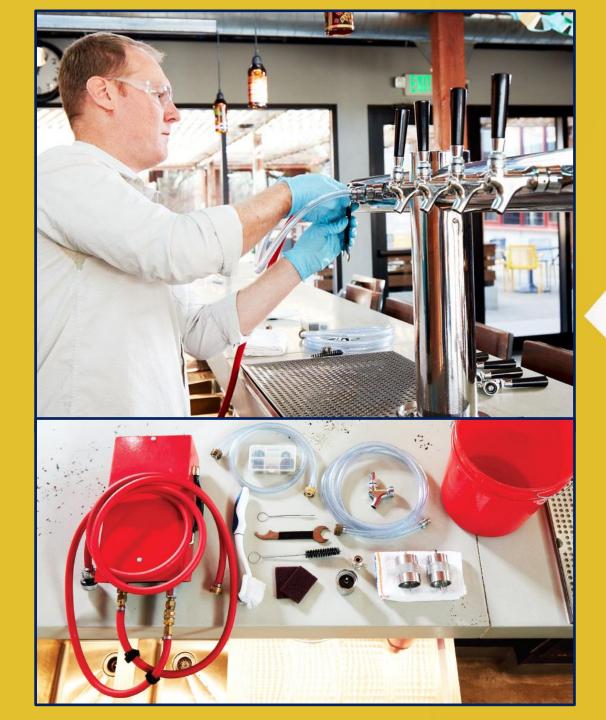


## THERE'S MORE TO CLEANING DRAUGHT LINES

**JUNE 9, 2022** 



## THERE'S MORE TO CLEANING DRAUGHT LINES THAN...

- Wasting time and beer
- Going through the motions

#### PROPER LINE CLEANING

- Highest product quality
  - Proper heading and CO<sub>2</sub> levels
  - Avoid off-flavors
  - Maximize profits
- Optimal system performance
  - Hardware longevity
  - Preventative maintenance
- Safety considerations





#### **MATT STINCHFIELD**

Safety Ambassador

**BREWERS ASSOCIATION** 

#### **BEN GEISTHARDT**

Field Quality Specialist

**NEW GLARUS BREWING COMPANY** 





# THE VITAL IMPORTANCE OF SAFE DRAUGHT LINE PROCEDURES

https://www.fox5vegas.com/2 022/03/21/jury-awards-8mman-served-chemicalcleaning-solution-insteadbeer-henderson-casino/

## Jury awards \$8M to man served chemical cleaning solution instead of beer at Henderson casino



MGN Online (Source: MGN)

By Chanel Ridley

Published: Mar. 21, 2022 at 5:08 PM EDT

() Z Y () 🗖

LAS VEGAS, Nev. (FOX5) - A jury on Friday awarded \$8 million to a man who suffered internal injuries after being served a chemical cleaning agent that was leftover in a tap lines instead of a beer at a Henderson casino, attorneys said.

According to the man's attorneys, Dr. Lon Enwright, a 38-year-old special education teacher, was visiting Barley's Casino & Brewing in Henderson to watch a football game when a bartender offered him a sample of a Honey Blonde ale. However, instead of a beer, attorneys say Dr. Enwright was given a chemical cleaning solution instead.

