

Reducing Textile Waste with goBins in D.C.

Georgetown University
2020 Public Policy Challenge



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Appendix A. Sample Marketing Materials

Executive Summary

Textile waste is a growing problem throughout the United States, with the average American throwing away roughly 80 pounds of clothes and other textiles per year. This waste creates major environmental and health costs in the D.C. region, and D.C. pays over one million dollars per year to dispose of residents' textile waste. Donating old textiles can largely eliminate these costs and environmental risks, but many options for textile donation are inaccessible to a large number of D.C. residents.

To remedy this problem, we propose that the District of Columbia launch a partnership with Goodwill, a large national nonprofit organization that operates a network of thrift stores which accept textile donations. In 2014, Goodwill partnered with San Francisco as part of an ambitious program to reduce the city's textile waste. This program involved placing over 100 textile bins throughout the city of San Francisco, primarily in residential high-rises, with the goal of making these bins extremely convenient and accessible to a large population. Goodwill uses an innovative design for these bins that make them easier for residents to use, and that notifies Goodwill when the bins are filled and their contents ready to be collected. This program has proven very effective in San Francisco, and we believe that in D.C., this program could be very effective in reducing textile waste and eliminating a large portion of the city's textile disposal costs.

Our proposed partnership would largely mimic Goodwill's existing partnership with San Francisco. Textile donation bins would be placed throughout the District in residential buildings, and a marketing plan would inform residents both of the existence of the bins and of the environmental harms incurred by throwing away textiles in the trash. Because of the large number of college students in the District, our partnership would especially target areas around universities at the beginning and end of the academic school years.

The partnership would be set up between D.C.'s Department of Energy and Environment (DOEE) and Goodwill. The initial stages of the project would be funded with one of DOEE's sustainability grants, and the long-term maintenance of the goBins will be performed by Goodwill. We expect it to take around two months to plan the partnership, two to three months to plan optimal bin locations, and another two months to conduct marketing efforts, with a Fall 2020 launch of the bins being a realistic goal. The proposal includes a more detailed timeline detailing our campaign plan.

The Problem

Textile waste has become one of the biggest environmental problems in the world. In the United States alone, it is estimated that over 11 billion pounds of clothes end up in landfills every year instead of being recycled or reused, an increase of approximately eight hundred percent over the past sixty years (“Textiles: Material-Specific Data”, 2019). Overall, this amounts to the average American producing about 80 pounds of textile waste from clothes and other items each year (LeBlanc, 2019). These clothes take up to 200 years to decompose, emitting greenhouse gases in the process and polluting the atmosphere. As part of the climate battle around the world, many governments, companies and advocacy groups are taking on the issue of textile waste and increasing the life cycle of fabrics, encouraged by a large scientific literature documenting the positive environmental impacts of recycling or donating textiles instead of disposing of them (Sandin and Peters, 2018). Despite these efforts, the nationwide recycling rate for textiles hovers at only about fifteen percent (“Textiles: Material-Specific Data”, 2019).

While reliable data on textile disposal in D.C. specifically is not readily available, the city’s status as a notoriously transient city makes it likely that the problem is even more severe here than in most places. It is estimated that 60,000 residents moved houses in the District in 2014 (Taylor, 2015), and in a given year tens of thousands of residents move into or out of the District from other regions of the country (Maciag, 2017). The constant flux of residents, who dispose of a large number of items when they move, only worsens the problem of textile disposal.

D.C. experiences large costs, both monetary and environmental, from the disposal of textiles. Currently, the city pays about \$45 per ton to have trash taken to and disposed of at a facility in Fairfax County (Seldman, 2017). With a population of slightly over 700,000 residents, each disposing of around 80 pounds of textile waste a year (likely a conservative estimate), this means that D.C. currently pays about \$1.3 million per year to dispose of residents’ textiles. Additionally, research suggests the health costs associated with trash incineration in a city approximately the size of D.C. can be in the tens of millions annually (Seldman, 2017). It is estimated that about five percent of D.C.’s waste, and thus five percent of these costs, consists of textiles (“Rethread D.C.”, n.d.).

Donating textiles is a key way to help reduce this waste, but options for donating textiles are fairly limited in D.C. There are currently only about fifty five locations at which to donate textiles in the city; only two of these are located in the city’s Southeast quadrant, and zero are located in the Southwest (“Rethread D.C.”, n.d.). Furthermore, many of these locations only accept clothes for donations, and do not accept other forms of textiles. All of these donation bins are at retail establishments or non-profit organizations, and many residents who have textiles to donate may be unwilling or unable to do so, especially if they do not have access to a car. D.C. desperately needs further options to allow residents to conveniently donate textiles, and also needs a larger effort to educate the city’s population on the environmental harm resulting from throwing textiles in trash.

