

Emergency Breathing Safety Systems (EBSS)

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Goals Determined by Task Group

To better understand how EBSS is utilized throughout the country

- Department type
- Training provided
- SOPs
- Familiarity
- Successes or failures of EBSS usage

Emergency Breath Safety System (EBSS)

Most Efficient Method?

SURVEY

- Multiple Choice
- Fifteen Questions
- Option available to make comments
- Offered anonymity
- Allowed for follow-up



Emergency Breath Safety System (EBSS)

- Went Live 2nd Week in April
- Received 1,962 Responses
- 629 Respondents Posted Comments
- Invitations to Respond Were Solicited by:
 - The Secret List
 - IAFC Health and Safety Section
 - Fire Department Safety Officer's Association (FDSOA)

EBSS Survey

Not a scientific sample

Convenience sample

Problems with terminology

- RIC-UAC
- EBSS
- Proprietary systems

Reluctance to follow-up

Emergency Breath Safety System (EBSS)

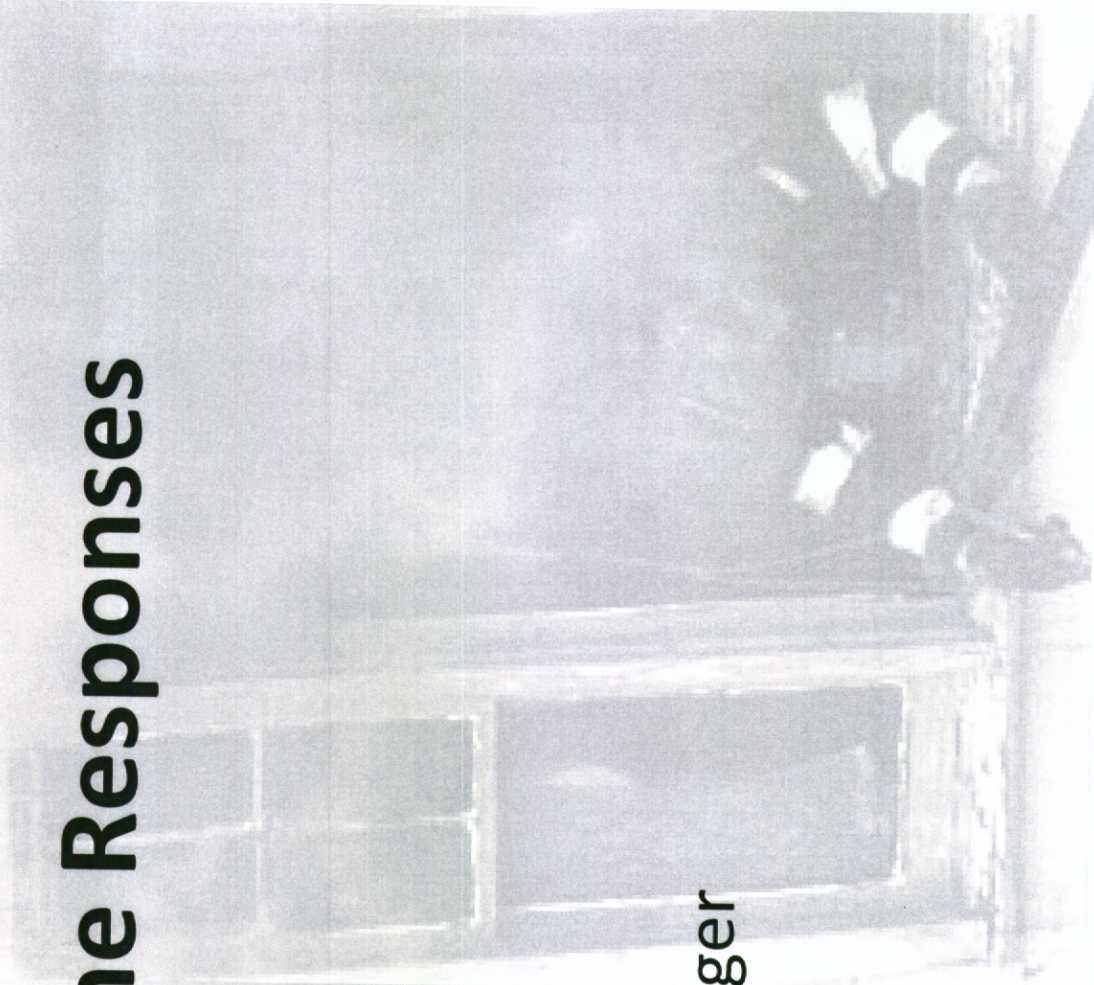
Department Type Representation:

