



2016

Impact Report

**Learn how your support
made a difference**



SILENT SPRING INSTITUTE
Researching the Environment and Women's Health



You waited a long time for this...

Major Chemical Safety Bill Passed, Allows for Expanded Regulation of Toxic Substances

Intense scrutiny required to prevent weakening of reform

In 2016, Congress finally passed legislation overhauling our nation's outdated chemical safety law. The original bill passed in the 1970s. This new reform provides you with an historic opportunity. You now have a real chance to get toxic chemicals out of products found where you live, work, and play.

Your commitment to a toxic-free future laid critical groundwork for this policy change. As always, it wouldn't have happened without you!

Your victory — years in the making

Silent Spring Institute's Household Exposure Study was a milestone in this journey. It documented consumer products as a major source of exposure to hormone-disrupting chemicals. All more than ten years ago!

That key evidence showed the original law wasn't protecting the public as intended. This study would not have been possible without your long-time support.

What now?

The new legislation empowers the Environmental Protection Agency (EPA) to regulate thousands of chemicals in use today. Almost none of these have been properly evaluated for safety.

First 10 Chemicals Selected for Risk Evaluation

- ✓ 1, 4 Dioxane*
- ✓ 1-Bromopropane
- ✓ Asbestos
- ✓ Carbon Tetrachloride*
- ✓ Cyclic Aliphatic Bromide Cluster
- ✓ Methylene Chloride*
- ✓ N-Methylpyrrolidone
- ✓ Pigment Violet 29
- ✓ Trichloroethylene*
- ✓ Tetrachloroethylene*

** Mammary gland carcinogens or linked to breast cancer*

But the work to ensure this new law protects public health has only just begun. In the current political climate, the law may even be used to declare some dangerous chemicals harmless. And this could prevent states from regulating them!

Silent Spring's unique role

EPA has picked 10 priority chemicals for immediate analysis. We already know six of them. Five are breast carcinogens or linked to breast cancer. And one is a flame retardant, another key focus of our exposure research. With your help, Silent Spring will play a key role in the review process of these chemicals.

The regulation of toxics will hinge on debates about scientific methods and evidence. The chemical and manufacturing industries will surely have a blank check to hire experts. And no doubt, they will generate significant data to protect their interests.

You need your own experts working to protect your health and the public as a whole. With your continued generosity, Silent Spring can be that voice. **Together, we can stop threats to undermine evidence-based science policy.**

"I [was] diagnosed with two primary cancers in the span of 14 months. Apply this...to the general population, and you understand the incredible value of prevention. In this context, it is hard to overestimate the value of the work of Silent Spring."

~ Helen Drinan, President of Simmons College

Helen Drinan (right), President of Simmons College, after Linda Paresky (left) presented her with Silent Spring Institute's 2016 Rachel Carson Advocacy Award. Simmons College is part of Silent Spring's Healthy Green Campus Project.





One of Many Cutting-Edge Research Studies You Made Possible in 2016...

Toxic Chemicals Found in Almost Half of Fast Food Wrappers

A new study shows you've got to think about more than calories, fat, and carbs when getting your next takeout meal. You also have to consider what's in the packaging your food comes in.

Packaging contains highly fluorinated chemicals

This first comprehensive analysis revealed fast food packaging often contains highly fluorinated chemicals. These are the same chemicals used in nonstick, stain-resistant, and waterproof products. Things like carpeting, cookware, and outdoor apparel.

"We've all heard that eating more fresh foods is better for our health. This is another reason why."

~ Dr. Laurel Schaider, Silent Spring Scientist & Lead Study Author

With your support, Silent Spring Institute analyzed more than 400 samples from 27 fast food chains. Results showed almost half of paper wrappers (*think burger wrappers and pastry bags*) contained highly fluorinated chemicals. So did 20 percent of paperboard samples, like the box for your french fries or fried chicken.

The food industry uses these chemicals because they resist oil, water, and stains. This keeps the grease or sauces on your burger from leaking through the wrapper.

What Can You Do?

