

Garden Operations Manual

Wednesday, May 23, 2018

Log of operations

Date	Desc
05/11/2017	Original Planting
05/19/17	Soil Tested,
05/20/2017	Fertilized: Osmocote and Miracle Gro
6/7	Garden was completely flooded for weeks. Water system repaired.
6/11	Soil Tested, Added Gurney tree food and calcium
05/018	Garden is growing well. Tilled, fertilized, and revamped drip system with auto timer Planted wildflower mix.
06/2018	The garden is doing well. It is a LABOR of love. The soil is a good sandy loam with a pH of 7.0. But the nutrients (NPK) were all "Depleted". I have fertilized and the levels are creeping up to "Sufficient" with the exception of phosphorus which is still "Deficient". The southernmost 8 ft of the garden (with the ooze tubing) is planted in wildflowers. The apple trees, strawberries, and blackberry are clearly marked and watered by drippers. The drip system is on a timer for 15 min every day.
09/2018	Test, Fertilize, Chicken Wire, Wire baskets, hoe, and water Tiger lily and columbine seeds planted Water System and drip left ON for winter with slow stream at shower end.

The garden is planted near the hose over the rock. It consists of:

- 2 Apple trees
- 1 Blackberry bush
- 5 strawberry plants
- Wildflowers

A drip watering system has been added. The valve is in the 1/2" tubing as it descends the rock. The water timer is set for 15 min daily.

Cliff Camp is in the Sierra Mountains near Shaver Lake at an elevation of 6500'. The average extreme minimum temperature is 0 to 5 deg F. This is USDA zone 7a. (Grover Beach is zone 10a: 30 to 35 deg F).

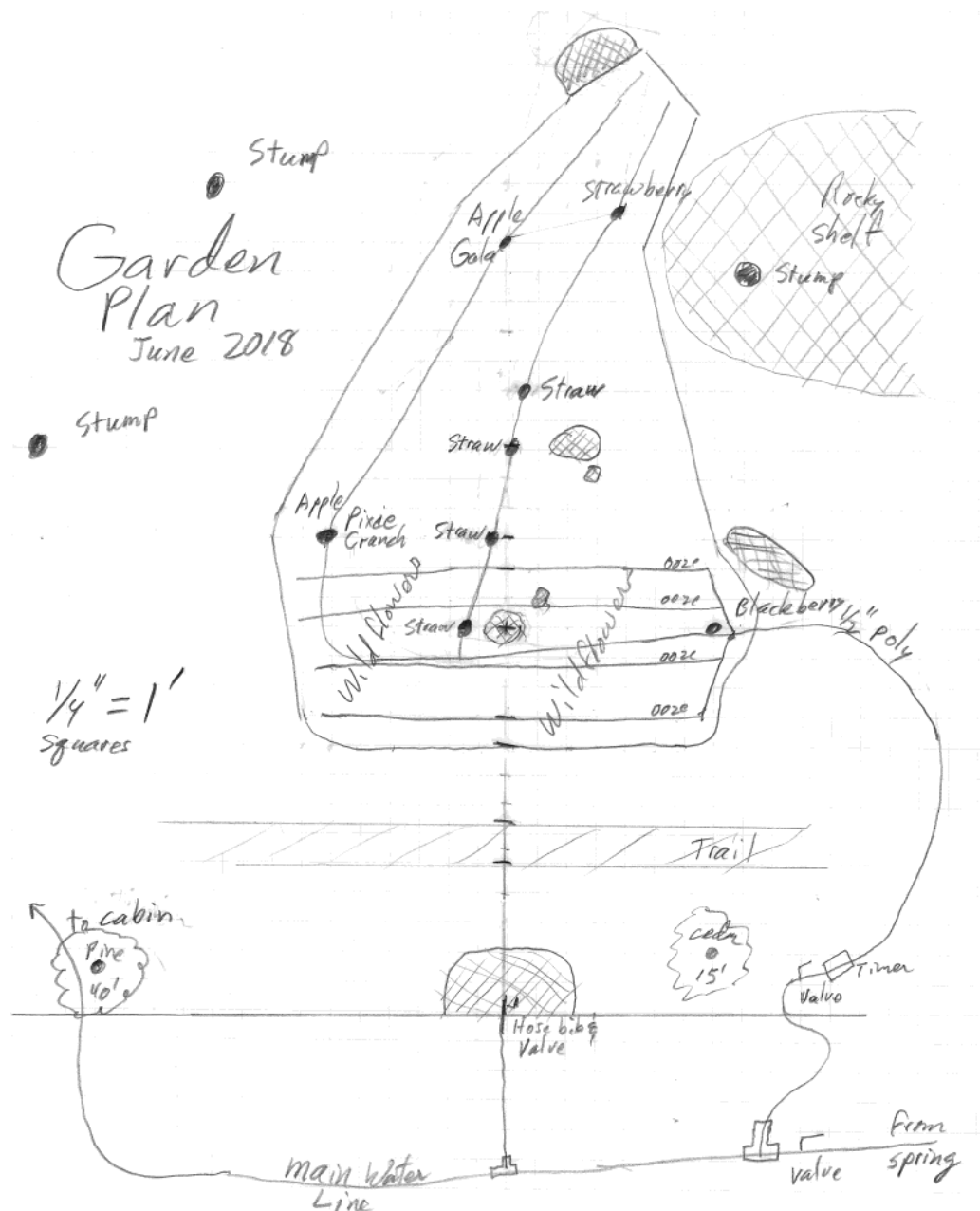
Planted 05/11/2017:

