

# Watering my garden with Linux....Eventually

Tim Laurence  
July 9th 2018



# Front Yard





# Second Floor





# Back Porch





# Vegetable Garden





# Herb Garden





# 2010

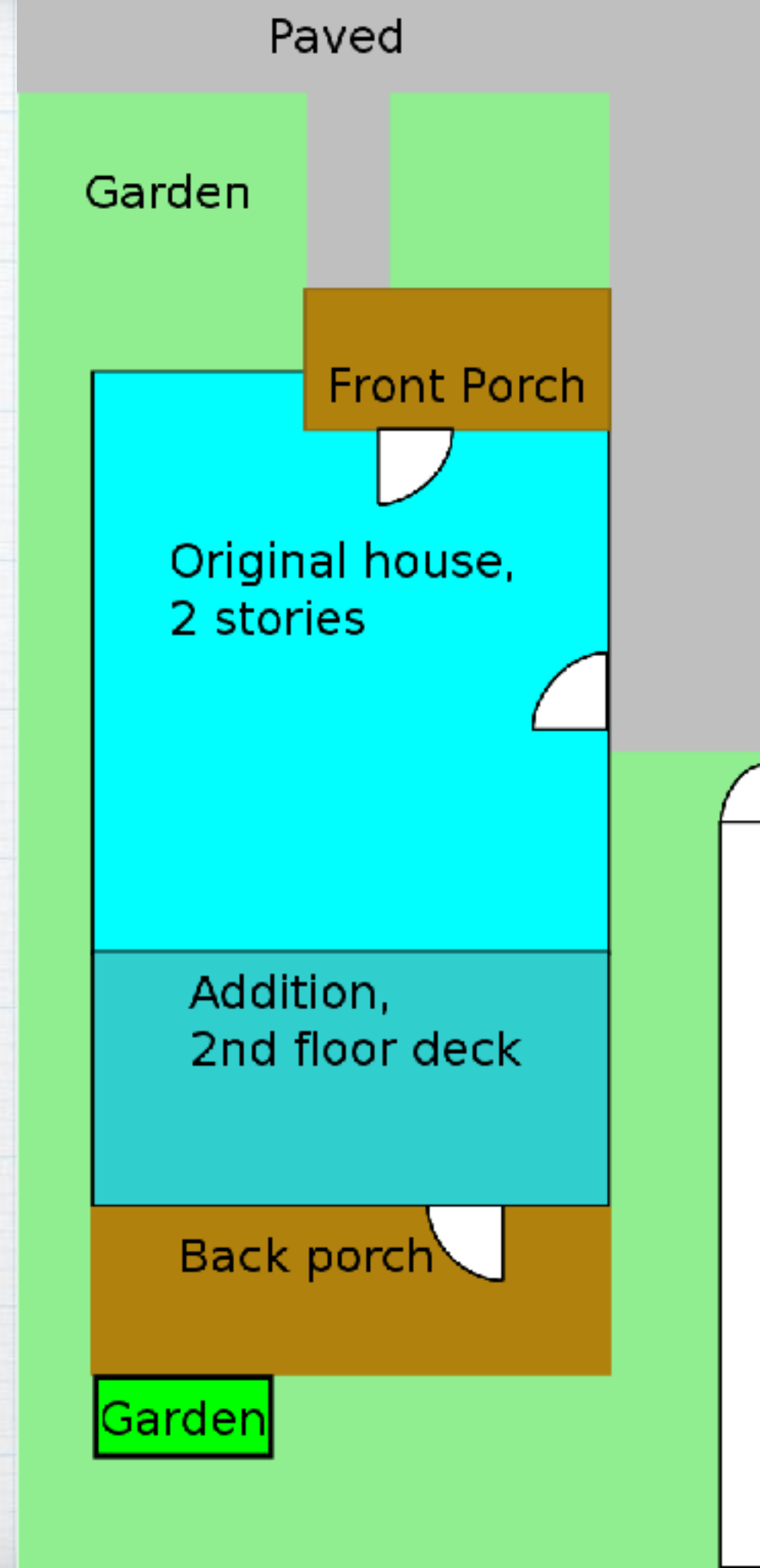
- \* We bought a house
- \* Oh \$%#!, we bought a house
- \* Buying tools!

