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WHERE LABOR & SAFETY TECHNOLOGY MEET

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BLANCHARD**Editor-in-Chief****HANDLE WITH CARE**

Employees are more likely to take workplace safety seriously if they feel valued as individuals.

It's certainly no surprise to learn—as one recent survey reveals—that workplace safety is very important to people, nor is it shocking that after two years of a pandemic, nearly eight in 10 employees say they're more concerned about their safety than ever before. Even so, I did a double take when the survey said safety on the job is more important to people than anywhere else, including while receiving medical attention, while socializing or while on vacation. In fact, safety while at work ranks even higher in importance than while living your life.

Those are some of the takeaways from AlertMedia's "The State of Employee Safety in 2022," a report based on a survey of more than 2,000 U.S. workers. Besides stating the obvious—that workers want to feel safe when they're at work—the report points to a disturbing trend: barely half (54%) of workers surveyed believe their safety is extremely important to their employer. Another 38% feel their safety is only somewhat important to their company, while 9% think their safety is either not very important or not at all important to their employers.

And that, of course, can lead to very dangerous situations when employees are expected to follow safety protocols. If an employee feels their company doesn't care about their safety, why would they ever listen to you? "Everyone who really cares about you wants you to flourish," observes motivational speaker Matthew Kelly. It's not enough for workers to go home every night with all body parts intact—they want to feel inspired by the job and appreciated by their managers. That's an admittedly pretty high bar to reach, and as safety leaders know all too well, even on a good day, workers don't always do what they're supposed to do. But if workers feel that their safety and their worth as individuals aren't important to their companies, it makes a safety leader's job even more difficult than it already is.

Besides believing their bosses are apathetic toward them,

there are other reasons why employees might resist or outright refuse to do what you ask them to do. Sharon Lipinski, CEO of Habit Mastery Consulting and a speaker at last year's ASSP Safety 21 show in Austin, Tex., outlines some of those other reasons:

- Your employees are uninformed, especially when it comes to new safety procedures or policies your company is introducing. "This is a temporary situation," Lipinski points out, "so you need to make sure that they're getting the most accurate information directly from you—not from co-workers and definitely not from social media."
- Confusion, which could also reflect a lack of confidence. If an employee doesn't understand the directions, chances are good they're not going to respond properly.
- Obstacles. It could be a language barrier, or poorly fitting PPE, or inclement weather or many other things that could impede an employee's ability to properly follow safety procedures.
- Know-it-all types. Throughout the pandemic, we've heard from many instant experts who "know better than you" what caused COVID-19 and how to best protect the workplace from it. Lipinski recommends that rather than openly challenging their opinions, safety leaders should make it clear they're open to learning from all sources of information, but that ultimately, as the safety manager, their policies must be followed.
- The "it'll never happen to me" types who believe in the myth of their own invulnerability and wrongly conclude that just because they're never gotten hurt before, they never will.
- And there are the rebellious types who have an attitude of "don't tell me what to do."

How do you effectively manage a workforce with so many different personality types and viewpoints? According to Lipinski, the key is good communication, which has to be honest, transparent, accountable, consistent and frequent. Safety leaders who focus on the values their employees find most important, and who involve employees in problem-solving, will ultimately develop the kind of safety culture where the company not only respects and protects its employees, but where the employees equally respect their managers and do all they can to protect themselves and their co-workers, and where the entire workforce—managers and employees alike—can flourish.

Send an e-mail with your thoughts to dblankhard@endeavorb2b.com.

We've launched a new podcast series called "Talking EHS," and the first episode features a conversation with long-time (and recently retired) *EHS Today* columnist Terry Mathis on where the safety profession needs to go in the years ahead. Those of you who've enjoyed reading Terry's columns over the years will be equally enlightened by the anecdotes and lessons learned he shares in the podcast. You can find "Talking EHS" on the ehstoday.com website, or on many of the major podcasting platforms.





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OSHA Hikes Penalty Amounts

By David Sparkman

In January, the Occupational Safety and Health Administration (OSHA) announced a 5% increase in the civil penalties assessed for violations of its regulations, but worse may yet come if certain legislative reforms are adopted by Congress.

As of Jan. 13, the maximum penalty for willful or repeated violations rose to \$145,027, a nearly \$10,000 increase from the 2021 maximum for the same violations. The maximum penalty for failure-to-abate violations increased to \$14,502 for each day after the abatement deadline where no abatement has taken place. The maximum penalty allowed for serious, other-than-serious, and posting requirements violations is now \$14,502, nearly \$1,000 more than last year.

States that operate their own Occupational Safety and Health plans are required by law to adopt maximum penalties levels that are at least as effective as federal OSHA's penalties, observe attorneys Michael T. Taylor, Amelia A. Esber and Adam Roseman of the law firm of Greenberg Traurig.

"It is important for employers to be cognizant of these increases," they stress. "While it might sometimes seem like an attractive option to simply accept a serious penalty and pay the \$14,502 fine instead of paying to challenge the citation, such instant gratification could pose issues (and serious financial headaches) for an employer in the future."

The attorneys add that this is particularly true when the time frame for challenging a citation is short, making the business decision on whether to challenge the citation that much more difficult. "It is important to consider that while the maximum penalty for a repeated violation is \$145,027, in the next few years, the maximum penalty could reach over \$150,000 after inflation adjustments are applied."

It is also routine for an employer to receive multiple violations in one OSHA Citation and Notification of Penalty. Multiple penalties at \$145,027, let alone

any other penalty after inflation, could have drastic effects for a business and a worksite, Taylor, Esber and Roseman remind employers. "Therefore, employers should consciously weigh the potential exposure the inflated rates may pose in the future when considering whether to challenge serious violations today."



In addition, employers should keep a watchful eye on additional legislation to increase OSHA penalties that could be in the offing, according to attorneys Anna Little Morris and James Bolin of the law firm of Butler Snow.

They point to the Build Back Better (BBB) bill, which had been approved by the House of Representatives only to later be stymied in the Senate in late 2021. That measure's nearly 2,500 pages included some staggering increases in OSHA penalties. For serious violations, the maximum penalty would have gone from \$14,502 to \$70,000. For willful and repeat violations, the penalty would have

increased from \$145,027 to \$700,000.

The Democratic legislators who proposed these increases said they believe they are needed to provide penalties large enough to prove to be a real deterrent for employers that could be expected to commit these violations otherwise.

Although the massive BBB bill appears to be dead, President Joe Biden has said he intends to see parts of it reintroduced as separate pieces of legislation.

"Economic realities demand employer attention to this issue," Morris and Bolin declare. They also agree with the Greenberg Traurig attorneys that even the 2022 OSHA penalty levels should spur employers to strongly consider challenging an OSHA citation regardless of its seriousness. "With repeat violation penalties now climbing to almost \$150,000, it would be difficult for almost any company to financially sustain repeat offenses."

The current amounts are only going to rise, legislation or no legislation. Morris and Bolin note that since 2015, OSHA maximum penalty amounts have more than doubled.

In the past seven years, serious, other-than-serious and posting requirement violations are up from \$7,000 to \$14,502 per violation. Violations for failure to abate (assessed per day) have seen the same increase. Willful or repeated violation maximum penalty amounts also jumped from \$70,000 to \$145,027 per violation. **EHS**

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David Sparkman is founding editor of ACWI Advance, the newsletter of the American Chain of Warehouses Inc. He also heads David Sparkman Consulting, a Washington, D.C.-based public relations and communications firm. Prior to these, he was director of industry relations for the International Warehouse Logistics Association. Sparkman has also been a freelance writer, specializing in regulatory compliance and transportation.

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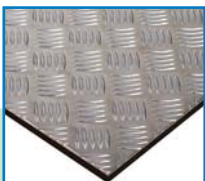
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Survey Highlights Safety Concerns Among Truck Drivers

By Nicole Stempak

A new survey reveals dangers drivers face—and it has nothing to do with what happens on the road.

The survey, conducted in 2021 by the Women in Trucking (WIT) association, asked professional truck drivers about driver safety and harassment, specifically toward women.

Slightly more than half (54%) of respondents strongly agreed or agreed that the North American trucking industry is safe for female drivers. Eighteen percent disagreed or strongly disagreed, and 28.5% had no strong opinion.

The survey asked respondents to share the locations where they perceived the most significant safety threat to female drivers. Those included:

- truck stops (87%),
- rest stops (85.5%),
- cab of their truck (75%) and
- shipper/receiver facility registers (74%).

One in four respondents (25.5%) reported having some formal training in self-defense, though WIT says the industry needs to prioritize safety training for female drivers.

One particular safety concern is part of the driver training process, during which newly hired drivers are paired with a trainer or experienced driver to help them improve their driving skills before employment is secured. This process ranges from a few days to a few weeks and requires extended close proximity. Forty-two percent of respondents say they are aware of a driver who has experienced harassment or assault as a result of sharing a cab with an opposite gender trainer.

“The proximity of the sleeper berth and personal quarters creates an atmosphere where privacy is often compromised,” said Ellen Voie, WIT President and CEO in the article. “In most cases, the driver trainer and trainee are unrelated and often previously unfamiliar with one another.

“We have not been able to identify any other mode of transportation that mixes men and women in areas intended for sleeping or personal activity. In trucking, a carrier is not allowed to use age, ethnicity, gender or other protected classification to segregate drivers.”

In 2016, a court ruled that the adoption of a same-gender training policy was a violation of the Equal Employment Opportunity Commission. However, 62.5% of survey respondents believe that a same-gender training program would encourage more women to pursue a career as a professional driver.

WIT and its management company and publisher MindShare Strategies conducted an online survey from July through September 2021. Nearly 450 professional drivers responded. Of them, about 47% work for for-hire motor carriers, 27% are owner-operators and 11% drive for a private fleet of a manufacturer, retailer or distributor.

