**Beer #1: Patrick Taylor - Commercial Cascade hops**

11# American 2 row

Mash 154F , 60 minutes

Batch sparge

60 minute boil, 7.5 gallon

1 oz cascade (8 AA) 60 minutes

1 oz cascade (8 AA) 15 minutes

2 g Wyeast nutrient (10 min)

1 WhirlFloc tablet

.8 oz cascade (8 AA) 20 minute whirlpool (200F)

Added: Camden tablet, 12g gypsum, and 6g calcium chloride to 14 gallons of brewing water, 4 mL phosphoric acid (88%)

US-05, 300 mL fresh yeast slurry, 68F for 2 weeks

Force carbonation

**Beer #2: Pete Zollweg - Home grown Cascade hops**

11lb 2 row

1oz cascade 60m

1oz cascade 15m

1oz cascade 0m

Upped the hops slightly because I was using whole leaf hops.

Irish moss at 15 minutes

Cascade rhizomes were from a farm in NY and the plant was 3 years old when hops were harvested.  The hops were put into vacuum sealed freezer bags and left in the freezer for about a year.

Charcoal filtered Newport New water with 3 g of gypsum.

151F mash (I think) for an hour.  Adjusted ph  from 6.0 to 5.5 because I ran out of acid.

Fermented at 69F for 5 days, diacetyl rest for 2 days.

SG-1.060 calculated, 1.058 measured

FG- 1.014 calculated, 1.000 measured (interesting data point)

IBU- 23

SRM-3.7

Transfer to a keg and attempted to carbonate to 2-2.5 vols.  Probably closer to 1.5-2.0 due to being low on time.

**Beer #3: Carl Hayden – Vic Secret Hops**

11 Gallon Batch

20 gallons of NN Water(13 HLT, 6.8 Mash)

11.1 g Gypsum in HLT

5.8 g Gypsum in Mash

5.6 g Calcium Chloride in HLT

3.8 ml Lactic Acid in HLT

2.9 g Calcium Chloride in Mash

21 # 2-row

.75 oz Vic Secret (AA 19.2) at 60

1 oz Vic Secret (AA 19.2) at 15

1 oz Vic Secret (AA 19.2) at 0

60 Min Mash at 152 with 10 Min mash out at 168

2 pkgs of US-05 in a 1.040 starter night before then pitched at 67 for 14 days

OG – 1.052

FG – 1.004

Keg carbonated and transferred to bottle via beer gun

**Beer#4: Kurt Schueler – Waimea Hops**

2 x 5 gal bottles of RO water each treated with:

2.5 g chalk

2.2 g CaCl

1.1 g Epsom salt

2 g gypsum

0.2 g salt

1.5 g baking soda

5 ml Lactic acid (88%) to mash

11 # 2-row

.5 oz Waimea (AA 16.8) at 45

.5 oz Waimea (AA 16.8) at 15

1 oz Waimea (AA 16.8) at 0 and I stirred until wort got down to about 150 degrees using immersion cooler

60 min mash @152 then sparge with 170º water

60 min boil, OG 1.052

Irish Moss at :15

Pitched 1 pkg US-05 dry @ about 68 degrees

Fermented at 67 degrees for 4 days, then raised temp to about 70

Racked/bottled on day 14 (Bottle conditioned)

5.6% ABV

45 IBU

3.6 SRM

**Beer#5: Bryan Flaherty – Idaho #7 Hops**

Target 6 Gal Batch

9.5 gal of RO water treated with:

2.1 g chalk

2.2 g CaCl

2 g Epsom salt

4 g gypsum

3 g salt

12.4 ml Lactic acid (88%) to mash

Target mash pH 5.20

12 # 2-row

75 min mash @152 with Brew-in-a Bag

60 min boil, OG 1.053

.75 oz Idaho #7 (AA 12.5) at 60

1 oz Idaho #7 (AA 12.5) at 15

Irish Moss at :15

1 tsp Yeast Nutrient at 5 min

1 oz Idaho #7 (AA 12.5) at 0

Aerated with 100% O2 for 45 seconds

Pitched 1 pkg US-05 dry @ about 68 degrees

Racked off trub after a week and allowed to clear and cold crash for a week. Forced carbonated via keg

5.9% ABV

45 IBU

3.6 SRM

Finished with 5.5 gallons