Tips for Reducing Your Exposure to Chemicals in Food Packaging

- ✓ Avoid takeout items that come in grease-proof packaging.
- ✓ Ask companies to use food packaging that does not contain harmful chemicals.
- ✓ Don't store your leftovers or reheat your food in the packaging.
- ✓ Limit the amount of time you leave your food in the packaging, and use your own plate or bowl.

Chemicals increase risk of cancer and other diseases

The potential health risks associated with highly fluorinated chemicals are serious. Cancer, thyroid disease, immune suppression, decreased fertility, and low birth weight top the list. Given this, you'd probably prefer greasy fingers. Or even better, that restaurants would package food in safer alternatives.

Among the 27 chains included in the study were Starbucks, Panera, Dunkin' Donuts, Subway, Chipotle, McDonald's, Wendy's, and Taco Bell. The peer-reviewed research was published February 1st. Findings were reported in more than 100 news outlets worldwide.

Previous studies have shown chemicals from packaging can leach into your food. Especially when the food is hot and greasy.

The FDA still allows more than 90 fluorinated chemicals to be used in materials that come into contact with your food. Clearly, your help is still needed!

Your support funded a study highlighting the danger of highly fluorinated chemicals in fast food packaging. Findings will allow consumers to make more informed choices when ordering takeout. And encourage manufacturers to switch to safer packaging.

Percent with Fluorine



Dessert & Bread Wrappers **56%**



Sandwich & Burger Wrappers **38%**



Paperboard **20%**



Paper Cups **0%**





More Science for Public Good, Made Possible By You...

Water Supplies for More Than Six Million People Contaminated By Highly Fluorinated Chemicals

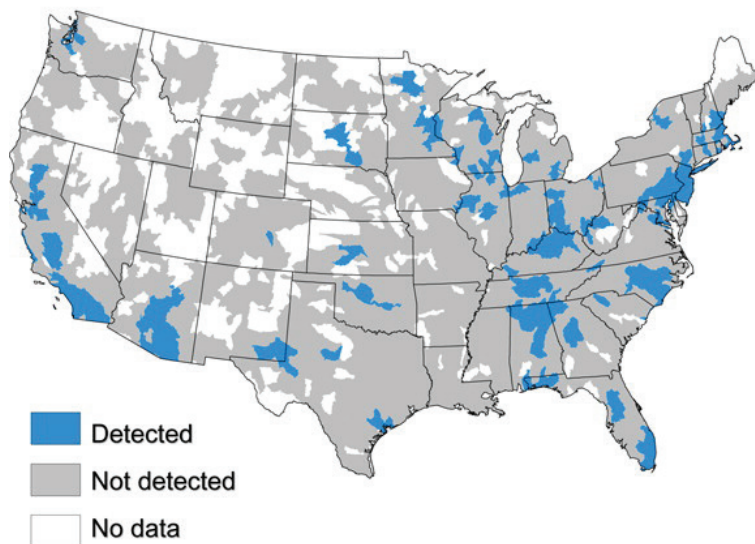
Events in Flint, Michigan, brought widespread attention to the problem of lead in drinking water. Last year, your support enabled Silent Spring Institute to show another far-reaching issue: highly fluorinated chemicals in drinking water.

Your donations fueled an analysis of nationwide data. Findings showed contaminated water for more than six million people in the United States. In this case, contaminated with highly fluorinated chemicals above EPA guidelines. These chemicals pose many health risks such as cancer, thyroid issues, high cholesterol, and obesity.

The number could be even higher

The study puts the number of Americans exposed to unsafe levels of highly fluorinated chemicals at six million. But you should know that could be a gross underestimate. Another ten million people are drinking water with detectable levels of these chemicals. However, they fall within what the EPA considers safe. Then, there are the sources that aren't part of EPA's water monitoring program. Water that comes from small public supplies and private drinking water wells. That's a lot of people who also might be exposed to contaminated water.

Hydrological units with detectable PFASs



Areas in blue show water supplies where highly fluorinated chemicals were found. Despite the health risks, the federal government still does not regulate these chemicals in drinking water.

