

# PALOS VERDES SHELF

## Do Not Consume Sign Summary

August 2022 – July 2023

FINAL



# Contacts and Resources

## U.S. Environmental Protection Agency

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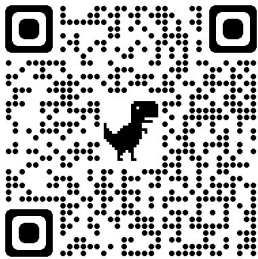
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## Fish Contamination Education Collaborative

Email us at [info@pvsfish.org](mailto:info@pvsfish.org) or contact us through our website at [www.pvsfish.org/contact](http://www.pvsfish.org/contact)

For more information about fish contamination from the Palos Verdes Shelf Superfund Site, please visit: [www.pvsfish.org](http://www.pvsfish.org)



For more information about California fish advisories, please visit: [www.oehha.ca.gov/fish](http://www.oehha.ca.gov/fish)

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## LIST OF ACRONYMS AND ABBREVIATIONS

Cabrillo	Cabrillo Marine Aquarium
COVID-19	Coronavirus Disease 2019
DDT	Dichloro-diphenyl-trichloroethane
DNC	Do Not Consume
EPA	U.S. Environmental Protection Agency
FCEC	Fish Contamination Education Collaborative
NI	Not inspected
PCB	Polychlorinated biphenyl
QR	Quick response
UV	Ultraviolet

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## SUMMARY

The purpose of the U.S. Environmental Protection Agency (EPA) Palos Verdes Shelf Institutional Controls Program is to protect Southern California's most vulnerable populations from the health risks associated with eating fish contaminated with polychlorinated biphenyls (PCBs) and dichloro-diphenyl-trichloroethane (DDT). This report summarizes the condition of permanent signs that warn the public about the five contaminated Do Not Consume (DNC) fish. These signs are displayed at nine piers and eight coastal structures and beaches to inform anglers about contaminated fish. The Fish Contamination Education Collaborative (FCEC) routinely inspects the condition of the DNC signage at pier locations during monthly angler outreach activities and annually inspects the condition of all DNC signage to determine if maintenance, cleaning, or replacement are required.

The DNC signage inspections and monitoring activities were conducted between August 2022 and July 2023. A total of 46 signs were recorded and evaluated during these inspections, with 27 signs reported to be in good condition and 19 signs reported to be in poor condition. A total of 23 signs were reported as missing compared to previous inspections conducted in February 2020. Following the 2023 DNC sign inspection, it is recommended that 26 signs are cleaned, 39 signs are replaced, 4 signs are relocated, 3 missing sign locations are removed from the list of sign locations to monitor, and 1 sign be removed from a location that has been designated as ineffective at reaching angler populations. This sign is recommended for relocation to a more effective area.

This report provides a discussion and summary of recommendations for all locations and individual signs. There are scenarios where recommendations overlap. For example, one sign location (El Porto/El Segundo) has been designated as ineffective at reaching angler populations, but the sign is in good condition; therefore, it is recommended for both removal and relocation to one of the new fishing docks present at Ballona North Creek/Playa del Rey Jetty.

## 1. INTRODUCTION

The Palos Verdes Shelf Superfund Site is part of the Montrose Chemical Corporation Superfund Site, located in Los Angeles County, California (Figure 1). The Palos Verdes Shelf became contaminated with PCBs and DDT from the inland Montrose Chemical plant and other industries that discharged their waste into the ocean through the Los Angeles County sanitation sewer White Point Outfall pipes from 1953 to 1971 (Figure 1). Today, about 34 square miles of ocean sediment on the Palos Verdes Shelf are contaminated with these legacy pollutants. Although the contaminated sediment is too deep for human contact, some fish in the area accumulate these organic pollutants at levels that make them unsafe to eat.



**Figure 1. Map of Contaminated Sediment at the Palos Verdes Shelf Superfund Site**

The EPA initiated institutional controls at the Palos Verdes Shelf Superfund Site in September 2001. Institutional controls refer to non-engineered measures, such as outreach and signage, that aim to prevent or reduce exposure to contaminants at a site. The purpose of the institutional controls program at the Palos Verdes Shelf Superfund Site is to minimize human exposure to PCBs and DDT by reducing the consumption of contaminated fish, particularly white croaker. The institutional controls program includes public education and outreach, fish monitoring, and enforcement of white croaker catch bans. In 2003, the EPA established the FCEC with representatives from federal, state, and local agencies; non-government organizations; and community-based organizations to implement public outreach and

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education activities. In September 2009, the EPA selected an interim remedy for the Palos Verdes Shelf Superfund Site that included the continuation and strengthening of the institutional controls program.

The institutional controls program aims to reduce human consumption of contaminated fish by increasing awareness and understanding of local contamination and fish advisories. The program consists of three main components: angler outreach, community outreach, and enforcement. Angler outreach activities are used to engage anglers and communities that are vulnerable to fish contamination and disseminate educational materials (e.g., program tip cards, brochures, and comic books) that provide information and resources about contaminated fish species. In 2014, the EPA conducted the Palos Verdes Seafood Consumption Study to identify local demographic and subsistence subgroups within the general fishing population of the Palos Verdes Shelf area that may be disproportionately exposed to contaminants based on the types and quantity of fish species consumed, including consideration of cooking methods. The following four key communities were identified as more vulnerable to fish contamination from the Palos Verdes Shelf Superfund Site: Chinese community in San Gabriel Valley, Vietnamese community in Orange County, and Hispanic and African American communities in Los Angeles County.

PCBs and DDT pose a significant risk to public health and are listed on the EPA Integrated Risk Information System as probable human carcinogens and on the State of California's Proposition 65 list of pollutants known to cause cancer. Additionally, exposure to elevated levels of PCBs can result in skin irritation, liver disease, and endocrine dysfunction. Exposure to elevated levels of DDT can negatively impact the nervous and endocrine systems, liver function, and child development. The EPA monitors PCB and DDT concentrations in white croaker and barred sand bass on the Palos Verdes Shelf to evaluate the effectiveness of natural recovery processes and improve modeling of contaminant fate and transport. While PCB and DDT concentrations in fish tissues have generally declined since the 1990s, concentrations in white croaker remain above the risk-based cleanup levels.

As part of the angler outreach component of the institutional controls program, the EPA has installed permanent signage displaying DNC fish warnings to help anglers identify fish species that are contaminated and pose a health risk if consumed (Figure 2). This report summarizes the signage inspections and monitoring activities conducted between August 2022 and July 2023, including recommendations on sign maintenance, replacement, or relocation.





**Figure 2. Do Not Consume Warning Sign**

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## 2. OVERVIEW OF ANGLER OUTREACH AND DO NOT CONSUME SIGNAGE

The institutional controls program aims to prevent human exposure to Palos Verdes Shelf Superfund Site contamination by educating impacted communities about safe fishing practices and the health risks associated with eating contaminated fish.

