

Red Oak Rain Garden Student Team Final Report

ENVS 472

Eric Green

Fall 2020 Semester Final Report

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Executive Summary

Our team of ISEE students worked with Layne Knoche and Kate Gardiner who are executive directors of the Red Oak Rain Garden (RORG). The main mission of our project was to spread awareness and educate the general public of the benefits of the rain garden through social media, along with expanding the reach of the current social media presence. We focused on 5 different platforms: Facebook, Instagram, Twitter, TikTok and blog posts on the RORG website. Each platform required a unique approach because they attracted varying audiences who are drawn to the rain garden for different reasons. Through infiltration testing and other research, we utilized educational posts to engage homeowners interested in the drainage benefits and other historical significance of rain gardens. Our team found holidays, both popular and obscure, to celebrate with the rain garden online, and also used items from the garden for small crafts targeted at attracting the young kids attending the daycare right next to the garden. We were able to jump on viral trends like the “Ghost photo shoot” and popular Twitter and TikTok formats to gain attention from the student population. And finally, during a time where it seems impossible to bring people together, we managed to lead people to the garden directly using chalk drawings and a sticker scavenger hunt. Through these posts, we were able to determine what works best to provide the rain garden with the attention that it deserves. This report will demonstrate our findings on how we represented the rain garden online and also explore how the RORG team can continue on this path, leading eventually to the garden becoming a respected campus landmark and increased implementation of rain gardens throughout the Champaign-Urbana community.

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Project Description, Objectives and Scope

The overall objective for this project was to focus on the redevelopment, restoration and modernization of the Red Oak Rain Garden (RORG). Testing soil infiltration and planting native plants brings a comprehensive awareness to the area through the strategic marketing move of enhancing RORG's social media platforms. Mainly focusing on means of creating and posting content, the overarching goal of this project was to use the content we create to attract attention to make this area a campus staple. The Red Oak Rain Garden deserves to take its rightful place with the other landmarks located throughout the campus of the University of Illinois; for like the others, much time, consideration and love was put into this landscape. The objective for our team to bring awareness through social media to the garden is important because educating the public and getting more attention will raise awareness which would enact a level of respect and appreciation for the garden. The utilization of taking on part of the social media division for the garden was to introduce strategies that are effective and popular with the young crowd today which in turn we hope would get more traction for the location. An important aspect of the Red Oak Rain Garden design involves putting methods in place to ensure the longevity of the project. Therefore, we as a group should do the same in leaving a blueprint with our work in social media, which was our ultimate goal.

Our project scope includes only the promotion of the rain garden and the infiltration tests. We assisted in planting for the garden, but this was treated as more of a favor than a deliverable, as we worked alongside other volunteers. Deliverables of this project include infiltration testing results and weekly posts on the RORG's Instagram, Facebook, Twitter, and TikTok. For the first few weeks after our project commenced, our team met at the rain garden periodically for testing. In addition, from the time our project started to right before finals and the end of the semester, each member of the team created multitudes of their own posts for the various social media platforms with review, assistance, and approval from the other members and Illinois Extension. The success of these posts was determined using each app's "analytics" function. After a few days of letting a post circulate, its analytics will be assessed to determine how our social media strategy and future posts can be improved. A variety of ideas and methods for posts will be provided to assist our partners in continuing this level of social media action after the semester ends. In preparation, we have researched how to conduct infiltration tests and how the garden's social media has been run in the past. The broader impacts for this

project could include a gained respect for the rain garden from the student body, resulting in less trash litter or vandalization. It may also encourage students to set up rain gardens in their own neighborhoods, which would lead to more wide-scale flood mitigation and soil erosion prevention, along with other such benefits. Providing more awareness and educational opportunities could also lead to receiving more grants and funding for the Red Oak Rain Garden team.

Barriers and Scope Adjustment

Our project scope did not significantly change from proposal to implementation. The only main change was the frequency of posts. We initially committed to posting on each platform weekly. In reality, Facebook and Instagram got weekly posts, but blogs were much more spread out throughout the whole semester. We only managed to post on Twitter twice and Tiktok four times. We had an additional two posts planned for Tiktok, one using a popular audio and the other being a part 2 of our Rain Garden Plants video. However, we were unable to finish these due to weather conditions. The first Tiktok required a video in the heavy rain, but we were unable to get footage of this. As for the second video, we were unable to complete it due to limited time between fall break and visual changes to the garden as winter approached. However, we compensated for the lower quantity by putting greater emphasis on the quality of the posts we were able to complete.