- 42% Career
- 29% Volunteer
- 28% Combination
- 1% Other

Emergency Breath Safety System (EBSS)

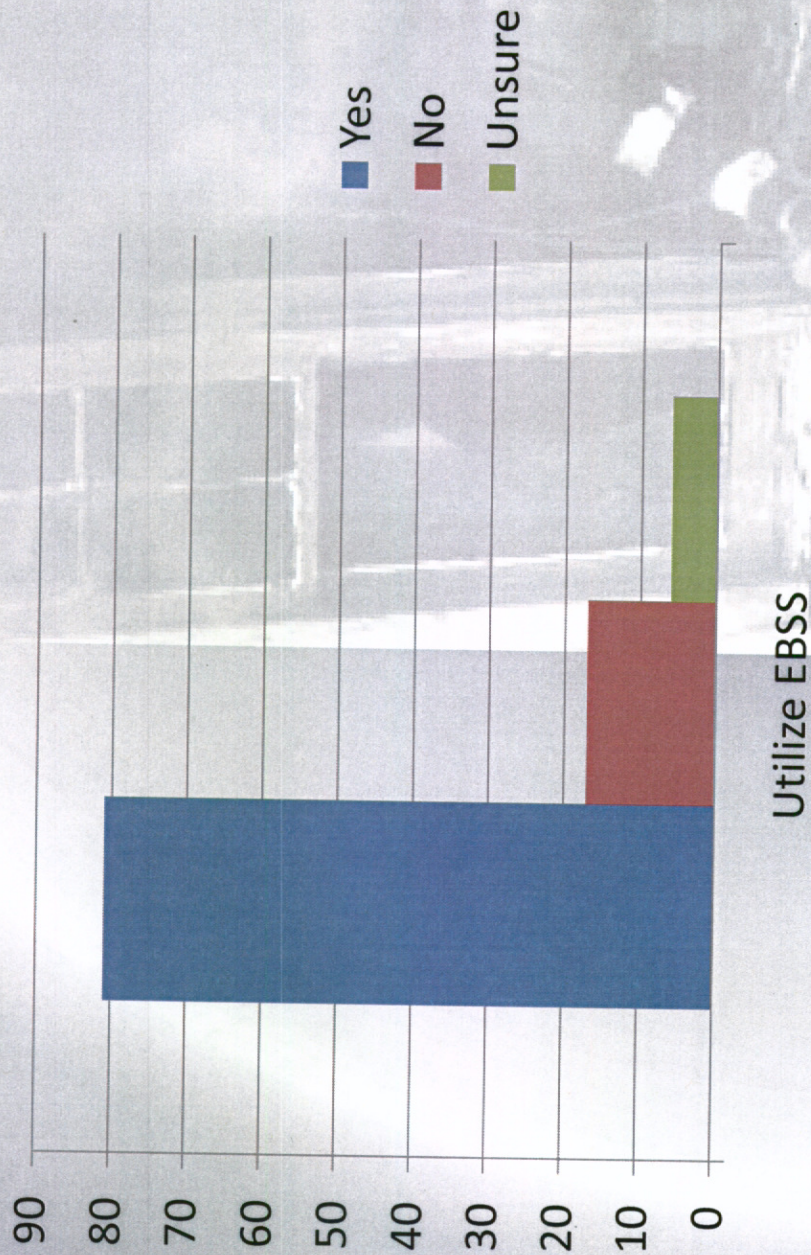
Multiple-Discipline Responses

- 32% Line Officers
- 28% Firefighter/Rescuer
- 25% Chief Officer
- 17% Training Officer
- 12% Safety Officer
- 10% SCBA Program Manager
- 9% Engineer
- 6% Other

