

#12

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Page 2: PART I: PROJECT INFORMATION

Q1

Project Title:

The Biodynamic Backyard

Q2

Contact Person:

Jude Coleman

Q3

Organization (if any):

The Arboretum at Flagstaff

Q4

Contact Address:

800 W. Forest Meadows ST. APT 166 Flagstaff AZ 86001

Q5

Contact Email Address:

jude.coleman@thearb.org

Q6

Contact Telephone Number:

6025683986

Q7

Project Physical Address:

4001 S Woody Mountain Rd, Flagstaff, AZ 86005

Q8

Tax ID # (if an organization):

██████████

Q9

Food

Please select the primary project category. Refer to the Grant Application Instructions to determine the project category.

Q10

Resilience

Please select the secondary project category (if applicable).

Q11

Please provide one or two sentences that describe the project:

The Biodynamic Backyard project will be a demonstration of how to increase self-sufficiency in small spaces, while utilizing sustainable, environmentally friendly practices; natural growing methods, composting, and water conservation will all be key elements. Occupying a footprint the size of an average Flagstaff backyard (approximately 200 square feet), the installment will educate our community on small scale sustainable agriculture and biodynamic gardening, while also providing fresh food to those in need; all food produced will be donated to the Flagstaff Family Food Center.

Q12

Funds Requested (not to exceed \$2,000 total):

1999.50

Q13

Project and Project Goals: Describe the project and its goals. Include in appropriate detail how the project matches the goals for the Guidelines for Neighborhood Sustainability Projects. Include the geographic area/neighborhoods/communities affected. All Water Conservation projects must include an estimation of total water usage on the property where the project will occur and a narrative explaining how the project will save water.

The Biodynamic Backyard project will serve as an educational model of achievable, sustainable agriculture in high-elevation environments. Now more than ever, it is vital to start making an effort toward increasing our own self sufficiency, as well as improving our sustainability habits. Situated on 200 square feet of land in the south-west corner of The Arboretum at Flagstaff's property, the project space is intended to mimic the size of an average Flagstaff backyard; highlighting how little space is necessary to create an ecosystem at your own home. As a longstanding organization serving the Flagstaff community, The Arboretum is dedicated to providing environmental education and opportunities for community engagement to the public since 1981. The Arboretum is accessible to both Flagstaff residents and many visitors from within the state of Arizona and beyond. With a focus on experiential environmental education, native plants and transition zone growing, the Biodynamic Backyard would coalesce perfectly with The Arboretum's mission to increase the understanding, appreciation and conservation of plants and plant communities native to the Colorado Plateau.

The goals of this project are to educate the public, engage local homeowners, and provide a needed resource for the Flagstaff community. By creating a flourishing "backyard" for visitors to observe, the Biodynamic Backyard project provides an explicit, visual example of what is possible; all pieces of the installment will adhere to local building codes for all residential zones of Flagstaff, so that anyone can re-create exactly what they see (all building/livestock restrictions will be taken into account, using T4 residential zone guidelines as it has the most restrictions). Additionally, all aspects of the garden will be explained via interpretive signs. This project has the potential and intention to intimately involve volunteers from the community, furthering the opportunities for educational outreach. Upon its completion, the Biodynamic Backyard project has the ability to support its own educational sustainable agriculture program, providing a much needed resource for sustainable agriculture mentorship in Flagstaff. Finally, in an effort to improve access to healthy, naturally grown food, everything produced in the gardens will be donated to the Flagstaff Family Food Center. Donating the produce contributes to the resolution of Flagstaff's systemic homelessness issue, and increases the access to food that may otherwise not be available to some individuals of our community.

Gardening and farming biodynamically is, at its core, creating a garden that functions in relation to the whole environment, with the whole environment. In this way, we enrich the ecosystem, as opposed to harming it; we contribute to the future uses of the land and generations who will live on it, as opposed to diminishing it. By gardening or farming using sustainable practices, the space becomes integrated and integral to the surrounding ecosystem, working with it instead of against it. To keep in stride with this vision, the installation will have several key features that utilize the habitat available and conserve resources. First, most crops will be grown in mounds or raised beds that utilize space saving/production increasing techniques such as companion and succession planting. The crops grown will be native heirlooms or varieties that are more fit to succeed in arid, high elevation environments, which not only reduces water use but also improves the biodiversity of the area. Second, only Organic Materials Review Institute approved pest control methods will be used, including the incorporation of integrated pest management practices (e.g. attracting beneficial predators to combat pests). In conjunction with this, some plants will be explicitly planted for the purpose of attracting pollinators, and a solitary pollinator habitat will be installed. Next, a composting system will be integrated within the site, which provides the opportunity to reduce waste and improve soil quality. Finally, a rain barrel will be used to catch any precipitation instead of using groundwater, when possible, to aid in water conservation. Also present in the Biodynamic Backyard will be a chicken coop, which will not house chickens but will demonstrate the space needed for backyard chicken keeping. The coop will have its own interpretive sign with the details of backyard chickens, which will explain how they fit into the ecosystem of a biodynamic backyard and how they can improve self sufficiency.

