

# Huron River Watershed Council: Microplastic Reduction Program Research & Outreach Summary

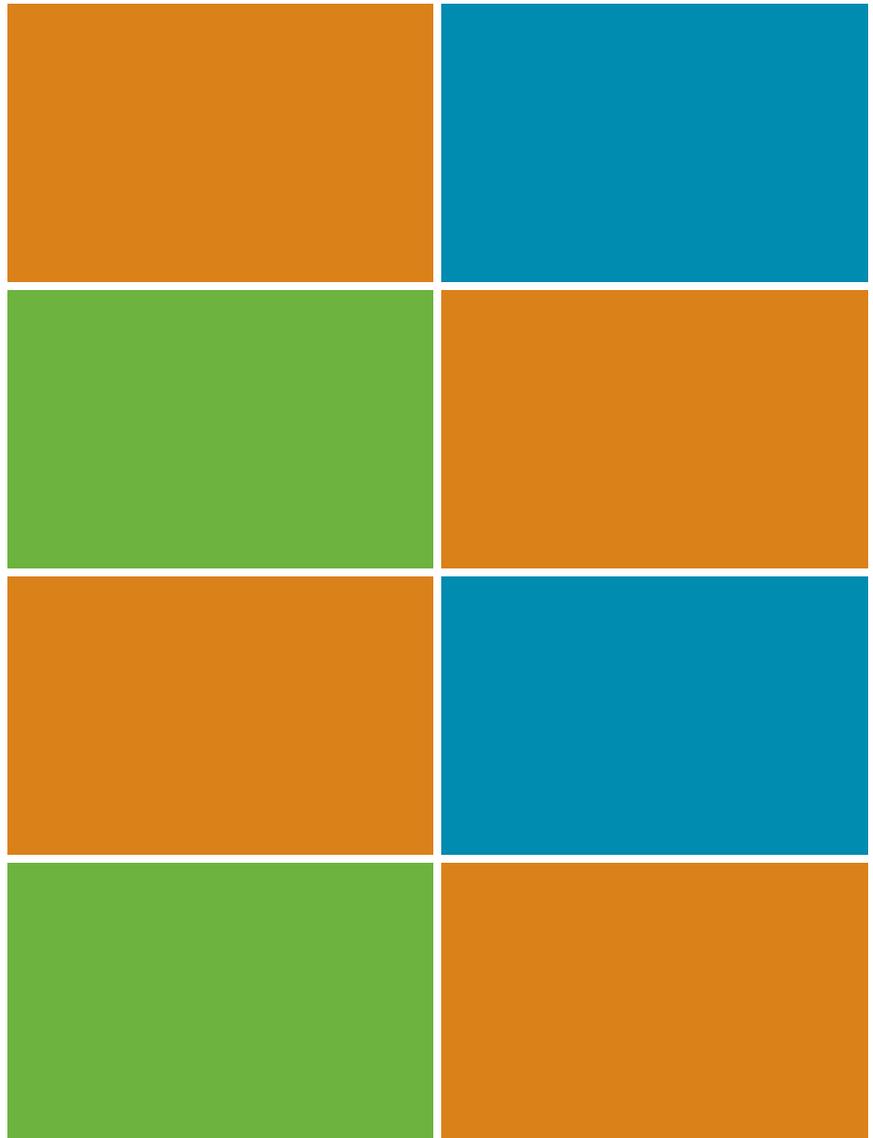
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## Approach

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To develop a microplastics reduction program, Huron River Watershed Council (HRWC) contracted with Action Research to use a behavior-based approach called community-based social marketing (CBSM). CBSM is a best practice methodology to achieve lasting, quantifiable behavior change. The process included behavior selection and research to identify the barriers and benefits of the selected behaviors. Using the research outcomes, an outreach strategy was developed to reduce barriers and enhance perceived benefits. Following the outreach, evaluation research was conducted to measure the effectiveness of the outreach strategies.

## Foundational Research

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The research and outreach activities in this report include:

- Literature Review (September 2020);
- Focus Group Summary (October 2020);
- Program Interview (February 2021);
- Final Behavior Selection and Strategy Development (May 2021);
- Initial Neighborhood Outreach Summary (June-July 2021); and
- Cora Ball Delivery Summary (August-September 2021).

## Literature Review

A challenge that many water-quality groups face is that the problem of water pollution is urgent, complex, and enormous, with pollutants coming from multiple and often non-point sources. The current literature suggests there is uncertainty about the source of microplastic fibers, which presents challenges for ensuring that HRWC targets the behavior or behaviors that will have the greatest impact on reducing fibers that flow through the Huron River Watershed. However, research does suggest that reducing the number of fibers generated from clothing with plastic content would have a meaningful impact.

Overall, there were no peer-reviewed research articles that identify the barriers and benefits to fiber-reducing actions. Therefore, a variety of news, industry articles, and blog posts were used to create an initial list of potential barriers and benefits to the following actions:

- Use a Guppyfriend Washing Bag in the washing machine;
- Use a Cora Ball in the washing machine;
- Buy and wear natural fiber clothing;
- Air-dry clothing instead of using the clothes dryer; and
- Install a washing machine filter to catch fibers before they are released into the wastewater.

## Guppyfriend Wash Bag

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Here is a preliminary list of barriers and benefits based on articles such as <https://www.fairforallguide.com/2017/08/22/i-tried-the-guppyfriend-washing-bag/>.

### Barriers

- Made of plastic
- Do not see results
- Forgetting to use it
- Cannot go in dryer
- Have to hang-dry bag
- Cost (product, international shipping)
- Uncertain what clothes should go in the bag
- Unsure how to remove/time to remove microfibers
- Uncertainty about if the machine is still cleaning clothes

### Benefits

- Environmental and health benefits of reducing microfibers

## Cora Ball

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Here is a preliminary list of barriers and benefits based on articles such as, <https://facedownwaste.com/does-the-cora-ball-capture-plastic-microfibres/>  
<https://www.forbes.com/sites/jeffkart/2019/02/01/science-says-laundry-balls-and-filters-are-effective-in-removing-microfibers/#e30fa25e07a8>.

### Barriers

- Made of plastic
- Do not see results
- Forgetting to use it
- Concerns it harms clothing
- Cost (product, international shipping)
- How to remove/time to remove microfibers
- Uncertain what clothes should go in the wash with it

### Benefits

- Can go in the dryer
- Easier to use than guppy bag
- Environmental and health benefits of reducing microfibers

## Buy and Wear Natural Fiber Clothing

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Here is a preliminary list of barriers and benefits based on articles such as <https://ecocult.com/tips-synthetic-plastic-free-wardrobe-natural-fibers/>, <https://www.contrado.com/blog/how-natural-fabrics-can-make-your-life-better/>.

### Barriers

- Cost
- More effort and time to find
- Many synthetics have ease of care
- Performance concerns (no sport bras, no yoga pants)
- Lack of knowledge of terminology (What is plastic clothing)
- Aesthetic concerns (no sparkles, limited stretch, not wrinkle free, not waterproof, not lightweight, loose fitting or hemmed)
- Limited outdoor gear (High-performance rain jackets, winter puffy coats, and lightweight camping gear will always come in synthetics)

### Benefits

- Environmental and health benefits of reducing microfibers
- Reduced skin irritation for those with sensitive skin or allergies
- Most natural fabrics are biodegradable, moisture-wicking, breathable, durable, heat-responsive and naturally repellent to mold and dirt

## Airdry Clothes

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Here is a preliminary list of barriers and benefits based on articles such as, <https://www.cleancult.com/blog/8-reasons-why-you-should-air-dry-your-clothes> and <https://www.bobvila.com/slideshow/the-dos-and-don-ts-of-air-drying-everything-you-own-52998>.

### Barriers

- Time
- Space
- Save money
- An effort to hang
- Wrinkles/aesthetics

### Benefits

- Prevents shrinking
- Protects your clothes
- Environmental/health benefits

## Install a Washing Machine Filter

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Here is a preliminary list of barriers and benefits based on articles such as, <https://thiswestcoastmommy.com/microplastic-pollution-washing-machine-filtrol/>.