### 2.1 ANGLER OUTREACH

While the contaminated sediment bed at Palos Verdes Shelf Superfund Site is too deep for direct human contact (40–200 meters), contaminants can build up in the food web, including certain fish that are caught and consumed by the public. The EPA conducted a human health risk assessment and determined that exposure to PCBs and DDT through the consumption of fish presented the greatest potential for adverse human health effects. In 2003, the EPA initiated the angler outreach program, which aims to mitigate risk to human health by minimizing the consumption of contaminated fish.

Local organizations, including Heal the Bay and Cabrillo Marine Aquarium (Cabrillo), perform regular in-person outreach at popular fishing piers along the coast of Los Angeles to educate anglers about the five contaminated fish that are unsafe to eat (white croaker, barred sand bass, topsmelt, black croaker, and barracuda). Angler outreach activities are conducted during the day at Santa Monica Pier, Venice Beach Pier, Hermosa Beach Pier, Cabrillo Pier, Rainbow Harbor, Pier J, Belmont Pier, and Seal Beach Pier (Figure 3). In 2017, the FCEC expanded the angler outreach program to include evening outreach at two popular fishing piers (Venice and Redondo Beach Piers) to reach subsistence anglers who may fish after typical work hours. These piers were chosen based on previous observations that evening anglers frequent these popular piers and that the piers have safe evening access for the outreach team.

Angler outreach objectives include educating active anglers about fish contamination and local fish advisories, how to identify fish species, and how to prepare fish to reduce contaminants. The outreach team also collects data including whether the angler is an adult or child, if they are aware of fish contamination, how they learned about fish contamination, language(s) spoken during the conversation, residence zip code, and what types of fish they caught. The data collected during angler interviews are used to evaluate the effectiveness of the angler outreach program. Details about the angler outreach program are provided in the Palos Verdes Shelf Annual Angler Outreach Report and can be found at [www.pvsfish.org/partner-documents](http://www.pvsfish.org/partner-documents).



**Figure 3. Map of Piers and Beaches with Posted Do Not Consume Fish Signs**

## 2.2 DO NOT CONSUME SIGNAGE

In addition to active angler outreach, the EPA posts and monitors DNC signage listing the five contaminated fish species at locations along the coast of Los Angeles. In total, EPA monitors 69 signs across 17 pier and coastal structure locations (Figure 3). Reporting through the 2020-2021 reporting year included 18 pier and coastal structure locations; however, this included the Marina del Rey/Burton Chase Platform location where the Los Angeles County Department of Public Health removed signage in 2015. There is no fishing in this location due to expansion of the boating bay; therefore, the Marina del Rey/Burton Chase Platform has been excluded from reporting beginning with the 2021-2022 reporting period. As of the June 2023 inspection, there are a total of 46 signs present at 12 pier and coastal structure locations, with 5 pier/coastal structures where previously posted signage was reported as missing in the 2022 Sign Summary. Permanent DNC signage are posted in locations from Santa Monica Pier south to Seal Beach Pier where anglers are known to frequently participate in subsistence and sport fishing activities. This area of the California Office of Environmental Health Hazard Assessment's Coastal Fish Contamination Advisory is designated as the "Red Zone" as some fish species collected during sampling and analysis were found to have higher concentrations of PCBs and DDT that pose a health risk (Figure 4). Fish advisories for some fish extend to the north and south of this zone ("Yellow Zones"; Figure 4) based on other contaminants. The sign messaging includes anatomically representative images of the five contaminated fish that are unsafe to

eat (white croaker, barred sand bass, topsmelt, black croaker, and barracuda) in four languages (English, Chinese, Vietnamese, and Spanish) as well as provides the FCEC website address ([www.pvsfish.org](http://www.pvsfish.org)) for additional information on fish contamination (Figure 2). Anglers most often attribute their awareness of fish contamination to posted DNC signs, suggesting that DNC signage is one of the most effective outreach methods for increasing awareness of fish contamination among anglers. As such, the EPA has placed a high priority on the monitoring and maintenance of DNC signs to ensure angler visibility and messaging effectiveness based on sign conditions.



**Figure 4. Map of Yellow and Red Zones for Fish Caught from Ventura Harbor to San Mateo Point**

In-person pier angler outreach and DNC sign monitoring activities were suspended in March 2020 due to the Coronavirus Disease 2019 (COVID-19) pandemic and associated State restrictions and closures of public spaces. Prior to March 2020, the Los Angeles County Department of Public Health and the City of Long Beach provided support for sign monitoring and maintenance in addition to the routine DNC sign inspections conducted during angler outreach efforts. In 2021, both the Los Angeles County Department of Public Health and the City of Long Beach ceased participation in FCEC’s DNC sign monitoring and maintenance activities to redirect resources to address the urgent demands of the global pandemic. DNC sign monitoring activities were transitioned to Heal the Bay and Cabrillo. Sign maintenance activities have not been completed since March 2020.

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DNC signage conditions are evaluated annually at all posted locations and monthly during angler outreach activities at the nine fishing piers. The inspection includes a qualitative evaluation of necessary maintenance activities due to graffiti, stickers, bending, peeling, or any other conditions affecting the visibility of the sign messaging. Inspection reports include the designation of sign conditions; photographs; and recommendations for maintenance, replacement, and/or relocation. Sign conditions and recommendations for all posted DNC signs are provided in the Annual Do Not Consume Sign Summary.

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### 3. PIER SIGN CONDITIONS (AUGUST 2022 – JULY 2023)

From August 2022 through July 2023, Heal the Bay and Cabrillo performed monthly DNC sign monitoring activities at the nine fishing piers where angler outreach is conducted. The annual DNC signage inspection was completed during June 2023 at 12 of the 17 posted sign locations. Five locations were not inspected because individual signs at these locations were reported missing during the June 2022 annual inspection and new signs have not been installed. These locations include: Ballona South, Dockweiler Beach, Manhattan Beach, Rocky Point, and Torrance Beach. These 5 locations include a combined total of 12 individual previous sign locations that are included in Table 1 for tracking purposes with recommendations for evaluation discussed in Section 4.1 below. In Table 1, these locations have been identified as not inspected during the 2023 annual inspection, but the individual missing sign locations are included in the missing column totals.

To evaluate the progress toward pre-pandemic signage goals, the data collected during the June 2023 inspection were compared to data collected during the February 2020 and July 2022 sign inspections. The 2020 sign inspection was the last inspection to include all sign locations prior to the COVID-19 pandemic. During the August 2020 through July 2021 reporting period only a partial inspection was conducted, including 45 individual sign locations, in compliance with State restrictions. As the 2021 inspection summary did not include all individual sign posting locations, comparison to the 2020 sign inspection summary was done to determine the number of replacement signs needed for missing locations documented in the 2022 report. However, the recommendations are based on the current conditions during this reporting period.

