



Project Report

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“Community and Composting in Victory Acres”

Clients: Victory Acres Residents

Abstract

"Community and Composting in Victory Acres" implemented a pilot composting program for a local neighborhood in an effort to increase community cohesion. Victory Acres is a low-income, culturally diverse neighborhood located in Tempe that used to have easier access to the Escalante Community Center before the 101 freeway divided the community. Residents of the neighborhoods surrounding ECC do not have access to the Escalante Community Garden except on Community Harvest Days twice a month. The goal of the project was to reconnect broken ties to the ECC through a neighborhood composting service. Through composting, residents could directly benefit from the community garden's composting capabilities while encouraging a more sustainable method for dealing with food waste. The composting pilot project in Victory Acres was used as a way to mitigate the greenhouse gases emanating from food waste along with other neighborhood issues. The project would encourage aspects of community cohesion, sustainability, and happiness.

By the completion of the project, composting in the neighborhood could continue through increased access to the Escalante Community Center Garden. An assessment via survey responses was made on improvements in perceived community connectedness, sustainability, and happiness. The pilot was unsuccessful in gaining a large client base for composting participation, but it was successful in exploring challenges and barriers to implementation of projects in Victory Acres. Several intervention points were explored, several lessons were learned from successful and unsuccessful engagement techniques, and opportunities arose for further future research.

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Project Goals

The primary goal of the project was to reconnect broken ties to the Escalante Community Center (ECC) through a neighborhood composting service. Residents of the neighborhoods surrounding the ECC did not have access to the Escalante Community Garden (ECG) except on Community Harvest Days twice a month. Increased residential access to the ECG would help close the distance between ECC and Victory Acres (VA) residents, increase community cohesion, increase sustainability efforts in the neighborhood, and increase happiness. Through composting, residents could directly benefit from the community garden's composting capabilities while encouraging a more sustainable method for dealing with residential food waste. The desired outcome of the project was to increase a perception of community cohesion, sustainability, and happiness. This would be qualitatively determined by two surveys given: first when each resident began composting and again at the completion of the project.

The project was used as a pilot to test assumptions and find challenges to implementation of projects in the community. It was able to identify several barriers to program participation and began to build a foundation for the success of programs in the future. Success was not determined by the number of residents participating in the composting initiative; the project was to be considered successful if any residents participated, and these participants were able to give further insight into why more residents were not willing to take part in the composting project.

As a supplementary goal, the project aimed to spread knowledge about the methods and benefits of composting and increase composting rates in Victory Acres. The approximate weight of food waste collected and composted at ECG was recorded throughout the project. This statistic was reported to participating residents in the final deliverable to the client; this statistic was also converted to greenhouse gas savings from diverting the waste from landfill. This, theoretically, would help reinforce the connection between composting, sustainability, and the community's collective impact potential.

Context

In the ASU School of Sustainability, we clearly connect sustainability and happiness with waste reduction. In other parts of the Phoenix metropolitan area, the connection is not as clear: waste management remains a nationwide and statewide sustainability issue. “Yard trimmings and food waste make up 45% of Phoenix's solid waste stream,” most of which ends up in area landfills and adds carbon dioxide and methane to the atmosphere as it breaks down (City of Phoenix 2016, savethefood.com). Preliminary data in a Phoenix waste characterization study of city-collected residential garbage found that food waste is one of the most prevalently disposed of materials with approximately “56,466 tons of residential food waste [...] disposed of annually” (Ilioi 2014).

Organic waste is a fundamental area of focus if Arizona is to achieve the ambitious goal of removing 40% of organic waste materials from Phoenix area landfills by 2020 (City of Phoenix 2016, Ilioi 2014), a vast improvement “from the current 13% diversion rate, which is below the national average” (Reid 2013). City officials also want to boost composting and recycling practices because of concerns about burdening landfills (Reid 2013). “When you dispose of compostable material in a landfill, not only are you taking up space in the landfill, you are disposing of organic material that can be composted and used in the garden” (ADEQ 2016).

Tempe, as part of the Phoenix metropolitan area, offers several compost pickup services; each of these services has its own cost and contract. A monthly cost can be a significant deterrent from a composting service to a Victory Acres household with an average income of \$35,000 (www.city-data.com), although it is unknown how many residents of VA currently utilize one of these services. In order to mitigate the burden that accompanies Tempe compost services, participation in the pilot project in VA was free to residents.

