

GREENER GODFREY

SIUE Successful Community Collaborative with Godfrey Cool Cities



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The Village of Godfrey in Illinois

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Table of Contents

Executive Summary	3
Team Biographies	6
Community Description and Target Population	9
Best Practices	12
Needs Assessment	16
PRECEDE-PROCEED	23
PRECEDE-PROCEED Model	25
Project Theory	26
Goals and Objectives	30
Project Plan	34
Formative Evaluation	49
Logic Model	51
Expected Outcomes and Summative Evaluation Tools	52
Evaluation Results	56
Discussion of Results	62
Reflection on Project, Lessons Learned, and Recommendations	68
References	73
Appendix	80
A. Verbal Survey Questions	80
B. Fact Sheets	81
C. Polls	85
D. Photo Release Form Sample	86

Executive Summary

Southern Illinois University Edwardsville (SIUE) Public Health students, Godfrey Cool Cities, and SIUE Successful Communities Collaborative (SSCC) came together in fall of 2017 to plan a community recycling education program for Godfrey, IL. In order to put together the best intervention possible, a detailed community description was needed of our community and target population. Based from our findings, we decided to target homeowners in Godfrey, IL and exclude those who are renting. All of these components below make up a complete intervention known as *Greener Godfrey*.

Once we found our target population, we organized a needs assessment survey to be distributed to homeowners in Godfrey. The data was collected through Facebook, SIUE ListServe, and face-to-face outreach in the community. From the needs assessment, we decided the community needs a recycling education intervention to increase the knowledge of the homeowners, to then increase acceptance of a citywide recycling program.

This decision for a recycling education program was based off of past studies and implementations moving towards support for a community wide recycling program. This can be found in best practices, which led us in the right direction of an intervention plan. Within the best practices, surveys were distributed to their target population to gather information on homeowners' beliefs, attitudes, and knowledge. Another study in best practices, took place in Belleville, Swansea, and O'Fallon, Illinois which is geographically close to Godfrey, Illinois (Lauf, 2009). This study showed that cost and education were an issue (Lauf, 2009). This study also recommended an educational approach for residents to understand the benefits and cost of recycling (Lauf, 2009).

In the Precede-Proceed section, it describes outcomes Godfrey would like to see from recycling, such as improved air and water quality, improvement in waste management, and to reduce pollution and roadside dumping. Three behavior factors that affect our homeowners are predisposing factors, reinforcing factors, and enabling factors. Predisposing factors are based on homeowner's knowledge and their attitude toward recycling. Reinforcing factors deal with being recognized or appreciated when recycling. Enabling factors include access to recycling and the availability to recycle. The environment affects the target population by having access to bins or larger bins, if they can afford it, and when their recycling gets picked up. Due to a few factors, Madison County has decided to move towards a zero-waste zone and the first step in moving towards this is the *Greener Godfrey* program (Recycling and Resource Management, 2015).

The theory of planned behavior was used to guide the project's goals and objectives and the overall intervention plan. Attitude towards the behavior and perceived behavioral control constructs were the best fit for this intervention. We are able to fit these constructs in with the plan by providing homeowners information on the positives of recycling and on what they can recycle. Several goals and objectives were then put into place to guide the intervention plan. Two of our goals included increasing recycling in Godfrey, IL and increasing support of recycling in Godfrey, IL. Both goals had specific objectives to follow in order for this intervention to be successful.

Our intervention plan involved implementing for five weeks starting January 22nd and ending February 23rd. During these five weeks, we uploaded a variety of different facts, polls, and YouTube videos about recycling, along with awarding Recyclers of the Week on the *Greener Godfrey* Facebook page. The Recyclers of the Week were chosen in Godfrey and

received a free t-shirt and/or reusable bag. We posted to the Facebook page a total of ten times a week, with two posts being dedicated to the Recyclers of the Week.

Our group decided to open the *Greener Godfrey* Facebook page three days before implementation in the hopes of gaining followers prior to our first post. By the end of implementation, our page had a numerous amount of likes and followers. We met five out of the twelve objectives. Our posts that received the most engagement were the Recyclers of the Week, and these posts seemed to reach the biggest audience as well. We also had support on the page from our community partners and our professor through shares, comments, and rating the page. The Facebook insights program was the biggest help while evaluating the program. Although Facebook insights took some time to learn how to find the data we needed, using the page for our results became a simple task.

Finally, our recommendations to future groups would be to stay positive, be patient, use all your available resources, ask for help, be prepared for the unexpected, pay attention to detail, and be as thorough as possible in all parts of this project, and you will have a successful program.

Biographies of Team Members



Meg Bruhn is a Senior at Southern Illinois University Edwardsville (SIUE). She has plans to graduate in May 2018 with a Bachelor of Science degree in Public Health and a minor in Applied Communication Studies. She has been a member of the public health honorary society, Eta Sigma Gamma (ESG), since August 2016. She held the position of Fundraising Coordinator for the 2016-2017 term. She is also the recipient of the Alice Prince Award and the ESG Academic Achievement Award at SIUE. After graduation Meg plans to pursue her Master's degree in Public Health.



Amber Green will be graduating from Southern Illinois University Edwardsville (SIUE) in Spring of 2018 and will receive her Bachelor of Science degree in Health Education. She first attempted her studies at Southern Illinois University Carbondale but realized in her first year that this was not the university for her. She then attended Southern Illinois University Edwardsville and fell in love with the school and the Health Education program. She currently lives in Greenview, IL and she is on the Civic Improvement Association (CIA) for her town. She works at St. John's Hospital as a clerk on the Cardiovascular unit in Springfield, IL. After she graduates from SIUE, she plans to attend the accelerated

nursing program at Methodist College in Peoria, IL. Ever since she was little she has had a passion to be able to help the public whether it be from the prevention side or the medical side. She would love to be able to work in the field of health education as this affects many of her family members and means a great deal to her but her dream goal would be to become a nurse and work in a doctor's office or with children.



Jordan will be graduating in the Spring of 2018 with a Bachelor of Science degree in Health Education from Southern Illinois University Edwardsville (SIUE). As a health education major, she hopes to take this degree and work with the prevention aspect of health education. This is an important factor in her life, considering the many health obstacles her family has faced in the recent years. Jordan lives in Wood River, IL with her three German Shorthairs and her fiancé. She currently works as a part-time supervisor at Carter's and Osh Kosh and spends her free time catching up on as much sleep as she can. After graduating she plans on taking time to care of her newborn baby and planning her wedding for Fall of 2018.



Abbigayle Riedisser will be graduating with a Bachelor of Science degree in Public Health and a minor in Sociology from Southern Illinois University Edwardsville (SIUE) in Summer of 2018. Abbigayle is currently the Vice President of Eta Sigma Gamma and has been a member since August of 2016. Abbigayle is also a member of the Madison County Medical Reserve Corps and through this organization has been CPR and AED certified on adults, children, and infants. She is currently on the board for the creating the 17th Madison County Youth Forum as well. After graduating from SIUE Abbigayle hopes to either pursue her Master of Public Health or move to Florida to be closer to family and work in the public health field within the community.

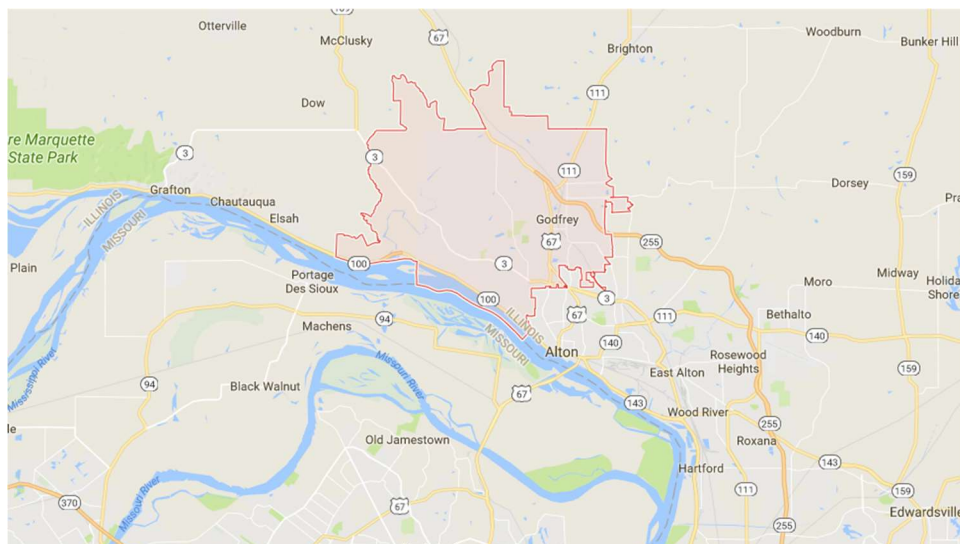


Megan Widman will receive her Bachelor of Science degree in Public Health in the spring of 2017 from Southern Illinois University Edwardsville. She minors in Anthropology. Megan is the current secretary of Eta Sigma Gamma, and has been a member of the public health honorary society since February 2016. She is a member of the National Society of Leadership and Success and Archery Club at SIUE. Megan was the lead student contact and organizer for the 17th Madison County Youth Forum, held at SIUE. She has been program planning for over a year at The Highland Home, an independent living center for senior citizens. There she designs and teaches weekly courses in regard to personal health.

Community Description and Target Population

Description of Community

The target community for this project is residents living in Godfrey, Illinois. Godfrey is in Madison County, and parts of Godfrey border the Mississippi River. Godfrey is a primarily residential community with a population of 17,733, as of July, 2016 (Riverbender, 2017a). While most of the land is still devoted to agriculture, there have been rapid developments in Godfrey in recent years (Riverbender, 2017a). They hope to soon see more commercial developments. The average age of a resident in Godfrey is 45.6 years old (Data USA, 2017). Of all Godfrey residents, 92.6% of them are white (Riverbender, 2017a). While 5.6% of residents live in poverty, the annual household income in Godfrey is \$65,145 (U.S. Department of Commerce, 2016). About 27% of residents have a bachelor degree or higher (U.S. Department of Commerce, 2016). The top three types of jobs that are held by Godfrey residents are administrative, production, and management (Data USA, 2017). When it comes to housing, 85.1% of the residents in Godfrey are homeowners, while the other 14.9% rent their place of living (Data USA, 2017). This average is higher than the state average for Illinois, which is 65.5% home ownership (Data USA, 2017).



Priorities of the Community

The city of Godfrey has many things they value. Some of them include: bike and pedestrian safety, emergency systems and disaster management, climate protection, and economic development (Riverbender, 2017a). To target these values as well as others, residents of Godfrey have gotten together and formed committees. On the Village of Godfrey website, there are 20 different committees dedicated to standing up for the things Godfrey residents value, such as; the Planning and Zoning Commission, the Finance Committee, and the Bike and Pedestrian Advisory Committee (Riverbender, 2017a). While some of these committees receive grants, such as Godfrey Cool Cities, all the members on these committees are on a volunteer basis (Cope, personal communication, September 22, 2017).

Community Partner's Role and Organization

One of the community partners we are working with for this project is the Climate Protection and Energy Efficiency Committee in Godfrey. They are also commonly called the Godfrey Cool Cities. Godfrey Cool Cities began meeting in 2013 to advocate for sustainability. The committee is currently sponsored by the Sierra Club and is made up completely of volunteers that live within the community (Woulfe-Beile, personal communication, September 22, 2017). The main goal of the Godfrey Cool Cities is to reduce greenhouse gases at the municipal level (Riverbender, 2017b). Their mission statement is to "Engage diverse village stakeholders with the goals of improving energy efficiency in municipal operations, protecting the environment and natural systems, and, consequently, enhancing quality of life in the Village;" as well as to, "Educate the public about energy efficiency and climate change while championing this process (Riverbender, 2017b)."

Existing Health Education/Promotion

Madison County has many programs that are implemented into communities, and Godfrey residents benefit from all of them. Some of the programs include smoking cessation, secondhand smoke awareness, disaster preparedness, handwashing presentations, Madison County Youth Board, and Madison County Youth Forum (Madison County Health Department, 2015b). While these are county wide programs, the Godfrey Cool Cities has also been taking part in initiative. These initiatives include the green cities challenge, Recycle and E-Waste Day, and the county wide solarize program (Riverbender, 2017b). Godfrey Cool Cities also hope to start a new initiative for recycling and yard waste that our group will be involved in planning and implementing. Because the decision to recycle is up to each resident within Godfrey, our group hopes to educate the residents on the importance and benefits of recycling.

Proposed Target Population for Project

For *Greener Godfrey*, the target population is homeowners living in Godfrey, Illinois. This population will be the target of the project because the recycling program currently in place requires homeowners to contract their own and pay separately for their monthly recycling services. Therefore, these are the people that need to be reached regarding education on recycling and program implementation. We are not targeting the 14.9% that rent in Godfrey, because they tend to have recycling services included with the rent, especially apartment complexes (Data USA, 2017).

Best Practices

In this portion, three best practices will be outlined that have worked before our intervention, and what we think will work for our intervention.

Effective Practices

In a suburban community in California, mail surveys were sent out to residents that would give the researchers a better understanding on their environmental and recycling attitudes (Gamba and Oskamp, 1994). These households were observed on whether or not they were participating in the recycling program, which would require residents to put all recyclables in one bin for curbside pick-up. In the past, all residences, except for commercial and apartment complexes, were given the recycling bins needed to recycle. It was noted that this would create community wide pressure to participate in recycling. Past research took into account knowledge, environmental attitudes, motivations, and demographics of the participants. The present study was conducted to see what influences recycling behavior. The researchers sent out a 58-item questionnaire along with a cover letter. The cover letter played an important role because it was “signed by the mayor mailed in an official city envelope” (Gamba and Oskamp, 1994). Since a city official was included in this process, it put pressure on the participants to fill out the questionnaire and make it more of a priority. These questionnaires focused on recycling knowledge, attitudes, and behavior. Ten days after the questionnaires were sent out, a postcard was sent out to the same households to thank them for their participation, or to remind them to respond. The response rate for the questionnaire was 76% (Gamba and Oskamp, 1994). A week before the questionnaires were sent out to the households, observation of whether or not the households participated in the biweekly recycling took place over five consecutive observations. The results found that knowledge based question respondents were able to correctly answer,

were 8.1 out of 9 (Gamba and Oskamp, 1994). Such questions asked them to identify, from a list, if an item is recyclable or not. The question regarding the participant's attitudes did not show that residents found solid waste disposal. A separate question related to solid-waste disposal was rated by 77% of participants as a very or extremely serious environmental problem (Gamba and Oskamp, 1994).