Heal the Bay inspected the condition of 43 individual DNC signs at 11 piers and coastal structures/beaches: Santa Monica Pier, Venice Pier, Ballona North Creek/Playa del Rey Jetty, El Porto/El Segundo, Hermosa Beach Pier, Redondo Beach Pier, Royal Palms/White Point, Pier J, Rainbow Harbor, Belmont Pier, and Seal Beach Pier. Heal the Bay reported a total of 11 individual DNC signs in poor condition, 27 individual signs in good condition, and 5 of the 43 individual sign locations were missing signs. In total, Heal the Bay reported 38 signs currently present in the inspected locations. Cabrillo inspected the eight DNC signs posted on the Cabrillo Pier and reported that all eight signs are in poor condition. The combined inspections (Heal the Bay and Cabrillo) resulted in 27 signs designated in good condition and 19 signs designated in poor condition, for a total of 46 signs present during the 2023 inspection. Of the 51 sign locations inspected by Heal the Bay and Cabrillo combined, 5 individual sign locations were found to be missing signage. During the 2020 sign inspection there were a total of 69 signs present at pier and coastal structures/beaches, resulting in a total of 23 missing signs when comparing 2023 to 2020 inspection totals. Each of these missing sign locations has been previously recommended for replacement signage and are included in this summary.

One individual sign location at Rainbow Harbor that was documented as missing in the 2022 DNC Sign Summary report was replaced by an unknown entity during this reporting period. Table 1 documents a total of five individual sign locations at Rainbow Harbor in 2020, with only

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four individual sign locations documented in this location in 2022. The missing sign location was confirmed through inspection photographs included in summary reporting. The individual sign location is then documented and photographed in this summary report as having signage present during this reporting period. The specific details of removal and replacement of this location are currently unknown, but individual sign location totals and status (missing or present) are accurately reported across represented reporting periods in Table 1.

Following the 2023 DNC sign inspection, it is recommended that 26 signs are cleaned, 39 signs are replaced, 4 signs are relocated, 3 missing sign locations are removed from the list of sign locations to monitor, and 1 sign be removed from the El Porto/El Segundo area and used as a replacement sign for the missing location at Ballona North Creek/Playa del Rey Jetty. Table 1 summarizes the DNC sign conditions and recommendations as of June 2023.

Appendix A presents the pier sign condition assessment from Heal the Bay and Cabrillo, and Appendix B includes photographs of the DNC signs at locations with DNC signage present.

**Table 1. Pier Sign Conditions and Recommendations**

Location	Total # of signs present (2020)	Total # of signs present (2022)	Total # of signs present (2023)	Sign Condition (2023)			Recommendations Based on Current Conditions						Notes
				Good	Poor	Missing (since 2020)	No Action	Clean	Replace	Relocate	Remove	Add	
Santa Monica Pier	6	5	4	4	0	2	-	4	2	-	-	-	-
Venice Beach Pier	6	5	4	1	3	2	-	1	5	-	-	-	-
Ballona North Creek/Playa del Rey Jetty	4	2	2	1	1	2	-	1	1	-	2	-	Remove the 2 missing sign locations. Replace one sign. Use the sign removed from El Porto/ El Segundo to replace the missing sign at this location.
Ballona South	4	0	NI	-	-	4	-	-	4	-	-	-	Reevaluate location prior to replacement.
Dockweiler Beach	1	0	NI	-	-	1	-	-	1	-	-	-	Reevaluate location prior to replacement.
El Porto/El Segundo	1	1	1	1	0	0	-	-	-	1	1	-	Remove from El Porto/El Segundo. Relocate to Ballona North Creek/Playa del Rey Jetty fishing deck without current signage.
Manhattan Beach	4	0	NI	-	-	4	-	-	4	-	-	-	Reevaluate location prior to replacement.
Rocky Point	1	0	NI	-	-	1	-	-	1	-	-	-	Reevaluate location prior to replacement.
Cabrillo Pier	8	8	8	0	8	0	-	-	8	-	-	-	-
Hermosa Beach Pier	5	4	4	2	2	1	-	2	3	-	-	-	-



Location	Total # of signs present (2020)	Total # of signs present (2022)	Total # of signs present (2023)	Sign Condition (2023)			Recommendations Based on Current Conditions						Notes
				Good	Poor	Missing (since 2020)	No Action	Clean	Replace	Relocate	Remove	Add	
Redondo Beach Pier	6	6	5	4	1	1	-	4	2	-	-	-	-
Pier J	4	3	3	3	0	1	-	3	-	3	1	-	Remove one missing location. Relocation 3 remaining signs as outlined in Section 4.4.
Rainbow Harbor	5	4	5	3	2	0	-	3	2	-	-	-	-
Belmont Pier	5	5	5	3	2	0	-	3	2	-	-	-	-
Seal Beach Pier	5	5	4	4	0	1	-	4	1	-	-	-	-
Torrance Beach	2	0	NI	-	-	2	-		2	-	-	-	Reevaluate location prior to replacement.
Royal Palms/White Point	2	2	1	1	0	1	-	1	1	-	-	-	-
Total	69	50	46	27	19	23	0	26	39	4	4	0	-

Notes:

NI = Not inspected

**Sign Conditions:**

Good – Sign shows no visible damage; all information is clear and visible.

Poor – Sign has damage present and information is obscured.

Missing – Sign is no longer present.

**Recommendations:**

No Action – Sign is in good condition and sign messaging is fully visible.

Clean – Sign is in fair to good condition; however, dirt, graffiti, or stickers need to be removed to restore visibility of content.

Replace – Sign is in an effective location (i.e., pier) with good angler visibility but is damaged beyond repair.

Relocate – Sign is in an effective location, but it is not well seen as currently installed (e.g., too high, too low, partial view, etc.); recommend seeking alternative locations to install the sign within the same pier location.

Remove – Sign is in an ineffective location; this could apply to signs in ineffective locations and to signs that are redundant in an effective area.

Add – Add signs to significantly improve angler visibility and awareness of fish contamination.

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## 4. RECOMMENDATIONS

As mentioned previously, the Los Angeles County Department of Public Health and the City of Long Beach have ceased participation in the FCEC programs. Heal the Bay is planning to begin conducting maintenance activities for all DNC sign locations; however, establishing points of contact for each of the pier and beach locations needs to be completed prior to beginning this work. Notification of maintenance activity timeline requirements, approved cleaning materials and chemicals, and health and safety protocols also need to be established prior to initiating DNC sign maintenance activities. It is anticipated that the aforementioned items will be addressed in the upcoming reporting period and that Heal the Bay will initiate DNC sign maintenance activities when pier contacts, material approvals, and health and safety measures have been established. Maintenance activities such as cleaning and sign replacement were not conducted during this reporting period.

Due to the suspension of maintenance activities during the COVID-19 pandemic and the transition of maintenance activities to Heal the Bay, a significant number of signs require cleaning, replacement, or relocation. Maintenance, replacement, and relocation recommendations from the prior reporting periods have not been completed and are included in this summary report for tracking purposes. As recent construction activities at pier and beach locations may have been completed since the suspension of maintenance activities in March 2020 and throughout the following reporting periods, recommendations in this report are based on the current conditions noted during the 2023 annual DNC sign inspection.