### Barriers

- Cost
- Tools needed to install the device
- Renters need permission from owners to install the device
- Filter needs to be regularly cleaned
- Need space to mount the filter
- Need knowledge and skills to install the device

### Benefits

- Highly effective at removing plastic fibers before getting into the drainpipe

## Recommendations

### Behaviors

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This group of behaviors provides HRWC an opportunity to learn, through research and piloting, about a variety of audiences and contexts. The behaviors include immediate solutions for the removal of fibers from the system, as well as purchasing decisions and advocacy which take a longer view. While we do not want to ignore advocacy behaviors, we believe that outcomes from the behavior research and piloting program may be appropriate for use to promote the advocacy activities. Advocacy behaviors can be addressed after movement is made on immediate solutions to reducing microplastic pollution.

Most of the behaviors on the list are applicable to all households, given that plastic-based clothing, cleaning clothes, and bedding are so common (e.g., wicking clothing fabrics, fleece blankets, microfiber cleaning cloths). The behaviors vary in their complexity, resident's likelihood to engage, and their barriers and benefits. For one of the most impactful behaviors, installing a washing machine filter, barriers (e.g., purchase, space, installation, and maintenance), and applicability (can the household or individual engage in the behavior) are expected to vary greatly across groups. For example, student athletes in a dorm or rented space, are not able to modify the washing machine but may be willing to use a Cora Ball or airdry their athletic clothing. The research step will help to identify the behaviors that have the right combination of impact on pollution reduction, and willingness and ability to engage in the behavior.

We did not include washing clothes in cold water for the research phase as there is ample research available on the subject and we have access to a cold-water wash toolkit. Cold-water wash may be a viable behavior for the pilot program, which can be decided after the research step.

## Audiences

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Six out of seven hot spots for microplastic pollution were found in the Ann Arbor area, therefore, barrier research was conducted in select neighborhoods. The purpose of the research is to measure current level of engagement and likelihood of engaging in the target behaviors. Potential audience segments include:

- Homeowners;
- Renters;
- Those with a high-proportion of plastic-based clothing;
  - Adults in running clubs or sports leagues or membership in a gym;
  - Households that engage in outdoor activities, such as fishing, hiking, and kayaking;
  - Households with children or teens in sports leagues; and
  - Student athletes living on campus.

It is expected that some behaviors are unattainable or more challenging for some audiences. In addition to barriers, the research will be used to identify benefits that can be promoted in the program. For example, while student athletes may not be able to participate in filter installation, we may find they have an increased concern for clothing performance and see benefits to airdrying (or may already be doing so).

## HRWC Focus Group Summary

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### Background

The Huron River Watershed Council (HRWC) and Action Research collaborated to conduct four focus groups of Ann Arbor residents on October 19<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup>, and 22<sup>nd</sup> 2020 to gather information on behaviors to reduce microplastic fiber pollution. The purpose of the groups was to determine the challenges and benefits the participants had experienced or could imagine experiencing in relation to five to six actions that could reduce microplastic fiber pollution. The focus group discussion guide was developed using a literature review and focused on the following actions:

1. Using a bag to catch fibers, such as a Guppyfriend Wash Bag
2. Using a ball to catch fibers, such as the Cora ball
3. Installing a filter on your washing machine to catch fibers (homeowners only)
4. Purchasing natural fiber clothing over synthetic clothing
5. Using natural fiber cloths instead of synthetic cloths
6. Airdrying clothes (renters only)<sup>1</sup>

There was a total of 21 participants between the four groups; three renters on October 19<sup>th</sup>; three renters on the 20<sup>th</sup>; seven homeowners on the 21<sup>st</sup>; and eight homeowners on the 22<sup>nd</sup>. There was a mix of males and females, with estimated ages ranging from early 20's to over 60.

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<sup>1</sup> Airdrying was included only for renters due to the total amount of time allotted to the group – while it is applicable to owners as well, the inclusion of the washing machine filter discussion did not allow for sufficient time to address both.

## Methods

Participants were recruited for the focus groups using multiple methods: direct mail postcards and the City of Ann Arbor posted on their NextDoor account and email newsletter. Participants were first screened using a survey, included in *Appendix A: Screening Survey*, and then screened on a phone call with HRWC staff. The recruitment was restricted to Ann Arbor residents. The focus groups lasted approximately 90 minutes, and participants were provided a \$75 gift card for their time. The guide is included in *Appendix B: Focus Group Guide*.

## Themes

Multiple themes emerged during the focus groups which are summarized below.

**Residents value the Huron River.** All respondents reported valuing the river. The specific qualities they valued most varied from the aesthetic benefits to recreation uses (kayaking, fishing) to drinking water. Many mentioned the Huron River being an integral part of the Ann Arbor community. Some participants mentioned that they were aware that there are pollutants in the river, which reduces their enjoyment of it.

*[The river] is literally in my backyard. It pleases me to be around it. I insist on living near water.*

*I think of the river for recreation, for kayaking and running along...and a source of drinking water.*

*I spent a lot of time swimming in the river growing up, but it was always the kind of thing that you'd go swimming, and your parents would say, okay you have to shower after this.*

*It's dammed in many places, has a lot of trash compared to some of the more pristine rivers. Love it, love to be on it, but I lament a little bit that it's not like these more pristine streams up north.*

**Low awareness of the presence of microplastic fibers in the water and what actions could be taken to prevent the issue.** Few respondents were aware of specific issues around microplastic fibers, as opposed to microplastic beads, PFAS, and other plastic related pollution. In addition, few had heard of any of the behaviors that that could reduce microplastic fibers (ball, bag, filter). While they had heard of the others (buying natural clothing and cloths, airdrying), most of the awareness was not related to microplastic fibers.

*I've chosen natural [clothing] for other reasons, but never for a microplastics concern.*

*I've never thought about [any of these actions] before as a way to reduce microplastics. The biggest barrier is never thinking about it.*

*The issue of microplastic fibers hasn't been on my radar...This conversation has been eye-opening.*

**Technical challenges were presented across the washing machine behaviors.** In reference to the bag and the ball, participants questioned if their clothes would be able to get clean, if their clothes would fit in the bag, or if they would remember to use either on a consistent basis. With the washing machine filter, participants were mixed – some stated they were confident about their ability to install the filter, while others were certain they would need to hire someone. One participant mentioned that she had been considering a filter, but her inability to install it herself had held her back. Participants also mentioned concerns about cleaning the ball, bag, or filter, from proper methods to if the item would break if not cleaned frequently.

*I would be concerned if my clothes were really getting clean if I used [a Guppyfriend bag], if it's capturing all the fibers inside.*

*We have community washers/dryers, you have to carry all your stuff to another building, I would be a lot less likely to use [the bag].*

*I could see me forgetting [the ball] every few loads.*

*I would have to hire a plumber [to install the filter]. I'm not a do-it-yourself person.*

*You would have to make sure the filter doesn't clog up and cause problems.*

**Identifying and purchasing natural clothes is difficult.** Multiple participants mentioned that they were uncertain if they could identify and purchase non-synthetic clothes easily, given the similarity in feel and confusion about which fabric names are natural and which are not. This was mentioned as a particular concern with online shopping, as in person, they can check a tag, but they were less certain if online stores are clear about this information. One participant mentioned they wished that natural clothing had a visible label similar to *Energy Star*, where they could easily identify if clothing had synthetic or synthetic components. Furthermore, many participants mentioned that they were not sure that, even if they tried, they could find natural clothing, as synthetic clothes are what they typically see available. Finally, natural clothing is perceived to cost a lot more, which makes consistent purchasing more challenging.