Q14

Community Partners: List the individual(s), community groups, or not-for-profit organizations affiliated with the project and describe the responsibilities of each. Describe which of the cooperating organization(s) have already agreed to participate in the project and provide contact information for a person from each organization. For some projects it may be appropriate to list organizations that you anticipate cooperating with but do not yet have a commitment from.

Community Partner 1:	Flagstaff Family Food Center: Where any edible crops produced will be donated. carrie@hotfood.org
Community Partner 2:	Violas Flower Garden: Source of most seeds and plants will be purchased. art@violasflowergarden.com
Community Partner 3:	Leupp Family Farms: Source of heirloom seeds. Unconfirmed commitment
Additional Space for Comments:	Other anticipated, unconfirmed partners are HomeCo (for all lumber and hard ware) Roots Micro Farm (for technique consultation) and TerraBirds (they could potentially hold some programs at the Biodynamic Backyard installation)

Q15

Previous Experience/Expected Challenges: Describe any expected challenges and how you anticipate overcoming these, including through previous experience.

Flagstaff's growing season and climate can be challenging due to unpredictable weather patterns, such as drought, heat, and cold snaps. Additionally, pest control and management issues may be present. However, my experience as both a botanist and a gardener make me confident that I will be able to overcome these challenges; for example, I plan to cultivate a population of beneficial insect predators to mitigate detrimental pests. I also plan to create moisture retaining beds that will continue to support plants despite dry spells, reducing the amount of city water needed for their survival.

Additionally, some crops may not do as well as planned depending on the weather in the summer and the coming winter conditions. Adaptability to a changing crop rotation will be necessary as some degree of trial and error is needed to determine the plants that will thrive best.

Q16

Project Milestones and Timeline: Provide a list of project milestones with an approximate timeline. Include details necessary to accomplish each milestone.

Due to Flagstaff's short growing season and the time at which the grant is awarded, this project will have two phases. The first phase of this project will be to naturally amend the soil and create the foundation for 2021's crops, which will last through the winter. In addition to construction and basic prepping, cover crops and compost will be started so they are ready for the spring.

The second phase of this project will be to begin planting productive crops. One year following project initiation, the project will be available in its entirety for the purpose of both public education and food production.

The timeline will be as follows:

July-mid August 2020: prepare plot for planting and construction (tilling, fencing etc), prepare soil and create beds, plant summer cover crop

End of August 2020: transplant perennial flowers. install coop/composter/rain barrel/pollinator hotel.

Early September 2020: develop and install all educational signs.

October-November 2020: Maintenance, chop and cover crop, plant winter cover crop, collect flower seeds

March-April 2021: Sow appropriate seeds indoors, turn soil and mulch perennials

Early June 2021: Begin transplanting/direct sowing

Mid-July 2021: Fully functional, biodynamic garden is complete! Crops to be harvested Late July-September.

Q17

Project Sustainability: Describe how/whether the project might be maintained beyond the life of this grant and include these efforts in the project milestones.

The Biodynamic Backyard project will take one full growing season to produce foods for donation, but will have ample educational insights and volunteer opportunities throughout the entire process. At the end of the project period, and going forward, the installation can be maintained as part of The Arboretum's grounds as a permanent garden. Though our programs have been postponed for this year due to Covid-19, at the time of completion the project will ideally become a centerpiece of its own educational program, in addition to being used for summer camp, field trips and docent training programs.

Q18

Other Project Details: If appropriate, describe current use of site and relevant details of ownership. Proceed to the next question if you need to upload a map or photo of the site.

Currently, the site is an underutilized yet central area of The Arboretum's property between the Visitor Center and the Horticultural Center.

Q19

Optional Upload: Upload a map or photo of the site (file size limited to 16MB).

sitemap_arboretumneighborhoodsustainabilitygrant_2020.pdf (822.5KB)

Q20

Detailed Budget and Budget Narrative: Provide the total project budget in detail, specifying which aspects of the project are to be funded by the Neighborhood Sustainability Grant and include any additional funding sources. The narrative should provide a general overview of how the grant funds would be used. Optional: download this PDF template and re-upload in the next question. Type "see attachment" in the comment box if using this option.

see attachment

Q21

Optional Budget Upload: Upload your budget and narrative (file size limited to 16MB).

Neighborhood Sustainability Grant Budget _BiodynmBackyard.pdf (50.6KB)

Q22

Community References: Include at least two independent references.