### 4.1 DO NOT CONSUME SIGN REPLACEMENT RECOMMENDATIONS

Sign locations included in the June 2023 inspection that were documented in poor condition are recommended for replacement with new DNC signs. Missing sign locations have been recommended for a variety of reevaluation, replacement, removal, and relocation activities as discussed throughout the Recommendations Section of this report. Missing signs are presumably due to theft and/or removed by cities during pier maintenance or construction activities. Damaged signs are primarily due to environmental damage, bending from being leaned on, vandalism, and/or construction activities. Damage is indicated most often at popular pier locations and in low-level sign installations (e.g., pier railings).

The 2022 DNC Sign Inspection Report documented 5 areas as having 12 total missing signs, including: Ballona South (4), Dockweiler Beach (1), Manhattan Beach (4), Rocky Point (1), and Torrance Beach (2). Currently, these areas remain without DNC signage and are recommended for reevaluation by the FCEC to determine their effectiveness and angler visibility prior to replacement signage installation. As determined during reevaluation, these 12 missing sign locations can either be replaced at the same location(s), relocated to more effective newly constructed structures if present, or removed from the list of monitored DNC sign locations based on ineffective angler visibility.

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In addition to the 12 missing sign locations discussed above, 8 other missing sign locations have been identified at Santa Monica Pier (2), Venice Beach Pier (2), Hermosa Beach Pier (1), Redondo Beach Pier (1), Seal Beach Pier (1), and Royal Palms/White Point (1). These eight missing sign locations are effectively located for reaching anglers and are recommended for replacement.

The 19 signs in poor condition located at Venice Beach Pier (3), Ballona North Creek/Playa del Rey Jetty (1), Cabrillo (8), Hermosa Beach Pier (2), Redondo Beach (1), Rainbow Harbor (2), and Belmont Pier (2) are all recommended for replacement with new signage. Appendix B includes photographs of the DNC signs at locations where DNC signs are present.

It is recommended that DNC signs designated as being ineffective locations for reaching anglers be redistributed as replacement signage in locations where signage is no longer present but are effective locations for reaching anglers. Suggestions for relocating ineffective signage are provided in Section 4.4 Do Not Consume Sign Relocation Recommendations.

#### **4.2 DO NOT CONSUME SIGN REMOVAL RECOMMENDATIONS**

There are three missing sign locations at Ballona North Creek/Playa del Rey Jetty (2) and Pier J (1) where removal from the list of monitored DNC sign locations is recommended. The previous locations of the missing signage at Ballona North Creek/Playa del Rey are unknown and relocation efforts discussed in Section 4.4 of current signage are believed to effectively cover the new fishing docks in this location. The Pier J missing sign location is not recommended for replacement as relocation efforts discussed in Section 4.4 are believed to effectively cover this area.

#### **4.3 DO NOT CONSUME SIGN CLEANING RECOMMENDATIONS**

DNC sign cleaning activities have not been performed since the Los Angeles County Department of Public Health and the City of Long Beach ceased participation in the FCEC programs. Generally, the recommendation for signs reported in good condition would be “No Action” as the information is still legible. However, due to the lapse in maintenance and cleaning activities since 2020, it is recommended that signs be considered for cleaning unless they are to be replaced or relocated. Table 1 indicates that 26 signs are recommended for cleaning; however, signage at El Porto/El Segundo and Pier J have been recommended for cleaning and relocation. Sign cleaning efforts should be combined with relocation efforts to minimize the overall level of effort at these locations. Additionally, prioritizing sign cleaning efforts is recommended to be considered based on the timing of proposed content changes to the DNC sign design. If design changes are proposed in the near future, based on FCEC discussions, and it is determined that for consistency all DNC signage will be updated with the new design, then cleaning recommendations should be considered a low priority.

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#### 4.4 DO NOT CONSUME SIGN RELOCATION RECOMMENDATIONS

During this reporting period and previous reporting periods, many signs were reported as bent due to pier visitors leaning against railings where signs are mounted. This indicates that the DNC sign height may be too low in some locations. In addition, signs located at a low height are easier to vandalize and remove. By contrast, DNC signs at Pier J, which are placed higher up on poles, show less evidence of being bent or vandalized. However, if signs are located too high, they are not easily readable by pier anglers. It was previously reported that the ideal height is 9 feet above ground surface to reduce maintenance requirements, yet FCEC partners have recently indicated they did not easily observe signs at this height at Pier J. The ideal height for signs is 48 to 60 inches above the lowest point (i.e., pier boardwalk, beach ground, sidewalk, etc.) to align with American Disabilities Act sign height requirements. However, due to mounting location availability and restricting pier views, there is limited control over DNC sign height in many locations.

Heal the Bay reported that some DNC signs are not well located for anglers to easily view and should be considered for relocation. Recent data shared in Angler Outreach Reports and at FCEC meetings suggest that angler populations at certain locations have shifted since the COVID-19 pandemic and that new fishing pier locations have been installed in some locations. Areas with reduced angler populations are not effective locations for DNC signage, and it is recommended that newly constructed fishing piers (e.g., Pier J and Ballona North Creek/Playa del Rey Jetty) display DNC signage. Suggestions for potential relocations are as follows:

- There are two new fishing piers at Pier J, where DNC signs are not currently located, and anglers are commonly encountered. It is suggested that the signs hung high on poles at Pier J be relocated to the new fishing pier locations to improve visibility. Angler visibility of DNC signage can be improved by relocating one sign to each of the fishing piers and mounting the third sign on the restroom structure near the northern fishing pier. To preserve pier views, the relocated DNC signs will need to be mounted to pier railings adjacent to other pier signs. Sign height for the restroom structure is recommended to be installed between 48 and 60 inches in accordance with American Disabilities Act sign height requirements.
- There is one DNC sign that is recommended for relocation at El Porto/El Segundo. It is reported that fishing activities are not taking place in this area and that the DNC sign could be relocated to a different pier or used as a replacement sign in a different location.
- There are two fishing piers present at Ballona North Creek/Playa del Rey Jetty, one of which has a DNC sign posted in a location that is obscured by a trash can. The other pier does not have DNC signage. It is suggested that the sign obscured by the trash can be relocated on the same pier to a location that improves visibility. The second DNC sign at this location is located near the parking area and is damaged and recommended for replacement and relocation due to poor angler visibility. It is recommended that the

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ineffective sign location at El Porto/El Segundo be cleaned and relocated to the fishing pier without signage at this location. Signage on the fishing piers will likely need to be installed on pier railings to preserve pier views.

- Royal Palm/White Point Pier currently has one DNC sign present, and the other is missing. It is suggested that the missing sign be replaced and relocated to the new lifeguard tower as there are no existing poles or structures in this location to hang signs. If possible, signage on the lifeguard towers should be mounted between 48 and 60 inches above the ground surface.

#### **4.5 DO NOT CONSUME SIGN GENERAL RECOMMENDATIONS**

The FCEC has previously suggested enhancements to DNC signs, such as incorporating a quick response (QR) code for quick access to the FCEC's website (<http://pvsfish.org/>) and applying ultraviolet (UV) protective coatings to signs for increased durability against environmental factors. It is recommended that DNC sign content and construction materials be reevaluated prior to ordering replacement DNC signs. Based on the current overall conditions of the DNC signs due to suspended maintenance activities and the transition of partner maintenance responsibilities, the DNC signs are generally needing cleaning to remove dirt, graffiti, and/or stickers to improve message visibility. It is recommended that if sign content and construction materials are to be redesigned in the near future, that all DNC sign locations be updated with the new design and messaging for consistency. Therefore, sign cleaning, replacement, and relocation activities are recommended to be scheduled based on the new sign design timeline to reduce the level of effort maintaining existing signage that will be updated in the future.