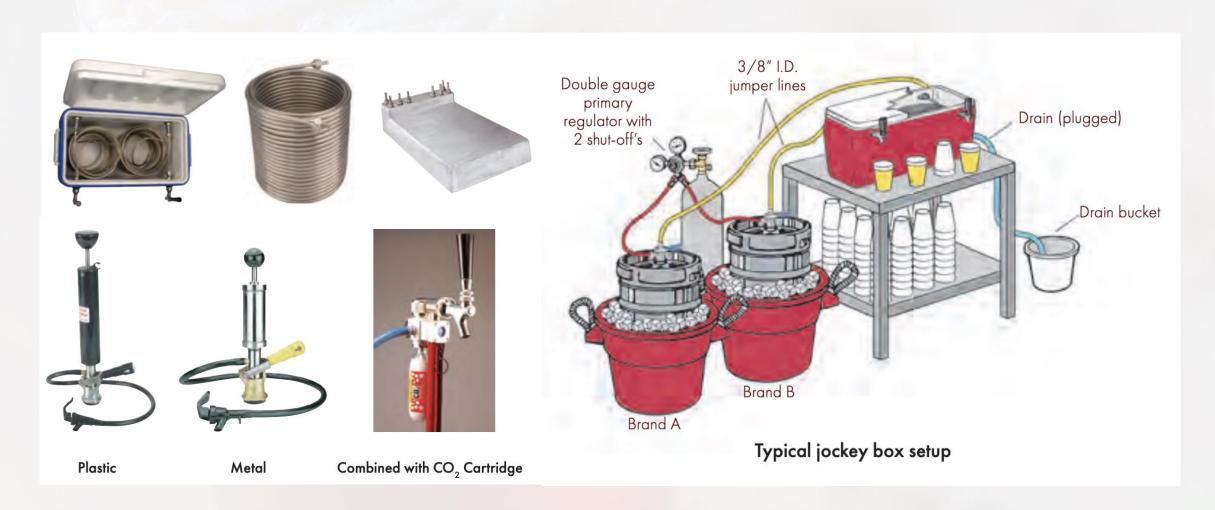
Attorneys for the man, Rahul Ravipudi, Ian Samson, and Adam Ellis of Panish | Shea | Boyle | Ravipudi LLP, argued that staff knew the tap lines were out of service for cleaning. However, he was offered a sample anyway.

