

## Group 3: Area 3

...In addition to the previous elements mentioned on the CSC's property resides an orchard with 115 apple and pear trees. Though the trees produce fruit, some do so more heartily than others. Since being planted 35 years ago the community, the people within the community and the orchard has grown, changed and evolved. During those transitions the opportunity to build a design in which as little maintenance as possible for healthy upkeep became evident.

Based on the three needs of the Orchard co-op—healthy trees, healthy fruit and a park-like setting—our goal was to create a closed loop system in which the trees and their fruit would thrive in a beautiful setting with as little maintenance as possible. We've outlined our proposal in three stages according to the amount of resources available.

### The Vision

We didn't have to do much imagining when it came to the beauty of the orchard. The fruit trees and dark rich soil encouraged our thinking and convinced us that with an appropriate design, and a plan for care, that the envisioned health of the orchard could be achieved. We saw the opportunities all over the place— opportunities to hold water on the property and build the health of the soil, thus increasing the health of the trees and the fruit all while enhancing the natural beauty of the orchard. (The orchard inspired us to help facilitate the potential health, growth and community the orchard can provide.)

The Stages- How we propose to do it.

## STAGE 1

The mission and vision of the Center for Sustainable Community provides fertile ground for understanding the connection between sustainable community and sustainable land through their mission to educate and provide opportunities for learning “models and practices of sustainability.”

Stage 1 outlines the foundational steps needed to let the orchard begin operating on a closed loop system. These items will add vitality quickly and have a quick impact in the health of the orchard.

### Orchard:

- **Remove apple trees** to thin the orchard – use wood for benches? Art projects in the orchard? Sell as apple wood chips or firewood
- **Dig swales** in apple orchard
- **Plant cover crops** in orchard between swales and guilds

### Raingarden:

- **Move the equipment** out of the way
- **Dig Swales** in raingarden
- **Cut Austree** whips and root them to create wind breaks.

- **Split and plant** raspberry canes in the berms alongside the raingarden swales
- **Inquire about Arbor** Foundation tree catalog, etc. deal for \$10 bucks

#### **Greenhouse:**

- **Greenhouse beautification** -weed inside the greenhouse, remove non-organic matter, build soil health with a leguminous cover crop...

#### **Chickens**

- **Reinforce chicken coop walls** with re-purposed barnwood, or cob, remove all the flapping plastic

### **Summary Stage 1**

Items outlined in Stage 1 build a foundation on which CSC can begin to become more self-sufficient thus closing their orchard loop and becoming a more self sustainable community. The selected apple trees have been removed and the equipment has been moved to create room for the swales and berms which have been completed in the orchard and the raingarden. These berms and swales will increase the amount of water held on the property and increase the health of the soil thus increasing the health of the trees and apples. The cover crops that line the swale bottoms have been planted and the Austree whips have been rooted as a windbreak for the raingarden.

The chicken coop has been reinforced and insulated with barn material or cob, or other found, salvaged, and/or gifted materials.

The cleaned green house adds to the park-like setting.

## **STAGE 2**

The work to be done in Stage 2 requires a little money and some specialized labor. It continues the work of Stage 1.

#### **Orchard**

- **Buy plant stock** water-loving plant varieties for planting inside swales for more apple guild varieties (ground nut, asparagus, and nasturtium)
- **Start mowing** in cover crops
- **Start moving fence** and rotating chickens in the orchards

#### **Raingarden**

- **Buy plant stock** for Mulberry, Hazelnut and Chestnut trees; aronia

#### **Greenhouse**

- **Plant annual vines** and nightshades in the greenhouse; or plant perennials around the outside and start organizing the indoor space for whatever purpose you choose

#### **Chickens**

- **Buy fencing and establish rotation** for the now foraging chickens.

### **Summary Stage 2**

The orchard and the raingarden swales and berms have been prepped for planting. Highbush Cranberries , Switch Grass, Chufa, Spice Bush, Service Berry and Ribbon Grass in the swales; Rasberries and Aronia in the Raingarden berms; Apple Guild varieties in the Orchard Berm including comfrey (a dynamic accumulator), dill, fennel, iris (these draw beneficial insects) garlic, chives, walking onions, nasturtium

(pest deterrents) asparagus (their pest, the asparagus beetle, provides feed for chickens), chufa (nitrogen fixer) wild ginger and strawberries (ground covers—moisture retention and living mulches). Cover crops have been mowed.

The Greenhouse has begun its rebirth with the planting of perennial vines like grapes and wisteria along the roof with espalier fruit trees on the sides. This project will be another moment of functional beauty in the orchard.

The chickens will have begun their foraging journey. Fencing will be established to keep the chickens in a contained area working on the pest control and fertilization contributing to the health of the soil, trees and fruit.

## **STAGE 3**

Stage 3 requires more money, more expertise and more time.

### **Orchard/Turkeys**

- **Add the turkeys** to the orchard, rotationally grazing them with nighttime shelter in the greenhouse or new cob structure.
- **Regular maintenance** of guilds, regular maintenance of orchard, regular maintenance of animals
- **Adding fruit** to the CSA and implement full marketing plan for produce

### **Stage 3 Summary**

Swales and berms in the orchard and the raingarden have been made and all plants have been planted and guilds “established”.

The chickens have been eating the fallen fruit and adding nutrients for soil, trees and fruit through their manure. Now, in stage three, a shelter for turkeys has been built and turkeys have been bought. They have begun to graze in rotation using the same methods as the chickens- portable wire fencing. What remains are the harvesting of food from the guilds, fruit trees and animals, and maintenance necessary for those guilds. When the harvest is ready any fruit or items grown in the guilds can be used in the CSA basket.

Vines and trees have started to grow around and on the greenhouse.

## **Where we go from here**

### **Towards Community Integration and Sustainable Community**

Within the organization and community lie strong assets. There are two assets we see immediately- a devoted Orchard Co-op and Midwest Permaculture- an organization devoted to Permaculture education through project based learning.

We see the opportunity for free human power and low costs in the implementation of Stage 1 utilizing these assets. Midwest Permaculture hosts at least three trainings a year bringing about 60 people looking to develop their skills through hands on teaching. The development of the orchard and raingardens can be used to both fulfill the goals and vision of the orchard co-op and the learning objectives for the students.

Specifically, we can envision the plants used in the berms, swales and guilds being implemented for free through a “Build a Guild” event. As part of the participation in the Midwest Permaculture class you have to bring rootstock, seeds, cuttings, or bulbs that would fit into an apple guild. As students bring in plant material – start planting guilds. Chip wood that’s in piles around the community and start mulching. Plant initial apple guild varieties into berms around swales in the orchard and under the trees via cuttings and shared seeds from neighbors, friends, & visitors. (comfrey, chives and garlic chives, garlic bulbs, walking onions, strawberries, dill, iris, wild ginger).

The above is only one possible example of a mutually beneficial functional relationship between CSC and Midwest Permaculture which integrates a broader regional community (a “partnership with a like-minded organization”) while “fostering a learning community” through sustainable community.