

## **Santa Ana River Mouth Monitoring Project 2025 Report**



The mission of Orange County Coastkeeper (Coastkeeper) is to protect swimmable, drinkable, fishable water and promote watershed resilience throughout our region. We are a nonprofit clean water organization that serves as a proactive steward of our fresh and saltwater ecosystems. We work collaboratively with diverse groups in the public and private sectors to achieve healthy, accessible, and sustainable water resources for the region by utilizing innovative and effective programs in education, advocacy, restoration, research, enforcement, and conservation.

The Santa Ana River Mouth Monitoring Project (SAR Project) enlists volunteers, community groups, and local government to monitor human, dog, and bird activity in the Santa Ana River Mouth area, a 13.2-acre parcel of land that is owned by four agencies: the California State Lands Commission, California State Parks, the County of Orange, and the City of Newport Beach. Due to the fragmented ownership of the area, management of activities and law enforcement have been difficult. The entire 2025 SAR Project covered in this report (January 2025 through December 2025) was conducted as an ongoing project by Orange County Coastkeeper with funding from the California Coastal Conservancy. The goal of the SAR project is to monitor human, dog, and bird use of the area and to provide education and outreach to residents and visitors about the vulnerable species at the Santa Ana River Mouth and actions they can take to protect them while recreating in the area.

### **EXECUTIVE SUMMARY**

Monitoring for this project began on February 9th, 2021. All subsequent surveys followed a standard protocol that is used for all surveys.

Between January and December 2025, 1,023 surveys at the Santa Ana River Mouth were completed by 16 trained volunteers and 2 staff members. In the surveys collected, 14,669 people and 1,163 dogs were observed. Of the dogs, 662 were off-leash and 501 were on-leash. Dogs off-leash accounted for 57% of the dogs observed. There are current regulations in the City of

Newport Beach (CNB) jurisdiction that prohibits dogs from being off-leash on the beach at any time, and they are not allowed on the beach between 10:00 AM to 4:30 PM to protect the sensitive wildlife area and lessen impacts to visitors. Law Enforcement Officers are considered individuals with the authority to enforce the regulations in or around the Santa Ana River Mouth area, including the multi-use trail on CA State Parks property. Law Enforcement Officers (LEO) were present 453 times throughout all surveys completed in this time period, with the Newport Beach Lifeguard observed most frequently, followed by the Orange County Lifeguard. Other public officials that were not law enforcement include OC Public Works, California State Parks, and Orange County Parks. No citations were observed to be issued, although it is possible that citations occurred outside of the time spent surveying the site. A total of 178 visitors were observed to be contacted by law enforcement officers and other public entities. A visitor contact does not have to include a citation, but is simply the observance of communication between a beach visitor and any public entity or LEO.