# -1DRAUGHT LINE SYSTEM TERMINOLOGY

**BEN GEISTHARDT** 

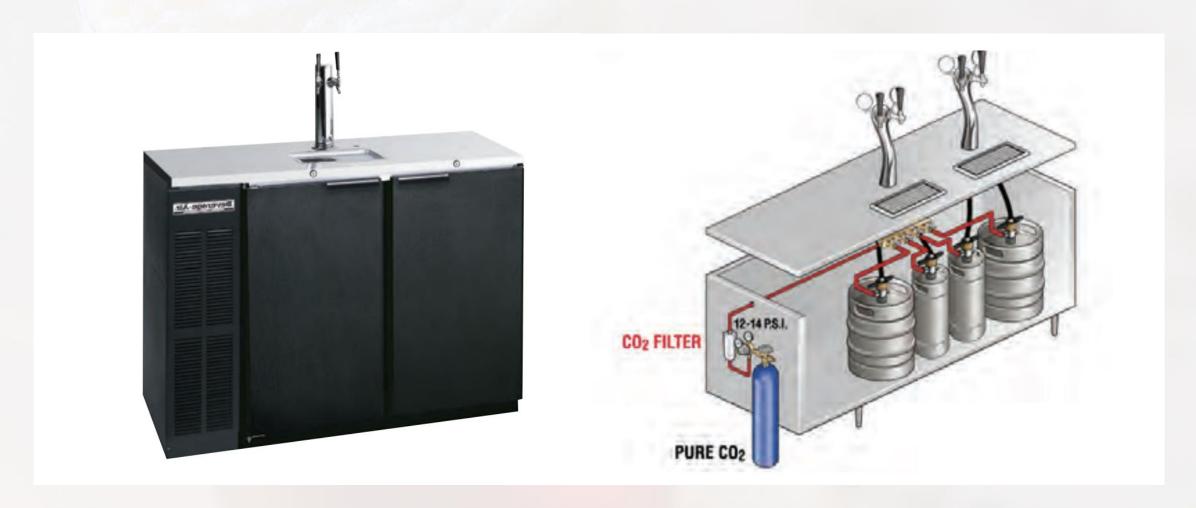


## **Temporary Draught Setup**



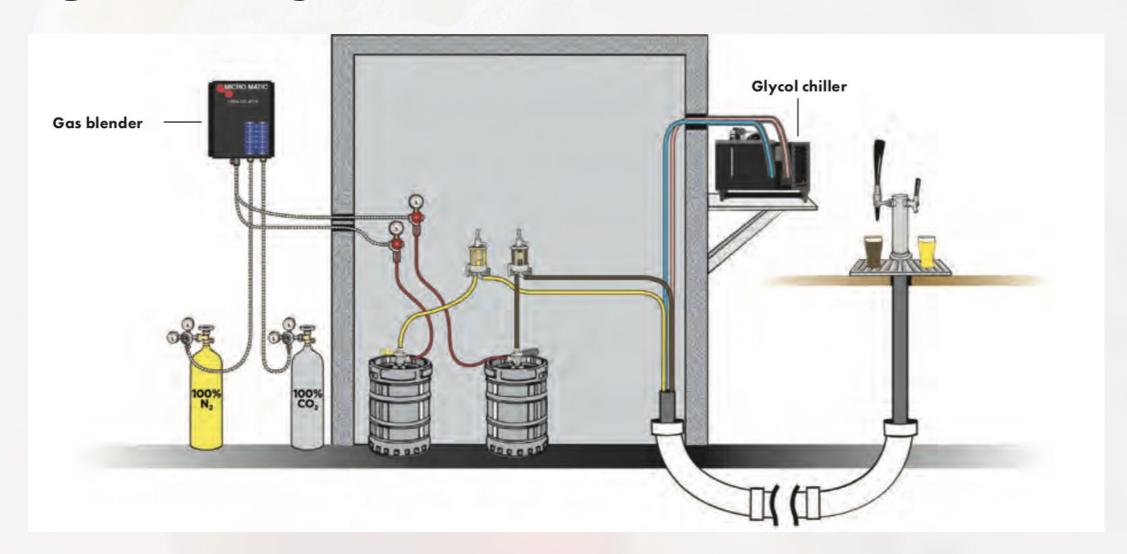


## **Direct Draw System**



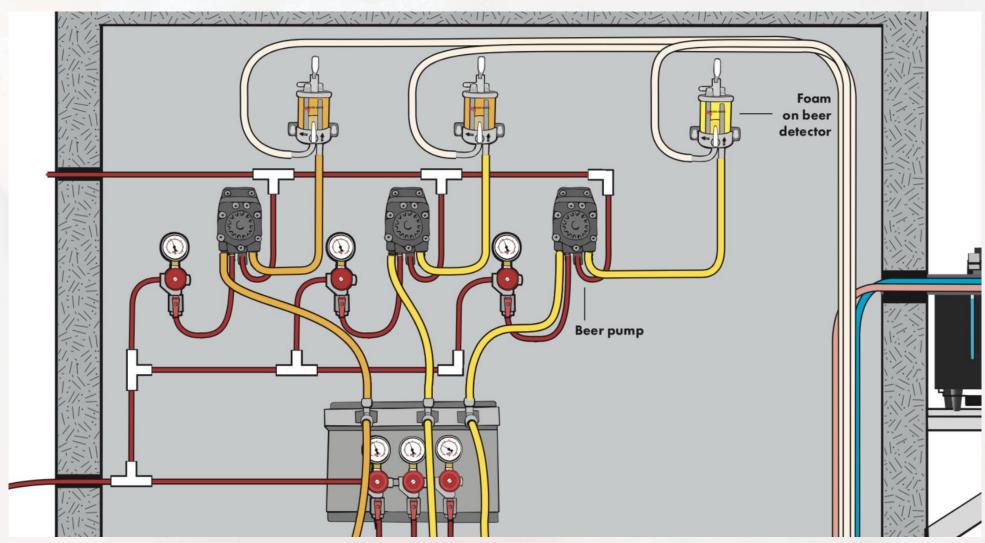


## **Long Draw System**



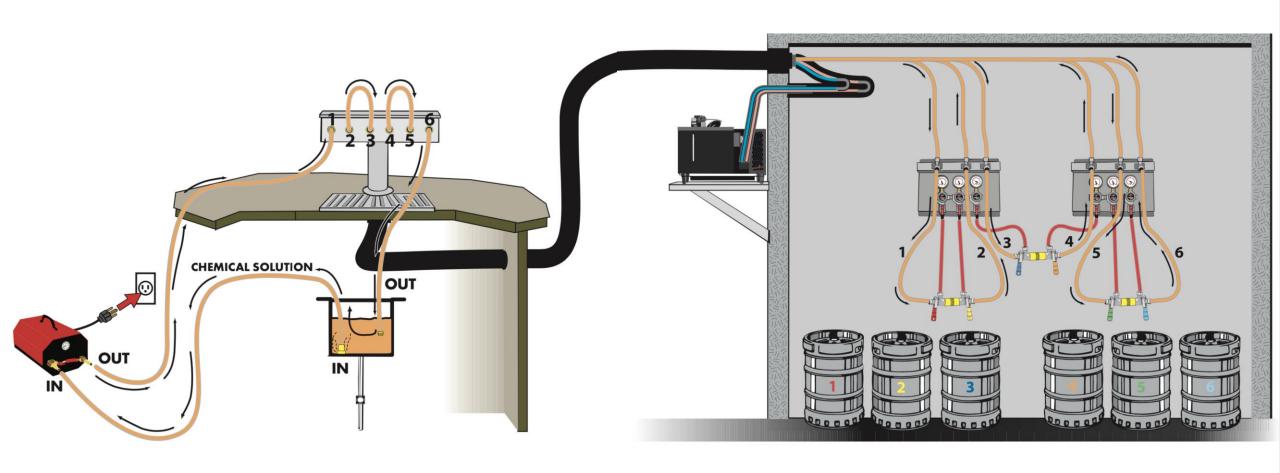


## **Long Draw System with Pumps and FOBs**





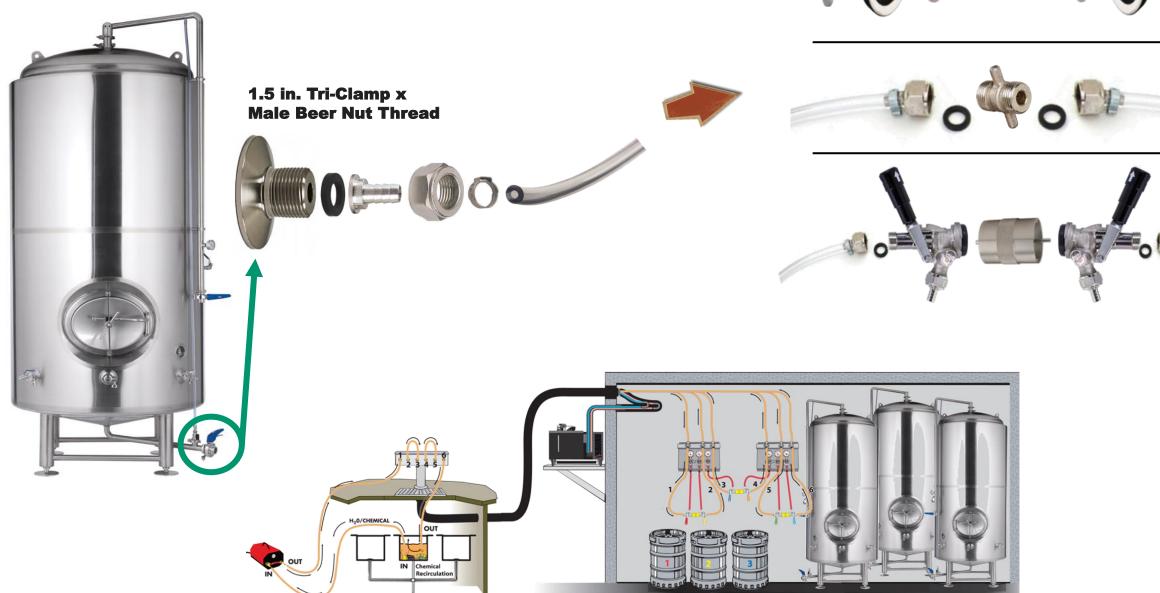
## **Typical Recirculated Cleaning Setup**





## **Serving Tanks**







## Circulation Pump vs. Cleaning Canister



#### **Circulation Pump:**

- High Pressure 1½ X Q rate
- Mechanical force assists in removal of build-up
- More <u>Time Efficient</u>

#### **Cleaning Canister (Pressure Pot):**

- Pressure restricted to the regulator setting
- Stagnant (no flow)
- Time Consuming
- Development of Carbonic Acid

## POLLING QUESTION

Which line cleaning procedure do you utilize at your business?



