SURFRIDER FOUNDATION
SAN DIEGO COUNTY

SAN DIEGO COASTKEEPER

SAN DIEGO COUNTY

BEACH CLEANUP REPORT 2019

ABOUT

The Surfrider Foundation San Diego County and San Diego Coastkeeper partner each year to host volunteer-powered beach cleanups across San Diego County in order to address the issue of trash on our beaches and in our oceans. In addition to hosting approximately six of these community events per month, both organizations host special cleanup events and empower individuals to host their own.

In 2019, our beach cleanups empowered 11,895 volunteers to remove 16,534 pounds of trash from our coastline. Additionally, they collected data on 237,452 separate pieces of trash.

This report, based on data from 196 separate cleanup events, provides a detailed picture of the waste we found on our beaches this year. Top items found include cigarette butts, EPS foam (i.e. styrofoam) fragments, and common single-use plastics such as food wrappers, bags, bottle caps and straws. No area is immune to trash, but certain areas are hot spots for our efforts; in particular, Mission Bay and Fiesta Island.

Our shared Beach Cleanup program has removed 119,242 pounds from our beaches and waterways since 2007.

In addition to beach cleanups, Surfrider and Coastkeeper are both committed to stopping coastal pollution before it reaches our beaches and ocean; this includes fighting for better 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 context.

Beach cleanups remain the most impactful way of getting trash off San Diego beaches once it's already there, and we're proud to continue to lead this effort. Read on to discover what we and our volunteers found on beaches this year, where we found it, and how our network of community activists is making a difference.
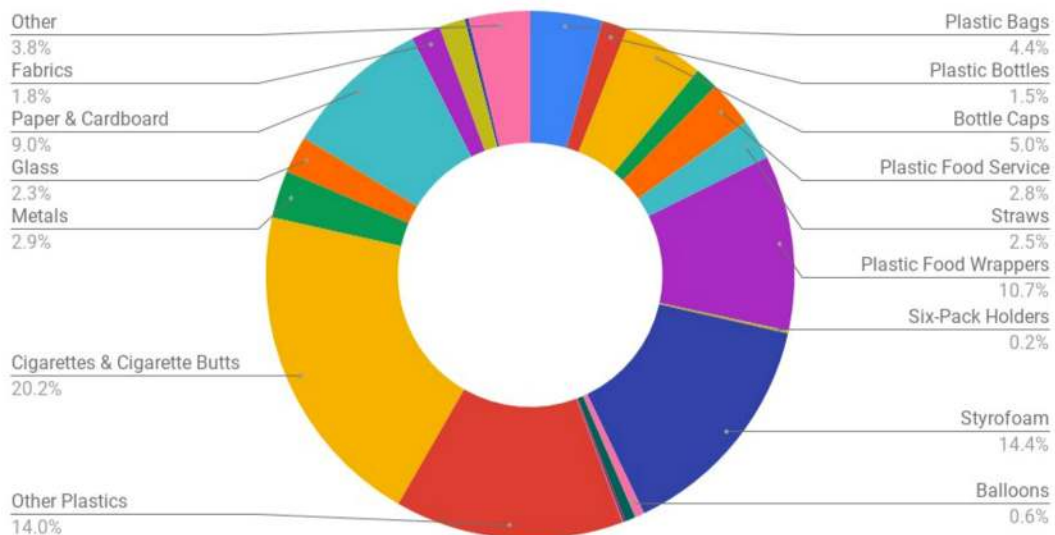
78.3% OF DEBRIS COLLECTED WAS PLASTIC

The vast majority of trash we find is either made from or contains plastic. This year, plastics accounted for 185,906 of the 237,452 items collected across 196 separate beach cleanups. Of that total, at least 64.3% were "single-use plastics," i.e. items like bags, straws, and bottles which are designed to be used once and discarded. Also included in these totals are single-use cigarette filters aka "butts," which are made from a plastic called cellulose acetate.

Plastics are particularly damaging to the marine environment, as they do not biodegrade, and are easily mistaken as food and ingested by - or pose an entanglement risk to - wildlife. If there is one takeaway from our beach cleanup program, it is that our society's overreliance on disposable plastics wreaks havoc on our waterways, beaches, and ocean.

