

Arcata House Garden Project

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Practicum in Environmental Science
Spring 2001



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Introduction

We were assigned to help create a perennial garden for the Arcata House. The Arcata House is a transitional housing program that is designed to help people who are temporarily homeless and working to secure and retain permanent housing. Residents are provided three months of rent-free living to help them reestablish their financial independence. Our mission was to implement an aesthetically pleasing, safe and easy to maintain garden, with the hopes of inspiring the residents to involve gardening in their lives.

Problem Statement

After networking with Jhym Phoenix, the executive director of the Arcata House, our group developed a problem statement to help focus our approach, and to develop a series of goals and objectives for the project. The project statement reads as follows: Our mission is to implement a low cost, perennial garden located at the Arcata House in order to create a pleasant environment suited to meet the safety and aesthetic concerns of the residents.

Physical Setting

The site for the garden is a fenced yard approximately 40 feet long and 25 feet wide. On the initial site survey, the yard was found to be overgrown with mustard plant, weeds and grass. A large mound of gopher plant dominates the southeast portion of the yard. It was decided to preserve this mound in the design, both for the plant's beauty, and for the

anit-gopher properties associated with it. Although this plant is thought to be a natural gopher deterrent there is much evidence of gopher activity in the yard.

Initial work on the garden began along the four fence boundaries. Several beds were pre-existing, including along the south, west, and east fences. Our group decided to reinforce the existing beds, and created a third bed along the house boundary. Borders were installed to help preserve the shape of the beds, and to reduce grass and weed intrusion. The bed dimensions are approximately 3 1/2 ft. wide, by 20 ft long. Each bed receives different amounts of insolation, and plants were placed in the beds that best suited their requirements. Plant donations dictated what we were able to plant, and when. Currently, the garden includes over twenty six varieties of plants, with more expected to be planted in the weeks to come.

Project Goals

In order to establish the best methods of implementation, our group established seven goals, as well as other plausible alternatives. The goals that we set for our project are as follows:

1. Strategies to fit the needs of the residents
2. To produce an edible and non-edible garden.
3. To produce a native plant garden.
4. Establish a short-term implementation plan.
5. Establish ways to meet the material needs of the garden.

6. Complete the implementation of the garden by May 15.
7. Establish a long-term maintenance plan.

Goal 1. Strategies to fit the needs of the residents:

There were three variables within this goal that were of concern for us; safety issues, establishing an eating area with a picnic table, and aesthetics. Because the house has a fast turn around of people, many of whom are children, we wanted to create a garden for children to enjoy without worrying about safety concerns. To that end we have leveled out the uneven areas of the backyard, and cleaned up the yard of all trash. We also researched the plants to avoid any vegetation that has poisonous properties, or is known to cause harm to people. Jhym Phoenix, our project contact, suggested that we incorporate an eating area within the yard to accommodate the residents.

We have established an area for the picnic table in the northeast corner of the yard because it allows for easy access from the house to the table, and the overhang of the neighbor's house will provide late afternoon shade for the residents in summer. Everyone involved in the design of the garden decided to make it as aesthetically pleasing as possible. We have planted a variety of annual and perennial plants in patterns that will produce blooming at different intervals, allowing for many months of colors.

Goal 2: To produce an edible and non-edible garden:

Our initial goal was to produce a garden that was complete with both non-edible and edible plants. As with other aspects of this project, we were entirely dependent on plant donations, and those we received were predominantly non-edible. We also worried

that residents may confuse edible plants with some non-edible varieties, which could pose potential problems. To prevent this problem, we chose to plant only edible herbs, such as oregano and thyme that are easily distinguishable when compared to the other plants within the garden.

Goal 3: To produce a native plant garden:

We felt that a native plant garden would be easiest to implement initially, because the plants are available from our local surroundings, the garden would provide habitat for native creatures, and ultimately, the yard and the community would benefit from the propagation of more native seeds. However, there were certain key disadvantages to having a native only garden. First, we felt that it was unethical to dig plants out of their native habitat. Second, we believe that an all-native garden might lack the diversity and aesthetic value that an all-inclusive garden would yield. And finally, we did not want to be too picky about what donations we would accept and which ones we would not from businesses. In the end, we decided to base all planting decisions on donation availability.