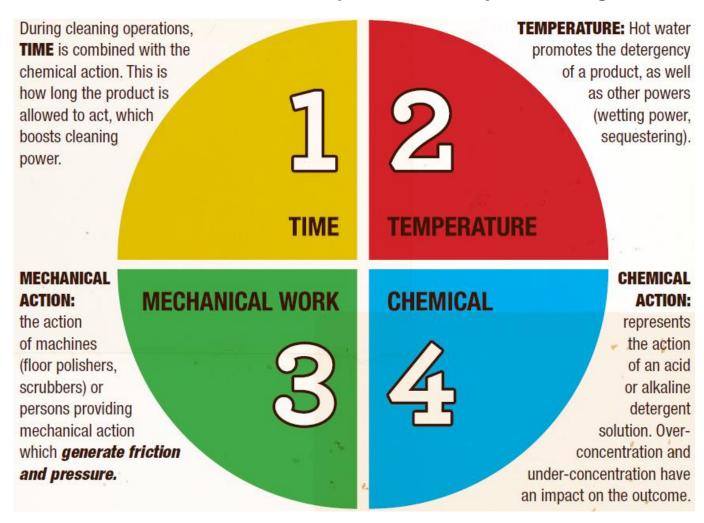
# - 2 – CHEMISTRY AND CLEANING THEORY

MATT STINCHFIELD



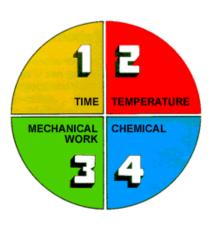
#### SINNER CIRCLE

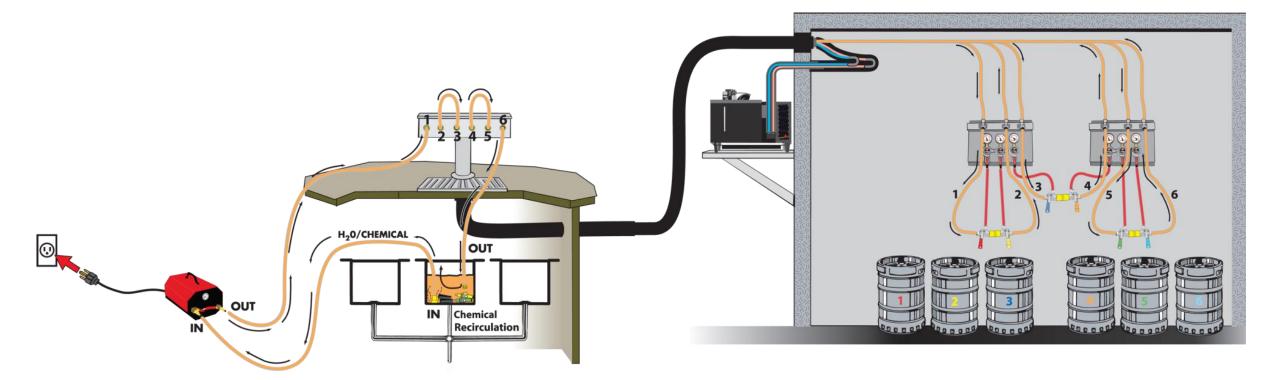
In cleaning, the final result is influenced by *4 interdependent factors*, represented in the Sinner Circle. *If one factor is reduced, the loss must be compensated for by increasing one or more other factors.* 



### TIME

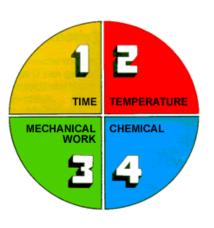
- Two-week cleaning cycle (caustic)
- Three-month cleaning cycle (acid)
- 15 Minutes of circulation