2010





2010





# 2011

- \* Use more rain water
- \* Bought rain barrel





# 2011

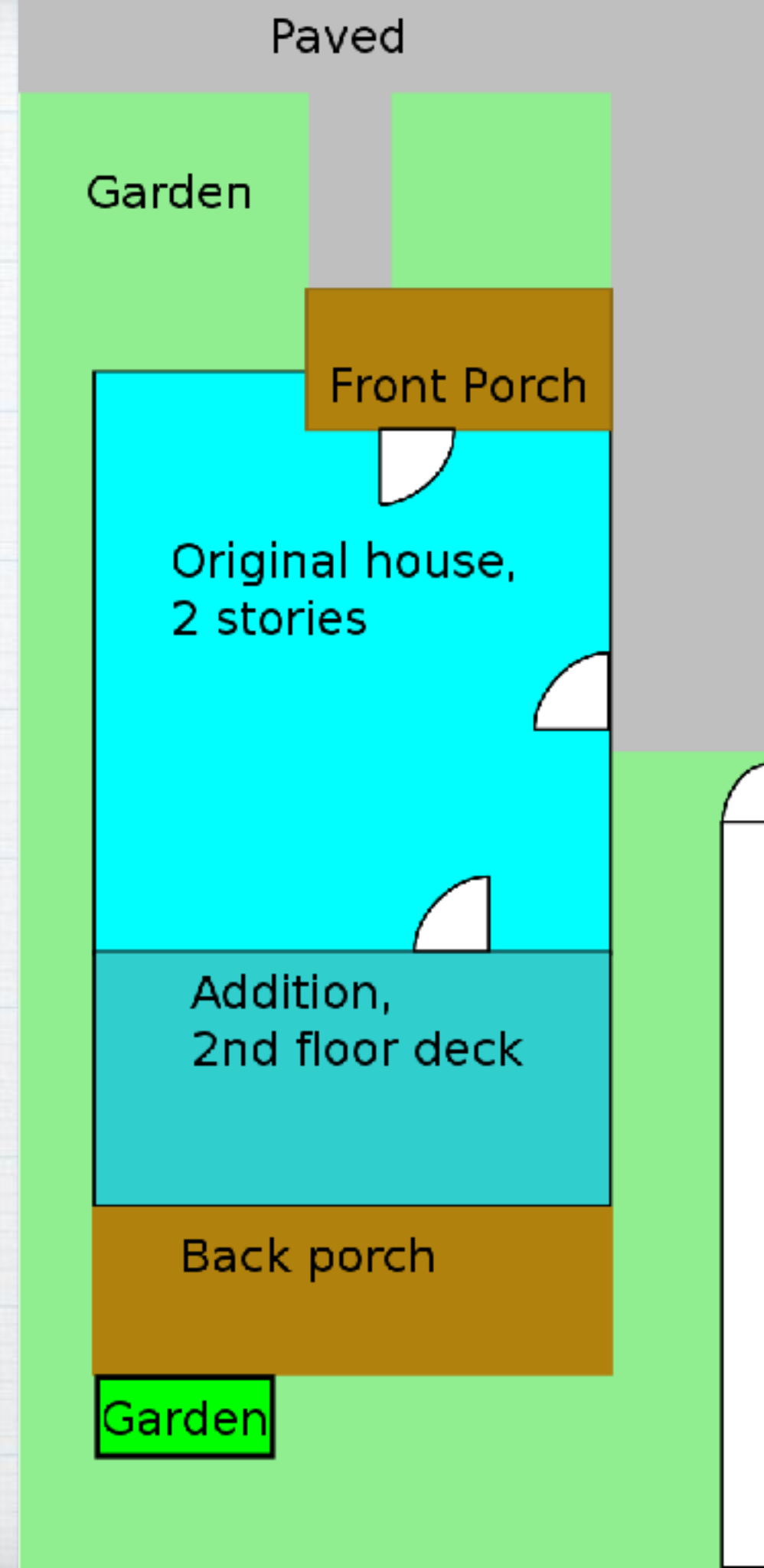
- \* Use more rain water
- \* Bought rain barrel
- \* Got one free





