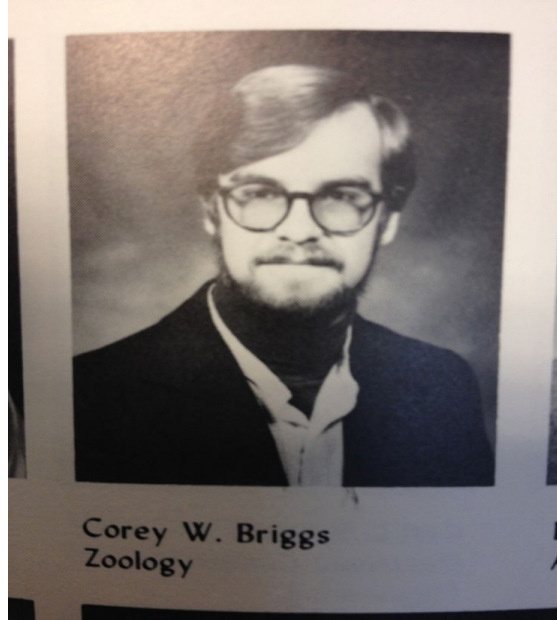




**THE PRESENT AND FUTURE OF OEH&S PROS?
THE GRAYING OF THE PROFESSION, IDEAS FOR THE NEAR FUTURE, AND BEYOND**

**NEW ENGLAND OSHA ROUNDTABLE
MAY 11, 2022**



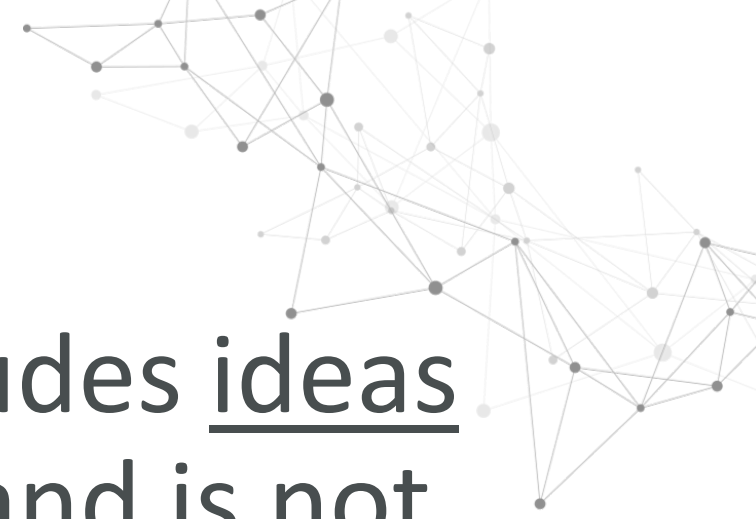
Your Presenter

**Corey Briggs, CIH, CIT, AIHA Fellow
AIHA Distinguished Lecturer
Colden Corporation
Boston Regional Office
Quincy, Massachusetts
briggs@colden.com
617-259-0172**



Occupational Health, Safety &
Environmental Consultants

www.colden.com



DISCLAIMER

The content of this session includes ideas and opinions of the presenter and is not endorsed by nor does it reflect any of the opinions of or similar input from Colden Corporation, the various OEH&S trade associations, agencies, or other organizations that may be discussed in this session.



DISCLAIMER

Demographics were solicited from and provided by various entities (e.g., AIHA, ASSP, etc.) but may not be completely reflective of current employment conditions effective on the date of this presentation.

OVERVIEW

This seminar will provide attendees information and demographics on the OEHS profession and what has and can be done to make every effort to ensure “young/not-so-young professionals” are learning about what we do.

WHAT WE HOPE TO COVER

- Who we are and where we came from?
- Where we are now and how we got into this position?
- Some demographics
- My experience “spreading the word” of the profession to students and others.
- Recommendations for moving forward

IHSN

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

<https://www.ishn.com/articles/82533-what-does-the-future-hold-for-careers-in-safety-and-health>

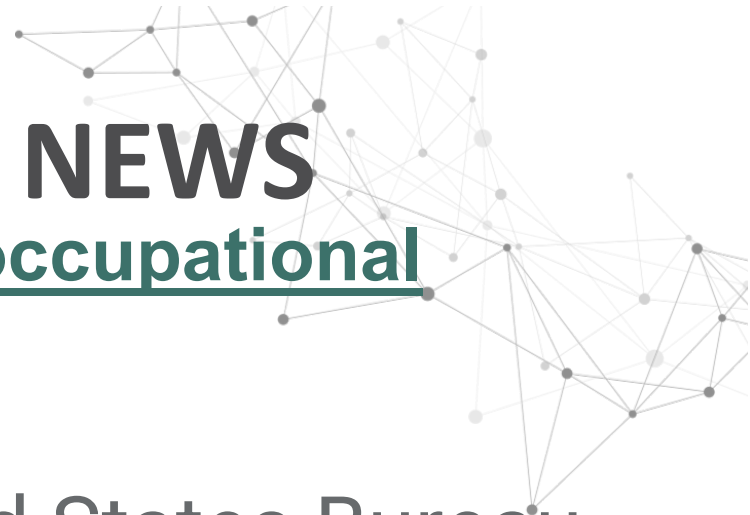
(2019 reprint of an article compiled in 2000)



JOBS/CAREERS

- BEYOND a huge issue nationwide.....**we all know it is not just OEH&S**
- Aging workforce and an aging OEH&S workforce
- Huge change in “business” as we used to know it
- Earlier retirement/career changes
- OEHS was **a/the thing** in 1970s and 80s....look at where we are now?
- Gaps in our profession started in 1990s and has been an ongoing issue.... students lost interest in and there was a lack of emphasis on STEM topics
- Grant monies for students to pursue OEHS education became sparse/non-existent
- There will always be the need for consultants...but





JOBS/CAREERS – THE GOOD NEWS

What is the job outlook for a person with an occupational health and safety degree?

According to data obtained by the United States Bureau of Labor Statistics (BLS), occupational health and safety professionals are expected to experience an increase in job growth of 5% through 2029

The expected growth is 1% above the expected 4% growth rate of all occupations tracked by the BLS.