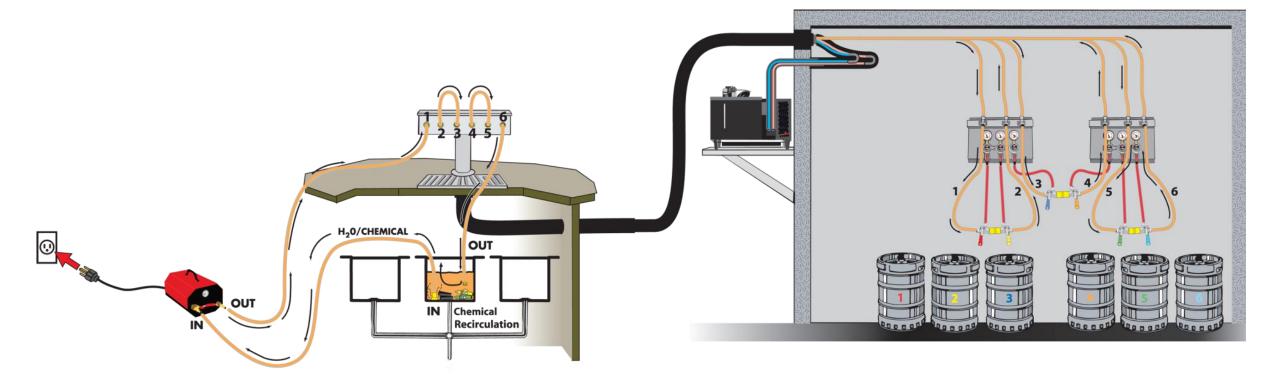




### **TEMPERATURE**

- Hot tub temperature
- About 100° Fahrenheit

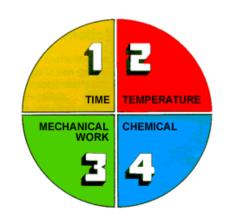


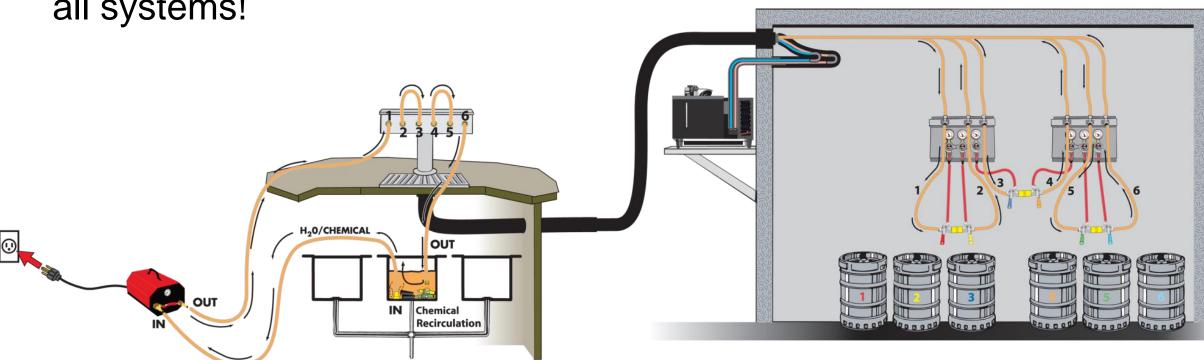


### **MECHANICAL WORK**

- 1.5-2.0 gpm, i.e. 1.5x faster than dispense rate
- Reverse direction each cycle
- Physical scrubbing faucet, couplers with brushes

 Recirculated cleaning recommended for all systems!