2019 BEACH CLEANUP ITEM COUNT

Other
3.8%

Fabrics
1.8%

Paper & Cardboard
9.0%

Glass
2.3%

Metals
2.9%

Cigarettes & Cigarette Butts
20.2%

Other Plastics
14.0%

Plastic Bags
4.4%

Plastic Bottles
1.5%

Bottle Caps
5.0%

Plastic Food Service
2.8%

Straws
2.5%

Plastic Food Wrappers
10.7%

Six-Pack Holders
0.2%

Styrofoam
14.4%

Balloons
0.6%

72,584 more items were collected in 2019 than 2018.

2019 saw a large increase in the total number of items removed. The increase, which accounted for an additional 5,004 pounds of trash, should not necessarily be interpreted as evidence of dirtier beaches. Surfrider and Coastkeeper hosted 52 more cleanups this year, which is likely the single biggest contributor to the larger totals. That said, our data does show a slight increase in "pounds per volunteer," which rose from 1.3 in 2018 to 1.39 lbs per volunteer in 2019.

While there is no single, scientifically agreed-upon metric to determine the cleanest and dirtiest beaches, we prefer to stress the "quantity of items" collected over the total weight. As the pie chart illustrates, our top items of concern are virtually weightless and make up the majority of debris collected at each cleanup, whereas one heavy item - i.e. a mattress, a water-logged surfboard, or a discarded appliance - will effectively skew the total weight of any single cleanup effort.

TOP THREE ITEMS OF CONCERN

47,934 CIGARETTE BUTTS
34,104 PLASTIC FOAM
25,473 PLASTIC FOOD WRAPPERS

One less butt headed to the coast

Cigarette butts topped the list _again_ in 2019. Unfortunately, cigarette butts are the #1 most littered item in the world (Truth Initiative, 2017), San Diego's coast is no exception. Butts remain the most prevalent type of debris found at our beach cleanups, a position they've held since 2007 when we started logging data.

In 2019, volunteers removed 47,934 cigarette butts from our beaches. Despite laws banning smoking at every city-managed beach in the county (with state beaches to follow in 2020), cigarette butts accounted for one out of every five items picked up.

Source: "Truth Initiative. April 21, 2017. 5 Ways Cigarette Litter Impacts the Environment. https://truthinitiative.org/research-resources/harmful-effects-tobacco/5-ways-cigarette-litter-impacts-environment."

Butts are a major concern for the health of San Diego County beaches. They are non-biodegradable and leach toxins, dangerous chemicals, and carcinogens into the water, poisoning marine life and beachgoers alike. They also move with ease through city stormwater systems, entering roadside storm drains and traveling miles underground through conveyance infrastructure to outfalls along the coast. Because stormwater is untreated, littered butts from all over the county find their way to the beach eventually.

34,000 pieces of Expanded Polystyrene (EPS) Foam

Many of the plastics collected were pieces less than one inch in diameter, and much of it was expanded polystyrene foam, or Styrofoam®. Due to its delicate nature, EPS foam foodware easily breaks down into tens, hundreds, even thousands of smaller pieces. Once that occurs, it becomes exceedingly difficult - and often impossible - to identify, separate and remove EPS foam debris from shell fragments and sand. In 2019, EPS foam accounted for 14.4% of the total items found at our cleanups.

Surfrider and Coastkeeper have been strong advocates for local ordinances restricting the use of styrofoam and other harmful single-use plastics. With foam bans in Encinitas, Solana Beach, Del Mar, Imperial Beach and most recently the City of San Diego, we are hopeful that this number will decrease in 2020.

Foam fragments mixed in with natural beach debris.

Plastic bags and wrappers continue to be a problem.

Beach cleanup volunteers collected over 25,000 plastic wrappers and 10,000 plastic bags, accounting for 15.1% of total items removed. While the state bag ban and local bag ordinances have certainly helped, our data shows that single-use plastic bags continue to plague our beaches and streets.

Meanwhile, our data clearly highlights that individually-wrapped snacks, bars, candy, etc. constitute an even more significant pollutant to our beaches. Contrary to the cases of shopping bags, EPS foam, and straws, there has been little policy advocacy or educational initiative behind this particularly problematic form of single-use plastic pollution.

Due to their disproportionately dangerous impacts on marine wildlife, limiting plastic bags and wrappers should continue to be encouraged and enacted. Bags and wrappers easily break down in the environment into smaller pieces - similar to EPS foam - which further compounds the problem.