JOBS/CAREERS – THE GOOD NEWS



Individuals with a background in science or experience in multiple areas of health and safety should experience the best prospects.

Individuals seeking an occupational health and safety degree online should consider enrolling in a program that offers specializations or certifications that show the graduate has an area of expertise.

CAREERS



As with other occupations, job demand varies by geographic region and industry.

More than 40% of occupational health and safety technicians and specialists work in manufacturing and government.

Areas that employ high levels of safety professionals working in these industries should experience better than average job prospects.

CAREERS

Occupational health and safety professionals and recent graduates willing to work in high-employment locations should experience better than average job prospects.

According to the geographical data provided by the BLS, Texas, California, Pennsylvania, and Ohio are the top three states that hire the most occupational and safety professionals.

When looking at metropolitan areas, Houston, New York, and Dallas are the top three metro areas with the most occupational health and safety professionals.



COVID

S
Respirators
n and Safety and Environmental
d Safety as a profession
r air quality
ation
c health
miology
emand for OEH&S personnel.....

n employees/job hunter's market

iations have done a **very good job** in communicating hazards/risks/controls regarding COVID ---- **NEED**
LD OFF OF THIS MOMENTUM KEEP THE BALL ROLLING ON OTHER THINGS THAT WE DO!



COVID

os (cont'd)

Big increase in visibility...
could this spark interest?
Career changers?
Virtual meetings have
helped to a degree



COVID



Cons

- Obvious one = more sick and deceased people and OEHS professionals
- Workers have had it and are changing...OEHS Pros have had it....leaving workplace permanently or looking for a change (could be an opportunity)
- Modified OEHS pros early retirement plans
- Focus for many OEHS pros has been on COVID only: other topics they have oversight of are being impacted or neglected
- Interaction (in person/face-to-face) with employees/customers and staff development for younger folks very hard
- Virtual presentations getting old...
- OEHS compliance agency activity has down
- Many others

ISSUE #1 – OUR PROFESSIONS

o... you are on an airplane...(pre-COVID)



ler from
ets



????

Neal Page
"Marketing"

Dell Griffith –
Shower Curtain

..... what do you do for work?

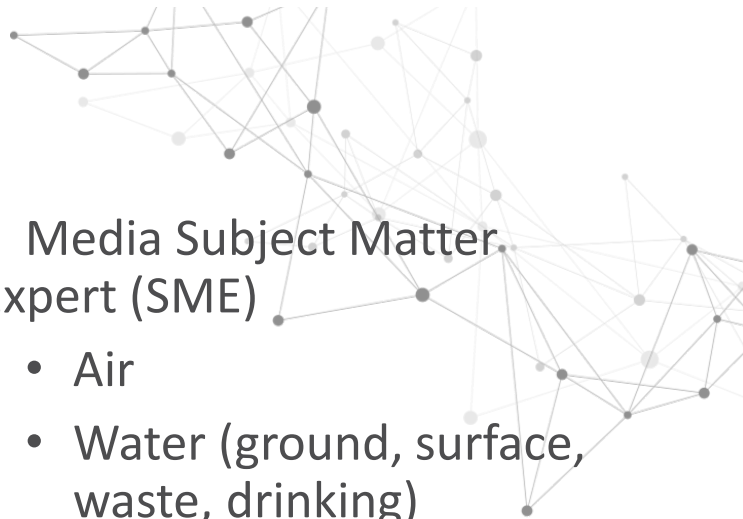
- OEHS
- ENVIRONMENTAL
- SAFETY
- INDUSTRIAL HYGIENE



As you look at the following.....I want you to think about the types of education, courses, and degrees, that students would need to fit into each one of these categories....this could include your degree(s)


THE
ENVIRONMENTAL
BUSINESS
(PRIVATE/PUBLIC
SECTORS)

- Plant, regional, Corp rep
- Consultant
- Auditor
- Sustainability
- Government
- **Academia**
- Engineer
- Scientist
- Management
- Sales
- Policy
- Environmental Services

- 
- Media Subject Matter Expert (SME)
 - Air
 - Water (ground, surface, waste, drinking)
 - Waste (solid, non-haz, haz, universal)
 - Health Scientist
 - Laboratory/R&D
 - Insurance
 - Legal
 - M&E/Real Estate
 - Others

THE SAFETY BUSINESS (PRIVATE/PUBLIC SECTORS)

- The plant, regional, Corporate rep
- Consultant
- Auditor
- Government
- **Academia**
- Engineer
- Management
- Equipment Sales
- Services
- Insurance
- Legal

- 
- Subject Matter Expert (SME)
 - Attorney
 - Inspector
 - Construction vs industrial sector
 - Specialty (Fire, Life, Hospital, Process, Laser?, Radiation?)
 - Others

THE “INDUSTRIAL HYGIENE” BUSINESS (PRIVATE/PUBLIC SECTORS)



THE “INDUSTRIAL HYGIENE” BUSINESS (PRIVATE/PUBLIC SECTORS)



MY TYPICAL ANSWER ON A PLANE....

HOW MUCH TIME DO YOU HAVE?

THE “INDUSTRIAL HYGIENE” BUSINESS (PRIVATE/PUBLIC SECTORS)

THE EASY ANSWER....

**OSHA TYPE STUFF...
THEN YOU CLARIFY...**

DO YOU WATCH CSI?



A BRIEF HISTORY OF IH



A BRIEF HISTORY OF IH



[https://www.osha.gov/sites/default/files/training-library industrial hygiene.pdf](https://www.osha.gov/sites/default/files/training-library%20industrial%20hygiene.pdf)

<https://www.aiha.org/about-aiha/aiha-history>

[https://www.ehstoday.com/industrial-hygiene/article/21911490/yes-even-you-can-do-industrial-hygiene-air-sampling\](https://www.ehstoday.com/industrial-hygiene/article/21911490/yes-even-you-can-do-industrial-hygiene-air-sampling)

BRIEF HISTORY OF IH – **CHILD OF INDUSTRIAL MEDICINE AND PUBLIC HEALTH**

4th century BC - **Hippocrates** – LEAD in the mining industry.