WIT offers tips for female truck drivers safety, including bringing your own food and planning bathroom breaks to minimize the number of times female drivers have to get out of the cab and stop at facilities with the best reputations. The full article is available in the Fall 2021 edition of WIT’s magazine, *Redefining the Road*. **EHS**

Adrienne
Selko

Senior Editor



Your Employees Want to Know What You're Thinking

Feedback is vitally important, especially to younger workers, so a good safety leader should also be a good communicator.

Over the past two years, as a result of the pandemic, there is an increased level of trust between employers and employees that was built when everyone had to band together to adapt to different ways of working safely and doing business. Heightened communication was the tactic used to support the new structure.

It only makes sense to continue this level of success and cooperation and turn it toward feedback, which is something many companies only offer during performance reviews. But year-round feedback is a more effective way to both strengthen the employer-employee relationship and also to foster a safety culture that truly works for everyone.

Feedback is especially important to the younger generations. Over 65% of Generation Z (born 1997-2012) say they would like frequent feedback, according to a report for the Center for Generational Kinetics. How frequent? Sixty percent want multiple check-ins from the manager during the week, and of those 40% would like interactions with their boss to be daily or several times a day.

That's a lot of talking. So how should a safety leader structure these conversations? Ken Vaughn, president of New Horizons Partners, has worked with many companies over the years offering leadership in coaching and employee development. He offers these tips that safety managers can adapt to their situation, aimed at helping leaders become more comfortable in giving feedback and doing it well:

Feedback is best served warm. In other words, provide feedback as soon as possible after (or even during) the activity, whether it be a near miss, improper use (or non-use) of personal protective equipment or another lapse in safety adherence that needs to be addressed right away. The longer the time gap between the action and the feedback, the harder it will be for the recipient to tie the two together. The impact or benefit is much reduced if the person has difficulty recalling all of the facts regarding the action due to lapsed time.

Use your words wisely. Feedback should be a respectful, professional discussion aimed at producing a positive outcome. Our language and behavior should be in line with this objective. It's better to use the word "I" in demonstrating the impact and refrain from using the word "you," which can sound judgmental of the person rather than the behavior.

Provide feedback in digestible doses. If you expect your feedback to have an impact on future performance, it is better for the recipient to walk away with one action item regarding one safety issue. Storing up several items for discussion results in a confusing mess for the recipient to sort out after the discussion.

Focus on performance, not personality. Always deliver feedback in reference to specific actions or behaviors, either by expressing appreciation for an action and the resulting benefit or discussing an action or behavior that you want to see improved. "You're so smart" is not nearly as valuable as "I really appreciated the way that you helped the team come to that conclusion." With the latter, the person understands the action and the benefit to the team.

Regarding corrective feedback, a statement such as, "That incident led to a shipment not being delivered on time, which resulted in a big cost penalty from our customer" can lead to a discussion of reasons and corrective action. On the other hand, "You really messed up, as usual" is likely to simply prompt a defensive reaction.

Balance negative or corrective feedback with affirmational or positive feedback. People respond more strongly to negative than positive statements. That's why relationships are stronger when positive statements outweigh negative statements by a factor of 5:1 or even 8:1. Even when giving corrective feedback, a safety leader should find some positive things to say about the other person: the part of the task that was done correctly and safely, a belief in their ability to improve, etc. When a person only hears negative comments or criticism from a boss, they lose heart and look for the door.

Focus on the future. The goal of feedback is not to criticize a person or to gather a history. The goal is to help the recipient to grow and improve. The discussion of the situation or the past history is just to establish the need for an action plan. Therefore, all such discussions should be weighted in favor of the future, with positive expectations for improvement and growth.

Adrienne Selko

Send an e-mail with your thoughts to aselko@endeavorb2b.com.

Where Labor and Safety

Company-wide controls and processes are vital to building a safer and more resilient workplace.

By David Natalizia

2022 is already proving to be another year fraught with uncertainty, as organizations continue to face deep supply chain disruptions and workplace risks stemming from ongoing labor shortages.

Now, more than ever, new and innovative technologies are being deployed—or considered for deployment—to answer workforce availability issues and improve safety. However, these technologies won't provide the desired benefits without careful management, and they require well-planned implementation and follow-up to succeed.

The COVID-19 pandemic was only the start of these issues, which now include a shift in expectations about the nature of the workplace itself and willingness to participate in various roles. According to the U.S. Bureau of Labor Statistics, 4.5 million U.S. workers left their jobs in November, part of a phenomenon commonly referred to as the Great Resignation. Further mixed job growth numbers in December indicate the headwinds of 2021 haven't yet abated; the January 2022 jobs report suggests a slight rebound but nowhere near a full recovery.

As the labor market continues to fluctuate, business leaders are facing the harsh reality that these new dynamics and challenges might be here to stay. Part of the changing nature of the workplace includes heightened expectations and demands from employees for health and safety protections. All the while, companies have begun investing heavily in new technologies built, in part, to help address a scarcity of workers.

Amid this new era of labor shortages and technological innovation, leaders

must actively rethink their workforce structures to achieve their goals and establish a more stable workforce with a level of safety and health controls fit for the times.



ADAPTING TO NEW WORKPLACE DYNAMICS

Automation has long been an avenue for companies to improve production capacity and reduce risks from manual operations, and the recent shake up in the labor market has only increased consideration and adoption of these solutions. Data compiled by the Association for Advancing Automation notes that from January to September 2021, factories and other industrial users ordered 29,000 robots, 37% more than during the same period the

previous year, valued at \$1.48 billion.

We believe this trend will continue throughout 2022 and beyond, as we have already seen how the global pandemic has spurred innovative uses and applications of automation and robotics. In our work with a range of global Fortune 500 companies, we have seen a rise in the use of automation beyond traditional production and warehousing robot applications. Use cases include drones and virtual reality (VR) technology for facility inspections and audits; special purpose exoskeletons for manual tasks; and wearables, such as watches and health sensors, that help mitigate or prevent risks that can lead to injuries.

For example, one major electric infrastructure operator implemented a combination of unmanned aerial vehicles (drones) to complete tower and conductor inspections. The company also permanently installed sensors to monitor remote facility and equipment conditions. This sensor use marks a growth in workplace technology applications, from predictive maintenance to health and safety considerations. And in heavy construction, fatigue and heat stress monitoring are among the risk controls that have been automated to improve safety and well-being on the worksite.

While these and other similar technological additions bring significant increases in productivity and benefits, they may come with unanticipated side effects. Introducing complex technology into any workplace is almost guaranteed to create conflict between man and machine, particularly if workers view their technological counterparts as a threat to their job security or even their physical safety.

Put simply, challenging the status quo with new innovations in this way threatens to put undue stress on a workforce. It will require leaders to embrace innovative approaches—not just to technology, but also to environmental, health and safety (EHS) tactics to drive

Technology Meet

safety performance, lower costs, improve oversight and increase skills.

UNINTENDED CONSEQUENCES

Over the past few years, the manufacturing industry has seen a significant uptick in research and initiatives around exoskeletons, the mechanical apparatuses that can help increase the size and quantity of loads workers can move and potentially reduce workplace injury caused by repetitive tasks.

In concept, exoskeletons have the potential to use active power-assist, but in current practice this is a technology still too rife with potential dangers to be ready for widespread industrial application. The more common passive, unpowered exoskeletons still offer many benefits to workers without the considerable risks of powered devices. However, there is still a list of EHS procedures, policies and decisions that need to be considered before any of those benefits can be reaped.

By adding technology like an exoskeleton or robot to the workplace, organizations face unintended consequences. One is the added responsibility on their workforce to ensure appropriate use, integration and handling. For example, one recent study found that while workers enjoyed physical benefits from exoskeleton usage, they also endured taxing mental fatigue while working with the device. Another unintended consequence is the need for firmwide ownership of these controls.

Organizations need to consider those unintended consequences and ask themselves several questions before introducing new technology, including:

- Did we plan to buy the technology with enough time in advance for someone to ensure it arrived as ordered, is in working condition, and is properly assembled and set up?
- Did we design a site and task-specific training program? Did we allocate proper time to train users?

- Did we outline proper care and procedures for upkeep? Is the technology regularly cleaned? Where is it stored when not in use? Has it been stored properly? How long should a user be required to work using it? What happens when it gets damaged?
- Do we have checks and controls in place for proper use? Is someone checking that the technology is working properly, that it is being used in the correct manner or whether it might need adjustment?
- Do we have the right people in place for all these new controls and responsibilities?
- Is our executive team involved? Is our chief risk officer working alongside our operations, HR and EHS experts?
- Has the technology responsibility been shared across the organization?

Companies must perform a high-wire act when introducing technology into the workplace. As good as it feels to introduce new efficiencies into monotonous processes, leaders have a responsibility to always fully vet and scrutinize technologies to ensure they achieve the desired results without risking employee health and safety.

POLICY, CONTROLS AND PROCEDURES DRIVE LONG-TERM SUCCESS

Organizations that look to technologies (e.g., exoskeletons, robots, cobots, wearables or drones) as the cure-all for labor shortages will likely become disillusioned. The decision to purchase the tool is the easiest step, but the implementation may not be so easy. To drive long-term success, organizations must take five key steps prior to purchase.

- **Establish clear goals and objectives.** It is important to identify why change is needed and develop a comprehensive strategic road map. Developing a road map provides a clearer direction for organizations to follow and ensure goals and objectives are met.
- **Consider your resources.**

Where has this technology already been used in similar applications, and what were the lessons learned? Can the company tap additional resources to get a fuller scope of any adjustments that should be made before demos and implementation?

