



# NYS Draft Beer Line Sanitation Practices Survey Results

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# Project Start

- “Why does the same beer taste different at different locations?”
  - Brewers work hard to make sure product is perfect when it goes into the keg – then what?
  - There are of course – many answers:
    - Batch-to-batch variation
    - Storage and distribution conditions
    - Environmental influences
    - Draft line sanitation and maintenance
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# Draft systems affect flavor

- ❑ Unclean tap lines
    - ❑ Microbial build-up, biofilms
    - ❑ Hop, grain protein residue, mineral build-up
    - ❑ Flavoring agent carry-over
  - ❑ Temperature changes
    - ❑ Foaming
    - ❑ Microbial growth rate
    - ❑ Oxidation Rate
  - ❑ Tap line material, length, age
    - ❑ Oxidation
    - ❑ Harbor microbes
    - ❑ Amount of exposure to unclean lines (long draw vs. direct draw)
  - ❑ Pressure, resistance changes
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# Beer style influences size of effect

- ▣ Hops = antibacterial
  - ▣ Hop degradation
  - ▣ Alcohol percentage
  - ▣ pH
  - ▣ Masking
  - ▣ Already present contamination, off aromas
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# What's the goal?



- Proper dispense system should:
  - Store beer between 34-38F
  - Serve beer between 38-44F
  - Have balanced draft settings (pressure = resistance)
  - Normal flow rate of 2 oz/sec

*\*Draught Beer Quality Manual. Boulder, CO: Brewers Association, 2011. (PDF Available Online!)*

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# What's the goal?

- ▣ Industry recommended sanitation guidelines:
  - ▣ Every two weeks:
    - ▣ 2-3% caustic solution at 80F-110F
    - ▣ Pump for >15 min. or static for >20 min.
    - ▣ Hand clean couplers, faucets, etc.
    - ▣ Flush with water
  - ▣ Every three months:
    - ▣ Perform acid cleaning, too.
    - ▣ Hand clean couples, faucets, FOBS.

*\*Draught Beer Quality Manual. Boulder, CO: Brewers Association, 2011.  
(PDF Available Online!)*

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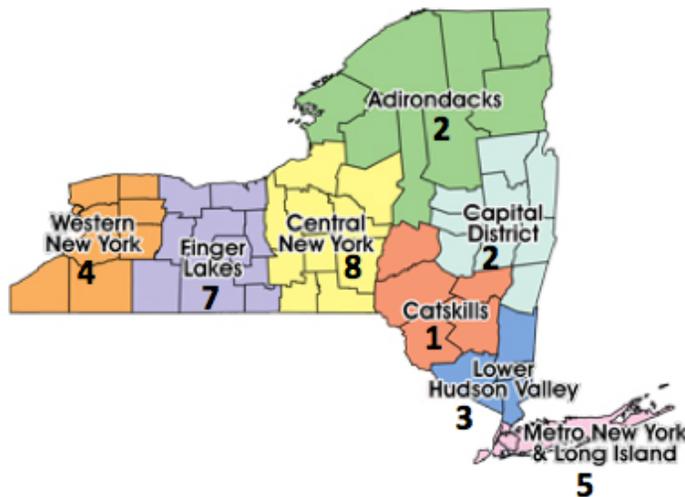
# How's NY doing? Survey Results.

- Two different surveys – all anonymous
  - Breweries (20 questions)
  - Sales accounts (10 questions)
- Responses solicited through meetings, e-mails, social media, in-person conversations
- No responses were required (respondents could choose which questions to answer and/or skip)

\*Survey granted exemption from Cornell IRB Approval

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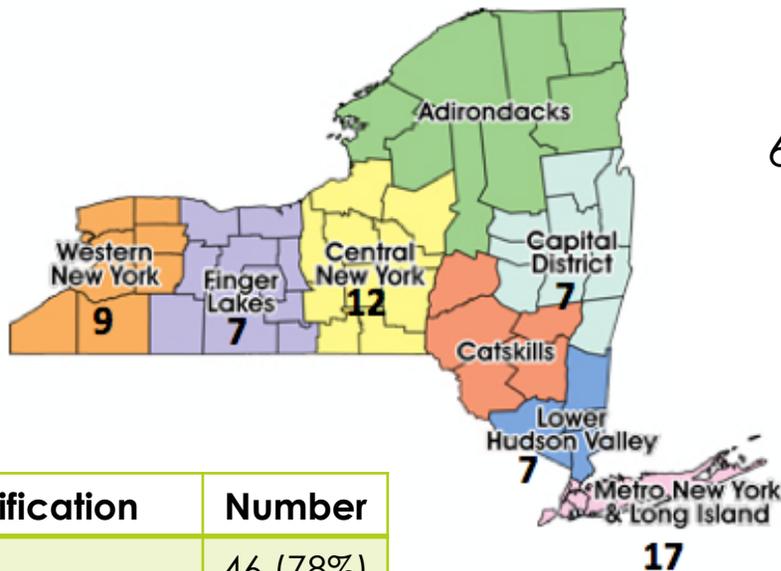
# Response: Breweries



