

## Love & Carrots

Garden Design, Installation, & Coaching





## Gardening in Challenging Spaces

Garden Design, Installation, & Coaching



## Outline

- Love & Carrots
- Garden Set Up
  - Sun & Site
    Assessment
  - Soil
  - Water
- Sub-optimal conditions
  - Shady Gardens
  - Small Gardens



## What We Do

#### Design, Installation, Maintenance, Coaching -- Since 2011

#### Design & Installation

o Over 1000 gardens

#### Full Service Garden Care

o ~150 Gardens

#### Garden Coaching

Curriculum-based
 bi-weekly Lessons



#### Local, Woman Owned & Run, Award Winning



## Garden Set Up

Assess your space and optimize garden conditions.

- 1. Sunlight: Maximize Sunlight Hours
- 2. Soil & Nutrients: Optimize your garden set up
- 3. Water: Install Irrigation
- 4. Crops: Guidance & Creativity!
  - Shady Spaces
  - Small Spaces
  - Trouble Shooting



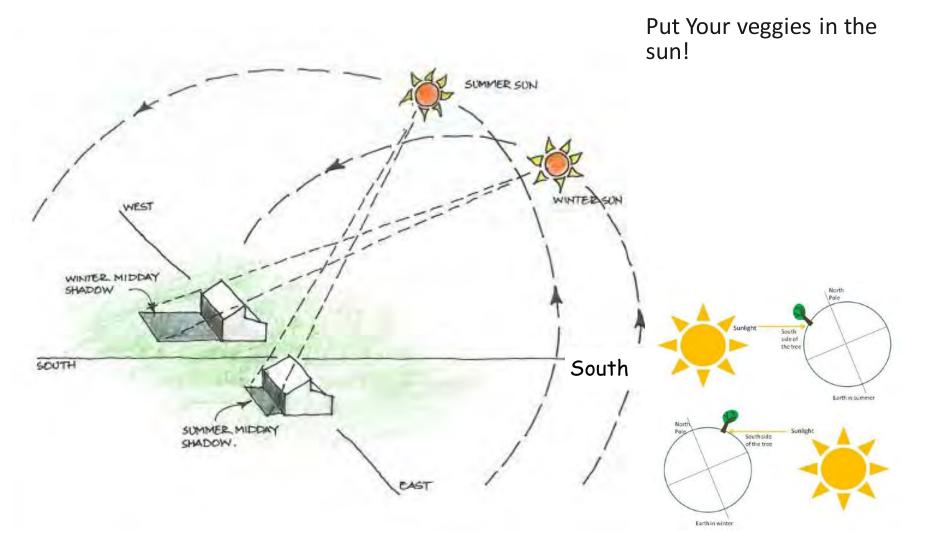
## Garden Set Up

Assess your space and optimize garden conditions.

- 1. Sunlight: Maximize Sunlight Hours
- 2. Soil & Nutrients: Optimize your garden set up
- 3. Water: Install Irrigation
- 4. Crops: Guidance & Creativity!
  - Shady Spaces
  - Small Spaces
  - Trouble Shooting