- **Bring in stakeholders early.** Design and review for EHS and demo before purchase.

- **Pilot and test before full roll out.** This step will allow an organization to see its strategy in action before roll out, providing the opportunity to refine safety strategy and procedures for use.

- **Measure performance to objectives.** Once a technology has been implemented, review the results or data points to make sure the company is on target. How is this reshaping the workforce? What can the company do better for ongoing success?

Throughout this process, it's critical to keep in mind that technology will not replace the human element. Rather, technology will shift roles and duties, sometimes in a more complex direction. It is therefore essential that leaders prioritize their people and build a culture where sharing and collaboration is a top priority.

As organizations continue to tackle industry-wide labor shortages and strains, they will no doubt increase their adoption and introduction of technology in 2022 and beyond. Those that take the steps now to think both strategically and tactically about incorporating these technologies into their organization—without putting employee safety in any additional jeopardy—will be better positioned to develop a more resilient workforce for tomorrow. **EHS**

David Natalizia is an EHS principal consultant for BSI's Health, Safety and Well-Being division, where he works with performance- and leadership-focused clients to help them pursue excellence in workplace safety, health, and well-being solutions.



The **POWER OF OPPORTUNITY** in a More **DIVERSE WORKPLACE**

*Women should
be recognized
for their safety
accomplishments,
not for their gender.*

By Adrienne Selko



SANJERI | GETTY

The natural order is for things to change. What was once novel should become commonplace. In that vein, it's time that women in environment, health and safety (EHS) professions need no longer be differentiated for their gender. They should be recognized for their accomplishments in the field. The fact that they are women ought to be a side note, if that.

"The needle is moving but needs to move faster," says Maria Gutierrez, director, corporate responsibility and sustainability at Bendix Commercial Vehicle Systems, an America's Safest Companies winner in 2020. "While we're still in the minority, I am seeing more women in the safety field."

To move more quickly, Gutierrez feels the profession needs to concentrate on building awareness that safety is a good career for women. "The expression that 'you can't be what you can't see' applies here.

"We need to show more women in these jobs and explain that women don't need to give up their own personalities in order to be successful in this field. They just need to have a passion for the job."

Passion for the job is exactly how Rachel Bugaris, business development manager at Panduit, would explain her experience in the EHS field. She began her career with Rockwell Automation in the leadership development program. With a degree in electrical engineering, she rotated positions at Rockwell and raised her hand to work on electrical safety standards as a way to make her mark as a young woman in a workforce of mostly older men.

"Tackling this area gave me an opportunity to know as much about something as everyone on the team did," Bugaris says. "I found my passion in the research and development area, where I was able to ask why we were doing things the same way and was there a better way to do this."

Joining Panduit in the R&D division,

she felt that advancing technology would be key to making improvements in the field. Bugaris' success landed her at leadership positions in IEEE committees.

Gutierrez joined Bendix 25 years ago with a mechanical engineering degree and the notion that she was equal to all things. However, once she entered the workforce, she was surprised that things looked different.

"I saw myself working harder, but I could present my point in an informed manner and was able to gain respect partly due to my technical background," Gutierrez says. "But I had to prove myself."

And that she did. "What I found interesting is that my soft skills earned the respect of my co-workers. I have high expectations of those who work for me. They know they have to work at their highest level and have told me that when they work with contractors, they make it clear that their boss won't accept anything less. This makes me proud."

WHAT'S HOLDING BACK PROGRESS?

Given the accomplishments exemplified by these two women, why aren't we seeing more forward progress for women as a whole throughout the profession?

"We talk about safety as being a great career for women, but the next step is to actively understand what's happening in our own organizations," explains safety expert Abby Ferri, CSP, senior risk control consultant with Gallagher. A well-known safety expert, she is currently vice-chair of the ASSP/ISEA Z590.6 Technical Report Committee.

"Why aren't more women in upper management or senior executive roles?" Ferri asks. "It's because they are hitting the glass ceiling. We see women in field safety positions, site managers and some safety directors, but it's rare to see them in vice president of EHS roles."

One reason for the lack of women

in leadership roles could stem from outdated ways of thinking. Ferri surmises that some women are choosing to not put themselves out there for those higher roles. There is the oft-quoted research that shows that men apply for jobs where they meet only 60% of the qualifications, but women apply only if they meet 100% of them. “Women need to be stretching and pushing themselves,” says Ferri.

“Women don’t need to give up their own personalities in order to be successful in this field.”

Pushing is not quite how Bugaris would describe the upward trajectory of her career, but instead she would say that women should be cognizant of their value and ask for what they need.

“When I became a remote worker due to COVID-19, I felt that wasn’t entirely ideal for me, so I asked to work on a part-time basis, and the company said yes,” she explains. “This enabled me to stay at my current company and have a longer career. While many women would have just left the job and not requested this arrangement, Bugaris says that as long as you are performing your job well, women should feel empowered.

CAN A CAREER IN SAFETY BECOME AN EQUALIZER?

Bringing more women into the field isn’t always a straightforward route. “I took a winding path to get to where I am today, and that’s not uncommon for women,” says Bugaris. “While many might be hesitant to join the profession due to misconceptions of what the job entails, I think it’s important to send a message to woman to try the career and see if it fits.”

For Gutierrez, EHS is an ideal profession. “This is a job you can do forever as it’s a very large field and you can move up quickly,” she says. “You can also move around to different industries with the basic knowledge of the field.” And what appeals to Gutierrez is the

broader implications of the field, which is how the job addresses larger issues such as energy, air and water usage.

“One of the major reasons I decided on this field is that I feel I can make a difference,” says Bugaris. “I know that the work I’m doing is going to matter as safety directly impacts people’s lives.”

As a purpose-driven profession, it’s a fair assumption to make that if the right level of awareness about safety is evident,

it will attract more women. And once there is a tipping point, per se, the shift from gender to specific work accomplishments should turn into an equalizer.

ATTRACTING NEXT-GEN WOMEN

So, the next logical step is to develop tactics to attract more women to the field. Letting women know that this is a type of job that has broad impact on a daily basis is key, says Bugaris. “In the work I do involving standards, I’m able to work with the best people across many companies, bringing together other experts in technology so that I’m able to not only affect my company but multiple companies. To me, that’s exciting.”

Reaching out to women at any stage in their careers is necessary also. “Women make such good safety professionals because we bring such diversity of experiences,” explains Ferri. “A job in safety could be our second, third or even sixth career.”

And once on the job, it’s very important to have mentors, both men and women, Gutierrez says. “Mentors are necessary to develop a career. Early in my career, I had people advocating for me when I couldn’t be in the room. They helped me navigate. And it was the passion that my mentors and co-workers showed about this work that has kept me in the field,” she says.

Boldness is also a necessary element

to further the career track for women, says Bugaris. “Early in my career, I learned that it’s OK to say no. And it’s OK to try new things. Don’t be afraid if it’s not for you and doesn’t work out. It’s not a failure—it’s just one step closer to finding what will give you meaning in your job.”

Ferri says that the younger generation approaches things differently, and she thinks we can all learn from them. “Younger people speak up and ask for the salary and benefits and resources they feel they deserve, and we should all be celebrating that. It’s a shift of thinking from the older ways of waiting for things to happen,” she notes.

Shifting thinking is something that is already happening in the field. Barriers are being removed. “Asking for metrics to be focused on areas such as productivity and efficiency is a way to bypass the focus on the gender of the worker,” says Ferri. “And working virtually has pushed this thinking along since it’s been shown that productivity has been good for those working virtually.”

Another benefit of the virtual work world is that it should help expand the pool of candidates who are considered for jobs in safety. Often people choose candidates from who they associate with at work or are part of some type of group they belong to. But as the world moved into virtual work, a lot of social structures changed, including the workforce. Interviewing job candidates in a virtual world becomes less subjective and will broaden the field as more candidates would have equal access to the process.

Changing the process starts with adjusting the thinking behind the systems, which should lead to different methods of measurement. One measurement that Ferri would like to see changed is how awards are given. “There shouldn’t be special industry awards given to women. Women should be in the same pool as their male counterparts and judged for how they are doing their jobs, no matter the gender.”

When everyone is on the same level playing field, the needle will finally move. “I look forward to the day when it doesn’t matter who is doing the job,” says Bugaris. “What matters is that I like what I’m doing, and I am good at it.” **EHS**



PICHAU | DREAMSTIME

A Spotlight on Women in Construction and Safety

Women share their experiences and identify opportunities to improve diversity, equity and inclusion in the workplace.

By Lauren DeBellis

Women working in the construction and safety industries have certainly made progress over the years. However, challenges remain, as we learned at this year's Women in Construction week (March 6-12, 2022). This annual event, created and hosted by the National Association of Women in Construction (NAWIC), celebrates women's contributions to the profession of building, and brings to light the numerous issues they still face in the workplace.

As with many industries, gender diversity in the workplace has always been a challenge. The U.S. Bureau of Labor Statistics (BLS) found that in 2021, women represented only 10.9% of construction workforce. Considering that women make up 47% of all employed individuals, this means that the construction industry is only benefiting from about 1.25% of women in the workforce. Furthermore, women on the

front lines of a job site account for only 4% of employees in the field.

"The challenges we face are the continued perceptions that the construction industry is not for women. This can be an initial barrier," says Doreen Bartolus, president of NAWIC.

In addition, women in construction report discrimination on the job, according to data from the Institute for Women's Policy Research's (IWPR) 2021 Tradeswomen's Retention and Advancement Survey. This can often lead to women leaving their roles and the field, says Ariane Hegewisch, senior research fellow at IWPR.