To improve qualitative data collection for routine and annual DNC sign inspections in the future, new condition criteria will be adopted by partners performing the DNC sign evaluations. The expanded designations will help improve inspection reporting and help inform future recommendations. The expanded designations will align with current recommendation categories and enhance the EPA's ability to prioritize signs for maintenance and relocation activities. The expanded designations for future assessment are as follows:

- Good – Sign is in great condition and no action is needed.
- Decent – Sign is in good condition (completely readable with minimal/repairable damage) but needs to be cleaned.
- Fair – Sign is significantly damaged and needs to be cleaned.
- Poor – Sign is damaged beyond repair and needs to be replaced or removed.
- Missing – Sign is not seen at the location originally installed.

Implementation of the new criteria includes revision of field forms for DNC sign evaluation and will be utilized during the June 2024 DNC sign inspection.

## **APPENDIX A**

### **Do Not Consume Sign Conditions**

## Appendix A. Do Not Consume Sign Conditions

Pier Location	Total Number of Signs Present (2023)	Notes
Santa Monica Pier	4	Sign 1. Missing. Recommended for replacement. Sign 2. Good condition. Dirty, some scrapes, rips, and graffiti. Recommended for cleaning. Sign 3. Good condition. Recommended for cleaning. Sign 4. Good condition. Dirty, some scrapes, and a rip. Sign 5. Missing. Recommended for replacement. Sign 6. Good condition. Dirty, some scrapes, stickers, and graffiti.
Venice Beach Pier	4	Sign 1. Missing. Recommended for replacement. Sign 2. Missing. Recommended for replacement. Sign 3. Poor condition. Dirty, graffiti, and bent. Recommended for replacement. Sign 4. Poor condition. Dirty, graffiti, and bent. Recommended for replacement. Sign 5. Poor condition and illegible. Dirty, graffiti, sticker, and bent. Recommended for replacement. Sign 6. Good condition. Some light graffiti. Readable. Recommended for cleaning.
Ballona North Creek/Playa del Rey Jetty	2	Sign 1. Good condition and legible. Dirty, stickers, and graffiti. Recommended for cleaning. Sign 2. Poor condition and illegible. Dirty and graffiti. Recommended for replacement. Recommended that the ineffective sign from El Port/El Segundo be cleaned and relocated to the second fishing pier at this location. Sign 3. Missing. Previous location unknown. No recommendation for replacement. Sign 4. Missing. Previous location unknown. No recommendation for replacement.
Ballona South <sup>1</sup>	0	Sign 1. Missing. Recommended for replacement. Sign 2. Missing. Recommended for replacement. Sign 3. Missing. Recommended for replacement. Sign 4. Missing. Recommended for replacement.
Dockweiler Beach <sup>1</sup>	0	Sign 1. Missing. Recommended for replacement.
El Porto/El Segundo	1	Sign 1. Good condition and legible. Recommended that this sign be cleaned and relocated to the Ballon North Creek/Playa del Rey Jetty second fishing pier location.
Manhattan Beach <sup>1</sup>	0	Sign 1. Missing. Recommended for replacement. Sign 2. Missing. Recommended for replacement. Sign 3. Missing. Recommended for replacement. Sign 4. Missing. Recommended for replacement.
Rocky Point <sup>1</sup>	0	Sign 1. Missing. Recommended for replacement.

## Appendix A. Do Not Consume Sign Conditions

Pier Location	Total Number of Signs Present (2023)	Notes
Cabrillo Pier	8	Sign 1. Poor condition. Very bent and lots of peeling. Recommended for replacement. Sign 2. Poor condition. Weathered and peeling. Recommended for replacement. Sign 3. Poor condition. Peeling and illegible. Recommended for replacement. Sign 4. Poor condition. Weathered, bent, and graffiti. Recommended for replacement. Sign 5. Poor condition. Stickers and graffiti. Recommended for replacement. Sign 6. Poor condition. Weathered, bent, and graffiti. Recommended for replacement. Sign 7. Poor condition. Weathered, bent, and graffiti. Recommended for replacement. Sign 8. Poor condition. Weathered, bent, and graffiti. Recommended for replacement.
Hermosa Beach Pier	4	Sign 1. Missing. Recommended for replacement. Sign 2. Good condition. Some cracks and fading. Recommended for cleaning. Sign 3. Good condition. Some cracks. Recommended for cleaning. Sign 4. Poor condition. Graffiti, torn, and chipped. Recommended for replacement. Sign 5. Poor condition. Dirty, fading, and torn. Recommended for replacement.
Redondo Beach Pier	5	Sign 1. Good condition. Recommended for cleaning. Sign 2. Poor condition. Weathered and peeling. Recommended for replacement. Sign 3. Missing. Recommended for replacement. Sign 4. Good condition. Chipped on corners. Recommended for cleaning. Sign 5. Good condition. Chipped and weathered. Recommended for cleaning. Sign 6. Good condition. Recommended for cleaning.
Pier J	3	Sign 1. Good condition. Recommended for cleaning and relocation. Sign 2. Good condition. Recommended for cleaning and relocation. Sign 3. Good condition. Recommended for cleaning and relocation. Sign 4. Missing. No recommendation for replacement.
Rainbow Harbor	5	Sign 1. Poor condition. Weathered and graffiti. Recommended for replacement. Sign 2. Good condition. Recommended for cleaning. Sign 3. Poor condition. Weathered and graffiti. Recommended for replacement. Sign 4. Good condition. Recommended for cleaning. Sign 5. Good condition. Recommended for cleaning.
Belmont Pier	5	Sign 1. Poor condition. Weathered and graffiti. Recommended for replacement. Sign 2. Poor condition. Weathered and graffiti. Recommended for replacement. Sign 3. Good condition. Recommended for cleaning. Sign 4. Good condition. Recommended for cleaning. Sign 5. Good condition. Recommended for cleaning.



### Appendix A. Do Not Consume Sign Conditions

Pier Location	Total Number of Signs Present (2023)	Notes
Seal Beach Pier	4	Sign 1. Good condition. Recommended for cleaning. Sign 2. Good condition. Recommended for cleaning. Sign 3. Good condition. Recommended for cleaning. Sign 4. Good condition. Recommended for cleaning. Sign 5. Missing. Recommended for replacement.
Torrance Beach <sup>1</sup>	0	Sign 1. Missing. Recommended for replacement. Sign 2. Missing. Recommended for replacement.
Royal Palms/White Point	1	Sign 1. Good condition. Dirty, scrapes, and bent. Recommended for cleaning. Sign 2. Missing. Recommended for replacement and relocation to second lifeguard tower.
<sup>1</sup> Note that this Appendix A Table does not include the 2023 reevaluation recommendations for the five locations discussed in Section 4.1 (Ballona South, Dockweiler Beach, Manhattan Beach, Rocky Point, and Torrance Beach).		

