Colin McCrate
Portfolio

University of Washington
Master of Design

Industrial Design

Colin McCrate
Selected Works

Crops for Clunkers Display Garden
Residential Edible Landscape Design
Community Garden Library Box
Raised Bed Kit
Raised Bed Corner Bracket
Seattle Urban Farm Company Logo
Parhelion Ecological Greenhouse
Chicken Water Bar

Crops For Clunkers **Display Garden**

Crops For Clunkers is an exhausted pick-up truck re-born as a container garden, giving new meaning to the term “truck farm”. I hoped that the transportable vegetable patch would not only be viewed as a piece of garden art, but would also cultivate discussion about local food systems and salvaged materials.

The truck, complete with a living wall, chicken coop, dwarf fruit tree and a plethora of annual vegetables was originally created as a display for the 2010 Northwest Flower and Garden Show. Serving as the centerpiece of the Display Garden Room, the truck gained media interest across the country and received a gold medal, the Show’s highest award. After its debut, the truck was donated to the Children’s PlayGarden, “a welcoming place where children with special needs can play alongside their typically developing siblings and friends.” At the PlayGarden, the garden continues to inspire and entertain children of all ages. The transformation from truck to garden was documented by filmmaker Lou Karsen, and can be seen in his award-winning film “Crops For Clunkers”.

Nov. 9, 2010

Vegetable transplants are started from seed in a propagation greenhouse

Jan. 3, 2010

The 1978 Isuzu B1800 is parked at a Fremont garage, ready to get to work

Feb. 1, 2010

Crops for Clunkers is towed to the WA State Convention Center

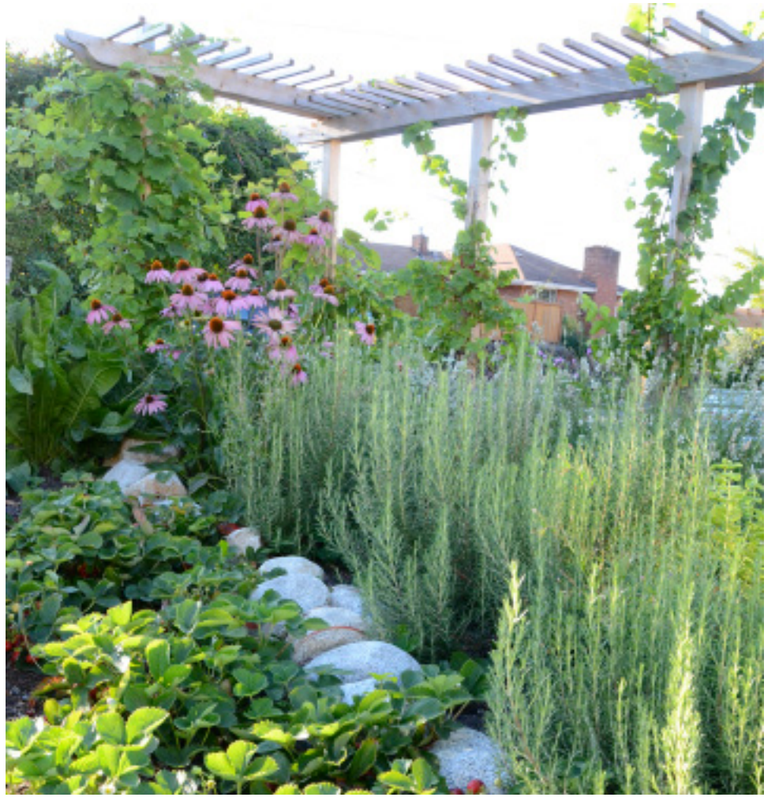
Feb. 3, 2010

The truck is awarded a gold medal for garden design at the 2010 Northwest Flower and Garden Show