### Start with a Site Assessment



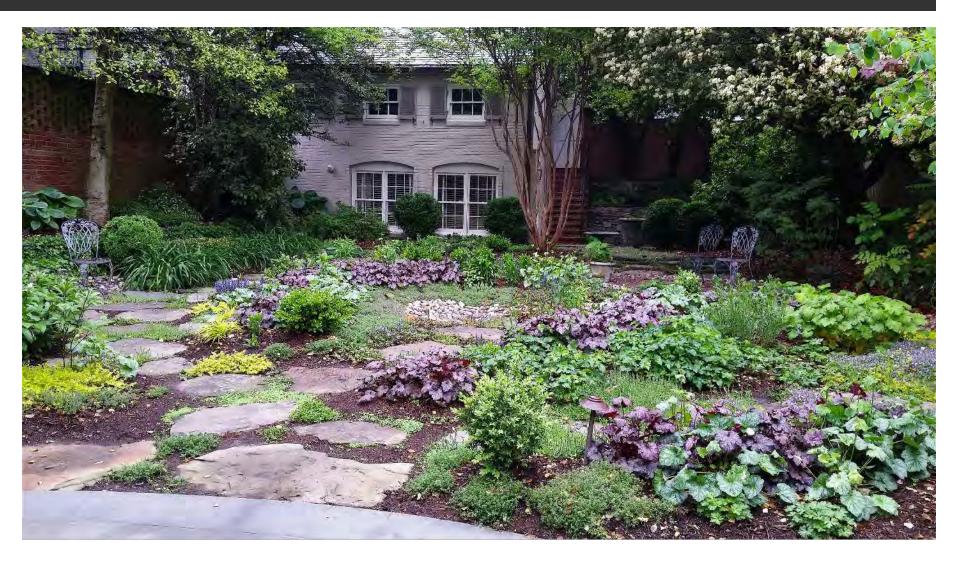
### Start with a Site Assessment



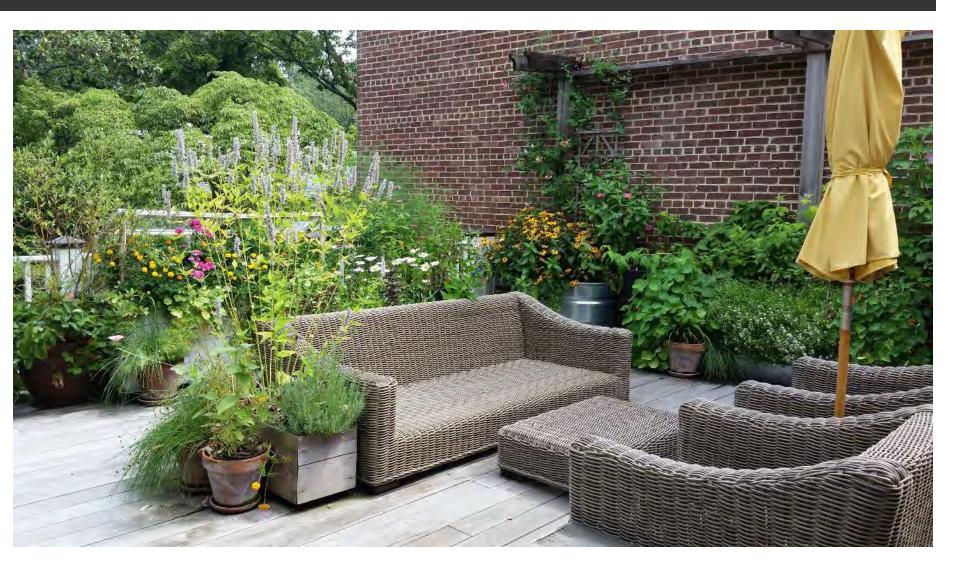
### Start with a Site Assessment



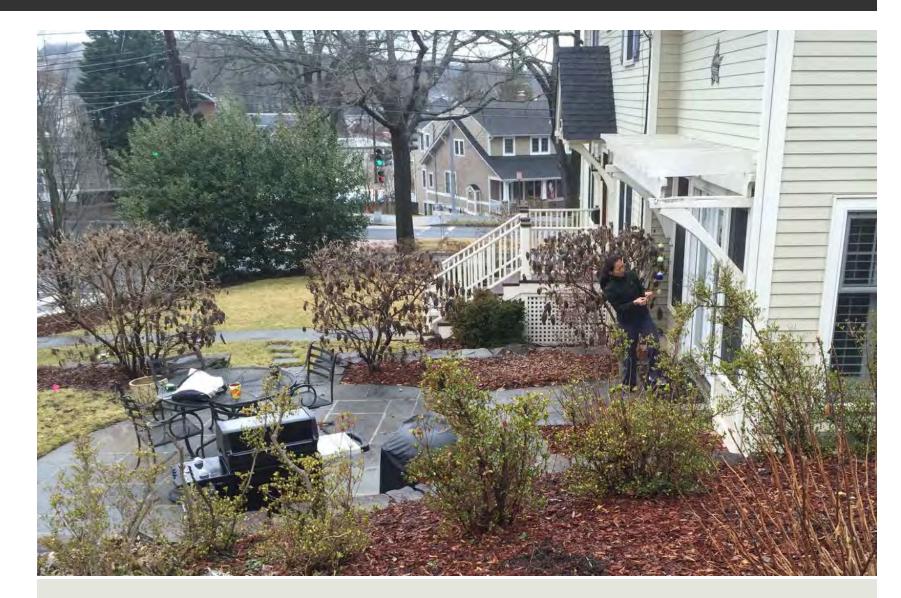
Solar Pathfinder

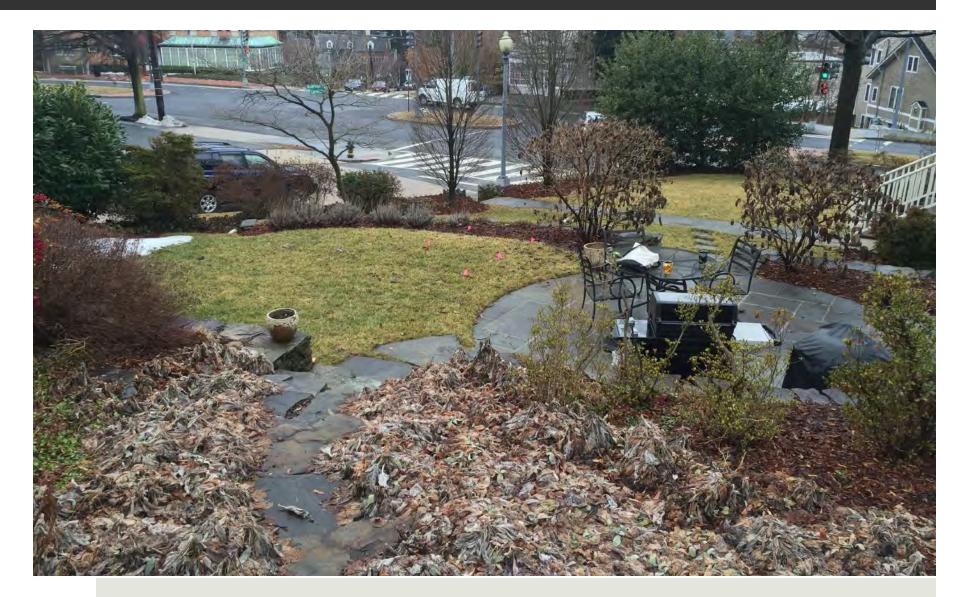