*For things like spandex, sure, [I know it's synthetic], but with rayon, I wasn't ever sure what that was, so I'm not sure I would have known it is synthetic.*

*You have to have an awareness of what's natural.*

*Smart wool products are mixed. I love smart wool...but what else is in there?*

*It's very socio-economically driven. If you look at fast-fashion stores, it's all synthetic.*

*Cost is the biggest thing for [choosing natural clothing].*

**Inability to replace the functions of synthetic clothing.** All participants expressed some concern about buying only natural clothing. Even participants who reported that they actively seek out natural clothing mentioned that they own some amount of synthetic clothing. Participants cited multiple functions that they did not feel they could find in natural clothing, including: light weight, waterproof, wrinkle-free, tight fit, fashion, and sweat-wicking. Many participants mentioned that synthetic clothing was easier to care for than natural fabric. Participants cited concerns ranging from wanting to avoid drycleaners, accidentally shrinking natural clothes, having to use specific washing machine settings, and challenges preventing wrinkles.

*I'd say fit for me. You get used to how stuff fits when it has spandex...I bought some leggings that were wool for hiking so they would stay warm, but they don't fit as well or as comfortably...and they were a lot more expensive.*

*When you're hiking, you try to buy the lightest weight thing possible with waterproofing, and I'm not aware of any great options for natural fibers. Waxed canvas is incredibly heavy.*

*I wear a lot of tights. I'm not sure [natural options] could work for that.*

*[Care] isn't the primary thought, but I have had nice cashmere sweaters get ruined...and it's like, why did I even invest the money in that?*

*I will not buy a button up that is not 'no-iron' anymore...I cut out [ironing] when I grew up.*

*I do have a wool coat. It weighs a ton, my god!*

*So much of the athletic wear is made out of synthetic fibers, and they say it's better for you, it pulls the sweat away. So, for certain things, it's hard to find natural fibers.*

**Mixed feelings about their ability to replace the functions of synthetic cleaning cloths.** Participants were more mixed on the function of natural cleaning cloths, with some citing that they were concerned about cotton's ability to clean, but others significantly preferring using and touching cotton over microfabric. Participants also reported using old shirts to clean, which may or may not be natural, depending on the composition of the original shirt.

*Microfiber is incredible with absorbency...with cotton rags, I feel like I'm squishing water around rather than wiping it up.*

*I don't see the point in buying cleaning cloths.*

*I have a stack of microfiber clothes because it was like, oh these are the best things ever. But now I guess I shouldn't use them...after tonight.*

*Microfibers do clean really well. If you're polishing glasses, there isn't a streak on there. If you're using cotton, it leaves dust there.*

*I hadn't thought about the cleaning cloths [as a pollution source]. That's a pretty easy thing to change.*

**Air-drying had challenges with space, weather, and amount of time.** As the focus group was restricted to 90 minutes, only renters were asked about air-drying. Participant mentioned challenges with sufficient space for the items to dry, especially during the winter, and having wrinkle-free clothes.

*Space, time, and weather...we don't have room inside for a drying rack [to airdry].*

*I have no idea what you're supposed to do with clothes after they airdry.*

**Overall impact on microplastics is critical to understand.** Throughout each section, participants consistently asked questions about the impact of each action on the amount of microplastics in the Huron River. Participants were often focused on whether the cost, the time, or the effort of taking the actions would be worth the amount of impact they would be having on the problem. Multiple participants stated that their actions would only have a meaningful impact if a majority of Ann Arbor residents chose to participate. Participants reported being drawn to the lower repetitive effort options, such as the Cora ball and the filter, specifically for the purpose of reducing the effort they had to put in, while still having an impact.

*I think [the impact on microplastic pollution] could influence me...I care about my environmental impact...but I'm still going to have budget constraints.*

*I struggle with seeing the benefit of small-scale change...it's my river, I should care about it, but the northern places are doing god knows what...so what's the point? But I struggle with inconveniencing myself and my wallet for things I worry don't have a huge impact overall.*

*I'm doing something, and other people are doing worse things, and I'm making a sacrifice. Why?*

*The Cora ball seems like it could have a lot of impact versus the effort and cost that would go into using it regularly. It seems like the most feasible option.*

*If there was a commitment [from my neighbors] to...install a filter, then I would do it, because I can afford it.*

*I like that the filter is 'one and done.'*

**Other environmental and social concerns are intertwined in their decision making about these actions.** Participants mentioned that there are other concerns they consider when making these kinds of choices, from animal rights to sending usable items to the landfill to choosing American-made products. These concerns may, or may not, drive participants to engage in the desired actions, as, for example, some synthetic items are promoted as a more vegan choice. In addition, in reference to the bag and the ball, a couple participants raised concerns about creating and buying a plastic object to solve an issue with plastic, from concerns about greenwashing to creating more plastic pollution in the future.

*I try and reduce my animal products. Sometimes I'll avoid [natural clothing] things like leather that have animal welfare issues involved.*

*I still have a lot of synthetic [clothing] that's perfectly usable. What are we going to do, throw it all in a landfill?*

*When polar fleece came out, they were like, oh this is a way to use recycled plastic. There are all these competing demands and interests.*

*There's a macroplastic problem...can we come up with more creative solutions than creating more plastic?*

**Participants reported motivations around preferences, ease of use, and increasing clothing lifetime.**

While participants were generally focused on the microplastic reduction as a benefit, participants also mentioned being drawn to the ball and the filter for their relative ease compared to the other actions. In addition, participants mentioned upsides to natural clothing, such as higher quality, better feel, and better environmental impact. In relation to air-drying, renters mentioned that helping their clothing last longer was appealing.

The advantage of [the filter] is it's set it and forget it – you're not grabbing a bag or cleaning a ball.

*[The ball]...seems a lot simpler, so I think a lot of the barriers I saw with the bag wouldn't apply to this. The cost is still similar...I would be more likely to buy one of these.*

*The longevity of natural fibers...I have dresses that you wash them...they fall apart, and I think that's because they are cheap plastic things. This is a bigger investment upfront, but it's going to last, so that's more worthwhile.*

*If I buy more expensive clothes, I'll care more...I do treat [cheap clothing] disposably.*

*I love linen dresses.*

*I have heard that the dryer breaks down clothes over time...that could potentially influence me, especially as someone who is on a tight budget.*

**Interest in upstream solutions.** During each group, at least one, if not multiple, participants mentioned the problem needed to be addressed at a broader scale than their own home for solutions to be meaningful. Participants mentioned water treatment-based solutions, such as installing better technology in the water-treatment plants or in the sewer line that leaves their homes. Participants also expressed interest in corporate-based solutions, such as washing machines coming with built in filters and phasing out or specifically labeling synthetic clothing.

*I would be happy to pay for [wastewater treatment] capital improvements to filter out fibers.*

*It's harder to think of people who would use that bag than not. You're going to charge me \$35 for a bag instead of telling Lululemon they can't put that stuff in their clothes anymore?*

*I would be in support of something that places the blame back on the manufacturers...rather than each consumer purchasing extra items...maybe it's through regulations or mandates or taxes.*

## Conclusions

Overall, it was our impression that it was important to participants to prevent water pollution from microplastic fibers, though the issue was relatively unfamiliar. Participants appeared willing and interested in participating in solutions that improve water quality, as long as their barriers to acting are addressed. Generally, the participants mentioned that they would value understanding how much of an impact they were having by acting.

## Recommendations

Participants provided valuable information to develop effective messaging. Further information will be collected from program managers of similar programs. We recommend the following topics to be addressed in outreach and the program manager interviews:

### Communication

Throughout the focus groups, participants were asking questions about the impact of each action. This came in two formats: first, the relative impact between the different actions, and second, the impact relative to the amount of cost, time, and effort each action took. The types of questions and concerns raised by participants suggested several effective pathways for communication.