"The responses to our 2021 survey highlight that many women are doing well in the trades but that far too many—about a quarter—frequently or always face discrimination and harassment," she says. "Even basics, such as being provided with gloves and safety equipment that fit, are not standard for almost three in ten. And close to half

feel that they are always or frequently held to higher standards than men. Not surprisingly, over 40% say that they are or have seriously thought about leaving the trades altogether."

The industry still lacks on the number of women entering—and staying—in the construction-related field. That's unfortunate considering the average salary for a female construction manager is \$97,000 a year, according to the BLS. What's more, the industry has one of the lowest gender pay gaps. Women in construction earn about \$0.96 for every \$1 men in the same age range make, higher than the U.S. average of women earning about 81.1% of what men do, according to recent BLS data.

"The issue is not just to recruit women, but to retain and grow the women that have been recruited," Hegewisch says.

Fortunately, a number of women and organizations are leading the way for change.

"While this industry is more open than ever to the inclusion of women, only a small fraction includes women," says Angela Seaborn, senior director of HR operations at 84 Lumber Company. "Women can be effective in changing the perceptions and culture of this industry. They are able to communicate where their delivery of feedback is more well-received than their male counterparts and bring the empathy and human-side of the message."

Still, many of the challenges women may face in the construction and safety fields stem from outdated perceptions that construction is a male-only field.

"As a young woman in safety, it has always been a challenge to earn the respect of co-workers who question how you can be a contributor when you have not done the labor or 'job' yourself," says Allison Kulka, senior safety specialist for 84 Lumber. "To counteract this, I will always try to listen and learn from the workers and apply the knowledge and information I gained through my education to help contribute to a safer workplace for all."

Kristi Allen agrees. Allen is the owner of WoodCastle Homes and the contractor behind The House that SHE

Built, a home built by Utah Professional Women in Building and the Utah Home Builders Association, as well as others. To encourage more women to join in and reap the rewards, she suggests companies make women in construction more visible to provide relatable role models to others.

"The more we see women doing these jobs and succeeding in this industry, the more likely it is that other women will view the construction industry as a viable option," Allen says. "Even growing up in residential construction, I had never seen a female general contractor, so it never occurred to me that it would be a career I would love."

Hegewisch says that in addition to support from their female co-workers, there are several support groups and organizations that offer a wealth of resources and assistance to women in the industry.

"Women-focused pre-apprenticeship programs, such as ANEW in Seattle, Building Pathways Boston, Chicago Women in the Trades,

Oregon Tradeswomen, Mississippi Moore Community House, Tradeswomen Inc. and W.I.N.T.E.R. in California, and West Virginian Women Work!, are great partners, both in reaching out to women and in helping contractors ensure that their worksites are welcoming," she says.

Given the plethora of resources available for support and guidance, women have a unique opportunity to reap the rewards of the construction and safety industries for themselves, their families and those women who have yet to come.

"Women need to show up and let [themselves] be seen," Allen says. "The more girls and women [who] are able to see women succeeding in the industry, the more they will want to join us." **EHS**

Lauren DeBellis is a freelance writer with experience in consumer lifestyle and housewares trade publishing, as well as public relations and corporate communications.

Women in Construction Stats

- **2 million** – new construction jobs for 2022
- **14%** – staff executive construction positions
- **7%** – line executives
- **86.7%** – office positions
- **2.5%** – tradespeople
- **11%** of the construction industry is represented by women
- **13%** – women-owned construction firms
- **64%** – growth in women owners from 2014 to 2019
- **4%** – new construction firms launched by women in 2020
- **44%** – top 100 contracting companies have women in executive roles
- **16%** – employ women in C-level positions; 2 are CEOs
- **43%** – organizations do not actively monitor wage gaps
- **73%** – women who feel passed over for roles because of gender
- **60%** – gender discrimination victims in workplace are women

Source: Big Rentz



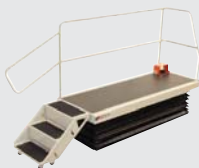
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PK SAFETY

Hearing Loss Prevention:

What You Should Consider

Make sure all employees are aware of the hazards of noise-induced hearing loss, so they can take steps to protect against them.

By Rick Pedley

Loud noises in the workplace can lead to permanent hearing loss among workers. Banging, drilling and other mechanical processes can produce loud noises that can damage a person's eardrum. The types of sounds, noise intensity and duration of exposure can all contribute to hearing loss.

Symptoms may take years to develop, but even brief exposure to loud noises can have a major effect on a person's life, limiting their ability to hear the world around them. Once noise-related hearing loss occurs, it is irreversible, so it's crucial to protect your hearing when on the job and off, including when attending concerts and using loud tools or equipment at home.

The Occupational Safety and Health Administration (OSHA) has set clear rules regarding noise pollution in the workplace. If these sounds pass a certain threshold, managers should implement what's known as a hearing conservation program to protect staff from permanent hearing loss.

MEASURING SOUND

Managers first need to understand how sound is measured in the workplace. Decibels (dB) are used to measure the intensity of sound. The higher the decibel, the louder the sound. For context, normal conversations occur at around 40 dB, while appliances like a hair dryer come in at around 70 dB. Meanwhile, a jetliner can be as loud as 140 dB.

Prolonged exposure to sound above 85 dB and any exposure to sounds above 135 dB can cause permanent hearing damage. In addition to hearing loss, these noises can cause damage to the inner ear, which can lead to long-term ringing in the ears or tinnitus.

IMPLEMENTING A HEARING CONSERVATION PROGRAM

According to current OSHA guidelines, employers must implement a hearing conservation program if noise exposure is at or above 85 decibels averaged over 8 working hours, or an 8-hour time-weighted average (TWA).

This doesn't mean exposing workers to 85 dB for 8 hours straight. OSHA wants employers to average sound exposure over the 8-hour day. For example, if a worker is exposed to 100 dB of sound on and off for around two hours in an otherwise quiet workplace, they will likely still need a hearing conservation program during their shift if the average comes out to 85 dB or more.

To calculate the average, employers can add up the amount of time workers are exposed to different levels of noises. For example, a worker may be exposed to 50 dB for two hours, 70 dB for two hours, 90 dB for two hours and then another two hours of 50 dB. This comes out to an average of 65 dB over an 8-hour shift.

According to OSHA, hearing conservation programs should "strive to prevent initial occupational hearing loss, preserve and protect remaining hearing, and equip workers with the knowledge and hearing protection devices necessary to safeguard themselves."

These programs can take many forms as long as they all work toward the same goal, which is to prevent hearing loss. Creating a hearing conservation program all depends on the workplace in question and the source of the noise. However, most programs include the following:

- Workers should be aware of the risks of noise-induced hearing loss and other health risks that can

Workers have a right to earn a living without worrying about losing their hearing.



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occur due to noise exposure.

- If workers are potentially exposed to noise-induced hearing loss, they must be given a baseline audiogram within the first six months of work. Afterward, they should receive an annual audiogram performed by a certified audiologist, free of charge. They should then compare the results to those of the baseline audiogram to determine if noise exposure has caused hearing loss.
- Workers at risk of experiencing noise-induced hearing loss should be given various hearing protection options, including earplugs, earmuffs and headphones for reducing ambient sound.
- Employers must hold a hearing protection training program every year to make sure workers who will be exposed to more than 8 hours of 85-decibel noise know how to protect themselves on the job.
- Records must be kept of employees' varying noise exposure levels.

Hearing protection equipment comes in many different shapes and sizes. Managers should provide workers with a range of options, so they can choose the appropriate, securely-fitted equipment for the task at hand.

For example, electricians will often wear dielectric headphones to protect them from electrical hazards. This equipment is often inserted underneath or on top of other personal protective equipment. Workers may need to use bands or inserts underneath their hel-

metts. In other cases, these devices may be mounted on the helmet or neck.

Some teams will use earplugs when it's too hot to wear earmuffs or to supplement their hearing protection equipment. Plugs can be molded, custom molded or unmolded. Some are corded, which may get in the way on the job. Some are disposable, while others are reusable. These devices should fit properly without making the worker uncomfortable. Managers should consider investing in custom-molded ear plugs for a better fit if their workers are continuously exposed to loud noises.

CREATING A HEARING CONSERVATION PROGRAM

Managers can use the following steps to implement a safe and effective hearing conservation program in the workplace:

- Managers should first make a checklist of all the loud noises that occur in the workplace, including their respective decibel levels and how often they occur.
- Once the source of the noise has been identified, the manager should look for ways to reduce the noise level. This may include using a different piece of equipment, setting up a sound barrier, running equipment during different times of the day or moving workers away from the source of the sound. Managers may also rotate their teams to limit their exposure to high noise levels. Preventing loud noises also means

using materials and machinery with care. Workers should avoid slamming or dropping items that could put their colleagues' hearing at risk.

- If the noise level can't be adjusted, managers should install high noise area signs around the site to alert staff.
- They should also provide various types of hearing protection equipment to workers before they enter the high noise area.
- Crew members should regularly inspect this equipment for damage, including cracks, tears or poor noise control, to make sure it will work as intended in the workplace.
- In addition to baseline testing, managers should continue monitoring and testing their workers' hearing to make sure they aren't losing their hearing over time.

Even if some workers appear to have their hearing intact, they may see a noticeable decline down the line since these symptoms may take years to develop.

Workers have a right to earn a living without worrying about losing their hearing. If managers don't comply with the latest noise pollution guidelines, workers have a right to report their employer to OSHA. Workers may also receive compensation if their hearing is damaged in the workplace.

If managers aren't sure whether sound levels merit a hearing conservation program or they don't know how to implement such a program, they should consult with a workplace safety professional with a background in preventing hearing loss. This person can help managers identify potential hazards in the workplace while proposing a reasonable solution for limiting staff exposure to these sounds.

