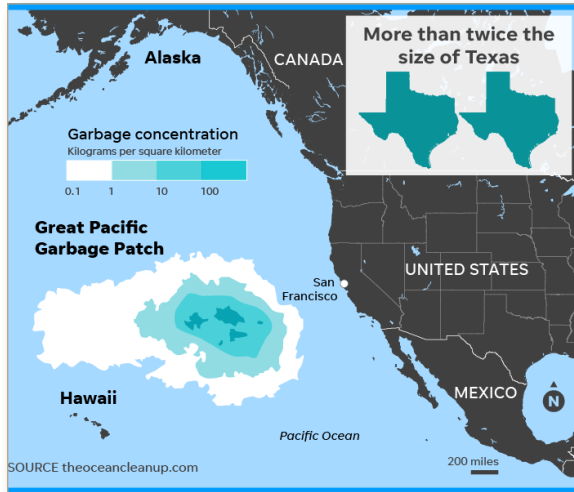


PLASTIC IN OUR OCEANS

It should be no secret by now that there is an island off our West coast that is purely made of bits of plastic and non-degradable garbage. Did you know it is twice the size of Texas...

...and **GROWING!**



Did you know that there are actually 2 other ocean garbage patches, and our Pacific Garbage Patch is the biggest? That what you see on the surface is 5% of the garbage as the other 95% is at the bottom of the ocean? It is killing our fish and birds, and ends up in the food you eat.



The majority of that garbage, 80%, came from the land, and more than half of that are the textiles, like water bottles, that we throw out.

We can't afford to stay on the same path. Please consider the suggestions that follow.

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THE IMPACT OF DENTISTRY ON THE PLANET

The last newsletter focused on the use of my Trios scanner to take digital impressions for my anterior dental implant cases. Besides the increased speed and accuracy of impressions and outcomes, the fun of 'techy' gadgets, and the 'wow' factor upon patients, part of the reason for the purchase was a desire to find ways to reduce my footprint on the planet, even if it would be a small impact.



TRIOS by 3Shape

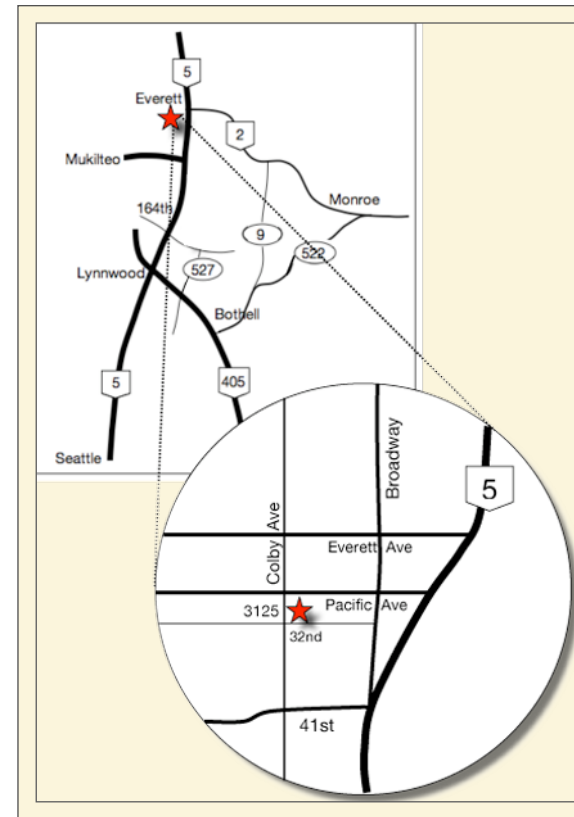
I had on the shelf tubes of impression material, sometimes expired, and an always superfluous supply of impression material tips. Metal impression trays were a time-consuming pain to clean, and used chemical softeners to help clean them out. This then went down the drain requiring the city to separate out. Plastic trays needed spray adhesive to improve accuracy. Disinfect it, pour it up, and the lab drives up to take it back to their office to work on.

With the Trios, there is no impression tray to purchase and eventually throw out, no impression material to expire or drip on the carpet or your patients face, no adhesive, no stone, and one less trip by the lab guy using gasoline to drive up to your office to pick up your case since it digitally shows up on their computer. Of course there is a printed model to replace the stone pour up, but even crowns, temporary or otherwise, are digitally planed and printed as well. No wax-up, investing, and all the other lab things that are materially consumptive, and ultimately become garbage.

This issue of ProbeTips will review how dentistry (and humans in general) impacts the environment, and lists a few things we do, and you can do, to minimize our footprint.

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PROBE TIPS

A QUARTERLY PERIODONTAL
NEWSLETTER

BY PAMELA NICOARA DDS MSD

GREEN
Dentistry



VOLUME 11, No. 2

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Green Dentistry and Green Living

GENERAL CONSIDERATIONS

First is to realize in general that the mantra 'Reduce, Reuse, Recycle' is organized in order of importance. Recycling is never as good as not having a piece of garbage to recycle in the first place. Much of what makes life convenient is what is filling our landfills and overflowing into the oceans. So, naturally, some aspects of caring for the planet will be inconvenient. It is more convenient to pick up a disposable coffee cup from the coffee kiosk than it is to remember to bring your own reusable carafe, and wash it when you get home. But clean oceans, land and food are more important.