Goal 4: Establish a short-term implementation plan:

In order to efficiently begin implementing the garden, we outlined some activities that we felt would produce the greatest benefits to our project. These activities include a letter writing campaign to solicit donations, creating and distributing fliers regarding labor donations, and begin working in the garden.

We decided to write and distribute a letter of solicitation to local businesses asking for any materials they were willing to donate. (Please see appendix) The results

yielded two bags of steer manure, one bag of goat manure, planting mix, and a variety of annual and perennial plants. We continued to solicit businesses throughout the course of the project in hopes of acquiring more donations.

The group decided that the community could have donations to give that businesses did not. To that extent, we chose to produce a flier that discussed the project, and the types of donations still needed to implement the garden. We posted the flier around portions of Arcata, and we were successful in raising fifty dollars.

The third way in which our group decided to initiate a short-term implementation plan was through consistent physical work on the garden. Perhaps the most intriguing and unseen aspect of this project was that it benefited us to, "work harder, not smarter." Donations rolled in somewhat infrequently, and we found early on that it benefited us to do what we could on the garden when the opportunity arose, rather than plan our approach and follow a set format.

Goal 5: Establish ways to meet the material needs of the garden:

Our group realized that our project required a variety of materials, but that we had no budget to operate with, other than our own out-of pocket expenses. In order to account for the lack of money, we came up with ways to acquire materials with little or no money. Our alternative sources of materials included: donations from businesses, digging up native plants in our region, salvaged plants from residents' gardens, continuing to borrow tools, and a letter writing campaign.

As discussed before, we solicited donations from businesses through a letter writing campaign, which ultimately produced positive results. But businesses were

unable to donate bigger items, such as tools, which forced us to consider pooling our money together to purchase certain items we felt were not going to be donated. We compared shopping at a wholesale store, such as Costco, and a second hand store, such as the Salvation Army. Costco was the least expensive store to acquire tools and other materials from, but the cost was still more than we could afford. The Salvation Army is closer to our requirements for costs, but finding the right tools and other materials needed could be burdensome, if not impossible.

Jhym Phoenix purchased two pitchforks and a lawn mower. We have decided that, for now, other tools needed to maintain the garden, such as hand tools, will have to be purchased by Jhym, or brought each time by those who will maintain the garden. There is a regular garden hose at the site for hand watering, but a more elaborate irrigation system would be beneficial.

Goal 6: Complete the implementation of the garden by May 15:

Our group decided that we would set the tentative date of May 15 to complete the implementation of the garden, and to establish a monitoring and evaluation strategy. It appears that we will meet that deadline by completing the remaining tasks well before May 15.

Goal 7: Establish a long-term maintenance plan:

It was critical to our design and our monitoring strategy that we account for a long-term maintenance plan for the garden. We have selected four possible alternatives to

meet this goal: Roni, (a laborer who needs to do community service), the Seed and Plant Exchange, Mishka, (our other contact), and the residents of the house.

Roni has volunteered her time and energy to the future maintenance of the garden, which may lead us to incorporate her into the final maintenance program. Our group initially tried to involve the Seed and Plant Exchange in the development of the garden, so that they would have an interest in maintaining it in the future. The Seed and Plant Exchange expressed interest in the idea at first, but later chose not to become involved because of the limited space in the yard.

Mishka is very knowledgeable about plants and garden maintenance, and has volunteered future time to the project, but has very limited time. We worry that other pressing considerations may affect Mishka's ability to consistently maintain the garden. Initially, we were hesitant to involve the residents of the house with the maintenance of the garden for fear that we would implicate them in something they may not prefer to do. As other possible maintenance plans begin to show areas of weakness, however, we are beginning to consider their involvement.

Criteria

The criteria that we had to work with guided the progress of our project. We had four criteria. They are safety, low cost, minimal effort, and aesthetics. Minimal effort refers to the effort that is practical to apply with the tools that were available to us. Using these criteria and looking at our goals we came up with some concrete objectives. The project consists of seven essential objectives.

Objectives

1. A garden that requires one hour of maintenance or less per week
2. A garden that is aesthetically pleasing to the residents
3. A garden that is free of all toxic plants
4. A garden that incorporates both edible and non edible plants
5. A garden that requires less than 100 gallons of water per month
6. A garden that requires \$40.00 or less to implement
7. A garden that requires less than \$100 to maintain per year.