Research Methods

Looking at the relevant “tools” our student team used to complete this project, the list is quite short and simple. We utilized the five social media platforms we were presented with at the beginning of our project and the semester; Instagram, Twitter, Facebook, Tiktok, and the Red Oak Rain Garden Blog website. However, in the actual creation of a majority of our posts we did not utilize a lot of outside sources and tools, but rather our group member’s combined knowledge and efforts. A large portion of the posts were created or inspired based upon trends our group members were interested in and/or saw on social media through their own personal accounts.

Although, in a few posts such as the Witches’ Brooms post (*Figure 15.*) and the Dia de Los Muertos post (*Figure 16.*) outside experts were contacted to confirm the information presented on the posts and/or to provide images. For the arts and crafts posts which are the RORG Monster Friends Blog post and Tiktok (*Figures TT3. and B1.*) as well as the Dia de los

Muertos post and Tiktok (*Figure 16. and Figure TT4.*) a variety of basic art tools were used to create the monster friends as well as the paper flowers. The art supplies used are as follows; a glue gun and glue sticks, puffy paint, biodegradable glitter, googly eyes, beads, paint, and buttons, and colorful paper, all materials and tools which can be easily found in one's home or at the nearest craft store. Just by having these basic craft tools available it is rather easy to recreate the various crafts shown in the post, or one can even choose to create their own crafts as it relates to the garden. Additionally, for the educational infographics posted on Instagram, which are the Witches' Brooms post (*Figure 15.*) and the Edible and Medicinal Plants post (*not featured*), these infographics were created using Adobe Illustrator and Adobe Photoshop. The educational information portion of the infographics were gathered using sources of Google, which then helped determine which images, icons and color schemes were used within the infographics. The infographic icons were created in Photoshop and then converted and placed into Illustrator, where the layout, text, colors were finalized and the entire infographic was put together in a 1080px x1080px image as this would prevent any cropping of the image when posted on the social media platforms.

To gather the analysis portion of our project, we used the built in analytics tool called BusinessSuite within the social media platforms. This analytics tool, which we used, primarily for Facebook and Instagram show the analysis of the platform's followers by age and gender as well as the location. This tool is very beneficial for determining how to cater posts to a certain audience as different posts can be appealing to different people. Additionally, Tiktok provides its own analytics tool for each tik tok video created and posted on the account which differentiates between the traffic source types as well as what the average watch time was of the video by the viewers. However, we were unable to gain direct analytics for the Tiktok account in general due to a low amount of followers, which Tiktok requires at least a hundred followers to get access to the account analytics.

Analysis of Research

We judged the success of our posts and social media strategies based on the analytics provided by each platform. Our team made two Twitter posts, which together received 12,340 impressions. Of those impressions, 390 accounts engaged with the posts, making an engagement-to-view rate of 3.2%. Additionally, 80 people read our blog, which was not an increase in viewership amount, but rather it was a similar amount as to before we started posting our blogs. On Tik Tok we posted a total of four times, three of which were viewed

greater than 200 times. However, the first Tiktok we posted (*Figure TT1*) was initially posted to private which affected the amount of views we received. Once we changed it to public, it was not placed on the For You Page and was not pushed out since it had technically already been posted too long for Tiktok to deem it relevant. We could not acquire analytics about our audience demographics for any of these platforms due to a low follower account, in which TikTok requires at least 100 followers to show any detailed analytics for the whole account.

Facebook consistently had the greatest outreach across the board, likely because the page already had a decent following prior to our team's project. In *Figure A1*, which depicts Facebook interactions over time, we can see the peaks become higher beginning September 28th, around the time our team began work. The most liked posts were the TV news coverage, drone interview blog, and the July summer blooms photo. The most viewed posts were the last chance fall foliage post, chalking the quad post, and the summer blooms photo. Notably, only one of these posts (the chalking the quad post) was made by our team.