Similar research study was conducted to figure out what was needed to increase the number of people who would participate in recycling programs in New Jersey. There were four strategies created to help improve participation which included: "increasing the knowledge about recycling, identifying effective means of making the community aware of recycling programs, increasing the convenience of recycling, and identifying changes that the public perceives will induce full participation" (Nyamwange, 1996). They sent out a questionnaire and cover letter to randomly selected households in Jersey City, New Jersey. While 800 were sent out, the researchers received 293 responses. Their results found that 49.5% of households always recycled, 36.3% sometimes recycled, and 14.2% never recycled (Nyamwange, 1996). For those who did recycle, they found that the household was knowledgeable on the topic of what to recycle and what not to recycle. For the 14.2% that never recycled, the researchers found that lack of knowledge was inhibiting their recycling habits. In order to make sure that information was going to be given out correctly, the researchers ranked television programs, public campaigns, newspapers, and radio advertisements as the top four effective sources to get recycling information from (Nyamwange, 1996).

One last study presented recycling rates that were compared in Belleville, Swansea and O'Fallon Illinois, which are all located in St. Clair County. These rates were compiled to see if the cost of recycling affected residents' recycling habits (Lauf, 2009). Each of these three

communities offer recycling, with curbside pick-up, of a variety of different materials such as glass, paper, aluminum, tin, and plastic. One major factor that is inconsistent with these recycling programs is the cost factor. Two different methods were used to show who participated in recycling and their knowledge on recycling. The first method was a visual survey. This means the researchers drove around and observed the recycling bins and houses to see who recycled, and how many houses recycled. For three weeks, the visual survey was conducted to see who participated in a recycling program. The other method was a mailed questionnaire. A randomized mailed questionnaire was sent to the same households in each town to get a better understanding of how people rate their willingness to recycle, and any deterrence to recycle. The survey was grouped into seven sections: willingness-to-pay for recycling, participation in a current program, knowledgeability on landfills, demographics of participants, what influences them to recycle, current service satisfaction, and who takes responsibility for recycling (Lauf, 2009). In O'Fallon, Illinois, residents pay a flat fee for recycling their items. Of that target population in O'Fallon, 9% used co-mingled recycling during the study. This meant all different recycled materials can be combined in one bin. In Belleville, Illinois, recycling is free for residents, and they are required to separate everything in three different bins. Of the target population in Belleville, 30% recycled during the study (Lauf, 2009). Swansea, Illinois residents pay for each container of garbage and recycling. Of the target population in Swansea, 66% percent were recycling during the time of the survey. The questionnaire revealed that the type of program each city offered, influenced whether people recycled or not.

Several factors showed why people recycled in these three different cities. Convenience was a factor in Belleville and Swansea, but not in O'Fallon. Provided information was a factor in Swansea, but not Belleville and O'Fallon. The number of people in a household was a factor for

O'Fallon, but not Belleville and Swansea. The person responsible for recycling, and level of education did not play a factor. Income was a factor in O'Fallon for recycling habits, but not for Belleville and Swansea. Overall, residents in these three cities will participate in recycling if it is convenient and not costly. In this article, the author suggests aiming a program towards education of the population on cost, because the population does not understand the cost after their waste leaves their home. This may give them a better understanding on how paying for their recycling up front actually saves money in the end (Lauf, 2009).

Intervention Fit

Pieces of these articles could be tailored to an appropriate fit for our priority population in Godfrey. The main obstacles when it comes to recycling, as stated in these articles, is attitudes and knowledge. This will be a present theme in the program our group plans to implement. Education is key on getting residents to understand the cost and benefits of recycling. The second article (Nyamwange, 1996), focused on the general knowledge about recycling, which found that the more knowledgeable the resident was about recycling, the more likely the resident would recycle. This could be tailored to our intervention because knowledge could be a factor on why residents are not recycling in our community. A needs assessment will be completed in order to tell if our target population is lacking education on recycling. The third article showed that cost was a main factor in the residents recycling (Lauf, 2009). This could be tailored for our intervention because the population reached in this article is close geographically to our target population, and cost could be an issue for our residents considering they use several different recycling programs in one city.

Needs Assessment

Methodology (secondary)

Madison County implements a health plan, called IPLAN, every five years, much like Healthy People 2020. In 2015, the county identified four priority areas to be addressed in 2016-2021. These areas included obesity, substance abuse, mental health, and air quality (Corona, T., Yeager, A., & Madison County Partnership for Community Health, 2016). Strategies for improving each priority considered the resident's perception, acceptance, and prior knowledge of the area needing improvement. Data were collected using qualitative and observational methods. Environmental health was initially a topic of importance for the researchers to study. They would then identify specific needs of environmental health and other aspects of health in the county. Community stakeholders, the Health Advisory Committee, and the Board of Health participated in focus groups to begin narrowing the focus of the county health plan. The top three identified were substance abuse, sexual health, and mental illness with the least important being health education. A community health survey was then given and analyzed to county residents. They felt the most urgent health concerns in the county were: substance abuse (10.5%), obesity (8.8%), mental health (4.5%), and air pollution (3%) being towards the bottom of the list (Corona, T., Yeager, A., & Madison County Partnership for Community Health, 2016).

On the Madison County Health Department's online environmental page, some of the topics of research where further information can be found are food recalls, the food sanitation program, handwashing programs, radon, and mold (Madison County Health Department, 2015a). It also prominently displays a food temperature chart in relation to foodborne illness. Unfortunately, even though these can be classified as environmental health needs in the county, none of them focus on the actual health of the environment such as air quality.

The Alton Memorial Hospital conducts a mandated community health needs assessment, every three years. The purpose of this is to identify community health needs and implement a plan in accordance (Alton Memorial Hospital, Barnes-Jewish/Christian Healthcare [BJC], 2017). The hospital's defined community is Madison county, and Alton itself shares a city limit with Godfrey. The priority topics to be discussed and analyzed in the most recent needs assessment were cancer, access to health care, health literacy, and leading a healthy lifestyle (Alton BJC, 2016). Other needs included sexual health, risk screening, childhood obesity, adult exercise, nutrition, drug education, health relationships, and self-identity (Alton BJC, 2016). These were subject to change after formal focus groups that included community stakeholders and medical professionals from the hospital.

Stakeholders involved in evaluating the needs of the Alton area felt that some other topics should be considered in addition to the priority needs listed above. These included dental care, air quality, mental health, and gaps in implementation such as missing the needs of minority and low-income populations (Alton BJC, 2016). The topics of greatest concern found by the needs assessment were health education, mental/behavioral health, housing/homelessness, obesity, access to services, and air quality being lower on the list (Alton BJC, 2016). After the needs assessment in Alton was completed, the committee comprised of the stakeholders and medical professionals chose to implement programs based on obesity and diabetes (Alton BJC, 2016).

Methodology (primary)

We began collecting data the first time we met with our community partners: Alexandra Cope, Virginia Woulfe-Beile, Connie Frey-Spurlock, and Tim Engelman. During our initial meeting Alexandra Cope, the chairman of Godfrey Cool Cities, and Virginia Woulfe-Beile, the Three Rivers Project Coordinator for the Piasa Palisades Group of the Sierra Club, gave us

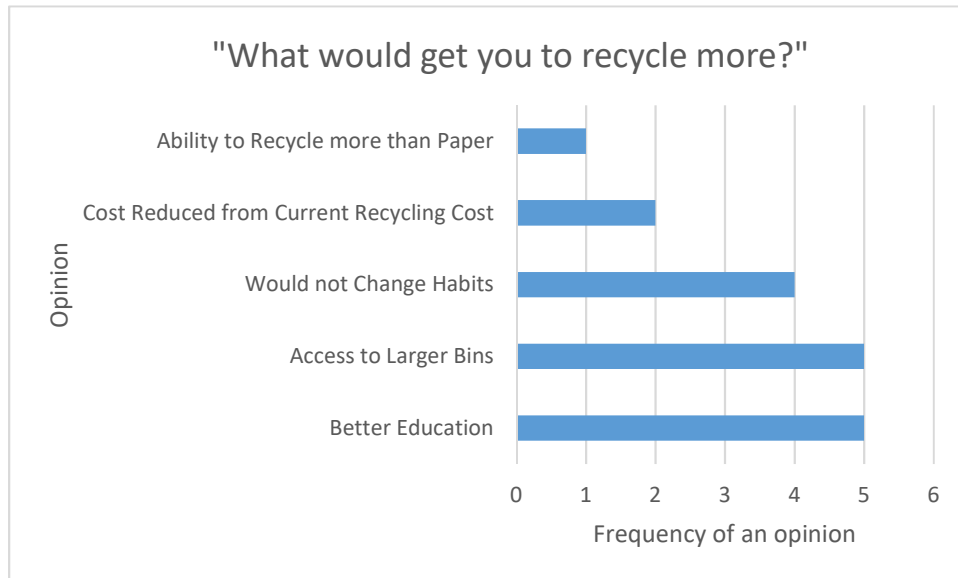
information on the perceived needs of Godfrey recycling. The topics they believed needed to be addressed in the community were: education on recycling, single stream recycling, and a city-wide recycling system (Cope & Woulfe-Beile, personal communication, September 22, 2017).

Our second round of data collection began by developing a survey that would collect qualitative data, and could be verbally given or submitted in writing by participants. This survey can be found in Appendix A. We used three open-ended questions and three close-ended questions regarding the Godfrey residents' current recycling practices and knowledge. This was done mostly through snowball sampling, by asking participants to identify others to take the survey, and a little random sampling done outside of Aldi's in Alton. To be able to participate in the survey, the people we sampled had to be a homeowner in Godfrey. We were also consciously making sure the people we were interviewing represented the community. Therefore, we also asked for their age and if they fall below, at, or above the average household income level. The average age of the sample was 46.6 years old. Also, when it comes to the average household income, two people in the sample live below the annual household income, eight people live within the annual household income, and five people live above the annual household income. Our most important qualitative question, "What would get you to recycle more," was answered in four ways (see Graph 1). The top answers were having better education about recycling, and having access to larger recycling bins. The next most frequent answer that four people stated was that they would not change their recycling habits. Participants also cited that money incentives,

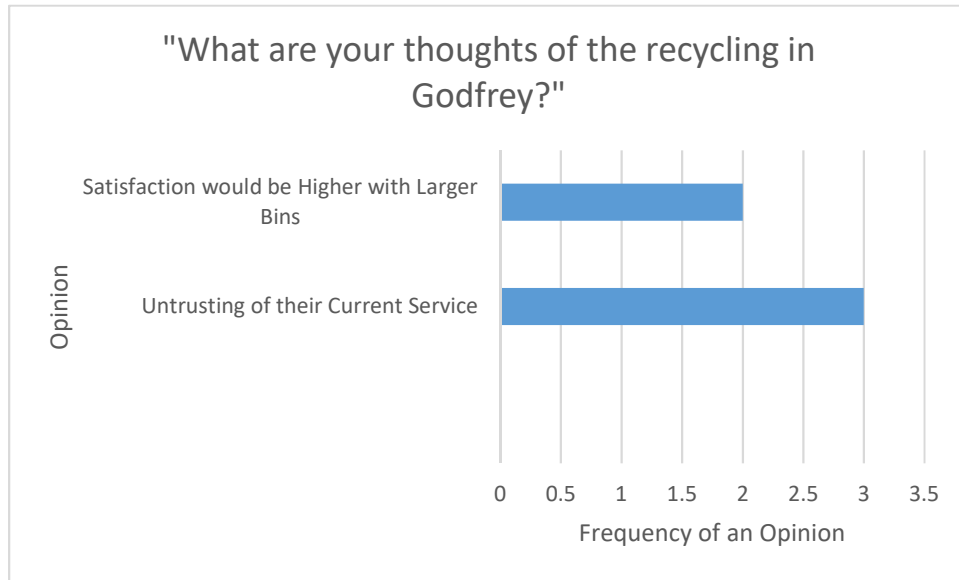
such as cheaper trash pick-up costs, would encourage them to recycle more. This was followed by the ability to recycle more than just paper (i.e. glass and plastic).

Graph 1

We also collected data on the participants' opinions on recycling in Godfrey, seen in Graph 2. Those who answered the question (5 out of 15) stated that they were unsure if their

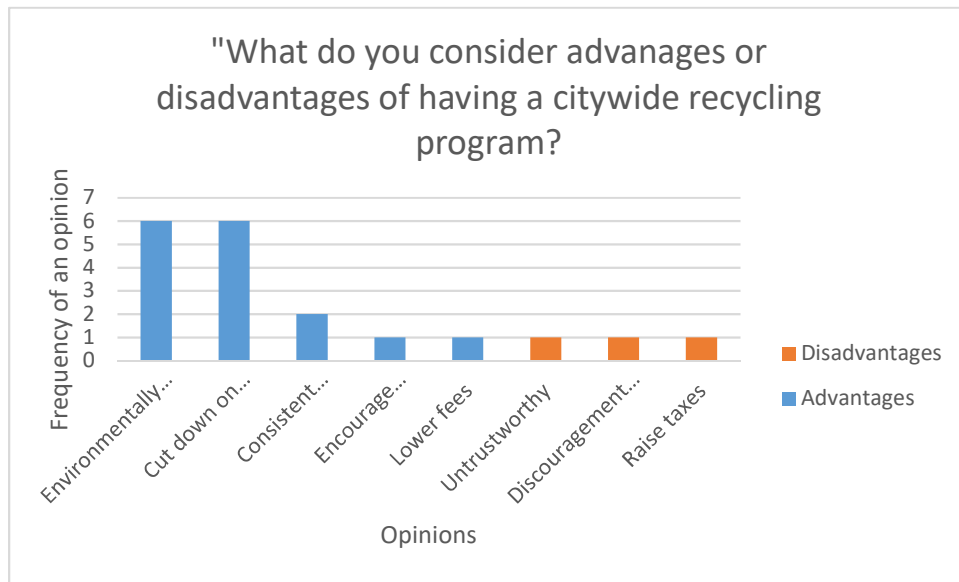


recycling materials were actually being recycled. Many feared the materials were being disposed of in the same manner as trash. The remaining participants stated that their satisfaction with the recycling they already have would rise if they could use larger bins.