The Proposal

A Partnership between Washington, D.C., and Goodwill

We propose that D.C. launch a partnership with Goodwill, a nationwide nonprofit organization which operates a large network of thrift stores throughout the country. Individuals can donate textiles, and those which are suitable for reuse will be sold at these thrift stores. A key advantage of partnering with Goodwill, as compared to other D.C.-area nonprofits, is that Goodwill, unlike most local organizations, accepts non-clothing textiles such as linens, towels, and carpets.

Of course, under the current status quo residents of D.C. must travel to a local Goodwill donation if they wish to donate old textiles. To eliminate this problem, this partnership would place donation bins around the city, starting in large apartment complexes and at universities. These donation bins are much more than typical dusty old bins, however. As part of a partnership with San Francisco, Goodwill created an innovative type of recycling bin called the goBIN™. GoBINSs are electronically equipped bins which are “durable enough to withstand years of use, yet light enough to be easily shipped, assembled and moved” (“Goodwill goBIN™”, n.d.). The bins are sustainably created and have sensors that alert Goodwill when the bin is full and its contents are ready to be picked up. Finally, the bins have scannable QR codes that can “generate a receipt for anyone making a donation” (“Goodwill goBIN™”, n.d.) and looking to itemize their taxes. In the first year of its partnership with San Francisco, Goodwill placed over 100 bins in high-rise apartments and condominiums throughout the city (Wong, 2014).



A key component of this existing partnership consists of marketing. Goodwill and San Francisco’s Department of the Environment have worked diligently to make their residents aware of the bins and their locations, and to educate the city on the environmental costs incurred from disposing of textiles in landfills. Likewise, a partnership between D.C. and Goodwill would need to be heavily marketed, not only to make residents aware of the new supply of textile donation options, but also to increase residents’ desire to donate textiles rather than throwing them out.

We envision our partnership between Washington, D.C., and Goodwill as largely mimicking the existing partnership between Goodwill and San Francisco. The major difference between our proposal and the existing system in San Francisco is that, given D.C.’s very large student population, we propose that a key part of D.C.’s partnership with Goodwill consist of placing a large number of goBINS at colleges and universities, particularly at the beginning and end of each academic year. (This aspect of our proposal is discussed in more detail below.) Additionally, this partnership would be an innovative aspect of D.C.’s current sanitation regime because it would provide a very convenient option for many D.C. students and residents to donate clothes without even needing to leave their buildings.

Existing Efforts

By all accounts, this partnership has been fairly successful in reducing textile waste by San Francisco's residents. In the early 2000s, San Francisco launched the Zero Waste Initiative, which as the name implies, set an ambitious goal of achieving zero waste by 2020. This initiative aims to reduce all types of waste across the city, not merely textiles, and includes an array of initiatives and partnerships designed to tackle all kinds of waste. While the city has not quite met the goal of zero waste, San Francisco's overall landfill diversion rate has increased from less than fifty to over eighty percent (the highest rate among major U.S. cities), compared to a nationwide average of around thirty-five percent (Airhart, 2018). While data on the rate of textile donations specifically in San Francisco before and after the launch of the Goodwill partnership is not available, nowadays the city's average resident throws away only about 50 pounds of textiles per year, far below the nationwide average of about 80 pounds ("Recycle Your Clothes, Linens, and Rags (Textiles)", n.d.). Given the success of this partnership in San Francisco, we believe that this success can be easily extended to Washington, D.C. as the two cities are quite similar demographically; both are among the most densely populated, wealthy, highly educated, and transient major cities in America.

San Francisco is the only major city that has gone to this extent to tackle the problem of textile donations with such lofty ambitions. In most places across the country, local nonprofit organizations (including Goodwill) are the primary agents organizing textile donation efforts. However, smaller cities across the country have focused on the issue of textile recycling, rather than donation, by placing several bins throughout these cities in which residents can place textiles for recycling. These cities include Troy, New York; Durham, North Carolina; and Tempe, Arizona (Troy City Hall, 2018; Martinez, 2018; "Clothing and Household Textiles Recycling", n.d.). While these efforts focus on textile recycling, rather than donations, they largely operate in a similar way to our proposed partnership by placing bins in locations convenient for residents. However, these programs are quite small in scale, and consequently much more limited in terms of their success. Such local initiatives certainly have tangible benefits, but they underscore the possibility for a large-scale partnership with a national organization such as Goodwill to have a much more substantive impact on reducing textile waste in D.C.