# 2011

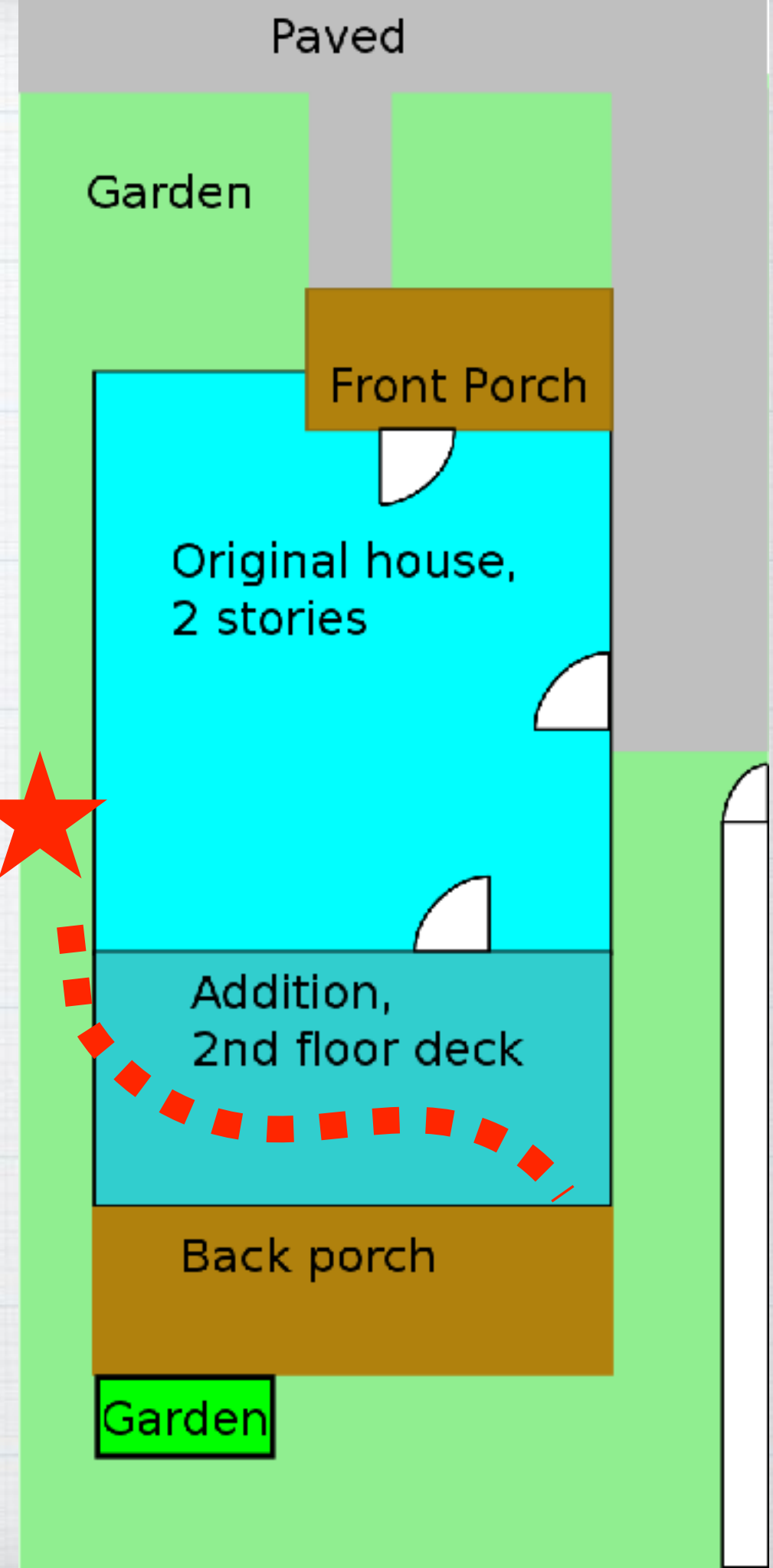
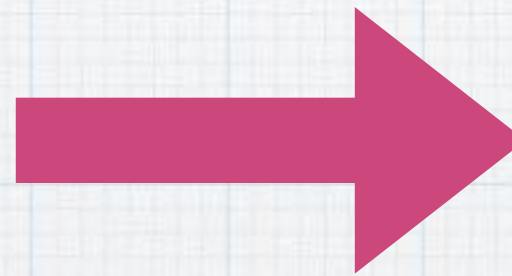
Where to put them?