Preventing hearing loss is often a group effort. Everyone in the workplace should be aware of the hazards of noise-induced hearing loss, so they can take steps to protect against them. If employees have any questions about hearing protection, they should contact their employer directly for more information. **EHS**

Rick Pedley is president and CEO of PK Safety, a supplier of occupational safety and personal protective equipment since 1947.



Tight vs. Loose Cultures:

Ramifications for Occupational Health and Safety

ADAM121 | DREAMSTIME

A safety culture becomes more manageable when employees are heavily involved in the safety process.

By E. Scott Geller

For three decades, Michele Gelfand—a cultural psychologist and distinguished university professor at the University of Maryland—has studied systematically the cultures of more than 50 countries. She has researched and documented a human dynamic that explains opposing reactions following top-down specifications of a regulation or rule, from a basic safety protocol to a requirement to wear a COVID-prevention face mask. Some people willingly comply with such directives; others reluctantly follow a mandate; and others resist compliance, sometimes with negative vocal discord and even physical conflict.

Professor Gelfand explains these differences in her profound and provocative 2018 book, *Rule Makers, Rule Breakers: How tight and loose cultures*

wire our world. Indeed, the tight/loose dynamic influences our thoughts and behaviors regularly and can explain critical differences between people's daily decisions as well as their interpersonal exchanges. An understanding of this fundamental cultural distinction could facilitate an appreciation and acceptance of certain individual differences; it can also help reduce and/or resolve interpersonal conflict.

As Gelfand notes, "Tight-loose theory can help deepen our empathy toward those whose way just doesn't sync with ours."

TIGHT VS. LOOSE COUNTRIES

Tighter countries (e.g., China, Germany, India, Japan, Pakistan and Singapore) tend to have autocratic governments.

The citizens promote self-control, cling to stability and monitor social media.

For example, China has for years tracked online opinions and criticisms about the government among both residents and Chinese expatriates. Meanwhile, Singapore—a small island country of about 5.6 million residents—epitomizes excessive control of public behavior by levying hefty fines for seemingly minor offenses. A person could be fined up to \$1,000 for spitting on the street or for forgetting to flush a toilet in a public bathroom stall. Alcohol consumption in public is banned from 10 p.m. until 7 a.m., and making too much noise in public places can lead to imprisonment and/or a fine. Some elevators in Singapore are engineered to detect urine; if activated, the doors of the elevator lock shut until the authorities arrive to identify and fine the rule breaker.

Tighter countries typically have:

- higher population densities (e.g., India has more than a thousand residents per square mile),

- been burdened by infectious diseases (e.g., malaria, typhus and tuberculosis),
- endured more national disasters (e.g., China, Japan and Malaysia) and
- fewer natural resources.

The solidarity among the residents in these tighter countries increases the probability of surviving a national disaster. These countries have generally been more successful at controlling the COVID-19 pandemic because tightness and solidarity enhance compliance with COVID-prevention behavior. These human dynamics also provoke anger toward those who do not wear a face mask properly or who do not get vaccinated when the vaccine is readily available.

Loose countries (e.g., Australia, New Zealand, Greece, the Netherlands, Venezuela and the U.S.) typically:

- evidence more creativity and a higher percentage of immigrants,
- are more open to change and different ideas,
- are more tolerant of diversity and more accepting of the LGBTQ+ community and
- promote free speech.

Relatedly, nearly half of all Dutch children are born to unmarried parents. These looser countries also experience higher rates of alcohol consumption, more gambling and more obesity.

In addition, these looser countries have not handled the COVID-19 pandemic as well as the tighter countries, primarily because of lower adherence to COVID-prevention behaviors—wearing face masks properly and obtaining available vaccinations. As one American was quoted on CBS News, “I believe in the vaccinations; I just want it to be my choice.”

THE CURVILINEAR EFFECT

Gelfand and her associates assessed citizens’ subjective well-being (SWB) in more than 30 different countries and discovered a curvilinear relationship—an inverted U—between SWB and degree of cultural tightness. The extremely tight and loose nations had the lowest levels of SWB and the highest levels of depression and rates of suicide. Those countries that were moderate or less extreme on the tight/loose

continuum scored highest on SWB and evidenced lower depression levels and suicide rates.

Moreover, life expectancy is lowest in the extremely tight countries (e.g., India, Pakistan, Turkey) and in the loosest countries (e.g., Brazil, Hungary, Ukraine). The tightest and loosest countries also have the lowest gross domestic product (GDP) per capita. Incidentally, the U.S. scored relatively high on SWB, but lower than the three countries that were judged to be more loose (Australia, the Netherlands and New Zealand).

DIVERSITY AMONG STATES

It is noteworthy that within the relative looseness of the U.S., levels of tight/loose vary significantly between states. Tighter states include Alabama, Arkansas, Oklahoma, Mississippi and Tennessee; looser states include California, Florida, Idaho, Iowa, Nebraska, Oregon and Washington. Regarding general U.S. regions, the West and the Northeast are the loosest, the South is the tightest and the Midwest is midway between tight and loose.

Gelfand’s research revealed a variety of cultural differences between tight and loose U.S. states. In particular, tight states:

- have more police and law enforcement officials and incarcerate a greater proportion of their citizens;
- evidence lower divorce rates, single-parent households and homelessness; and
- have higher percentages of residents who attend religious services, demonstrate in-group loyalty, refrain from both drug use and premarital sex, and “take a black-and-white view of what is right and wrong.”

The data analysts of a website that provides assistance with personal finances (i.e., WalletHub) scored each of the 50 states with regard to their recreational options—including beaches, national parks, movie theaters, amusement parks, casinos, bars and music festivals. The most “fun” states were among the loosest—Colorado, Nevada, New York and Oregon—and the least “fun” states were among the tightest—Alabama, Arkansas, Kentucky and West Virginia. While the tighter states have fewer entertainment options, the residents of those states are considered less

rude as well as more orderly, polite and self-regulated.

COUNTRY VS. CULTURE

Although we’ve been referring the tight/loose dynamic to different countries, the concept of culture could certainly be substituted for country. Culture is defined by the [American Heritage Dictionary](#) as “the attitudes, feelings, values and behavior that categorize and inform society as a whole or any social group within it.”

Culture can refer to a particular community, family, organization or work group within an organization. However, by generalizing culture to an entire country, we realize how large-scale factors—such as vulnerability to national disasters, population density, environmental resources, territorial threats and infectious disease—can influence the attitudes, feelings, values and behaviors of the residents of a particular country.

Of course, this tight/loose cultural dynamic is reflected by social norms, which are conveyed and supported from infancy to adulthood. Although social norms provide direction and support for individual and group behavior, Gelfand points out that “tight cultures have strong social norms and little tolerance for deviance, while loose cultures have weak social norms and are highly permissive.”

In the U.S., the tight/loose culture dynamic relates to socioeconomic classes, with upper-class individuals typically being more rude, less ethical and less rule-governed than those in the lower classes. Higher education is generally more difficult for lower-class individuals, partly because of the relatively loose culture in colleges and universities. A study of over 145,000 students at six large public universities found that students from lower working-class families reported a lower sense of belonging, more distress and depression, and less satisfaction with their educational experience than did their peers from upper-class families (Soria, Stebleton and Huesman, 2013).

In tight cultures, college students always address their professors by title—Dr. or Professor—and their last name. However, in the loose culture of the U.S., many students call professors by their first name, especially the younger

faculty. This is typically accepted by most professors and is often encouraged. Similarly, in the U.S., polite salutations and personal signatures are often missing in letters, e-mails and text messages.

TAKEAWAYS FOR SAFETY LEADERS

This brief review of the tight/loose distinction evidenced in different countries, U.S. states, and within community and organizational cultures helps to explain observations of variable human reactions to occupational health and safety (OHS) rules and regulations—from willing compliance to reactive resistance.

The tightness or looseness of the culture in which people are raised and nurtured certainly influences their willingness to follow a prescribed protocol. In the workplace, compliance with safe operating procedures (SOPs) is required and monitored. Tight cultures have no trouble making this happen, but such top-down control can be challenging in a loose culture or among employees with

a loose-culture mindset.

However, top-down rules and regulations can seem less controlling when management involves employees in customizing SOPs for their own work areas. In addition, a work culture loosens up when management solicits safety suggestions from employees, and then implements those that are relevant and reasonable.

Perhaps realizing that nurture can program individuals to resist mandates that are perceived to reduce individual choice will enhance empathic understanding among those who resist obedience. Perhaps it will also inspire the use of these and other techniques to increase perceptions of autonomy in an OHS system that requires compliance with specified rules and regulations. The more employee involvement in an organization's OHS process—from customizing and evaluating SOPs to developing and implementing interventions to increase occurrences of safety-related behavior—the greater the perception of individual choice and personal commitment to support OHS. **EHS**

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7 Mistakes Companies Make with Safety Technology

How to more effectively use technology to improve employee safety.

By Shane McEwen

Studies show that every 15 to 30 seconds, someone around the world dies from a work-related incident. To protect workers, companies across industry sectors are increasingly taking a closer look at their employee safety programs. For many, this also means turning to the latest advances in technology for help. But companies must first ask if the solutions they're implementing are effective.

From my experience working with companies across the globe, organizations all too often inadvertently make mistakes when it comes to using technology to keep employees safe on the job. This results in a range of potential safety issues, from gaps in alert monitoring to incomplete risk mitigation to insufficient communication protocols.

Running a safety program is a complex, multilayered task that involves equipment checks, incident investigation and compliance reporting. An effective safety program relies on several different systems working seamlessly together. Automation can help, but the last thing you want to do when introducing the latest tools into the mix is to upset your company's operational rhythm and lose employee confidence as a result.

Here are what I have found to be the top mistakes companies make when it comes to adopting safety-related technology—and how to avoid them.