1. A garden that requires one hour of maintenance or less per week:

The design of the garden was created in a way that organized the plants in concentrated areas, such as established beds. We felt that this would reduce the overall work load for those who will be maintaining the garden. We also planted relatively small, slow growing plants that will not take over the yard or choke out surrounding plants. Finally, the plant donations we received were evenly divided between annual and perennial varieties, so while some plants will continue to grow, others will die at the end of the season, producing less work than a solely perennial garden.

2. A garden that is aesthetically pleasing to the residents:

It was important for us to create an aesthetically pleasing garden for the residents for two reasons. The first reason was that Jhym, our contact person, wanted the residents to become impassioned towards gardening, and the best way to achieve that was to implement something that the residents would take pride in. We were fortunate to

receive a variety of colorful annual plants, such as pansies and primrose, which added a lot of color initially to the garden while the slower growing plants began to take root. This helped to foster interest in the project from the residents, and they became willing to aid in the project. The second reason why an aesthetically pleasing garden was desired was to generate enough enthusiasm from the residents to provide a source of long-term maintenance for the garden. The residents in the house show genuine interest in the maintenance of the yard, and they have already begun to water the garden and to plant a variety of flowers.

3. A garden that is free of all toxic plants:

This objective was easy to accomplish because we decided to only accept donations that met this criteria. We turned away donations for strawberry plants because there are children residing in the Arcata house, and we did not want to inadvertently harm them. We also avoided accepting rhubarb because the leaves are toxic, and because they look similar to the chard that we had already planted.

3. A garden that incorporates both edible and non-edible plants:

Our group decided that a garden complete with edible and non-edible plants would provide more interactive pleasure to the residents than a standard non edible garden. As discussed before, we were careful to only plant edible starts, such as oregano, chard, and thyme, that do not look similar to non edible varieties of plants to avoid confusion for the residents regarding what is edible and what is not. We also placed all of the edible plants in one area of the garden, in particular, the northwest corner of the east facing garden bed. This objective was also contingent on the types and amounts of donations

we received through the business solicitation letter, and the community flier. Our edible donations were quite limited, so it was not difficult to divide up garden space between edible and non edible sections.

4. A garden that requires less than 100 gallons of water per month:

This objective was also contingent on the types of donations we received. We decided to avoid digging up native plants and placing them in the garden because natives, such as broad leaf ferns and clover groundcover, require substantially more water to grow and maintain than do the donated plants we received. We felt that those maintaining the garden would be forced to over water in order to account for the native plants, which would inhibit our ability to meet this objective.

5. A garden that requires \$40.00 or less to implement

We were on target to accomplish this goal, but at the end, we went slightly over the forty-dollar limit. While most of the starts that we planted were donated, we were faced with the dilemma of how to aerate the garden. The existing grass was sparse and regionalized, so it was imperative that we turn the soil to lay grass seed. Our options were to either rototill the majority of the backyard, or to shovel each portion of the yard. The option to shovel each portion of the yard was unfeasible simply because of the backbreaking labor involved. Our only real option was to rototill. We researched each rental business in the region and eventually found a full day rototill rental for thirty-five dollars. We did not receive any donated grass seed, so we were forced to purchase some for seven dollars. To fill in some bare spaces within the garden beds, we decided to

purchase one container of wild flower mix, which was six dollars per container. In total, we spent forty-eight dollars on the implementation of the garden.

6. A garden that requires less than \$100 to maintain per year.

We anticipate that the garden will require less than one hundred dollars to maintain and reproduce each year. The majorities of the plants in the garden are perennial and will continue to grow over the years. The only plants that will require replanting each year will be the primroses, the pansies, the blue birds, and potentially a few other plants. Having implemented the garden from start to finish with just under fifty dollars, we are hopeful that maintaining the garden will require far less than the one hundred dollars per year.

Alternatives

To meet the needs outlined in our objectives required additional brainstorming. In this process we have analyzed the alternatives. Each alternative has its advantage and disadvantage. We chose to implement the alternative that fit closest to the criteria.

Implementation Alternatives

The backyard of the Arcata House had many mounds of grass, which needed to be cleared. We could either use a rototiller to help clear the grass, or we could manually clear the grassy mounds with shovels. The rototiller would be labor and time saving. However it would be costly, cause potential accidents, and noise and air pollution. Shoveling would provide the laborers with a good workout, and precision. Yet, the

amount of time and the labor required compelled us to use a rototiller, which saved us time and energy.