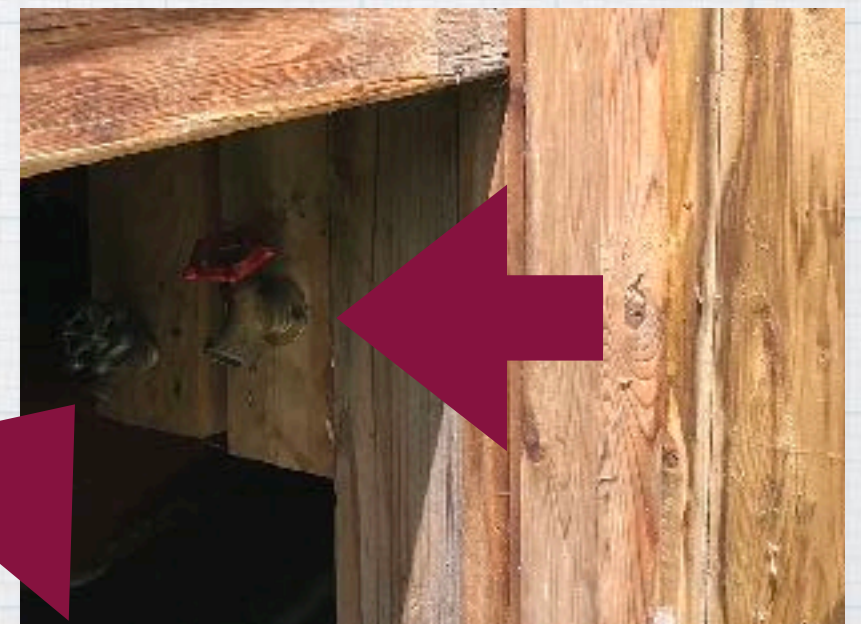
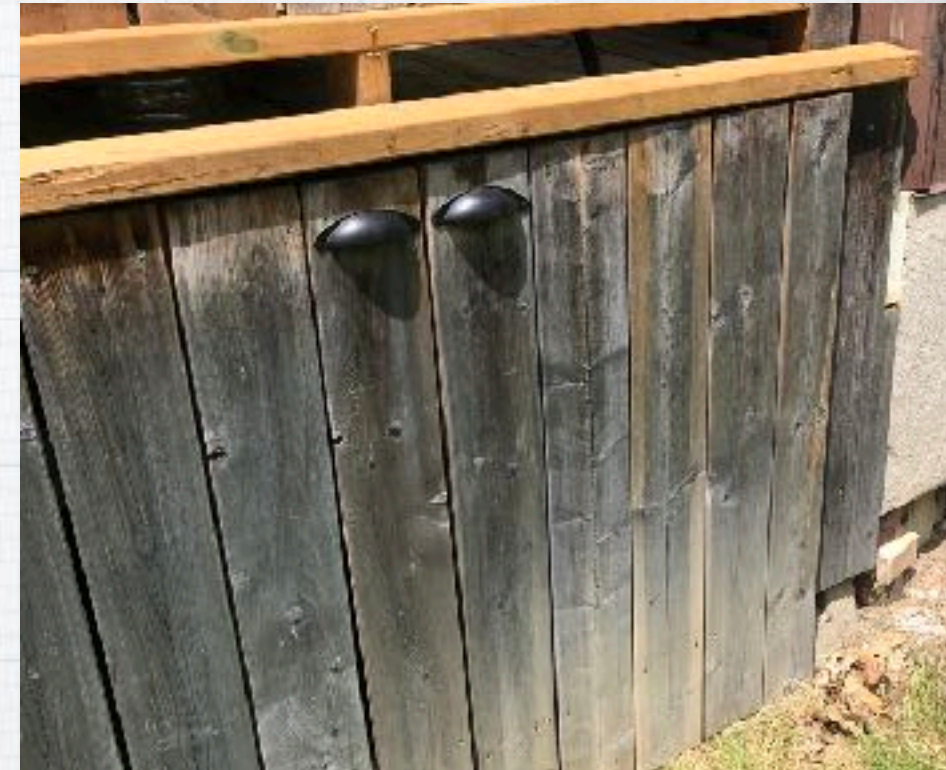
# 2011