1st century AD, **Pliny the Elder**- ZINC and SULFUR - devised a face mask made from an animal bladder to protect from dust and lead fumes.

2nd Century AD, **Galen**, lead poisoning and hazardous exposures of copper miners to acid mists.



A BRIEF HISTORY OF IH



Middle Ages, guilds worked at assisting sick workers and their families.

In 1556, **Agricola**, described the diseases of miners and prescribed preventive measures.

In 1700, Bernardo **Ramazzini**, "father of industrial medicine," published the first comprehensive book on industrial medicine, *De Morbis Artificum Diatriba* (The Diseases of Workmen). The book contained accurate descriptions of the occupational diseases of most of the workers of his time. His big finding **occupational diseases should be studied in the work environment rather than in hospital wards.**

First Job

President of
Company was
called that he
couldn't get his bi-
annual cleaning
done without
leaving the
office.....**I knew IH
was going to be a
challenge**



THE INDUSTRIAL HYGIENE BUSINESS (PRIVATE/PUBLIC SECTORS)



- The plant, regional, Corporate
- Consultant
- Government
- **Academia**
- Management
- Services
- Subject Matter Expert (SME)
- Construction vs industrial, commercial sectors
- Laboratory
- Legal
- Etc. IEQ, Mold, Etc.

***IT'S NOT EASY TO DEFINE WHAT WE DO IN AS FEW
WORDS AS POSSIBLE....ACCOUNTANT, WAITER, SALES,
STOCKBROKER, INSURANCE...IT...***

NOW, WE ALL NEED TO PUT ON OUR
SALES/MARKETING HATSREMEMBER THIS FOR
LATER IN THE PRESENTATION

WHY DO WE DO WHAT WE DO?



- We don't want to see people get hurt/ill or see damage to the environment

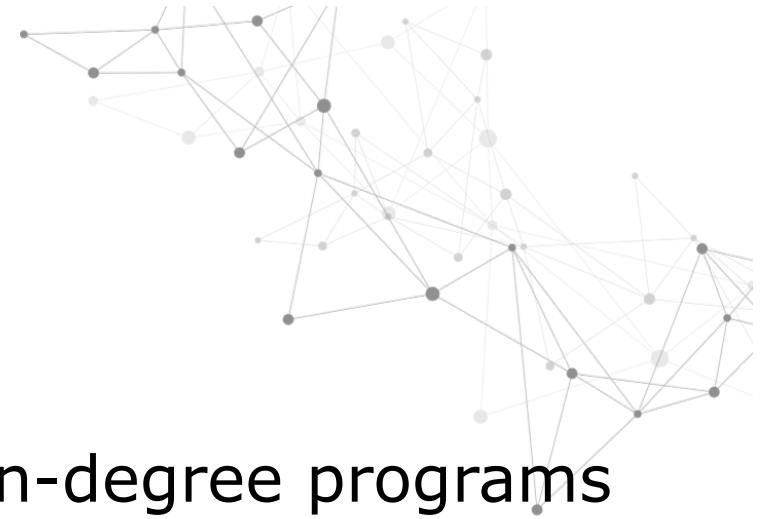
- Inquisitive
- Technical
- Make things better
- Help/work/interact with people
- Investigate and solve problems
- Passionate about what you do.. You care!
- The variety of topics
- Challenge
- Expansion/Advancement
- Travel



LET'S TALK ABOUT EDUCATION AND REVIEW OUR QUESTION.....STUDIES, DEGREES, AND EDUCATION TOPICS



EDUCATION



Primary/elementary

Middle school

Secondary school (called high school)

Postsecondary (tertiary) education includes non-degree programs that lead to certificates and diplomas plus six degree levels:

- Associate
- Bachelor
- First professional
- Master
- Advanced intermediate
- Research doctorate

<https://www2.ed.gov/about/offices/list/ous/international/usnei/us/edlite-structure-us.html>

EDUCATION



CHAT FEATURE

SHARE GIVE ME SOME DEGREES, STUDIES,
TOPICS, ETC. THAT ARE NEEDED TO DO
WHAT WE DO...

STUDIES, DEGREES, AND EDUCATION TOPICS



SAFETY

CHEMISTRY

BIOLOGY/ZOOLOGY

MICROBIOLOGY

PHYSICS

ENGINEERING (CHEM, MECHANICAL, ETC.)

BIOSCIENCES

EARTH SCIENCE

ENVIRONMENTAL SCIENCE

ENVIRONMENTAL MANAGEMENT

- OCCUPATIONAL MEDICINE
- METEOROLOGY
- POLITICAL SCIENCE
- PUBLIC HEALTH
- TOXICOLOGY
- EPIDEMIOLOGY
- FIRE SCIENCE
- OTHERS.....

H&S COLLEGES/UNIVERSITY



<http://www.abih.org/become-certified/abet-accredited-ih-programs> --- no more
programs” at Harvard, Univ. of North Carolina, UMass (Amherst, Lowell), Univ. South
Carolina, Temple, Drexel, Hunter College, others. NIOSH training grants, lack of
students, lack of profs, no tenure...no accreditation.

<https://www.abet.org/accreditation/what-is-accreditation/why-abet-accreditation-matters/>

fety

<https://www.assp.org/students/accredited-academic-programs>

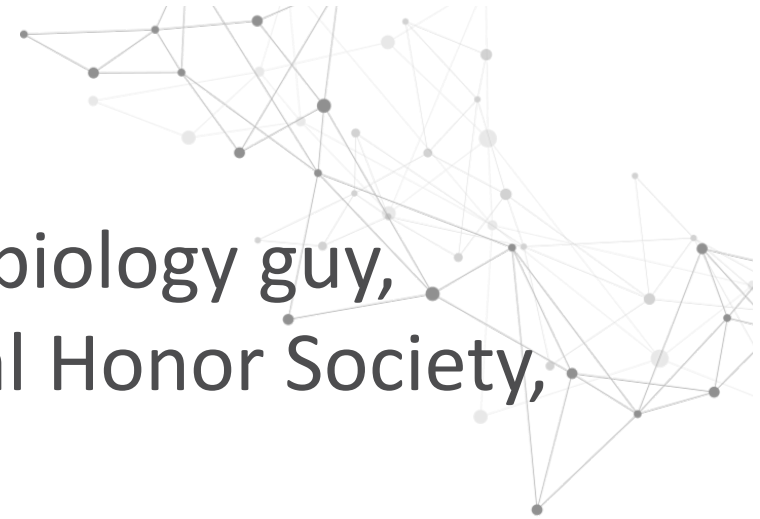
<https://collegevaluesonline.com/rankings/occupational-safety-degree-programs/>

