



SILENT SPRING INSTITUTE

2020 IMPACT REPORT



*Thank you
for putting*
**Science
First**

It seems like a no-brainer, right?

Public health policies should be based on science, first and foremost.

Especially when it comes to regulating toxic chemicals in our own homes.

Sadly, that's usually *not* the case.



BECAUSE OF YOU, 11 toxic flame retardant chemicals, frequently used in furniture and carpeting, will be banned in Massachusetts (see details on page 2).

Powerful players in industry prioritize profit above public health, and – unfortunately – they have great influence over policy decisions.

You know this all too well, as someone who supports our work at Silent Spring Institute.

You know about the toxic, cancer-causing chemicals that companies put into products we use every day . . . and that industries discard into the water supplies of millions of Americans across the country.

Now, during this last terrible year, we've learned that these harmful chemicals in our air, water, and consumer products can also increase our vulnerability to the ravages of COVID-19.

Making it more essential than ever that our policymakers look to **science first** when they make decisions that affect our health. That's why we are so grateful for generous donors like you, who believe deeply in science that supports public health.

Thank you for creating a safer world – where we and our children can breathe the air, drink the water, and use the products we buy without fear.

The following pages describe a few of the many amazing things your generosity accomplished in 2020. Read on! >>>

New law bans toxic flame retardants in Massachusetts

WITH PERSISTENCE, PASSION, AND SCIENCE, Massachusetts State Senator Cynthia Stone Creem and State Representative Marjorie C. Decker triumphed over the chemical industry this past New Year's Day. That's when Governor Baker signed a new law banning the use of 11 toxic flame retardant chemicals in household and children's products.

These tenacious legislators — working with a coalition of environmental advocates and the state's firefighters unions — provided the passion.

And thanks to you, Silent Spring provided the irrefutable science.

Flame retardants. They're not just toxic, they're also ineffective.

For more than two decades, Silent Spring scientists have investigated the harm posed by flame retardants, which have been linked to serious conditions including cancer, thyroid disease, decreased fertility, and lower IQ — just to name a few.

Our studies showed that these toxic chemicals are present in our homes. Over time they escape into the air and dust from products we use every day, such as furniture, children's car seats, strollers, and carpet pads. They have been found in breast milk and umbilical cord blood.

When furniture and products containing flame retardants burn in a house fire, they make the smoke more toxic. Firefighters are exposed to the poisonous fumes when they go into burning buildings. Unfortunately, it's not surprising that these first responders have significantly higher rates of cancer compared with the general population.

And here's the kicker: flame retardants don't make households safer. A recent Silent Spring study showed that — despite the chemical industry's claims — adding flame retardants does not protect people against the deadliest types of furniture fires.

Lawmakers join forces to protect us

Doing the science to reveal the risks is the critical first step. But how do we get from the science to a law that will protect us from these risks? That's where Senator Creem and Representative Decker come in.

They came to the issue for different reasons. Senator Creem filed the first bill to ban flame retardants eight years ago, after she read an article in *The New York Times Magazine* called "How Dangerous Is Your Couch?"

"The answer is — extremely dangerous," says Senator Creem. "It was a wake-up call. We filed this bill in the Senate way back then to protect families from inhaling or ingesting what science tells us is toxic — in our own homes." The bill didn't get enough support to pass, but that didn't stop Creem from filing it again.

Soon after, Representative Marjorie Decker was contacted by the Professional Fire Fighters of Massachusetts to file a similar bill in the House.

"When they explained the staggering, breathtaking statistics regarding the rise of cancer among firefighters, I was astonished," says Representative Decker. "We were allowing chemical companies to make exorbitant profits off the health and safety of firefighters who are literally risking their lives for us."



State Representative Marjorie C. Decker (L) and State Senator Cynthia Stone Creem (R) with the firefighters and advocates who supported their efforts to pass the bill.



Creem and Decker joined forces to drive the bill through the legislative process. "Silent Spring provided the initial research," says Decker. "They were our indispensable guides to the science."

Rodgers. "I interpreted the science for legislative staff members when they were getting pushback from industry or questions from firefighters."

