



# SAN DIEGO COUNTY

## 2025 MARINE DEBRIS REPORT



# OVERVIEW

Surfrider Foundation San Diego County and San Diego Coastkeeper partner each year to host volunteer-powered beach and park cleanups across San Diego County to address the issue of trash along our coast and in our inland waterways. This year, we've added our friends at Ocean Connectors, who host kayak-based wetlands cleanups. In addition to hosting approximately six public cleanup events a month, all three organizations host special cleanup events and encourage individuals to conduct their own.

**In 2025, our beach cleanups empowered 8,179 volunteers to remove 19,880.4 pounds of trash from our parks and coastline. Additionally, they picked up an estimated 516,665 separate pieces of trash, 461,304 of which were characterized by type.**

Drawing from data collected across 214 cleanup events, this report paints a comprehensive picture of the waste discovered on our beaches, wetlands, and parks this year. In 2024 and 2023, plastic fragments significantly outnumbered all other trash items collected, the only two years since data collection began in 2007 that the top (dis)honor did not belong to cigarette butts. In 2025, for the third consecutive year, the plastic fragment dominance continued.

**Our shared Beach Cleanup program has removed 189,241 pounds of trash from our beaches and waterways since 2007.**

In addition to beach cleanups, Surfrider San Diego, Coastkeeper, and Ocean Connectors are committed to stopping coastal pollution before it reaches our beaches and ocean; this includes fighting for better stormwater and solid waste management practices, waste reduction efforts, integrated water management, and other local and large-scale systemic changes. At the end of the report, we will touch upon cleanup efforts in the larger clean water context.

Beach cleanups remain the most impactful way of removing trash from San Diego beaches once it's already there, and we are proud to continue to lead this effort. Please read on to discover what we found on our beaches in 2025 and how our network of community activists is making a difference.