Sources of contamination vary

The study traced many possible sources of contamination. These include military fire training areas, airports, industrial sites, and wastewater treatment plants. In fact, public water supplies near military bases were three times more likely to contain elevated levels of highly fluorinated chemicals. After the study was published, the U.S. Air Force stopped using fluorinated foams during training. Hopefully, with your continued support, we can convince others to follow.

Lack of federal regulations persists

Despite the risks, the federal government still does not regulate highly fluorinated chemicals in drinking water. And that's certainly not going to change anytime in the next four years! All this makes Silent Spring more grateful than ever for your support of science serving the public interest.

**Dr. Laurel Schaider, in the field,
labeling water samples for analysis.
Your generosity helps support all her
research aimed at reducing exposure
to toxic chemicals in drinking water.**





Your dollars are revolutionizing prevention...

Pilot Study: Chemicals Tested for Breast Cancer Risk Using High-Speed Screening

Imagine researchers being able to test hundreds of chemicals, all at once, for health risks... Now, imagine knowing which ones are most likely to increase your chance of breast cancer...

Thanks to you, this might soon be a reality. And, your support is what's making it possible!

What now takes years could take days...

The technology is called "high throughput screening." And it has the potential to revolutionize breast cancer prevention.

It would take years to analyze so many chemicals using traditional screening tools. But with this technology, hundreds of experiments could be done in days—or even hours.

Pharmaceutical companies have used this technique for years. And toxicologists recently adopted it for studying chemicals in liver, kidney, and lung cells.

But, as you may often find to be the case, there's been a gap in knowing the effects of these chemicals on breast cells. Until now...



"Ultimately, this technology will help us get chemicals that contribute to breast cancer out of everyday products."

*~ Dr. Vanessa De La Rosa,
Postdoctoral Research Fellow at
Silent Spring*

Pilot batch of chemicals under review

Enter Vanessa De La Rosa. She's a postdoctoral research fellow at Silent Spring Institute, with a PhD in Molecular Toxicology.

Dr. De La Rosa recently did high throughput screening on a pilot batch of eight chemicals. She processed each using technologies at the forefront of toxicity testing.

The results should show the unique effects each chemical has on breast cells. And once the pilot proves successful, the first full batch of 100 chemicals will be tested!

The outcome will help focus research on the chemicals most likely to cause breast cancer. Not to mention, improve our ability to regulate toxics and create safer products.

More to come on how this cutting-edge technology advances... Only with your continued support, of course!

Your support enables Dr. Vanessa De La Rosa (shown here in the lab) to develop "high throughput screening" techniques. This technology would allow hundreds of chemicals to be tested for links to breast cancer—and faster than ever before!





You're creating a healthier environment for students...

Analysis of Flame Retardants Reveals Pervasive Exposure on College Campuses

Your commitment powers our research on the chemicals we're exposed to every day. Including at colleges and universities!

Last year, your support raised awareness of the links between exposures on campuses and potential health risks. As part of this, you are also helping to engage students in the research. That means a whole new generation of scientists working for the public good. Put it all together and you've got the *Healthy Green Campus Project*.

SNEAK PREVIEW: Analysis of flame retardants on campus

The first case study you made possible through this project looked at flame retardants on two college campuses. These chemicals are known toxics. Exposure is linked to cancer, lowered IQ, and thyroid issues.

Your support enabled us to conduct the first comprehensive analysis of these chemicals on college campuses. This pilot project examined nearly 100 dust samples and found flame retardants in every single one.



"Silent Spring has been an invaluable partner, ensuring that our strategy can be driven by science..."

~ Heather Henriksen, Director of Harvard University's Office for Sustainability

More detailed peer-reviewed findings will be released later this spring. And you'll be among the first to know!

Purchasing power of colleges could influence product safety for all

Your support of this research lets administrators better protect students and staff. You're allowing us to collect the data needed to make healthier purchasing decisions. In fact, Harvard University has already pledged to buy furniture that's free of flame retardants.

These decisions will drive demand for products free of toxic flame retardants. And greater demand benefits us all!