Jun. 9, 2010

Crops for Clunkers is delivered to The Children’s Playgarden

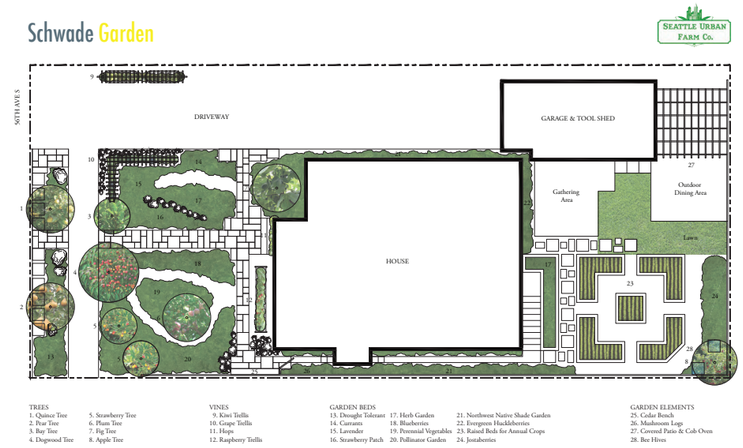
Residential Edible **Landscape Design**



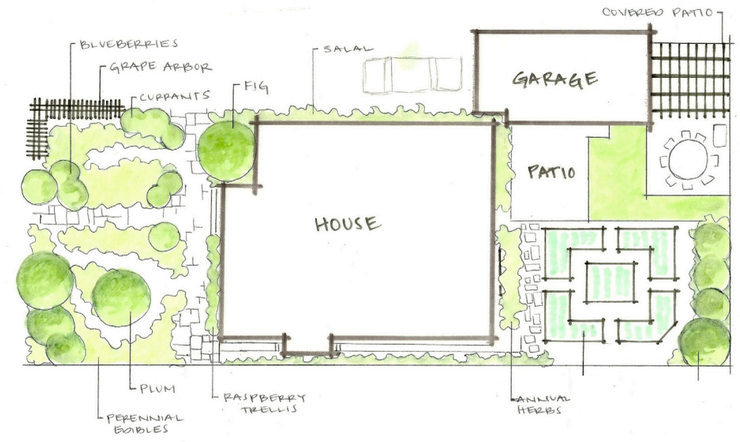
This South Seattle residence is home to an avid cook who sought to redesign his entire property to reflect and support his passion for food. Raised bed annual gardens, beehives, perennial plantings, and mushroom habitat have transformed the yard into an edible, functional outdoor living space. The landscape produces a wide range of herbs, berries, vegetables, medicinal crops, and pollinator flowers. Fruit trees, patios, stone walkways, trellises, and covered seating areas provide structure for the garden and combine to create comfortable spaces for entertaining throughout the year.

The front yard is home to dozens of perennial edible plants. Beautifully combined, the variety of shapes and colors provide year-round interest and create a welcoming entryway to the home. The shady sides of the property are planted with Pacific Northwest natives, and focus on edibles such as salal, evergreen huckleberry, and wild ginger. The backyard serves as the primary gathering space, containing two seating areas, large annual garden beds, and a wood-fired oven.

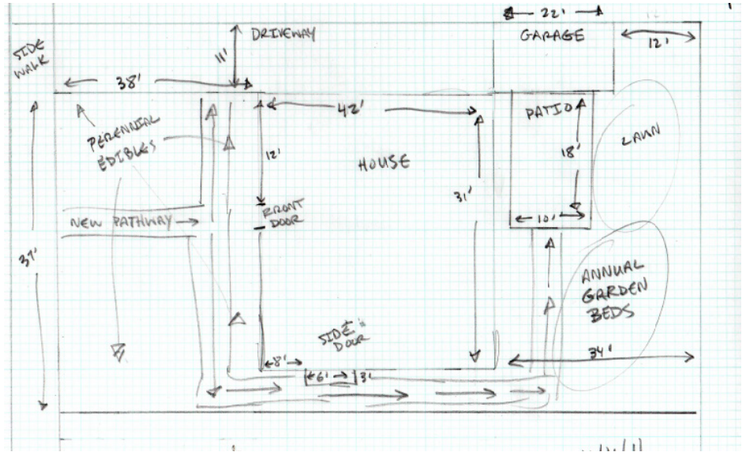
FINAL COMPUTER RENDERING



HAND DRAWN PLAN



ON-SITE CONCEPT SKETCH



Community Garden **Library Box**

This Little Free Library Box was designed in 2014 as an entry into Libraries on the Loose, a competition organized by Architects Without Borders. The competition rules required that the box be constructed with materials costing $150 or less and be easily reproducible.