## Garden Set Up

Assess your space and optimize garden conditions.

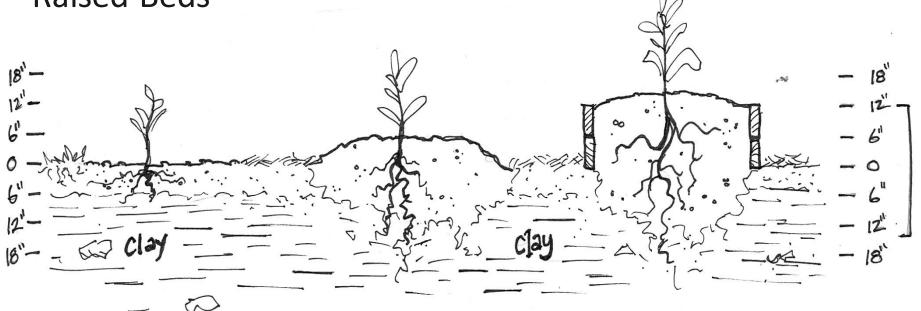
- 1. Sunlight: Maximize Sunlight Hours
- 2. Soil & Nutrients: Optimize your garden set up
- 3. Water: Install Irrigation
- 4. Crops: Guidance & Creativity!
  - Shady Spaces
  - Small Spaces
  - Trouble Shooting