Graph 2

Finally, we inquired about the participants perceived advantages and disadvantages of a citywide recycling program for Godfrey, which Cool Cities hopes will be implemented by 2020. They stated advantages as recycling being good for the environment, it would cut down on landfill, there would be more consistent curbside pick-up of recycling, it would encourage residents to partake in recycling, and recyclers would not have to pay higher private service fees. There were few participants who stated any disadvantages at all. These included not being able to trust the company, implementation without education could be discouraging, and it could raise taxes. The results can be seen in Graph 3.



Graph 3

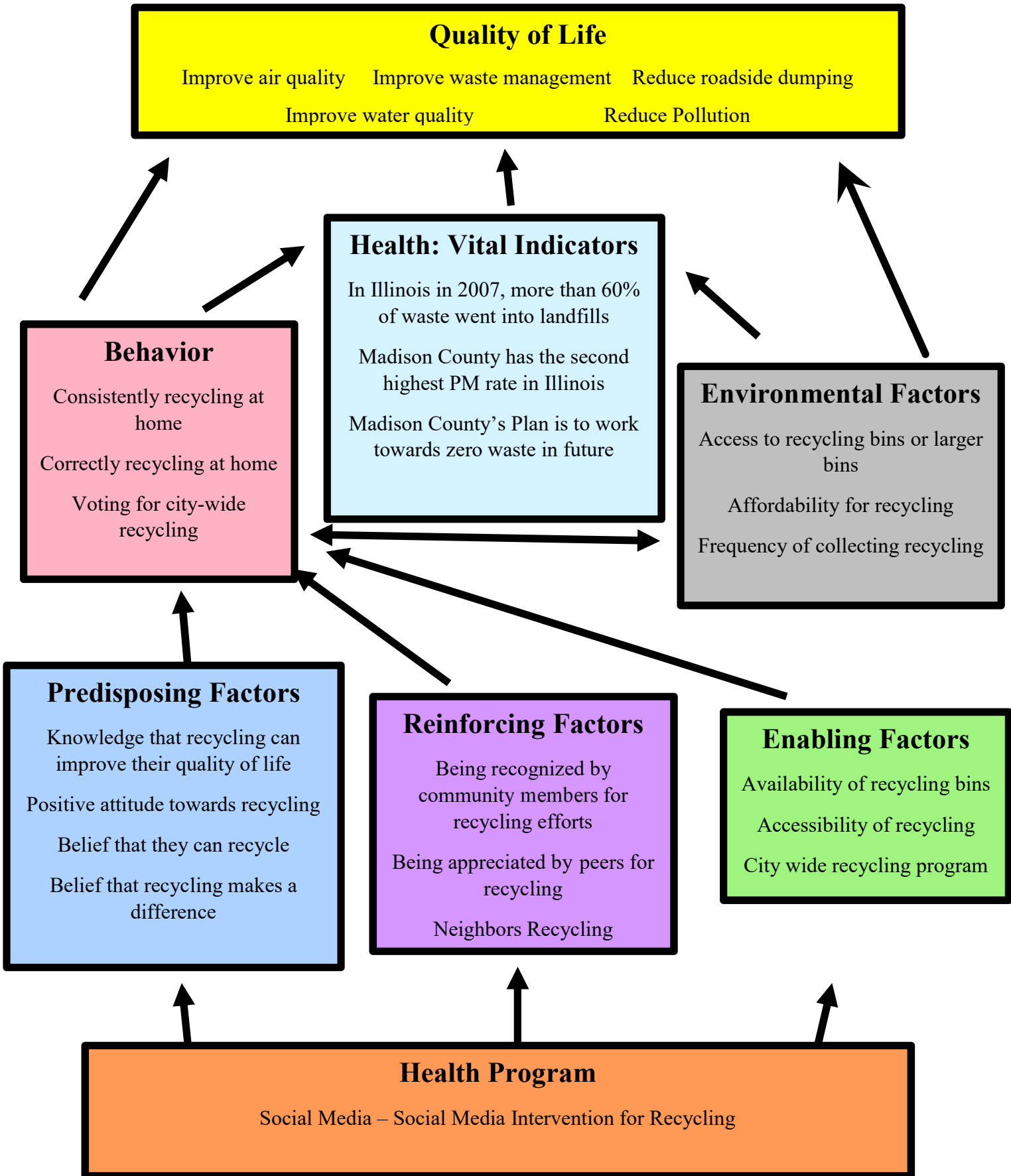
Key Findings

The needs of our specific target population, homeowners in Godfrey, were different than the overall health needs of Madison County as identified by IPLAN and the Alton Hospital needs assessment. Madison County on a whole found that there is a widespread need for focus on substance abuse, sexual health, mental illness and health, safety including falls and violence, obesity, cancer, heart disease, and affordability of treatment and services. We know from our community partners and our primary data that there is a true need for better recycling programs and options in Godfrey. The residents of Godfrey perceived that only small changes such as larger recycling bins or community education were what they needed in the spectrum of environmental health. However, we believe that their true need was to implement a citywide recycling program that will organize, educate residents, and change attitudes about recycling. We plan to address educating residents on why recycling is necessary and how a citywide ordinance would improve the overall health in Godfrey. This will put action into place for future lobbying and implementation of a citywide ordinance.

Prioritize Needs

Nothing is currently being done to resolve the recycling needs in Godfrey. Committees such as the Godfrey Cool Cities have been created to address the needs of the community. However, Godfrey Cool Cities focuses on "engag[ing] citizens with their local governments to advance the goal of reducing greenhouse gasses at the municipal level (Riverbender,2017c)" and not just recycling. Therefore, they have collaborated with us to begin a program to help improve recycling in Godfrey. The chairman of Godfrey Cool Cities has identified the unmet needs in the community as education, having adequate size recycling bins, and a city-wide recycling program. This team will focus on changing attitudes and increasing knowledge toward recycling through an educational program.

PRECEDE-PROCEED Model



PRECEDE-PROCEED

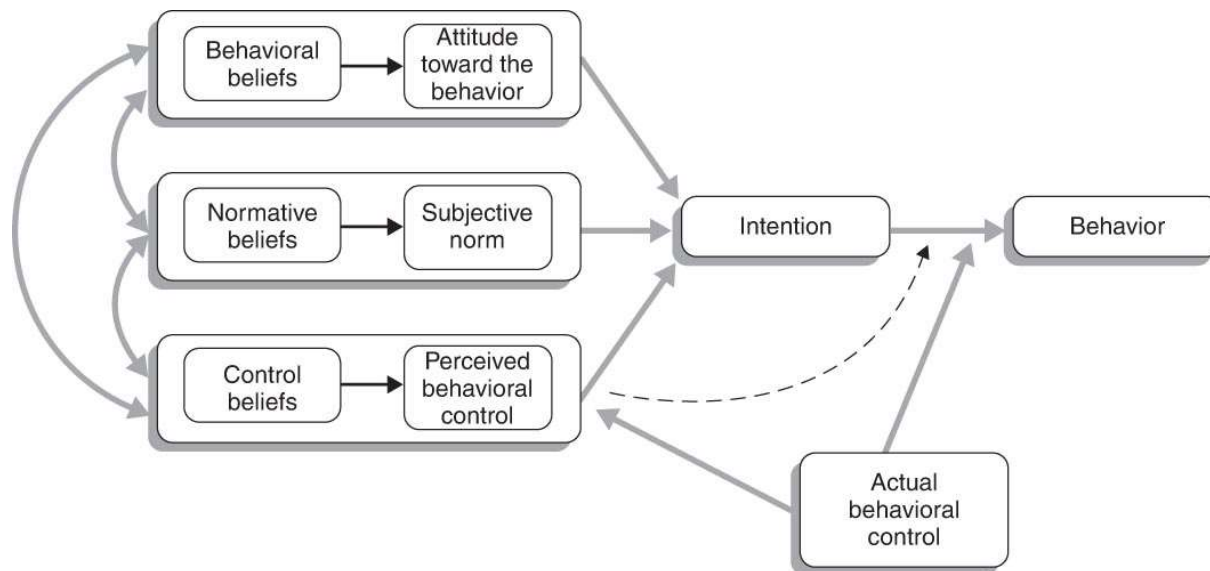
Starting at the bottom of our PRECEDE-PROCEED model, the health program we will implement will be an education strategy that improves the education about recycling in Godfrey, IL homeowners. There are three factors that contribute to this which are predisposing factors, reinforcing factors, and enabling factors. Predisposing factors are based on knowledge, skills, and beliefs. For our health program, predisposing factors are the homeowners' knowledge on recycling, their attitudes towards recycling, whether they feel recycling is necessary, and how they value recycling. Reinforcing factors are negative or positive behaviors that keep the homeowners recycling, or keep the homeowners from not recycling. The reinforcing factors in this program are recognition by community members for recycling, being appreciated by peers for recycling in their community. Enabling factors are what gives the homeowners the means to recycle. Enabling factors for *Greener Godfrey* are the availability of recycling bins in the community and accessibility of recycling. Accessibility means access to curbside pickup, or if they must take their recyclables somewhere else. These factors reflect the behaviors of our homeowners. Two behaviors of our homeowners are compliance to recycle and commitment to recycle. Some homeowners may or may not wish to recycle, and some may not be dedicated to consistent recycling. Another element that effects our homeowners is the environment. The environment effects our homeowners by access to recycling bins or larger recycling bins, if they can afford recycling, and the frequency that their recyclables get picked up. Both behavior and the environment effects the homeowners' health. In Illinois in 2007, more than 60% of waste went into landfills (Mansoori, 2016). Madison County, IL has the second highest particulate matter rate in Illinois (County Demographics, 2017). Due to this, Madison County has created a goal to move towards zero waste (Recycling and Resource Management, 2015). This outcome of

zero waste will lead to improved air quality, improved water quality, an improvement in waste management, a reduction in pollution, and reduction of roadside dumping.

Theory of Planned Behavior

Theory of Planned Behavior Background

To best reach our target population with *Greener Godfrey*, we chose the theory of planned behavior (TPB) for guidance. This theory, based on the social ecological model, is at the intrapersonal level. It will focus on individuals working with attitudes, knowledge, and motivations to shape this intervention. As suggested in the name, the theory of planned behavior is used to tell us how an individual is going to act based on their attitudes and beliefs (McKenzie, Neiger, & Thackeray, 2017). Theory of planned behavior came from Fishbein and Ajzen, and is branched off of the theory of reasoned action (TRA). Theory of reasoned action did not explain the nonmotivational factors that went into performing a behavior, which is why theory of planned behavior was used. A visual representation of this theory and its constructs are shown below.



Fit of the Theory of Planned Behavior

Our project focuses on the attitudes and behaviors about recycling in the Godfrey, IL community. Because of the focus we have chosen, we found the TPB as the best fit for our project. The higher the positive attitude, subjective norm to recycle in the community, and perceived behavioral control to be a successful recycler, the greater the success of our program.

During our literature research, we found several recycling programs which have successfully used the TPB. It was found that the recycling success through policy is not always a direct result from the policy itself, but the most important factors to a successful recycling program are perceived behavior control and the subjective norm (Botetzagias, Dima, & Malesios, 2015). When there is a high perceived behavioral control, there is a higher intent to recycle, and this is the most important factor to successful recycling programs (Botetzagias, Dima, & Malesios, 2015). When it comes to subjective norm and social influences, individuals choose to recycle because they feel they are doing the right thing, not because everyone else is doing it (Botetzagias, Dima, & Malesios, 2015). A second study done in Malaysia on school students, also found that the largest predictor of the intent to recycle was perceived behavior control (Mahmud, & Osman, 2010).

A study done in the United Kingdom using the TPB as a predictor for recycling behaviors, found that attitudes towards the behavior was a strong indicator of the intent to recycle. (Tonglet, Phillips, & Read, 2004). The study also explains how attitudes are strongly correlated with the individual's perceived behavior (Tonglet, Phillips, & Read, 2004).

These three articles gave us the evidence we needed to feel confident in our choice of using TPB as the theory for our program. We will focus on the Godfrey resident's knowledge, skills and attitudes towards recycling. Therefore, our program will target the attitudes and

education to increase resident's perceived behavioral control to have the skills and knowledge to do the right thing and recycle.

Application of the Theory of Planned Behavior to Recycling

To apply the TPB behavior to recycling, we need to use its three constructs: attitude toward the behavior, subjective norm, and perceived behavioral control.

Attitude toward the behavior outlines how a person views the behavior as negative or positive. If a person believes there are positive outcomes from a behavior, they will have a positive attitude toward the behavior, which encourages them to partake in the behavior. This can be accomplished by providing information to the individual on how recycling will reduce pollution, conserve energy and creates jobs. Subjective norm is social pressure to recycle. When an individual sees other people in their neighborhood recycling, they will be more likely to recycle if they see that behavior as a positive behavior. In a recycling program, subjective norm is normally a factor only when the individuals see their peers recycling and the individual knows the positive outcomes associated with recycling. This can be done by a community recycling program in addition to changing attitudes about recycling. Perceived behavioral control is an individual's perception of their personal ability to accomplish a behavior. This includes how a person assumes if they will be able to easily perform a task, or if it will be difficult. This will be accomplished by teaching an individual the skill to recycle. Teaching someone the skill to recycle can include instructing someone which items can be recycled, and how to properly prepare these items for recycling. Also, to increase perceived behavioral control, individuals need to know their recycling options in their area.