Designed for community gardens, this little free library utilizes salvaged and inexpensive materials to create a space for sharing agricultural resources and information. The library is curated by the community, and in addition to its function as a book swap, serves as a place to sort, store, exchange, and plant garden seeds.

An attached trellis allows vining crops to provide shade for the seeds and gardeners; a built-in, retractable work surface creates space for seed sorting; the insulated enclosure provides weather resistant seed storage; and a small garden bed at the base serves as a varietal test plot.

Usable exterior surfaces include chalkboard walls and a cork message board. The small attic space provides a customizable area for tool storage, egg exchanges, mason bees or other community-specific needs.

NORTH FACADE

A reclaimed window opens to reveal book and seed storage as well as an attic flex space; below the window a reclaimed cutting board pulls out to create a work surface for seed sorting and browsing.

EAST FACADE

Flex surface chalkboard and cork board for community messaging; trellis provides growing structure for vining crops from the seed library.

WEST FACADE

Flex surface chalkboard lets people note which seeds they have deposited into the seed library.

SOUTH FACADE

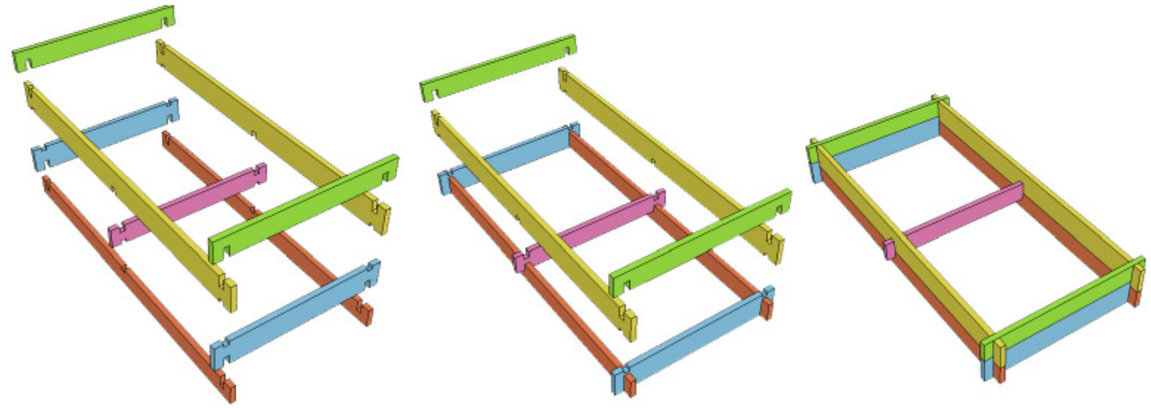
Provides an insulated enclosure from prominent sun and wind exposure; flex surface chalkboard; gutter for rooftop drainage releases to rain chain and into a demonstration garden below.

Raised Bed **Kit**

Designed in 2012, this raised garden bed kit was created to serve as a cost-effective, simple solution for the home gardener. The bed is 4'x8' and constructed from cedar or fir lumber. The primary design objective was to create a kit that could be assembled without the use of any tools. The corner connections and center cross bracing are cut so that the pieces can be quickly stacked together, placed in a permanent or temporary location and filled with soil. Inspired by Lincoln Logs, the objective was to provide a tool-less bed that could be assembled by anyone, no construction experience necessary.

The design process involved rapid prototyping and numerous field tests which resulted in significant adjustments to the final product. Sold throughout the Seattle region for several years, the kit was discontinued in 2014 due to logistical challenges involving inventory space, construction timelines and distribution. Many Raised Bed Kits remain in use.