- **Increase awareness:** While awareness of an issue alone does not create behavior change, most participants were not aware that microplastic fibers cause pollution, despite their existing interest in clean water and the Huron River. Ann Arbor residents may need an increased awareness of the existence of, and problems resulting from, microplastic fibers, before they will be willing to engage in the actions. However, even those who were aware of the issue did not know how to address it, emphasizing the importance of going beyond education and awareness.
- **Provide credible information on impact:** The impacts of microplastic fibers on humans, as well as their relative sources and best methods of prevention, are a relatively new field for research. The specific impact of each potential action is not fully known. However, we recommend, where possible, communicating about how much impact the resident would have by taking the action using vivid communication, such as metaphors and imagery. It may be most meaningful to frame it as a community impact (e.g., if 50% of Ann Arbor residents did X, Y would result), as the total reduction in microplastic fibers would be much larger and more motivating.
- **Social norms may be critical for communicating meaningful impact:** Social norms, or the perception of what most people either do or approve of, are one of the most impactful ways to change behavior. We recommend pairing normative information with the “community impact” statistic. For example, this could be done by reporting the results of the Swift Run neighborhood survey, where the majority of residents reported valuing water quality. Social norms can also ensure that the credible information on the impact is framed positively, as a solvable problem, rather than an issue that creates fear and disengagement. One participant reported that she felt disheartened by the information she had learned about microplastics, as she was overwhelmed by the enormity of the problem. By keeping the communication positive and focused on solutions, outreach can avoid causing similar feelings.

## Potential Target Behaviors

An important concept in behavioral science is “choice overload,” where people find it challenging to make a decision when they are presented with too many choices. To address this, we recommend narrowing the recommended actions to prevent microplastic pollution to three, if possible, with five as the upper limit. Based on the currently available data and the results of the focus groups, we would recommend prioritizing: (1) Cora ball; (2) washing machine filter; and (3) purchasing natural clothing. Reducing the number of choices increases the likelihood of participants doing something and increases the amount of effort HRWC can put into addressing the specific barriers of each action. These three behaviors will be explored further in the program manager interviews. Once those interviews have been conducted, we will create a full list of barriers to be addressed and benefits to be promoted, and connect them with social science strategies (e.g., prompts, commitments) to assist HRWC in creating effective outreach.

- **Cora ball:** Based on the focus group results and the literature review, the primary barriers to using the Cora ball were: (1) upfront cost, (2) remembering to use it, (3) remembering to clean; (4) uncertainty about impact.
- **Washing machine filter:** Based on the focus group results and the literature review, the primary barriers to using the washing machine filter were: (1) upfront cost (purchase and installation), (2) remembering to clean the filter, (3) uncertainty about impact, (4) challenges with installation/hiring a plumber, (5) concern about hurting the filter or washing machine.
  - An overarching barrier for those who not own their washing machine is an inability to install a filter in a public machine. Laundromats may be a worthwhile target audience for future efforts.
- **Buying natural clothing:** Based on the focus group results and the literature review, the primary barriers to buying natural clothing were: (1) upfront cost, (2) uncertainty about impact, (3) losing the functionalities of synthetic fibers (waterproof, light, tight fitting, ease of care), (5) availability in stores, (6) identifying natural fabrics. In addition to the benefits of water quality improvement, some participants mentioned benefits around quality and feel.
  - As a note, while the groups focused on buying completely natural, it is important to note that blends of synthetic and natural fibers still reduce microplastic fiber pollution to a significant degree.
- **Put switching to natural cleaning cloths and air-drying as second-tier behaviors.** As there was willingness and interest to engage in the Cora ball, washing machine filter, and buying natural clothing actions, we recommend focusing the campaign’s time, energy, and resources on those first-tier actions. However, as there was also willingness to engage in these actions and potential impact from them, we recommend that once the first campaign is in place, moving on to addressing the barriers of cleaning cloths and air-drying. Cleaning cloths’ primary barriers were (1) concerns about ability to clean, (2) misperception of them as eco-friendly products. Air-drying’s primary barriers were (1) space, (2) time, (3) weather, (4) wrinkles and other care issues.
- **Leverage engagement in the priority actions to promote upstream actions.** Participants in each group reported interest in upstream solutions, which are a segment of actions that are also of interest to HRWC. An individual’s engagement in prevention activities in their day-to-day life can further increase their engagement in promoting upstream solutions. Some activities send a message directly to organizations – for example, avoiding synthetic clothing communicates to

clothing companies about the viability of offering more natural clothing options. Overall, regularly engaging in activities will alter the way an individual sees themselves and creates a strong internal pressure to behave “consistently,” such as signing petitions or writing letters to encourage upstream solutions. The results of the focus group suggest that participants have already made the connection between microplastic fiber pollution and upstream solutions, which will enhance the likelihood that their internal pressure, coupled with individual behaviors, will lead them to engage in promoting upstream solutions as well. Moreover, an effective message for outreach may be to frame individual actions as part of a movement to drive upstream solutions, including legislation to require washing machines at laundromats be retrofitted with filters.

## Program Interview

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Georgian Bay Forever (GBF) is a non-profit organization dedicated to conducting research and public outreach that promotes clean water and enhancing aquatic ecosystems in the Great Lakes region of Ontario, Canada. In 2017, GBF and the University of Toronto partnered after conducting water quality tests that showed that microplastic fibers were the number one microplastic pollutant.

They pursued research projects focusing on combatting the microplastic problem. They wanted to tackle the problem at one of its sources: Washing clothes and the microfibers that are released during wash cycle. They chose to test the Filtrol washing machine filter and the Cora Ball.

After testing the filters in the lab, they chose to conduct outreach to 100 households in Perry Sound community of about 6,000 people. They were successful in getting 100 households to install the filter and save the microfibers from their machines for analysis. They had a measurable decline in microfibers found in the water treatment plant. They expected to see a 10% decrease at the water treatment plant because they are installing it into 10% of the community. After the initial pilot they decided to expand this program in another city. The program paid for a plumber to install the filter at every household. Some people did choose to install the filter themselves, as they are not hard to install especially if someone is handy.

Resident challenges. Most of the issues that did occur were from people not cleaning out their filter often enough, but those issues were experienced by few residents. They had a training session at the time of installation with each household on how to clean out their filters. You need actual space for the filter. They had to turn away people who were interested in the filter because of space. If they had stacked washer and dryer, they did not have enough space for the filter.

Cora Ball. They do promote the Cora Ball and the guppy friend bag in their outreach education to the public. They have a handout that discusses how people can reduce their microplastic *footprint*.

Buying natural clothing. They encourage people to buy clothes they love and to stay away from fast fashion. They also promote doing laundry less often and do fuller loads of clothing in addition to avoiding fabric softeners.

Program success. Community outreach and talking to people one on one was very effective in gaining participation in the program.

## Final Behavior Selection and Strategy Development

### Behavior Selection

The Huron River Watershed Council (HRWC) and Action Research conducted a literature review, focus groups, and a program manager interview to gather information on creating a program to reduce microplastic fiber pollution in the Huron River. The program is focused on the following actions:

1. Using a device in the washing machine, such as the Cora Ball, to catch microfibers;
2. Installing a filter on your washing machine to catch fibers (homeowners only); and
3. Purchasing natural fiber clothing in favor of synthetic clothing.

The strategies developed for each behavior are displayed followed by the outreach approach.

In the strategy tables below, we list relevant research findings, link those findings to social science and marketing tools, and suggest pathways for operationalization.