## MAP AND PROJECT BOUNDARIES

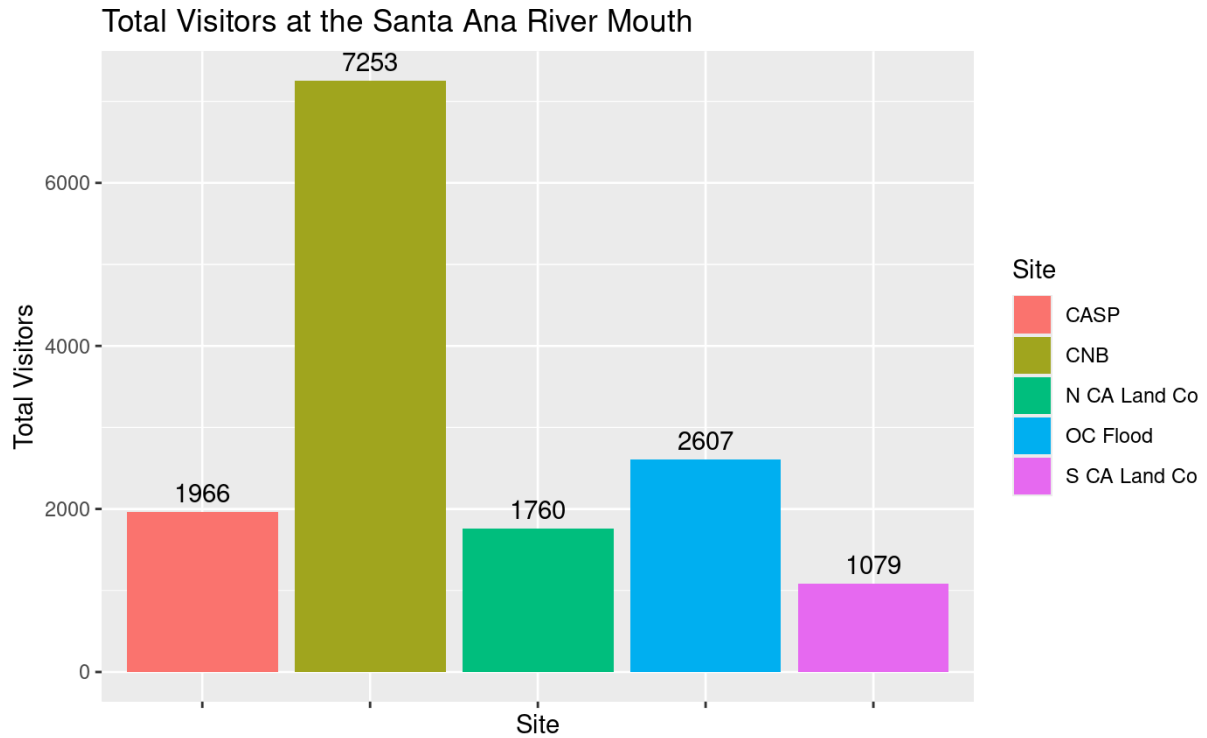
### SAR Project Survey Boundaries



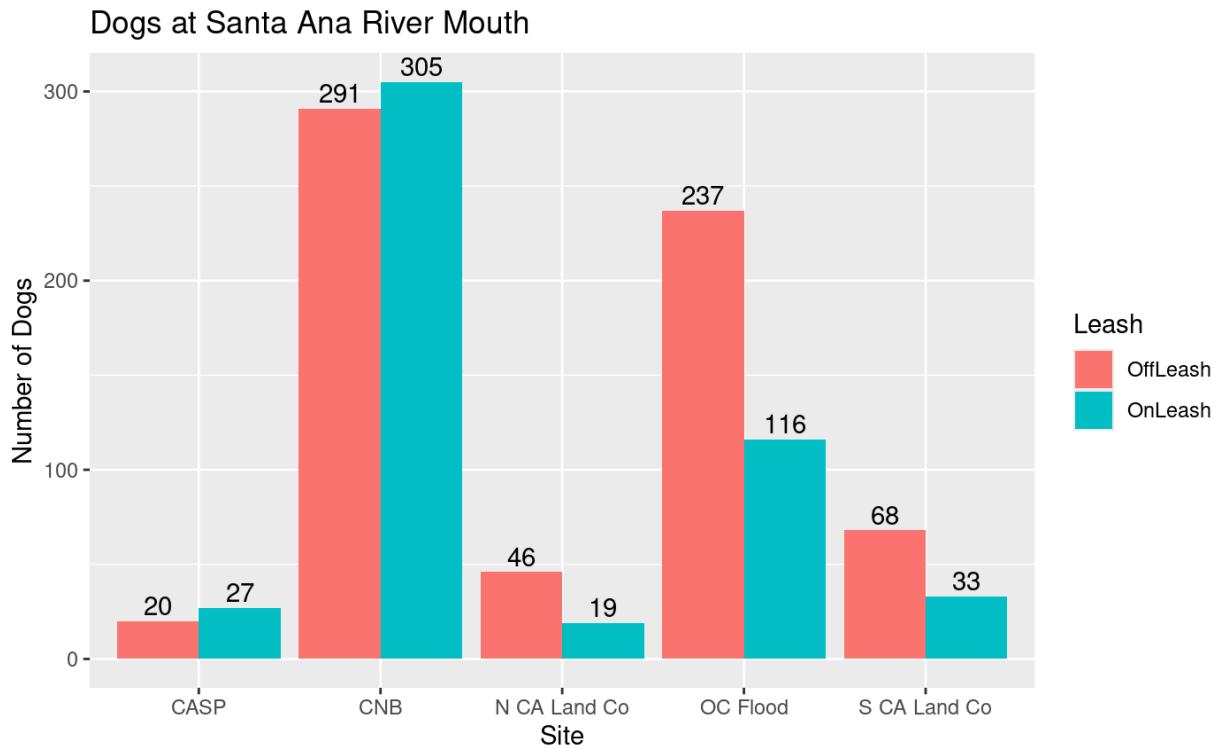
Map of Santa Ana River Mouth with property names overlaid to correlate with data sheets. California State Lands Commission property was split into North and South portions, divided by the location of the river mouth during surveys, to better analyze land use in the area