Instructions



Step 5: Add 4' long 2"x 6" boards, notch facing up

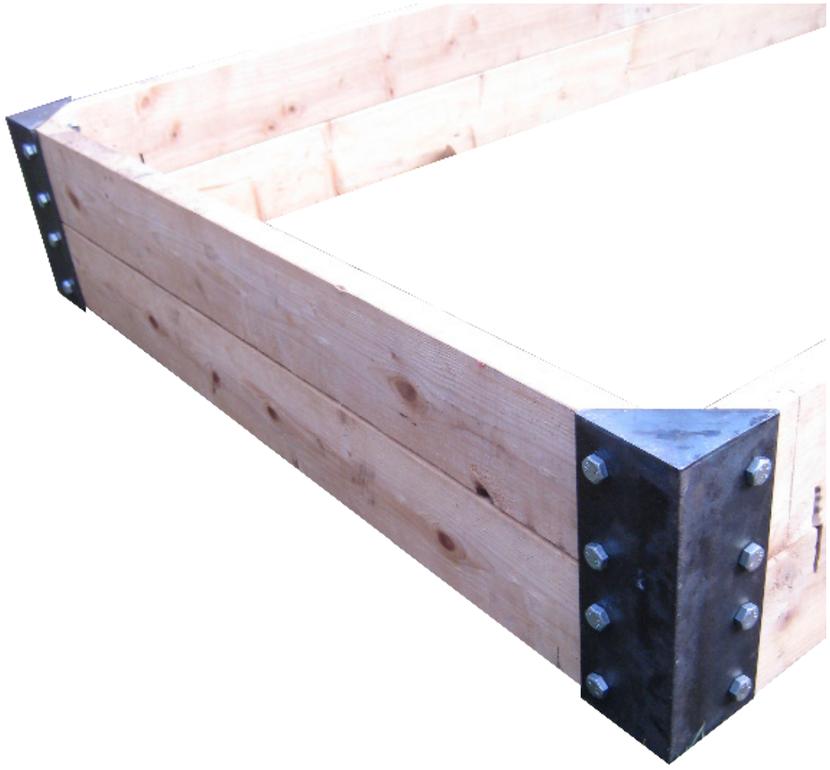
Step 4: Add 8' long 2"x 8" boards, deep notch facing up

Step 3: Add 4' long 2"x 6" board notched on top and bottom to center, deep notch facing up