Timeline and Logistics

We expect the structure for Goodwill and D.C. to be a mutually beneficial partnership, whereby Goodwill will manage the donation bins and take ownership of the textiles and D.C. will benefit by reducing the volume of textile sent to landfill. As part of the partnership, the City will identify the most suitable locations for the donation bins and the timing for the launch of the initiative. As mentioned earlier, we would expect the City to start by rolling out the donation bins at university campuses and larger apartment complexes in the area.

As we discuss in more detail later, the costs of producing and placing the bins will be covered by one of the sustainability grants of D.C.'s DOEE and the operations and maintenance will be taken on by Goodwill. We expect the grant application and processing to take six to eight weeks per the

DOEE's grant application guidelines. Once financing is finalized, we expect the City and Goodwill to spend four to six weeks determining the optimal locations for the bins. Then we expect the bin preparation and development to take approximately two months, which will account for the majority of planning around the partnership and the donation logistics. We also expect the marketing campaign to take ten weeks after the partnership is announced to make sure we reach as many D.C. residents as possible. We anticipate that the launch would occur in Fall 2020, however this would largely depend on Goodwill and D.C.'s availability to implement the initiative quickly.

Dates	4/6	4/13	4/20	4/27	5/4	5/11	5/18	5/25	6/1	6/8	6/15	6/22	6/29	7/6	7/13	7/20	7/27	8/3	8/10	8/17	8/24	8/31	9/7	9/14	9/21	9/28	10/5	10/12	10/19	10/26	11/2	
Partnership Planning																																
Initial Meetings																																
Contract Preparation																																
Grant Application																																
Initiative Implementation																																
Identify Bin Locations & Number																																
Bin Development																																
Bin Setup																																
Marketing																																
Announce Partnership																																
Promote goBins																																
Advertise Bins																																

Initiative Structure

The key members of the initiative will be: 1) D.C.'s Department of Public Works and Department of Energy and Environment, 2) Goodwill and 3) Sustainable D.C. 2.0 working group. Although our initiative will be run primarily by Goodwill, we believe it is important to have this initiative included as part of the Sustainable D.C. plan. The plan is a community effort led by the D.C. government to make the city more sustainable. Being a part of this effort will help our initiative reach more D.C. residents and further the mission of Sustainable D.C.

Measuring Success

The success of D.C.'s partnership with I:CO can primarily be evaluated in several ways. The first, and most obvious, way to measure success is to simply measure the total quantity of textiles dropped off in textile recycling bins over a given length of time. From here, it is easy to calculate how many pounds of waste this program has kept out of D.C. landfills, and consequently we can calculate the savings to the city's budget in disposal costs, not just relative to taking them to a landfill (about \$45 per ton) but also relative to the counterfactual in which D.C. would recycle textiles itself (about \$120 per ton, as discussed in more detail below). In addition, the environmental and health costs avoided by taking textiles out of landfills should be taken into account. These savings can then be evaluated against the cost of the program.

In addition, the success of our marketing efforts must be taken into account. Our marketing strategy aims to accomplish two goals: first, to increase awareness of the existence of the new options for textile recycling, and second, to make residents more likely to recycle rather than throw out textiles, by providing information on the harms and costs of textile disposal. To measure our success in these realms, we could conduct surveys asking a random sample of D.C. residents whether they have seen our marketing materials and, if so, whether the materials made them more

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likely to consider textiles recycling. The results from these surveys could be used to further refine our marketing materials and make them more effective in the future.

Campaign Plan

D.C. is a young city filled with students. Our initiative plans to work with different colleges and universities in the D.C. area such as Georgetown, George Washington, American University, The Catholic University of America, and Howard University. We would like to collaborate with universities' newspapers and sustainability offices to promote our textile donation bin campaign. We will create flyers in both printed and online forms - a sample flyer is provided in Appendix A. University's newspapers can then be put as part of their weekly/monthly contents. In addition to newspapers, we can create flyers and post them around campuses to spread our message. We can also work with the sustainability offices to get our campaign promoted in the school's weekly email to all campus residents. This way we can ensure that our message reaches the entire university population. We expect that having goBINS on campus will become a natural way for students to dispose/donate unwanted textiles and clothing. We will also aim to have our program promoted mostly around move-in/move-out dates, especially in May and September, and some weeks leading up to it.