However, when the project began Victory Acres had no neighborhood-level composting program in place, nor did residents have access to the ECG except during volunteer hours and on formal Community Harvest Days, which occur twice a month. Even on Community Harvest Days, residents were not informed that they could bring their separated compostable materials, nor were there any composting instructions available. ECG Community Harvest Days are focused on the garden, rather than the compost system; these Community Harvest Days encourage community members to help with garden tasks such as planting and pruning, learn about plants that flourish in the desert climate, and take home several varieties of fresh vegetables that have grown there. Garden plots are owned and managed by ECC at all other times, and the gate is closed and locked during non-volunteer hours.

This pilot project aimed to make sustainable compost options more available to a low-income community. The composting capabilities at the ECG offered a localized solution to a citywide issue of food waste; the benefits from composting food waste directly benefitted the ECG and thus the community surrounding it. When neighborhood food scraps were composted at the Escalante Community garden, the chickens were fed and more eggs could be produced, the compost soil was put back into the ECC garden to nourish plants growing there, and those plants and the chicken eggs were both taken to be used in the ECC cafe. This strengthens the understanding of how composting at home impacts the food you eat, your health, and your happiness. Composting through city-offered services does not benefit the community in this way.

Literature Review

Community connectedness, sustainability, and happiness are linked ideas. “Community amenities and environmental conditions have been found to contribute to the domains of happiness of residents” (Cloutier & Pfeiffer 2015). Since communities impact happiness through the cultivation of social relationships and the inclusion of “amenities that affect wellbeing” (Cloutier & Pfeiffer 2015), then the inclusion of a sustainable community amenity, such as composting, also holds the potential to positively impact happiness. The Sustainability Through Happiness Framework solidifies the theory that improving one aspect of community cohesion, sustainability, or happiness would positively impact one or all three of the other aspects. Scott Cloutier’s Sustainable Neighborhoods and Happiness course further taught how social cohesion and local amenities can play a role in happiness, and how “we may just find that a happy neighborhood is a sustainable neighborhood” (Cloutier & Pfeiffer 2015).

While Cloutier and Pfeiffer’s Sustainability Through Happiness Framework was helpful in linking community, sustainability, and happiness, the project utilized Arnim Wiek’s Sustainability Solutions Framework to implement its solution strategies. This framework can be boiled down to a three-stage model: first, identify the current state as a problem; second, create a sustainable solution strategy through a theory of change or evidence; lastly, enable a sustainable solution vision (Wiek 2015). It is important to note that the vision state is not developed solely by the project manager, but by the collective efforts of the project clients (VA residents), project partners (the ECC and ECG), and the project manager or project team. The project vision focused on a specific aspect of community systems planning (waste), engaging potential participants to incorporate their feedback, planning intervention points, and encouraging a vision of sustainability and happiness. The goal was to re-link Victory Acres to the community garden via its composting capabilities, encourage sustainable actions, and increase a sense of personal happiness through increasing both sustainability and community cohesion. In light of the difficulties that the project faced, the path was much less straightforward than these frameworks suggest which is not uncharacteristic of sustainability efforts.

Methodology

I first canvassed Victory Acres for interest in a free compost program as part of the Sustainable Neighborhoods and Happiness course in fall 2016. I created a flier advertising several services the class could provide including the compost project (Appendix 1), and this flier was handed out during ‘Reverse Trick-or-Treating’ on October 31, 2016 and on the City of Tempe’s Zero Waste Day on November 12, 2016. Around 50 residents were spoken to personally on a door-to-door campaign in fall 2016, and many responded positively to the projects proposed including the composting pilot project.

After initial interest in the program was significant, I contacted Dave Talley at the Escalante Community Garden and we formed a partnership. He gave me instructions, a tour, and key to the garden gate. He was very excited to expand the garden’s impact across the neighborhood surrounding ECC. I also contacted JD Hill at Recycled City in fall 2016 and told him my plan to collect compost from residents in Victory Acres. If the number of residents participating grew, he agreed to collect compost from the neighborhood and drop it off at the ECG compost center for a significantly reduced monthly rate.