Our team's first post on the Instagram page generated the highest outreach on the page since July 1st with 177 views. Relative to their respective audience size, our team's posts usually did better on Instagram than Facebook. Of the five most liked posts, three were posted by our team, and the most liked post was the ghost photoshoot. The day with the highest outreach on Instagram was November 5th, which was when the sticker giveaway was posted. This can be seen in *Figure A2*.

The audience analytics for Facebook and Instagram show quite different audiences, as seen in *Figure A3*. Though the gender ratios are relatively similar, we can see a notable difference in age distribution. On Facebook, the mean age is between 45-54, while on Instagram most followers are between 18-24. Additionally, while the top three locations are Champaign, Urbana, and Chicago in that order for both, the ratio of Chicago followers is 2.4 times higher on Instagram than Facebook.

Research Implications

With such limited analytics, it is difficult to properly analyze Twitter or the blog posts. However, we have learned a few lessons from Tiktok. For one, it is important not to post to private before making it public as this will suppress the video and prevent it from being shown on the feeds of followers or our potential audience. Unfortunately, the only Tiktok we created using a popular audio was the one we posted on private, so we were unable to see how successful using those audios could possibly have been. Attempting to use another popular

audio within another video can demonstrate whether this technique of utilizing popular audios can be successful.

The differences between the Facebook and Instagram audiences and which posts they preferred were very interesting and varied significantly. Based on the age and location differences, we can imply that the Facebook audience is primarily made of Urbana-Champaign community members, while the Instagram audience is primarily UIUC students. This may explain why our team's posts did better on Instagram than Facebook. We made our posts with shareability, trends, and the Instagram "aesthetic" in mind, which clearly appealed more to both the younger demographic and Instagram's design. The sticker giveaway and student profiles were shared on people's stories, which is likely part of why they were so successful. Though Facebook stories do exist, they are significantly less used on the platform, thus shareability based on photos are less useful on Facebook. Our Facebook followers preferred updates over trends and giveaways, which makes sense for community members who already may feel a connection to the garden. It would be worthwhile to tailor content to each of these respective audiences.

As previously mentioned of the five most liked posts on Instagram, three were created by our group members. The most liked which was the ghost photoshoot trend which was quite popular on Instagram, Twitter, and Tiktok did very well due largely because of the Instagram audience, which are UIUC students. Posting popular trending photos about the garden clearly brings in the attention and audience which our group was aiming to get, and as such moving forward, any future posts on Instagram should definitely be considered to be applied to any popular trends. Additionally, on Instagram the day with the highest outreach with the audience was the day that the sticker giveaway was posted which encouraged the Red Oak Rain Garden's account followers to interact with the post by reposting on their stories to get the location of the stickers. Clearly this attempt to reach out and directly interact with the followers and audience was successful, and overall any future attempts at community engagement and outreach regarding posts should be heavily considered.

Recommendations

Going into the future, there are three takeaways that are essential to be focusing on when in the process of creating posts on the various social media platforms. The first is to know your audience, as many of the social media platforms cater to a specific audience, of either gender or age. By knowing your audience, this will help create social media posts for certain

platforms, for example on Facebook which has a larger audience of older people who are already invested into the garden, they do not require posts which are meant to draw people in. Instead the Facebook audience seems to prefer posts focusing on updates about the garden and the plants within it. The second area of focus is relevance, specifically how current the social media posts are with keeping up with new trends as they relate closer to the younger audience of college students, etc. This can be achieved through browsing amongst Instagram for example and noting down certain picture formats or content which seems to be circulating immensely and then applying it to the garden. The third and final area of focus is community interaction, which is crucial to helping bring in foot traffic to the garden and to attract a larger audience composed of UIUC students and members of the Urbana-Champaign community. This part is essentially just focusing on the creation of posts which encourage the community to physically interact with the garden, rather than just liking a post on Instagram or Facebook.