Step 2: Add 4' long 2"x 8" boards, deep notch facing down

Step 1: Lay down 8' long 2"x 6" boards, notch facing up

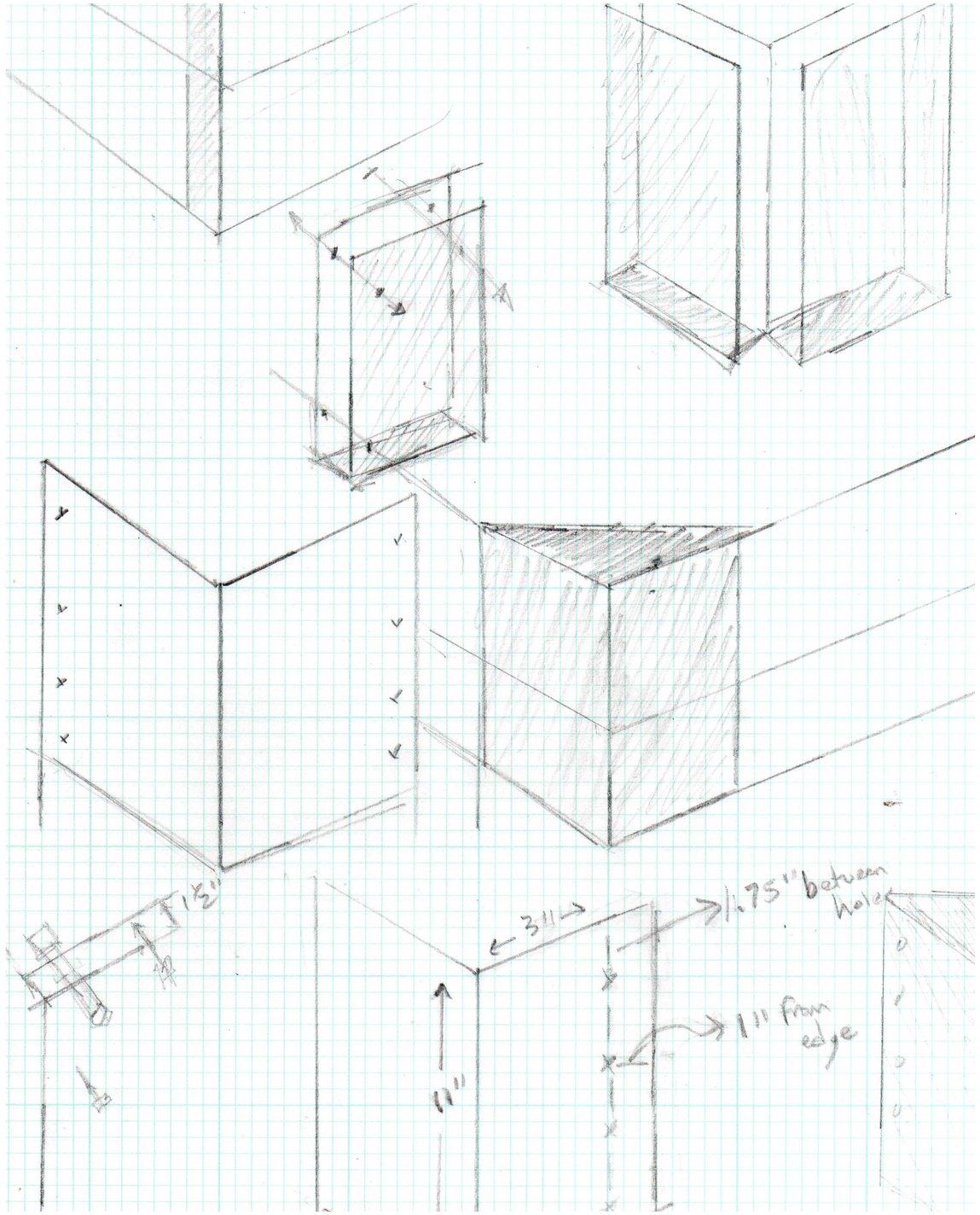
Raised Bed **Corner Bracket**



These steel corner brackets were designed to provide a simple solution to raised garden bed construction. The brackets are constructed from 1/4” steel plate and attach to 2”x6” lumber with a series of stainless steel 1/2” bolts or lag screws.

The solid makeup of the bracket eliminates the need for corner posts. If purchased with pre-cut and pre-drilled lumber, a new raised bed can be quickly assembled in a matter of minutes with only a ratchet set. The corner brackets can also be purchased independently and installed with any 2”x6” lumber, creating a garden bed of any length and width.

After much experimentation and product testing, these steel brackets were made in a limited batch. Although the heft of the 1/4” was part of the product’s visual and structural appeal, the heavy weight of the final pieces make shipping expensive and technically challenging.



Seattle Urban Farm Company **Logo**

When developing the business plan and brand identity for Seattle Urban Farm Company, the creation of a logo was one of the first items on the agenda. I wanted to create a rectangular logo that included the company name. Inspired by old-time farm equipment and country store signs, the logo was intended to inspire confidence in the consumer by harkening back to days past when brands were seen as trustworthy entities.

The font, Captain Howdy, was selected for its unique appearance and western style which fits with the old, rural attitude of the logo frame. Over the years, the logo has undergone a series of small but significant changes. The initial logo, a simple rectangle was given a finial, simple flourishes to suggest plant growth, and a small cityscape. The addition of the Seattle skyline helps balance the rustic feel of the font, indicating that it is a modern business with traditional values.

Over time the interior flourishes were eliminated, the cityscape increased in size, and the company name was expanded to fill the rectangular shape. These adjustments, while unnoticed by most casual observers, strengthen the image of the brand and create a more appealing logo.