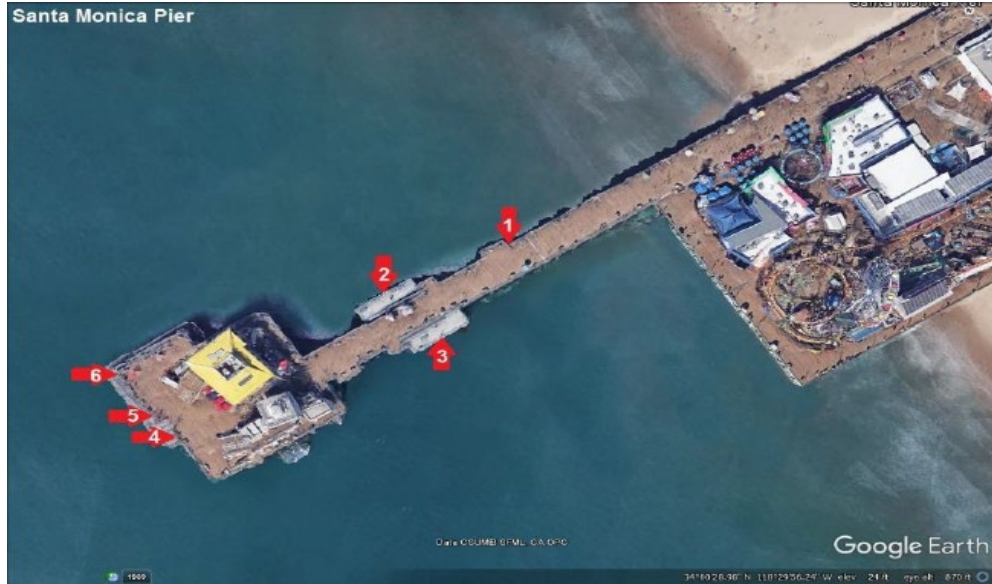
## **APPENDIX B**

### **Do Not Consume Sign Photographs**

## Appendix B. Do Not Consume Sign Photographs

### Santa Monica Pier

Six total signs were previously located at this pier. Four total signs were inspected during this reporting period, and they are in good condition and recommended for cleaning. Two missing signs (#1 and #5) are recommended for replacement.



#1



#2



#3



#4



#5



#6

## Appendix B. Do Not Consume Sign Photographs

### Venice Pier

Six signs were previously located at this pier. Four signs were inspected during this reporting period. Two missing signs (#1 and #2) and three damaged signs (#3, #4, and #5) are recommended for replacement. Sign #6 has some graffiti but is still legible and is recommended for cleaning.



#1



#2



#3



#4



#5



#6

## Appendix B. Do Not Consume Sign Photographs

### Ballona North Creek/Playa del Rey Jetty

Four total signs were previously located at this pier; however, the missing sign locations are unknown. Two total signs were inspected during this reporting period. Sign #1 is in good condition but needs cleaning and relocation from behind the trashcan to a new location on the same fishing pier, and Sign #2 is damaged and recommended for replacement and relocation from the parking area to the second fishing pier that does not have DNC signage. It is recommended that the ineffective sign from El Port/El Segundo be cleaned and relocated to the second fishing pier.



#1



#2

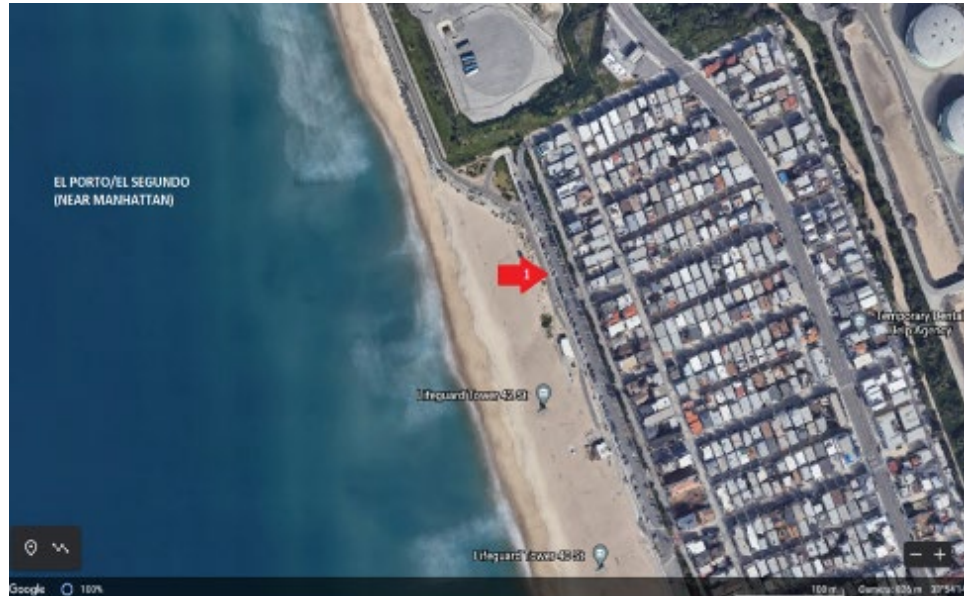


Piers at Ballona Creek

## Appendix B. Do Not Consume Sign Photographs

### El Porto/El Segundo

One total sign is located at this site and is in good condition. It is recommended that this sign be cleaned and relocated to the Ballon North Creek/Playa del Rey Jetty second fishing pier location.