Some final key aspects to consider for each social media platform is based largely upon the audience on the platform as well as the popular content which circulates largely on that platform. On Instagram, the audience is composed largely of University of Illinois students, roughly around the ages of 18-24. As such, create Instagram posts with aesthetically pleasing images and “shareability” in mind, as many students may choose to share or repost the initial post, which can attract an even larger audience. On Facebook, as previously mentioned the audience is made up of older members in the Urbana-Champaign community, who are already invested largely in the garden, so providing them with posts about garden updates would be preferential. On Twitter, using popular formats and trends to create posts or “tweets” would help bring in a larger audience as well as the amount of likes and comments. Lastly for Tiktok, as the Red Oak Rain Garden account is relatively new, there are multiple avenues to consider. One would be to continue generating tiktoks using popular sounds, hashtags and trends to gain exposure and a larger audience. However, there is another option which would be to take a more educational approach when creating tiktoks, or even a combination of both educational and popular aspects would be beneficial.

Appendices

Instagram posts
Handle: @raingardenuiuc

Figure I1.

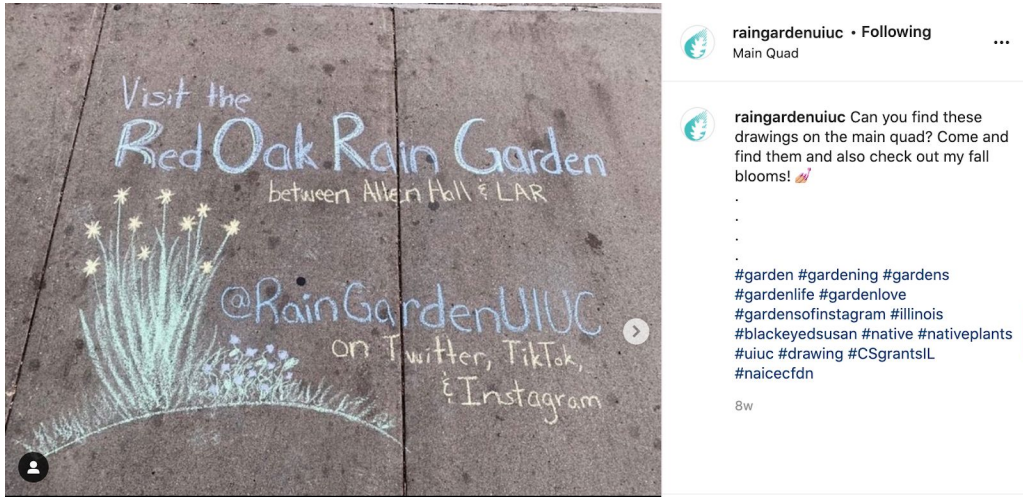


Figure I2.

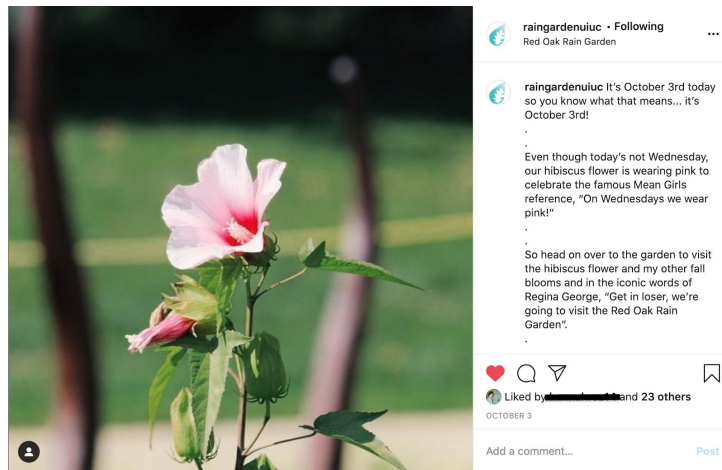


Figure 13.



raingardenuiuc • Following Red Oak Rain Garden

raingardenuiuc Over the past few weeks, my awesome Student Team used special equipment from @illinoiscropsciences to determine just how much stormwater I'm able to infiltrate! My team will continue this monitoring annually to see how all of my native plants improve my soil health. 🌱🌿

#CSgrantsIL #NAicefdn

7w

Liked by [redacted] and 44 others

OCTOBER 7

Add a comment... Post

Figure 14.



raingardenuiuc • Following

raingardenuiuc Much like the English Building and Lincoln Hall, I'm haunted too 🏠

#CSgrantsIL #NAicefdn #ghostphotoshoot #raingarden

5w

gradcollegeillinois Scarrrrrry 🏠

5w 3 likes Reply

nature_illinois Glad to see you getting into the "spirit!"