Snack wrapper fragments litter the gutter at Oceanside Pier

The "Usual Unusuals"

In addition to collecting data on common beach debris such as cigarette butts, plastic foam, and plastic food wrappers, volunteers are also asked to note any "unusual items" they find during the course of the cleanup. Over the years we have noticed some "unusual" items documented so frequently that they have become known as our "usual unusuals." For instance, glow sticks are so common that last year we included them as an item on the data sheet (1,504 were picked up in 2019). They are frequently used in night fishing as a fish aggregation device, and are being discarded or littered after use. Our top three unusual items in 2019 were bandaids, shoes, and condoms.

A few other bizarre finds from 2019 - as reported by our cleanup volunteers - include electric scooter pieces, a mattress, a cookie cutter, a rotted tooth, a golf club, a windshield wiper, a crack pipe, a crow bar, and a computer monitor… just to name a few.

A TRUE COMMUNITY IMPACT

Surfrider and Coastkeeper would like to thank each of the 11,000 plus San Diegans and visitors who contributed to this large-scale, collective effort to clean our coastline. The removal of 8.25 tons of debris from our beaches is no small feat; for the record, each and every one of the over 230,000 items removed presented a real threat to our ocean ecosystem. We hope that every participant feels proud of their contribution.

Furthermore, the cumulative impact ripples far beyond the actual trash removed from San Diego beaches. Volunteer-collected data contributes directly to this report, which we hope will serve as an educational resource re: the larger issue of plastic pollution. Beach cleanup data informs education, outreach and policy advocacy to target and reduce the most prevalent forms of debris found in our environment.

Ultimately, the goal of our shared beach cleanup program is not to simply remove trash from our shores, but to drive change that prevents it from reaching the beach in the first place. Without reliable data, none of that would be possible.

CONCLUSION

Beach Cleanups in the Larger Context

Saturday at Belmont Park. Not enough trash cans, or *too much trash*?

Beach cleanups provide a fun, accessible and educational community service opportunity for thousands of San Diegans every year. Despite this, it's important to remember that our coastal communities would rather enjoy pristine beaches than be constantly called upon to clean them. Even one piece of trash on the beach is **one piece too many.**

Our beach cleanup program sheds a local light on a global problem, the origins of which are far more complex than the common perception that we have a "litter problem." While litter from careless individuals certainly contributes to dirty beaches, it only scratches the surface of a much more important question - where does all this trash come from?

The short answer is that we produce exponentially more waste than at any other time in history; this amount is only forecasted to grow if current trends persist (Kaza et al. 2018). An increasingly large percentage consists of single-use, disposable and "throwaway" items made from plastic. Unfortunately, the amount of trash we produce overwhelms any chance we have to properly dispose of it. Much of it ends up in the natural environment, where the ocean is often the final destination.

Source: "Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0 : A Global Snapshot of Solid Waste Management to 2050. Urban Development;. Washington, DC: World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/30317 License: CC BY 3.0 IGO."

CONCLUSION

Beach Cleanups in the Larger Context

In the larger context, the most effective approach to clean beaches is to generate less trash. This approach, often referred to as "source reduction," is especially relevant in the case of plastics which do not biodegrade in the natural environment. Most of the single-use plastic items we have come to rely on can be replaced with long-lasting, reusable alternatives. For those that cannot, biodegradable materials offer an alternative with far less end-of-life impact on the environment.

Surfrider and Coastkeeper advocate for restrictions on unnecessary single-use plastics which commonly end up on our beaches and in the ocean. The cities of Oceanside, Solana Beach, Encinitas, Del Mar, San Diego, and Imperial Beach have all passed ordinances that restrict either single-use plastic bags, EPS foam containers, plastic straws, or all three. We will continue to advocate for more comprehensive single-use plastic reduction ordinances in San Diego County.

Whether through policy advocacy, consumer demand or a mix of both, systemic changes that attack waste at the source are possible, and ultimately more effective than reactive approaches like cleanups. For example, our data suggests that San Diego beaches would be 20-25% cleaner if tobacco companies stopped attaching a single-use plastic filter on every single cigarette; instead, smokers who prefer filters could employ a reusable one. With one fell swoop, litter from cigarette butts would be solved.

Individuals, businesses and governments all have a role to play in keeping our ocean clean. We invite and encourage all San Diegans to participate in our 2020 Beach Cleanup Program, and of course, to support and get involved with The Surfrider Foundation, San Diego Coastkeeper, and other organizations dedicated to the realization of clean water and healthy beaches for present and future generations.

www.sdcoastkeeper.org

www.surfridersd.org