Environmental – Too many

MY EDUCATION

High School – Graduated 1976 -- a science/biology guy, microbiology, head of Science Club, National Honor Society, had a good guidance counselor

Undergraduate – Graduated 1980 Univ. Rhode Island, BS in Zoology (close to two other minors), initially wanted to be a marine biologist, then got interested in “pollution control”, took some marine affairs, did some work study, and basic civil engineering classes. A couple of good professors, no real guidance counselor



MY EDUCATION



Graduate – 1982 Univ. South Carolina, MSPH Environmental Health Science (Industrial Hygiene) ABET-accredited program on a USPHS/NIOSH grant, started out in water quality management then to IH. Two work internships (Allied Chemical and Eastman Kodak) Research and thesis. Local section of AIHA and went to conferences. National conference in 1983. Good profs, good diverse program....but the IH program eventually disappeared.

MY CERTIFICATIONS AND OTHER STUFF



NESHTA CET...now BSCP CIT (late 1980s)

ABIH CIH – comprehensive (early 1990s)

Board Member and Past President of the New England Chapter of AIHA

Clandestine Drug Lab Safety Trainer for the DEA

AIHA Fellow

AIHA Distinguished Lecturer

Adjunct Professor – Univ. Rhode Island – Geosciences – College of the Environment and Life Sciences (CELS) since 2013

Dean's Advisory Council CELS

Visiting Lecturer – Massachusetts Maritime Academy (MMA)

MMA MSSEP Advisory Council

Able to get MMA eligible for AIHA Scholarship even though not ABET accredited

ENVIRONMENTAL CAREERS – CB'S FORECAST



- LOOK BACK APPROX. 50 YEARS AGO.....AND WHAT'S HAPPENING IN THE WORLD TODAY <https://www.epa.gov/history>
- EXISTING “ISSUES” WILL TAKE QUITE WHILE TO FIX AND NEW ONES WILL ARISE
- FEEL GENERALLY GOOD ABOUT CAREERS
- MY EXERIENCE... NEED IMPROVED COMMUNICATION, COLLABORATION, PARTNERSHIPS, FINANCIAL SUPPORT NEEDED WITH LOCAL/NATIONAL “E” ASSOCIATIONS AND “BUSINESSES” WITH SCHOOLS (High School and up)
- What students study vs. what their degree(s) is/are and employment opportunities
- Teachers are Academics – Need our real world input

SAFETY CAREERS – CB'S FORECAST

LOOK BACK 50 YEARS AGO...AND TODAY <https://www.osha.gov/osa50>

NEVER GOING AWAY.... FEEL GOOD ABOUT CAREERS...STRENGTH IN NUMBERS

INFRASTRUCTURE IMPROVEMENTS/CONSTRUCTION SAFETY

CONCERNS ABOUT INDUSTRIAL SAFETY KNOWLEDGE, EXPERIENCE, AND CAPABILITIES OF STUDENTS

NEED IMPROVED COMMUNICATION, COLLABORATION, PARTNERSHIPS, FINANCIAL SUPPORT WITH LOCAL/NATIONAL "H&S" ASSOCIATIONS WITH SCHOOLS....What students study vs. what their degree(s) is/are and employment opportunities

I SEE AN OESH/OEHS PROFESSION



IH CAREERS – CB'S FORECAST



OSHA at 50..same as safety

VERY, VERY CONCERNED ABOUT CAREERS SOLEY IN THIS PRACTICE....those who have or can expand their toolbox to include safety and or environmental will be in much better shape..

IMPROVED COMMUNICATION, COLLABORATION, PARTNERSHIPS, FINANCIAL SUPPORT WITH LOCAL/NATIONAL "H&S" ASSOCIATIONS WITH SCHOOLS....What students study vs. what their degree(s) is/are and employment opportunities

ASSP

Approx. 36,000 members worldwide (2021)

Typical Age = 46-55

>43% have more than 20 years of experience

3X more men than women

Educational “liaison”.....?

<https://coldencorp.sharepoint.com/:b:/s/share/EVw86rJiOexNrus8zoeMRFQBkos2ZJgVi55QiEIK2Sm3uQ>



NSC

Annual NSC salary survey

<https://www.safetyandhealthmagazine.com/articles/20389-salary-survey-2020>

Educational “liaison”?



AMERICAN INDUSTRIAL HYGIENE ASSOCIATION AIHA



Approx. 8,500 members worldwide 2021- **Approx. 13,000 members**
2022

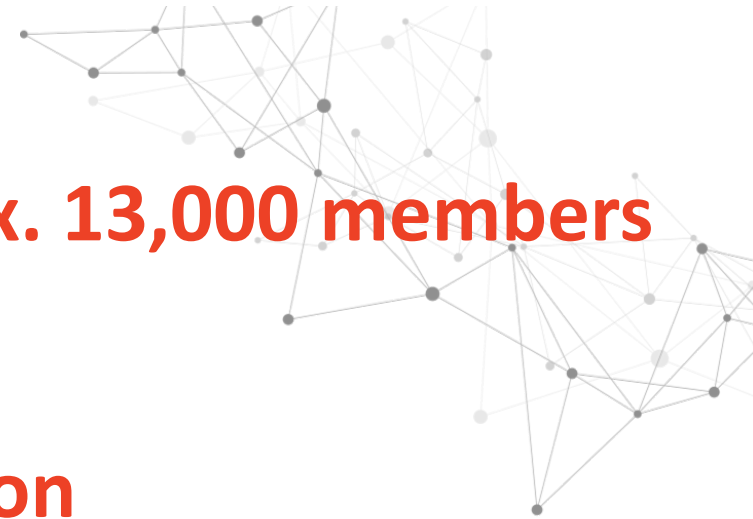
Officially part of American Public Health Association