## GRAPHS

**CASP**= California State Parks, **CNB**= City of Newport Beach, **N CA Land Co**= North California State Lands Commission, **OC Flood**= Orange County Flood Control, **S CA Land Co**= South California State Lands Commission  
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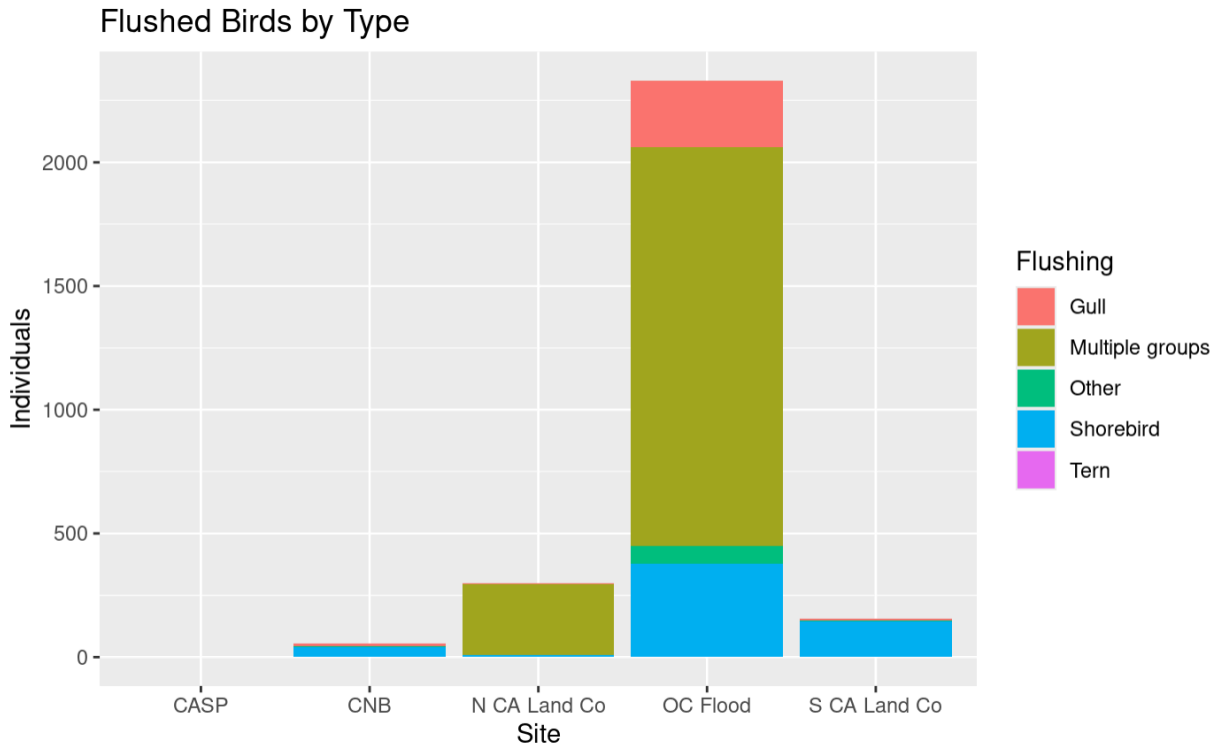
**Figure 1. Visitors Based on Location**