### Strategy Table – Cora Ball

Table 1. Cora Ball Strategy Table

Research Outcome	Tools	Strategy Options/Operationalization
<b>Low existing motivation</b>	Social Norms Social Diffusion	<ul style="list-style-type: none"> <li>• Frame communication around resident’s high level of concern for water quality, such as in the Swift Run Neighborhood survey.</li> <li>• Recruit well-respected and well-known residents to create testimonials.</li> </ul>
<b>Cost of product</b>	Incentives	<ul style="list-style-type: none"> <li>• Provide free or low-cost Cora Balls.</li> </ul>
<b>Forget to use</b>	Prompts	<ul style="list-style-type: none"> <li>• Create a washing machine prompt that reminds participants to use the Cora Ball.</li> <li>• Consider pairing with a prompt to use cold water.</li> </ul>
<b>Uncertainty about impact and unaware of the problem</b>	Education Vivid + Credible Communication	<ul style="list-style-type: none"> <li>• Introduce outreach with simple and clear educational message on the existence, extent, and impacts of microplastic fiber pollution.</li> <li>• Link impacts to the local area of the Huron River.</li> <li>• Communicate by using vivid information.</li> </ul>
<b>Interest in upstream solutions</b>	Advocacy Self-perception	<ul style="list-style-type: none"> <li>• Link using the Cora Ball to upstream solutions, such as petitions to politicians.</li> </ul>

## Strategy Table – Washing Machine Filter

Table 2. Washing Machine Filter Strategy Table

Research Outcome	Tools	Strategy Options/Operationalization
<b>Low existing motivation</b>	Social Norms Social Diffusion	<ul style="list-style-type: none"> <li>• Frame communication around resident’s high level of concern for water quality, such as in the Swift Run Neighborhood survey.</li> <li>• Recruit well-respected and well-known residents to create testimonials.</li> </ul>
<b>Cost of product</b>	Incentives	<ul style="list-style-type: none"> <li>• Provide free or low-cost filter if possible. Consider partnering with a washing machine filter company.</li> <li>• Advertise deals or coupons.</li> </ul>
<b>Forget to clean filter</b>	Prompts	<ul style="list-style-type: none"> <li>• Create a washing machine prompt that reminds respondents to clean their filter.</li> <li>• Consider pairing with a prompt to use cold water.</li> </ul>
<b>Uncertainty about impact and unaware of the problem</b>	Education Vivid + Credible Communication	<ul style="list-style-type: none"> <li>• Introduce outreach with simple and clear educational message on the existence, extent, and impacts of microplastic fiber pollution.</li> <li>• Link impacts to the local area of the Huron River.</li> <li>• Communicate using vivid and credible information.</li> </ul>
<b>Interest in upstream solutions</b>	Advocacy Self-perception	<ul style="list-style-type: none"> <li>• Link using the washing machine filter to upstream solutions, such as petitions to politicians.</li> </ul>

## Strategy Table – Natural Clothing

Table 3. Natural Clothing Strategy Table

Research Outcome	Tools	Strategy Options/Operationalization
<b>Low existing motivation</b>	Social Norms Social Diffusion	<ul style="list-style-type: none"> <li>• Frame communication around resident’s high level of concern for water quality, such as in the Swift Run Neighborhood survey.</li> <li>• Recruit well-respected and well-known residents to create testimonials.</li> </ul>
<b>Cost of product</b>	Incentives	<ul style="list-style-type: none"> <li>• Recommend where the best return on investment is for natural fiber clothing – for example, things that are washed often or last a longer time, or with natural and synthetic blends.</li> <li>• Consider partnering with a company that sells natural fiber clothing to offer a sale.</li> </ul>
<b>Unsure what is natural</b>	Education Prompts	<ul style="list-style-type: none"> <li>• Create a wallet sized or digital prompt that educates and reminds users what fabric names are natural and synthetic.</li> </ul>
<b>Loss of synthetic functions</b>	Education Convenience	<ul style="list-style-type: none"> <li>• Recommend choosing synthetic blends when one requires the function of synthetic material.</li> </ul>
<b>Uncertainty about impact and unaware of the problem</b>	Education Vivid + Credible Communication	<ul style="list-style-type: none"> <li>• Introduce outreach with simple and clear educational message on the existence, extent, and impacts of microplastic fiber pollution.</li> <li>• Link impacts to the local area of the Huron River.</li> <li>• Communicate using vivid and credible information.</li> </ul>
<b>Interest in upstream solutions</b>	Advocacy Self-perception	<ul style="list-style-type: none"> <li>• Link purchasing natural clothing to upstream solutions, such as driving changes in the market.</li> </ul>

## Outreach Approach

### Audiences

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Homeowners or renters can adopt Cora Ball and purchasing behaviors. Homeowners who have standalone front- or top-loading washing machines can install the washing machine filter (with space).

### Messenger, Message, Channel, and Social Science Tools

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The key messenger for this program is the Huron River Watershed Council.

*Table 4. Messaging Tools for the Cora Ball and Washing Machine Filter*

<b>Use a Cora Ball and Purchase Natural or Blends</b>			
<b>Material</b>	<b>Message</b>	<b>Channel</b>	<b>Social Science Tools</b>
6-Panel Brochure	Reduce fabric confusion; Protect the local area of the Huron River.	Direct drop off at household by volunteers.	Education Vivid communication Testimonial Self-perception
Cora Ball	Use a simple device to have a household-community impact.	Direct drop off at household by volunteers.	Education Vivid communication
<b>Install Washing Machine Filter and Purchase Natural or Blends</b>			
<b>Material</b>	<b>Message</b>	<b>Channel</b>	<b>Social Science Tools</b>
6-Panel Brochure	Install this device to have a household-community impact; Protect the local area of the Huron River.	Direct in-person at doorstep.	Education Vivid communication Testimonial Self-perception
Prompt	Remember to clean filter (e.g., monthly).	Provided at installation.	Reminder
Follow-up script	Protect the Huron River.	Phone call or email.	Gain commitment

## Initial Neighborhood Outreach Summary

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### Method and Sample

The outreach was conducted in person by trained volunteers at the selected households in each of the target neighborhoods. The outreach was conducted in person by HRWC staff and trained interns at the selected households in each of the target neighborhoods.

**Choosing the target neighborhoods.** Using demographic data from census and adding data from Tapestry, a demographic segmentation profile tool offered by ESRI, we selected two neighborhoods in Ann Arbor: Miller and Stadium. While these neighborhoods are in different areas of the city (northwest and southwest), residents have common interests because they fall into these Tapestry segments: urban chic, in style, and exurbanites. Most importantly, these neighborhoods are made up of single-family homes and have high rates of owner occupancy. Each of these segments are comprised of homeowners who use modern technology and are connected and interested. Miller has 306 households and Stadium has 402. See the table below.

*Table 5. Demographic Data for Target Neighborhoods (Stadium and Miller)*

Location	Southwest (Stadium)	Northwest (Miller)
Census Block #	3	9
Median Age	45.7	49.8
Race/Ethnicity		
Hispanic	5%-H	1%-H
Asian	9%-A	3%-A
White	83%-W	93%-W
Black	0%-B	0%-B
PC Income	\$48,158	\$61,706
# Households	402	306
Owner Occupied %	96%	93%
Single Family Home %	100%	100%
HH Type		
Non-family	13% NF	19% NF
Married	76% M	75% M

Out of these three neighborhoods, the Miller and Stadium neighborhoods were selected for outreach. We created a heads-up postcard to let neighbors know we were coming to the neighborhood. From June 14-June 28, 2021, HRWC staff and interns knocked on each door in these neighbors to conduct clipboard surveys. For those who did not answer the door, the street teams left behind a flyer so residents could fill the out survey online. The outreach materials are shown in the appendix.

## Overview

### Natural Fibers

- Most respondents, 67.8% (N=116), can tell if a clothing lists natural or synthetic materials.
- Many respondents seek out clothing with natural fibers (47.7%, N=82), and do not favor synthetic clothing (60.8%, N=104).

### Cora Ball

- An overwhelming majority of respondents, 84.2% (N=144), have not heard of the Cora Ball, and only five respondents (33.3%) reported using the Cora Ball.
- The only reported issue with using the Cora Ball was that it does not collect enough fibers. However, two respondents said they would recommend it to others.

### Washing Machine Filter

- An overwhelming majority of respondents, 76.2% (N=131), had not heard of the washing machine filter, and only eight respondents reported using the filter.
- Respondents reported that the filter helps their drain function properly and that it collects lint and paper.
- The main hurdles associated with the filter were that it doesn't collect very much, it's messy, and it involves cleaning.
- Respondents reported they would recommend the filter because it prevents drain clogging, it reduces waste in the water outflow, and it saves our resources.