Where to put them?





# 2011





# 2011

**We ran out of water!**





Paved

Garden

Front Porch

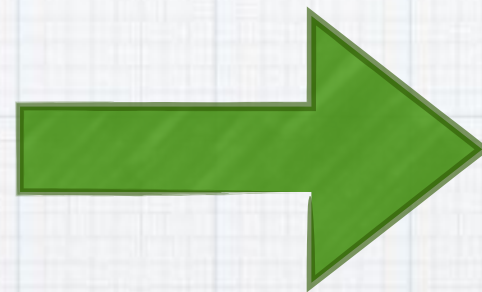
Original house,  
2 stories

Addition,  
2nd floor deck

Back porch

Garden

2011



Paved

Garden

Front Porch

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Garden



# 2012

## MOR WADAR!





# 2012

## MOR Barrels





# 2012

\$cat \*.barrel | garden\_hose






# 2012

## Where to get them

Brubacher Drums, Arthur Street S



Brubacher Drums

5.0 ★★★★★ · 3 reviews

Barrel Supplier


Directions


SAVE


NEARBY


SEND TO YOUR PHONE

SHARE

 855 Arthur St S, Elmira, ON N3B 2Z2

 brubacherdrums.ca

 (519) 664-2958



Map data ©2018 Google Canada Terms 5 km



# 2012

He' He', he said  
bung hole

That is a 3/4" pipe thread





# 2012

Better option





# 2012

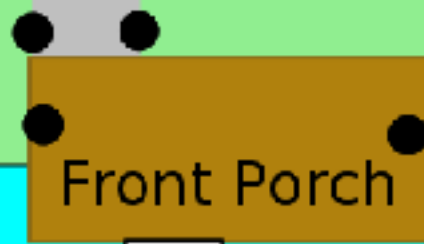
- \* Lots of carrying water around
- \* About minute to fill each
- \* About 10-15 buckets per watering
- \* Took up to 20-30 minutes