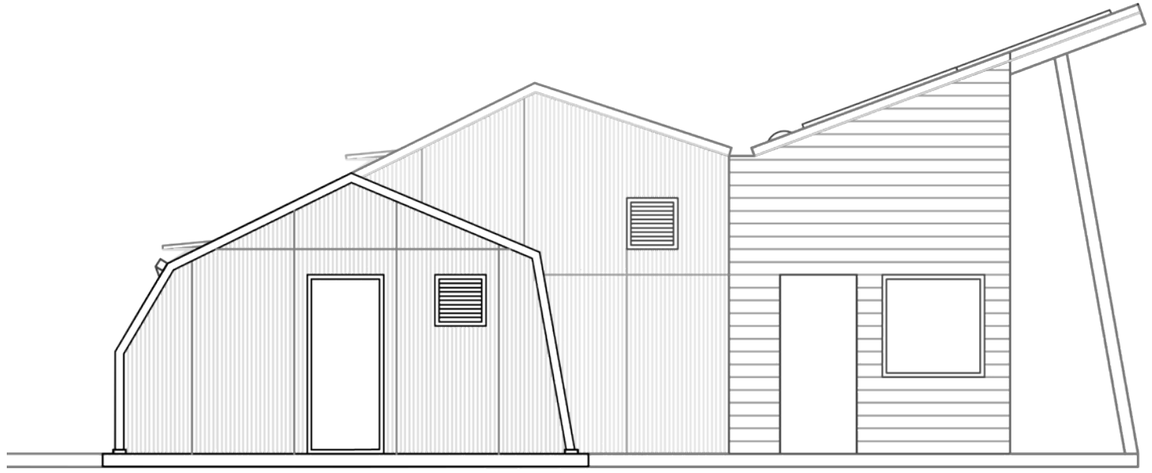
2014

2012

2009

2007

Parhelion **Ecological Greenhouse**



This greenhouse design received an Honorable Mention in the Big Green Greenhouse competition hosted by the International Living Future Institute in 2013.

The Parhelion (Sun Dog) Ecological Greenhouse balances advanced green infrastructure and traditional agricultural systems. The structures are designed for net zero energy and water consumption. It meets the standards of Living Building certification by creating water independence and relying on solar income for energy needs. The site incorporates a range of sustainable systems, including rainwater catchment and recycling; passive heating, cooling, and ventilation; grid-tied solar power; rolling high tunnels and geo-exchange temperature moderation.

The nine page design brief includes a site plan, floor plan, building elevations, material lists, water analysis, energy analysis, crop list, and a crop rotation plan.

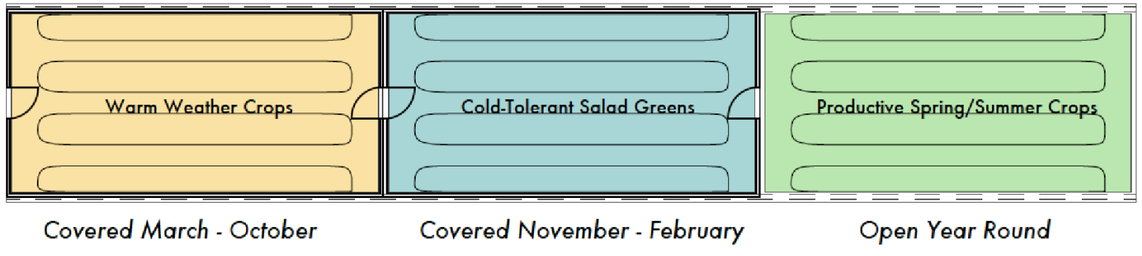
The food production is focused on three principal strategies:

1. Production of annual transplants for county-wide distribution enables food bank patrons and other community members to actively engage in local food production.