Application of the Theory of Planned Behavior to *Greener Godfrey*

Considering we gathered our data for our needs assessment primarily using social media, we decided that our educational intervention would work best on social media as well. We will create a Facebook page that the homeowners of Godfrey, IL will be able to access. Our project will apply the attitude towards the behavior construct by giving our Facebook followers information on the positive outcomes of recycling. We will provide fact sheets and YouTube videos with information such as how recycling reduces pollution, conserves energy, and creates jobs. Our program will minimally address subjective norms. We want the community to know that their peers are recycling and their reasons for recycling. This will be applied by posting pictures on Facebook with short captions of those recycling in Godfrey. This is known as the Recyclers of the Week. We will go into the community and find individuals who are actively recycling, and give prizes to recognize their efforts to recycle. We will then post these people, with their permission, on our Facebook page. We will also address the perceived behavioral control construct. This will be applied by giving Godfrey homeowners information on what can be recycled and when, so they feel confident recycling on their own. We will provide the information through videos and general posts of what can be recycled, the proper way to prepare recyclables, and how to dispose of these items. After these posts, we will have quizzes and polls on Facebook, so individuals can test their skills on what they have learned.

We chose these strategies because we feel these will be the most interactive to our audience for our social media project. These strategies will keep our community actively involved and exposed to the benefits of recycling; therefore, will relate and help us achieve our project goals.

Project Goals & Objectives

Goal 1: To increase recycling in the community of Godfrey, Illinois.

Objective 1.1: Two weeks after launching the Facebook page, we will have at least 50 followers to the *Greener Godfrey* page.

Type of objective and outcome: Behavioral objective

Theory and construct: Theory of Planned Behavior (Subjective norm)

Objective 1.2: One week into implementation, at least 35 Facebook followers will identify that they are Godfrey residents.

Type of objective and outcome: Impact learning objective, cognitive outcome

Theory and construct: Theory of Planned Behavior (Subjective Norm)

Objective 1.3: Midway through implementation, at least five Facebook followers will share our page with their friends.

Type of objective and outcome: Impact learning objective, cognitive outcome

Theory and construct: Theory of Planned Behavior (Perceived behavioral control)

Objective 1.4: There will be at least three shares of the video “How to Prepare your Home Recyclables” posted to the Facebook page in week three, by Facebook followers.

Type of objective and outcome: Impact learning objective, cognitive outcome

Theory and construct: Theory of Planned Behavior (Perceived behavioral control)

Objective 1.5: Midway through implementation, at least 10 of the *Greener Godfrey* Facebook followers will correctly select an answer from a poll regarding what items can be recycled in Madison County.

Type of objective and outcome: Impact learning objective, cognitive outcome

Theory and construct: Theory of Planned Behavior (Perceived Behavior Control)

Objective 1.6: There will be at least five likes on fact sheet ten (found in Appendix B) by Facebook followers in the last week of implementation.

Type of objective and outcome: Impact learning objective, cognitive outcome

Theory and construct: Theory of Planned Behavior (Perceived behavioral control)

Objective 1.7: Midway through implementation, at least 10 Facebook followers will correctly select an answer from a poll regarding what the numbers on recyclable products mean (found in Appendix C).

Type of objective and outcome: Impact learning objective, cognitive outcome

Theory and construct: Theory of Planned Behavior (Subjective Norm)

Objective 1.8: After implementation, there will have been at least 70 people who visit the *Greener Godfrey* Facebook page.

Type of objective and outcome: Outcome objective

Theory and construct: Theory of Planned Behavior (Subjective Norm)

Goal 2: To increase support of recycling in Godfrey, IL.

Objective 2.1: Every week of the five-week implementation, the *Greener Godfrey* team will post a total of 10 times to the Facebook page, which will include two Recyclers of the Week and one weekly poll.

Type of objective and outcome: Process objective

Theory and construct: Theory of Planned Behavior

Objective 2.2: During week two of implementation, at least 20 of the Facebook followers will identify on a Likert scale that they are excited to thrilled about potentially being a Recyclers of the Week (found in Appendix C).

Type of objective and outcome: Impact learning objective, affective outcome

Theory and construct: Theory of Planned Behavior (Attitude Toward the Behavior)

Objective 2.3: In the fifth week of implementation, at least 20 Facebook followers will identify on a Likert scale that they feel more encouraged to participate in recycling because of the Recyclers of the Week prizes (found in Appendix C).

Type of objective and outcome: Impact learning objective, affective outcome

Theory and construct: Theory of Planned Behavior (Attitude Toward the Behavior)

Objective 2.4: By the end of the fifth week of implementation, at least 35 Facebook followers will have signed an online petition indicating they want to see a citywide recycling program implemented in Godfrey, IL.

Type of objective and outcome: Outcome objective

Theory and construct: Theory of Planned Behavior (Subjective norm)

Our team selected these objectives because our community partner and needs assessment helped us identify that we need to further the knowledge about recycling in Godfrey before we can change attitudes about recycling. The majority of those who participated in our survey acknowledged that they would be more encouraged to recycle if they had better access to education on the topic. Also, based on our literature review and stated in fit of the theory in our project theory, targeting the attitudes and knowledge to increase residents' perceived behavioral control will be the best focus to achieve our goals. By using *Greener Godfrey*, our social media campaign, we will make relevant knowledge more accessible to homeowners in Godfrey, encourage them to partake in recycling, and positively influence their attitudes toward participation in a recycling program. This will culminate with a petition of participants who want a better recycling option for their community. Our focus is primarily on impact versus outcome objectives, mainly because the final outcome of our project, to increase recycling in the Godfrey community, will not be assessed in our time frame. Our objectives are not targeted as percentages because as the program is implemented, there is a high chance our target audience will continually grow; thus stating 50% of our followers in week 1, could be different than stating 50% of our followers in week 4.

Project Lesson/Intervention/Activity Plan

Introduction

The intervention we have chosen is an online Facebook page for the Godfrey community. This page and program are entitled *Greener Godfrey*. We chose an online basis for our intervention because we have concluded that this will reach the most people in the community based on our time frame. Also, based on our topic of recycling, and wanting a *Greener Godfrey*, a paperless intervention was ideal.

The education materials were carefully selected from various online resources. The videos were selected from YouTube, and the images were found on Google. Each group member selected three or more videos that contained appropriate information about recycling. We each watched the videos to choose the best ones for our target population, and to meet our goals and objectives. We prepared poll questions based on the content we will share with our Facebook followers. The polls will allow us to evaluate what our followers are learning from our posts, along with us learning what is important to our followers. The images were selected based on the facts we are trying to convey to the community on the importance and benefits of recycling. We want to educate the community on the benefits of recycling and proper recycling techniques. The material we selected will increase the individual's attitude toward their recycling behavior, increase their perceived behavioral control, and this will in turn change the subjective norm of recycling in the Godfrey community. This method will help us attain our goals of increasing recycling in the Godfrey community and give them a positive attitude about recycling.

Intervention Overview

	Greener Godfrey City Wide Recycling Program
Location	Online: Facebook
Dates	January 22, 2018 to February 23, 2018
Duration	Two informational posts per day and two contest posts per week
Target Population	Godfrey, IL Homeowners
Goals	<p>Goal 1: To increase recycling in the community of Godfrey, Illinois.</p> <p>Goal 2: To increase support of recycling in Godfrey, IL.</p>
Objectives	<p><u>Objective 1.1:</u> Two weeks after launching the Facebook page, we will have at least 50 followers to the <i>Greener Godfrey</i> page.</p> <p><u>Objective 1.2:</u> One week into implementation, at least 35 Facebook followers will identify that they are Godfrey residents.</p> <p><u>Objective 1.3:</u> Midway through implementation, at least five Facebook followers will share our page with their friends.</p> <p><u>Objective 1.4:</u> There will be at least three shares of the video “How to Prepare your Home Recyclables” posted to the Facebook page in week three, by Facebook followers.</p> <p><u>Objective 1.5:</u> Midway through implementation, at least 10 of the <i>Greener Godfrey</i> Facebook followers will correctly select an answer from a poll regarding what items can be recycled in Madison County.</p> <p><u>Objective 1.6:</u> There will be at least five likes on fact sheet ten by Facebook followers in the last week of implementation.</p> <p><u>Objective 1.7:</u> Midway through implementation, at least 10 Facebook followers will correctly select an answer from a poll regarding what the numbers on recyclable products mean.</p> <p><u>Objective 1.8:</u> After implementation, there will have been at least 70 people who visit the <i>Greener Godfrey</i> Facebook page.</p> <p><u>Objective 2.1:</u> Every week of the five-week implementation, the <i>Greener Godfrey</i> team will post a total of 10 times to the Facebook page, which will include two Recyclers of the Week and one weekly poll.</p>

	<p><u>Objective 2.2:</u> During week two of implementation, at least 20 of the Facebook followers will identify on a Likert scale that they are excited to thrilled about potentially being a Recyclers of the Week.</p> <p><u>Objective 2.3:</u> In the fifth week of implementation, at least 20 Facebook followers will identify on a Likert scale that they feel more encouraged to participate in recycling because of the Recyclers of the Week prizes.</p> <p><u>Objective 2.4:</u> By the end of the fifth week of implementation, at least 35 Facebook followers will have signed an online petition indicating they want to see a citywide recycling program implemented in Godfrey, IL.</p>
Educators	Meg B., Amber G., Jordan P., Abbi R., and Megan W.

Week One

Monday January 22, 2018

12:00 p.m. Fact sheet one (Appendix B)

Objective 2.1



5:00 p.m.: YouTube video - Why Recycling Matters

https://www.youtube.com/watch?v=F2pyi_SUhgQ

Objective 2.1

Tuesday January 23, 2018

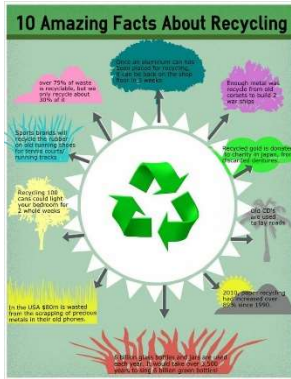
12:00 p.m.: Fact sheet two (Appendix B)

Objective 2.1



5:00 p.m.: Fact sheet three (Appendix B)

Objective 2.1



Wednesday January 24, 2018

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: YouTube Video - Recycling Facts - Did You Know...?

<https://www.youtube.com/watch?v=fX30BYceJHM>

Objective 2.1

Thursday January 25, 2018

12:00 p.m.: Fact sheet four (Appendix B)

Objective 2.1



5:00 p.m.: YouTube video - Population: Why is Recycling Still Important?

<https://www.youtube.com/watch?v=Jixu9zCF0a0>

Objective 2.1

Friday January 26, 2018

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: Poll one - Are you a resident in Godfrey, Illinois? (Appendix C)

Objective 1.2

Week Two

Monday January 29, 2018

Evaluate Objective 1.2

12:00 p.m.: Fact sheet five (Appendix B)

Objective 2.1



5:00 p.m.: YouTube video - SER Why Recycle

<https://www.youtube.com/watch?v=0h19WKT02Kw>

Objective 2.1

5:30 p.m.: Kickoff event at City Hall Godfrey, IL

Tuesday January 30, 2018

12:00 p.m.: Fact sheet six (Appendix B)

Objective 2.1



5:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

Wednesday January 31, 2018

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: YouTube video - Does Recycling Actually Help?
<https://www.youtube.com/watch?t=67s&v=osjRUoodb7Q>

Objective 2.1

Thursday February 1, 2018

12:00 p.m.: YouTube video -The shocking scale of our waste - and the myth of recycling
<https://www.youtube.com/watch?v=BTgTWLYCeOU>

Objective 2.1

5:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

Friday February 2, 2018

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: Poll two: How excited are you by the opportunity to be one of our Recyclers of

the Week (Appendix C)

Objective 2.2

Week Three

Monday February 5, 2018

Evaluate Objective 1.1

12:00 p.m.: Madison County link - What Can be Recycled

<https://www.republicservices.com/residents/all-in-one-recycling>

Objective 2.1

5:00 p.m.: YouTube video - How to Prepare Your Home Recyclables - Republic Services.