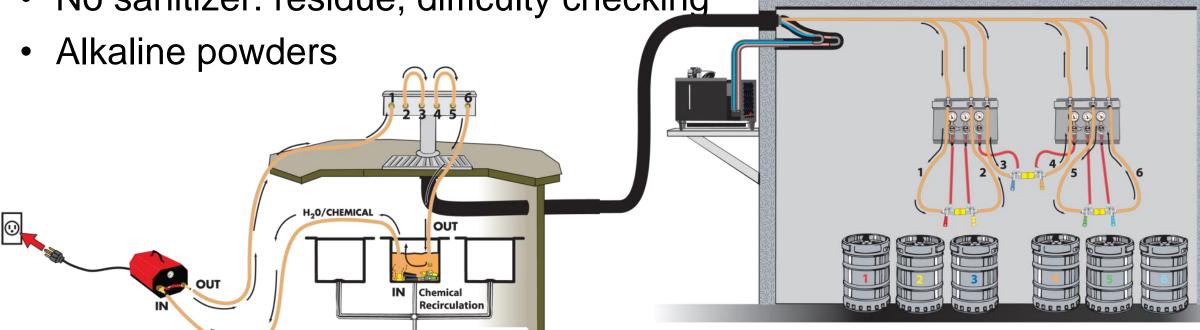


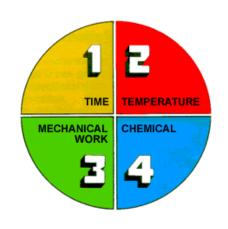


### CHEMICAL CLEANING

- 2% to 3% caustic (NaOH or KOH)
- Non-chlorinated caustic only
- Pre- and Post-rinsed with water, pH check / record
- 2% acid used quarterly (H<sub>3</sub>PO<sub>4</sub>)









#### CHEMICAL SAFETY / USE INFO

- Safety Data Sheet (SDS)
- Manufacturer tech info
- Labels, workplace signs
- PPE selection chart
- Standard Operating Procedure (SOP)

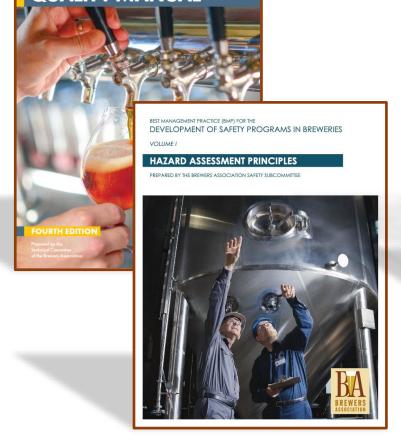
#### SOP / CHECKLIST

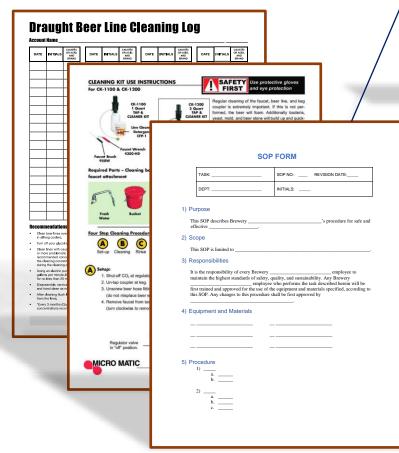
- Develop your own
- Brewers Association Resource Hub
  - BMPs
  - CBC archives



#### **SOP RESOURCES**

DRAUGHT BEER





https://www.brewersassociation.org/ educational-publications/hazardassessment-principles/