The Sustainable Neighborhoods and Happiness course held a gardening/composting class at ECC on November 19, 2016. We developed a lesson plan that detailed best gardening practices in our desert environment and showed the connection between a flourishing garden and composting for soil health. Later that day, we set up a table at the Community Block Party in an effort to recruit attendees into the composting program. The only items the table had were buckets and a sign-up sheet. Several residents stopped at the table to ask questions, but no new residents signed up during that effort. However, the Community Block Party was an encouraging success with lots of residents and their families coming to listen to music, play games in the blocked-off street, and talk to their neighbors. Soon after, I began to post project advertisements (Appendix 3) across heavily trafficked areas in Victory Acres.

For the residents that had committed to the project, I created a compost education poster (Appendix 2). This poster was available to the clients in either printed or pdf formats. The items listed as ‘compostable’ on the poster were specific to the ECG specifications; the garden is also home to chickens and a turkey, and all items allowable to compost were cross-checked to ensure the safety and health of the animals. The poster was delivered to the client along with the collection bucket. When both of these items had been distributed, I could begin the composting service and data collection.

By February and March 2017, several residents dropped interest in the composting pilot. In an effort to regain participants, I continued to post project advertisements at ECC, Saint Margaret Catholic Church in the neighborhood, a book exchange box, and other frequently seen areas (Appendix 3). I attended ECG Community Harvest Days and spoke to as many people about the project as would listen to me. Meanwhile, I continued composting for the residents that were still participating; by the completion of the project, 348 pounds of food waste was collected and composted at the Escalante Community Garden.

The final deliverable was presented at a table at the Community Block Party on April 22, 2017 (Appendix 4). This document was a plan for how composting can continue in Victory Acres and the results of the pilot project in terms of pounds of food waste diverted from landfill and greenhouse gas savings. At this Community Block Party, in contrast to the table set up during the fall 2016 Community Block Party, I displayed visual composting guides and my composting “Do’s and Don’ts” poster (Appendix 2). There was also a simple game that could engage everyone from children to adults while showing which everyday items could be composted instead of thrown in the trash (Appendix 5). Candy was offered as encouragement to play, and those who successfully categorized items into the correct waste stream were rewarded with the candy pieces. Recycling, compost, and trash bins were offered side-by-side all day, and 8 pounds of food scraps were collected from the Community Block Party and later composted at ECC.

Findings and Conclusions

While the participation rates for the composting pilot in VA were low, there was a significant amount of food waste diverted from Phoenix area landfills during the project timeline. Over 350 pounds of residential food waste was collected and composted at ECC in 4 months’ time. This translates into 301 kilograms of carbon dioxide equivalent greenhouse gas savings (Watch My Waste 2017). Even more encouraging is acknowledging that those 350 pounds of

food waste were composted and returned as soil to the Escalante Community Garden or various neighborhood gardens to nourish plant life. These plants also capture carbon dioxide in the air, further expanding the tangible benefits of this small pilot project in VA.

The project was highly successful in both starting a composting initiative in Victory Acres and in creating a pathway for composting to continue after the project timeline. At the onset of the project, ECG was open to residential access only during volunteer hours and Community Harvest Days. Furthermore, residents were not allowed to bring their own separated food waste to the garden to compost. Due to the partnerships formed with ECC during this pilot, residents of VA and other surrounding neighborhoods are now allowed to drop off separated food waste during specified garden volunteer hours (7 a.m. to 1 p.m. Tuesday through Saturday). The “Composting Do’s and Don’t’s” poster and the final deliverable will still be available as resources to residents to facilitate the proper composting techniques required at ECG. The final deliverable also showed several details about the project, including the pounds of waste diverted during the project timeline and greenhouse gas savings. Hopefully, these results encourage more participation in composting in VA in the future by solidifying the community’s impact potential in meeting the Phoenix area’s waste diversion goals.

During the school year, students of the future Sustainable Neighborhoods and Happiness classes will enable composting to continue in the neighborhood for interested residents. Residential compost pick-up in VA will be during class hours. Residents can contact the class email, ASUHappyHoods@gmail.com, to sign up for the service, receive their copy of the “Do’s and Don’t’s” poster (Appendix 2), and communicate with the class. The key to the garden was given to Scott Cloutier, the professor of the course, who is also in possession of the compost buckets. Copies of all deliverables have been shared in a Google Drive folder and sent to the project partners at ECG for future access.