#### Compost. Compost. Compost



#### **Raised Beds**



Improve Soil, Drainage, and Space Efficiency



#### Improve Soil, Drainage, and Space Efficiency





Improve Soil, Drainage, and Space Efficiency

#### Use BIG Pots: Avoid getting root bound







**Use BIG Pots:** 

Avoid getting root bound



## Garden Set Up

PLAN: Use what you have to optimize garden conditions

- 1. Sunlight: Maximize Sunlight Hours
- 2. Soil & Nutrients: Modify your garden Set Up
- 3. Water: Install Irrigation
- 4. Crops: Guidance&Creativity!
  - Shady Spaces
  - Small Spaces
  - Trouble Shooting

# Set Up Irrigation

Irrigation is a great investment

- Timer + mainline and driplines for beds
  - Consistent watering
  - Easily adjustable
  - Flexibility to travel
  - More efficient, less water waste
  - Waters at the root line for best uptake by plants





## Watering

- Water regularly
  - In spring, every 2-3 days
  - In summer, every day (possibly 2x per day if extra dry)
- Watering in the morning is best
  - Evening is 2<sup>nd</sup> best
- Water at the root line, not the foliage
- Underwatering can lead to stressed plants
  - Early fruiting
  - Disease
  - Bolting
  - Plant death



## Garden Set Up

PLAN: Use what you have to optimize garden conditions

- 1. Sunlight: Maximize Sunlight Hours
- 2. Soil & Nutrients: Modify your garden Set Up
- 3. Water: Install Irrigation
- 4. Crops: Guidance & Creativity!
  - Shady Spaces
  - Small Spaces
  - Trouble Shooting

### Tailor Your Crop List: Continual harvest is best

Vegetables that mature SLOWLY and have LOW yield per square foot are not ideal for small space growing:

#### Crops to Avoid:

- Carrots
- Beets
- Onions
- Potatoes
- Squash
- Okra
- Corn



### Best crops for continual harvest:

- Tomatoes
  - o Cherry tomatoes
  - Look for "determinate" tomato varieties – they are shorter bush-types and don't sprawl as much
- Most herbs
  - Keep perennial herbs in pots (mint, sage, rosemary, oregano, etc)
  - o Basil, cilantro, parsley, dill
- Greens
  - o Swiss Chard
  - o Kale
  - o Collards
  - o Asian Greens
  - o Salad Mixes

- Peppers
  - o Shishito
  - o Lunchbox
  - o Lipstick
- Eggplant
  - o Asian varieties
  - o Patio baby
  - Cucumbers
  - o Diva or pickling varieties
- Beans
  - o Climbing or bush varieties



### Progressive Thinning

- Thinning promotes strong growth
- Thin every 2 weeks so that plants are "touching, not crowding"
- Enjoy a microgreen harvest every 2 weeks!
- Crops to thin: salad greens, root crops