# DATA

## 2025 BEACH CLEANUP ITEM COUNT

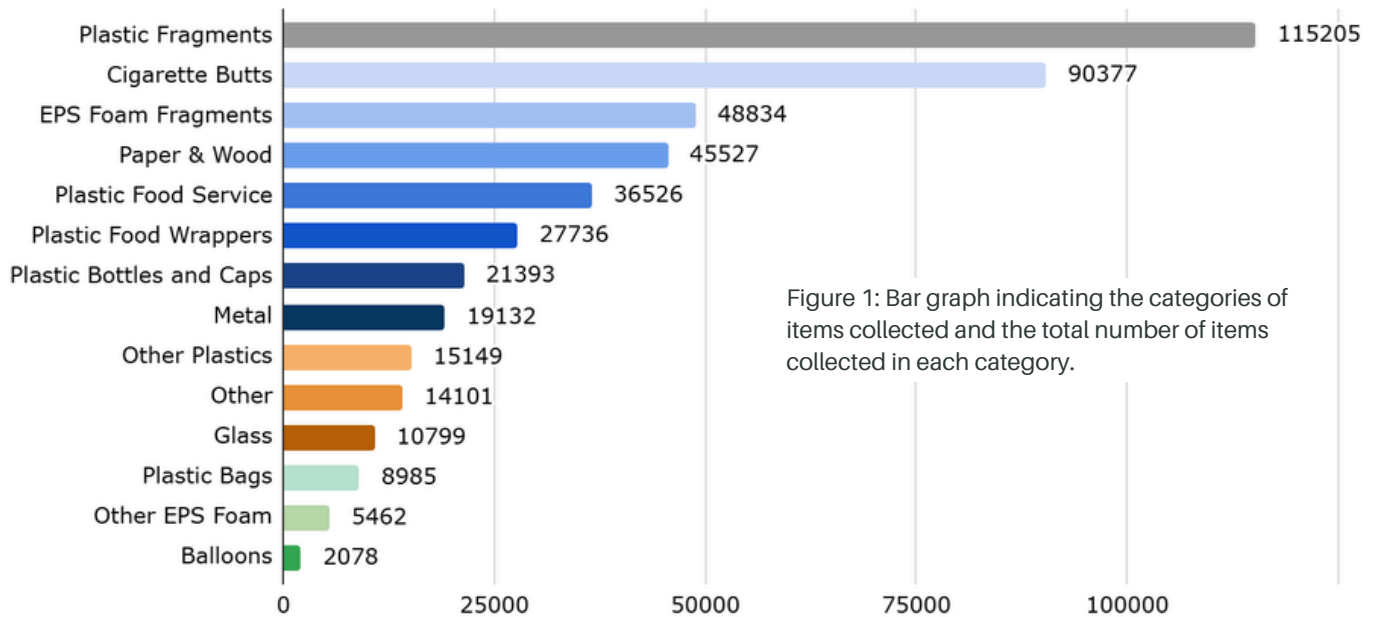


Figure 1: Bar graph indicating the categories of items collected and the total number of items collected in each category.

## 2025 BEACH CLEANUP BREAKDOWN

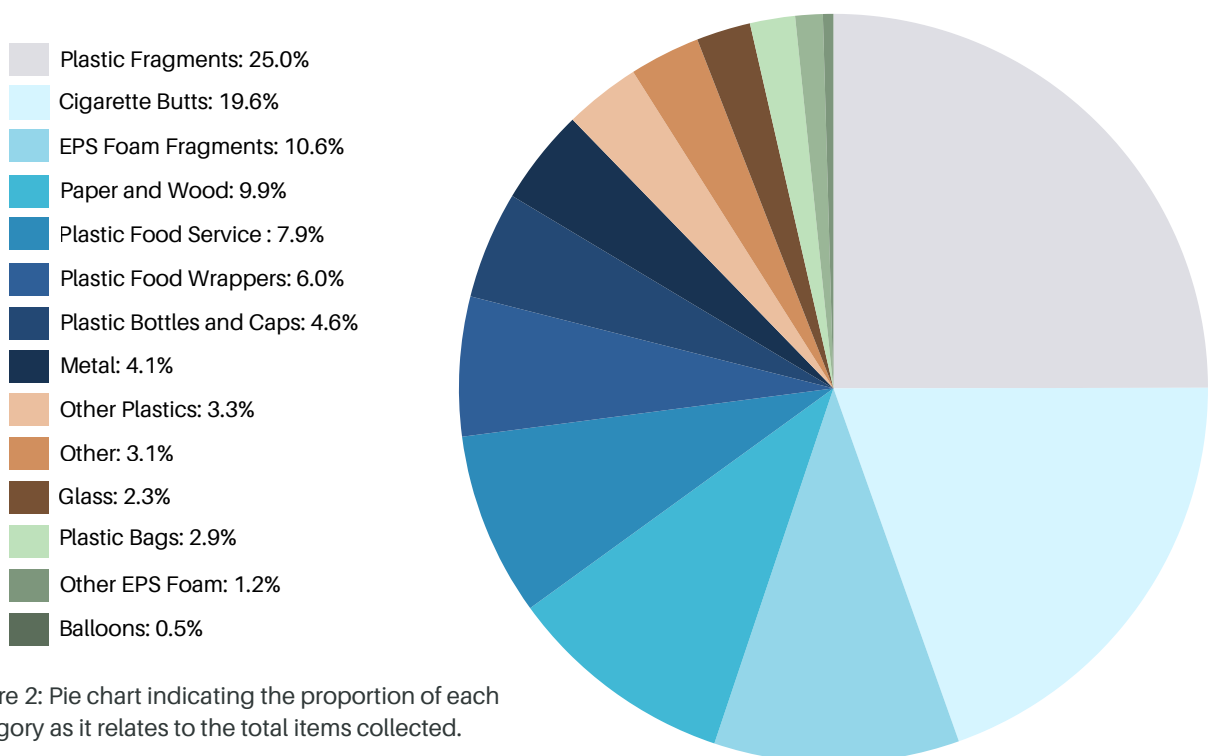


Figure 2: Pie chart indicating the proportion of each category as it relates to the total items collected.