1. FAILING TO UNDERSTAND EXACTLY WHO NEEDS PROTECTING IN THE FIRST PLACE

Prevention begins with understanding and identifying all the ways employees can be harmed. Unfortunately, many companies err on the side of "good enough" when it comes to conducting



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their worker risk assessments, and that leaves people vulnerable.

For example, a large energy producer might equip their field employees with gas detectors to alert them to the presence of toxic or combustible gas and have them check in every hour by phone. But what if something happens unrelated to a gas event, such as a slip, fall or stroke? I recall one situation where a lone worker suffered a heart attack and died on the job. Regrettably, he wasn't discovered until his wife phoned his employer after not hearing from him for more than 24 hours.

To fully protect workers, your risk assessment must be thorough and meticulous. Start by assembling a carefully curated team comprised of a cross-section of health and safety professionals and other subject matter experts who have hands-on work experience.

Ask your newly assembled team to perform a step-by-step analysis of all workplace activities to flag any situation that can potentially cause injury or harm. They should also observe workers during different times and days of the week to help identify gaps in safety monitoring related to equipment safety; the implications of possible long-term exposure to chemicals, noise and other hazards; or potential weather hazards, for example.

2. NEGLECTING TO CONSIDER BARRIERS TO ADOPTION

When it comes to installing workplace safety devices, the more seamless the experience, the greater your chance of success. It's important to know if additional IT infrastructure will be required to operate your devices.

Some safety monitoring products come network-ready out-of-the-box, similar to the way your new cell phone automatically connects to your telecommunications provider and loads features once you power on. However, others rely on extra pieces of equipment or steps to provide connectivity, such as the way a cell phone tethers to a tablet to create a Wi-Fi hot spot. The latter works, but the service isn't the most reliable or convenient.

Some products require on-premises software installations that your in-house IT staff will need to maintain, including the time and expense of managing firmware updates. Others are cloud-based, meaning updates occur automatically, and the service provider is responsible for maintenance.

3. NOT ASKING THE RIGHT TECHNICAL QUESTIONS

Protecting hardworking employees requires hardworking technology, and that means ensuring your safety devices are secure, well-connected, have a long battery life, and will promptly receive and respond to alerts.

I've seen scenarios where connectivity was added to older generation safety devices, requiring additional infrastructure to be implemented. For example, some gas monitors use an add-on communication hub that requires a cellular plan and special software to send alerts to a cell phone. Not only does this type of configuration drain the battery life of a safety device—causing a 20-hour run-time to quickly wane to 12 hours or less

because you're constantly pinging a cellular network—but there's also the risk that the cell phone you're pinging might be in use or running an app in the background, causing alerts to be delayed.

Good questions to ask when surveying specifications include:

- How long does a device take to charge, and what is the average battery life per charge?
- Are additional battery packs available?
- What security certifications are supported?
- Are multi-factor authentication and single sign-on supported?
- Can devices connect directly, or do they require a smartphone, tablet, additional app or added infrastructure?
- What is the minimum length of time between sending out an SOS and receiving it on a monitoring software dashboard? The maximum length of time?

4. CHOOSING SPECIALIZED VS. MULTIFUNCTIONAL PRODUCTS

When I talk to chief technology officers at large oil and gas producers, they often tell me their main concern is how to minimize the “Christmas tree effect” that occurs when workers end up with gear “hanging” off of them. Workers are already burdened by the need to wear personal protective equipment, such as a hard hat, fire retardant coveralls, gloves, safety goggles and safety boots. They must then add two-way radios, GPS locators, intrinsically safe tablets or gas detectors.

Each device might be really good at its specific job, but together they represent a heavy load that doesn't always make for the most effective safety solution. A more efficient approach is to look for more modern, all-in-one devices that converge multiple features onto one connected platform. When one device provides gas monitoring, two-way communication, fall detection and the ability to connect to an around-the-clock emergency response call center, you'll have greater visibility into your workforce. Meanwhile, the technology burden will be substantially reduced for workers in the field.

5. NOT PLACING ENOUGH IMPORTANCE ON DATA COLLECTION AND REPORTING

In order to get a clear view of how your safety program is performing, you'll want to be able to measure it. That requires having data at your fingertips. Otherwise, you'll be left operating in the dark with no clear window into usage information that could help identify problems proactively.

Instead, look for safety monitoring devices that are connected to the cloud and constantly streaming valuable information about everything from employee movement to the inner workings of your devices, including temperature, humidity data and detailed sensor information to help with diagnostics. By applying data analytics—either using an in-house team or outsourcing to your vendor—you can search for patterns and identify problems you didn't even know you had.

We once helped a company mitigate risk by using data analysis to identify the implication of a small leak of a low-level gas. It didn't meet the threshold for an evacuation alert, but exposure would have been harmful over time. When the company researched it further, they discovered an old gas tank buried beneath the area and then were able to mitigate the risk. The ability to collect and report on vital data is key to taking your safety program to the next level.

6. FAILING TO TREAT ADVANCED COMMUNICATION AS A NECESSITY

The majority of industrial sites today still use what we call “beep and flash” technology, i.e., devices that monitor for danger and send a very loud alert intended to notify others in the area. The problem is that alert might not be sufficient to protect all employees—for example, employees who either work alone or with no one nearby to hear the sound if they happen to be knocked unconscious, or when employees work under noisy conditions that require wearing noise-cancelling earmuffs. Refineries are particularly challenging because the complexity of their piping infrastructure makes it difficult to spot a fallen co-worker who might be 30 feet away or less.

When you equip your workers with

a connected safety device that includes integrated two-way communication—or is backed by a 24-hour emergency response command center supported by live agents—you're assuring their safety under every circumstance. An automated “man-down, no motion” feature may seem superfluous, but if an employee is exposed to toxic gas or suffers a stroke or heart attack, a quick intervention could be the difference between life or death.

7. RELYING SOLELY ON CELLULAR COVERAGE FOR CONNECTIVITY

If you're not using always-on connected devices that record and stream safety data 24/7, you run the risk of leaving your employees vulnerable.

One energy producer I spoke with recently said they were using cellular coverage to communicate with oil well inspectors in the field, who must park their work trucks and rely on ATVs to access extremely remote well locations. Their gas monitors connected to special truck-mounted communications boxes that served as relay points, but they often ended up out of range. They didn't love the solution, but it was the best coverage their vendor could offer.

A better practice in that scenario would be to use satellite coverage. There are safety monitoring platforms available that offer a choice of either cellular or satellite coverage, making it possible to equip lone workers with battery-powered satellite relay boxes that can be mounted on the ATVs themselves. The end result is better off-road protection in ultra remote locations.

At the end of the day, getting the most from your technology implementation requires up front research and planning, combined with strategic application, to ensure your connected devices work seamlessly and are easy to use. By avoiding some common technology implementation mistakes, you can take your safety program from “good enough” to “great,” creating a better employee experience and saving lives in the process. **EHS**

Shane McEwen is global product marketing manager at Blackline Safety, a provider of connected safety technology.

Leading Indicators: Driving Proactive Safety

Having a clear picture of what needs to be achieved must be the first step when using leading indicators.

by Eric W. Thompson

Leading indicators are nothing new to occupational safety. These are metrics that indicate safety performance prior to an incident occurring. Given that occupational injuries resulted in an estimated cost of \$171 billion in 2019, there is great potential benefit in proactively addressing hazards to prevent injuries (National Safety Council, 2022).

However, it is not enough to select a few leading indicators and then expect safety performance to improve. To be effective, one must determine which leading indicators to use in each situation, track them accurately and evaluate the results. If any of these steps are not performed fully, then the benefits will be lacking. There will also likely be frustration and wasted effort.

START WITH THE END IN MIND

With our busy schedules and bias toward action, it is tempting to move through the selection process quickly. Resist that temptation. Instead, make sure you have a clear picture of what you are trying to accomplish.

Envision your safety program in the future. How does it look? Think about the perceptions, decisions, stories and behaviors that need to be in place for your future vision (Mathis & Galloway, 2013).

From there, try to identify the observable signs of a strong safety culture. Is the workplace clean and orderly? Are employees identifying and reporting hazards on their own? What else could you observe? Keep these things in mind as you move forward, identifying actionable areas that will, in turn, determine your leading indicators.

Also, look at your injury data to see what trends are present. There are many ways to do this depending on what you are using and your specific situation. If this is not already in place, a Pareto chart, or bar chart, is good for breaking this down. It helps to visualize the data and target those causes that result in the largest number of incidents.

Depending on the categories used, there will typically be three to four



causes that make up around 80% of the items listed. Take some time to reflect when setting this up. The incident data and categories used as the input will need to make sense for your organization.

When it comes to leading indicators, there is no set prescription since every organization has its own personality, challenges, culture, history, etc. However, all these things need to be taken into consideration.

Creating a safety vision to guide where you want to go—along with a review of available incident data—allows you to determine what areas need to be improved most. It is also important to not get bogged down here because of the complexities involved. Provide a good, thoughtful analysis to select the results you would like to measure and then move onto the next step. Remember, you are after progress, not perfection.

SELECT LEADING INDICATORS

Once you have crafted a solid safety vision and reviewed incident data, it is time to select your leading indicators. Think about what you can observe and measure to make that vision a reality. Often, near miss reporting will be an important part of any proactive safety vision.

However, there are other important, proactive metrics to consider, such as the number of hazards reported (without being a near miss). Results from a regular employee perception survey can help gauge the health of the safety culture. Some leading indicators to consider include:

- near misses,
- number of hazards reported,
- number of safety work orders entered/closed,
- number of audits/inspections completed,
- hours of safety training,
- ergonomic projects completed,
- risk assessments completed,
- number of safety committee meetings,
- percent of employees making safety observations.