**Figure 2. Dogs Based on Location**

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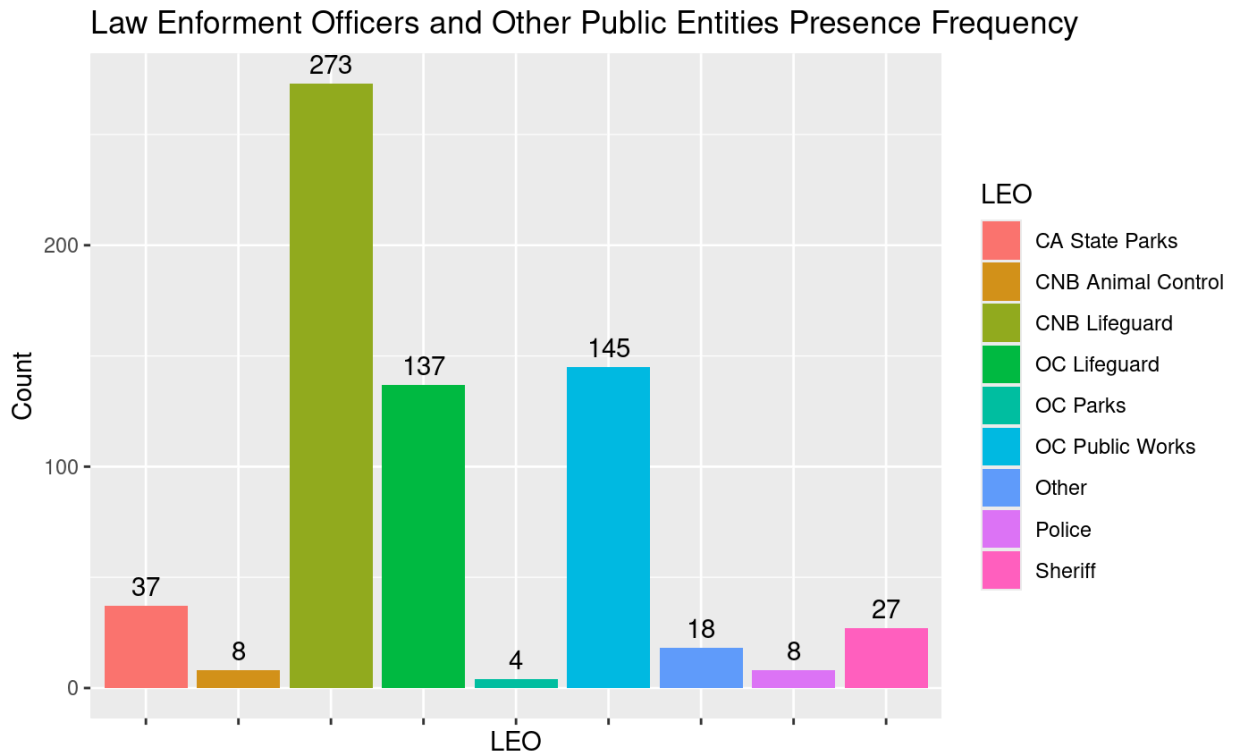
A total of 1,163 dogs were observed at the Santa Ana River Mouth; 501 (43%) were on leash and 662 (57%) were off leash.



**Figure 3. Bird Disturbances by Location**

Bird disturbances, also known as Flushing events, are defined by when birds are present on the beach and are approached by humans and/or dogs, causing them to depart the area. A total of 98 flushing events occurred, affecting 2,942 individual birds. The majority of birds flushed were observed in OC Flood (82%).

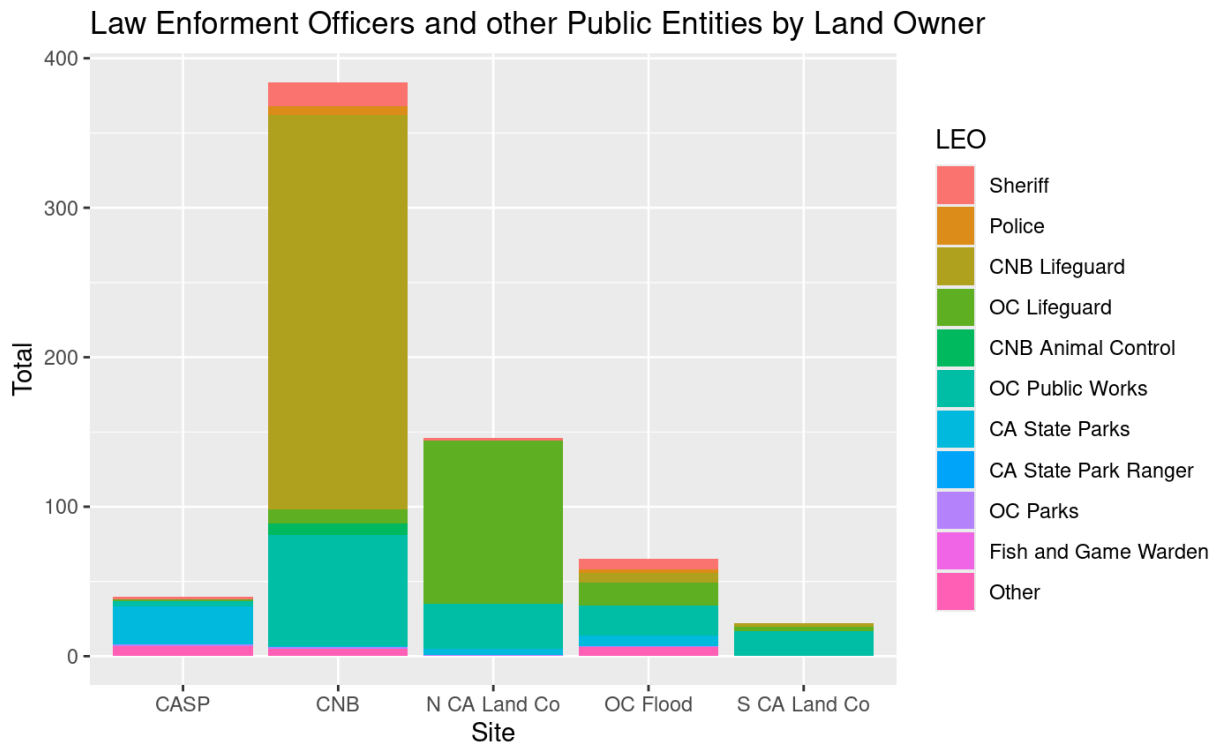
45% of birds flushed were shorebirds, 26% of birds flushed included a mix of terns, gulls, and shorebirds, 18% of birds flushed were gulls, 9% of birds flushed were other bird species, and about 2% consisted of terns.