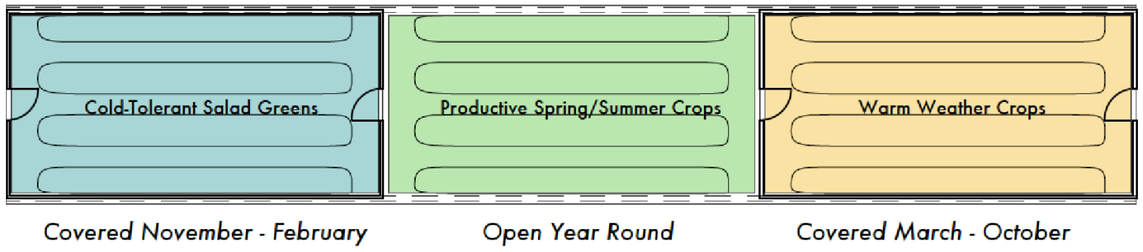
2. Heat-loving crops planted in the container and in-ground growing spaces provide a local source of foods that typically have a large carbon footprint in the Snohomish region.

3. The large in-ground production space with an unheated rolling field tunnel allows for intensive year-round harvests and organic soil management practices with minimal energy input.

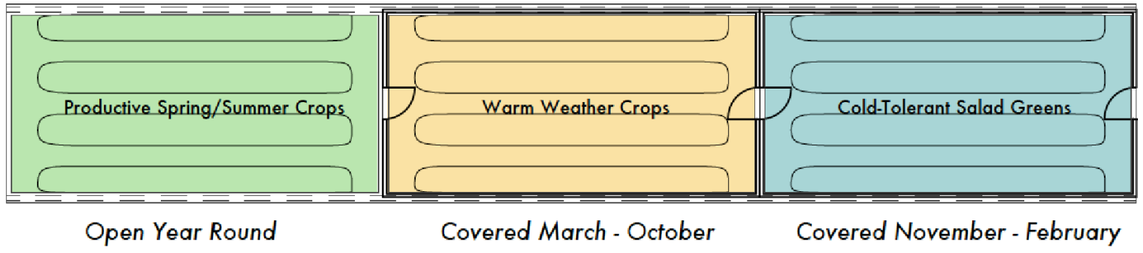
EXCERPT: Rolling High Tunnel Crop Rotation Plan



Year Two

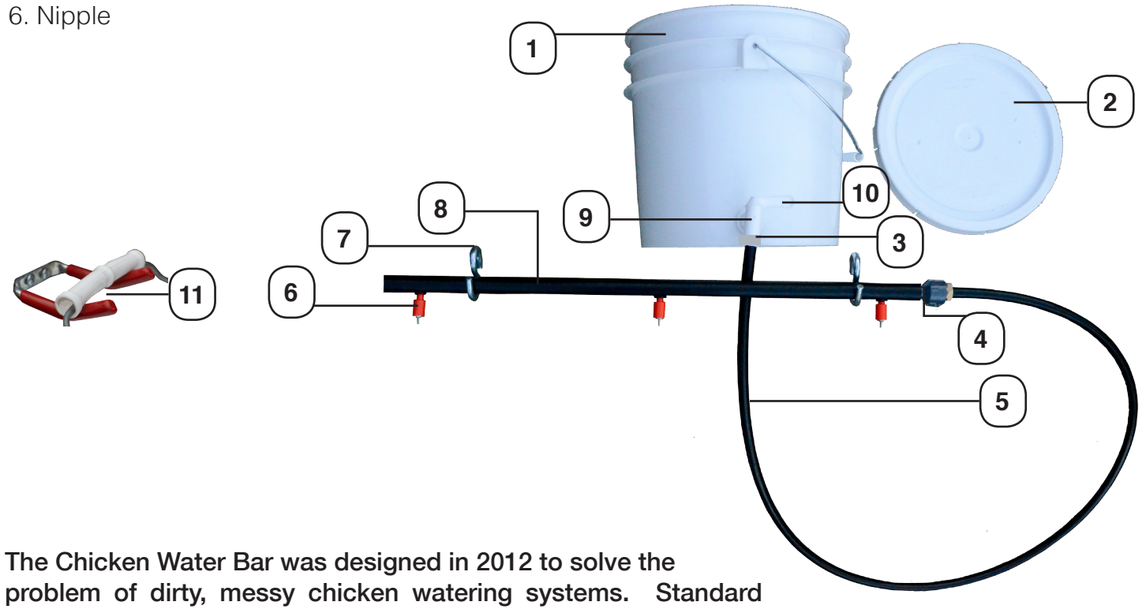


Year Three



Chicken **Water Bar**

1. Bucket
2. Lid
3. Hose Clamp
4. Barb
5. 3/8 Tubing
6. Nipple
7. S-Hook
8. Water Bar
9. Spigot
10. Valve
11. Hanging Bracket