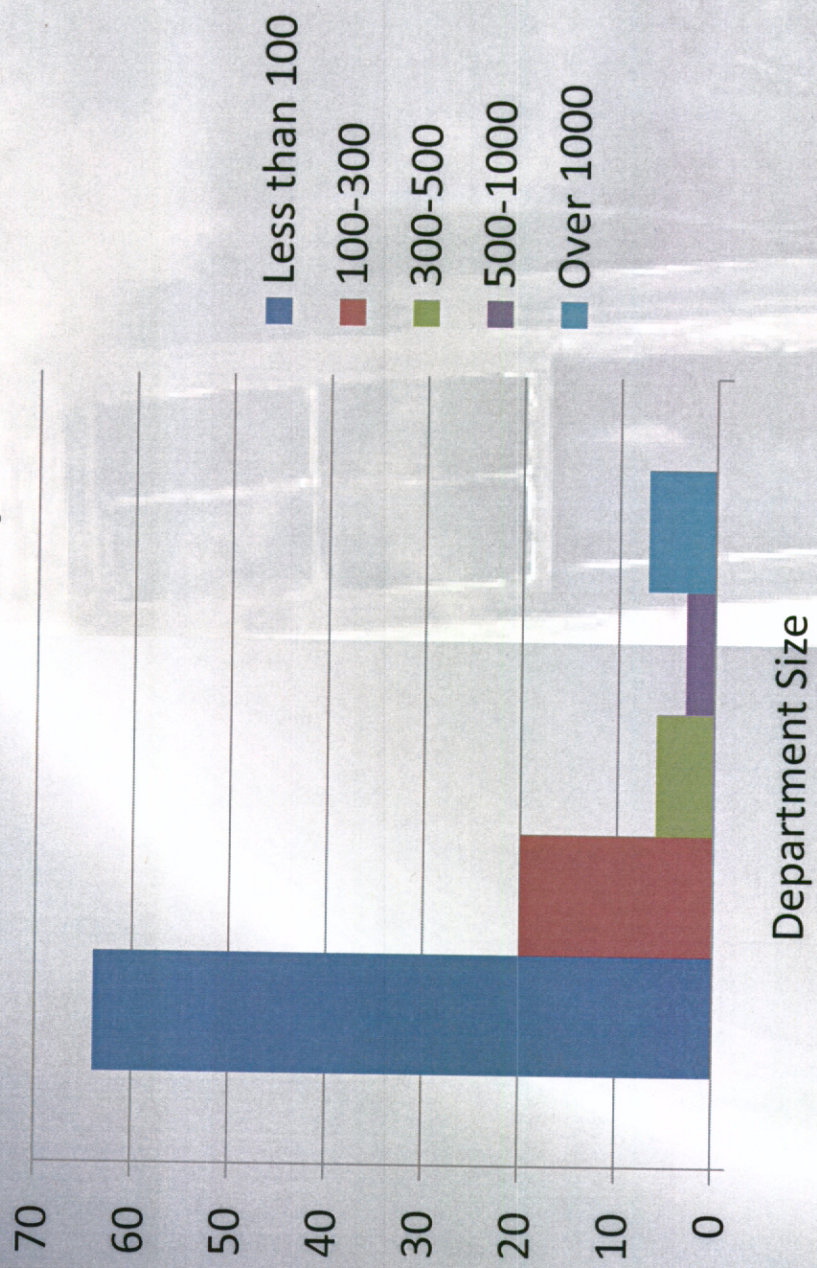


Emergency Breath Safety System (EBSS)

Of respondents, what percentage currently use EBSS?