Paved

Garden



Original house,  
2 stories

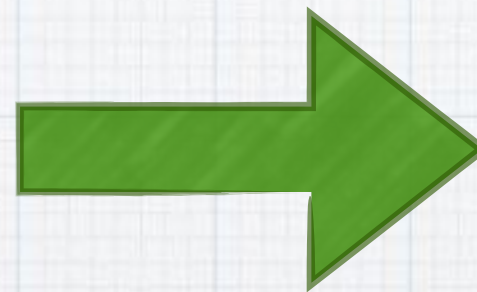
Addition,  
2nd floor deck

Back porch

Garden

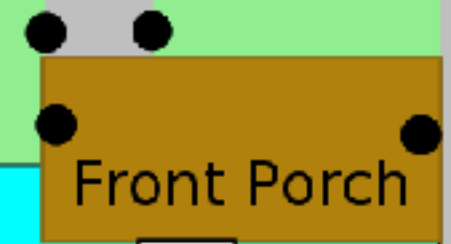
Garden

2012



Paved

Garden



Original house,  
2 stories

Addition,  
2nd floor deck

Back porch

Garden

Garden



# 2013

## Added a pump





# 2013

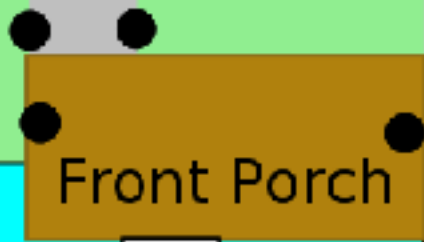
Added a timer





Paved

Garden



Original house,  
2 stories

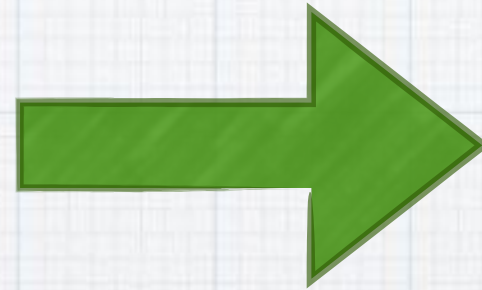
Addition,  
2nd floor deck

Back porch

Garden

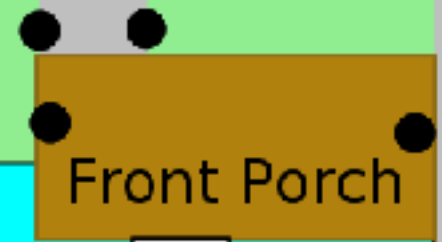
Garden

2013



Paved

Garden



Original house,  
2 stories

Addition,  
2nd floor deck

Back porch

Garden

Garden





# 2014

- \* No pictures
- \* Timer broke
- \* Ran branch of hose to second floor



Paved

Garden

Front Porch

Original house,  
2 stories

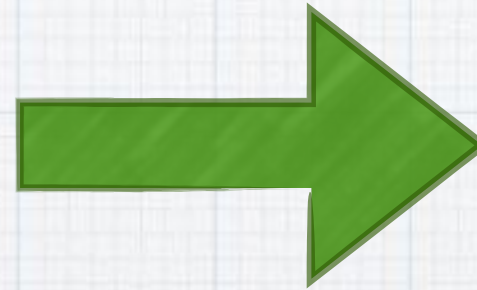
Addition,  
2nd floor deck

Back porch

Garden

Garden

2014



Paved