	_			_		_							an	aa	ıra	U	per	ITII	١g	_	то	ce	aı	JITE	(2	U	')								
SOP 1										31	IN	G	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_			_
						•••			r								_	_	_			-			_				_	_	_	_			_
Date \										_	_			-											/ 10				_	_	_				_
Purpo valuat ruined are ha Packa	le le	and Juip led	po me pro	ten nt, per	tia sp ly,	lly ill d	da clea nd i	nge an-i	ero up, afe	an wo	ma id, ork	me inte	eria ost g c	ils, t in	an npo diti	d h orta	ose intly . Th	fall , p	ur ers	es or	ca nal to	in i	oe jur	ex ies	per . Ti	siv iis į	e ir	te cec r th	rm:	of e is	lo to	st p en	pro sur	duc e h	se
Enviro	nn	nen	al I	He	lti	18	k Sa	afet	y:																	4		7							
	N ci	eve ould omp	ma res	and ike sio co	no no no	fr ise ha wa	ont e, a irac iter	t of nd ter	bri of	efly wa	, o y s ate	r b pra r, v	eh ay vio	wa	d ei iter nt b	nds . D	of a ue t v ou not	ho o ri	se pi	d tti	sse pre ng	s/h	ur	e d	rop s n	fri ot c	on	clo	sec	sy d a	ste a	m ha	anı	d lo d.	
Equip	me	nt	M	ate	ria	als:	_	_	_	_	_						-	4				k	Ť	4		k	_	4	ñ	,	_				_
		am															4	7		7	М		N		4		М								
	G	ask	ets														М	h			- )		,			4									
	В	utte	rfly	va	ĺνε	s								4	a	ĸ.		۹		L	4	v	,				_								
	R	oth	nb	urg	er	te	st p	un	ıp (	TP.	25	) (1	loc	ate	ed i	in t	he s	upi	ly	cl	OSI	et	acı	ros	s fr	om	th	e 2	20 (	on	tro	ol r	oor	n)	
Proce			_	-	-	-	_	_	_	_	-			7		۲	₹	K	_	_3	₹		h	,							-				_
2. 3. 4. 5. 6. 7. 8. 9.	a GAFICT "OP h h K re p H e th R	ath ttai Il ti arm min per pid rescold the eco	ime er p h bi e h o th adji is the rup for: sta pui ed, ure for r a l	att art utt ose e l ust dir e b th XX tic np us e a pr esu	ro s for erf event e consecution e consecuti	on ly ith int ion er ion int ion int ion int ion int ion int ion int ion int ion ion ion ion ion ion ion ion ion ion	n te tes val fitti kn fitti kn j fity i e t f te t f te t f f te t	empting ves atering ob ust valves (a) 1 (a) 1 (b) 2 (b) 2 (c) 2 (c	to r (v ont) so r (xxx or r op r op r op r op r op r op r o	ent to to to to ssu of los atcl	the the the the the con ure we sees	en ir b post ork sys	gas by utt s h g f ucr kin ste pr ing	ske of rai ten ow nan ting g p m i	ts, sin fly art dit idle g ti ires and sur-	bu e h g d val is t igh is u ine is u ing	he t). ) an	nd d	of the	h e l	ore nos	Ro e), ssi	an II	d d	dos dos dug l ki	e b	oro ex	t pi	y v	p (1	P2	ure y al	incliso	dica	es
		۵٤٠	"Ho	Se I											10		_	_	_				_	-			_								_

https://cdn.brewersassociation.org/wpcontent/uploads/2020/05/Standard-Operating-Procedures-Guidance-for-Brewers.pdf - 3 -

# DRAUGHT LINE CLEANING EDUCATION

KAYLYN KIRKPATRICK



## DRAUGHT LINE CLEANING EDUCATION

- LEARN MORE
- POUR BETTER

#### **BREWERS ASSOCIATION / OSHA GRANT TRAINING PROGRAMS**

- FREE Advanced "Operations Level" Course
  - For Line Cleaning Technicians, t.b.a. Spring 2023
  - <a href="https://www.brewersassociation.org/association-news/2022-registration-open-for-free-online-draught-line-safety-course/">https://www.brewersassociation.org/association-news/2022-registration-open-for-free-online-draught-line-safety-course/</a>
- FREE Intro "Awareness Level" Course
  - Starting SOON Summer 2022
  - For FoH staff, owners, brand managers, public health officials

#### MORE RESOURCES

- Draught Beer Quality Manual, 4<sup>th</sup> ed.
- Draught Beer Quality Manual for Retailers, 2<sup>nd</sup> ed.
- Brewers Association Forum



- 4 -

Q & A





## Pour Safely, not Poor Safety

**CONTACT US** 

Matt Stinchfield safetyambassador@brewersassociation.org
Ben Geisthardt bgeisthardt@newglarusbrewing.com
Matt Meadows mmeadows@newbelgium.com
Kaylyn Kirkpatrick kaylyn@brewersassociation.org