

MINI GRANT PROJECT SUMMARY

Please complete the project summary and return the completed form to April Snyder, Associate Administrator for the Institute on the Environment at aprilsnyder@umn.edu. Paper copies will not be accepted. Please also attach any photos, publications, brochures, event agendas or other materials that were a result of the mini grant summary.

Date of Report Submission:	April 1, 2016
Project PI & Dept/School	T. E. Michaels (Tom), Horticultural Science, CFANS
Project Title:	Community Hydroponics in Prospect Park
Grant Amount \$:	\$ 3,000

Project Context & Purpose

Please include the original project purpose statement and revise for any changes that occurred in the project after the start date with a short explanation of the changes.

We will collaborate with The Cornerstone Group, a local, progressive real estate development company, to design, build, and maintain a community hydroponics garden in Prospect Park . We will host hydroponics system building workshops to teach the basics of hydroponic food production to students and community members. An educational video will be made documenting the process of constructing, planting, and maintaining the garden.

This project aims to establish a hydroponic vegetable garden at the forthcoming Cornerstone site of the Prospect Park Community Gardens (PPCG), located at 2909 4th St SE in Minneapolis on the site of a former factory. PPCG, a local neighborhood organization, has created and maintains two community gardens within the Prospect Park community. In addition to traditional raised bed vegetable gardening, there is room for exploring alternative methods of food production, including hydroponics. PPCG has generously offered to provide space for a hydroponics garden to be constructed on the new site. In order to educate interested students and community members about hydroponic gardening, a hydroponics workshop will be hosted in the summer. Educational materials will be presented, and the gardening structures will be built in the process by volunteers. The finished products will become part of the garden to be tended to by community members. With the guidance of Professor Michaels, Joseph Cronick will lead the hydroponics aspect of this project. Joseph is a Communications undergraduate at the U of M with an interest in community place making, sustainability and filmmaking, and will produce an educational documentary as the project progresses. The video will be projected in the garden space during a community harvest event at the end of the growing season and will be shared online. This video will highlight the benefits of hydroponic gardening and will serve as an educational tool for others who want to implement their own hydroponics projects for food production.

We also worked with the Minneapolis Health Department to extend the implementation of the hydroponic salad tables and benches to high rise residences and other sites throughout Minneapolis.

Work Completed

Please provide a summary of the work that was completed for the mini grant project.

- Designed new hydroponic salad bench appropriate for personal use that complements the family-sized hydroponic salad table
- Built six hydroponic salad tables at PPCG Cornerstone
- Built a Hydroponic Tomato Rack at PPCG Cornerstone
- Built a greenhouse at PPCG Cornerstone so that we can test extending the growing season in 2016
- Equipped the tables and racks with net pots, water bins, fertilizer, seeds, etc.
- Grew assorted greens in the tables in 2014 and 2015
- Grew tomatoes in the rack in 2015
- Built and delivered eight hydroponic salad tables and five hydroponic salad benches to:
 - Atrium (314 Hennepin Ave): 2 benches
 - Brian Coyle Center Youth Program (420 15th Ave S): 1 table
 - Feeney Manor (901 N 4th Ave): 1 table
 - Hamilton Manor (1314 N 44th Ave): 1 table
 - Heritage Park (350 Van White): 1 table, 1 bench
 - Lyndale Manor (600 18th Ave): 1 table
 - Lake Street Station (2220 East Lake St): 1 table, 1 bench
 - Martha Joy, Prospect Park resident: 1 bench
 - Open Circle (at Senior Center, 1015 N 4th Ave): 1 table
 - Parker Skyview (1815 Central): 1 table
- Conducted workshops for the gardeners to develop skills for growing produce in the tables
- Mentored the gardeners on maintaining the tables and harvesting the produce
- Staffed information tables at events about Hydroponic growing

Partnerships & Collaborations

Please provide a summary of the project personnel, partnerships and collaborations that worked directly on the project or were started as a direct result of the mini grant project.

Project Personal:

Annie Young, Lake Street Station Resident, MPRB Commissioner at Large
Ari Baum-Hommes, Gardening Matters
Barb Harris, Minneapolis Highrise Representative Council
Cathy Hughes, PPCG GardenShare lead gardener
Dana Lehigh, UMN CFANS Budget and Finance
Del Hampton, Hennepin County Master Gardener and PPCG Coordinator
Joseph Cronick, UMN student
Sara Denzer, Pillsbury United Communities, Brian Coyle Community Center
Dr. Thomas Michaels, UMN professor
Vishwarupa [Vish] Vasani, Minneapolis Health Department

Partnerships and Collaborations:

Hennepin County Master Gardeners
Minneapolis Health Department
Minneapolis Public Housing Authority – Highrise Representative Council
Pillsbury United Communities
Prospect Park Association
Prospect Park Community Gardens
University of Minnesota, Department of Horticultural Science Display and Trial Garden

Project Outcomes & Impacts

Please provide a summary of the outcomes and /or impacts of the mini grant project including future plans for the project.