<https://www.youtube.com/watch?v=MijcP9aibu4>

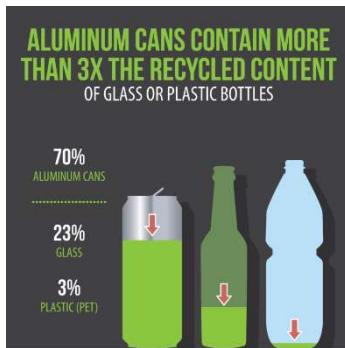
Objective 1.4

Tuesday February 6, 2018

Evaluate Objective 1.4

12:00 p.m.: Fact Sheet seven (Appendix B)

Objective 2.1



5:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

Wednesday February 7, 2018

Evaluate Objective 1.3 and 2.2

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: YouTube video – Speak Up About Recycling at Work & School

<https://www.youtube.com/watch?v=8TQcjP-X7Oo>

Objective 2.1

Thursday February 8, 2018

12:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

5:00 p.m.: Fact Sheet eight (Appendix B)

Objective 2.1



Friday February 9, 2018

12:00 p.m.: Poll three - What items can be recycled in Madison County? (Appendix C)

Objective 1.5

5:00 p.m.: Recyclers of the Week

Objective 2.1

Week Four

Monday February 12, 2018

Evaluate Objective 1.5

12:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

5:00 p.m.: YouTube video - What would our future be like if we don't recycle?
<https://www.youtube.com/watch?v=hjnqiBBFviE>






Objective 2.1

Tuesday February 13, 2018

12:00 p.m.: Fact Sheet nine (Appendix B)

Objective 2.1

Plastic Resin Identification Codes

1	2	3	4	5	6	7
PETE	HDPE	PVC	LDPE	PP	PS	OTHER
Polyethylene Terephthalate	High-Density Polyethylene	Polyvinyl Chloride	Low-Density Polyethylene	Polypropylene	Polystyrene	Other
<p>Common products include water bottles, soda bottles, clear plastic food storage containers, and clear plastic jugs.</p> <p>Recycled products include carpet, clothing, and other fibers.</p> 	<p>Common products include milk jugs, detergent bottles, and plastic grocery bags.</p> <p>Recycled products include floor mats, pipe, and other construction materials.</p> 	<p>Common products include shower stalls, pipes, and other building materials.</p> <p>Recycled products include pipes, floor tiles, and other building materials.</p> 	<p>Common products include plastic bags, food wrap, and other flexible packaging.</p> <p>Recycled products include floor mats, pipe, and other construction materials.</p> 	<p>Common products include yogurt containers, margarine tubs, and other rigid plastic containers.</p> <p>Recycled products include car parts, pipes, and other construction materials.</p> 	<p>Common products include foam cups, foam plates, and other foam containers.</p> <p>Recycled products include insulation, and other construction materials.</p> 	<p>Common products include plastic bags, plastic jugs, and other plastic containers.</p> <p>Recycled products include plastic mulch, and other construction materials.</p> 

5:00 p.m.: Fact sheet ten (Appendix B)

Objective 1.6



Wednesday February 14, 2018

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: YouTube video - Know Your Plastics

https://www.youtube.com/watch?v=_qTelxi3MjU

Objective 2.1

Thursday February 15, 2018

12:00 p.m.: YouTube video – Green Effect: The Recycling Industry’s Economic Impact

<https://www.youtube.com/watch?v=2JPFpC5O170>

Objective 2.1

5:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

Friday February 16, 2018

Evaluate Objective 1.6

12:00 p.m.: Poll four - Which number is correctly matched with the recyclable product it is displayed on? (Appendix C)

Objective 1.7

5:00 p.m.: Recyclers of the Week

Objective 2.1

Week Five

Monday February 19, 2018

12:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

5:00 p.m.: YouTube video – Recycling Commercial (Teenagers Future)

<https://www.youtube.com/watch?v=7yDcNbqxwQM>

Objective 2.1

Tuesday February 20, 2018

12:00 p.m.: YouTube video- How Recycling Works - Single Stream

<https://www.youtube.com/watch?v=hdGjiKJsgRk>

Objective 2.1

5:00 p.m.: Fact Sheet eleven (Appendix B)

Objective 2.1



Wednesday February 21, 2018

Evaluate Objective 1.7

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: YouTube video - What is Recyclable

<https://www.youtube.com/watch?v=D9ZCLaYRe9U>

Objective 2.1

Thursday February 22, 2018

12:00 p.m.: YouTube video – Is Recycling Worth it? Extra Stuff

<https://www.youtube.com/watch?v=colcvdcKhq8>

Objective 2.1

5:00 p.m.: Petition promotion post - https://www.thepetitionsite.com/188/422/843/greener-godfreys-petition-for-city-wide-recycling/?taf_id=46415569&cid=fb_na#bbfb=351074431

Objective 2.4

Friday February 23, 2018

12:00 p.m.: Recyclers of the Week

Objective 2.1

5:00 p.m.: Poll five: - Do you feel encouraged to recycle by seeing other recyclers on this page? (Appendix C)

Objective 2.3

Evaluate Objectives 1.8, 2.1, 2.3, and 2.4

Detailed Intervention Plan

Each group member will be responsible for their own week of posting to Facebook. Posts will only be made Monday through Friday. Two times a week, group members will go into the Godfrey community and find residents who are actively recycling. We will nominate these individuals to be the Recyclers of the Week, and these individuals will receive t-shirts or other prizes for their efforts of recycling. We will then post these individuals and their photos, with permission, on the Facebook page. We chose to post at 12:00 p.m. and 5:00 p.m. based on our own Facebook activity. We have experienced ourselves checking our pages the most around lunch and dinner time. Once our page is live we will continue to check the data on the "insights" page, which shows times when our page has the most views and activity. If there is a need to adjust posting times we will adjust them accordingly. All members will be responsible to respond to messages, questions, and comments on the Facebook page within 24 hours.

Meg will be in charge of week one, January 22 - January 26. Monday January 22, Meg will post fact sheet one (Appendix B) at 12:00 p.m. and the video *Why Recycling Matters* at 5:00 p.m. The next day, she will post fact sheet two (Appendix B) at 12:00 p.m. and fact sheet three (Appendix B) at 5:00 p.m. Wednesday on Meg's week her 12:00 p.m. post will be the first Recyclers of the Week followed up by the video *Recycling Facts - Did You Know....?* posting at 5:00 p.m. Thursday Meg will post fact sheet four (Appendix B) at 12:00 p.m. and the video *Population: Why is Recycling Still Important?* At 5:00 p.m. On Friday January 26, Meg will make her final two posts. The post at 12:00 p.m. will be a post of the Recyclers of the Week and the 5:00 p.m. post will be poll one.

Amber will post for week two, January 29 - February 2. Monday January 29, Amber will evaluate objective 1.2, and then she will post fact sheet five (Appendix B) at 12:00 p.m. and the

video *SER Why Recycle* at 5:00 p.m. On this night, we will have our kickoff event starting at 5:30 p.m. in Godfrey City Hall. The event will be advertised prior to the date by SSCC. The kickoff event will consist of a presentation from SSCC explaining everyone's role in the project. We will be promoting our Facebook page to the community and discussing the petition and encourage them all to take part in our giveaways, petition, and Facebook page. The next day, she will post fact sheet six (Appendix B) at 12:00 p.m. and a promotional post for the electronic petition at 5:00 p.m. Wednesday on Amber's week her 12:00 p.m. post will be a Recyclers of the Week followed up by the video *Does Recycling Actually Help?* posting at 5:00 p.m. Thursday Amber will post the video *The Shocking Scale of our Waste – and the Myth of Recycling* at 12:00 p.m. and a promotional post for the electronic petition at 5:00 p.m. On Friday February 2, Amber will make her final two posts. The post at 12:00 p.m. will be a post of the Recyclers of the Week and the 5:00 p.m. post will be poll two.

Jordan will be in charge of week three, February 5 - February 9. Monday February 5, Jordan will evaluate objective 1.1, and then post a link to a website outlining what can be recycled in Madison County at 12:00 p.m. and the video *How to Prepare Your Home Recyclables* at 5:00 p.m. The next day, on the 6th, she will evaluate objective 1.4, and then post fact sheet seven (Appendix B) at 12:00 p.m. and a promotional post for the electronic petition at 5:00 p.m. Wednesday the 7th on Jordan's week, she will evaluate objectives 1.3 and 2.2. Following evaluating the objectives, her 12:00 p.m. post will be a Recyclers of the Week followed up by the video *Speak Up About Recycling at Work & School* posting at 5:00 p.m. Thursday, Jordan will post a promotional post for the electronic petition at 12:00 p.m. and fact sheet eight (Appendix B) at 5:00 p.m. On Friday February 9, Jordan will make her final two posts. The post at 12:00 p.m. will be poll three and the 5:00 p.m. post will be a Recyclers of the Week 5:00 p.m.

Abbi's week will be February 12 - February 16. Monday February 12, Abbi will evaluate objective 1.5. Abbi will then post a promotional post for the online petition at 12:00 p.m. and the video *What would our future be like if we don't recycle?* at 5:00 p.m. The next day, she will post fact sheet nine (Appendix B) at 12:00 p.m. and fact sheet ten (Appendix B) at 5:00 p.m. Wednesday on Abbi's week, her 12:00 p.m. post will be a Recyclers of the Week followed up by the video *Know Your Plastics* posting at 5:00 p.m. Thursday, Abbi will post the video *Green Effect: The Recycling Industry's Economic Impact* at 12:00 p.m. and a promotional post for the electronic petition at 5:00 p.m. On Friday February 16th, Abbi will evaluate objective 1.6 and make her final two posts. The post at 12:00 p.m. will be poll four and the 5:00 p.m. post will be a Recyclers of the Week.

And the final week, Megan will post February 19 - February 23. Monday February 19, Megan will post a promotional post for the online petition at 12:00 p.m. and the video *Recycling Commercial (Teenagers Future)* at 5:00 p.m. The next day, she will post the video *How Recycling Works – Single Stream* at 12:00 p.m. and fact sheet eleven (Appendix B) at 5:00 p.m. Wednesday the 21st Megan will evaluate objective 1.7 and then make her Recyclers of the Week post at 12:00 p.m., followed up by the video *What is Recyclable* posting at 5:00 p.m. Thursday, Megan will post the video *Is Recycling Worth it? Extra Stuff* at 12:00 p.m. and a promotional post for the electronic petition at 5:00 p.m. On Friday February 23, Megan will evaluate objectives 1.8, 2.1, 2.3, 2.4, and make her final two posts. The post at 12:00 p.m. will be a Recyclers of the Week and the 5:00 p.m. post will be poll five.

Formative Evaluation

Elements of a Comprehensive Formative Evaluation

Element	Application to Project
Justification	The needs assessment showed that the residents of Godfrey believe better education and citywide recycling would be beneficial. Our community partners also approved the plans to do a social media campaign to inform Godfrey residents about recycling and the need for citywide recycling.
Evidence	Research shows educational videos to be effective in learning. A meta-analysis of 25 peer reviewed articles found that video programs delivered the material as well as, or even better than, written materials or lectures (Gagliano, 2000). The result also showed an overall increase in knowledge (Gagliano, 2000).
Capacity	Each group member has been trained in program planning and implementation, instructional strategies (choosing appropriate materials), as well as environmental health. All members are also proficient in using Facebook.
Resources	The main community partner, SIUE SSCC created a \$1,400 budget which was broken down into our kick-off and final events, as well as other material needed. This includes t-shirts, newspaper advertisements, and compensation for gas. Facebook is another resource to use. Facebook is free and the option to schedule posts frees up time for the team members.
Consumer-Orientation	The program was designed to be more environmentally conscious than paper advertisements and educational materials being handed out at booths or events. We also chose an online basis because that will reach the most amount of people in the community based on our limited time frame and lack of opportunities to host outdoor booths in the winter months.
Multiplicity	Different types of Facebook posts were created on the <i>Greener Godfrey</i> page. These include short videos, fact sheets, Recyclers of the Week, polls, and encouragement to check out the petition for citywide single stream recycling.
Support	T-shirts with the <i>Greener Godfrey</i> logo and reusable shopping bags will be distributed to Recyclers of the Week throughout implementation. They were also acknowledged on the <i>Greener Godfrey</i> Facebook page to encourage others in the community to participate in recycling. There will be open communication with the Facebook page for comments, suggestions, questions.
Inclusion	We met with the multiple community partners to inform them of our social media campaign, and invited them to share the information with their colleagues. We had multiple meetings with community partners to establish our budget and requirements.
Accountability	All team members agreed to meet weekly in person as well as communicate through Dropbox and texting to discuss progress, as well as work that needs to be completed. The members also decided to meet with Dr. Klein to go over

	material prior to the end of the project. Finally, all team members provided feedback to Dr. Klein and each other.
Adjustment	In the beginning, the goal of the program was for Godfrey, IL homeowners to vote for a citywide ordinance for them to have single stream recycling. However, we realized this was going to take longer than the time frame given for this project. We decided to start off small, and first educate our target population on recycling and the benefits of single stream recycling by setting up a social media page on Facebook, <i>Greener Godfrey</i> .
Recruitment	The target population was recruited through Facebook, verbal surveys in person, and through a kick-off event.
Reach	All Godfrey homeowners that have access to Facebook are able to like the <i>Greener Godfrey</i> Facebook page and become involved. Some Godfrey homeowners will not have access to our program because some might not have access to Facebook or access to the internet. Therefore, we cannot reach the entire population. All homeowners will have the opportunity to become a Recycler of the Week by having their recycling bin out.
Response	The expectation is that we will reach at least 50 Godfrey, IL residents through our Facebook page, <i>Greener Godfrey</i> . The total population for Godfrey, IL is 17,733 residents, and 85.1% of those residents are homeowners, so we anticipate reaching approximately .3% of Godfrey homeowners.
Interaction	All team members will interact with participants on the Facebook page in a professional manner. We will make any changes that are needed after piloting our program one week prior to our implementation.
Satisfaction	The polls given throughout the program will assess if the population retained the information from the posts, as well as assess the population's enjoyment of the program. Signing the petition will show they will eventually support a citywide recycling program.