Students at Simmons College review their research findings with Silent Spring scientists. This work is part of the *Healthy Green Campus Project*, an effort to reduce the chemical footprint on college campuses.





Coming in 2017: What's inside you?

Understanding Chemical Exposures, One Urine Sample at a Time...

Newest research project uses biomonitoring to advance cancer prevention

When Silent Spring Institute's newest research project launched in December, more than 200 people signed up to be part of it. And that was just in the first thirty days!

The project is the Detox Me Action Kit. It is the world's first crowdsourced, biomonitoring research study. With a simple urine test, this effort will measure personal exposure to toxics. Specifically, household chemicals that may lead to breast cancer and other diseases.

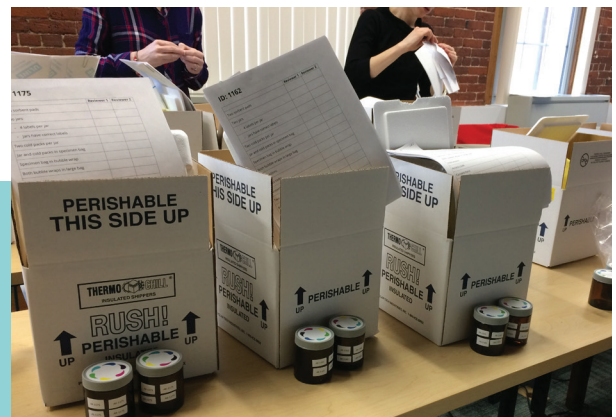
Your support of this innovative research could have a major impact on public health and cancer prevention. You will help us identify the most common sources of exposure to toxic chemicals. And, you will educate the public on risks of exposure and how to limit them.

Your commitment to this project could also increase testing and regulation of chemicals. Plus, advocate for better consumer protections, hold manufacturers accountable, and demand safer products.

Participants are tested for 10 common household chemicals that pose potential health risks. By taking a simple urine test, you can learn your level of exposure to BPA, parabens, and triclosan. You'll also better understand your likely sources of exposure. You'll even get tips to reduce your chemical levels.



The first round of Detox Me Action Kits has been shipped to participants. But it's not too late for you to be part of the first-ever biomonitoring study. Visit www.silentspring.org to learn more and sign up!





Your support turns research into policy that improves public health...

City of Boston Changes Fire Code to Allow Furniture Free of Toxic Flame Retardants

Your support of research on the risks of these chemicals helped make the case

Until last spring, Boston was the only major city in the United States with a decades-old flammability standard. And, there was no exception for buildings with automatic sprinklers. Thanks to you, that's changed!

The Boston City Council passed a bill to amend the fire code in March of 2016. This allows public areas with sprinklers to use furniture free of flame retardants. Your support of Silent Spring Institute's research on flame retardants helped make the case to the City Council.

The bill will reduce the presence of toxic flame retardants in public buildings across Boston. And, that means healthier hospitals, schools, colleges, libraries, and theaters throughout the city. This historic change was only possible because of your support.

You enabled us to show that flame retardant chemicals migrate out of furniture and into the air and dust. From there, they end up in our bodies, which is quite concerning. Exposure to flame retardants is linked to cancer, low birth weight, thyroid problems, and fertility issues.

There are continued efforts to phase out the use of flame retardants in children's products and residential furniture. And their success depends on your continued support!

Look for the Flame Retardant-Free Label!

When you're buying new furniture, look for flame retardant-free labels. For more tips on reducing your exposure, download Silent Spring's free Detox Me app at www.silentspring.org/detoxme.





Former member of President's Cancer Panel speaks...

Why Isn't Cancer Prevention a Priority?

You've likely heard of Former Vice President Joe Biden's Cancer Moonshot Initiative. This is a \$1 billion effort charged with accelerating the rate of progress in cancer research. Yet, prevention is little more than a footnote in the strategy. Here, Dr. Margaret Kripke shares her thoughts on why...