Table Design and Planning

- Tom designed a new, personal sized, hydroponic salad bench that was introduced to workshop attendees in conjunction with the family sized hydroponic salad table. Plans for both the table and the bench are available at the [hydroponic salad table web site](#). Pictures are attached to this report showing the benches and table installed at Prospect Park Community Garden and target highrise senior residences

Prospect Park Community Gardens (10 gardeners in the GardenShare plus the exposure to visitors at the garden)

- Del taught the GardenShare gardeners how to plant the seedlings, set up the table, and maintain the nutrient and water level.
- The PPCG gardeners harvested the seedlings and replanted seedlings throughout the year so that there was a continuous supply of greens.
- The GardenShare gardeners planted the seedlings for the hydroponic tomato rack. They also maintained the plants and harvested the produce from them.
- The salad tables worked great.
- The tomato growing needs work in 2016
 - Find a better way to support the plants and fruit as they grow
 - Use a larger container to hold water because they use a lot of water and dry out quickly

Lake Street Station (8 gardeners in their newly formed Garden Club plus the exposure to other residents)

- The workshop was completed on Saturday, July 18th. They planted some seedlings at the workshop. I left one table there after the workshop. You have the pics from that workshop.
- Del set up that table for as demo for an open house they had on Thur, July 23. Del brought in seedlings and plants from the PPCG Cornerstone tables for the demo.
- On Tue Aug 8th Del dropped off one bench for Katie. The table worked great and produced lots of greens.

Brian Coyle Center

- The workshop was completed on Monday July 27. 3 people attended. We planted some seedlings at the workshop.
- On Mon Aug 3rd Del dropped off one salad table.
- Two attempts were made to grow seedlings. The first failed due to management and the second set was vandalized.
- The table was picked up and stored so it could be used during the off season and used elsewhere in 2016. Of the sites, this one was the most problematic and frustrating.

MHD, MPHA, and MHRC (30 people in various roles plus the exposure to residents in the buildings)

(Minneapolis Health Department, Minneapolis Public Housing Authority, and Minneapolis Highrise Representative Council)

- The first workshop was completed on Thur Aug 13. 11 people attended but only two of them were residents at the three sites represented. The rest were from the sponsoring agencies looking to learn about the technology - that was a bit of a disappointment because it was not clear who will own taking care of the plants and tables at a couple of the sites. We planted some seedlings at the workshop.
- The second workshop was completed on Mon Aug 17. 12 people attended, most of them from the three sites represented. The participants were active and engaged throughout the workshop - it was a great workshop. We planted some seedlings that Del took with me to care for while the details of table distribution were ironed out.
- A follow up meeting is scheduled with Barb, Vish, and me tomorrow (Thur Aug 20) to finalize details on how to get the tables and benches out to the sites and determine who will be in charge of them at the sites. There will be some adjustments from the original plan now that they see the size and function of the tables and benches. For example, one of the sites who wanted 4 benches will now get two tables instead.
- The tables and benches were built, delivered, and planted.
- Planted more seedlings as a group at their MHRC meeting. They loved it and said they want to do that again as a group event in the spring.
- While they were started late in the season, all the sites grew something and they are excited to hit the ground running next spring and grow continuous greens throughout the year.

- The MHD and MPHA are budgeting to roll out tables to more sites next year.

Overall, once we get the materials (tables, benches, etc.) out there I believe the gardeners will need ongoing support. Growing the seedlings will require monitoring, and once the plants get in the tables monitoring the water level, harvesting the produce, maintaining the nutrient level, and setting up a succession plan will require ongoing support.

Communication

Workshops were conducted as noted above to provide hands-on instruction in the construction, planting and management of the hydroponic salad table and bench. A PowerPoint presentation used at the workshops is included in the final report files

The Hydroponic Salad Table website was used as a reference for construction plans, choosing and growing salad greens, solving problems and enjoying the greens.

Video interviews with Del Hampton, Tom Michaels and volunteer gardeners at the PPCG were completed, but the final video production was not completed before the graduation and departure of the videographer, Joey Cronick

Conclusion

The project was an outstanding example of collaboration among various departments and institutes at the University of Minnesota (IonE, Horticultural Science) and community partners (PPCG and several senior living centers). The hydroponic salad tables and benches provided an opportunity for urban gardeners to grow salad greens in areas of the city where fresh vegetables are scarce due to proximity of produce retailers or due to the limited mobility of gardeners. The project brought this hydroponic production technique to the attention of many urban gardeners. The tables were very productive and adaptable to many circumstances, from community gardens to highrise balconies. The workshops engaged and delighted the volunteer gardeners who attended. The one disappointment was that the video was not completed on time. However, additional effort went in to expanding the number of workshops, and we believe the communication value of these workshops more than made up for the lack of the video component of the project.