Initiative – Increase interaction with academic institutions

<https://www.oehscareers.org/>

SUE MARCHESE (MANAGING DIRECTOR, MARCOMM)

marcheselewis@aiha.org



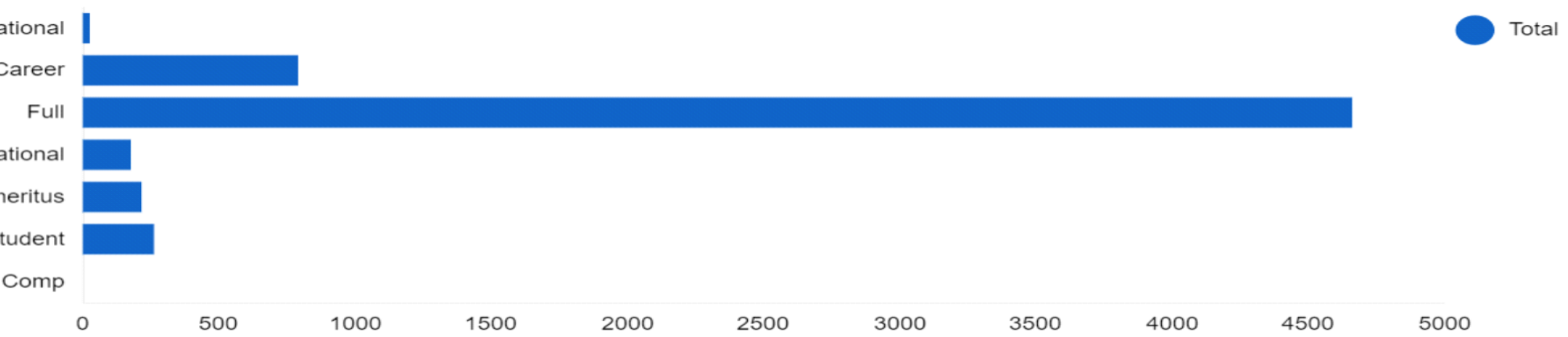
NATIONAL MEMBERSHIP DASHBOARD

Total National/Local Section Membership: 8,500**
Total # Local Sections: 67
Total # Student Local Sections: 23

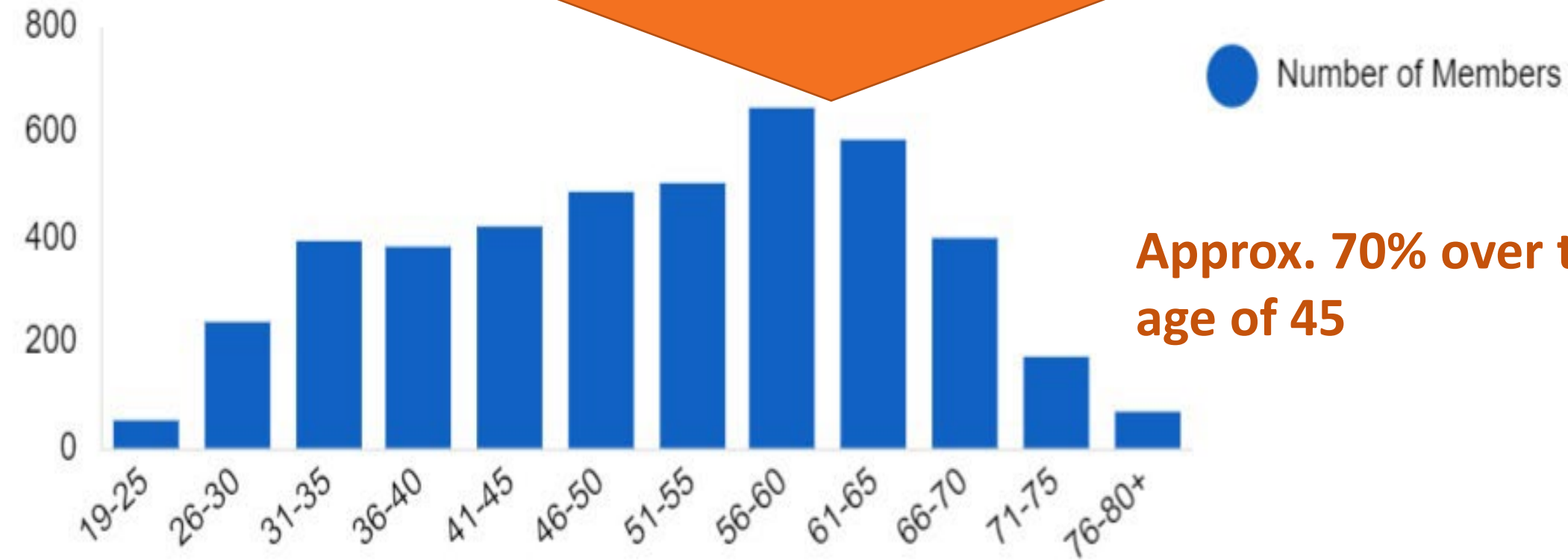
Local membership is not required. Local Sections are only required to share their officers' rosters with National.