# TOP ITEMS OF CONCERN



**115,205** Plastic Fragments



**90,377** Cigarette Butts



**48,834** EPS Foam Fragments

**In 2025, our cleanups averaged 2.43 pounds per volunteer, with an overall 19,880.4 pounds of trash removed.**

Cigarette butts were the most commonly collected item along San Diego’s coastlines for more than 16 years, historically accounting for 20–25% of all debris recorded. Beginning in 2023, however, plastic fragments, ranging from pieces larger and smaller than a dime, surpassed cigarette butts as the most frequently observed item, a trend that has continued through 2025. Cigarette butts now rank second, followed by EPS foam fragments in third, with paper and wood items close behind.

This shift likely reflects a combination of policy changes and evolving waste patterns. In recent years, local and statewide regulations have increasingly restricted smoking in coastal areas, including beaches, parks, boardwalks, and waterfront spaces, which may be contributing to a measurable decline in cigarette butt litter. At the same time, plastic pollution continues to dominate what we find during cleanups.

In 2025, plastics accounted for 317,449 of the 461,304 items collected across 214 beach and inland cleanups, **nearly seven out of every ten pieces of trash**, consistent with long-term trends showing that **70–80% of all debris is plastic**.

Together, these findings suggest that while targeted policies can reduce specific types of litter, addressing plastic pollution will require broader, upstream solutions and stronger enforcement of existing waste reduction efforts.



**You can help ensure the success of our state and local plastic reduction laws.**

The Surfrider Foundation San Diego County Chapter has compiled a guide to statewide and city-specific policies, including contacts for reporting non-compliance.



[www.surfridersd.org/-/plastic-laws-tracker](http://www.surfridersd.org/-/plastic-laws-tracker)

# Plastic Fragments



Plastic fragments were the most commonly collected item across San Diego County cleanups in 2025, with 115,205 pieces recorded. These fragments now make up a significant portion of all items found along our beaches, bays, and inland waterways.

Most fragments fall within the mesoplastic size range (5–20 mm) and continue to break down into microplastics (<5 mm). In a region like San Diego, where urban runoff flows directly to the ocean through storm drains and creeks, these small plastics can travel quickly from inland neighborhoods to the coast, accumulating in both marine and coastal environments.

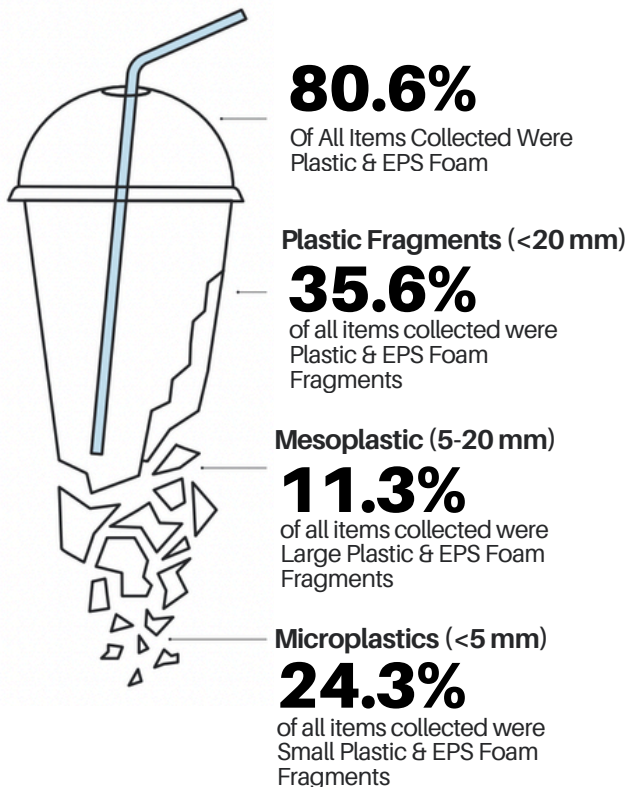
Plastic Fragments  
25% of total items



Microplastics are now widespread across San Diego's ecosystems. They are easily ingested by marine life and have been found throughout the food web. Their persistence and mobility also mean they are increasingly present in the air we breathe and the food we eat, raising growing concerns for both environmental and human health.