5w 5 likes Reply

kategardiner8 ROO! 🏠

Liked by [redacted] and 55 others

OCTOBER 27

Add a comment... Post

Figure 15.

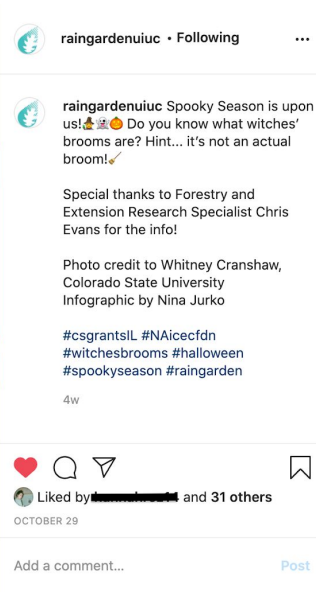


Figure 16.

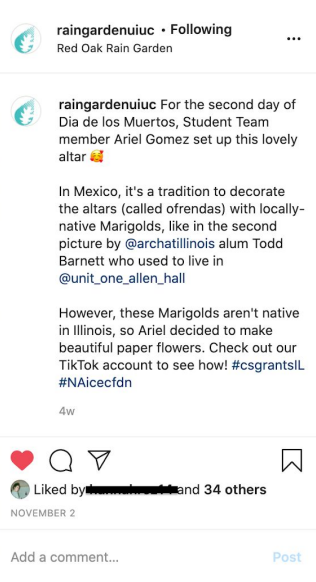
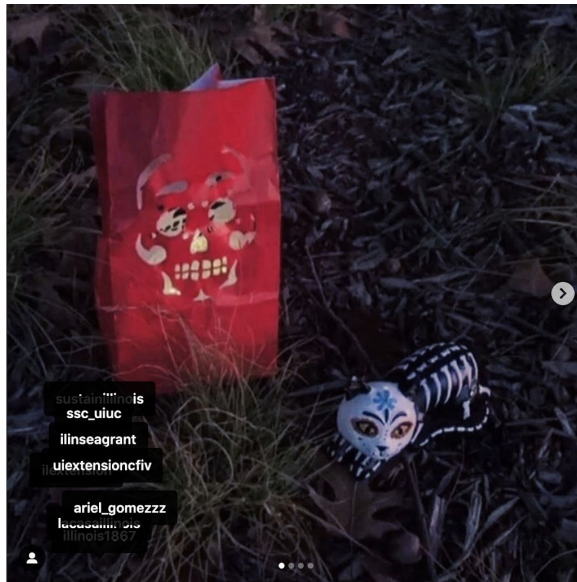
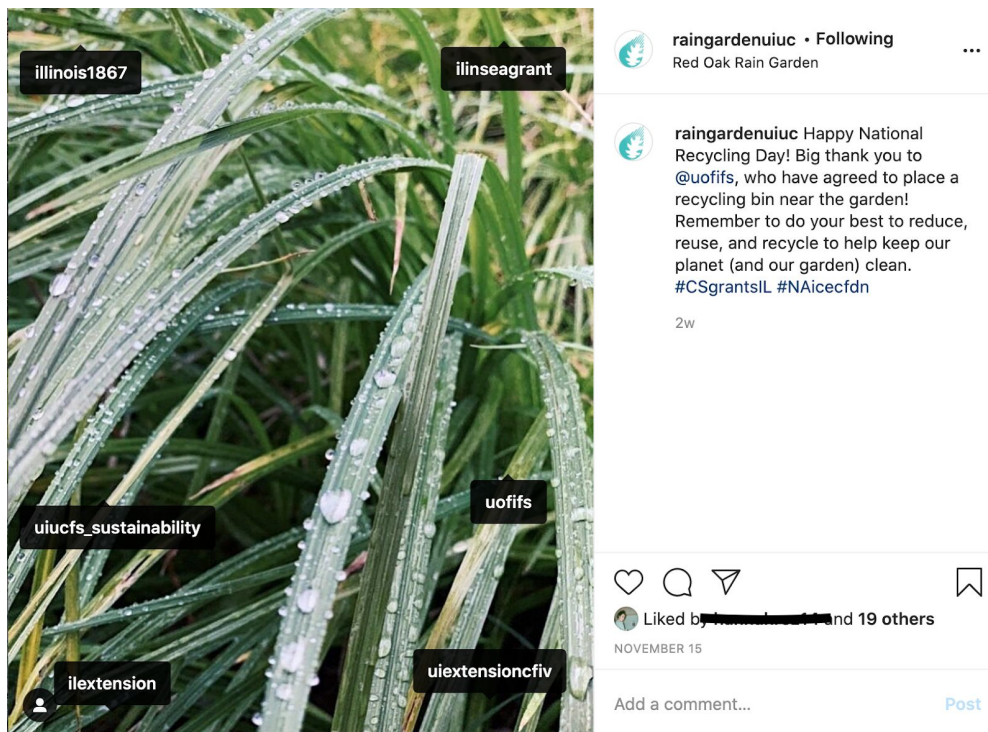