**Figure 4. Law Enforcement Officers (LEO) and Other Public Entities Frequency**

A total of 453 law enforcement officers and 204 public officials were present during observational surveys. These values represent the number of observations of law enforcement officers and public officials during surveys, not the number of unique individuals. There were a total of 178 visitor contacts made by various law enforcement officers.

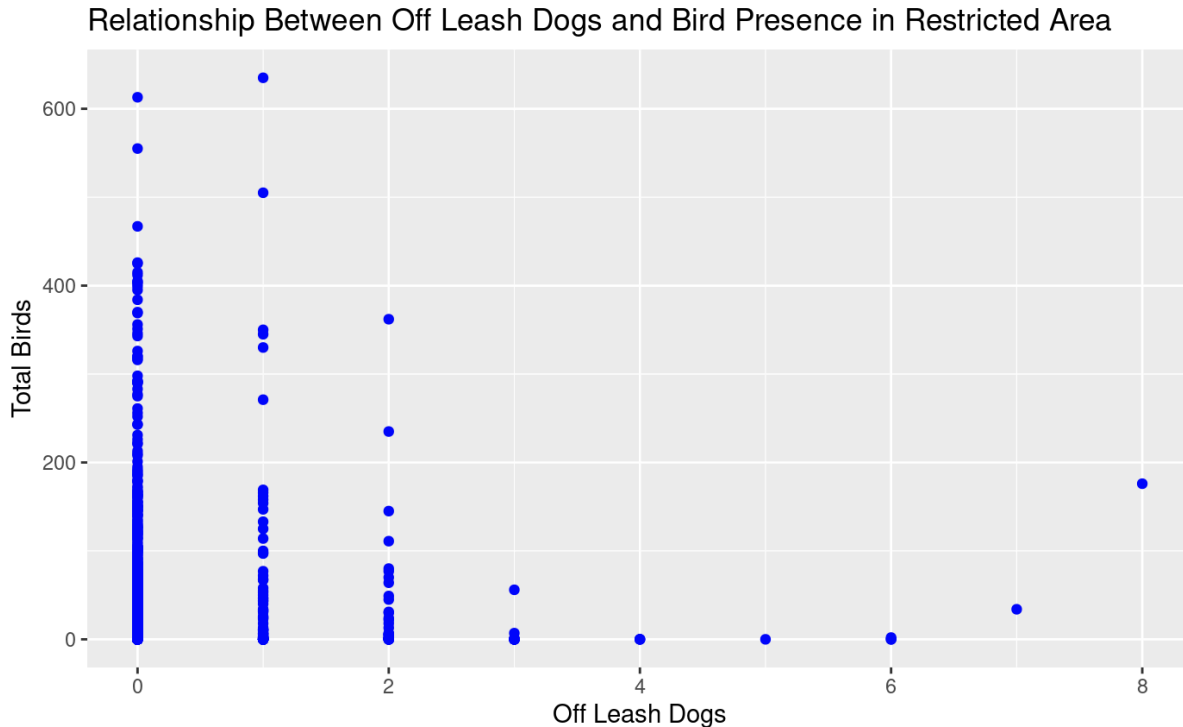
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**Figure 5. Law Enforcement Officers and Other Public Entities by Location**

This figure illustrates where LEOs and representatives of public entities were located at the time of observation, which does not imply that is the jurisdiction that they are enforcing.