## Results

### Interest

Table 6. Interest in Materials

If any of these were available to you at low or no cost, would you be interested?	Frequency	Percentage
Free "How to Read a Clothing Label"	95	54.6%
Free Cora Ball	147	84.5%
Washing Machine Filter with Free Installation	121	69.5%
Washing Machine Filter with Low-Cost Installation	76	43.7%

N=174.

### Natural Fibers

Table 7. Knowledge of Types of Clothing Materials

When you shop for clothes, do you look at the label to see what the material is?	Frequency	Percentage
Yes	105	60.3%
No	24	25.9%
Sometimes	45	13.8%

N=174.

Table 8. Knowledge of Types of Clothing Materials

Can you tell if a clothing label lists natural or synthetic materials?	Frequency	Percentage
Yes	116	67.8%
No	13	7.6%
Sometimes	42	24.6%

N=171.

Table 9. Awareness of Natural Fibers

When shopping for clothes, do you seek those made with natural fibers?	Frequency	Percentage
Yes	82	47.7%
No	30	17.4%
Sometimes	60	34.9%

N=172.

Table 10. Shopping Behaviors

When shopping for clothes, do you favor those made with synthetic fibers?	Frequency	Percentage
Yes	13	7.6%
No	104	60.8%
Sometimes	54	31.6%

N=171.

## Cora Balls

---

Table 11. Cora Ball Awareness

Have you heard of the Cora Ball?	Frequency	Percentage
Yes	19	11.1%
No	144	84.2%
Not sure	8	4.7%

N=171.

Table 12. Cora Ball Use

If so, do you and/or your household use the Cora Ball?	Frequency	Percentage
Yes	5	33.3%
No	10	66.7%

N=15.

Table 13. Cora Ball Maintenance

<b>If you use the Cora Ball in your washing machine, do you clean it regularly?</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	2	40.0%
No	1	20.0%
Not sure	2	40.0%

N=5.

Table 14. Issues with the Cora Ball

<b>Do you have any issues with the Cora Ball?</b>
I used it for about a year. I stopped using it because it was collecting almost nothing. I think that is because we mostly wear natural fibers.
I'm assuming you mean the wool dryer balls. If not, then my answer would be no.

N=2.

Table 15. Reasons to Recommend the Cora Ball

<b>Would you recommend it to others? If so, why?</b>
I would recommend it to people who wear a lot of synthetic fabrics.
Yes.

N=2.

Table 16. Reasons for Lack of Interest in the Cora Ball

<b>Why are you not interested in using the Cora Ball?</b>
Already have a filter.
Don't know enough about it.
Don't know why fibers should be eliminated.
Extra item to fiddle with during each laundry cycle.
I have one and it didn't seem to catch very much. It sounds like a filter would be more effective and nobody would need to remember to put it in the load.
Moving houses.
N/A – don't use synthetic clothing.
Why should I be if the filter catches all fibers? How bad is the problem really?

N=8.

## Filters

*Table 17. Washing Machine Filter Awareness*

<b>Have you heard of filters for your washing machine's wastewater?</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	33	19.2%
No	131	76.2%
Not Sure	8	4.7%

N=172.

*Table 18. Washing Machine Filter Usage*

<b>Do you use a filter for the wastewater on your washing machine?</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	8	27.6%
No	21	72.4%

N=29.

*Table 19. Reasons to Use the Washing Machine Filter*

<b>Why do you use the washing machine filter?</b>
Already pre-installed.
Collect fibers.
Prevent tube clogging.
Reduce waste output in water.
To filter lint from the water going into the river.

N=5.

*Table 20. Washing Machine Filter Results*

<b>What results have you gotten from the washing machine filter?</b>
Drains work without problems.
Junk to put in the trash.
Lots of lint and paper.
Not much because we don't use synthetic fibers.
What was the biggest hurdle that you had with the washing machine filter and how did you overcome it?
Cleaning.
Doesn't trap a whole lot; no other problems.
Messy.
No problems.

N=9.

Table 21. Reasons to Recommend the Filter

<b>What's the main reason you would recommend using the filter?</b>
I don't know if I would because mine doesn't trap too much.
Prevent drains from clogging with lint.
Reducing waste in water outflow.
Saving our resources.
To catch the material in the wash.
Yes, good washer.

N=6.

Table 22. Reasons Respondents Do Not Want the Filter

<b>Why are you not interested in having a filter installed free of charge?</b>
Don't know enough about it.
Don't know why it's important to catch fibers.
Don't use synthetic clothing.
Don't know what it's for.
Don't want strangers in the house.
Moving houses.
New washer – wary of having something installed that isn't made for the machine.
No room – small area for washer.
Seems like too much work.
Wants to install themselves.
Will ask landlord if possible.

N=11.

## Cora Ball and Shopper's Guide Delivery Summary

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Building on the findings from the initial outreach and clipboard survey, HRWC created a pocket-sized Shopper's Guide and Tips for Reducing Microplastics in the Huron River. HRWC staff ordered Cora Balls to deliver to interested survey respondents. The Shopper's Guide, Cora Ball instructions and flyer, and filter flyer are displayed in the appendices.

All households in the Miller and Stadium neighborhoods that stated they would be interested in a Cora Ball, received a package delivered to their door. The contents of the package included a Cora Ball with instructions, a flyer that reminded them of the project and thanking them for participating, and the pocket-sized Shopper's Guide. For those among these recipients who said they were interested in a filter, HRWC included a flyer that asked them to contact HRWC staff if they were still interested in a free filter. On this flyer were details of how much space they needed near their washing machine as well as other logistical details.

Of the 306 households in the Miller neighborhood, we received survey responses from 89 households. Seventy-three of these households received the Cora Ball/ Shopper's Guide package on September 23, 2021. In the Stadium neighborhood, which has 402 households, 83 households responded to the survey. Seventy-two received the Cora Ball/Shopper's Guide package on September 27, 2021. In total, 145 Cora Balls and Shopper's Guides were delivered to residents' doors. (Two households had moved away since the street teams did the door knocking.)

## Filter Outreach Summary

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For both neighborhoods, 121 households stated they were interested in a free filter. At a cost of \$129 each, the project's budget wouldn't cover the costs to fulfill 121 installations. With the project ending in December, there was not enough time to coordinate a way for households to get a filter at a lower cost, including installation. To solve the quandary, HRWC put a flier in the Cora Ball/Shopper's Guide package that asked recipients to contact HRWC if they were still interested in getting a filter. The flyer included a deadline of October 1 and it provided details on the amount of space needed for installation and other logistical details. The budget provided funding for 22 filters. By asking the interested residents to contact HRWC to confirm their interest, the responses dropped off to a manageable level. The team also contacted residents who did not get Cora Balls or Shopper's Guides but who expressed interest in filters.

A mail survey was conducted with recipients of the Cora Balls and interviews were conducted with residents who installed washing machine filters to evaluate the outreach components. Those outcomes were summarized in a separate evaluation and implementation plan report.

## Appendix

### Focus Group Postcard Invitation



**You are Invited!**

to a  
**Focus Group**

Share your thoughts and opinions about water quality

*Remote sessions via Zoom*

October 19, 20, 21, or 22  
6-7:30 pm

Hosted by:  Huron River Watershed Council

The Huron River Watershed Council will be conducting virtual focus groups in October. We will be discussing important issues about the water quality of our local river, and are seeking input from residents like you!

We are asking for 90 minutes of your time. If you participate, you will receive a \$75 gift card.

If you are interested in participating, please complete the survey at:

[www.surveymonkey.com/r/HRWCwater](http://www.surveymonkey.com/r/HRWCwater)

Or scan here for the survey

Huron River Watershed Council  
1100 N. Main Street  
Ann Arbor, MI 48104  
HRWC.org



*Cover photo by: Daniel Brown*

## Focus Group Screening Script

We are inviting residents of Ann Arbor to participate in an online discussion group sponsored by the Huron River Watershed Council, or HRWC. We will be discussing important issues around the water quality in our local river and are seeking input from residents like you! As a thank you, participants will be provided with a gift card for \$75 for their participation in the 90-minute discussion. **There will be NO solicitations or sales of any kind.**

1. Do you live in Ann Arbor?
  - a. Yes (CONTINUE)
  - b. No (RESPONSE: *Thank you for your time. At the moment, we are looking for Ann Arbor residents.*)

Thank you! We are interested in having a variety of perspectives in the groups. Please complete the questions below, then provide your contact information. We will follow up with you over the phone.