Next, we needed to brainstorm possibilities for plant options. The original mission of the project was to create a perennial and native garden. With no funding we had to reconsider using only native and perennial plants. Native plants would be easy to grow, more adaptable, and require less maintenance. However if we were to only plant natives, then we would be limiting our donations. By adding non-natives to the garden we are able to accept more donations, and add more color to the scene. We risked the chance of planting invasive plants; however, special care may be required to tend the non-native plants.

A second consideration of plant alternatives was whether to plant only perennials or to broaden our choices to annuals as well. Perennials would be easier to maintain, they are non-seasonal, and they will continue to propagate. The disadvantage of perennials are that they provide excessive growth and require more long-term maintenance. By adding annuals to the garden we would be distributing a wide variety of plants and color to the garden. A disadvantage of planting annual plants is the necessity to replant them each year.

Finally we considered our alternatives for irrigation possibilities. There are a variety of options. Either we could use a drip irrigation system, a soaker hose, or stick to using the garden hose. Also, we could use a sprinkler attachment or install a sprinkler system. By using drip irrigation we would save time, labor, and water. Implementing a drip system is costly and requires maintenance.

Our other option was to attach a soaker hose to the garden hose and lay this soaker hose throughout the garden. A soaker hose would be time, labor, and water

efficient. However it would not be as durable compared to that of a drip system, nor would it be as site specific. The soaker hose is cheaper and easier to set up than the drip irrigation. The regular garden hose has the advantages of being of low cost, and manipulated to be site specific. The disadvantages of using the garden hose are lack of water efficiency, and an increase of labor spent in watering the garden.

A sprinkler attachment is less expensive, requires less labor and can add fun to the garden. The disadvantages of a sprinkler attachment are less precision, and efficiency of irrigation. An installed sprinkler system would be durable and require little maintenance. Yet due to its high cost and our lack of expertise we will not implement this option. It appears that we will initially implement a sprinkler attachment because of the cost limitations, but we are hopeful that Mishka or Jhym will eventually implement a soaker hose if funds become available.

Maintenance Plan

Obviously, a critical component to the long term success of the garden was the need to establish a reliable maintenance plan. As stated before, one of our goals was to develop a functional maintenance plan, and we were hopeful to target one person or group to perform the maintenance. We initially tried to connect the Seed and Plant Exchange with the maintenance of the garden. We proposed that the seed and plant exchange could maintain the garden, and in return, the plant exchange was free to plant any other plants in the garden that would benefit their cause. The plant exchange responded that the garden was simply not large enough to be of value to them, and they declined the proposition.

Our group began to believe that the maintenance of the garden would likely involve a variety of sources, rather than just one group or person. We were lucky in that there was extended interest in the project, both from Mishka, and a community volunteer named Roni. Both participants agreed to minimally maintain the garden, yet the group was concerned that the maintenance load was too substantial for two part-time volunteers.

We decided that in order for the garden to be permanently maintained, the residents of the Arcata house would have to take an active role in the project. This approach was strengthened by objective number two, that the garden be aesthetically pleasing to the residents. As the garden began to take shape, Hobie, the current resident, expressed interest in participating with the design and maintenance of the garden. He has already begun watering the garden, planting additional plants, and plans to help us create the remaining borders needed around the garden beds.

Of course, the difficulty with involving the residents in the maintenance of the garden is the high turn over rate of residents at the Arcata House. Every three months a new family resides in the house, so the help that Hobie and his family can offer is limited. We are hopeful that Hobie's enthusiasm will carry over to the next set of residents, and to this end, we have created a maintenance plan and interactive garden display to aid in the process. The maintenance plan discusses how to properly weed the garden and maintain the existing plants. The interactive garden display will help new residents become familiar with the types of plants in the garden. We are hopeful that the desire to remain a part of the project will carry over from resident to resident, and that this concerted group approach to maintaining the garden will insure long-term success.