Emergency Breath Safety System (EBSS)



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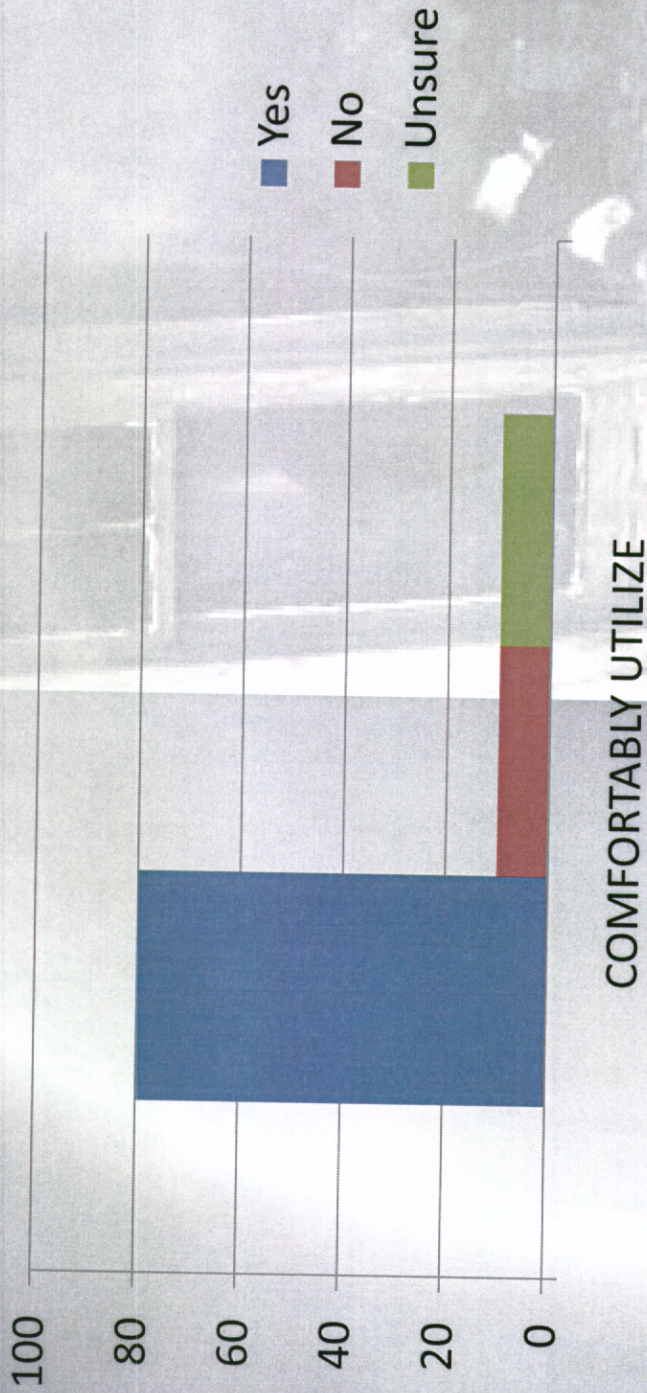
Training and SOPs

- Groups almost equally divided on Departments having an SOP (47% Yes; 47% No; 6% Unsure)
- Almost all respondents had received training in one form or another:
 - 90% Hands-on Training
 - 80% Verbal Instruction
 - 60% Simulated Incident
 - 45% Written Instruction
- The majority train intermittently (47%); while 11% have only received training once.

Emergency Breath Safety System (EBSS)

When asked:

- If you found yourself in a low-air, mayday situation, do you believe you are familiar with your EBSS to comfortably utilize it?



Emergency Breath Safety System (EBSS)

When asked:

- Do you believe the EBSS is an important component of SCBA?

EBSS Important



EBSS Comments

629 out of 1962 respondents submitted comments.