2. Do you live in...
  - a. A single-family home
  - b. A condominium
  - c. An apartment
  - d. Other: \_\_\_\_\_
3. Do you:
  - a. Rent
  - b. Own
4. Do you typically use a washing machine that is located ...
  - a. In your home?
  - b. In your building, but not in your unit?
  - c. In someone else's home?
  - d. At a laundromat?
  - e. Other: \_\_\_\_\_
5. How many days do you exercise in a typical week?
  - a. 0-1
  - b. 2-3
  - c. 4-5
  - d. 6-7
6. What is your gender?
  - a. Male
  - b. Female
  - c. Other (specify):
7. What age category do you fit in:
  - a. 18-24
  - b. 25-34
  - c. 35-44
  - d. 45-54
  - e. 55-64
  - f. 65-74
  - g. 75+
8. Which of these days and times you are available? Check all that apply.
  - a. FG1
  - b. FG2
  - c. FG3
  - d. FG4
9. Please provide an email address and a phone number where you can be reached. This information will not be used for any purpose other than scheduling this discussion group.
  - a. Email
  - b. Phone

## Focus Group Screening Script Follow Up

Hello! I am trying to reach (NAME).

My name is (NAME) and I am following up about an online discussion group you expressed interest in. Thank you for completing the survey. I want to go over your answers with you to make sure I have the correct information, and then I will check availability for the groups.

### CHECK ANSWERS

- IF INCORRECT – Hold on one second, we had a different answer. Let me update your information (CHECK THEY ARE STILL QUALIFIED)
- IF CORRECT - Thank you! Are you available at (TIME) on (DATE)?
  - IF YES – Great. After this call, you will receive an email with the link and calendar invite. Can I check I have the correct email?
  - IF NO – Thank you for your time. If other sessions become available, may we follow up with you again?
- Also – where did they hear about the survey?
- IF THEY SEEM INCOHERENT OR OFF – Thank you for your time. My system is telling me the group you qualify for is actually full – I apologize. Can we follow up with you if that changes?

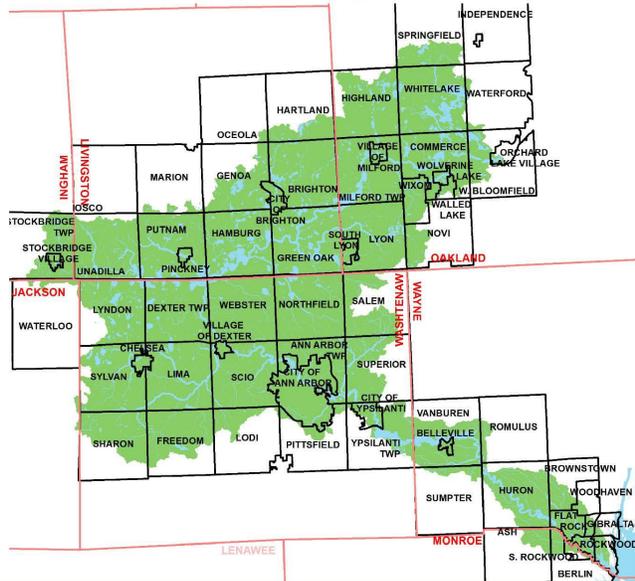


Appendix B

# Focus Group

Hudson River Watershed Council

## Huron River Watershed



## List of Fabrics

- ▶ Synthetic Fabrics
  - ▶ Nylon
  - ▶ Rayon (Viscose)
  - ▶ Polyester
  - ▶ Spandex
  - ▶ Acrylic
  - ▶ Acetate
  - ▶ Microfiber
  - ▶ Fleece/Microfleece
  - ▶ Lycra® (Elastane)
  - ▶ Gore-tex®
  - ▶ Polartec®
- ▶ Natural Fabrics
  - ▶ Silk
  - ▶ Wool
  - ▶ Cotton
  - ▶ Leather
  - ▶ Suede
  - ▶ Linen

## Microplastic Fibers

### Estimated fibers released from wash



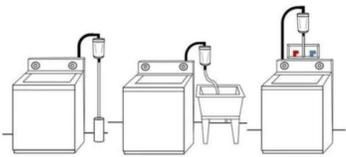
## Behavior 1 -Clothing bag in machine, such as Guppyfriend Bag



## Behavior 2 - Ball in washing machine, such as a Cora Ball



### Behavior 3 - Washing machine filter, such as Fitrol, Lint Luv, or Girlfriend Collective's Microfiber Filter



### Behavior 4 - Buying Natural Fabric Clothing

#### ▶ Synthetic Fabric

- ▶ Nylon
- ▶ Rayon (Viscose)
- ▶ Polyester
- ▶ Spandex
- ▶ Acrylic
- ▶ Acetate
- ▶ Microfiber
- ▶ Fleece/Microfleece
- ▶ Lycra® (Elastane)
- ▶ Gore-tex®
- ▶ Polartec®

#### ▶ Natural Fabrics

- ▶ Silk
- ▶ Wool
- ▶ Cotton
- ▶ Leather
- ▶ Suede
- ▶ Linen

## Behavior 5 - Using Natural Fabric Cleaning Clothes

### ▶ Synthetic Textiles

- ▶ Microfiber
- ▶ Polyester



### ▶ Natural Textiles

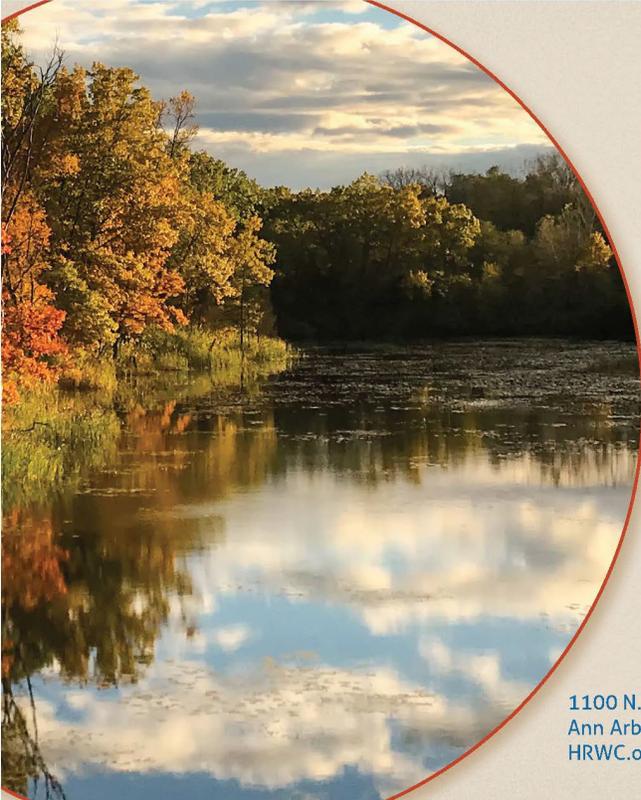
- ▶ Cotton



## Behavior 6 - Air drying Clothes



Outreach Pre Notification Postcard



Appendix C.1

**Coming Soon**

**To your neighborhood**

1100 N. Main Street  
Ann Arbor, MI 48104  
HRWC.org



Huron River Watershed Council

Dear Resident,

Your household has been chosen to participate in the Huron River Watershed Council's pilot project! In the next week or two, a staff person or volunteer will stop by your home and provide you with free information and materials to help you protect our local creeks and river.

Your participation in this pilot project will help us understand how our organization can better support community-wide pollution prevention efforts to protect our home river. If you have any questions, please contact me at [adaley@hrwc.org](mailto:adaley@hrwc.org).