Research shows that more than half of all cancers are preventable. Yet, why isn't prevention a priority? More precisely, why aren't environmental chemicals a focus of prevention research? When researchers talk about prevention, more often than not, they're referring to things like diet, exercise, tobacco, and other lifestyle factors. Given the mounting evidence linking environmental chemicals with cancer, however, and the fact that toxic chemicals are so widespread, it's hard to understand why there is so little research focused on environmental carcinogens.

As a cancer biologist and former chief scientific officer of the Cancer Prevention and Research Institute of Texas, where I oversaw the institute's research portfolio, I see several reasons. One is that substantial funding for cancer research has been driven by advocacy groups that want cures. It is also heavily influenced by fashion. Right now, immunotherapies. . . and genomic profiling of cancers to tailor treatments to individual cancers are leading trends. In addition, drug companies, which finance the majority of cancer research and development, have a financial incentive only to study treatments and cures, not causes and prevention. . . .

. . . We all want cures. But investment in prevention would have a much larger impact on the problem by reducing the incidence of the disease and sparing people from the medical, psychological, and financial burdens of a cancer diagnosis. . . .

So what do we do now? Read Dr. Kripke's recommendations on Silent Spring's website at <http://silentspring.org/kripke>



"Speaking as someone who was cured of cancer by surgery and chemotherapy, all things considered, I would have preferred prevention."

~ Dr. Margaret Kripke, speaking at Silent Spring's 2016 Gala



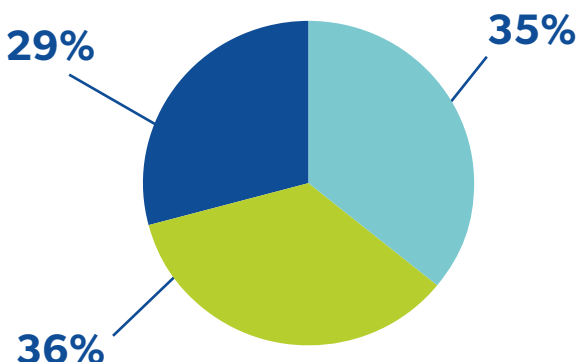
Transparent Financials & Accountability

The budget of Silent Spring Institute has remained relatively stable over the last few years. However, the sources of support for cancer prevention research are changing. Grants from the federal government have been on the decline – from 48% of Silent Spring’s income in 2015 to 36% in 2016. This trend will only continue under the current administration. Fortunately, the generosity of true believers like you has allowed us to hold our ground. Your continued support going forward will be critical. Thank you for your commitment to prevention!

Silent Spring Institute has the highest standards of financial transparency, integrity, and accountability. We value your trust and take your investment seriously. **If you would like a copy of our audited financial statements or additional information of any kind**, please contact Cathy Cotton, Development Director, at cotton@silentspring.org or 617-332-4288 x215.

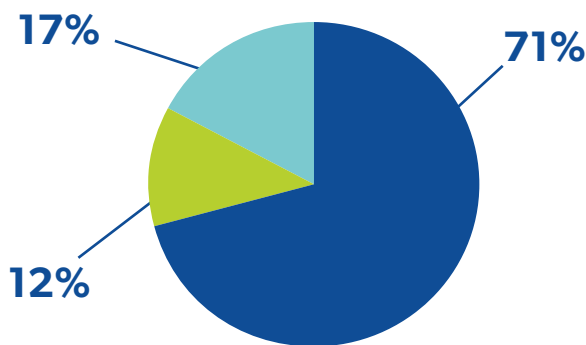
Income for 2016 Fiscal Year: \$2,167,581

- Federal Grants \$784,689
- Foundations \$757,199
- Individual Contributions \$625,693



Expenses for 2016 Fiscal Year: \$2,298,317

- Administrative \$277,667
- Fundraising \$378,864
- Research & Programs \$1,641,786





Looking for your name? Do you want to see who else was a supporter last year?

Satisfy your curiosity by visiting www.silentspring.org/weloveourdonors. That's where you can see the full list of all the wonderful people (*like you, hopefully!*) who donated in 2016 and made everything you see in this report possible. Thank you!

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