As you can see, there are many potential leading indicators. This is why it is important that you take the time to determine your specific needs and what you need to accomplish. What works well for one organization or plant is not necessarily the right fit for another.

So, what are your intended results? Suppose at a high level you want to see reduced injuries (of course!) and drive greater employee engagement.

When you reviewed your data, you found that 33% of your injuries are related to ergonomics. Based on this, you will most likely want to set a leading indicator focused on driving ergonomic improvements. As an example, your leading indicator could be a reduction of ergonomic risk by 20% annually. This then drives ergonomic assessments, ergonomic improvement projects, follow-up assessments and other related activities to

achieve a reduction in ergonomic risk.

Likewise, for employee engagement you might choose to focus on the number of employees identifying safety hazards. This would help raise employee awareness as well as get them used to identifying and reporting hazards. With good management response, a commitment to creating a safe workplace would be demonstrated. This would be further encouraged because managers would be actively pushing for hazard reporting from their employees to help meet the targets established.

Of course, these are just examples. The main thing is to determine the best leading indicators to help you drive activities that will help you achieve your safety goals. However, remember to do the best you can without getting too caught up in picking the perfect metrics. There is always opportunity for improvement.

GET PROACTIVE

You have now identified leading indicators focused on making the biggest im-

pact on safety. Ideally, key members of your management team helped choose those leading indicators. If not, make sure they are aware of what leading indicators have been selected, why they were selected, and what actions they are intended to promote. By sharing these with the management team, they will have a better understanding of the different ways they can promote safety. These leading indicators will need to be regularly reviewed like any other key business metric.

In addition, make sure that you periodically evaluate your leading indicators for effectiveness. If a leading indicator is not driving meaningful action, then modify or replace it. Just make sure you are deliberate in how any change is handled.

Changing something that is clearly not working will demonstrate a willingness to improve. Making changes that are not understood or appreciated will appear to be “change for change’s sake” and erode confidence in your efforts. Like anything else, good communication and involv-

ing stakeholders will help keep everyone supporting efforts to drive leading indicators in the desired direction.

In summary, make sure you know what you need to achieve, select leading indicators that will drive action toward those goals and ensure the resulting activities are effective. It seems simple but is quite complicated. Nonetheless, if leading indicators are implemented correctly, then positive results are sure to follow. **EHS**

Eric W. Thompson, CSP, is a consultant with VelocityEHS, a provider of EHS software solutions.

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How to Overcome Safety Complacency in the Workplace

Training supervisors and frontline employees to ask effective questions at strategic moments can help trigger critical thinking and situational awareness.

By Sharon Lipinski

Successfully combatting complacency starts by understanding that the root cause of complacency is how the brain handles repetitive behavior. In other words, complacency is a by-product of habit.

In casual conversation, people often talk about habit as a behavior. But that's not quite right. A habit is a behavior that results from a neural pathway. Advances in neuroscience have revealed that habit results from the collaboration of two parts of the brain.

The first is the prefrontal cortex (PFC), which sits above the eyes. It's responsible for advanced executive functions such as paying attention, predicting outcomes and prioritizing information. The PFC is critical to activities such as planning a critical lift, having interactive job briefs or taking a site walk.

The second is the striatum. The striatum is about the size of a walnut and sits on top of the brain stem. It's the habit center, reward center and goal-motivated behavior center.

When the brain is doing something new, a communication loop fires up between these two parts in the brain, and all the neurons during the activity fire. How-

ever, the brain is a quick learner. The next time it repeats that action, it's a little more familiar. Fewer neurons fire.

As this process is repeated, the action gets easier and easier, so fewer and fewer neurons fire. When something has been repeated often enough to become a habit, the PFC does not need to be involved. Not all the neurons fire during this activity, just the ones at the beginning and the end.

REPETITION IS THE MOTHER OF HABIT

In a nutshell, repetition is the mother of habit. By repeating an action over and over, the brain carves a deep neural pathway that requires very little work in order to operate.

In many ways, this is a good thing because the brain must process an unquantifiable amount of information. This includes everything from our own autonomic nervous systems (e.g., internal temperature, heart rate, eye blinking and more) to taking in external stimuli (e.g.,

colors, shapes, locations, movement and more) to just doing our jobs.

Unfortunately, the processing capacity of the brain is limited. There is so much information to process that the brain needs to prioritize, and it uses shortcuts to accomplish as much as possible. There are many different types of shortcuts, but the one applicable to our topic here is habit.

A habit is a neurological shortcut the brain can use when engaged in a repetitive task. The range of repetitive tasks is quite large. Not only does it include actions like brushing your teeth and wearing personal protective equipment, but also behaviors like asking for help, reacting calmly in stressful situations and problem solving. Beyond behaviors, people have created habits to process emotions, thoughts, decisions and actions.

Habits are a double-edged sword. They provide human beings with the ability to learn rapidly and perform repetitive tasks with as little energy and effort as possible, freeing up those cognitive resources to be used for other tasks.



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But there is a price exacted when habits are triggered: the PFC is often no longer actively involved in brain processing. When the PFC is not engaging, then we have lost an important safety resource.

Based on this understanding of the biological process of the human brain, we can offer a more accurate definition of complacency that opens the door to more effective strategies.

Complacency is a state of decreased external awareness and reduced sensitivity to hazards caused by the brain's ability to activate neural pathways that require less PFC activity.

This definition reflects the current neurobiological assessment of what happens in the brain when habits are established, and it reveals that complacency is a physical state. It's a by-product of the part of the brain people can use by virtue of the fact they've done an activity so many times.

Now the solution to complacency becomes clear: move the brain activity and reengage the PFC. While we've identified several different practices that can accomplish this task, one of our favorites is asking good questions. A good question can only be answered by the PFC.

Another reason asking questions is such a powerful strategy is that it can be used to short circuit complacency in ourselves *and* in others. Any individual can ask themselves a question that will reengage their PFC, and safety professionals can use questions as they're doing their audits or site walks. In addition, supervisors can ask questions as their teams are starting a job or in the middle of their work.

WHEN TO ASK QUESTIONS, AND WHY

There are at least four good times to be asking questions:

- When a group is starting the day or a task together.
- When an individual is starting a task or switching to a different task.
- When there is some type of pressure element such as time, visibility or interpersonal conflict. The human brain under pressure is much

more likely to use existing neural pathways, so these are prime opportunities for a strategic pause to reengage the PFC.

- When people are engaged in repetitive work.

Our research has identified at least five different types of questions that accomplish different goals:

PLANNING

People will often naturally start here as they think about how to do a task. Pre-job planning checklists often include a number of planning questions that may not be formed as questions but nevertheless serve the same purpose. For example, when a team member is filling out the tool section of the checklist, the implied questions are, "What tools do we need? Do we need a grinder?" Yes. "Do we need fall protection?" No.

PERCEIVING

The purpose of these questions is to gather information using the senses. What do I see, hear and smell? How does that compare to my past experiences? What do the job aids tell me about potential hazards I might encounter? Many of these questions can also be systemized into a pre-job planning checklist.

PREDICTING

These are questions that play the movie forward and imagine what the future looks like if things continue on this path. Or they might play the movie backward. If this is where we want to go, what are the steps that will take us there? What unexpected events could interfere with that?

PERSPECTIVE CHANGING

These questions ask people to put themselves in someone else's shoes or look at the situation from a different angle. These are often closely related to predicting questions, because answering them often involves imagining what will happen as the movie plays forward from that point of view.

PRIORITIZING

In any given situation, there is a lot of information to process. Your employees

have to sift through information quickly to identify what's most important and what applies to the situation versus what's just noise and can be ignored. The more experience people have, the more intuitively they'll be able to prioritize. To accelerate learning, leaders and senior staff should be explicit about what they're seeing and why they're paying attention to specific items.

A POWERFUL STRATEGY

You can think of these categories as forming a circle. Typically, employees start with planning questions. They ask perceiving questions to gather more information. Next, they play the movie forward to predict what could potentially happen. Then, they look at the situation from a different point of view. With that additional information, they can prioritize what's most important and what needs to happen first. Finally, they return to planning questions to incorporate the insights they've gained.

Proceeding through these different categories of questions should occur regularly, but they may not happen in order. For example, after the initial planning phase, perceiving questions may reveal hazards or a problem with equipment that requires them to return immediately to the planning phase.

Training supervisors and frontline employees on how to ask effective questions at strategic moments can reengage the PFC, which triggers critical thinking and situational awareness. It's a powerful strategy to combat the ever-present hazard of complacency. **EHS**

Sharon Lipinski is the Habit SuperHero and CEO of Habit Mastery Consulting, which helps organizations increase their targeted safety behavior by up to 150%. She is a Certified Gamification for Training developer, certified CBT for insomnia instructor, speaker, TV personality and coach dedicated to helping people create the right habits so they can be happier, healthier and safer at home and in their work. Download 100+ complacency fighting questions at habitmasteryconsulting.com/questions.

Harness the Power of Data and Analytics to Reduce Workplace Injuries and Fatalities



THINKSTOCK

Data can provide a clear understanding of where to allocate resources in order to equip workers with the right tools and training to stay safe.

By Rick Dorsett

Serious injuries and fatalities (SIFs) in the workplace reached 5,333 in 2019, the highest total since 2007. But while the number of SIFs decreased in 2020, these incidents have declined at a much slower rate than other less serious injuries.

In 2020, nearly half (42%) of workplace SIFs occurred in the construction industry—one of the most dangerous labor sectors—but workers across all industries are at risk. From waste management to transportation, there is a dire need for SIF and potential SIF (pSIF) prevention. In addition to jeopardizing worker safety, these events create reputational, financial and legal consequences for the organization.