Thank you,

Anita Daley  
Huron River Watershed Council

*photo by Daniel Brown*

Non-Profit Org.  
U.S. Postage  
**PAID**  
Ann Arbor, MI  
PERMIT # 435

## Outreach Clipboard Survey



“Hello! We’re here to talk about microplastic pollution in the Huron River and the Great Lakes and do a quick survey with you.

Your neighborhood is in the Huron River watershed, which drains into Lake Erie. Researchers who have taken water samples from the Huron River and the Great Lakes have found microplastic pollution in the samples.

The most common type of microplastic pollution in the Huron River is microplastic fibers. These fibers shed from synthetic textiles in washing machines. The wastewater is treated and then released into the river. However, wastewater treatment plants cannot filter such small particles.

The good news is that there are ways to reduce this microplastic fiber pollution. We are wondering if you have heard of them and/or have used them. Can I ask you some survey questions?”

Street Address: \_\_\_\_\_

Name: \_\_\_\_\_ Email: \_\_\_\_\_

### Natural Fibers

Clothing made with natural fibers do not have plastic in them.

1. When you shop for clothes, do you look at the label to see what the material is?  
 Yes       No       Sometimes
2. Can you tell if a clothing label lists natural or synthetic materials?  
 Yes       No       Sometimes
3. When shopping for clothes, do you seek those made with natural fibers?  
 Yes       No       Sometimes
4. When shopping for clothes, do you favor those made with synthetic fibers?  
 Yes       No       Sometimes

### Cora Balls

Cora Balls are small laundry devices that you put in your washing machine. (show the ball)

1. Have you heard of the Cora Ball?  
 Yes       No       Not sure  

(If No or Not Sure, skip to next section: Washing Machine Filter)
2. If so, do you and/or your household use it?  
 Yes       No       Not sure
3. If you use the Cora Ball in your washing machine
  - a. Do you clean it regularly?  Yes    No    Not sure
  - b. Do you have any issues with it? (What are they?)

- c. Would you recommend it to others? If so, why?

---

**Washing Machine Filter**

1. Have you heard of filters for your washing machine’s wastewater?

- Yes       No       Not sure

(If *No* or *Not Sure*, skip to next section: Interested in more?)

2. Do you use a filter for the wastewater on your washing machine?

- Yes       No       Not sure

3. If yes to having a washing machine filter

- a. Why do you use the washing machine filter?

---

- b. What results have you gotten from the washing machine Filter?

---

- c. What was the biggest hurdle that you had with the washing machine filter and how did you overcome it?

---

- d. What's the main reason you would recommend using the washing machine filter?

---

**Interested in more?**

If any of these were available to you, would you be interested?

The Cora Ball catches 30% of fibers. The filter catches nearly 100% of fibers.

- A free “How to read a clothing label” Shoppers Guide the size of a wallet card
- A free Cora Ball
  - If no, why are you not interested in using the Cora Ball? We want to gather this information to help us create an effective program.

---
- A free washing machine filter with free installation
  - If yes, make sure to get their phone or email
  - If no, why are you not interested in having a washing machine filter installed free of charge? We want to gather this information to help us create an effective program.

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- A washing machine filter with installation at a very low cost
  - If yes, make sure to get their phone or email

Outreach Leave Behind- Not Home



## Sorry We Missed You!

While you were away, Huron River Watershed Council staff and volunteers stopped by to ask you a few questions about synthetic textiles, washing machines, and microplastic pollution.

Our street teams wore masks and stepped at least 8 feet back after knocking. Even so, we understand anyone's hesitancy or refusal to answer their door due to COVID-19, or any other reason.

That's why we posted the survey online. Please fill it out at **[HRWC.org/microplasticsurvey](https://hrwc.org/microplasticsurvey)** or scan this QR code ⇨

The survey should take about 3-7 minutes to complete. At the end of the survey, you'll find ways to get information and free resources available to you and your neighbors.

If you have any questions, please contact us at [catchtheplastic@hrwc.org](mailto:catchtheplastic@hrwc.org).

THANK YOU!



Shoppers Guide

If everyone in Ann Arbor uses a Cora Ball or filter, we will reduce 26-87% of microplastic pollution from our washing machines' wastewater!



## Reducing Microplastics in the Huron River

### SHOPPER'S GUIDE AND TIPS!





Huron River Watershed Council

HRWC.org

#### FABRICS TO AVOID ✗



Try to avoid synthetic fabrics when shopping for clothes. Aim for natural or a blend of synthetic and natural fibers, which shed fewer plastic microfibers.

- Acrylic
- Polyester
- Nylon
- Spandex
- Acetate
- Latex (Elastane)
- Vinylon
- Olefin
- Polyethylene
- Polyester Fleece

#### FABRICS TO LOOK FOR ✓



- Hemp (organic preferred)
- Lyocell: wood pulp, an eco-friendly rayon (Excel and Monocel are types of Lyocell)
- Tencel: also a type of Lyocell
- Linen (organic preferred)
- Cotton (organic strongly preferred) \*
- Silk (Ahimsa preferred)
- Wool (Responsible Wool Standard preferred) \*
- SeaCell fibers • Kenaf
- Ramie • Flax • Jute

\*Try looking for recycled

Everyone can do something about microplastic fiber pollution when shopping and doing laundry – including you!

MICROPLASTICS are tiny pieces of plastic that are barely or mostly invisible to the naked eye.

Synthetic textiles, like fleece and sportswear, shed in washing machines. The fibers that shed are so tiny, they do not get filtered by the waste

water treatment plant and end up in the river. Synthetic microfibers are the leading source of microplastic pollution in the Huron River.

#### TIPS FOR LAUNDRY DAYS

Fabrics made with synthetics are highly popular and likely found in everyone's closet.

Reduce shedding in wash cycle by:

Using a CORA BALL, a GUPPYFRIEND BAG or WASHING MACHINE FILTER (Filtrol)



AND:

- Spot wash when you can and wash your items less frequently.
- Set your wash cycle for a shorter time. The longer they're in there, the more the fibers breakdown.
- Use cold water instead of hot water when washing.

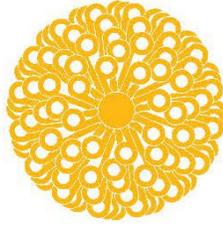
- If you're in the market for a new washing machine, get a front load machine instead a top loader. Fibers shed less in front load machines.
- Try detergent sheets or strips and use only the necessary amount.
- Air dry your clothes. Tumble drying clothes loosens fibers.

For more, go to [hrwc.org/microplastics](http://hrwc.org/microplastics)



## Greetings!

Enclosed is your CORA BALL laundry device and a Shopper's Guide that we offered when our teams came to your door in July. The Cora Ball will help you catch synthetic fibers in your washing machine before they get sent to the wastewater treatment system.



Here are some tips for the Cora Ball that we've learned from using it:

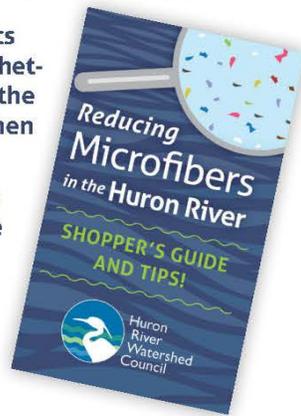
- Put clothes with thin straps, like bras, in a washing bag. The straps are easy to remove if the Cora Ball catches them, but this will make laundering easier.
- Leave your Cora Ball in your machine so you don't forget to use it.
- Pick out the debris once it starts collecting and throw it away in the trash.
- If you don't see any results after several months, that's okay! Keep using it. Eventually you will see threads and hair, especially if you have furry pets.

The SHOPPER'S GUIDE lists popular fabrics found in the market. There are more synthetic fabrics than are listed, but these cover the most common ones that you can avoid when shopping for clothes.

Over 200 of your neighbors signed up for a Cora Ball! Together, your efforts will reduce pollution in our home waters.

If you have questions, please let us know.

*From all of us at the Huron River Watershed Council, thank you.*



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