Creem and Decker confronted the chemical

"This is a huge victory and a testament to what happens when lawmakers follow science over the chemical industry's propaganda." REPRESENTATIVE MARJORIE DECKER

The bill was approved in both houses and finally landed on Governor Baker's desk on January 1, 2019.

Unfortunately, he vetoed the bill.

Creem and Decker never gave up

But as Creem says, "The key is persistence. And knowing you're right." She and Decker filed their bills yet again. And they worked throughout the two-year session to strengthen their coalition and their case.

Silent Spring staff scientists were there every step of the way. "I showed up at the statehouse to give testimony," recalls staff scientist Kathryn

industry's flame retardant lobbyists with scientific facts and data. "I challenged them on the science with Silent Spring's research in hand," Decker recalls. "I was able to contradict every argument they used with science, facts, data. They were speechless."

The third time was the charm. The increased support from advocacy and firefighter groups, combined with the overwhelming science, persuaded Governor Baker.

He signed the bill into law on January 1, 2021.

Thanks to Senator Creem, Representative Decker, and to you for doing so much to make our families and our firefighters safer! ♦

» Meet Ruthann Rudel, Silent Spring's visionary Director of Research

Inspired, inspiring, and committed to preventing breast cancer

Ruthann Rudel, a renowned leader in toxicology research, has vastly expanded our understanding of the links between chemical exposures and breast cancer. Lucky for us, she switched teams early on in her career.

“Our donors provide a place for the best scientists to do research in the public interest. There are not a lot of options for this. Science is expensive and public health gets short shrift.” RUTHANN RUDEL

RUTHANN WAS EXCITED when she got her first job as an environmental chemist. Her colleagues at a respected environmental consulting firm were bright scientists with dreams of making the environment safer — just like her. She learned a tremendous amount from her mentors there.

But the firm's clients were chemical companies motivated by profit. It wasn't long before she became uncomfortable with the fact that her research was helping companies reduce their risk of liability and avoid environmental regulations.

“I realized that hardly anyone in environmental science was creating science to advance public health goals,” she says. “The jobs available for scientists like me happened to be in industry.”

When she heard a presentation on the work and mission of a new organization called Silent Spring Institute, she thought this might be a way to “do science on the other side, for public good.”

That was 25 years ago. She's been leading Silent Spring's research program, alongside executive director Julia Brody, ever since.

Making the invisible visible

“At Silent Spring, our clients are people who are concerned about breast cancer — not profit-seeking companies,” says Ruthann. “And the goal — far from making profits — is preventing breast cancer.”

To prevent cancer, scientists need to understand what causes it. We know that very few breast cancers are due to high-risk inherited genes. The vast majority have other causes — including environmental factors that can hijack our hormones and immune responses. Ruthann focuses much of her work on identifying these factors.

“Some of the things we're trying to shine a light on are hiding in plain sight,” she says.

A perfect example is the Mammary Carcinogens List. In 2007, Silent Spring published a landmark study in the journal *Cancer*. Led by Ruthann, the study identified 216 chemicals that

cause mammary tumors in animals — and very likely affect breast cancer in humans.

Shockingly, these chemicals are widespread in consumer products, food, and air pollution.

Why was this groundbreaking? “If nobody knows which chemicals are likely to cause breast cancer, if that information is invisible,” says Ruthann, “it's impossible to act on them.”

Once researchers identify chemicals that cause breast cancer, however, government can craft policies to prevent manufacturers from using them. And consumers can get the information they need to avoid products that contain them.

Thanks to your support, Ruthann is on a mission to eradicate preventable breast cancers by “making the invisible visible.”

She's blazing new trails in prevention research aimed at saving countless women from the tragedy of breast cancer — including developing high-speed screening methods to identify chemicals likely to increase breast cancer risk, and mapping the molecular changes that occur when a chemical exposure leads to the formation of a tumor.

A box of gems

As Silent Spring's Director of Research, Ruthann has a hand in all our research. She loves her role as a mentor and she couldn't be prouder of the staff she and Dr. Brody have assembled over the last 25 years.