The prevalence of plastic fragments in local cleanups highlights a larger issue: most plastic pollution doesn't start small—it breaks down over time. Addressing this problem will require reducing plastic at its source, alongside continued local action to prevent waste from reaching our waterways.

## Plastics Breakdown



Check out Surfrider's website for ways you can reduce your plastic footprint.



[www.surfrider.org/  
initiatives/plastic-  
pollution](https://www.surfrider.org/initiatives/plastic-pollution)



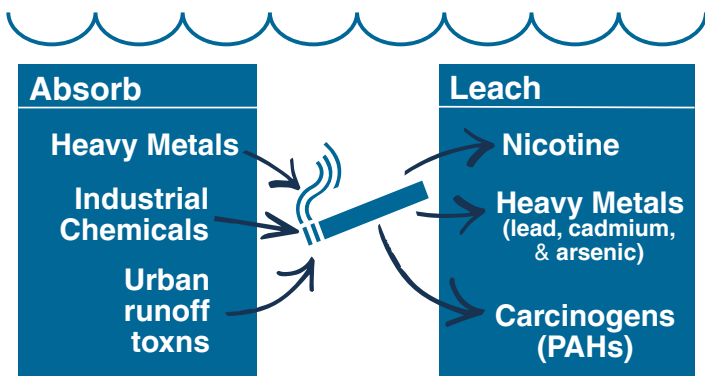
# CIGARETTE BUTTS

90,377 Cigarette Butts were recorded in 2025.



Cigarette butts were the most commonly collected item along San Diego County coastlines from 2007 to 2023 and remain the second most common item through 2025. While their prevalence has declined in recent years, they still **accounted for 19.6% of all debris collected**, highlighting their continued persistence despite public smoking bans and long-term declines in smoking rates.

Cigarette butts are well-known for their detrimental effects on marine ecosystems: leaching toxins, chemicals, and carcinogens into the water (Slaughter et al., 2011). But their non-biodegradable filters, made of cellulose acetate, a form of persistent plastic, also act as sponges, absorbing other chemicals from the water, making them even more toxic to animals that consume them (Rochman et al., 2013).



# EPS FOAM

48,834 Expanded Polystyrene (EPS) Foam Fragments were recorded in 2025.



EPS foam, a type of plastic commonly referred to as Styrofoam®, is notorious for its fragile nature, easily breaking into tens, hundreds, or even thousands of tiny fragments. Once dispersed, these pieces become nearly impossible to distinguish from natural debris like shell fragments and sand, making cleanup efforts extremely challenging and causing marine life to easily and accidentally ingest them.

**EPS foam can take over 500 years to degrade in sunlight**, and even longer once they sink lower in the water column, where the absence of sunlight slows the breakdown process even further.

**In 2025, EPS foam fragments accounted for 10.6% of all items collected during our cleanups.**

Surfrider San Diego, Coastkeeper, and Ocean Connectors have been strong advocates for local ordinances restricting the use of EPS Foam. By reducing reliance on these materials, we can help prevent further pollution and protect our coastlines and marine life for future generations.

# Fishing Gear

We recorded 3,149 items of fishing-related debris throughout 2025.

Fishing Gear  
0.68% of total items



Our fishing-related trash is accounted for in the “Other Plastics” category on Page 4 (3.3% of trash collected). While these numbers are much smaller than plastic fragments and cigarette butts, the ecological impact of fishing debris can be huge.

Monofilament line is typically made from nylon, while braided lines use polyethylene or polypropylene, and “invisible” lines are often fluorocarbon (Doherty 2025). These materials are engineered for strength and durability—resisting tension, abrasion, water, and UV exposure (Washington DFW 2026)—which also makes them highly persistent in the environment. Lost or discarded gear can remain in the water for decades or even centuries, breaking down into microplastics while intact gear continues to pose immediate threats.