### Thinning





### Cut and Come-Again Greens

Get multiple harvests - cut just above the point of growth for salad greens

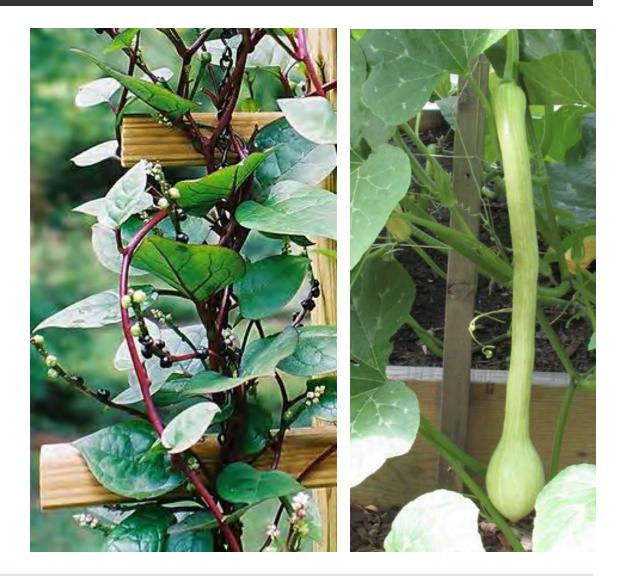


#### Grow vertically

- Smaller Tomatoes
  - o Determinate varieties
- Climbing Cucurbits
  - o Cucumbers
  - o Tromboncino squash

#### Pole Beans:

- o Scarlett Runner
- o Blue Lake
- Snap Peas
  - o Sugar Anne
- Malabar Spinach





#### Undersowing

- Pair light feeders with heavy feeders
- Layer quick growing crops under young slow-growing crops
  - Baby greens under kale
  - Radishes in front of head lettuce or cabbage
  - □ Cilantro under Peppers
- Seed new crops under fading old crops, before they are pulled
  - Cucumbers under Peas
  - Carrots under Tomatoes
  - Lettuce
    - under onions





#### Small Spaces

#### Maximize Space Efficiency

3 or 4' wide Raised Beds

Narrow Paths: 12" to 18" wide





Urban Farm Design, Installation, & Coaching



### Shady Spaces - Tailor your crop list

- >8 hours.....
- Any crops that fit!
- 6 to 8 hours...... Some fruit, herbs, greens
- 4 to 6 hours......
- some non, neros, greens
- Focus on certain herbs and greens

< 4 hours .....</p>

Get creative





#### 5-6 Hours of Sun

- Cherry Tomatoes
  (only)
  - o Supersweet 100
  - o Sungolds
- Herbs
  - o Oregano
  - o Mint (in pots only!)
  - o Rosemary
  - o Thyme
  - o Chives
  - o Basil
  - o Cilantro
  - o Parsley

- Greens
  - o Swiss Chard
  - o Kale
  - o Collards
  - o Asian Greens

#### Others

- Scallions
- Tromboncino
  Squash
- Smaller-fruiting
  Peppers



#### 4-5 Hours of Sun

- Herbs
  - o Chives
  - o Basil
  - o Cilantro
  - o Parsley

#### Greens

- o Salad/Asian Greens
- o Swiss Chard
- o Kale
- o Collards
- Others
  - Scallions