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**Figure 6. Correlation Analysis of Off-Leash Dog Presence and Bird Presence in the Sensitive Wildlife Area**

We ran a correlation analysis to understand the association between off-leash dog presence and bird presence in the sensitive wildlife area. Increased off-leash dog presence had a statistically significant association with lower bird presence ( $p$ -value  $< 2.083e-06$ , Spearman's  $\rho = -0.07$ ). While the correlation strength was weak, the relationship was consistent and significant. This finding highlights the potential impact of off-leash dogs on wildlife in protected areas and supports the need for continued monitoring in this area.

## DISCUSSION

Visitors at the Santa Ana River Mouth were most observed within the CNB boundaries followed by the OC Flood boundaries (Figure 1). This is reflected with most dogs also being observed in CNB and OC flood with a majority (56%) of all the dogs observed at both sites being off leash (Figure 2). Even though it is unlawful for visitors to enter the OC Flood control boundary, they would trespass the jetties with their dogs and disturb the habitat. It is hypothesized that high human and off-leash dog traffic to these areas may result in fewer bird observations, as seen in the correlation graph (Figure 6).

According to our data, the OC Flood area had the highest bird observations, since it is away from central beach access, however, these birds face disturbances by visitors nonetheless.

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Although most birds observed were in the OC Flood jurisdiction, the OC Flood boundaries also experienced a significantly larger amount of bird disruptions than the others, as most flushing events took place within this jurisdiction (Figure 3).

Law enforcement officers (LEO) were most often seen within the CNB boundary (Figure 5); however the results are an indication of where LEO's were present and not which jurisdiction they were enforcing. In 2024, we learned that the Sheriff would often be parked on either CNB or N CA Land Co and enforce only the river mouth regulations. On several occasions since then, we observed the Sheriff leave their vehicle to talk to visitors trespassing the OC Flood Channel. The same behavior was observed again for this reporting period. The Newport Beach Lifeguard was the most frequently seen LEO followed by the OC Lifeguard (Figure 4).

CNB is the only jurisdiction that can enforce the dog rules on the Newport Beach side of the river mouth. In June 2025, Coastkeeper staff engaged with CNB regarding an electronic, mobile police sign stating "No Dog Beach" that had been successful in decreasing off-leash dog presence in 2024. From June through September 2025, the "No Dog Beach" sign was posted at the entrance to the Santa Ana River mouth, but with an additional message alternating the message "Posted Dog Regs. Strictly Enforced." With our observations at the river mouth, we can hypothesize that posted signage and enforcement presence is a great way to raise awareness and reduce recurrent off-leash dog violations and threats to wildlife.

In the correlation analysis, we can conclude that higher off-leash dog presence was associated with lower amounts of birds present inside the sensitive wildlife area of the river mouth (Figure 6). This graph mainly focuses on activities within the river mouth since it is illegal for people and dogs to trespass on this area. Nonetheless, most of the flushing events still occurred in the restricted area (OC Flood) (Figure 3). When there is a greater number of dogs that are off-leash, this poses a potential threat to the birds that inhabit this area. The birds that inhabit the river mouth are constantly in survival mode, remaining alert of their surroundings at every moment. Considering some of the birds in this area include endangered and threatened birds like the Western Snowy Plover and California Least Tern, caution must be exercised by visitors to prevent threats to these protected species. It is important for dog owners to keep their dogs on a leash when they choose to visit this area in order to avoid scaring birds out of their habitat, causing them to abandon the processes they need to survive.

## **Outreach Table**

During this project, Orange County Coastkeeper conducted outreach to beach visitors through a staffed outreach table. Visitors were given pamphlets detailing information about the Santa Ana River Mouth and the seabirds that rely on this space: the California Least Terns and Western Snowy Plovers. A new sandwich board was created to help visitors understand their impacts on beach wildlife and basic guidelines for responsible recreation at this site. Additional information about the laws regarding dogs in the area and free biodegradable dog waste bags were provided to visitors as well. Overall, OC Coastkeeper has engaged with 582 visitors during observational surveys and outreach events in 2025.