The Chicken Water Bar was designed in 2012 to solve the problem of dirty, messy chicken watering systems. Standard chicken "waterers" regularly spill and become contaminated with chicken waste and dirt. Additionally, these standard units are located inside the coop, making access for refilling a daily chore. The Chicken Water Bar has a 3-gallon food-safe container that attaches to the outside of a chicken coop, allowing for long-term water storage and easy access. Birds receive water from pecking at the red nipples on the rigid bar which hangs inside the coop. The Chicken Water Bar is easy to install, easy to care for, and provide a cleaner, safer watering alternative for the small-scale livestock owner.

This project presented a number of design challenges. It was important that all of the materials were UV stable and food-safe. Concurrently, to ensure sales, the product needed a relatively low price point. It proved challenging to provide a functional, easy to use device for this market sector with the materials and suppliers available. It is my belief that this product would be more successful if parts were custom fabricated to meet its specifications. For the time being, further product development is on hold.

INSTRUCTIONS

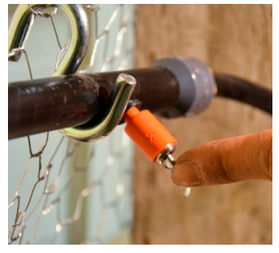
A

B

C

D

E



1. Find an easily accessible (and ideally shady) spot on the outside of your chicken coop to hang your water bucket **(1)**. Make sure that, once hung, the bucket will be slightly higher than the water bar **(8)**. Most people will want to hang the bucket directly on the coop using the included hanging bracket **(11) (photo A)**. If so,hold the bracket against the coop, mark the screw holes, drill 1/8" pilot holes, then attach the bracket with the 1 1/4"screws. You can also place the bucket on the roof of the coop, or set the bucket on a stand next to the coop (a few concrete blocks or a stack of bricks will work!)

2. Hang the water bar **(8)** inside the coop at the approximate head height of your chickens. For mature laying hens, approximately 18" high works well. Most people will want to use the included S-hooks **(7)** to hang the bar on the hardware cloth/chicken wire/aviary netting inside the coop **(photo B)**. Clip the S-hooks **(7)** onto the water bar **(8)** between the nipples and hang the bar on the coop. Rotate the tube so the nipples **(6)** stick out at a 45 degree angle from the wire **(photo B)**. Alternatively, attach the water bar **(8)** to exposed wood in the coop using the 1/2" clamps **(photo C)** and 3/4" screws..

3. Slide both hose clamps **(3) (photo D)** onto 3/8" tubing **(5)**. Run one end of the 3/8" tubing **(5)** into the coop and attach it to the barb **(4)** on the end of the water bar **(8)**. The tubing fits through most hardware cloth and poultry netting; if not, you can cut one strand of the wire to make a slightly larger hole using wire cutters. Tighten one hose clamp **(3)** onto the barb **(4)** with a flathead screwdriver.

4. Using scissors, cut the 3/8" tubing **(5)** so you have just enough to reach the spigot **(9)** on the bucket. It's OK if the tubing hangs below the water bar. Attach the tubing to the spigot **(9)**. Then tighten the 2nd hose clamp over the spigot **(9)**.

5. Fill the bucket **(1)** with water and cover with the lid. Set the valve **(10)** in the open position (to the left as you're facing it). Climb inside the coop and press in on each nipple **(6) (photo E)** until water drips out (this releases the air from the tubing). You're done!

TOOLS

Required:

- Scissors
- Flathead screwdriver
- Wire cutters

If using included hook to hang bucket:
Drill, 3/32" or 1/8" drill bit, phillips screwdriver