Logic Model

Inputs	Outputs		Outcomes – Impact		
	<i>Activities</i>	<i>Participation</i>	<i>Short</i>	<i>Medium</i>	<i>Long</i>
<p>Qualified Resources Dr. Klein: program professor Tim Engelman: SIUE community partner Connie Frey-Spurlock: SIUE community partner Virginia Woulfe-Beile: Godfrey community partner</p> <p>PBHE Team members Meg Bruhn Amber Green Jordan Powell Abbi Riedisser Megan Widman</p> <p>Material resources: Facebook, Greener Godfrey T-shirts, Reusable shopping bags, internet access</p>	<p>Facebook Platform for distributing information to the community, in an ecofriendly way</p> <p>YouTube videos and Infographics Provide infographics, educational videos, and links to important websites regarding recycling</p> <p>Community Involvement Show Godfrey others in their community that recycle</p> <p>Petition Will collectively show support throughout and after the program for better recycling options in Godfrey</p>	<p>Participants Godfrey Homeowners Godfrey Cool Cities SIUE SSCC PBHE Team Members</p> <p>Facebook Advertisement Targeted towards adults who may or may not have liked the Greener Godfrey page to check out the petition</p>	<p>Changes in Knowledge, Attitudes, and Beliefs Increases knowledge about recycling, why it helps the environment, and how the population can participate</p> <p>Residents will learn the skill of properly preparing recyclables for single stream recycling</p> <p>After learning about recycling, participants will have more confidence and feel more encouraged to recycle within their home</p>	<p>Increase in Positive Behavior Recycling will increase in Godfrey</p> <p>Participants from <i>Greener Godfrey</i> will show others in the community how easy and important it is to recycle</p> <p>Increase in inquisitions about how to begin recycling</p>	<p>Post Program Accomplishment All residents in Godfrey will understand the benefits of recycling for the environment as well as how to prepare their recyclables to insure it is able to be recycled</p> <p>Increase in interest and support in a town ordinance that provides recycling services for all residents</p> <p>Increased exposure to education about recycling</p> <p>Godfrey’s environmental health will increase</p>

Assumptions
 The focus on education on recycling will increase the community’s confidence regarding recycling and recycling will increase in Godfrey
 Best practices that have been researched for this project will be effective for our community

External Factors
 Low numbers of likes on Facebook: hard to reach the community with low numbers on Facebook; low participant involvement on Facebook
 Interactions with our many community partners: community partners changing, their busy schedules, and lower involvement than anticipated

Expected Outcomes & Evaluation Tools

Objective	Activity	Instrument Measures	Analysis
<p><u>1.1:</u> Two weeks after launching the Facebook page, we will have at least 50 followers to the <i>Greener Godfrey</i> page.</p>	<p>Facebook Statistics</p>	<p>Facebook Statistics – Insights</p>	<p>Facebook uses insights to measure page activity. <i>Greener Godfrey</i> will use this feature to track how many followers have been gained within the first two weeks of implementation.</p>
<p><u>1.2:</u> One week into implementation, at least 35 Facebook followers will identify that they are Godfrey residents.</p>	<p>Poll One</p>	<p>Are you a resident in Godfrey, Illinois? a. Yes b. No c. I used to be</p>	<p>This will measure the number of followers that are truly our target population. The answer “yes” indicates the Facebook user is within our target population.</p>
<p><u>1.3:</u> Midway through implementation, at least five Facebook followers will share our page with their friends.</p>	<p>Facebook Statistics</p>	<p>Facebook Statistics – Insights</p>	<p>Facebook uses insights to measure page activity. <i>Greener Godfrey</i> will use this feature to track how many times the link to the <i>Greener Godfrey</i> page has been shared by followers.</p>
<p><u>1.4:</u> There will be at least three shares of the video “How to Prepare your Home Recyclables” posted to the Facebook page in week three, by Facebook followers.</p>	<p>Viewing and sharing of the video “How to Prepare your Home Recyclables” on 2/5/18</p>	<p>Facebook Statistics- Insights</p>	<p>Facebook keeps track of how many times a post has been shared and can be found at the bottom right hand corner of the post.</p>

<p><u>1.5:</u> Midway through implementation, at least 10 of the <i>Greener Godfrey</i> Facebook followers will correctly select an answer from a poll regarding what items can be recycled in Madison County.</p>	<p>Poll Three</p>	<p>What items can be recycled in Madison County?</p> <ul style="list-style-type: none"> a. Envelopes b. Milk cartons c. Water bottles d. Food cans e. Glass soda bottles f. All of the above g. Only A and C h. A, C, D, and E 	<p>This poll is used to assess how well the Facebook users are paying attention to our educational instruments. This particular poll can be answered by watching a video posted earlier in the week. The correct answer is “f. all of the above.”</p>
<p><u>1.6:</u> There will be at least five likes on fact sheet ten (found in appendix B) by Facebook followers in the last week of implementation.</p>	<p>Reading and liking fact sheet 10 posted on 2/13/18</p>	<p>Facebook Statistics-Insights</p>	<p>Number of likes can be found at the bottom left hand corner of each post, and in the Facebook insights.</p>
<p><u>1.7:</u> Midway through implementation, at least 10 Facebook followers will correctly select an answer from a poll regarding what the numbers on recyclable products mean.</p>	<p>Poll Four</p>	<p>Which number is correctly matched with the recyclable product it is displayed on?</p> <ul style="list-style-type: none"> a. 2 – Shampoo bottle b. 1 – Paper towels c. 3 – Water bottle d. 5 – Glass 	<p>This poll is used to assess how well the Facebook users are paying attention to the educational instruments. This particular poll can be answered by a fact sheet posted earlier in the week. The correct answer is “a. 2 – Shampoo bottle.”</p>

<p><u>1.8:</u> After implementation, there will have been at least 70 people who visit the <i>Greener Godfrey</i> Facebook page.</p>	<p>Facebook Statistics</p>	<p>Facebook Statistics – Insights</p>	<p>Facebook uses insights to measure page activity. <i>Greener Godfrey</i> will use this feature to track how many people visited the page during implementation. This feature keeps track of the number of times logged on and not logged on users have viewed the page.</p>
<p><u>2.1:</u> Every week of the five week implementation, the <i>Greener Godfrey</i> team will post a total of 10 times to the Facebook page, which will include two Recyclers of the Week and one weekly poll.</p>	<p>Fact Sheets and Videos posted to Facebook at scheduled times and on scheduled days</p>	<p>Follow the lesson plan and objective to ensure there are 10 posts a week to the Facebook page which are primarily educational, but also include two Recyclers of the Week and a weekly poll. This amounts to 50 posts once the program is complete.</p>	<p>We will check the <i>Greener Godfrey</i> Facebook page and count the number of times we posted to make sure we included 10 total posts which include two Recyclers of the Week and 1 weekly poll each week. All ten posts from each week should be followed from our lesson plan.</p>
<p><u>2.2:</u> During week two of implementation, at least 20 of the Facebook followers will identify on a Likert scale that they are excited to thrilled about potentially being a Recycler of the Week.</p>	<p>Poll Two</p>	<p>How excited are you by the opportunity to be one of our Recyclers of the Week?</p> <ul style="list-style-type: none"> a. Thrilled b. Excited c. Indifferent d. Unenthusiastic e. It's discouraging 	<p>This will measure the Facebook users' attitude toward being one of the Recyclers of the Week. Although there is not a correct answer to this poll, we hope to see those either thrilled or excited.</p>

<p><u>2.3:</u> In the fifth week of implementation, at least 20 Facebook followers will identify on a Likert scale that they feel more encouraged to participate in recycling because of the Recyclers of the Week prizes.</p>	<p>Poll Five</p>	<p>Do you feel encouraged to recycle by seeing other recyclers on this page?</p> <ul style="list-style-type: none"> a. Yes, because of the Recyclers of the Week b. Yes, but because of the other content on this page c. I feel the same as I did before d. No, I don't feel any encouragement e. I feel discouraged 	<p>This will measure the Facebook users' attitude toward recycling and seeing/knowing that their neighbors or other community members are recycling and being rewarded. We hope to see that "a. Yes, because of the Recyclers of the Week" but would also like to see "b. Yes, but because of the other content on this page" be chosen for this poll.</p>
<p><u>2.4:</u> By the end of the fifth week of implementation, at least 35 Facebook followers will have signed an online petition indicating they want to see a citywide recycling program implemented in Godfrey, IL.</p>	<p>Petition Promotions on Facebook and link to petition</p>	<p>Petition website keeps track of signatures</p>	<p>This petition will ensure that Godfrey homeowners want to see recycling succeed in their community. This will also show us that they are ready to move forward with the notion and take action on making sure this comes an actual program in their community.</p>

Evaluation Tools

The evaluation tools include the data collected through the insights tab on the *Greener Godfrey* Facebook page, and the five polls given throughout the program. The data we receive from Facebook insights will be page likes, post engagement, page views, and the reach of each post. The data from Facebook insights and the polls will both be quantitative data. We will be reading and analyzing comments on Facebooks posts which will amount to qualitative data. This will enable us to analyze the content presented and the receptiveness of the target population.

Evaluation Results

Description of Implementation

Greener Godfrey was implemented online through a Facebook page. The implementation lasted five weeks from January 22nd to February 23rd, 2018. Scheduled posts were posted at 12pm and 5pm, Monday through Friday, with a total of 50 scheduled posts. In addition to the 50 posts, there was an extra post made before implementation to explain the purpose of the page. A total of 151 participants liked the *Greener Godfrey* page. The Facebook followers were a mixture of Godfrey residents, fellow classmates, instructors, community partners, and other Facebook users who are interested in recycling.

The intervention started out well by reaching the objective to have 50 Facebook followers, but during the weeks to come, it had less participation than anticipated. Facebook allowed us to schedule posts which made it easier to post at the scheduled times, but it made the page less likely to show up on our followers' newsfeed. The posts were not reaching all of the followers as anticipated because of Facebook's algorithm process, which we will discuss in the discussion portion of our plan. The first picture posted through Facebook scheduling was problematic. It was blurry enough to take it down completely and repost a photo of better quality. After checking the rest of the scheduled posts, we found four photos that were blurry. Only one participant saw the original blurry post.

A change we made during implementation was to the Recyclers of the Week. There was difficulty finding recyclers who wanted to participate, mainly because they did not want their picture posted on our page. This resulted in two alternative posts. We also boosted our petition site in order to gain more signatures. However, we received more negative comments than expected on the post.

During implementation, the team members did not initially interreact with the page from our personal pages, by liking or commenting on posts. After researching how to boost interactions on Facebook pages, we found it beneficial to like and share *Greener Godfrey's* posts with our personal Facebook accounts. This decision was made after researching the algorithm that Facebook uses when it creates a news feed. One suggestion was that the more interaction a post received, the more that post would show up in the newsfeed of other followers. This seemed to cause slightly more interaction with our posts, but not as much as we would have liked. Overall, implementation went smoothly and according to plan, with only having to make a few slight changes.

Results of the Evaluation

Objective	Activity	Instrument Measures	Results
<u>1.1</u> : Two weeks after launching the Facebook page, we will have at least 50 followers to the <i>Greener Godfrey</i> page.	Facebook Statistics	Facebook Statistics – Insights	Met: The objective was to have 50 people to follow the Facebook page. Two weeks in, there were 135 followers. This was almost three times more than expected. There was help from our community partner who shared our project with multiple colleagues to spread the word. We opened up the page three days earlier than our launch to make sure we had active followers on the day of implementation, and this also helped reach and exceed the objective.
<u>1.2</u> : One week into implementation, at least 35 Facebook followers will identify that they are Godfrey residents.	Poll One	Are you a resident in Godfrey, Illinois? d. Yes e. No f. I used to be	Not Met: We had seven Facebook followers take poll one. Of the seven participants, three said they were Godfrey residents and the other four said they were not Godfrey residents. No one selected that they used to be Godfrey residents. However, Facebook insights showed that there were 27 people who liked the page who live in Godfrey.

<u>1.3:</u> Midway through implementation, at least five Facebook followers will share our page with their friends.	Facebook Statistics	Facebook Statistics – Insights	Met: Five people ended up sharing our page with their other Facebook friends. We were hoping for more to help spread a bigger population to get more people to interact and learn about recycling.
<u>1.4:</u> There will be at least three shares of the video “How to Prepare your Home Recyclables” posted to the Facebook page in week three, by Facebook followers.	Viewing and sharing of the video “How to Prepare your Home Recyclables” on 2/5/18	Facebook Statistics- Insights	Not Met: Although Facebook followers were encouraged to share the video with their friends, no one shared the video. We believed that sharing a post on Facebook would be achievable.
<u>1.5:</u> Midway through implementation, at least 10 of the <i>Greener Godfrey</i> Facebook followers will correctly select an answer from a poll regarding what items can be recycled in Madison County.	Poll Three	What items can be recycled in Madison County? i. Envelopes j. Milk cartons k. Water bottles l. Food cans m. Glass soda bottles n. All of the above o. Only A and C p. A, C, D, and E	Not Met: Nine followers answered the poll and out of those who did, seven answered correctly with “F: all of above.” Two answered incorrectly with the answer “G: only A and C.” The other person answered “H: A, C, D, and E.”
<u>1.6:</u> There will be at least five likes on fact sheet ten (found in appendix B) by Facebook followers in the last week of implementation.	Reading and liking fact sheet ten posted on 2/13/18	Facebook Statistics- Insights	Met: We had six likes on the fact sheet ten post on February 13 at 5pm. While we had 18 people who saw the post, only six people liked the fact sheet.
<u>1.7:</u> Midway through implementation, at least 10 Facebook followers will correctly select an answer from a poll regarding what the numbers on recyclable products mean.	Poll Four	Which number is correctly matched with the recyclable product it is displayed on? e. 2 – Shampoo bottle f. 1 – Paper towels g. 3 – Water bottle h. 5 – Glass	Not Met: There was one person who answered poll four. This person chose the correct answer, “A: 2-Shampoo bottle.”