Ultimately, safety training plays a vital role in lowering the rate of SIFs, but it's only one component of the safety

and risk management process. You need to identify the root causes of these incidents to improve processes and trainings; the most effective way to do that is with data and analytics.

THE CAUSES AND CONSEQUENCES OF SIFS

Although the total number of SIF cases fell in 2020, the rate of occurrence actually increased—from 2019 to 2020, days away from work decreased by 61% while the total number of SIFs only decreased by 10%.

However, the leading cause of these incidents has remained consistent since 2018: contact with objects or equipment. The second and third most common causes of SIF incidents are falls, slips and trips; and overexertion and

bodily reactions. These incidents most frequently result in sprains, strains and tears; fractures and dislocations; and cuts, lacerations, wounds and bruises.

But the impact of SIF incidents is felt throughout the entire organization. Workplace injuries can cost up to thousands of dollars in damages—and up to millions of dollars for fatal injuries. SIFs also commonly result in lawsuits and negative press, damaging the organization's reputation.

One thing that complicates the challenge of reducing SIFs is the disconnect between full-time and contracted employees. Full-time employees typically complete the onboarding process when they begin work at a company and undergo continuous training and recertification. Contract workers are more likely to be rushed into a job they aren't prepared for. And, in many instances, they don't receive sufficient health care, which makes their injuries an even greater risk.

Fortunately, there is a way to create a safer workplace for both full-time and contract workers, and it starts with looking at data on past incidents in your organization.

HOW TO REDUCE SIFS WITH DATA AND ANALYTICS

Historically, risk and safety managers gathered data from incident management systems and observational audits to analyze safety event and performance data. But now that most work is done by contract workers in fields like construction and agriculture, risk and safety managers must track incidents across multiple employers and locations.

Instead of relying on this difficult and tedious method of evaluating performance and safety data, many companies are turning to data and analytics to determine the underlying causes of SIFs. Using a purpose-built contractor management platform with analytics capabilities, you can more easily submit, access and analyze data, such as performance and incident trends.

How does this work, exactly?

ers can report and categorize on-site incidents in real time, storing the organization's entire safety and performance data in a single repository. The more specific and high quality the data, the better you can analyze it to understand the potential for SIFs.

After submitting an incident report, the analytics dashboard evaluates the nature of the event. Over time, the platform helps recognize trends and pinpoint specific activities and processes that expose workers to risk. This equips you with the necessary knowledge to apply corrective actions to workplace processes and better mitigate future SIFs.

For example, in 2020 we discovered that certain indicators had a high correlation with higher or lower SIF rates in the construction industry. SIF rates were 69% higher for contractors who operate commercial motor vehicles, but they were 22% lower if someone submitted a program for NFPA-70E (electrical safety). This data highlights not only the need for

better training for commercial motor vehicle operation, but also the importance of submitting safety documentation.

In addition to protecting workers and avoiding the consequences of SIFs, data and analytics enable you to:

Focus efforts. The ability to pinpoint exactly what specific activities or processes are contributing to higher SIF rates allows you to focus your efforts on improving them. For example, if you determine that working at heights of 6 feet or higher correlates to a higher SIF rate, you can prioritize safety training and processes around working at elevated heights.

Create a culture of safety. With a clear understanding of where to allocate resources for safety improvements, you can equip workers with the right tools and training to stay safe. Initial training before a job is critical, but on-the-job training and continuous knowledge assessments help ensure a more thorough comprehension of protocols.

Creating a culture of safety is a win-win for employees and employers.

Become a preferred employer.

Marketing yourself as an empathetic, safety-first employer is crucial, especially in today's tight labor market. By allowing potential employees to evaluate the organization's safety data—if the numbers look good—a contracted worker will more likely want to work for you.

The need for SIF and pSIF prevention is on the rise, as the incidence rate doesn't appear to be slowing down. Workplace safety should always be a priority, but consider using data and analytics to uncover the root causes of these serious incidents. This will enable you to improve processes and enhance training procedures that will benefit both you *and* your workers. **EHS**

Rick Dorsett is a director at ISN, where he oversees the company's health, safety, environmental and sustainability review team.

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NEW PRODUCTS

A Work Boot for Women

KEEN Utility has released the women's Dover work boot. It's designed for the unique fit needs of today's tradeswomen, part of the company's "Tradeswomen Tested" program. With a design inspired by KEEN's hiking boots, the boot is non-metallic and weighs nearly 15% less than traditional steel. The Dover features the new KEEN KONNECTFIT Heel Locking System along with the KEEN Utility LUFTcell midsole with nearly 100,000 air bubbles per cubic centimeter, providing lightweight comfort for all-day wear. The Dover also has an ergonomically designed, removable footbed for support; a Cleansport NXT antimicrobial liner for natural odor protection; waterproof leather upper; and an EH-rated abrasion-, oil- and slip-resistant non-marking rubber outsole.



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ESG Reporting Tool

IsoMetrix has launched Lumina, an environmental, social and governance (ESG) application. Lumina is designed to be an all-in-one ESG management solution that supports the collection of data to help companies manage and report on their ESG and sustainability performance. The reporting tool is built on a new SaaS platform and assists with governance reporting requirements; reducing environmental impact while positively affecting social factors, such as diversity and inclusion; and identifying operational efficiencies to help lower costs. Lumina allows companies to track ESG standards via its Indicators Library, which contains pre-defined question sets and other content aligned with GRI, SASB, WEF and TCFD standards; full audit tracking; and built-in collaboration features. The application also helps companies visualize and analyze data through a range of dashboards and package it for reporting purposes.

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Connected Gas Detection Solution

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NICOLE
STEMPAK
Managing Editor



SUSTAINING OUR WATER—AND OUR WAY OF LIFE

Let's start treating our rivers, lakes and waterways like the life-sustaining resource that they are.

I'm so lucky to live about a 10-minute walk from Lake Erie. Going to the park to watch the sun set over the lake is one of my favorite things to do in the summer. In fact, I realize that water features prominently in many other activities I enjoy: picnics, barbecues and dining al fresco; lounging on inner tubes; napping on the beach; and cruising in a boat.

In elementary school, I learned that the Great Lakes make up the largest body of fresh water on Earth. It's a treasure in our own backyards, but often we don't treat it as such.

Fresh, drinkable water is an increasingly scarce resource despite the melting of the polar ice caps and rising sea levels. Climate change and a growing global population are only going to make it worse. That is, unless we do something about it.

Water shortages aren't just a hypothetical problem. They're already here.

In 2018, Cape Town, South Africa, became the first major city in the world to reach Day Zero: when water supplies got so low that the water taps were turned off.

And in the U.S., the most populous state in the nation, California, recorded the 2020-2021 season as the second driest year in The Golden State's history. According to the National Integrated Drought Information System, about 61% of the lower 48 states were in a drought March 9-15, 2022, the most recent data available as of press time.

Meanwhile, Lake Erie has endured a different kind of threat: negligence and pollution. In the 1960s, the lake that touches parts of Canada, Michigan, Ohio, Pennsylvania and New York was declared a dead lake. Left largely unregulated—and unprotected—Lake Erie was polluted from factories, agricultural runoff, waste from city sewers and waterways that fed into the lake, e.g., the Cuyahoga River, which caught fire multiple times.

Those fires earned Cleveland the nickname "The Mistake on the Lake," but those fires also prompted a flurry of action, including passage of the Clean Water Act. Lake Erie's water dramatically improved, but it has once again found itself in metaphorical hot water.

Since the late 1990s, Lake Erie has experienced toxic algae blooms, a result of agricultural runoff, that turn its waters a bright blue-green. In August 2014, those blooms caused the city of Toledo, Ohio, to essentially shut down. About 400,000 people were told they couldn't use the water from their faucet

to cook, drink or brush their teeth. Boiling the water didn't help, so many residents drove across state lines to find stores that still had bottled water on the shelves.

Algal blooms levels continue to be closely monitored, and there has been an increase in funding and attention to further research and knowledge. Unfortunately, it seems to be another case of two steps forward, one step back, as recent research has found more PFAS or toxic "forever chemicals" are making their way into Lake Erie. In 2021, raw data from a binational

Great Lakes monitoring program found that rainwater contained PFAS in monitoring stations in Cleveland; Chicago; Sturgeon Point, N.Y.; and in Michigan's Lower and Upper Peninsula.

It's easy to watch the sun set over Lake Erie and despair. After all, there are often days where people are told not to swim in the lake, as the water is too polluted. For this Earth Day, I'm trying to stay optimistic that we can change our course and chart a new path.

The Great Lakes will receive \$1 billion for cleanup and restoration as part of the \$1.2 trillion Bipartisan Infrastructure

Bill (Infrastructure Investment and Jobs Act). That's in addition to the Great Lakes Restoration Initiative, which each year invests in environmental infrastructure projects in the region.

Since the start of the COVID-19 pandemic, we've seen what good things can happen when we support Mother Nature, or at least let her heal herself. In Venice, Italy, less pollution meant the water in its famed canals turned clear. In Thailand's Maya Bay, restricting human access, swimming and boat pollution has resulted in more blacktip sharks sightings and even breeding. These are merely two examples of how Mother Nature, her creatures, her waters, her habitats and her ecosystems have a strong and enduring will to survive, reclaim themselves and restore homeostasis. We just need to support them.

It's up to us—as individuals, organizations, institutions and governments—to help preserve Mother Nature. In doing so, we collectively ensure our safety and well-being, both for ourselves and future generations.



NICOLE STEMPAK

Nicole Stempak

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A man wearing a grey Wrangler shirt, a dark cap, and glasses is working with a large metal pipe. The shirt has a small orange 'FR' tag on the chest pocket. The background shows a white truck and a clear sky.

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