**Fishing line can take up to 600 years to biodegrade**, and poses a huge threat to wildlife primarily through entanglement, which can cause injury, restricted movement, drowning, or death. Ingestion is another widespread but less visible risk: fish, seabirds, and other animals often mistake plastic fragments or bait for food, leading to internal injury, reduced nutrient absorption, and reproductive failure. In seabirds, plastics can

also be passed from adults to chicks during feeding, where they can be harmful even at low concentrations (Derraik 2002).

## Case Study: Brown Pelicans

In 2024, hundreds of federally protected Brown Pelicans were admitted to wildlife hospitals along the California coast, many malnourished and sick (Anguiano 2024). **At least 40% had significant injuries from entanglement in fishing lines and hooks.**

Research shows Brown Pelicans are especially vulnerable to fishing line injuries due to their plunge-diving behavior (Curtis 2009), and they have the lowest recovery rate among studied species, with only 54% surviving rehabilitation (Dau et al. 2009).

Properly disposing of fishing gear, using designated recycling programs, and participating in local cleanups can significantly reduce these impacts. By taking simple, responsible actions, our community can help protect wildlife and preserve the health of our coastal ecosystems.



Check out CA State Parks fishing line recycling program to locate a station near you.



[dbw.parks.ca.gov/?page\\_id=29426](https://dbw.parks.ca.gov/?page_id=29426)

# CONCLUSION

Community cleanups offer a fun, accessible, and educational way for thousands of San Diegans to give back to their community each year. More than just a volunteer opportunity, these efforts play a critical role in protecting our ecosystem by removing debris and raising awareness of local pollution issues.

**While cleanups make a visible difference, they also highlight a deeper challenge: our communities shouldn't have to rely on volunteers to manage everyday waste. Even one piece of litter is one too many.**

Our cleanup programs shine a local spotlight on a global crisis that is far more complex than the common belief that we simply have a "litter problem." While individual behavior contributes, the scale of pollution reflects a larger systems problem: we are producing more waste than at any point in history, and without intervention, this trend is expected to continue (Kaza et al., 2018). A growing share of this waste is made up of single-use, disposable plastics, including plastic fragments, cigarette butts, and EPS foam, the top three items collected locally.

The sheer volume of trash we generate overwhelms our ability to manage it, allowing a significant portion to escape into the environment, where creeks, storm drains, and waterways transport it from neighborhoods to the ocean. Ultimately, both inland and coastal environments become connected pathways and sinks for this pollution.

But this is also where change happens. By understanding where this waste comes from and reducing it at the source, we can shift the trajectory. Through community awareness, policy action, and everyday choices, we can move from simply cleaning up pollution to preventing it altogether.



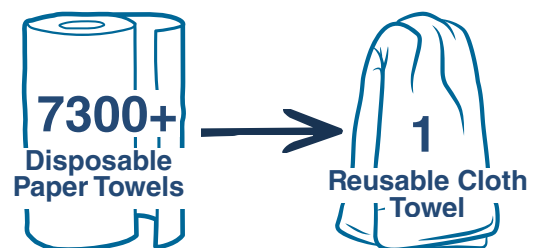
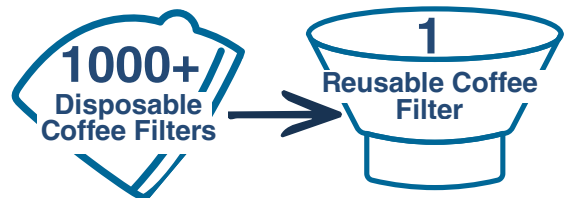
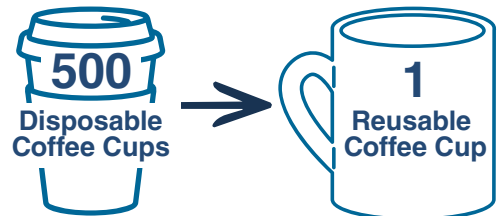
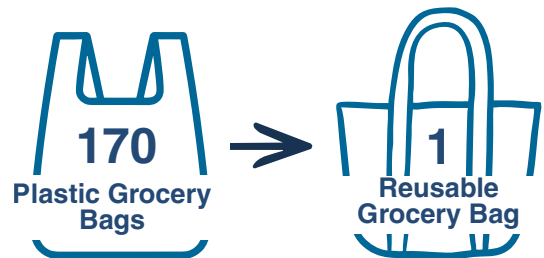
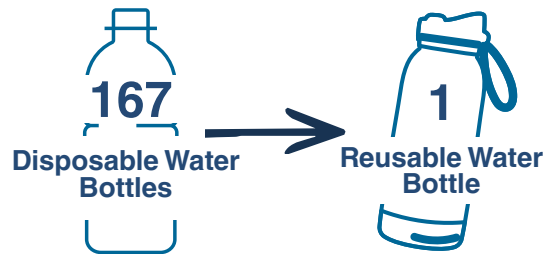
# CONCLUSION