<p><u>1.8:</u> After implementation, there will have been at least 70 people who visit the <i>Greener Godfrey</i> Facebook page.</p>	<p>Facebook Statistics</p>	<p>Facebook Statistics – Insights</p>	<p>Met: A total of 311 participants viewed the <i>Greener Godfrey</i> page by the end of implementation. This was over the amount of people we originally thought would visit the page.</p>
<p><u>2.1:</u> Every week of the five week implementation, the <i>Greener Godfrey</i> team will post a total of 10 times to the Facebook page, which will include two Recyclers of the Week and one weekly poll.</p>	<p>Fact Sheets and Videos posted to Facebook at scheduled times and on scheduled days</p>	<p>Follow the lesson plan and objective to ensure there are 10 posts a week to the Facebook page which are primarily educational, but also include two Recyclers of the Week and a weekly poll. This amounts to 50 posts once the program is complete.</p>	<p>Met: Each week two posts were made Monday-Friday for five weeks total. This met the goal of 50 posts total during implementation. Posts included one poll a week and two posts about Recyclers of the Week.</p>
<p><u>2.2:</u> During week two of implementation, at least 20 of the Facebook followers will identify on a Likert scale that they are excited to thrilled about potentially being a Recycler of the Week.</p>	<p>Poll Two</p>	<p>How excited are you by the opportunity to be one of our Recyclers of the Week?</p> <ul style="list-style-type: none"> f. Thrilled g. Excited h. Indifferent i. Unenthusiastic j. It’s discouraging 	<p>Not Met: Only three people answered this poll. Of those three, one chose thrilled and the other chose excited. The last participant chose unenthusiastic. The polls had more views than those who actually answered them.</p>
<p><u>2.3:</u> In the fifth week of implementation, at least 20 Facebook followers will identify on a Likert scale that they feel more encouraged to participate in recycling because of the Recyclers of the Week prizes.</p>	<p>Poll Five</p>	<p>Do you feel encouraged to recycle by seeing other recyclers on this page?</p> <ul style="list-style-type: none"> f. Yes, because of the Recyclers of the Week g. Yes, but because of the other content on this page h. I feel the same as I did before i. No, I don’t feel any encouragement j. I feel discouraged 	<p>Not Met: Only one person answered this poll question. This person chose that they feel the same as they did before. This poll post reached 29 people, but only ten people clicked and viewed this poll, and only one person went as far as actually answering the poll.</p>

<p><u>2.4:</u> By the end of the fifth week of implementation, at least 35 Facebook followers will have signed an online petition indicating they want to see a citywide recycling program implemented in Godfrey, IL.</p>	<p>Petition Promotions on Facebook and link to petition</p>	<p>Petition website keeps track of signatures</p>	<p>Not Met: After the fifth week of implementation, there were 16 signatures on the petition. We gained most of the signatures the first two weeks, then the petition only received a few more the rest of the program.</p>
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Other Evaluation Results

Other information we gathered from the insights was the followers were online consistently from 9 a.m. to 9 p.m. This information confirmed that our posts were reaching the followers during the times they were online. Almost three times more women were viewing our page than men, and ages ranged from 18 to over 65 years of age. The most engaging posts were the Recyclers of the Week, and these posts also reached the most people. We only had one person unfollow our page for the duration of implementation. By the end of implementation, our page engagement had increased by 89%.

The program online support from our community partners and professor throughout implementation as well. Our community partner at SSCC, Connie Frey-Spurlock, also manages the SIUE Sustainability Page and she shared our page saying, "We couldn't be prouder of this crew! They've worked tirelessly to educate and engage members of the Godfrey community around recycling and they've done a wonderful job." Our professor also rated the Greener Godfrey page five stars and wrote, "This is a great initiative! Recycling is KEY to appropriately managing our waste. Reasonably priced curbside recycling makes it easy." While their support and comments helped with the page, they were not the only ones to comment on our posts.

There was interaction on the page from followers about e-cycling, Recyclers of the Week, and the petition. One follower asked about how to recycle e-waste in or near Godfrey, and a fellow follower told them about an event recently in Edwardsville and suggested she contact the company that held the event for more information. The majority of comments were on the Recyclers of the Week posts. These comments were supportive. For example, one comment of a Recycler of the Week was, "This is great! Keep up the work." The petition post was the only post to receive negative feedback. The feedback focused on concerns that they would not have control over the cost of a citywide recycling program. One comment said, "I'm a recycling fanatic but, Alton trash pickup has increased every single year since it was contracted out...with no change in service. Good luck, Godfrey." Others worried if a certain company was chosen if their materials would not actually be recycled saying, "Sanders [a recycling company in Godfrey] picks up and throws my recycling in the same truck as trash? Is it sorted somewhere else? I doubt it." These were the only negative feedback we received on our page and we could not confirm these were made by Godfrey residents.

Discussion of Evaluation Results

The first objective for this program was to reach 50 followers on the *Greener Godfrey* Facebook page. We opened the page three days early in an attempt gain followers prior to our first post. Within those three days, we gained more than 50 followers, exceeding our first objective. By the end of two weeks, the page had 135 followers, and by the end of implementation, the *Greener Godfrey* page had 151 followers. We believe opening our page early helped us meet this objective. It is always exciting to see a new page on Facebook, especially when it is a popular topic such as recycling. Even after implementation, we had a steady pace of new followers, and we believe this was from current followers sharing the page and information. Our branding may have helped followers easily relate our information and posts back to *Greener Godfrey*. We chose green for Recyclers of the Week shirts to stay in theme with the green reusable bags and the *Greener Godfrey* graphic. The consistency of the shirts saying "Like us on Facebook" helped to emphasize that the goal was to reach as many Godfrey residents to see the educational material as possible.

The weekly polls did not have the participation we anticipated. The poll participation could have possibly been higher if the poll could have been directly taken on *Greener Godfrey's* page. From our own experience with Facebook, we concluded this may have had to do with users being directed to a different page to take the poll. As regular Facebook users, we tend to not follow through with viewing or participating in polls or posts that directs us to a third-party page. We did not have another option other than to conduct our polls with a third-party. Facebook would not allow more than a two answer poll directly on the page, and our polls had more than two answers to choose from. Also, the polls could not be anonymous, nor could we guarantee results would be kept confidential.

There was one objective regarding our page shares. We wanted to have at least five shares of our *Greener Godfrey* page from other Facebook users. There were exactly five Facebook shares midway through the implementation. After the midway date, there were not any more page shares. While the objective was met, we had hoped the shares would continue after the midway point and it did not. The page shares were possibly low due to it taking more effort to go directly to our page and share, compared to just liking our posts from an individual's newsfeed.

According to the page insights, the followers were not watching the videos that were posted. This could have been avoided if the video automatically played in the newsfeed, and followers did not have to click on another link to watch. Facebook's new algorithm makes it easier for videos that are uploaded directly to Facebook to perform better. Making videos from YouTube or other sites, that users have to leave Facebook to watch, result in less people watching the videos (Lua & Peters, 2018). The people who were watching the videos seemed to like them, and some of them shared the videos to their own pages. We do not think it was the content of the videos, we believe it may have been due to the fact that people just scroll through Facebook and do not want to leave Facebook to watch a video. We tried to ask follow-up questions about the content of the videos to increase participation, but this did not seem to increase our views.

The amount of likes on the posts varied on the type of post. The Recyclers of the Week posts had the most likes; people in the photos often shared the photo, and *Greener Godfrey* followers liked seeing others in their community who recycle. Seeing people in their community actively recycling may have made it more personal and put a face behind the page. Objective 1.6 assessed the number of likes on a fact sheet. This objective was met by having over five likes on

the post. While this post had over five likes, there were some posts that had only one like. The type of post made a difference on how often and where the post ended up in our follower's newsfeed. According to Facebook's algorithms, photos are more likely to end up in a follower's newsfeed (Lua & Peters, 2018). There is an option in which page followers can choose to see our posts first on their newsfeed, but if this option is not selected by the user it is set to the default. If it is on the default setting, Facebook will decide when and where to place these posts in a follower's newsfeed. Because of this, photos reached a larger audience, but scheduled posts, such as infographics, did not reach as many people. This could have contributed to the variation in the number of likes each post received. The more that people saw a post, the more likely it was to get interaction. Also, posts which ask for likes and shares do not get priority according to Facebook's algorithm. We were asking people to share and like our scheduled posts more than others, and this could have caused those posts to not appear in our follower's newsfeed as much as other posts (Lua & Peters, 2018).

While the Facebook page only had 151 followers, 311 people viewed the page. Our objective was to have at least 70 page views by the end of implementation. We believe we had almost double the amount of page views compared to followers for several reasons. In addition to the reasons we stated previously about the page esthetics such as our branding, consistency, and colors; people might not have chosen to follow the page because they were just clicking and viewing our page to see the Recyclers of the Week or other posts. Recycling is becoming a popular topic and our logo may have intrigued users to check out our page even if they did not decide to follow us. Our name *Greener Godfrey*, could have also peaked interest for people to check to see what was happening in their community.

The final objective targeted the *Greener Godfrey* citywide recycling petition. We wanted to have at least 35 signatures on the petition by the end of implementation. However, we only received 16 signatures. Most of the signatures were received within the first two weeks, and we believe this was because the page gained the majority of followers during those first two weeks of implementation. We also used a \$30 Facebook credit to boost the petition for one week. While this reached others that did not follow *Greener Godfrey*, it attracted more negative feedback than positive feedback. This could have affected the low numbers of signatures as well, but we do not have the information to prove or disprove that. The negative feedback on the petition was about the cost of a citywide recycling program, and concerns of the trash company chosen. After receiving the negative posts on our page, we mobilized quickly as a team, and provided the negative comments with facts about Alton recycling program and their current prices. We found these rates on from the City of Alton Ordinance 5-2-8, refuse charge (5-2-8: REFUSE CHARGE, 2013). Most people want to be able to make their own choices in regards to trash and recycling pickup. Community members did not want to enter a contract with possible rising fees and no control of switching companies if they were unsatisfied. Signing a petition would show their support for a mandatory citywide recycling program, and the members of the community were possibly not ready to solidify that decision yet.

We thought having scheduled posts would work in our favor because it kept us organized and posting on time. However, after further research, we found out that it was not in our best interest to have our posts pre-scheduled. We found because of Facebook's algorithm, posts which are scheduled are believed to not be given priority over posts that are not scheduled, and instead posted by the user at that time (Brandtastic, 2013). Therefore, the posts would have potentially been seen by more of our followers if we had opted to not schedule the posts. At the time of the

decision to schedule the posts, we did not take into consideration Facebook's algorithm.

Facebook decides which posts members are more likely to see on their newsfeed based on their interests and previous interactions. In essence, our posts were less likely to show up on our followers' news feed due to the new algorithm and how we opted to schedule our posts rather than posting them at the times we decided.

We believe there is interest for recycling in the community. When the group went out in the community, we saw a large number of houses with recycling bins out. So, we know a larger number of people are recycling within Godfrey than the number of followers we received on the Facebook page. We even believe Godfrey can eventually move forward towards a citywide recycling program because our social media intervention was steadily gaining followers, and interaction with the page was slowly increasing. We believe this shows an interest within the community about recycling. As stated previously in our best practices, research shows that residents in Belleville, Swansea, and O'Fallon Illinois, which are all in St. Clair County, would be more likely to recycle if it is convenient and not costly. If the education on recycling knowledge included more information on what citywide recycling would look like in their community and an estimated cost, we believe the program could have had more success. However, we did not have access to this information to share with the *Greener Godfrey* Facebook participants. When negative comments on the petition were posted, we provided Alton's fees, but it was not received as truthful by three residents. We think once the education on the importance of recycling is there, there needs to be more concrete information on the cost of recycling.

Now *Greener Godfrey* is finished, the email and Facebook page will be handed over to the community partners to continue the page as they see fit. If the *Greener Godfrey* Facebook

program continues, it will eventually become the resource Godfrey needs to further involve the community to reach their ultimate goal. We believe people want to recycle by our interactions and the amount of recycling bins seen in the community, but they need the resources and information to make that happen. This program was a small step towards success for a large program solution.

Reflection on Project, Lessons Learned and Recommendations

Thoughts About the Project

Planning Process

As a team, we decided that our implementation needed to occur earlier than other teams, due to personal circumstances. This was very challenging as sometimes we had to educate ourselves before concepts were taught in class. This was done by reading ahead and watching the videos Dr. Klein had on YouTube. We had to do more work earlier than our fellow senior project groups. Our community partners were chosen because we are all passionate about recycling, but creating a senior project about recycling was difficult. It was hard to match the community partners goals with our given time frame. We had to make the difficult decision to educate the community, instead of setting up a citywide recycling program which the community partner asked of us. We then needed to prove to our community partners that online education was the best method for educating the community instead of providing a booth or presenting at a town event, because it would allow us to reach the largest audience. We learned very quickly to be a self-sufficient group, and how to make our own decisions with passive consent. Our community partners trusted us to problem solve and make the best decisions for what would work for our team and goals. Once we had that idea in mind, picking a theory was difficult. We had two theories that would have helped create an effective program, but our group needed to decide which one to work with. After meeting with Dr. Klein, she told us to pick the one we felt most comfortable with because both theories would work with the project.

Implementation

The purpose of the kick-off event was to gain followers before implementation. Unfortunately, this event was canceled due to circumstances out of our control. Therefore, the

Greener Godfrey Facebook page opened three days early in order to receive more likes before implementation. Although there were many followers on the *Greener Godfrey* page, the page lacked interaction which could have been due to having scheduled posts, and not enough marketing. Scheduling the posts made it easier on our behalf to be sure posts were on time and organized, but that led to our posts not gaining priority over other posts on our follower's page. Having more interactive posts that were not scheduled at noon or five could have potentially boosted our participation. We assumed having free T-shirts or bags to give away to Recyclers of the Week would have made more people want to participate and interact with our page, but that was not the case. Many people did not want to be a part of it, or simply did not answer the door.

Finding the Recyclers of the Week was one of the biggest challenges faced during implementation. We cannot control those who answer their doors or force them to take a picture to be posted on the Facebook page. We found it to be more time consuming and discouraging than anticipated. Even though it was hard work, it was worth it because those posts had the most interaction.

Evaluation Analyses

For the evaluation aspect of the project, we used Facebook insights for data. While navigating the insights section was difficult in the beginning, once we understood how to use it, keeping track of the data throughout implementation was easy. Our group spent time prior to the launch of the *Greener Godfrey* page looking at the different parts of the insight sections to become familiar with it. This already had charts and statistics calculated to see how well the page is performing. In addition, the website we used for the polls kept track of how many people looked at the poll, the average time to answer the poll, and how many people answered. This made calculating our data an easy task.

Group Dynamic

Teamwork was key for our team to succeed. Good communication and ability to collaborate made planning and implementation easier. Our group started off with communicating through email, but quickly realized text messaging was more effective and lead to an overall better group dynamic. Being able to work together on project pieces as well as picking up where other group members were having trouble, also helped the implementation run smoothly. This allowed papers to be finished quicker. Due to our implementation being earlier than normal, we had to work ahead in planning to be successful. We made it a goal to all be available whenever the group needed, whether that was in person or by phone. As a group, we learned to respect one another's schedules and availability. Our dynamic is a huge reason why our group succeeded.