Additionally, we plan to work with major property management companies around the city that will put up goBINS in their premises to distribute flyers to their residents and promote the existence of new goBINS. In order to reduce the cost of mailing and printing, we will distribute the majority of flyers around peak moving season similar to university campuses.

We will start with these traditional campaign activities and evaluate our effectiveness for the first step. After the initial phase of this campaign, if budget allows, we want to take this campaign to the next level as our second step by using online advertising platforms (i.e. social media advertisement). Many campaigns now use social media platforms to promote their causes. We can target our main demographics which are college students and young professionals.

Funding and Budget

When considering the potential costs of a partnership between Goodwill and D.C., we must evaluate them against the costs of alternatives. As mentioned previously, to maintain the status quo and simply provide no options for residents to donate any textiles besides clothing, D.C. would continue to pay about \$45 per ton of textiles that residents dispose of, with total estimated annual costs of about \$1.3 million.

In light of these exorbitant costs, a partnership with Goodwill emerges as a potentially much more cost effective option. Goodwill would be responsible for all of the sorting and processing of textiles and apparel placed in donation bins. Unfortunately, information on the exact cost of the development of goBINS is unavailable, but we expect it to be significantly less than the City's alternatives. Given that we estimated D.C. spends about \$1.3 million per year in textile disposal, if the initiative is very successful any costs could be largely offset by the savings from not having to send textiles to the landfill. Of course, more detailed research, including contacting the developers of goBINS, will be needed to determine the exact costs of the initiative before this program is implemented in D.C.

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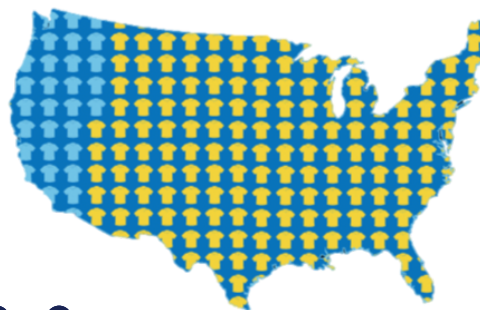
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APPENDIX A. SAMPLE MARKETING MATERIALS



DONATE TEXTILES

THE US GENERATES
21 BILLION POUNDS
OF TEXTILE WASTE PER YEAR

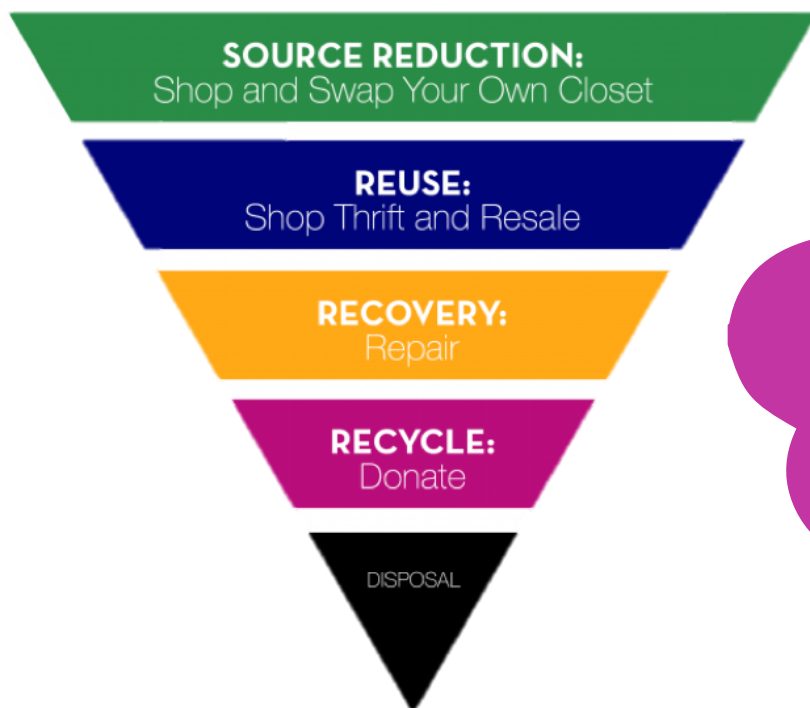


OR

70 POUNDS
PER PERSON PER YEAR
GOES TO LANDFILL



15 %
OF ALL TEXTILES
IN THE US GET
DONATED OR
RECYCLED



WE ARE BRINGING
MORE BINS TO DC TO
HELP PROPERLY
DISPOSE OF FABRICS

SCAN



TO FIND BIN LOCATIONS NEAR YOU

OR VISIT [ZEROWASTE.DC.GOV](https://zerowaste.dc.gov) FOR MORE INFORMATION