The survey to assess perceived increases in sustainability, personal happiness, and community cohesion produced inconclusive results due to the small sample size. If more residents had participated in the composting pilot and persevered through the whole timeline, more survey results could have been collected to better assess the project’s effect on the neighborhood’s perceptions. This is not to say the pilot was unsuccessful in helping to increase levels of community cohesion, sustainability and happiness; “the community garden is only part of a larger system focused on improving happiness” (Cloutier & Pfeiffer 2015).

This project faced many barriers to adopting practices that are difficult to observe even in more affluent communities. While initial interest in the composting pilot was significant, when it came time to begin the program, many neighborhood residents decided not to participate. The educational ventures had similar low participation rates, but compost education did not seem to be the limiting factor in gaining resident involvement in the project. In fact residents seemed to readily understand composting when explained, but I found that education on a matter and eagerness of the project manager are not enough to persuade changes to behavior. Rather, time dedication to the project was the most cited reason for lack of desire to participate. Clarifying compostable materials is the first step; separating trash into compost, recycling, and trash is the next step; monitoring it and coordinating pick-up times is another step. All of these steps take time. This lack of time felt by residents is understandable considering the demographics of the

neighborhood: 15% are single parent households, 82% of families have both spouses working, and 30% of households are below the United States declared poverty level (city-data.com). When a family is struggling to make ends meet and have time for family dinner, taking on a new project is simply not a priority.

Since success was not determined by the number of residents participating in the composting initiative, the advancements made in understanding the needs of Victory Acres render the pilot project successful. The pilot was meant to test assumptions and find challenges to implementation of projects in the VA community, and it was able to identify several barriers to program participation. First, residents do not have very much spare time due to economic struggles, and prefer to use what time they have to spend time with family or loved ones. A project that either facilitated family time or facilitated productivity without kids interrupting it could be an easier way to engage the neighborhood residents in projects. Second, trust can be in short supply. “There is a deep mistrust of outside organizations coming into the community, conducting research and leaving the community behind” (Cloutier & Pfeiffer 2015). No one wants a complete stranger to give criticism on their home, neighborhood, or lifestyle in order to suggest change; a friend who gives the same constructive criticism will be much better received. In this way, personal relationships seemed to be the best way to gain interest in projects. For example, when canvassing the neighborhood for initial interest in compost in fall 2016, the only people who made lasting commitments to the project were the residents I had already met several times. Other residents said they ‘would’ or ‘might’ participate, but these residents all dropped interest by the time the composting service was able to begin. However, I made friends with residents throughout the pilot. I was able to form one particularly strong, personal relationship with Terry, and helping her compost was only the start to helping her with other projects. I helped with her garden, helped her manage technology, and we talked on the phone at least once a week. She is now not only my friend, but a valuable contact in VA when considering future neighborhood projects.

Future Directions

The pilot project helped assess the potential for programs in the future. For example, a project involving reduced or free childcare for children under 6 would probably do very well in Victory Acres. ECC offers free memberships to youth aged between 6 and 17, but in 2015 there were 71 children in the neighborhood under the age of 6 (city-data.com). ECC also does not provide childcare for any ages on weekend days. The limitation of childcare could be blocking the ability of residents to participate in programs and projects happening in the neighborhood; meeting the needs of the residents is fundamental to community engagement and a viable way increase both community cohesion and happiness. On the other hand, projects that facilitate time spent with the entire family could also do well in Victory Acres. The Community Block Party that the Sustainable Neighborhoods and Happiness class puts on each semester is very successful, partly due to the fact that it offers appropriate activities for all ages. The whole family comes out to chat, mingle with neighbors, listen to music, eat free food, and play games. The party entertains multiple generations of people and encourages community cohesion and happiness in a new, fun way.

While in this case composting was not the most successful path in gaining community

engagement, Victory Acres is receptive to many other projects. Habitat for Humanity and other service groups are very successful in the neighborhood. Scott Cloutier's Sustainable Neighborhoods and Happiness class will also continue to do humanitarian work in VA. Around 50 residents were spoken to personally on a door-to-door campaign in fall 2016, and many responded positively to the various projects proposed by students in the course, including my free composting pilot project. A future student interested in waste reduction, community connectedness, and human behavior changes toward sustainability would be able to continue this using this pilot as a springboard for a full-scale composting project or alter it to fit his or her research interests.