- 244 comments generally positive
- 81 comments generally negative
- 114 suggestions
- 190 neutral comments

EBSS Comments

Positive Comments

EBSS is an important safety device that should be:

- Mandatory 60
- Available Option 44

EBSS is very important for Firefighter Safety: 105

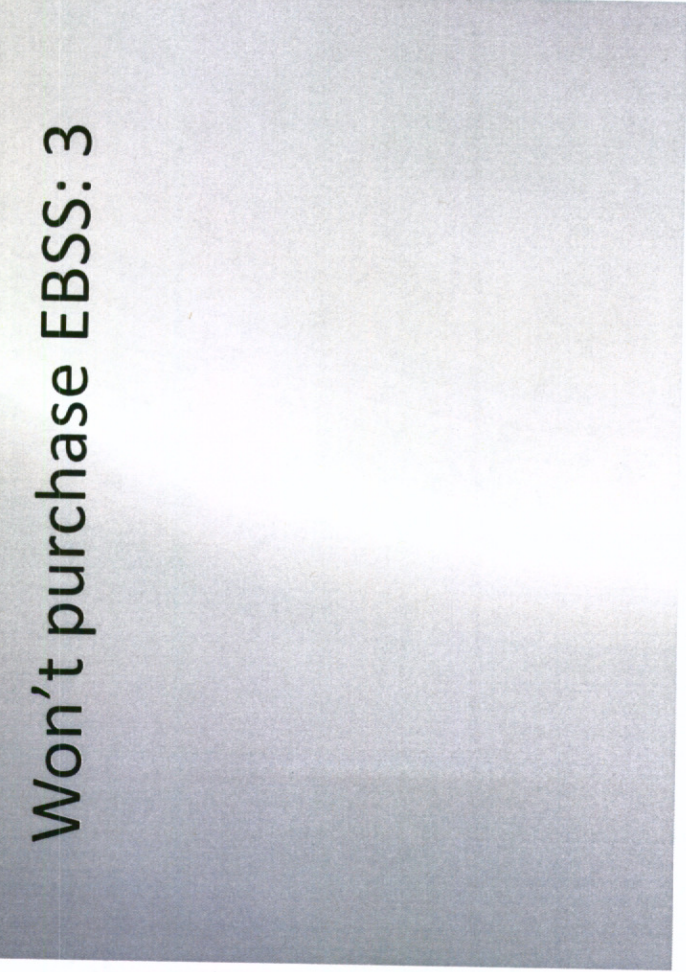
Only device that works with a first stage regulator failure: 5

EBSS easier to manipulate than UAC connection: 4

Will not use UAC, feels rapid fill is safety issue: 3

EBSS Comments - Negative

- Quit adding devices and complicating the SCBA: 8
- No money for any purchase or costs too much: 13
- Never had EBSS, never needed, don't see the need: 10
- Will not use because of NIOSH prohibition: 2
- Won't purchase EBSS: 3



EBSS Suggestions

EBSS needs to be standardized with all manufacturers.

- Fitting / Connection 72

Need training information, use policy, SOPs, frequency of training: 75

Connection needs to be easier with gloved hands: 33

Hose Length should be longer: 10

Connections/Fittings need to be illuminated or luminescent: 10

Storage Pouch needs to be easier to use: 2



EBSS Suggestions

- Wants a universal second stage regulator connection: 4
- Need a separate escape cylinder: 2
- 1200 liter air cylinders too small for use with EBSS: 1
- Firefighters need an escape canister / filter instead of EBSS: 2
- Needs air pressure bleed down to facilitate SCBA cylinder exchange: 1
- Needs control over which air cylinder is being used when EBSS is connected: 1
- Eliminate HUD: 1

EBSS USE

33 Respondents said they had used EBSS or knew of someone who had used EBSS

3 types of reports: 21 out of 33

- Connect & Exit (17)
- Connect & Protect in Place (2)
- Failed Connection (2)

EBSS Terminology

Connect & Exit

- One firefighter out of air, connected to a second firefighter's air supply

Connect & Protect in Place

- Rapid Intervention Crew connected through RIC-UAC, maintained air supply until victim extricated.



EBSS Use – Connect & Exit

- FF out of air in a basement deployed the system with partner and exited the basement.
- The firefighter ran low on air and called a Mayday to request assistance. Utilized the EBSS hose off the firefighter with adequate air and attached hose and exited the structure.