Of course, the water and electricity used to replace material products is precious and should also be carefully guarded. Using energy and water efficient machines and being water conscious are critical as water treatment plants can only treat so much water at a time.

DENTAL CONSIDERATIONS

There are several items specific to dentistry to consider: some things are more obvious than others, and some systems you may already have in place.

REDUCE:

1. **Amalgam Separator:**
-Can remove 95% of amalgam from waste water.
2. **Automated Suction Timer:**
-Turns off the suctions after 10 hours to make sure it isn't running all weekend if you forgot to turn it off.

3. **Go Digital:**
-Digital Radiographs: Eliminate chemical developers and fixers entering waste water, and reduce



radiation used to capture an image. No film wrappers or empty plastic chemical bottles to throw out.

-Digital Workflow: Paperless charts, online registration and referrals, encrypted emails, digital fax, electronic claims, and direct deposit reduce/eliminate paper use.

4. **Hand sanitizer:**
-Less water use and paper towel use / less garbage.



REUSE:

1. **Rechargeable Batteries:**
-Uses less resources to create new batteries, and creates less waste from spent batteries.
2. **Washable staff towels, surgical gowns and headrest covers:**
-Less garbage. We have our own washer and dryer to minimize need for laundry service. Each staff member has a different color towel in the staff bathroom instead of paper towels.



3. **Enviropouch:**
-Alternative to single use disposable sterilization pouches reduces the amount of garbage. Can be used for 1 year or more depending on work load.
4. **Metal Dixie cups:**
-Instead of plastic dixie cups for dispensing pre-medications and chlorhexidine rinse, we use washable metal cups to reduce garbage.
5. **Patient comfort:**
-Providing beverages in washable mugs, water from a Britta pitcher, and coffee from a coffee maker reduces garbage from disposable water bottles, coffee cups, and K-cups.



RECYCLE:

1. **Recycle paper and plastic:**
-Reuse the clean side of paper in the printer, recycle cardboard boxes and shredded paper, and separate out plastics for recycling.

INFRASTRUCTURE CONSIDERATIONS

There are items related to the building in which you practice that could reduce your footprint on the environment by reducing your energy needs. Some things you may have control over, others maybe only if you own your own building.

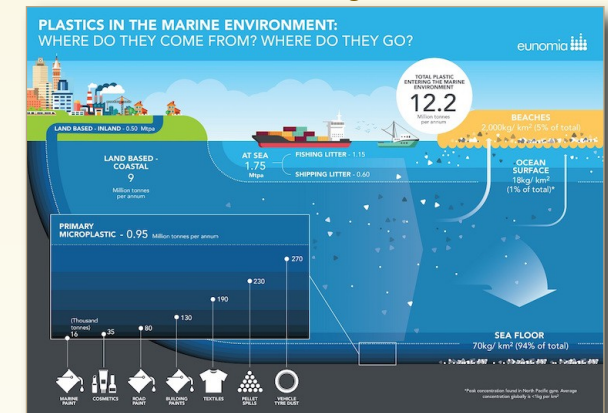
1. **Automatic Thermostat Timer**
2. **Close the blinds in the summer**
3. **Improve insulation**
4. **Solar Panels**

LIFESTYLE CONSIDERATIONS

Finally, there are things we can each do as individuals at home and as global citizens to reduce the burden on the planet. There is so much more you can do besides the few things listed here, but these may be most important.

1. **Become Vegan (at least part time!):**
-There are about 7 billion people on the planet, and 20 billion chickens, cows and pigs. Naturally, just by the sheer number, they produce more waste and require more food and water than we do. The excrement waste runoff into the oceans create nitrogen dead zones killing marine animals and habitat in the water: the nearest to us is the Gulf Coast. A 2006 UN report 'Livestock's Long Shadow' indicated that livestock and their maintenance produce more greenhouse gases contributing to global warming than all forms of transportation combined. Livestock are more burdensome on the environment in terms of deforestation for grazing and are the greatest cause of Amazon forest decimation. Overfishing is also a serious concern for the extinction of marine life. Besides the burden on the planet, you increase your risk for colon cancer with red meat, and consider when cheese has ever been good for your arteries!

2. **Walk/Cycle/Carpool/Public Transit to work (and even for errands):**
-The greatest source of micro plastics in the ocean is from vehicle tire wear!!! (Eunomia Research 2016). Walking and cycling is good for your health! Letting someone else drive is good for your stress levels and reduces traffic congestion.



3. **Get a compost bin:**
-Reduce garbage. We have a 'Hungry Bin' worm composting bin. Not stinky and the liquid byproduct is great fertilizer for your plants!
4. **Plant trees:**
-They consume our CO₂ and give us O₂ which is a clear benefit. Plus they are beautiful and will give us shade as our climate gets hotter.
5. **Reuse grocery bags, veggie bags, lunch bags, sandwich bags or get reusable bags or containers:**
-Reduce garbage.
6. **Get this newsletter emailed to you instead of mailed to you!**
-Send me an email and I'll digitally send you the newsletters moving forward (doctor@nicoaraperio.com).