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Summary of Shorebird Stewardship Program at Stone Harbor Point: Summer 2022

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Stone Harbor Point provides important habitat for beach-nesting and migratory birds, and is enjoyed by many visitors for outdoor activities. The Beach Steward Program was initiated by The Wetlands Institute in the spring of 2015 to reduce disturbance to beach-nesting and migratory shorebirds, document disturbance events, and provide education and outreach to beachgoers through stewardship of natural resources at Stone Harbor Point.

This report provides a summary of steward program accomplishments and activities for the duration of the 2022 season, May 28 (Memorial Day weekend) through September 5 (Labor Day), which coincides with the highest level of public visitation and peak tourist season.

Stewards interacted with beachgoers and provided educational information about beach-nesting birds, the importance of Stone Harbor Point as a conservation area, and the need for protecting areas from beach visitors, including youth, anglers, boaters, and beach walkers. Stewards also reduced disturbance to nesting and migratory birds by intercepting visitors in seasonally closed nesting areas marked by symbolic fencing or other unpermitted activities. When unfledged chicks were present at Stone Harbor Point, stewards escorted Stone Harbor Police patrols by foot, thereby allowing use of ATVs for beach access, per U.S. Fish and Wildlife Service and N.J. Fish and Wildlife agreement. Stewards monitored compliance with Stone Harbor Borough regulations which prohibit the following: dogs or other pets, swimming, kites, ball playing or frisbee, landing personal watercraft or boats, entering closed areas, or feeding birds or wildlife. Stewards also communicated with lifeguards from Stone Harbor Beach Patrol when swimming occurred on the unprotected beach at Stone Harbor Point.

Beach stewards recorded incidents that occurred during their shifts. Incidents included all observed violations of Borough regulations and/or activities that may have resulted in disturbance or other impacts to shorebirds. Incident type (violations or other notable interactions with beachgoers) and disturbance type (who or what caused the incident) were recorded, as well as details on the response by shorebirds.

This season, due less strict Covid-19 and social distancing recommendations, training for stewards was held in-person at the start of the season rather than virtually as it had been in the previous two years. Training was initiated at The Wetlands Institute, and then completed on-site at Stone Harbor Point.

Highlights:

- Five Shorebird Stewards were hired, three full-time up to 40 hours per week, and two part-time up to 24 hours per week. Over 800 hours were spent on training, stewarding, data entry, and program logistics.
- Stewards were present 90 days from May 28 – September 5.
- Stewards were present 8-10 hours on weekend days, and 3-5 hours on weekdays.
- Stewards engaged 659 visitors and documented 718 incidents.
- Visitor interactions decreased by 38% in 2022 compared to 2021.
- Incidents decreased by 39% in 2022 compared to 2021.

Incident Summary: Altogether, stewards recorded 718 incidents throughout the summer season. Most incidents were low-flying aircraft (35%), followed by landing watercraft (21%) and recreational disturbance (21%) (Figure 1). Beachgoers entering fencing, entering water, approaching fencing, bringing dogs, and chasing/harassing birds made up the other 22% of incidents. Low-flying aircraft incidents were comprised of banner planes (68%), helicopters (19%), planes/jets (12%), and drones (1%). Landed watercraft incidents were comprised of boats (77%), Jetskis (21%), and kayaks/paddleboards (2%). Although 154 incidents of landed watercraft were documented, many of these incidents involved several watercraft that were listed under one incident. In fact, stewards often documented 40 or more watercraft at the tip at one time under one incident, especially on weekends. An approximate count of the number of watercraft that were documented (not all incidents included a number of watercraft) was 370 (312 boats, 52 Jetskis, 5 kayaks, 1 paddleboard).

Stewards were able to communicate with the beachgoer causing the incident 216 times (30%) to intervene and/or educate. On six occasions stewards called law enforcement (Stone Harbor Borough Police) to intervene when the situation was beyond their control. All six occasions were in response to landed watercraft with boaters who were refusing to comply with regulations. On 38 occasions (5%) the beachgoer discontinued the behavior on their own before intervention was necessary. Of the remaining 458 incidents (64%), stewards were only able to observe the issue due to inaccessibility (e.g., low-flying aircraft) or distance to the incident.