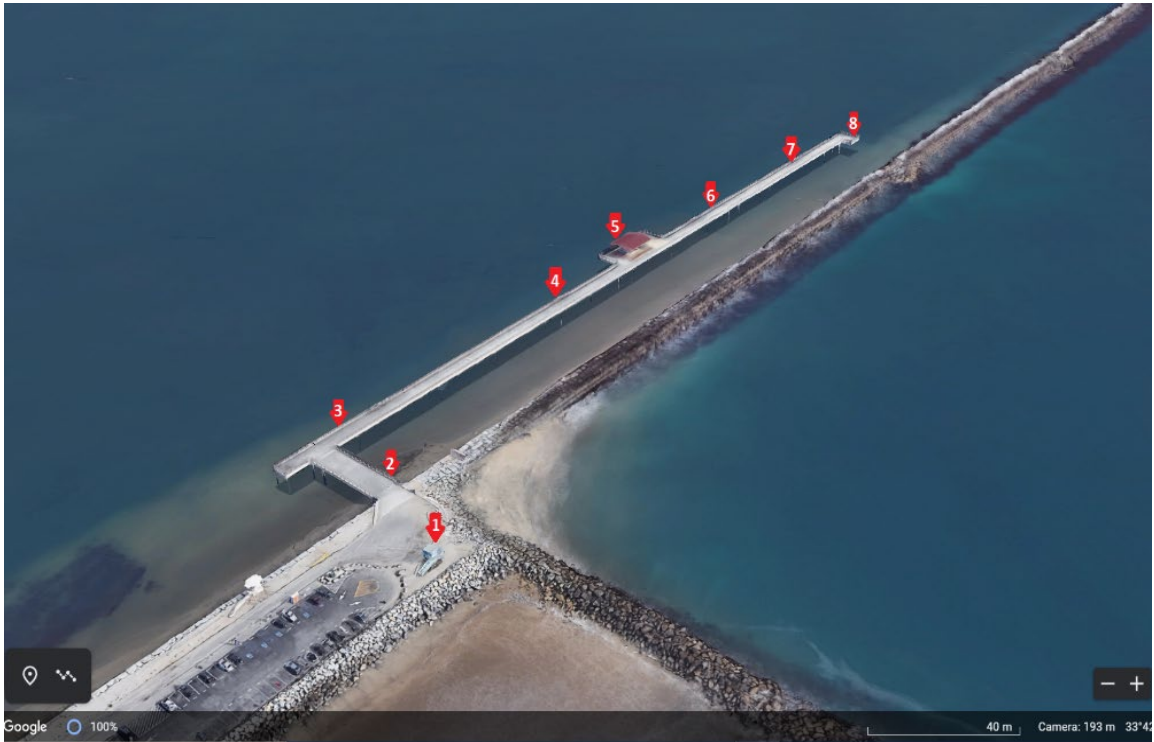


#1

## Appendix B. Do Not Consume Sign Photographs

### Cabrillo Pier

Eight total signs were inspected during this reporting period. All eight signs have been recommended for replacement due to weathering, vandalism, or bent, cracked, and peeling conditions.



#1



#2



#3



#4



#5



#6



#7

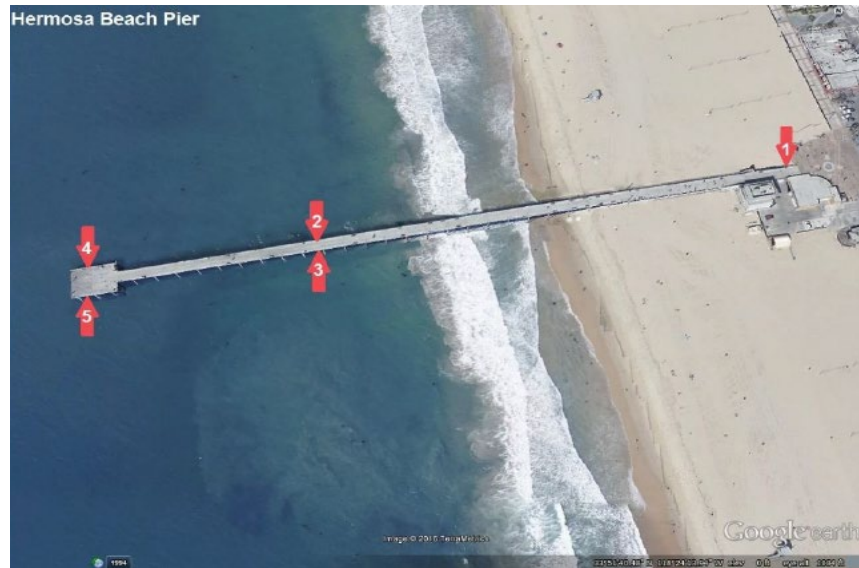


#8

## Appendix B. Do Not Consume Sign Photographs

### Hermosa Beach Pier

Five signs were previously located at this pier. Two signs (#2 and #3) were inspected during this reporting period and they are in good condition and recommended for cleaning. Signs #4 and #5 could not be inspected due to maintenance work on the west side of the pier; however, both sign locations have been previously reported as heavily damaged and needing to be replaced. The photographs provided below for Signs #4 and #5 are from the previous reporting period. Recommend replacing Signs #1, #4, and #5 with new signs.



#1



#2



#3



#4



#5



## Appendix B. Do Not Consume Sign Photographs

### Redondo Beach Pier

Six signs were previously located at this pier. Five total signs were inspected during this reporting period. One missing sign (#3) and one damaged sign (#2) are recommended for replacement. Signs #1, #4, #5, and #6 are recommended for cleaning.



#1



#2



#3



#4



#5

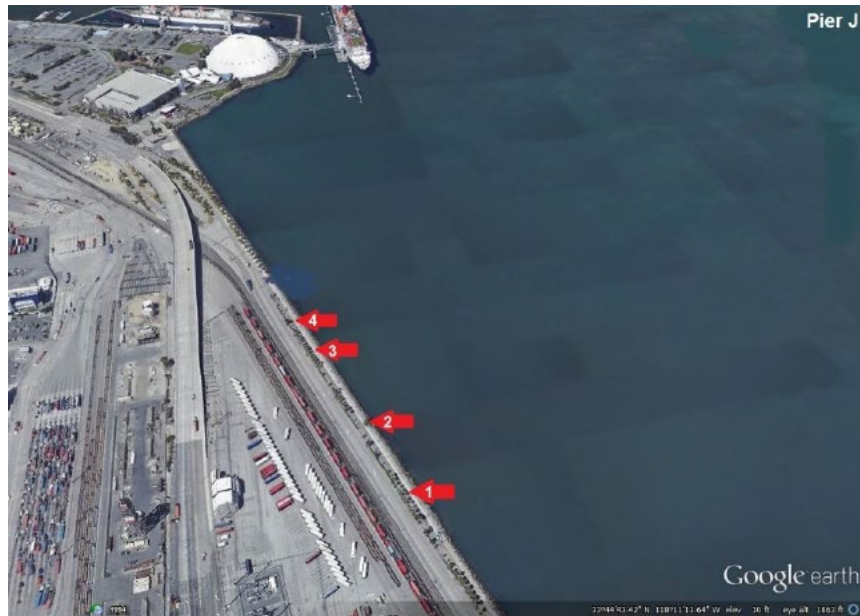


#6

## Appendix B. Do Not Consume Sign Photographs

### Pier J

Four signs were previously located at this pier. Three total signs were inspected during this reporting period, and they are in good condition. There are two new fishing piers at Pier J, where DNC signs are not currently located and anglers are commonly encountered. It is suggested that the signs hung high on poles at Pier J be relocated to these two new piers and the third sign be mounted on the restroom structure near the northern fishing pier to improve visibility. No recommendation for replacement of the missing sign.



