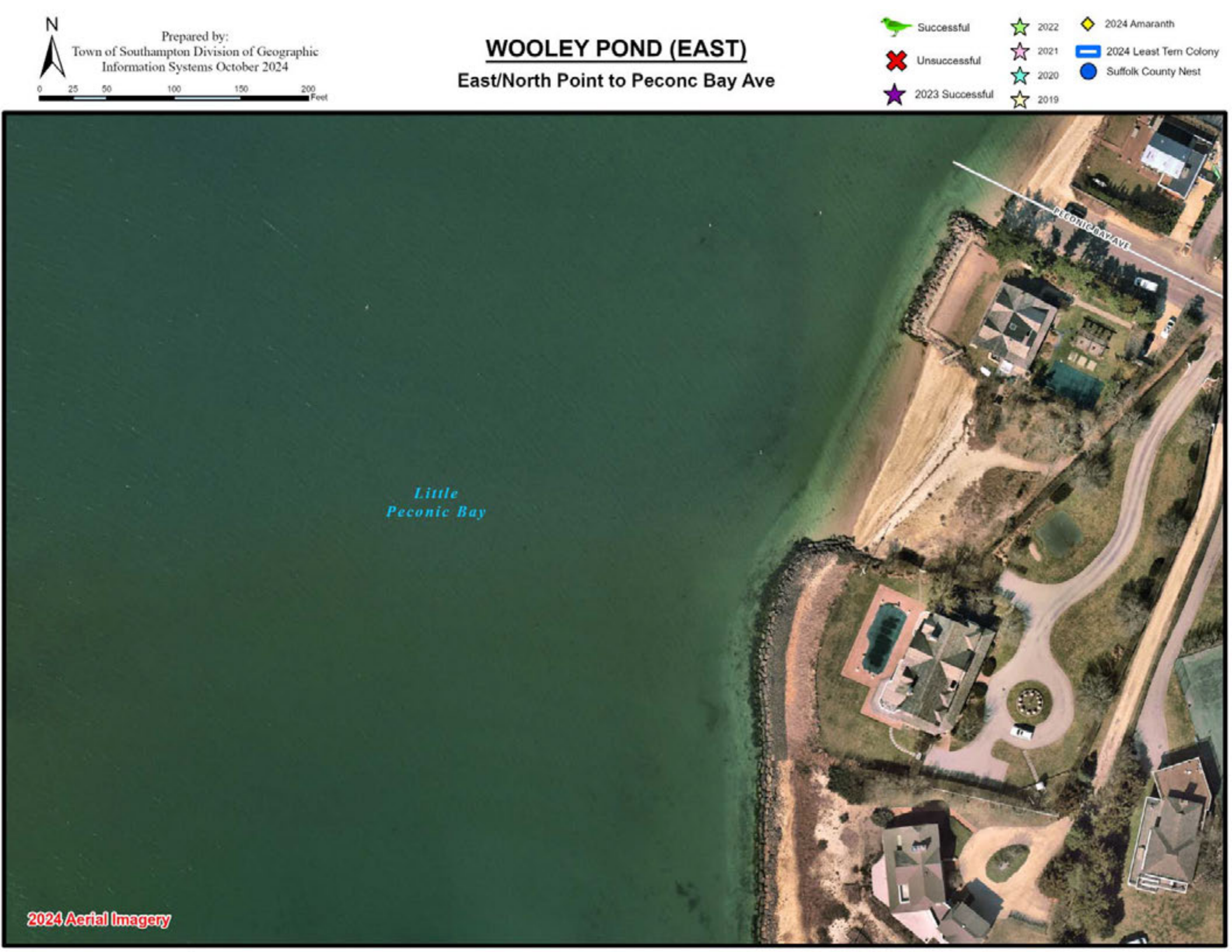

N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 130 260 520 780 1,040
Feet
TOWD NECK (EAST)
East Towd Point (Inlet) to Scotts Landing Rd
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Little
Peconic Bay
Turtle Cove
Davis Creek
W LEACH DR
SCOTTS LANDING RD
INVIEW DR
TURTLE COVE DR
SEAWEED RD
OLD
ORCHARD RD
TOWD POINT RD
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 235 470 940 1,410 1,880 Feet
TOWD NECK (WEST)
West Cow Neck Point to Towd Point
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Little Peconic Bay
Great Peconic Bay
Long Pond
Scallop Pond
North Sea Harbor
UNNAMED ST
COW NECK RD
WEST ST
CLEVERS LN
EAST ST
BAY ST
JORDAN LN
SOUTH ST
NORTH SEA RD
SCOTT RD
SOUTHAMPTON
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 155 310 620 930 1,240 Feet
WATER MILL BEACH
Dune Rd to Jobs Ln
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Sam's Creek
Sam's Creek
JOBS LN
Mecox Bay
DUNE RD
Atlantic Ocean
LYING POINT RD
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 155 310 620 930 1,240 Feet
WATER MILL BEACH
Fowlers St to Flying Pt Rd
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
FORDHAM DR
JULE POND DR
CHANNEL POND CT
FLYING POINT RD
Mecox Bay
Channel Pond
Jule Pond
FOWLER ST
Little Jule Pond
Phillips Pond
Atlantic Ocean
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 105 210 420 630 840
Feet
WATER MILL BEACH
Flying Point Rd to Dune Rd
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Mecox Bay
Bunnels Cove
BUNNELLS COVE RD
FLYING POINT RD
FLYING POINT RD
Atlantic Ocean
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic Information Systems October 2024
0 25 50 100 150 200 Feet
WOOLEY POND (EAST)
East/North Point to Peconc Bay Ave
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
PECONIC BAY AVE
Little
Peconic Bay
2024 Aerial Imagery


N
Prepared by:
Town of Southampton Division of Geographic
Information Systems October 2024
0 75 150 300 450 600
Feet
WOOLEY POND (WEST)
West Scotts Landing to Bulkhead
Successful
Unsuccessful
2023 Successful
2022
2021
2020
2019
2024 Amaranth
2024 Least Tern Colony
Suffolk County Nest
Little
Peconic Bay
Wooley Pond
EAST BEACH DR
SCOTTS LANDING RD
PECONIC BAY AVE
2024 Aerial Imagery