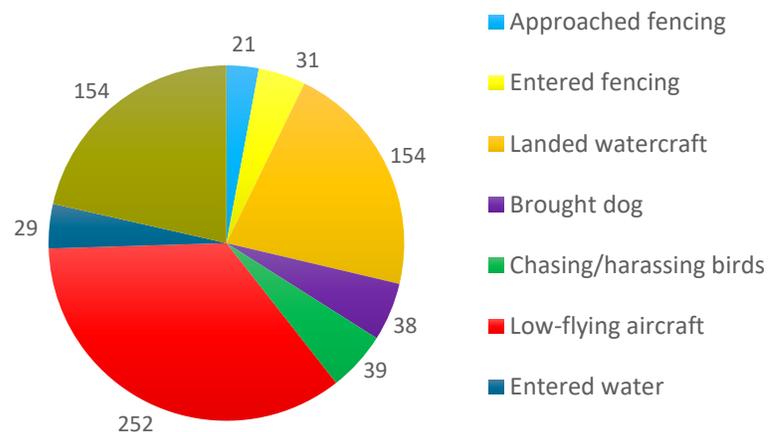


Figure 1. Incident types detailed across the season at Stone Harbor Point. n=718

Shorebird Disturbance: Stewards documented impacts to birds using the beach to nest, forage, or roost. Of the 718 documented incidents, shorebirds were recorded as present in the area on 484 occasions (67%) and not present in the area on 234 occasions (33%). When present, shorebirds were reported as

undisturbed on 260 occasions (54%), and were reported as visibly disturbed on 224 occasions (46%) based on observation of their behavior (i.e., vocalizations, flying away, etc.). The most common shorebird response to disturbance was flushing (44%), followed by disrupted feeding (26%) and disrupted roosting (16%) (Figure 2). Of all incidents, recreational disturbances caused the most disruption to shorebirds (37%), followed by low-flying aircraft (25%), chasing/harassing birds (17%) and landing watercraft (14%). Of all disturbance types, walkers/joggers were the most frequent cause of disturbance to birds (37%), followed by aircraft (25%) and watercraft (19%). The most common type of aircraft to cause disturbance was helicopters (11%) and the most common type of watercraft to cause disturbance was boats (14%) (Table 1). In the case of watercraft landings, although the boat is listed as the disturbance type, the people (and sometimes dogs) who accessed the beach from the boat were typically the cause of the disturbance. In some cases, Jetskis riding very close to shore were a cause of disturbance. Banner planes were documented more frequently (171) than helicopters (47), however helicopters resulted in a higher percentage of disturbances overall. Furthermore, when birds were present banner planes caused disturbance only 16% of the time, while helicopters caused disturbance 56% of the time, indicating that low-flying helicopters are more likely to cause disturbance than banner planes. Bikes were documented 51 times, and when birds were present (24 times) they caused disturbance 88% of the time.

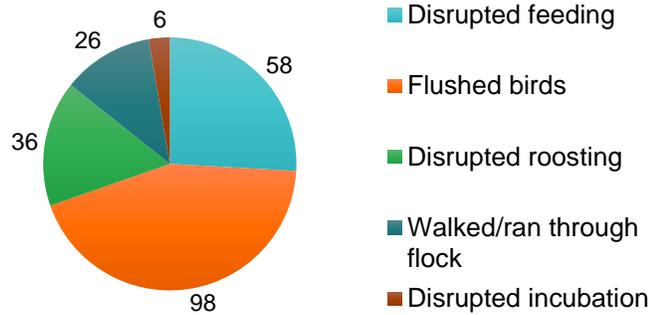


Figure 2. Shorebird response to disturbance detailed. n=224

Table 1. Causes of incidents and disturbance to shorebirds when shorebirds were present.