Figure 17.



Figure 18.



TikTok

Handle: raingardenuiuc

Figure TT1.

Figure TT2.

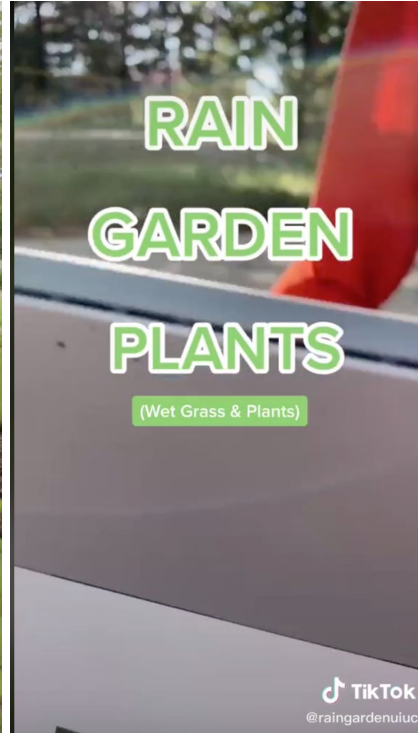


Figure TT3.

Figure TT4.



Tweets

Handle: @RainGardenUIUC

Figure T1.



Figure T2.



Blog Posts

Website: <https://redoakraingarden.org/blog/>

Figure B1.



How-To: RORG Monster Friends

By Ariel Gomez, RORG Student Team Member
Follow along as we show you the general steps to making your own Rain Garden Monster! We encourage you to use your imagination and have fun making these natural companions. For a print version, [click here](#). To see a video of the Monster Friends at RORG, [click here](#). [...]

October 28, 2020

Figure B2.



RORG's Edible Plants

By Nina Jurko, RORG Student Team Member
The Red Oak Rain Garden hosts a variety of plants and shrubs. Over 50 species, most of which are native to Illinois, can be found in the garden. These beautiful plants are not just functional and pleasing to look at, but many of them are also edible. From

[Continue reading](#) →

November 24, 2020

Team Posting Calendar

RORG Social Media Calendar				6/25 completed
✓	≡ Date ≡	Task	≡ In Charge?	
<input type="checkbox"/>	10/27	RORG Ghosts	Maggie	
<input type="checkbox"/>	10/28	Pine cone person post	Ariel	
<input type="checkbox"/>	10/29	Witches' Broom Infographic post.	Nina	
<input type="checkbox"/>	10/30	Blog on Tulip Installation	Layne	
<input type="checkbox"/>	10/31	Halloween	Layne	
<input type="checkbox"/>	11/1	day of the dead - Monarchs	Layne	
<input type="checkbox"/>	11/2	day of the dead post-make flowers	Ariel	
<input type="checkbox"/>	11/2?	sticker scavenger hunt post	maggie	
<input type="checkbox"/>	11/6	stranger things post	nina	
<input type="checkbox"/>	11/7	Part II RGP		
<input type="checkbox"/>	11/15	America Recycles day - mention that we are in talks with F&S on getting bins	lauren	
<input type="checkbox"/>	11/17	2020 Plant Observations - Blog	Layne	
<input type="checkbox"/>	11/20	RORG's Edible Plants - Blog & Infographic	Nina	
<input type="checkbox"/>	11/24	Evolution day	maggie	
<input type="checkbox"/>	11/27	Native American Land Use - Blog	Maggie	
<input type="checkbox"/>	12/2	no shave november / santa beard post Do not tag Illinois Clean Energy (not applicable)		
<input type="checkbox"/>		corn husk doll / crafting	ariel	
<input type="checkbox"/>	12/1	Giving Tuesday	Layne/Kate/Eliana	
<input type="checkbox"/>	12/4	Applying RORG to Home Gardens - Blog	Lauren	