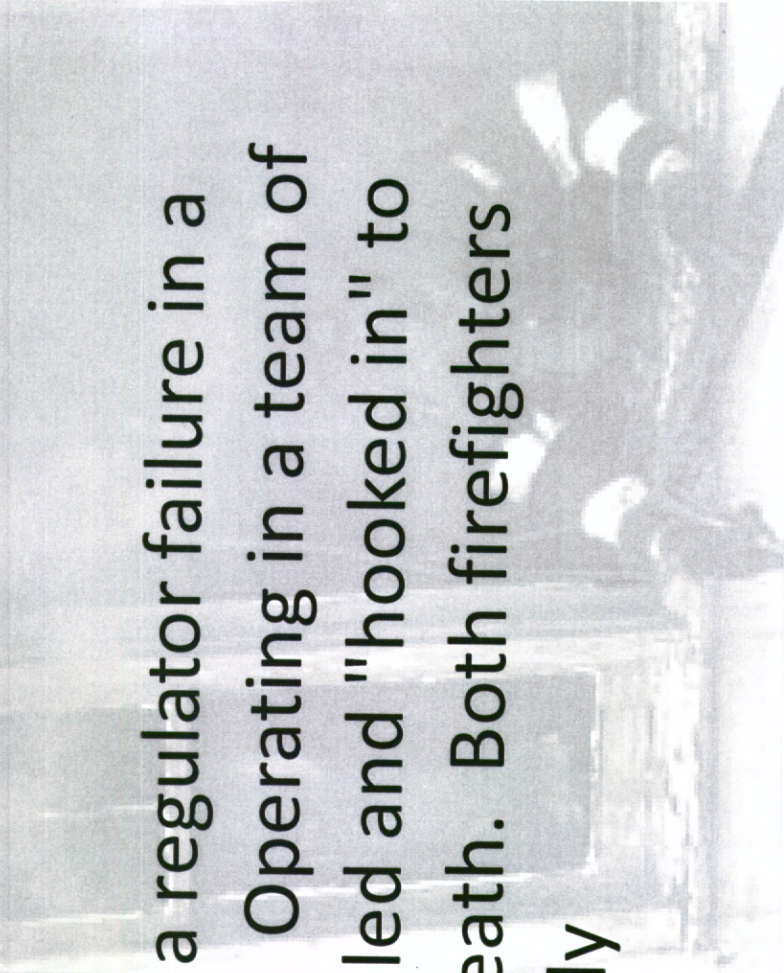
EBSS Use – Connect & Exit

- Firefighters became trapped/disoriented during a search of the second and third floor of a working fire in a townhouse. The Rapid Intervention Team (RIT) company used EBSS on one firefighter found in a hallway.
- Ran out of air in a basement and deployed EBSS successfully and escaped with partner.



EBSS Use – Connect & Exit

- Rookie FF ran low on air and vibe-alert went off. Rookie panicked and sucked mask to face. Senior FF had to use buddy-breather to calmly remove rookie.
- Firefighter experienced a regulator failure in a hazardous environment. Operating in a team of two, the firefighter signaled and "hooked in" to the adapter to buddy breath. Both firefighters exited the structure safely



EBSS Use – Connect & Exit

A firefighter and his Lt. were searching an attic bedroom under smoky conditions and the air pack failed. The firefighter activated his pass device and disconnected his air line and advised the Lt. of the problem. A mayday was issued with current location, and route of exit. The two hooked up utilizing the Lt's. air and headed out. We were met just down the stairwell by the R.I.T. and out we went!



EBSS Use – Protect in Place

- Bonus room collapsed on top of a FF operating in a garage, FF was able to declare a Mayday and once found was hooked up to a EBSS while extrication was performed.
- Trapped in lean-to collapse of residential garage. EBSS until extricated by RIT.



RIC/UAC Use – Protect in Place

Personnel were in an IDLH atmosphere when they fell in a below grade work area. A RIT crew responded to the down firefighter and provided additional breathing air by transfilling from the RIT pack to the downed firefighter's SCBA cylinder. The downed firefighter was immobilized for extrication and removed from the hazard area without incident.