The most effective way to keep beaches clean is to generate less trash in the first place. This strategy, known as source reduction, is especially crucial for plastics, which do not biodegrade. Many single-use plastic items can be replaced with durable, reusable alternatives, while biodegradable materials offer a lower-impact option for those that cannot.

Surfrider San Diego, Coastkeeper, and Ocean Connectors advocate for reducing unnecessary single-use plastics that often end up on our beaches and in the ocean. Cities across San Diego County—including Solana Beach, Encinitas, Del Mar, San Diego, Imperial Beach, Coronado, Vista, San Marcos, Carlsbad, and Oceanside—have passed ordinances restricting either plastic bags, EPS foam containers, plastic straws, or all three. We continue to push for broader single-use plastic reduction policies countywide. Policy, advocacy, consumer demand, or a combination of these can drive systemic changes that reduce waste at the source—far more effective than reactive cleanups.

Keeping our oceans clean requires action from individuals, businesses, and governments alike. We invite all San Diegans to join our 2026 Beach Cleanup Programs and support organizations like The Surfrider Foundation, San Diego Coastkeeper, and Ocean Connectors in the fight for clean water and healthy beaches—now and for future generations.

## Singe-Use Swaps HOW YOU CAN REDUCE YOUR IMPACT





# A TRUE COMMUNITY IMPACT



Surfrider San Diego, San Diego Coastkeeper, and Ocean Connectors are deeply grateful to the nearly 9,500 volunteers who came together to clean our coastline, parks, and waterways this year. Thanks to your dedication, nearly 10 tons of debris were removed from the environment—a remarkable collective effort. Of the 461,304 items characterized, the vast majority posed a real threat to our ocean and wildlife, and your work has made a tangible difference in protecting marine ecosystems.

Your impact goes beyond the debris removed. The data collected during these cleanups is invaluable, helping to raise awareness, strengthen education efforts, and inform advocacy for more effective plastic pollution policies. By identifying the most common types of waste, we can better target the sources driving the greatest impact.

Our mission extends beyond cleanups. We are working to prevent debris from entering our environment in the first place and create lasting, systems-level change. None of this would be possible without the dedication of volunteers like you. Together, you are helping pave the way toward a cleaner, healthier future for our coastlines and communities.

# References

Anguiano, Debi. (13 May 2024). *Hundreds of 'emaciated' and stranded pelicans turn up along California coast*. The Guardian. <https://www.theguardian.com/environment/article/2024/may/13/sick-pelicans-california>.

Bødtker, G., Haave, M., Velle, G., Andersen, G. L., Gomiero, A., Gaasø, R., et al. (2023). How plastic and the clearing of plastic affect the ecosystem

Botterell, Z. L., Beaumont, N., Dorrington, T., Steinke, M., Thompson, R. C., & Lindeque, P. K. (2019). Bioavailability and effects of microplastics on marine zooplankton: A review. *Environmental Pollution*, 245, 98-110.

California Coastal Commission. (2019). *The Problem with Marine Debris*. <https://www.coastal.ca.gov/publiced/marinedebris.html#cbd2016>.

Cox, K. D., Covernton, G. A., Davies, H. L., Dower, J. F., Juanes, F., & Dudas, S. E. (2019). Human consumption of microplastics. *Environmental science & technology*, 53(12), 7068-7074.