Membership by Class

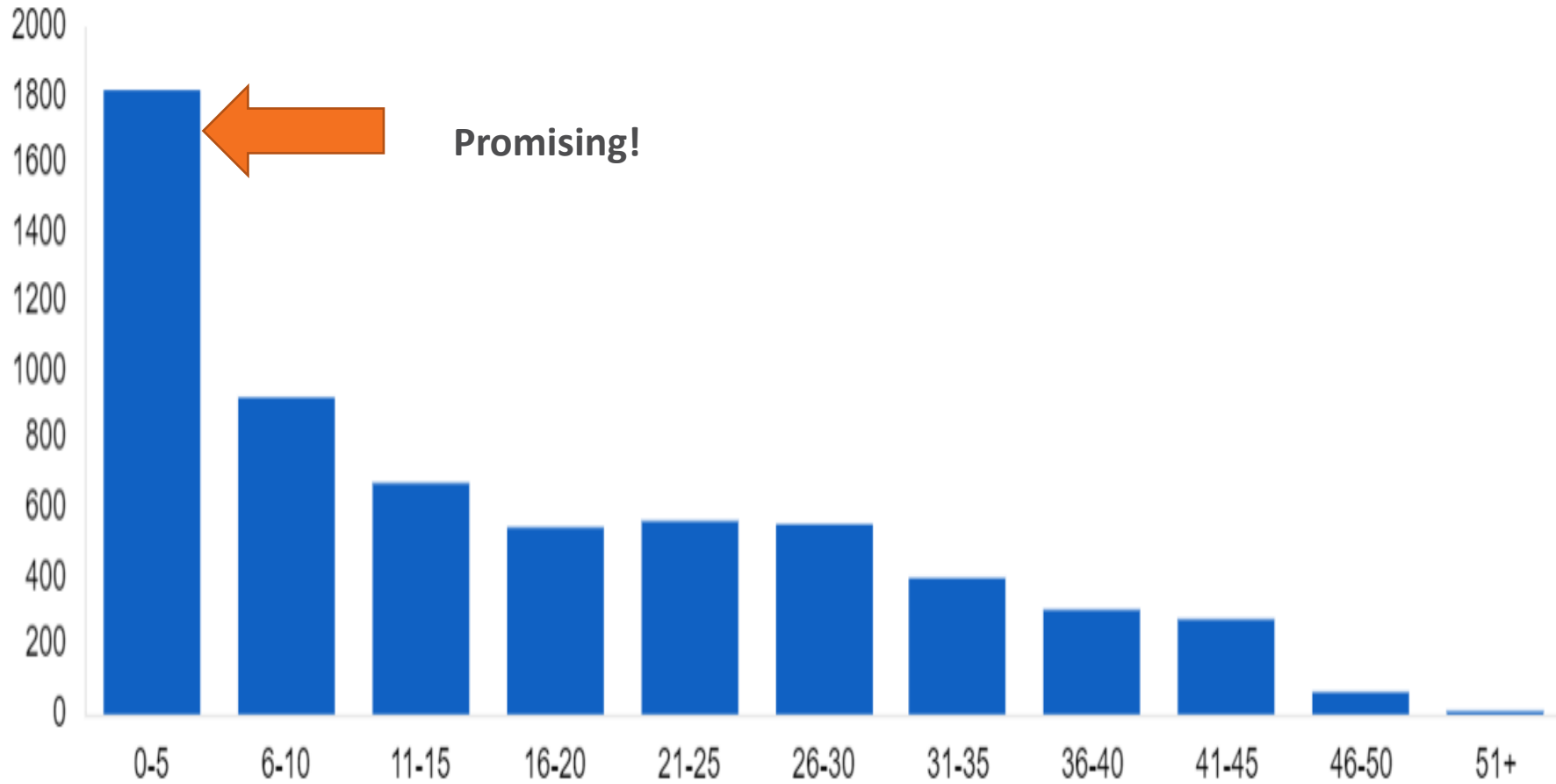


2021 Membership by Age



Approx. 70% over the age of 45

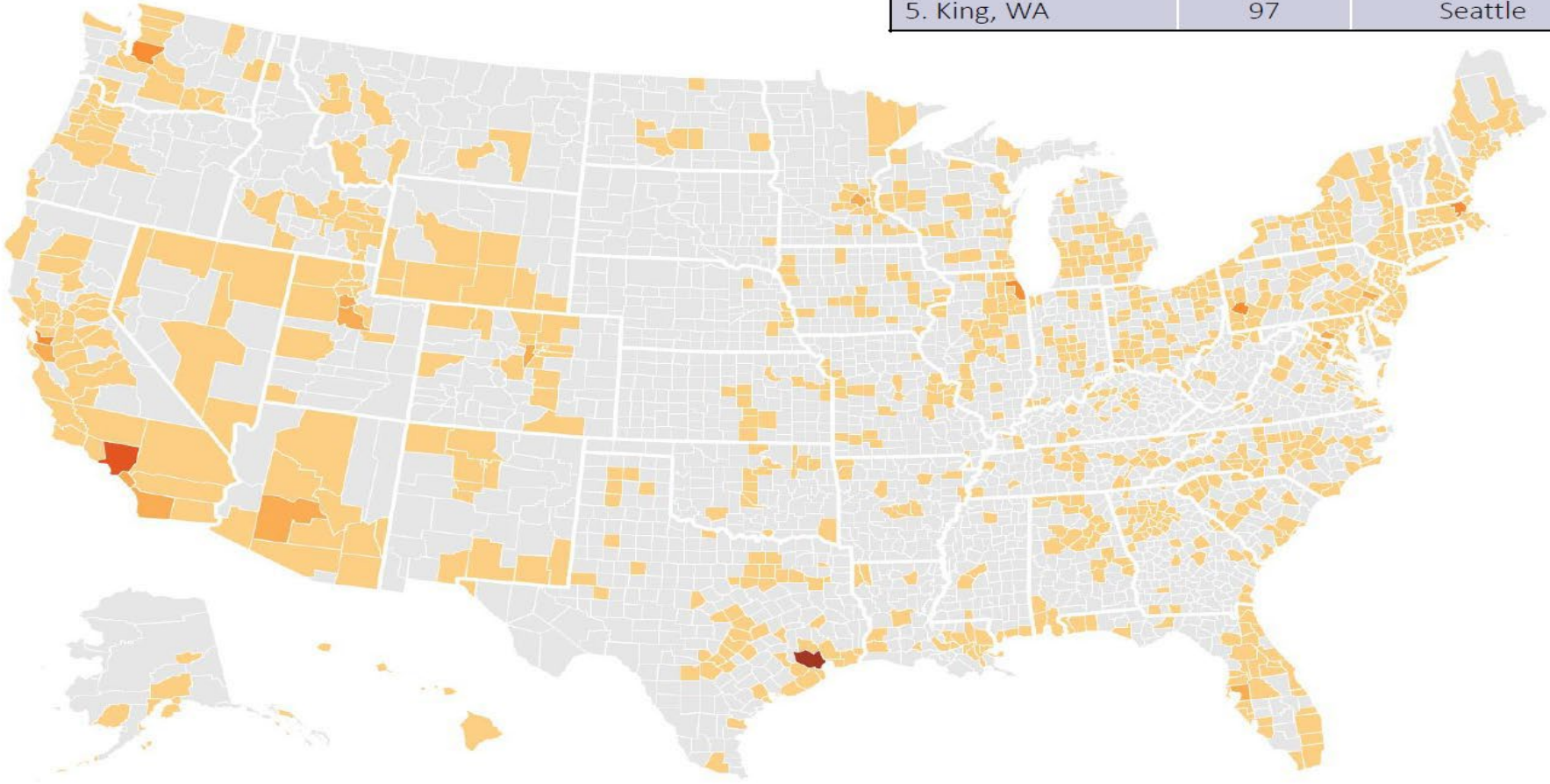
2021 Membership by Years



CHA Members

766 US Members

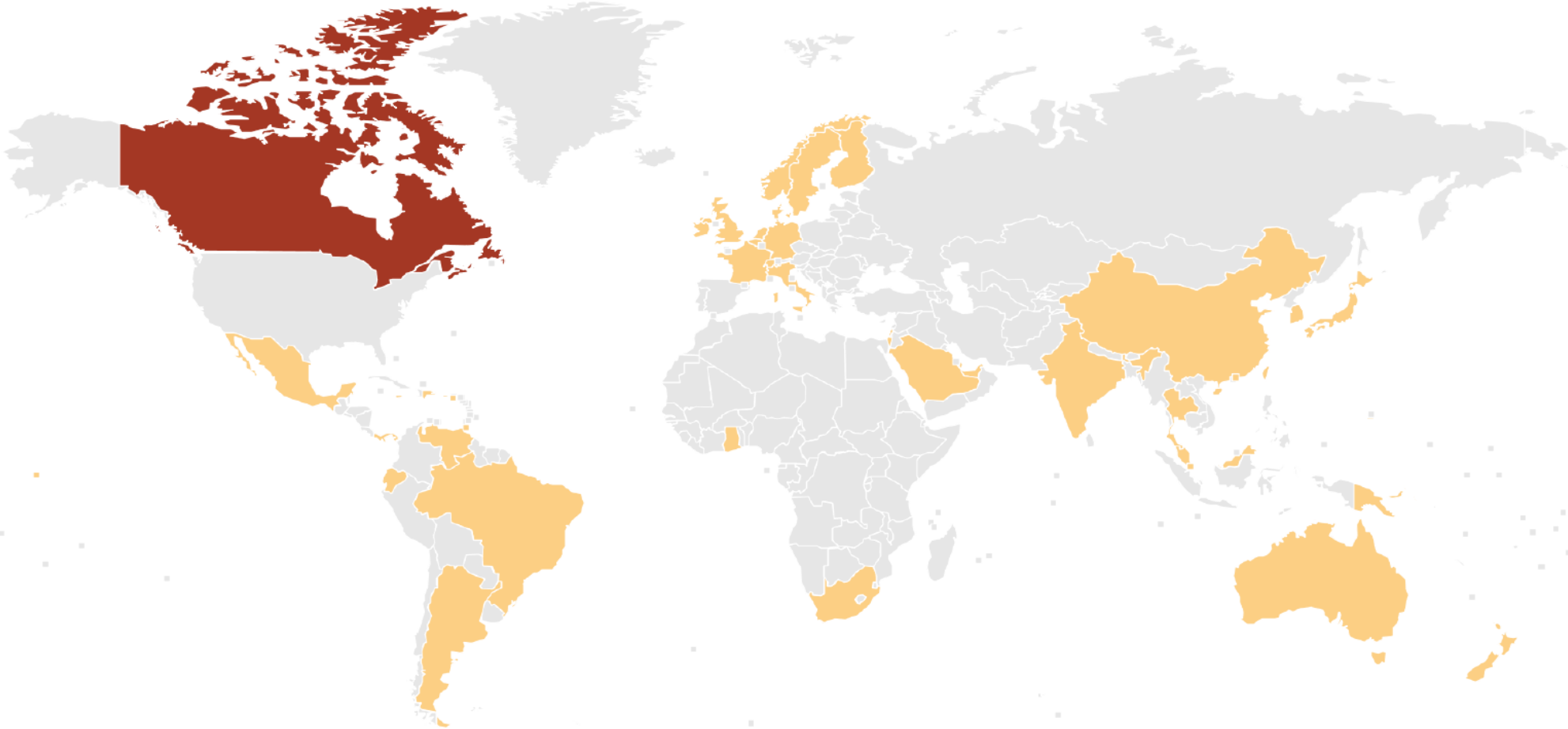
Top Counties	Members	Major City
1. Harris, TX	221	Houston
2. Los Angeles, CA	135	Los Angeles
3. Cook, IL	104	Chicago
4. Middlesex, MA	100	Boston
5. King, WA	97	Seattle



AIHA Members (International)

695 International Members

Top 5 Countries	Members
1. Canada	506
2. Australia	34
3. Japan	16
4. Singapore	13



BGC-ABIH



The [Board for Global EHS Credentialing](#)[®] ([BGC](#)[®]) offers the Certified Industrial Hygienist[®] (CIH[®]), Certified Associate Industrial Hygienist[®] (CAIH[®]) – (going away), Qualified Environmental Professional (QEP[®]), Environmental Professional In-training (EPI[®]), Certified Professional Environmental Auditor[®] (CPEA[®]), Certified Process Safety Auditor[®] (CPSA[®]), and the Certified Professional Product Steward (CPPS).

BGC



- “BGC only keeps essential information needed to maintain each practitioner’s certification in accordance with our requirements for ANAB/ANSI accreditation.
- They do not keep information about age.
- They maintain statistics on the location of certified practitioners

BGC



Videos to learn more about credentials:

“What is a CIH?” at <https://youtu.be/M-7FXpWfxrY>.

“QEPs and EPIs monitor and protect the world we live in” at

<https://www.youtube.com/watch?v=K2YhQ5qQPac>

BCSP?