“It's like a box of gems. Brilliant, mostly women scientists who share our commitment to public interest science.”

It's Ruthann's leadership, as well as the unique nature of Silent Spring's mission, that attracts such high-quality scientists.

“I can't think of any other institution that dedicates itself to creating science that can be used to prevent disease by reducing exposure to toxic chemicals in the environment.” says Ruthann. ♦

»» *Why I Give to Silent Spring Institute*

Meet Cynthia Barakatt



CYNTHIA is a retired director of a center focused on global environmental issues, science communications expert, former Silent Spring board chair, and donor since 1999.

“Recently, I’ve had several friends and family members diagnosed with breast cancer. I hate it — and I want it to stop.

“The only way to make that happen is through prevention — understanding the causes and risks and how to address them. Silent Spring is at the forefront of looking at the relationship between environmental exposures and biological pathways to breast cancer. That’s what got me invested. And that’s what keeps me here.

“As a donor, I’m so proud of the changes in toxic chemical policy Silent Spring has made possible. Like their 2008 study that facilitated a change to flammability standards aimed at reducing the use of toxic flame retardants in furniture in California.

“A couple of years later, when I was shopping for a new sofa, I called a furniture store in Massachusetts to ask if they had one without flame retardants. I expected they’d have no idea what I was talking about. But they knew. They said, ‘Yes, all our furniture now complies with that standard.’ I was amazed! That’s tangible progress, resulting from Silent Spring’s research!”

Meet Polly Hoppin

“I’ve learned a lot, throughout my career, about the ways science can be used by industry to undermine a community’s concerns about toxic chemicals in the environment. And how little science there was to help communities. So much was tilted in the direction of the polluters.

“I became aware of Silent Spring as an organization working in service of communities when a friend took me to the annual Gala. I was

utterly blown away by the people there, the speakers, and the vision for what was needed. That’s when I became a donor.

“One of the many things I admire about Silent Spring: There are very few nonprofit research organizations that consistently get funding from the National Institutes of Health and other government funders. It’s an extremely rigorous process. But they do — despite the bias toward academic institutions as opposed to nonprofits. It’s a testimony to the caliber of Silent Spring’s science.

“Silent Spring has this special sauce combining rigorous science with clarity about how important it is to apply their research in ways that benefit real people, living in real communities.”

Meet Robin Polishook

“I can’t count the number of friends and relatives who have been diagnosed with breast cancer. I don’t want to get it and I don’t want any more of my friends to get it. No more.

“When my daughters were very young, I attended an event to learn about Silent Spring’s work. I remember getting home and starting to frantically assess what needed to be changed in my home. I wanted to do everything they talked about to make my family’s environment safe.

“Then, of course, I wanted to tell everybody about it. I spread the word because I’m a selfish lady. I love my family. I love my girlfriends.

“I once heard someone say that the longest journey you’ll ever make is bringing knowledge from the mind to the heart. Silent Spring does that. They are giving women this information and the tools to effect positive change, so they can realize their dreams for a better tomorrow.

“That’s what makes me excited about supporting Silent Spring.”



POLLY is a professor of public health, co-founder of the Cancer Free Economy Network, and colleague and donor since 2008.



ROBIN is a speech and language pathologist, mother of two daughters and grandmother of Eila, champion of Silent Spring’s mission, and donor since 2003.



We hope you're proud.... You made these successes and discoveries possible in 2020 – THANK YOU



Because of you, New York banned toxic PFAS chemicals from food packaging

PFAS ARE KNOWN AS “forever chemicals” because they remain in the body for decades and can take thousands of years to break down in the environment. They have been linked to cancer, thyroid disease, birth defects, hormone disruption, decreased fertility, immune system suppression, and other serious health effects.

You've probably heard that they are used in nonstick cookware, stain-resistant fabric and furniture, and cosmetics. But did you know that they are also used in the wrappers and boxes for takeout and fast foods? Silent Spring scientist Dr. Laurel Schaidler published a study in 2017 showing that one-third of all fast-food wrappers contain PFAS, which can migrate into food.