Reference 1 (R1) Name:	Lauren McFate
R1 Affiliation:	Community member and applicant's previous employer
R1 Occupation:	assistant manager at OARS Grand Canyon
R1 Phone:	(801) 694-1093
R1 Email:	Laurenm@oars.com
Reference 2 (R2) Name:	Cassidy Gale
R2 Affiliation:	Applicant's current supervisor
R2 Occupation:	Horticulturist at The Arboretum at Flagstaff
R2 Phone:	(774) 219-2430
R2 Email:	Cassidy.gale@thearb.org

Q23

Optional - Letters of Support: Letters of support are optional. If your application includes letters of support, please compile your letters into one PDF and upload (file size limited to 16 MB) here. Use the following file name: Your Name_Your Project Title Abbreviated_Sustainability Grant_Month Year.

JudeColeman_BiodynBackyd_Sustainability Grant_May2020.pdf (85.4KB)

Q24

Mandatory Attendance at Sustainability Commission meeting: Attendance at either the June (Water Conservation projects) or July (Food, Waste, Climate Action, and Resilience projects) Sustainability Commission meeting is mandatory. These meetings are held on the fourth Thursday or each month from 4:30-6:30pm at Flagstaff City Hall (211 W. Aspen Avenue). Please refer to the Sustainability Commission webpage for specific dates and agendas. You may send a representative from your organization or a project partner in your place in the case that you are unable to attend. Please check the box below indicating which meeting you will attend.

**Food, Waste, Climate Action, and Resilience Projects:
I/a representative will attend the July commission meeting.**

Page 4: PART III: APPLICANT SIGNATURE

Q25

I have read and understood the information regarding my application for a Neighborhood Sustainability Grant and I understand that the grant money is not a prize for personal profit or gain and is strictly for the project described. I further understand that the City of Flagstaff has the right to allocate and supervise the spending of the grant money and when projects do not proceed within the stated timetable, the City of Flagstaff reserves the right to request that the grant be refunded. I understand that recipients of these grants may be invited by the City of Flagstaff to participate in promotion and publicity of the project. Please type your name below to electronically sign and signal your agreement to these terms and conditions listed in the Grant Application and Agreement.

Applicant Electronic Signature:

Jude Coleman

Title:

Assistant Horticulturist

Date:

5/30/2020

Item Description	\$/Unit	Unit	Quantity	Total	Item Description	\$/Unit	Quantity	Total
Supplies and Materials					Other			
Soil	\$10.00	per bag	26	\$260.00	interpretive signs	\$200.00	5	\$1,000.00
Lumber	\$1.50	per foot	110	\$165.00				\$0.00
seeds	\$4.50	per pack	15	\$67.50				\$0.00
plants	\$7.00	per plant	10	\$70.00				\$0.00
Trees	\$100.00	per plant	1	\$100.00				\$0.00
chicken wire	\$35.00	per 3'x50' roll	2	\$70.00				\$0.00
1/2" pvc	\$2.00	per 10'	6	\$12.00				
poly sheeting	\$35.00	per 12'x100' roll	1	\$35.00				
				\$0.00	Total Funds Requested			\$1,999.50
Equipment					Additional Funding Resources			
Weed wacker	\$200.00	item	1	\$200.00	The Arboretum at Flagstaff has many materials on site that are at the disposal of the project. For example, mulch, weed covers, polycarbonate for cold frames, and most tools that will be necessary.			
Staple gun	\$20.00	item	1	\$20.00				
				\$0.00				
				\$0.00				
				\$0.00				
				\$0.00				

The soil, seeds, plants, and trees requested will be used in the actual garden space itself, while lumber and chicken wire will be used to build a fence, as well as a shade trellis structure. The poly sheeting and pvc will be used to construct a cold frame and hoop house. A weed wacker is necessary to efficiently chop down cover crops and other weeds growing in the intended site, and a staple gun will be needed to affix wire and plastic to their frames. Finally, the interpretive signs will be pivotal for the education aspect of the Biodynamic Backyard.



The
Arboretum
At Flagstaff
Garden
flowering with
native plants



May 28, 2020

RE: Support for the Biodynamic Backyard Garden project

To the City of Flagstaff Neighborhood Sustainability Grant Review Committee,

As a representative of Flagstaff Family Food Center, I would like to lend my full support to the proposed project entitled, Biodynamic Backyard Garden, which is seeking funding support through the City of Flagstaff's Neighborhood Sustainability Grant Program. The design of this project and the outcomes it will achieve are feasible and needed within our community. Furthermore, the goals of promoting home gardening fulfills our mission of feeding those in need.

Flagstaff Family Food Center anticipates working with Jude and The Arboretum at Flagstaff to see this project through to a successful completion. We look forward to hearing about the successful funding of this project.

Sincerely,

A handwritten signature in black ink that reads "Monica Foos".

Monica Foos
Executive Director