Fruit	Variety		Blooms	Ripens	Polinat or	Sun	Soil	Notes
Apple	Pixie Crunch	\$70 1 dwarf deluxe bareroot	Early to mid season	Late August	Gala or Fuji	Full	Well-drained, deep, fertile soil	Very sweet and crisp. Medium growth rate. Weak vigor

	Gala	\$52 1 dwarf deluxe bareroot	mid spring	September	Fuji or Pixie	Full	Well-drained moist soil, with good organic material.	sweet and crisp. Moderate growth rate
Strawberry	Sparkle Supreme	\$20 25 plants		June	Self	Full	Moist, well drained, slightly acidic soil.	intense, super-sweet, true strawberry flavor! Hardy plants
Blackberry	Heaven-can-wait	\$25 1 plant	May-June	mid June thru fall	self	Full	Blackberry plants grow best in a well-drained, fertile, slightly acidic, loam soil with moderate water-holding capacity.	Sweet, flavorfull, Thornless

<https://www.gurneys.com/category/fruits-and-berries>

No Cherries or Peaches to California.



Watering:

1 gal = 231 in³ = 0.134 ft³.

1" of rain = 0.62 gal/ft².

1 gph / emitter

12" watering radius = 3 ft²/emitter

15 min x 7/week = 1.75 hr/week

1 gph/emitter x 1.75 hr/week = 1.75 gal/week/emitter

1.75 gal/week/emitter / 3 ft²/emitter = 0.58 gal/week/ft².

0.58 gal/week/ft² x 1" / 0.62 gal/ft².

= 0.9 inches of rain / week / gph

<https://www.irrigationtutorials.com/>

Apples

Soil: Well drained, deep, fertile, pH: 5.7 - 7.0

Fertilize:

Miracle-Gro, 24-8-12, every 2 weeks:

Sprinkle tree from trunk to 3 ft.

This is an area of 25 ft².

= 2.5 gal of solution.

= 2.5 Tblsp or 0.025 lb of fertilizer

= 0.24 lb N/1000 ft²

Osmocote, 14-14-14, once in spring:

Mix Osmocote Smart-Release into top 1-3 inches of soil from 1' to 2.5 ft from trunk.

This is an area of 16 ft².

= 0.16 lb = 4.8 Tblsp per tree.

= 1.4 lbs N / 1000 ft²

Gurney's Tree Food, 2-1-2, spring and late summer:

Mix Gurney tree food into top 1-3 inches of soil from 1.5 ft to 3.5 ft from trunk.