Monitoring and Evaluation

As previously discussed, an information sheet and list of guidelines for the garden will be given to the residents of Arcata House so that they may take an active role in the garden's maintenance. Basic tasks for daily and annual upkeep of the plants and lawn are outlined in this fact sheet, which we have included in the appendix. As we stated earlier in the document we have met almost all of the objectives that we set for this project. The short-term implementation and maintenance goals are now complete. For the long-term maintenance and continued success of this project we are proposing a variety of solutions.

1. Roni will continue to water and weed the garden through June 2001.
2. A description of the garden and a picture are to be posted on the Permaculture Guild's web site. If any members are interested in utilizing or working in the garden they will contact Jhym Phoenix to make arrangements to do so.
3. Continued involvement at the Arcata House by HSU classes or groups such as the Yes House is another option to insure the long-term survival of the garden. Currently there is a psychology class being offered which offers students a chance to work with the residents of Arcata House. Perhaps the therapeutic benefits of gardening can be utilized here.

Summary

The Arcata House has a garden in the backyard. During the process of creating this garden we have solicited and collected donations from various sources. Once we obtained these donations we began to dig up beds and to plant a variety of natives, perennials, and annuals. With the help of a fifty-dollar donation we rented a rototiller to

till the grass. Then we planted grass and wildflower seed. We have created an educational guidelines list, as well as an interpretive design of the garden for the residents of the house.

We have met and worked with many challenges. Our first and foremost challenge was lack of funding. We received donations from various sources as stated in the document. We had no tools to work with initially. Borrowing tools and encouraging Jhym Pheonix to buy tools helped solve this challenge. The limited time to create and implement a garden was a constraint on our choice of implementation methods. Working with Jhym Phoenix, Mishka, and Roni resulted in a complex integration of ideas. Finally we had to deal with a team member who was consistently absent. Through our combined efforts we have reached the objectives of this project and have provided the residents of the Arcata House an aesthetically pleasing, safe, and easy to maintain garden.

Appendix:

Here we are attaching the letter of solicitation for donations. We also are attaching a copy of the guidelines for care of the garden, as well as the interpretive design, which we are planning on giving to the Arcata House.

Letter of Solicitation for donations:

Dear valued North Coast Business,

Thank you for taking the time to read this letter. We are a group of Humboldt State University students working on a project that will better the lives of our community members, while enhancing the beauty of our area. The Arcata House is a transitional housing program developed to help low income working people and their families. Residents are provided three months of rent-free living to promote family self-sufficiency, and economic independence.

We have been asked to implement a perennial garden for the residents, and are seeking your help to make this a reality. The mission is to create a garden that is both aesthetically pleasing, and a productive food source for the residents. Community donations are vital to the success of this project. Our current need is for basic garden supplies, such as soil, plants, tools, mulch, or other materials. Any donations that you can provide would be greatly appreciated

Once again, thank you for your consideration. If you have any questions, please feel free to contact me at (707) 825-0709, or e-mail at consilience@netzero.com

Sincerely yours,
Todd Abbott,
Arcata House Project contact

Guidelines for care of the garden:

Watering:

- Water approximately three to four times a week as needed, let the hose soak the lawn for twenty minutes.

Weeding:

- Pull the weeds about two times per month.
- Make sure to pull the roots of the weeds out of the soil.

Gopher Tips:

- Place pinwheels throughout garden, the vibrations of the pinwheels will scare the gophers away.
- Plant garlic.
- Spray a dilution of castor oil on plants and soil. The suggested dilution of castor oil to water is five parts castor oil to one part water.

Compost:

- Turn compost every two to three weeks.
- Add straw and green clippings to compost.
- Add vegetable and fruit kitchen scraps.

Tending Plants:

- Cut back perennials in the late fall, just below the connections of main stem to outgrowing branches.
- Thin overgrown plants.
- Spray aphid infested plants with a dilution of lemon juice and water.
- Mow the lawn once a month.

Enjoy!