That's the kind of science that can change health policy – and New York cited our science as basis for the new law. At this point, New York is only the third state to ban PFAS from food packaging, but at least a dozen other states have introduced bills to do the same – including Massachusetts.

Your generosity is powering the research behind these policy changes. **Thank you!**

Let your legislators know how important it is that they get PFAS banned where you live. And ask your favorite restaurants to switch to takeout containers without PFAS!



Thank you for holding a powerful chemical company to account

DIRECTOR OF RESEARCH Ruthann Rudel is serving as a scientific advisor to six organizations working on environmental justice.

She helped draft a petition that the organizations submitted to the Environmental Protection Agency (EPA) last October. The petition demanded that Chemours (a spin-off of Dupont) be required to test 54 PFAS chemicals that they've been dumping into a river that provides drinking water for over 300,000 people in Cape Fear, North Carolina. These chemicals have been found in the region's drinking water, groundwater, soil, air, and locally produced food, and have also been detected in people's blood.

EPA rejected the petition.

Although we – and the six environmental groups – were deeply disappointed, we were not surprised. The previous administration discounted science and prioritized the profits of corporate polluters over people's health.

But we're confident there will be good news in the future. The Biden administration has pledged to work on reducing our exposures to PFAS. With Ruthann's guidance – and your support – she and her partners resubmitted their petition so that 300,000 residents in and around Cape Fear will finally learn what they have a right to know – whether or not their water is safe.



You are creating healthier homes for families

Thanks to your ongoing support, we compete successfully with the nation's top research labs for major grants and partnerships.

LIKE THE PRESTIGIOUS federal grant secured by staff scientist Dr. Robin Dodson last October. This \$900,000-plus grant to Silent Spring supports a new project to reduce exposures to harmful chemicals among low-income families in Rochester, New York. The project is a partnership between Silent Spring, University of Rochester, National Center for Healthy Housing, and the City of Rochester.

Rochester has a 15-year record of success at reducing lead in thousands of homes with small children. Robin wondered whether these same lead remediation efforts also reduce exposures to other toxic chemicals.

This grant will fund the partnership's work with 100 Rochester

families over the next three years to measure the impact of lead remediation on a wide range of harmful chemicals in their homes. These toxics leach into household dust from consumer products like furniture, cookware, carpeting, and children's products. They have been linked to asthma, learning disabilities, reproductive system issues, and cancer.

Findings will be used to develop better ways to protect children from toxic chemicals in their homes, not only in Rochester, but across the country.

Your generosity is having a profound impact on children's health. Thank you!

You are showing people why reading product labels is critical to their health

SURE, YOU'VE HEARD from lots of experts – including us! – that you should read labels to be sure the personal care products you purchase don't contain harmful chemicals. And sometimes, when the ingredient lists are long and hard to understand, you probably wonder if it's really worth the trouble.

Now we know for a fact that it absolutely is. Silent Spring scientists recently published results from their study in which they analyzed urine samples from 726 people. Those who avoided products with parabens, triclosan, BPA, and fragrances were twice as likely to have lower levels of toxic chemicals in their bodies.

This is great news, as these chemicals, which are commonly found in shampoos, deodorants, lotions, and the like, are associated with thyroid disease, obesity, asthma, and cancer.

We know it isn't easy to remember the names of all the ingredients you should avoid.