Disturbance Type	Disturbed Birds (n=224)		Didn't Disturb Birds (n=260)	
	Number	Percent	Number	Percent
Walker/Jogger	83	37%	17	6%
Aircraft Overall	56	25%	159	61%
Banner Plane	22	10%	115	44%
Helicopter	26	11%	20	8%
Other (plane, jet, drone)	8	4%	24	9%
Watercraft Overall	43	19%	61	23%
Boat	32	14%	37	14%
Jetski	9	4%	21	8%
Kayak/Paddleboard	2	1%	3	1%
Bike	21	9%	3	1%
Dog	8	4%	6	2%
Shell Collector	6	3%	5	2%
Swimmer	3	1%	4	1%
Kite	2	1%	1	<1%
Ball	1	<1%	1	<1%
ATV (Police)	1	<1%	0	0%
Angler	0	0%	2	<1%
Noise	0	0%	1	<1%

Seasonal Change: The number of incidents and the number of people engaged increased throughout the season until it peaked in early to mid-August, dropped off and then peaked again the last week in August (Figure 3). The watercraft landing incidents showed a more variable distribution through the season, with a peak in the first week of July which included the July 4th holiday weekend (Figure 4). Incidents were high again the last week of August, corresponding with the peak in overall incidents that week. The second highest number of incidents occurred during Labor Day weekend, which was especially high considering this was a three-day period instead of a week. The watercraft landing incidents were high despite overall incidents being lower on those days. These results indicate that although overall incidents did not spike on holiday weekends, watercraft landings did spike and were therefore the most common incident on holiday weekends.

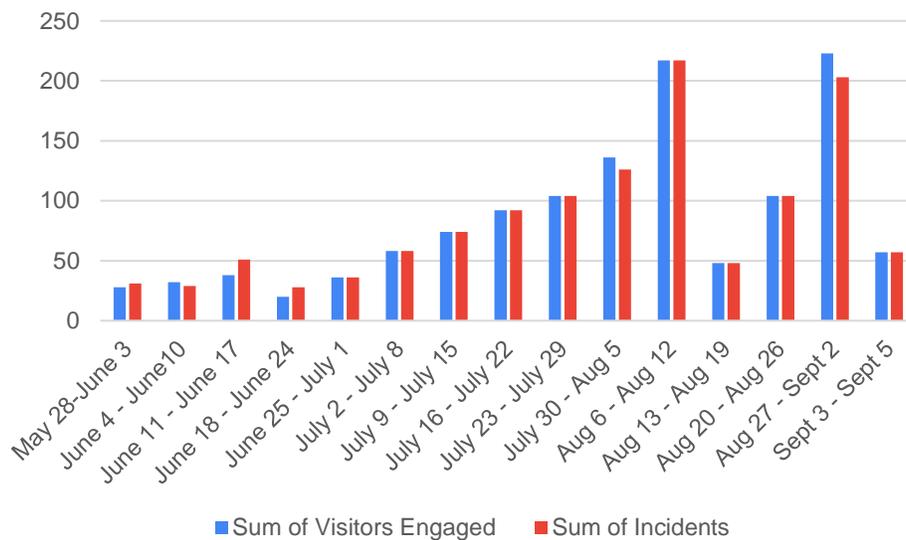


Figure 3. Seasonal changes based on total number of visitors engaged and total number on incidents by week.