The road to community connectedness, sustainability, and happiness is much longer than 4 months. In fact, it took 4 months to find and explore various pathways that might lead to the road itself. Regardless of the long pathway to improvement, efforts in the sake of these noble features should never be dismissed. Even a smidge of progress in the name of sustainability is progress to be proud of.

Appendices and Acknowledgements

Appendix 1: Sustainable Neighborhoods for Happiness Service Flier

Front:

We are ASU students working in your neighborhood to provide services to community members. Below, we have compiled a list of services we are able to provide. If interested, there are several options to contact us: send this flyer to Scott Cloutier at **800 Cady Mall #108**, email us at ASUHappyHoods@gmail.com, or come talk to us on Don Carlos Mondays or Wednesdays 4:30-6 pm. Thank you!

Programs we are working on:

- Garden Beds:** Do you want a raised garden bed to produce your own fresh fruits and vegetables? We can help with building your very own for your backyard.
- Landscaping:** Do you desire some assistance in planting or pruning your plants in your yard? Let us help!
- Composting:** Separate food waste from your normal garbage and we will collect it from you, take it to Escalante's composting center, and bring you fertile soil for your own garden or landscaping needs! We will even provide the collection bucket.
- Mailbox Painting:** We will paint your mailbox with any (appropriate) design you choose!
- Suggest your own project!** We are able to provide a wide variety of services, but cannot read minds- let us know what you need done, and we will do our best to get it accomplished!

Back:

Events we are hosting in your neighborhood:

- Zero Waste Day** (Saturday, November 12th 8am-11am): Bring all your unwanted items (furniture, clothing, broken items, old appliances, anything!) to Esquer Park (2407 E McArthur Dr) and we will take care of bringing them to the community collection at the City of Tempe for recycling. Or if you are unable to bring your items to us, contact Alyssa at alyssa.kiefer@asu.edu to schedule a pickup time for Saturday morning.
- **Gardening/Composting Class** (Saturday, November 19th 10am-11am): Meet Jason, a student landscaping specialist, at Escalante Center to learn how to create a beautiful, productive garden in Arizona's desert heat. Afterwards, stay for a neighborhood potluck from 11am-noon! You can contact Jason for more info at jasonstree@gmail.com or (602)327-5560.
- Community Block Party** (Saturday, November 19th 1pm-5pm): Part of Don Carlos street will be shut down to allow residents to enjoy the block party. There will be games, food, music and other fun activities for everyone to enjoy! If you have questions, please contact Sydney at skrood@asu.edu or (602)-299-6233.

Appendix 2: "Composting Do's and Don'ts" Poster



Appendix 3: Project Advertisement Poster



Appendix 4: Final Client Deliverable



Community Composting In Victory Acres

348 pounds of food waste were diverted from Phoenix area landfills in 4 months! That translates into 301.28kgCO₂e that was saved!

Let's keep it going!!



During summer, bring your food scraps to the ECC garden during open hours (7am-1pm Tuesday thru Saturday). When ASU is in session, compost pickup will be on Mondays and Wednesdays 4-6pm. Sign up now or contact ASUHappyHoods@gmail.com for a copy of a "Do's and Don't's" poster and a free composting bucket!

Appendix 5: Table and Game at Community Block Party April 2017



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During the fall 2016 semester, my pilot had the assistance of several Sustainable Neighborhoods and Happiness course members including Jason Tibbets, Erica Berejnoi, and Lena Van der Kamp.

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This project would be very different without the continued guidance from Dr. Scott Cloutier. A shared passion for improving people's lives produced the idea for this project, and constant encouragement kept it alive. Similarly, Paul Prosser was a valuable resource to the pilot. His dedication to ensuring project success is deeply appreciated, and he was essential to the project meeting all requirements in a timely and complete manner.

I am indebted to Terry, the sole resident of Victory Acres to participate in the composting initiative from start to finish. Thank you for willing to perform this experiment with me, and I am happy that we were able to form such a valuable friendship through this project.

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