Learning Moments

Even though Facebook is well known by users and easy to operate, using it for an online intervention takes great skill. Although we completed some light initial research on setting up a business Facebook page, we did not fully comprehend the exact science of a successful page. We should have researched deeper before the start of the project to find that using scheduled posts can lead to less interaction on the page. We also learned that going door to door is a difficult task. Many people do not answer their doors, or they are uninterested in the information presented. This made it hard for us because we wanted to have 10 Recyclers of the Week, which unfortunately fell short. We also thought two posts a day would be the right amount so our page would not take over our follower's newsfeed; in actuality, we could have posted much more without becoming annoying to our followers.

Implementation taught us to not take good fortune for granted, and that hard work is the only way to be successful. We were proud and excited of what we had come up with and

believed that everyone else participating would feel the same. The pilot made us feel even better about the project due to the amount of participation, which was more than anticipated, so we expected the actual implementation to run as smoothly. As a team, we believed that the more participation, the more successful our program would be. Although it would have been nice to have more participation from our followers, the low rate does not necessarily mean our program was not successful. We managed to reach five of the objectives and receive feedback on some of our posts through likes, shares, and comments.

Recommendations

As a group we recommend for the next group to be prepared for negative feedback on your work. Negative comments on the Facebook page caught us off guard, but this can be rectified through having material prepared to answer concerns. For instance, we decided to boost our petition, which would enable it to be seen by more people on Facebook; we anticipated this would help us gain more signatures. We thought doing this would get us the positive feedback we were looking for, but instead we ended up getting more negative, but valid, concerns. We learned from this that we should have chosen a less controversial post to boost, such as a Recyclers of the Week post which seemed to be the most popular type of post.

We found that some residents did not want their photos on social media. We suggest for future groups to have a back-up plan of a different type of photo or post. This would allow them to still make posts to show support of their efforts in the community, without making residents feel on the spot for a personal photo.

While this might be the only project your team is working on, this project might be one of many the community partners are working on. Therefore, they may not communicate with you as fast or as often as you hope. It is never wrong to keep them in the know and ask them

questions, but be sure to be patient and stay consistent with your communication. Our particular partners, SSCC and Godfrey Cool Cities, are good to work with if your group is highly motivated, self-sufficient, goal oriented, and can keep yourselves on schedule. If any problems arise always let Dr. Klein know.

Working ahead is exhausting and having Dr. Klein check every project piece may seem excessive, but well worth it. Her advice will help with putting together a successful program. Try not to get discouraged, especially when tackling social media. You are still making an impact, both to program participants and to your own learning experience.

Overall, the more detailed you are with your program plan, the more smoothly your implementation will run. We would suggest meeting with Dr. Klein as often as possible to make sure you are staying in the right direction with both your papers and the program as a whole.

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Appendix A: Verbal Survey Questions

1. Do you own a home in Godfrey?
 - a. Yes
 - b. No

2. What is your age?
 - a. _____

3. Is your annual household income above, at, or below the median household income for Godfrey Illinois, \$65,000.
 - a. Below <60,000
 - b. At (60,000-65,000)
 - c. Above >65,000

4. What are your thoughts of the recycling in Godfrey?
 - d. _____

5. What would get you to recycle more?
 - a. _____

6. What do you see as advantages/ disadvantages of having a citywide recycling program?
 - a. _____

Appendix B: Fact Sheets

Fact Sheet One (Vital News, 2017)

MWW
PUT YOUR RECYCLING BIN TO WORK!

RECYCLING 1 TON OF PAPER SAVES:

- 20 TREES
- 7,000 GALLONS OF WATER
- 3 CUBIC YARDS OF LANDFILL SPACE
- 60 POUNDS OF POLLUTANTS

AND, ENOUGH ENERGY TO POWER THE AVERAGE HOME **FOR SIX MONTHS**

SOURCE: GOINGGREENTODAY.COM

Fact Sheet Two (Earth Buddies)

STOP!
 Before you throw your waste in the bin.

THINK!
 Is there anything here you could have recycled?

RECYCLE!
 Don't throw recyclable items in the bin - use your recycling service.

Fact Sheet Three (Recycling Facts, 2014)

10 Amazing Facts About Recycling

- over 75% of waste is recyclable, but we only recycle about 30% of it
- Once an aluminum can has been placed for recycling, it can be back on the shop floor in 3 weeks
- Enough metal was recycle from old corsets to build 2 war ships
- Recycled gold is donated to charity in Japan, from discarded dentures.
- Old CD's are used to lay roads
- 2010, paper recycling had increased over 89% since 1990.
- 6 billion glass bottles and jars are used each year. It would take over 3,500 years to sing 6 billion green bottles!
- In the USA \$80m is wasted from the scrapping of precious metals in their old phones.
- Recycling 100 cans could light your bedroom for 2 whole weeks
- Sports brands will recycle the rubber on old running shoes for tennis courts/running tracks

Fact Sheet Four (Recycled Right, 2017)

MORE HELPFUL TIPS

- PLACE ALL **RECYCLABLES LOOSE** IN THE RECYCLING BIN OR CART.
- RINSE PLASTIC AND METAL CONTAINERS TO REMOVE ALL REMAINING RESIDUE.
- DO NOT PLACE **YARD WASTE** IN YOUR RECYCLING CART.
- ALL ITEMS MUST BE IN YOUR CART OR BIN TO BE COLLECTED. DO NOT PLACE RECYCLABLES ON TOP OF OR AROUND YOUR CONTAINER.
- IF YOUR RECYCLING PROGRAM ACCEPTS **GLASS**, YES, ALL COLORS ARE ACCEPTABLE.
- BOTTLE CAPS CAN REMAIN ON THE ITEM AND CAN BE RECYCLED TOO!
- WHEN IN DOUBT, THROW IT OUT (IN THE GARBAGE).

Fact Sheet Five (Media Kit, 2017)

RECYCLING FACTS & TRIVIA
Advanced Disposal

THE FACTS ABOUT PLASTIC - DID YOU KNOW?

1,000 YEARS
IT TAKES ONE PLASTIC BOTTLE UP TO 1,000 YEARS TO DEGRADE IN A LANDFILL

100K
100,000 MARINE ANIMALS ARE KILLED EACH YEAR AS A RESULT OF PLASTIC BAG POLLUTION

ENOUGH PLASTIC IS THROWN AWAY EACH YEAR TO CIRCLE THE EARTH FOUR TIMES

1 MIN = 1 MILLION
EVERY MINUTE 1 MILLION PLASTIC BAGS ARE USED. LESS THAN 1% OF PLASTIC BAGS ARE RECYCLED

5 PLASTIC BOTTLES MAKE A POLYESTER T-SHIRT 5 PLASTIC BOTTLES MAKE FIBERFILL FOR A SKI JACKET

To learn more, please visit www.AdvancedDisposal.com

Fact Sheet Six (Recycle Devon, 2015)

Let's break it down

recycling 1 glass bottle
saves enough energy to power a computer for 25 minutes!
And every year in Devon we recycle enough glass to power a computer for every Devon resident for 4 days!
Most old bottles come back as new bottles!

recycling textiles
is easy and useful!
Every year in Devon we recycle enough clothing to dress everyone in Cornwall, Devon and Somerset in a summer outfit!
In Africa around 80% of people wear second hand clothes, which were donated.
50% of clothes are re-used
50% are recycled into textiles

recycling tins and cans
The energy saved by recycling 1 aluminium can will power a TV for 3 hours!
Every tonne of recycled steel saves 2 tonnes of raw materials. And it can be recycled endlessly.

recycling 1 tonne of paper
saves 17 trees
All newspapers are now made from 100% recycled paper, taking just a week from your recycling box to appear back on a news stand in Devon.
In Devon we recycle enough paper to save nearly 1/2 a million trees - that's 500 acres!

recycling 1 plastic bottle
saves enough energy to power a 60 watt light bulb for 3 hours!
It takes just 25 two litre bottles to make an adult fleece.
Sadly plastic takes 500 years to decompose

Fact Sheet Seven (Aluminum Cans..., 2017)

ALUMINUM CANS CONTAIN MORE THAN 3X THE RECYCLED CONTENT OF GLASS OR PLASTIC BOTTLES

70% ALUMINUM CANS

23% GLASS

3% PLASTIC (PET)

Fact Sheet Eight

(Environmental Education Resources, 2016)

TOP FIVE ENVIRONMENTAL STATS RECYCLING
NOVEMBER 2013

1 **RECYCLING ONE ALUMINUM CAN SAVES ENOUGH ELECTRICITY TO POWER A TV FOR THREE HOURS**
ALUMINUM CANS CAN BE RECYCLED AN UNLIMITED NUMBER OF TIMES

IF EVERY NEWSPAPER WAS RECYCLED, WE COULD SAVE ABOUT **250,000,000 TREES EACH YEAR**

3 **RECYCLED PAPER REQUIRES 64% LESS ENERGY THAN MAKING PAPER FROM VIRGIN WOOD PULP**















4 **RECYCLING ONE GLASS BOTTLE SAVES ENOUGH ENERGY TO RUN A 100-WATT LIGHT BULB FOR 4 HOURS**

5 **75% OF EVERY VEHICLE IS RECYCLABLE**

SOURCE: <http://www.epa.gov/epa/pressroom/2013/11/01/110113top5envirostats.html>
<http://www.epa.gov/epa/pressroom/2013/11/01/110113top5envirostats.html>
<http://www.epa.gov/epa/pressroom/2013/11/01/110113top5envirostats.html>

PRESENTED BY INTELEX

Fact Sheet Nine (Recycle More?..., 2016)

Plastic Resin Identification Codes	
 PETE Polyethylene Terephthalate	 Common products: bottles; caps, jars, trays, clamshells Recycled products: clothing, carpets, bottles & water bottles
 HDPE High-Density Polyethylene	 Common products: detergent & shampoo bottles, flower pots, grocery bags Recycled products: detergent bottles, water, pipes, decking
 PVC Polyvinyl Chloride	 Common products: ceiling, pipe, gutters, window frames, automotive product Recycled products: pipes, wall siding, backing, flooring
 LDPE Low-Density Polyethylene	 Common products: trash bags, paper towels & paper napkins, squeeze bottles, trash bags, six-pack rings Recycled products: trash bags, plastic envelopes, compost bins
 PP Polypropylene	 Common products: yogurt containers, caps, straws, hangers, sand & shipping bags Recycled products: paint cans, speed bump covers, food containers, hangers, plant pots, razor handles
 PS Polystyrene	 Common products: CD cases, shipping cushion, cartons, trays Recycled products: picture frames, rulers, flower pots, hangers, toys, tape dispensers
 OTHER	 Common types & products: polycarbonate, nylon, ABS, acrylic, P.L.A. bottles, safety glasses, CDs, headlight lenses Recycled products: electronic housings, auto parts,

Fact Sheet Ten (Disposal Guide List, 2016)

Recycling Guide

Only these items in recycling



Glass
Bottles & Jars



Cans
Steel, Tin & Aluminum



Plastic Containers
Bottles, Tubs & Jugs



Cardboard & Cartons
Flatten Boxes.



Paper
Newspapers, Office Paper, Junk Mail, Magazines & Phone Books



Shredded Paper & Plastic Bags
Bagged separately in clear plastic bags.

When in doubt, keep it out!

For more information please contact your waste hauler, visit www.siouxfalls.org/recycle or call 605-367-8162.

All items must be empty of liquids, free of food waste & placed loose in bin.

Fact Sheet Eleven (Disposal Guide List, 2016)

Keep These Out

Not Single Stream Recycling



Free Medical Waste and Needle Disposal programs are available. Never flush down the drain or throw in trash.



Single Use Items & All Styrofoam
Berry & To-Go Containers, Plastic & Paper Tableware, Wrappers, Napkins & Straws



Ceramics, Porcelain & Baking Glass
Gently used items can be donated.



Toys, Clothes & Shoes
Gently used items can be donated.



Rubber & Metal
Check for alternative recycling.



Waste & Wood
Diapers, Food, Pet & Yard Waste



Hazardous Materials
Take to the Household Hazardous Waste Facility.



Electronics, Batteries & Bulbs
Take to the Household Hazardous Waste Facility.

When in doubt, keep it out!

For more information please contact your waste hauler, visit www.siouxfalls.org/recycle or call 605-367-8162.

Appendix C: Polls

1. Are you a resident in Godfrey, Illinois? (*1st week*)
 - a. Yes
 - b. No
 - c. I used to be

2. How excited are you by the opportunity to be one of our Recyclers of the Week? (*2nd week*)
 - a. Thrilled
 - b. Excited
 - c. Indifferent
 - d. Unenthusiastic
 - e. It's discouraging

3. What items can be recycled in Madison County? (*3rd week*)
 - a. Envelopes
 - b. Milk cartons
 - c. Water bottles
 - d. Food cans
 - e. Glass soda bottles
 - f. All of the above**
 - g. Only A and C
 - h. A, C, D, and E

4. Which number is correctly matched with the recyclable product it is displayed on? (*4th week*)
 - a. 2 – Shampoo bottle**
 - b. 1 – Paper towels
 - c. 3 – Water bottle
 - d. 5 – Glass

5. Do you feel encouraged to recycle by seeing other recyclers on this page? (*5th week*)
 - a. Yes, because of the Recyclers of the Week
 - b. Yes, but because of the other content on this page
 - c. I feel the same as I did before
 - d. No, I don't feel any encouragement
 - e. I feel discouraged

Appendix D: Photo Release Form

Photo Release Form

I give permission for my picture to be used on the Greener Godfrey Facebook page. I agree that Greener Godfrey may use photos of me or my child with or without my name or child's name and for any lawful purpose, including for example such purposes as publicity, illustration, advertising, and Web content.

Print Name: _____

Signature of Parent/Guardian (if a minor): _____

Signature: _____

Date: _____