Watercraft Landing Incidents

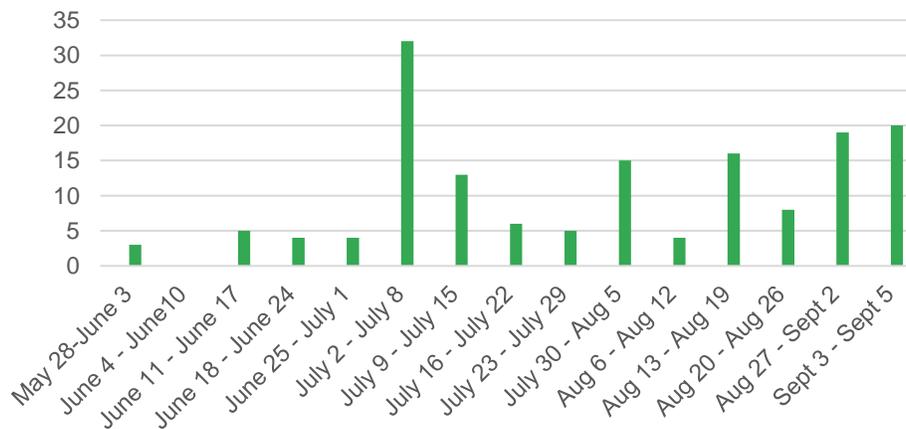


Figure 4. Seasonal changes in watercraft landings by week during the 2022.

Incident Comparison to 2021: In 2022, there was a 39% decrease in incidents overall, however there was a marked increase in a few types of incidents. The most significant increase was in recreational disturbances (154 in 2022, 8 in 2021) but this can be explained by a difference in the way stewards documented incidents in 2021 (Figure 5). In 2021, stewards documented beachgoers chasing/harassing birds even if the disturbance was unintentional (for example, a jogger running along the waterline through a flock of shorebirds), resulting in a large increase of recorded incidents from 2020 and previous years. In 2022, as in years prior to 2021, stewards only recorded beachgoers chasing/harassing birds if the act was intentional (e.g. children running through a flock of gulls). Incidents of walkers, joggers, or bicyclists unintentionally disturbing birds was documented as recreational disturbance. Boats close to shore were also documented as recreational disturbance. This difference can explain the increase in recreational disturbance and the decrease in chasing/harassing birds and boats close to shore.

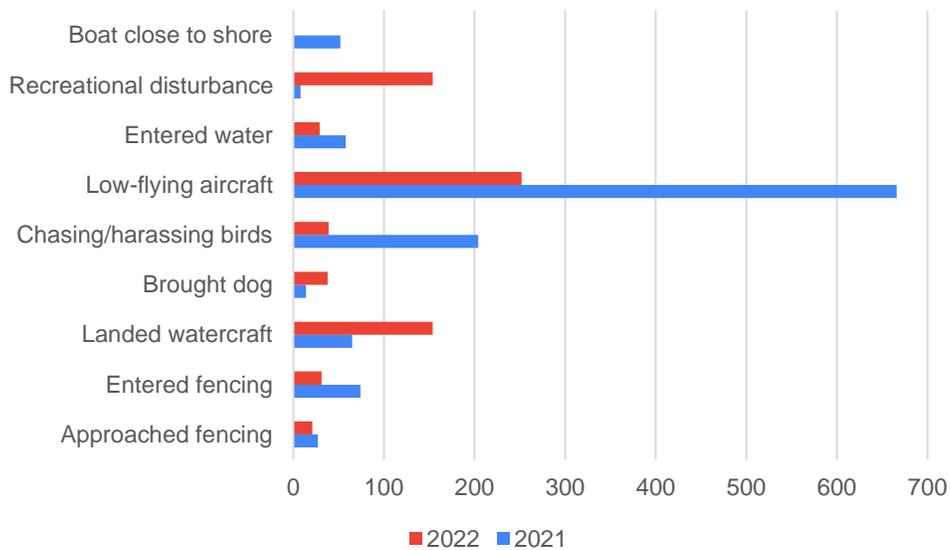


Figure 5. Comparison of incidents between 2021 and 2022.