Garden

Front Porch

Original house,  
2 stories

Addition,  
2nd floor deck

Back porch

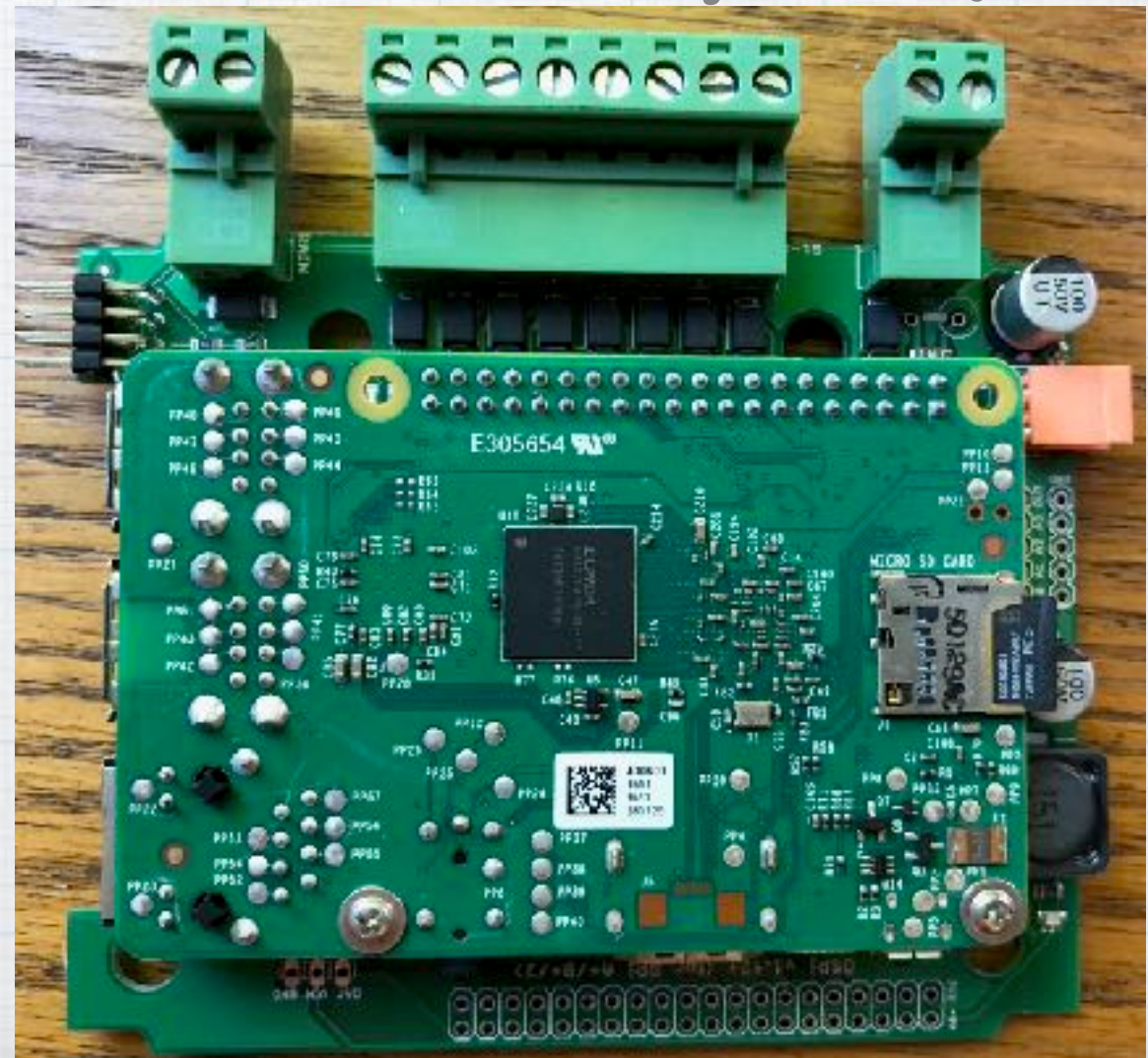
Garden

Garden



# 2015

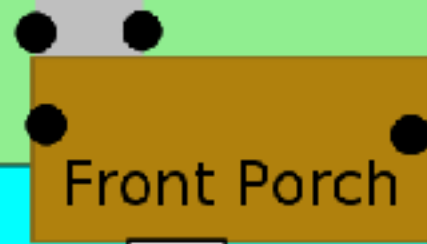
- \* Found out garden hoses don't hold up to continuous pressure.
- \* Bought an OpenSprinkler and a Raspberry Pi
- \* Drew up plans
- \* Did nothing else
- \* :(



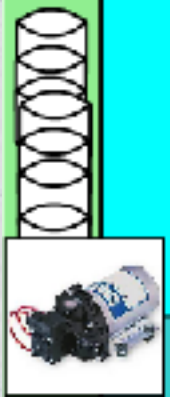


Paved

Garden



Original house,  
2 stories



⊗ Addition,  
2nd floor deck



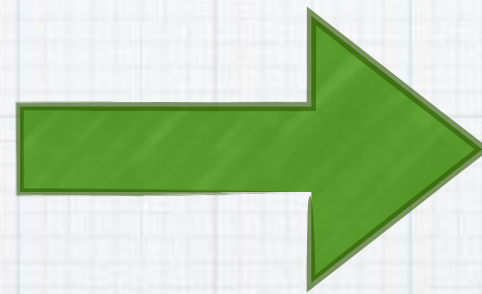
Back porch



Garden

Garden

2015



Paved

Garden



Original house,  
2 stories



⊗ Addition,  
2nd floor deck



Back porch



Garden

Garden



# 2016

- \* Switched to proper water lines
- \* Drew up more plans
- \* Did nothing else
- \* :(



Paved

Garden

Front Porch

Original house,  
2 stories

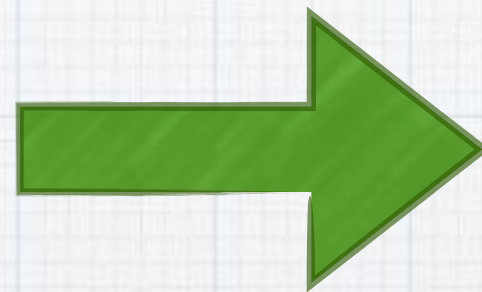
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Back porch