Analytics

Retrieved from: BusinessSuite (accessed through RORG FB page "Insights")

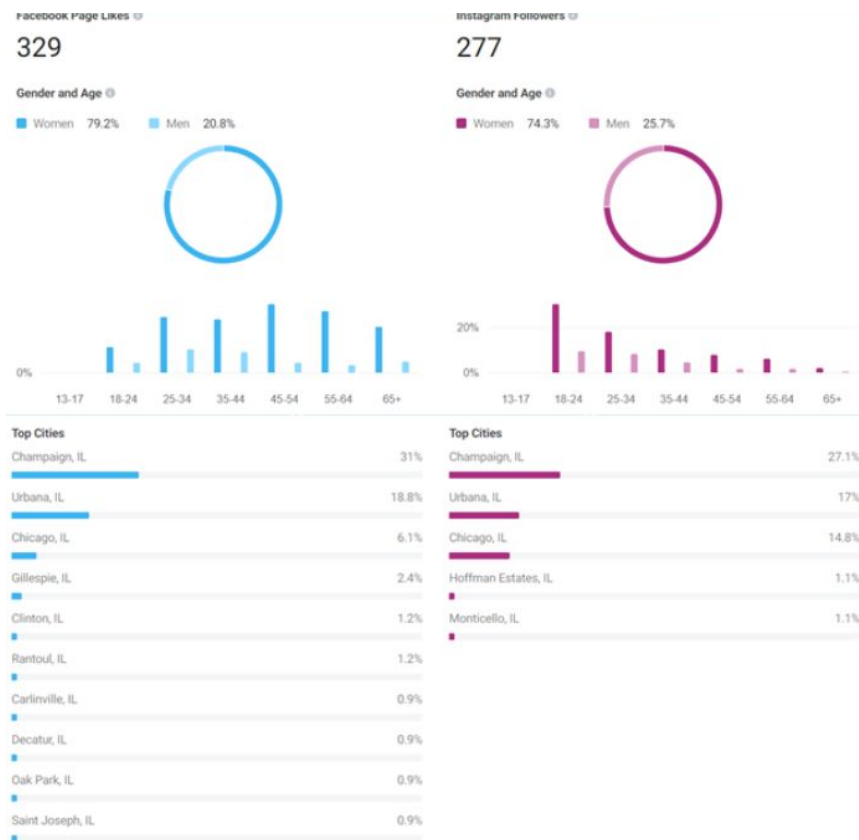
Figure A1.



Figure A2.



Figure A3.



Budget

Money-wise, the budget for this project was quite small. Around \$10 was used for purchasing chalk, and another \$10 for a small weatherproof box that would hold stickers that were already purchased by the rain garden group. In addition to this, we consulted the Red Oak Rain Garden group to determine our budget for promoting social media posts. To do this, we researched that we could select a few prime posts and promote on Instagram for \$30 (promotes for 6 days) and a similar price for Facebook. We were provided the infiltration equipment for free, courtesy of the crop sciences department on campus. However, the main resource that we used was our time. Several hours a week was needed to be dedicated to this project, between planting, testing, taking photos and writing the posts/creating the videos. The rain garden is also funded in part by the Illinois Clean Energy foundation grants that supports equipment purchases, volunteer labor and public events (Illinois Clean Energy). Our student team has

been recording our hours worked on rain garden activities to report back to these foundations and earn more money to put into the quality of the rain garden.