#1



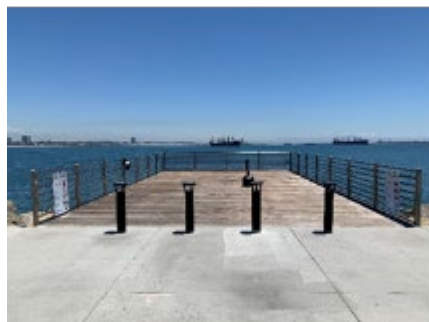
#2



#3



#4



Pier north of Sign #3

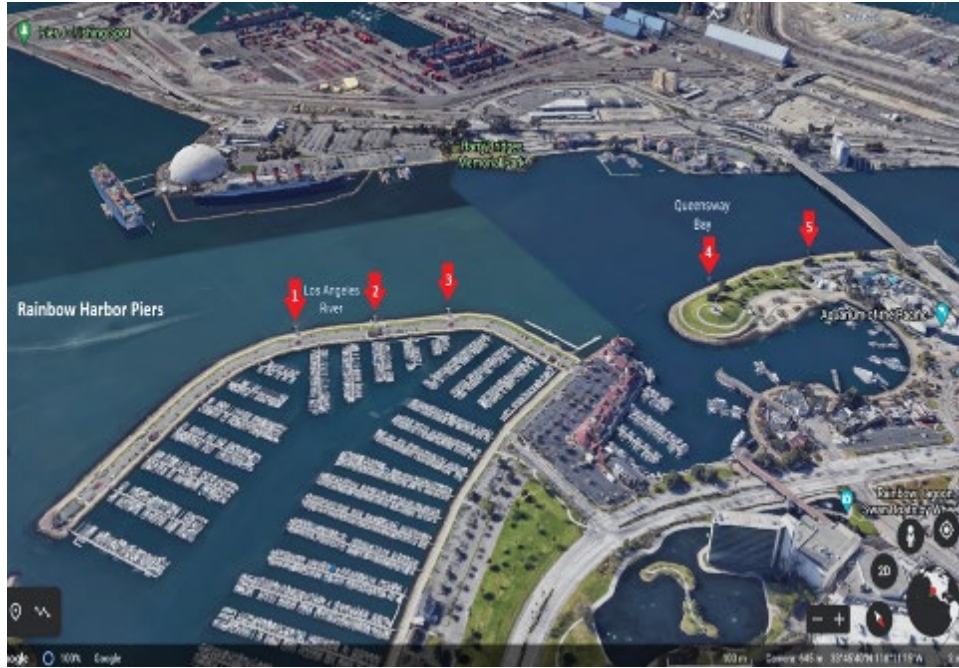


Pier south of Sign #1

## Appendix B. Do Not Consume Sign Photographs

### Rainbow Harbor Pier

Five total signs were inspected during this reporting period. Three signs (#2, #4, and #5) are in good condition and recommended for cleaning. Two signs (#1 and #3) are damaged and are recommended for replacement.



#1



#2



#3



#4



#5

## Appendix B. Do Not Consume Sign Photographs

### Belmont Pier

Five total signs were inspected during this reporting period. Three signs (#3, #4, and #5) are in good condition and recommended for cleaning. Two signs (#1 and #2) are damaged and are recommended for replacement.



#1



#2



#3



#4

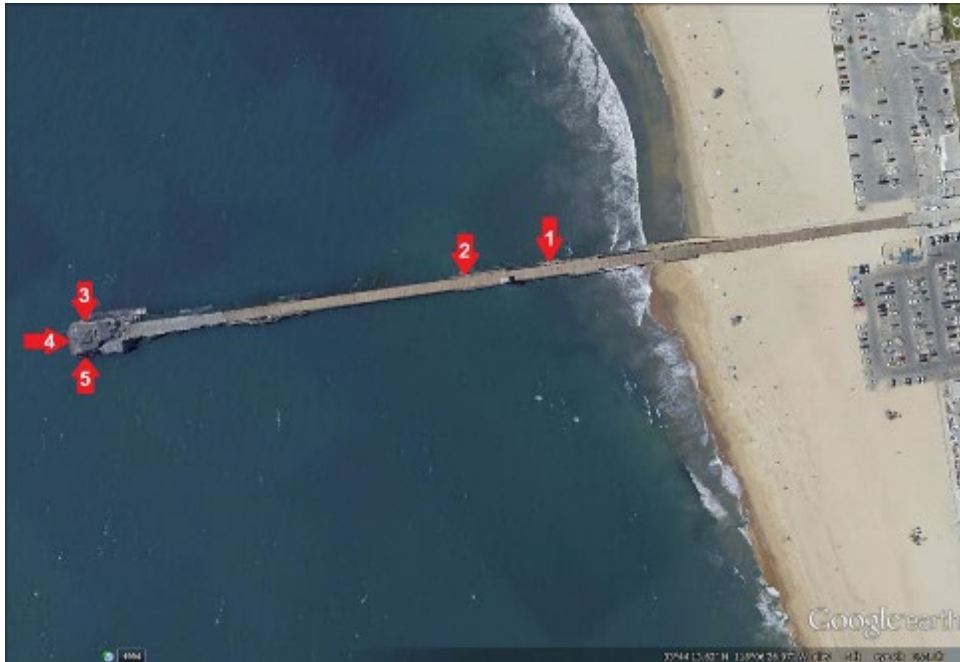


#5

## Appendix B. Do Not Consume Sign Photographs

### Seal Beach Pier

Five signs were previously located at this pier. Four signs (#1, #2, #3, and #4) are in good condition and recommended for cleaning. One sign (#5) is missing and recommended for replacement.



#1



#2



#3



#4

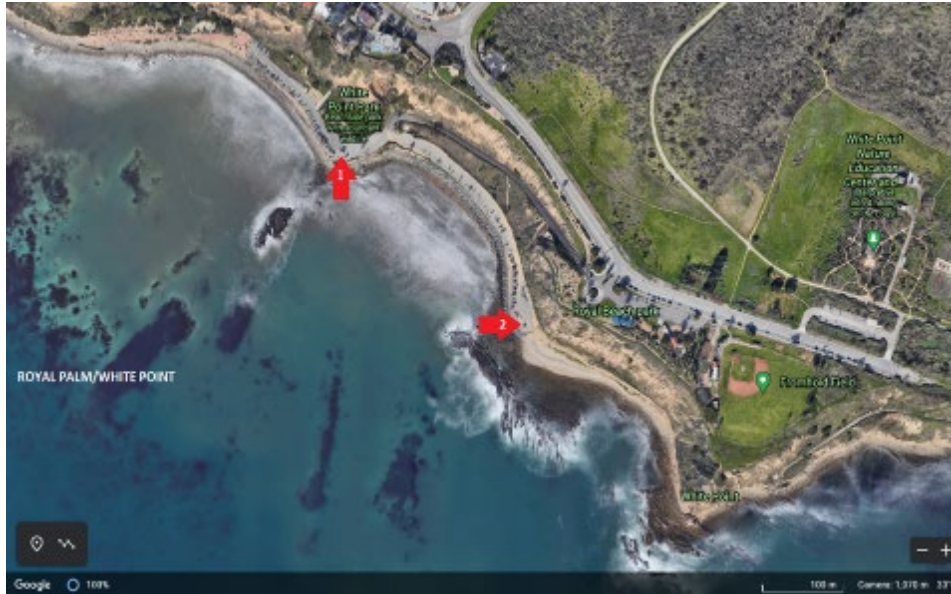


#5

## Appendix B. Do Not Consume Sign Photographs

### Royal Palm/White Point

Two signs were previously located in this area. One sign (#1) is in good condition and recommended for cleaning. The other sign is missing and recommended for replacement. The replacement sign is recommended to be mounted to the second lifeguard tower.



#1



#2