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Figure 7. Outreach Table

## Outreach Events

In addition to our regular outreach table, two “Beginner Birding” tours were held in conjunction with a beach cleanup in June and September. These events introduced members of the public to basic seabird monitoring at the Santa Ana River mouth. Multiple beach cleanups were also conducted throughout the year at this site, during which staff engaged volunteers in conversations about the project and the importance of protecting this sensitive coastal habitat.

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**Figure 8. Outreach Events**

## **Volunteer Training**

Training began with a StoryMap outlining volunteer roles and responsibilities, as well as an overview of the project. Training materials included wildlife identification guides, Law Enforcement Officer identification information, and a detailed map of the different jurisdictions. Trainees were also provided with relevant project materials, including past reports and a project training guide.

Following the online training, volunteers met with Project Manager Courtney Rickard at the Santa Ana River Mouth for an in-person orientation covering standard operating protocols and the property map. Volunteers were trained to understand the land manager boundaries, monitor human recreation use, and were given physical bird ID guides to identify the different bird species.

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**Figure 9. Research Assistant conducting survey**

### **Other Updates**

In late October, a Coastkeeper staff member spoke with a security guard after observing him inform a beach visitor that her and her dogs needed to leave the flood control zone. The guard stated that he works for a company called *City Guard*, which was hired by the County to monitor recreational activity at three locations along the Santa Ana River. Monitoring is conducted using a permanent camera installed near the fenced-off dredging area

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**Figure 10. County camera for observing river mouth violations**

The project faced several significant events affecting the area during the reporting period, and staff members have exercised different options as a response. The dredging project continued for about a week in late February and again in early December through the end of the year. During these periods, fences and heavy machinery occupied most of the CNB portion of the beach which interfered with some monitoring and outreach (Figure 11).

Despite these limitations, surveyors were still able to set up for outreach and surveys during this time by simply walking up to PCH and using binoculars to monitor the sites from the other side's perspective. In December, Coastkeeper staff also met with the County's hired biologist

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consultant, who was contracted to monitor for Western Snowy Plovers within the dredging area. This coordination helped ensure awareness of ongoing wildlife monitoring efforts at the site during active construction.



**Figure 11. Dredging project ran by county**

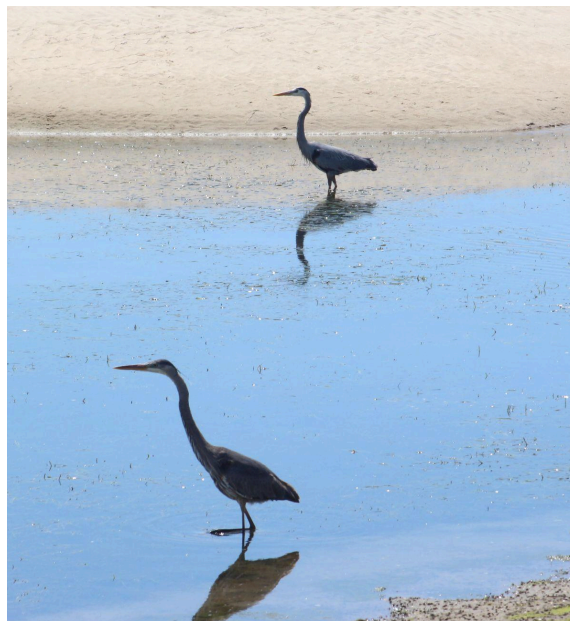
## **Next Steps**

With funding from the South Coast Habitat and Protection Fund, we are excited to continue onto our next steps with this project. As fencing along the CNB side of the Santa Ana River mouth is implemented, continued monitoring and public education at this site remain essential. Next steps include expanded volunteer recruitment from the local community, continued operation of the outreach table, and the collection of surveys with new updates.

Funding from the Coastal Conservancy was instrumental in growing the Santa Ana River Mouth Monitoring Project into the program it is today, supporting the development of consistent monitoring and public education presence at this highly visited site. Building on this foundation, we will continue seeking additional funding to sustain monitoring and outreach efforts that empower local jurisdictions and beachgoers with the knowledge needed to practice responsible recreation while protecting sensitive coastal habitat.

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**Figure 12. Various seabirds**

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