Garden

Garden

2016



Paved

Garden

Front Porch

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Back porch

Garden

Garden



# 2017

- \* Added waterline to front of the house
- \* Moved back yard faucet to better spot
- \* Drew up plans





Paved

Garden

Front Porch

Original house,  
2 stories

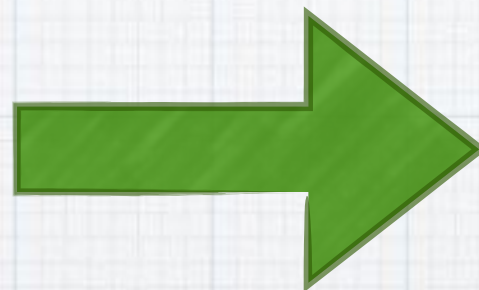
Addition,  
2nd floor deck

Back porch

Garden

Garden

2017



Paved

Garden

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Back porch

Garden

Garden



# 2018

- \* Bought valves and wire
- \* Added valve for second floor
- \* Added valve for vegetable garden
- \* Added valve for back porch potted plants
- \* After this, adding valve for side garden



Paved

Garden



Original house,  
2 stories



Addition,  
2nd floor deck



Back porch

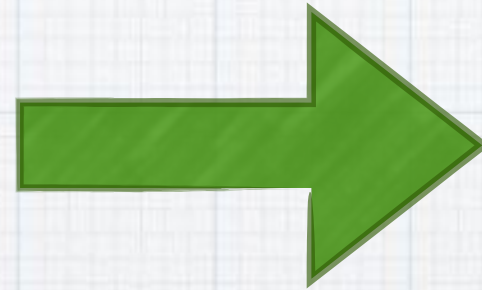


Garden

Garden



# 2018

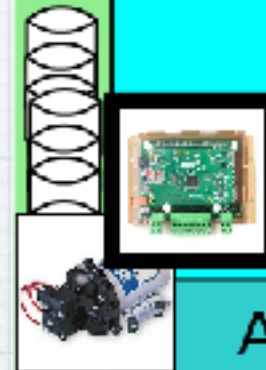


Paved

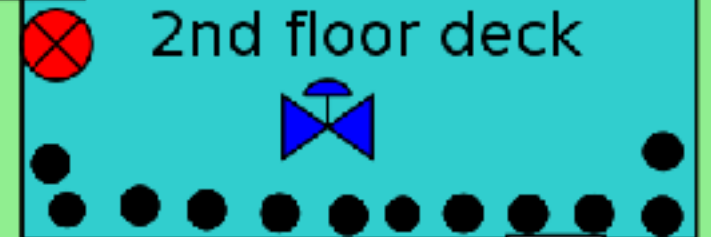
Garden



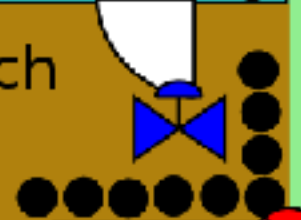
Original house,  
2 stories



Addition,  
2nd floor deck



Back porch



Garden

Garden





# Why?

- \* Use rainwater
- \* Tax break
- \* Less effort
- \* More regular watering
- \* Weather-responsive watering
- \* Different watering for each zone
- \* Fun to do
- \* Makes my wife's life easier



# What worked well

- \* Spend money on a pump! It was a game changer.





# What worked well

- \* Get valves with pressure regulators
- \* They will be bigger but you can get a cheap adapter





# What worked well

- \* Adjustable bubbler emitters
- \* \$20 on Amazon for 50 if you can wait





# What worked well

- \* OpenSprinkler works perfectly and the iOS App is useful





# What not to do

- \* Use garden hose for constant pressure
- \* Use valves without pressure regulators
  - \* Spending more on a bigger valve with adapter is much cheaper than parts to add a manual valve
- \* Standardize, I spent way too much on adapters
- \* Should have run 7 strand wires



# What to watch out for

- \* Leaks are big problem on a pressurized system
- \* Don't forget to address mosquitoes
  - \* Add screening to air holes



Demo