Curtis, Russ. (2 June 2009). *Fishing line injury study: pelicans most affected*. International Bird Rescue. <https://www.birdrescue.org/fishing-line-injury-study-pelicans-most-affected/>.

Dau, Brynie Kaplan et. al. (April 2009). Fishing gear-related injury in California marine wildlife. *Journal of wildlife diseases*. 45. 355-62. 10.7589/0090-3558-45.2.355.

Derraik, Jose G.B. (September 2002). *The pollution of the marine environment by plastic debris: a review*. *Marine Pollution Bulletin*, Volume 4, Issue 9, Pages 842-852. <https://www.sciencedirect.com/science/article/pii/S0025326X02002205>.

Doherty, Kyle. (February 28, 2025). *The Ultimate Guide to Fishing Line for Freshwater Fishing*. Flopindustries.com. <https://www.flopindustries.com/blogs/news/the-ultimate-guide-to-fishing-line-for-freshwater-fishing>.

Jabeen, K., Su, L., Li, J., Yang, D., Tong, C., Mu, J., & Shi, H. (2017). Microplastics and mesoplastics in fish from coastal and fresh waters of China. *Environmental pollution*, 221, 141-149.

Kaza, S. et al. (2018). *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*. Washington DC: The World Bank. <https://doi.org/10.1596/978-1-4648-1329-0>

Pew Charitable Trusts and SystemIQ, 'Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution,' 2020

*Preproduction Plastic Debris Program*. The California State Water Board. [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/plasticdebris.shtml](https://www.waterboards.ca.gov/water_issues/programs/stormwater/plasticdebris.shtml)

Rochman, C. M., Hoh, E., Hentschel, B. T., & Kaye, S. (2013). Long-term field measurement of sorption of organic contaminants to five types of plastic pellets: implications for plastic marine debris. *Environmental science & technology*, 47(3), 1646-1654.

Slaughter, E., Gersberg, R., Watanabe, K., Rudolph, J., Stransky, C., & Novotny, T. (2011). Toxicity of cigarette butts, and their chemical components, to marine and freshwater fish. *Tobacco Control*, 20(Suppl 1), i25-i29. DOI: 10.1136/tc.2010.040170.

Washington Department of Fish and Wildlife (DFW). *Monofilament Recovery and Recycling Program*. <https://wdfw.wa.gov/fishing/monofilament-recovery>. Accessed on March 17, 2026.

# Surfrider San Diego & San Diego Coastkeeper 2026 Community Cleanup Calendar

Unless otherwise noted, all cleanups will be held from 9 am to 11 am. Events may be canceled due to inclement weather or unexpected circumstances. For full details, up-to-date information, FAQ's, and how to register for cleanups, check our websites at [www.sdcoastkeeper.org](http://www.sdcoastkeeper.org) and [www.surfridersd.org/beachcleanups](http://www.surfridersd.org/beachcleanups).

## May

- 02: Oceanside | [Learn more here](#) (Surfrider monthly cleanup).
- 16: River Days Cleanup – Imperial Beach (9 AM - 12 PM) | Meet at Imperial Beach, next to the Imperial Beach Pier (Surfrider and Coastkeeper host)
- 16: Moonlight State Beach | [Learn more here](#) (Surfrider monthly cleanup).
- 16: Imperial Beach (10 AM - 12 PM) | [Learn more here](#) (Surfrider monthly cleanup).
- 23: Pacific Beach (10 AM - 12 PM) | [Learn more here](#) (Surfrider bi-monthly cleanup).

## June

- 06: World Ocean Day - South Mission Beach | Meet near restrooms by lifeguard tower (Coastkeeper hosts)
- 06: Oceanside | [Learn more here](#) (Surfrider monthly cleanup).
- 06: Ocean Beach | [Learn more here](#) (Surfrider monthly cleanup).
- 20: Imperial Beach (10 AM - 12 PM) | [Learn more here](#) (Surfrider monthly cleanup).
- 27: Seaport Village | [Learn more here](#) (Surfrider bi-monthly cleanup).