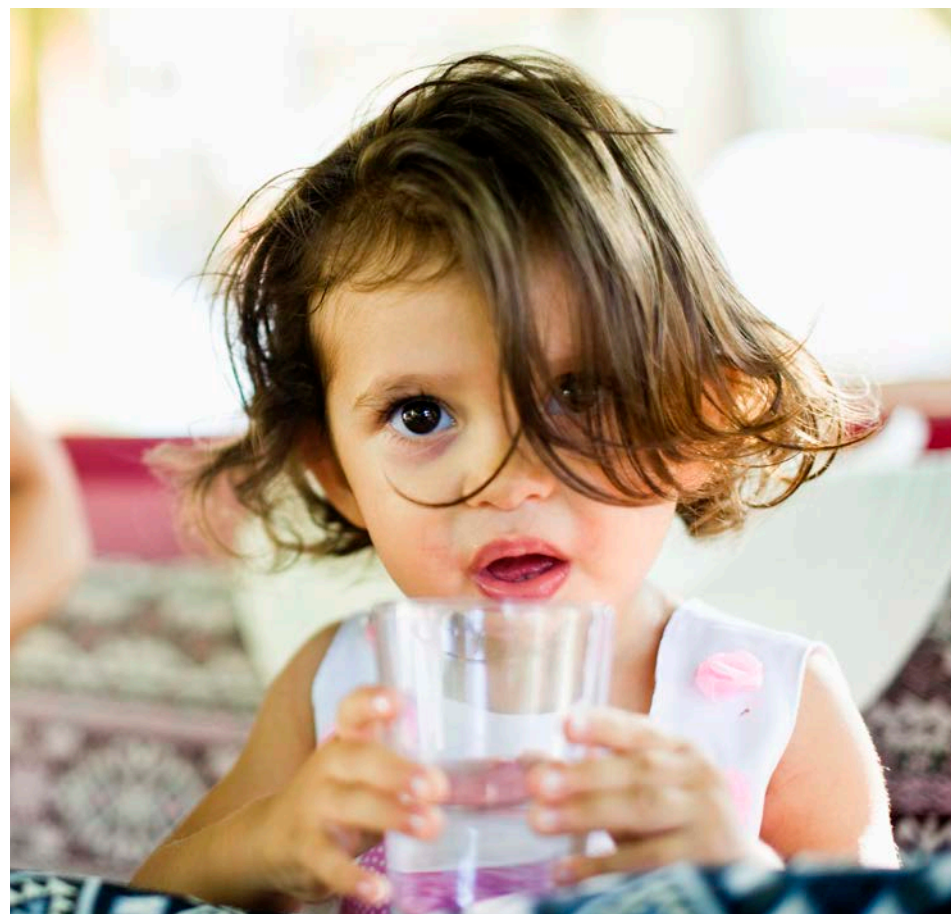
That's why we created our free mobile app, Detox Me, to be your personal shopping coach. Download it and take it with you when you shop. www.detoxmeapp.org



Celebrating With You

Although it is unlikely that we will be able to gather indoors this year for our annual gala, we do hope to hold an outdoor gathering early in the fall to be together and connect.

Keep an eye out for more details!



Is your well water safe to drink?

ANNOUNCING SILENT SPRING'S new online tool for private well owners!

If you've had your private well water tested – and you're not a chemist – you probably found the results hard to understand. Rows and columns with the names of chemical contaminants, mysterious abbreviations, and unexplained numbers are confusing.

And even if you are able to interpret them correctly, how are you supposed to know what to do about them?

Our new free online tool is here for you.

Simply enter the results from your water testing lab report and the online tool will show you how your water compares with safe standards and Massachusetts public water

supplies. The tool also tells you where these chemicals come from, how they can affect your health, and what your treatment options are for removing any harmful contaminants.