34 total responses

Classification	Number
Microbrewery: annual production less than 15,000 bbls, 75% or more off-site	13 (38%)
Brewpub: a restaurant that sells more than 25% of its beer on-site	15 (44%)
Contract Brewing Company: a business that hires another brewery to produce its beer	5 (15%)
Regional Brewery: annual production between 15,000 and 6,000,000 bbls	3 (9%)
<b>Total Responses</b>	<b>34</b>

# Response: Sales Accounts



61 total responses



Classification	Number
Bar	46 (78%)
Restaurant	31 (53%)
Retail Store	5 (8%)
Other	2 (3%)
<b>Total Responses</b>	<b>59</b>

- Number of beers on tap:
  - Range: 4-72
  - Mean: 17.7
  - Median: 14

# How often are draft lines cleaned?

Answer	Sales Accounts	Breweries
Never	0%	0%
Weekly	2%	19%
Every two weeks	43%	28%
Once a month	36%	25%
Semi-annually	4%	6%
Before running a different beer through the line	0%	22%
Upon development of off-aromas in beer	0%	6%
Sporadically, or whenever we have time	2%	9%
Not sure	0%	0%
Other	14%	9%
<b>Total</b>	<b>56 Responses</b>	<b>32 Responses</b>

Industry  
Guideline

# What is used to clean?

Answer	Sales Accounts	Breweries
Only caustic	17%	25%
Only acid	5%	6%
Both caustic and acid	16%	59%
Neither/Unsure	62%	9%
<b>Total</b>	<b>58 Responses</b>	<b>32 Responses</b>

Industry  
Guideline

- Just a reminder:
  - Watch out if you are pushing your caustic with CO<sub>2</sub> – you may be neutralizing your base.

# Who cleans the lines at accounts?

Answer	Sales Accounts
Third Party	84%
Employee(s)	8%
Both	7%
Other	2%
<b>Total</b>	<b>61 Responses</b>

- Are brewery reps or distributors willing to help troubleshoot if problems arise?

Answer	Number
Yes	47 (82%)
No	5 (9%)
Unsure	5 (9%)
<b>Total Responses</b>	<b>57</b>

# What's the biggest challenge in maintaining a regular cleaning schedule?

Answer	Sales Accounts	Breweries
Cost	28%	3%
Time	24%	66%
Employee Training	6%	13%
All of the above	13%	13%
Other	39%	16%
<b>Total Responses:</b>	<b>54</b>	<b>32</b>

21 "Other" Responses:

- 17: Not a challenge
- 3: Reliability of cleaning service
- 1: Product Loss

5 "Other" Responses:

- 4: Not a challenge
- 1: Old system, tough to replace

# Do draft lines matter in beer sales?

- Sales Accounts: Do brewery reps or distributors ask about your beer dispense system?

Answer	Number
Yes	10 (18%)
No	24 (43%)
Sometimes	21 (38%)
Unsure	1 (2%)
<b>Total Responses</b>	<b>56</b>

- Breweries: Do the sanitation practices of any accounts affect your decision on whether or not to sell your beer there?

Answer	Number
Yes	24 (75%)
No	7 (22%)
Unsure	1 (3%)
<b>Total Responses</b>	<b>32</b>

# Conclusions

- ❑ Unclean draft lines recognized as responsible for some faults in draft beer in New York.
- ❑ Less than half of both breweries and sales accounts follow industry guidelines for draft line sanitation.
- ❑ Draft line sanitation may affect sales decisions.



# What now?

- How can we use this information?
- Is draft line maintenance training accessible? Would it help?
- Whose responsibility is it to ensure clean draft lines?

Answer	Number
Distributor	14 (42%)
Brewery	8 (24%)
Sales Account	26 (79%)
Unsure	2 (6%)
<b>Total Responses</b>	<b>33</b>

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Please contact me with questions.

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- ▣ Cheers!