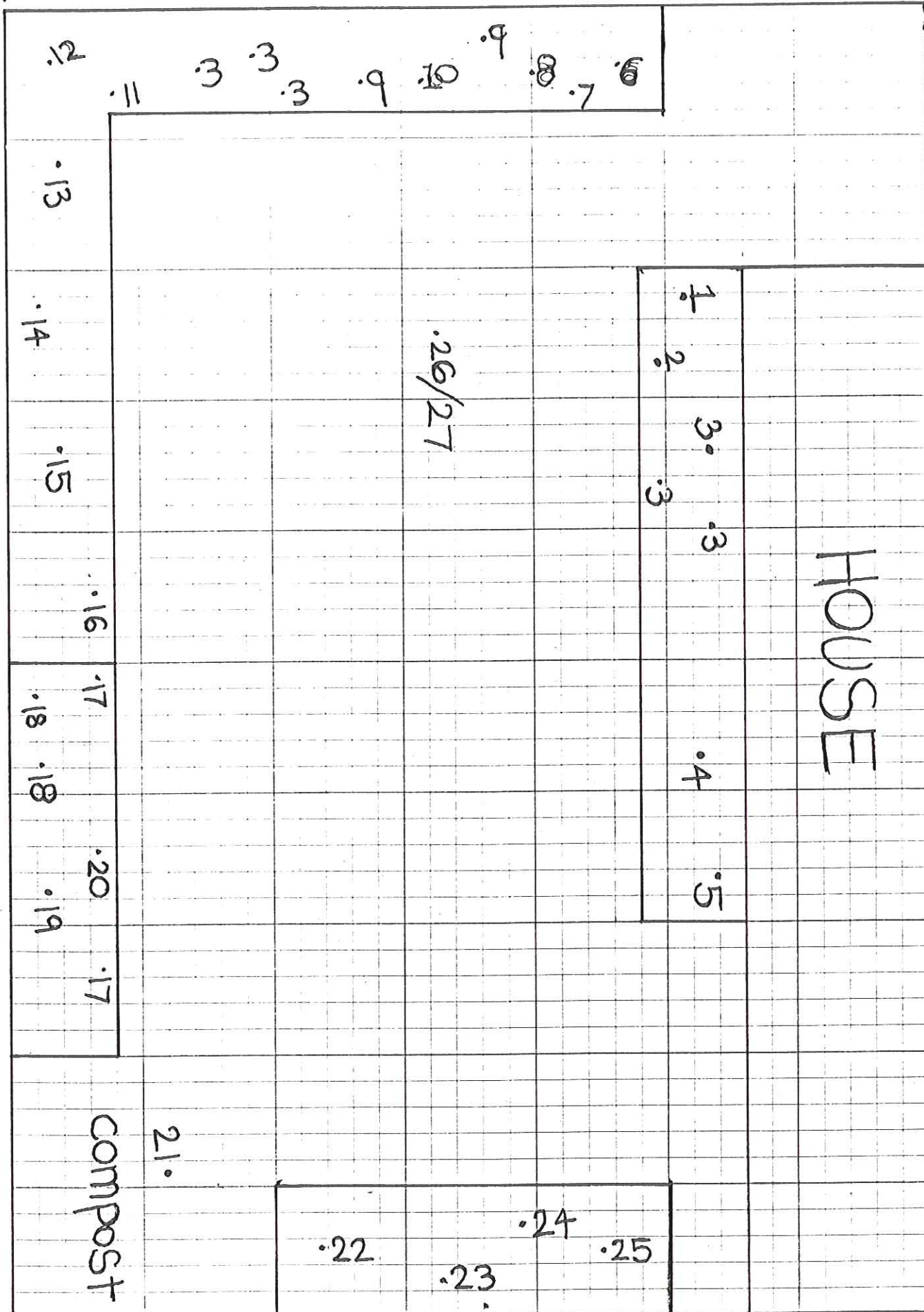
Interpretive list of plants followed by draft of the garden:

Plant List

1. Rosemary
2. Blue Bird Perennial
3. Salmon Berry
4. Juniper Bush
5. Lavender
6. Oregano
7. Chard
8. Blueberry
9. Thyme
10. Bulb Flower
11. Rhododendron
12. Primrose
13. Huckleberry
14. California Rose
15. Trillium
16. Forget Me Not
17. Lobelia
18. California Poppy
19. Poppy
20. Gopher Purge
21. Artichoke
22. Rose
23. Marigold
24. Echinacea
25. Grass seed
26. Wildflower mix

32'

40



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Table 1: Time spent on the Arcata House Garden Project. Time length refers to the number of hours worked per three group members.

Activity	Work Hours
Brainstorming	90
Solicitations for Donations	39
Garden Implementation	54
Paper	36
Work to Complete Project	12
Total Project Hours	231