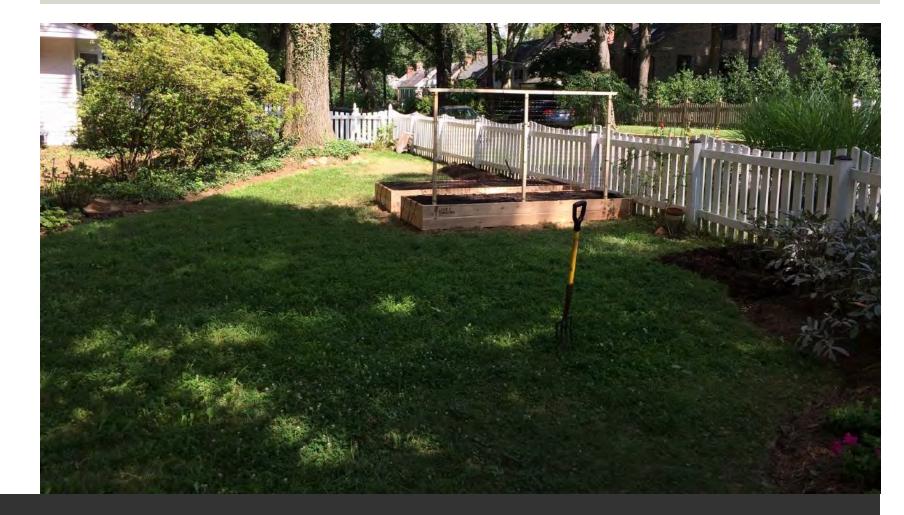
  - Pea shoots



#### 3-4 Hours of Sun

- Mustard greens, Chard, Kale
- Baby lettuces
- Arugula
- Chives, Basil, Parsley
- Scallions
- Expect that your crops will grow slower and will be smaller
- Occasionally you can grow more plants in the same area to compensate for slower growth and smaller maturity size
- Try to maximize early spring growing time before trees leaf out





### Season Extension

Garden Design, Installation, & Coaching



### Season Extension

- Take advantage of deciduous trees dropping leaves for extra sun
- Use row covers to protect crops from frost
- Plant strategically to ensure late fall harvests





This location gets 8 hours of sunlight from October to late April

## Season Extension

- Spring plantings
- Don't wait until May!
  - Peas
  - Arugula
  - 🛛 Spinach
  - Lettuces
  - Scallions
  - 🛛 Turnips, radish

- Fall plantings
  - Plan for fall/winter crops in late summer
    - 🛛 Kale
    - □ Spinach (overwinter)
    - Scallions, leeks
    - 🗌 Turnips, Radish
    - Some lettuces, winter-hardy greens (claytonia, mache)





# Small Spaces

Smart succession planting makes the most of your growing space:

- Spring Carrots into Fall Beets, Spring Beets into Fall Carrots
  - Low growing plants, plant on the South side of the garden beds. Space requirements are also similar.
- Spring Greens into Tomatoes
  - Greens produce a quick crop, timed well with tomato planting time.
- Spring Brassicas into Summer Bush Beans, Fall Carrots
  - Seed beans and carrots any time in early Summer, as soon as your brassicas are finished
- Peas into Cucumbers
  - Both grow on a trellis. Peas will finish in the late spring while cucumbers are just starting in early summer.



Garden Design, Installation, & Coaching



#### Slugs

#### **Effective Slug Control Methods**

- Beer traps
- Slug pellets (iron phosphate)
- Dry it out avoid overwatering

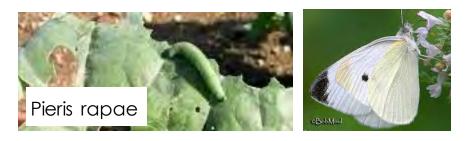
#### Less Effective Methods

- Copper Strips
- Coffee Grounds
- Cornstarch
- Eggshells or other "rough surfaces"



Slug damage: jagged holes on foliage

#### Cabbage Worms / Loopers / Moths IPM







- Agricultural Fabric (row covers)
- Hand-picking!
- Bacillus thuringiensis (Bt)
  - Toxic to larva when ingested only affects leaf-feeding insects
  - Safe for adult insects
  - Harmless to humans
  - Not to be overused

Bt Application: Timing and location are key

#### Aphids

- You may notice curling leaves
- Can be grey, black, white, orange
- Tend to attack newest growth
- Control by smushing off by hand, spraying with neem oil
- Spray off with hard jet of water
- Remove heavily infested plants



#### Recap

- □ For best success, take care when siting your garden consider the conditions year-round sunlight is the number one priority
- Optimize your soil by amending or installing raised beds
- Water consistently and at the soil line, install irrigation if possible
- For small spaces: maximize with crop planning high yield crops are best
- For shady spaces: choose crops that will tolerate low-light conditions, plant more, and prioritize smaller-fruiting varieties
- Identify North in your garden to avoid shading out crops within a bed, and plant strategically
- Extend your season by planting in early spring and planning for the fall

### Happy Gardening!