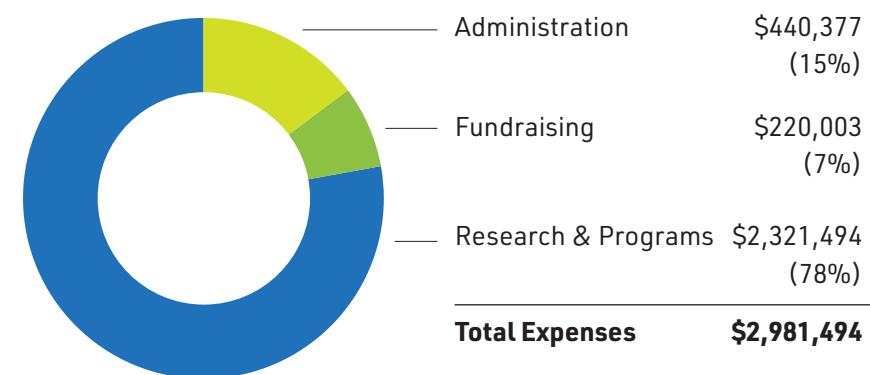
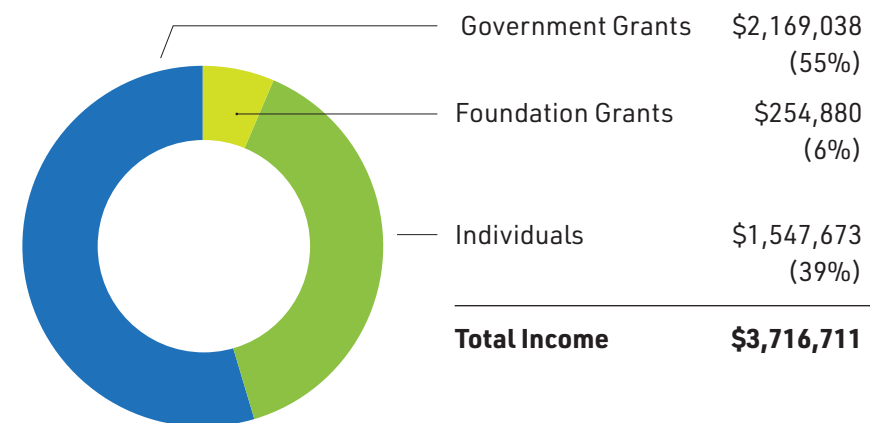
And if you haven't had your well water tested recently – please do! The Massachusetts Department of Environmental Protection strongly urges private well owners to get their well tested as least once a year. Visit our Private Wells Tool website to get guidelines for when and how to get your well tested. And to use our new tool to interpret the results.

Visit our Private Wells Tool website: privatewells.silentspring.org

Financial Information – Calendar Year 2020

DONORS – WE CAN'T DO IT WITHOUT YOU. The chart below proves it. Last year, your gifts made up more than 60 percent of our income, powering the bulk of everything we do. **Thank you for your farsighted generosity.**

We promise to invest your donations for the greatest possible impact. If you would like more information, please contact Rachel d'Oronzio Sarvey, Director of Development, at: sarvey@silentspring.org or 617-332-4288 x215



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YOUR IMPACT
2020 by the Numbers

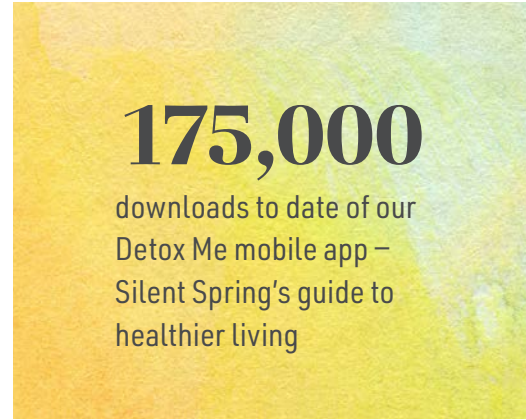
11

scientific studies published by Silent Spring in top peer-reviewed journals and mentioned in 60 news stories



175,000

downloads to date of our Detox Me mobile app – Silent Spring's guide to healthier living



\$6 million+

in highly competitive state and federal grants awarded to our scientists



54

scientific conferences and outreach events, at which our scientists presented, reaching more than 7,100 people



5

legislative bills filed and **2 signed into law**, thanks to contributions of science, education, and testimony from our scientists



\$1.75 million

in donations from generous, smart people like YOU who care about creating a healthier world for the people we love!



Thank You



“We’ve come through a long dark period, but today I’m hopeful. We’re emerging from this terrible pandemic with a deeper appreciation of our public health system than ever.

“In the next few years, I believe we will make tremendous progress eliminating cancer-causing chemicals from our environment — with government support and your generosity!

“Thank you for believing in Silent Spring.”

JULIA BRODY, PHD, EXECUTIVE DIRECTOR

SILENT SPRING INSTITUTE

320 Nevada Street, Suite 302

Newton, MA 02460

617-332-4288

SilentSpring.org

» *Researching the environment and women's health*