Approx. total number of ASP/CSP national only – ASP 6,200, CSP – 21,300

Approx. % Age breakdowns

4 - 5%

30 - 16%

20 - 36%

10 - 27%

4 - 13%

3 - 3%

% over the age of 40

Average about 125 CIHs that apply for the CSP annually

Geographical demographics of where our members are located (Unable to provide at the time)



ENVIRONMENTAL ORGANIZATIONS



AWARE OF ONE “ASSOCIATION” TO CAPTURE ALL

covers some

PNET

[://www.ahmpnet.org](http://www.ahmpnet.org) (CHMM)

A

[://www.naem.org/](http://www.naem.org/)

ors

[://www.theiia.org/centers/ehsac/Pages/welcome.aspx](http://www.theiia.org/centers/ehsac/Pages/welcome.aspx)

MY APPROACH AND EFFORTS TO AID THE CAUSE?

STEM presentations at my old high school

- What I do for a living --- “What’s a Career in EHS”

(with air monitoring, sound level meter and PPE demo)

- “Worst Plant” presentation

Please contact me briggs@colden.com if you would like a copy of these to use (there is a small fee of \$25 for each which is donated to my URI Hazwoper program)



Y APPROACH AND EFFORTS?

- Reconnection with URI back in 2012
- Volunteer/Now Adjunct Prof - HAZWOPER on Steroids
- Main class 8 years; refresher for 7 years
- Team teach with other New England EHS pros (different backgrounds, CM pts)
- YouTube video
- CELS Career Fair
- Env. Pros Night
- Young Env. Pros Night
- Established relationships with RISEP (www.risep.org), EBCNE (www.ebcne.org), and numerous EHS consultancies and agencies in the New England region
- Campus newspaper coverage and notifications across university



THE
UNIVERSITY
OF RHODE ISLAND



MY APPROACH AND EFFORTS?



Presentations: “EHS Career and Freeze Frame”

- *Keane St. College*
- *ASU*
- *E. Kentucky University*
- *Mass Maritime Academy*



MY CHRISTMAS WISHES FOR 2022

MY CHRISTMAS WISHES 2022



CHANGE THE NAME OF INDUSTRIAL HYGIENIST TO

**OCCUPATIONAL/ENVIRONMENTAL HEALTH
PROFESSIONAL**

OEHP

MY CHRISTMAS WISHES



STRENGTH IN NUMBERS AND FOCUS

cial educational outreach emphasis program for the next 5 years
t just to existing IH, public health, environmental and safety
rams

MY CHRISTMAS WISHES



STRENGTH IN NUMBERS



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

OLDEN
CORPORATION

MY WISHES



MY BIGGEST CHRISTMAS WISH & HOPE.....

EACH OF YOU MAY HAVE HEARD SOMETHING WHAT WE COVERED THAT YOU CAN DO/LEAD/COORDINATE PERSONALLY TO MAKE SURE WE MAINTAIN THE OEHS PROFESSION.....

The associations have the tools but have very limited resources.

You all have the knowledge, skill, sets, contacts, ...you can make the time.



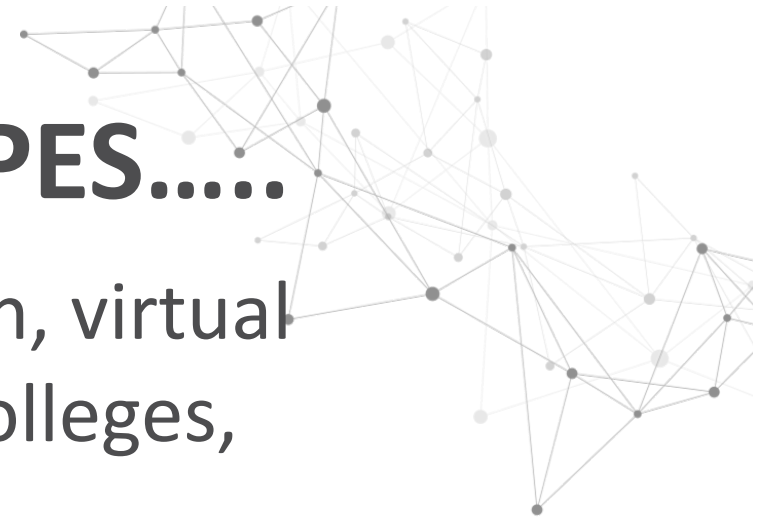
MY BIGGEST WISH & HOPE.....



- Outreach at all levels
- Any support to those colleges which are offering safety/IH/Env programs **AND OTHERS (this is the feedstock)**
- Ongoing virtual degree programs (do need HANDS-ON) with schools

MY BIGGEST WISHES & HOPES.....

- Education/orientation at schools: in person, virtual
- Jr high, high, vocational/tech, community colleges, colleges and universities (undergrad/grad)
- Science classes, biology, chemistry, whatever...doesn't have to be a safety or IH program



MY BIGGEST WISHES & HOPES.....



- Take your parent to school nights
- Tours of your workplace....."field trips"
- Student nights with presentations at your local section meetings
- Connect with a college/university for internships and job opportunities at your workplace - Mass Maritime...

MY BIGGEST WISHES & HOPES.....



Interacting/engaging with trade associations (safety, IH, nv)...LOCAL RISEP, EBCNE. Get student, young pro involvement

Veterans from the military who have done their time

Scholarships

Science fairs

Take your parent to school nights

MY BIGGEST WISHES & HOPES.....



Student nights with presentations at your local OEHS section meetings

YOU MOST LIKELY DO SOME TRAINING ALREADY AS PART OF YOUR JOB

REMEMBER YOU ARE NOW A SALESPERSON/MARKETING PERSON

MY BIGGEST WISHES & HOPES.....



YOU MOST LIKELY DO SOME TRAINING
ALREADY AS PART OF YOUR JOB

REMEMBER OEHS HAS A
SALES/MARKETING COMPONENT!



- Continue our “mission”

AL

Working with management at all levels to ensure that a safe and healthy work environment is provided and maintained



**Thank you
very much!**

**Corey Briggs, CIH, CIT, AIHA Fellow
AIHA Distinguished Lecturer
Colden Corporation
Boston Regional Office
Quincy, Massachusetts**

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617-259-0172**

QUESTIONS?



CELEBRATING 25
YEARS

COLDEN

CORPORATION

Occupational Health, Safety &
Environmental Consultants