In 2022 there was a 137% increase in incidents involving watercraft landings (154 in 2022, 65 in 2021). The increase may partly be due to the inability of the Stone Harbor Borough Police to access the point for the first part of the season. Even in years when SHPD have been unable to staff weekend patrols in June, police are normally still able to respond to requests for assistance from stewards in situations that are beyond the steward’s control. This was not the case in 2022 since the vehicle ramp to enter the beach was washed out in a storm in mid-May. Without police presence, boaters took advantage of landing at the tip without consequence, and although some were respectful and listened to the stewards when asked to leave, many simply did not comply and often gave stewards a hard time. The week including July 4th holiday was a particularly extreme example with 20% of the landed watercraft incidents occurring that week. Regular police patrols resumed on July 10 after the ramp was repaired, and in addition to the regular patrols stewards could rely on calling out the police when needed to resolve issues. Law enforcement presence has been an important part of the Beach Steward Program and a continued partnership is recommended. In 2022 there was also an increase in the number of incidents involving visitors bringing dogs (38 in 2022, 14 in 2021). This increase could be tied to the increase in watercraft landings since dogs were often brought by boat. This was particularly harmful

since the black skimmer colony was located at the tip where watercraft landed and stewards reported that dogs were often let off leash to freely run through the colony and chase the birds, and possibly trample eggs and unfledged chicks.

Discussion: Beach-nesting birds including American oystercatchers, piping plovers, black skimmers, and common terns had no success breeding at Stone Harbor Point in the 2022 season. Of the many nesting attempts made, only a single nest hatched (piping plover) and none of those chicks survived to fledge. The skimmer and tern colony was a complete failure, with the whole colony abandoning the site on July 18 to attempt nesting at an alternate site. Although predation and flooding were known to cause nest failures, it is suspected that human disturbance had an effect on the skimmer and tern colony at the tip.

The colony was located where watercraft anchor and boaters access the beach to recreate, often in large groups. Although the nesting area was symbolically fenced, visitors often crossed through the fencing from the back side of the point where their boat was anchored to the front side. Boaters also often brought dogs that were let loose to run through the colony and chase the birds. In addition, the birds make use the intertidal zone to cool off from the heat of the nesting area. This area was often unavailable to them, or they were flushed regularly, due to the recreational use by boaters. This amount of disturbance, in addition to the pressures of predation and flooding, could easily add to the collapse of the colony. The colony was observed shifting from the west side of the tip to the east as disturbance from boaters on the west side gradually caused them to move. Nests were documented further east than ever seen in previous years, and flooded right away at high tide due to their precarious position. Stone Harbor Point is one of only five black skimmer colonies in the state, and must be protected due to its high importance.

With uncertainty regarding watercraft landing regulations and how to proceed with enforcement, Stone Harbor Borough reacted to the situation quickly with the addition of a new rule and regulation to Code 156-6(A) governing access to paid beaches within the Borough. The new rule prohibited individuals from accessing the beach from any watercraft. Watercraft could be moored in the waters surrounding the Point, but boaters could no longer access the beach from the watercraft. Stewards benefited from a clear rule that was easier to communicate with boaters. The new rule also made enforcement easier. Officers issued warnings and summonses to gain control of the situation and with time the situation seemed to improve. Unfortunately, the colony had already collapsed and abandoned the site before the new rule was put into place, but we are hopeful that enforcement of the rule from the start of the season in 2023 will reduce disturbance enough to give the colony a better chance of success. One necessary improvement will be the addition of more visible and distinct signage at the tip.

This season, over 650 people learned more about Stone Harbor Point and the closure, wildlife that use the site, and the importance of the site to imperiled species. Since the start of the partnership between the Borough and TWI on the Shorebird Steward Program in 2015, stewards have spent at total of 5,109 hours at Stone Harbor Point and engaged 4,808 people. Stewardship through education and monitoring in conjunction with Borough patrols can improve public attitudes and occurrence of regulation incidents at Stone Harbor Point. However, recurring incidents, such as people entering closed nesting areas, dogs on the beach, unintentional disturbance of shorebirds, and landed watercraft, can be damaging to avian populations even at reduced levels. With the number of new and returning visitors who come to enjoy the site each year, continued stewardship is recommended to minimize impacts to sensitive avian species that depend on Stone Harbor Point as a place to feed, rest, and raise young. We plan to take a



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more thorough approach to educating beachgoers next year to discourage behaviors that cause disturbance and encourage behaviors that allow for people to share the space with birds more responsibly.