## July

- 18: Moonlight Beach | Meet near restrooms (Surfrider monthly cleanup)
- 18: Imperial Beach (10 AM - 12 PM) | Meet where Palm Ave. meets the beach (Surfrider monthly cleanup)
- 25: Pacific Beach (10 AM - 12 PM) | Meet on the sand south of Crystal Pier (Surfrider cleanup)

## August

- 1: Oceanside Pier | Meet at Lifeguard Tower 8, near the corner of Breakwater and The Strand (Surfrider monthly cleanup)
- 1: Ocean Beach Pier | Meet at Ocean Beach Veterans' Plaza south of the lifeguard station (Surfrider monthly cleanup)
- 15: Moonlight Beach | Meet near restrooms (Surfrider monthly cleanup)
- 15: Imperial Beach (10 AM - 12 PM) | Meet where Palm Ave. meets the beach (Surfrider monthly cleanup)
- 19: Thursday Night Cleanup – Mission Bay - Crown Point Park (3-5 pm) | Meet next to the Mission Bay Park Basketball Courts at Crown Point Park (Coastkeeper hosts)
- 22: Seaport Village | [Learn more here](#) (Surfrider bi-monthly cleanup).

## September – California Coastal Cleanup Day

- 5: Oceanside Pier | Meet at Lifeguard Tower 8, near the corner of Breakwater and The Strand (Surfrider monthly cleanup)
- 5: Ocean Beach Pier | Meet at Ocean Beach Veterans' Plaza south of the lifeguard station (Surfrider monthly cleanup)
- 19: California Coastal Cleanup Day | 9 a.m. to noon | Tecolote Shores, Ocean Beach, Imperial Beach, and various other locations | Visit [www.cleanupday.org](http://www.cleanupday.org) to register
- 19: California Coastal Cleanup Day - Otay Valley Regional Park | LOCATION TBD | Visit [www.cleanupday.org](http://www.cleanupday.org) to register (Coastkeeper hosts)
- 19: Imperial Beach (10 AM - 12 PM) | Meet where Palm Ave. meets the beach (Surfrider monthly cleanup)
- 26: Pacific Beach (10 AM - 12 PM) | Meet on the sand south of Crystal Pier (Surfrider cleanup)
- Ongoing: Events throughout the month to restore the Tijuana River Valley | Visit <http://trnerr.org/tram/> to learn more

## October

- 3: Oceanside Pier | Meet at Lifeguard Tower 8, near the corner of Breakwater and The Strand (Surfrider monthly cleanup)
- 3: Ocean Beach Pier | Meet at Ocean Beach Veterans' Plaza south of the lifeguard station (Surfrider monthly cleanup)
- 8: Thursday Night Cleanup – Mission Bay - Fiesta Island (3-5 pm) | Turn onto Fiesta Island Rd. Meet at the blue Coastkeeper canopy (Coastkeeper hosts)
- 17: Moonlight Beach | Meet near restrooms (Surfrider monthly cleanup)
- 17: Imperial Beach | Meet where Palm Ave. meets the beach (Surfrider monthly cleanup)
- 24: Seaport Village | [Learn more here](#) (Surfrider bi-monthly cleanup).

## November

- 7: Oceanside Pier | Meet at Lifeguard Tower 8, near the corner of Breakwater and The Strand (Surfrider monthly cleanup)
- 7: Ocean Beach Pier | Meet at Ocean Beach Veterans' Plaza south of the lifeguard station (Surfrider monthly cleanup)
- 21: Imperial Beach (10 AM - 12 PM) | Meet where Palm Ave. meets the beach (Surfrider monthly cleanup)
- 28: Pacific Beach (10 AM - 12 PM) | Meet on the sand south of Crystal Pier (Surfrider cleanup)

## December

- 5: Oceanside Pier | Meet at Lifeguard Tower 8, near the corner of Breakwater and The Strand (Surfrider monthly cleanup)
- 5: Ocean Beach Pier | Meet at Ocean Beach Veterans' Plaza south of the lifeguard station (Surfrider monthly cleanup)
- 26: Seaport Village | [Learn more here](#) (Surfrider bi-monthly cleanup).