This is an area of 30 ft².

= 0.15 lb = 4.5 Tblsp per tree.

= 0.1 lbs N / 1000 ft²

Water, entire drip zone:

1 gal = 0.134 cuft, 1" of rain = 0.62 gal / ft².

Target = 1" of rain per week

1 emitter (2 gph), 15 min, daily = 1.8" of rain / week

Prune: Late Winter or very early spring

Blackberries

Soil: Well drained, deep, fertile, pH: 5.5 - 7

Fertilize:

Miracle-Gro, 24-8-12, every 2 weeks:

Sprinkle bush from trunk to 3 ft.

This is an area of 25 ft².

= 2.5 gal of solution.

= 2.5 Tblsp or 0.025 lb of fertilizer

= 0.24 lb N/1000 ft²

Osmocote, 14-14-14, once in spring:

Mix Osmocote Smart-Release into top 1-3 inches of soil from 1' to 2.5 ft from trunk.

This is an area of 16 ft².

= 0.48 lb = 4.8 Tblsp per bush.

= 1.4 lbs N / 1000 ft²

Water:

Keep moist but not wet.

target = 1" of water per week

1 emitters (2 gph), 15 min, daily = 1.8" or rain / week

Prune:

Top the primo canes of erect cultivars during the Summer. Don't top trailing cultivars during the growing season. Shorten the laterals of erect cultivars.

Pick:

After you see ripened blackberries, pick them every three to six days.

STRAWBERRIES

Soil: Well drained, pH: 5.5 - 7

Fertilize:

June-bearing **strawberries** are the easiest to fertilize because they only need one feeding a year, **after** the berries are harvested.

Miracle-Gro, 24-8-12, every 2 weeks:

Sprinkle bush from trunk to 1 ft.

This is an area of 3 ft².

= 2 Tblsp of fertilizer dissolved in 2 gal of water

= 1/5 gal of solution per plant x 10 plants

= 0.24 lb N/1000 ft²

Osmocote, 14-14-14, once after harvesting is complete:

Mix Osmocote Smart-Release into top 1-3 inches of soil from trunk to 1 ft.

This is an area of 3 ft².

= 1 Tblsp per plant.

= 1.4 lbs N / 1000 ft²

Water:

Keep moist but not wet.

Target = 1" of rain per week

1 emitter (1gph), 15 min, daily = 0.9 inches of rain / week

Prune:

Eliminate daughter plants as needed. First and second generations produce higher yields. Try to space each plant about 10 inches apart.

When the growing season is over, mow or cut foliage down to one inch and mulch plants about 4 inches deep with straw, pine needles or other organic material. This can be done after the first couple of frosts, or when air temps reach 20 F.

Remove mulch in early spring, after danger of frost has passed.

Row covers are a good option for protecting blossoms and fruit from birds.

Wildflower Mix

Planning:

Soil temp > 55° F

Well drained, pH: 6 - 7

sun to partial shade

6 to 48 in height

Spread at rate of 1 lb / 2000 ft²

= 1 Tblsp per 280 ft² (16' x 16')

Soil Preparation:

Remove all existing growth and debris

Loosen top 3 inches of soil

Scatter seeds evenly and tamp in

Water thoroughly

Water:

Water twice daily to keep beds moist until plants are 4" tall. Thereafter, water is only needed in drought.

Ooze tubing = 1 gal/hr/ft, water spread up to 1 ft on each side

Initially:

Target = 2 inches of rain per week

Space tubing 1.5 ft apart = 0.66 gal/hr/ft²

0.66 gal/hr/ft² x 1.75 hr / week / .62 gal / ft² / inch of rain = 1.9 inches of rain per week

After established:

Target = 1 inches of rain per week

Space tubing 3 ft apart = 0.0.33 gal/hr/ft²

0.33 gal/hr/ft² x 1.75 hr / week / 0.62 gal/ft² / inch of rain per week = **0.9 inches or rain per week**

Fertilize: None

Reseeding next spring:

Mow old material in Fall and remove in Spring.

Most flowers will reseed naturally.