The National Campaign to Prevent Falls in Construction 2023 Safety Stand-Down Evaluation Report:

Lessons Learned from OSHA's Certificate of Participation Data



FEBRUARY 2024

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BACKGROUND

Falls are the leading cause of workplace death for construction workers. In 2021, more than one construction worker died from a fall to a lower level per day.¹ In 2022, fall protection in construction remained the most frequently cited standard by the Occupational Safety and Health Administration (OSHA) for the eleventh consecutive fiscal year.^{2,3} However, despite intensive efforts to prevent falls in the industry, fall fatalities in construction have increased over the last ten years. Between 2011 and 2022, the rate of fatal falls to a lower level in construction increased by 12.5%.⁴ In addition, fall deaths in construction are an occupational health equity issue, with immigrants, Hispanic workers, and those employed by small contractors being disproportionately affected. In 2017, the most recent year with available demographic data, the rate of Hispanic construction workers who died because of a fall to a lower level was 50% higher than the rate for their non-Hispanic counterparts.⁵

The National Campaign to Prevent Falls in Construction (Falls Campaign) has worked to address these risks since it was founded in 2012 by the <u>National Occupational Research Agenda (NORA)</u> <u>Construction Sector Council</u>, the <u>Occupational Safety and Health Administration (OSHA)</u>, the <u>National Institute for Occupational Safety and Health (NIOSH)</u>, and <u>CPWR–The Center for</u> <u>Construction Research and Training (CPWR)</u>. The Falls Campaign picked up steam in 2014, when the first National Safety Stand-Down to Prevent Falls in Construction (Stand-Down) was held. Having celebrated its 10th anniversary in 2023, the Stand-Down brings together employers, workers, safety associations, labor unions, and others to prevent falls. During the Stand-Down, participants pause work to engage in a range of fall-focused activities such as toolbox talks, equipment demonstrations, training, and more. The event prioritizes outreach to residential construction employers and workers given their elevated risk for fatal falls.⁶

The Stand-Down reaches hundreds of thousands of workers across the United States and its territories, along with many workers who participate internationally. See <u>Stop Construction</u> <u>Falls: Evaluation</u> for evaluation reports from previous years.

https://www.safetyandhealthmagazine.com/articles/safety-health-oshaannounce-top-10-violations-of-2012-2. (Accessed November 2023). FY 2016 was confirmed via the following source: Safety and Health Magazine. (2016). OSHA's Top 10 Most Cited Violations for 2016.

¹ 378 fatalities in 2022. U.S. Bureau of Labor Statistics, 2011-2021 Census of Fatal Occupational Injuries.

² OSHA. (2023). The Top 10 Most Frequently Cited Standards FY 2022. <u>https://www.osha.gov/top10citedstandards</u>. (Accessed September 2023). ³ From FY 2012-2020, Fall Protection 1926.501 was the most cited OSHA standard. In 2011, Scaffolding 1926.451 was the most frequently cited OSHA standard. 2011, 2013, 2014, 2015, 2017, 2018, and 2019 were confirmed via the Way Back Machine's internet archives of the OSHA webpage cited above. Archives were not available for FY 2012 and 2016. As such, FY 2012 was confirmed via the following source: Safety and Health Magazine. (2012). Safety and Health, OSHA Announce 'Top 10' Violations of 2012.

https://www.safetyandhealthmagazine.com/articles/14927-2016-oshas-top-10-mostcited-violations. (Accessed March 2021). ⁴ Report forthcoming from CPWR Data Center. ⁵ Flood et al. (2001). Interpreted Public Leo Microachte Center Compared Public Leo Microachte Compared Public

⁵ Flood et al. (2021). Integrated Public Use Microdata Series, Current Population Survey: Version 9.0 [dataset]. https://doi.org/10.18128/D030.V9.0

U.S. Bureau of Labor Statistics, Fatal occupational injuries due to fall to lower level in the construction industry (all ownership), 2017. https://www.bls.gov/iif/sqt/fatal-construction-falls-2017.xlsx.

⁶ Dong, X. S., Wang, X., Largay, J. A., Platner, J. W., Stafford, E., Cain, C. T., & Choi, S. D. (2014). Fatal falls in the U.S. residential construction industry. American Journal of Industrial Medicine. <u>https://doi.org/10.1002/ajim.22341</u>

METHODS

Data analyzed in this report were collected from the OSHA 2023 Safety Stand-Down Certificate of Participation Database. This database compiles all entries from participants who registered for certificates. To receive a certificate, participants are asked to share information about their event such as their location, how many workers attended, what took place, and any suggestions they had for how to improve the Stand-Down through an online form. The questionnaire is promoted online alongside Stand-Down promotional communications by OSHA, CPWR, and NIOSH through channels such as social media posts, webinars, and newsletters. The full questionnaire is shared as an appendix to this report.

This report is a mixed-methods analysis of the Database. To prepare for analysis, duplicates were removed. Entries with organization names that had small variations



in spelling or grammar were consolidated. Spanish-language entries were translated into English. Quantitative analysis was performed using Excel. Maps were created using Datawrapper. For the qualitative analysis, a codebook with topical and interpretive codes was created and data were coded iteratively. Analytical products were developed to analyze coded data. Data are reported in aggregate and, when quotes are used by participants who gave permission for OSHA to publish their responses, identifying details have been removed.

There are a set of limitations to the Certificate of Participation Database. All data are voluntarily reported by participants and thus are subject to selection and recall bias. Moreover, Stand-Down organizers have been informed that some organizations participate without registering for certificates, so the data represent an undercount of total events held.

CPWR has collaborated with OSHA since the start of the Stand-Down in 2014 to analyze the OSHA Certificate of Participation Database. However, because of variations in data availability and subsequent gaps in analysis, this report addresses trends in participation beginning in 2019. For reports on participation between 2014-2016, see <u>https://stopconstructionfalls.com/about-the-campaign/evaluation</u>.

FINDINGS

Total Number of Stand-Downs and Workers Reached

In 2023, thousands of Stand-Down events engaged hundreds of thousands of workers to come together to prevent falls in construction. A total of **3,554 stand-downs reached 463,594 workers** across the United States, its territories, and internationally.

Participation Trends

A. Stand-Downs Held & Workers Reached Over Time

In 2023, the number of total stand-downs held and workers reached continued its recovery from the dip experienced in 2020 with the start of the COVID-19 pandemic. In 2020, all stand-downs were held virtually, and in 2021, in-person events returned, but lower participation was reported than before the pandemic.

In 2023, total Stand-Down events held and workers reached surpassed the number of events held in 2019 for the first time. While in 2022 events held and workers reached approached 2019 levels, in 2023, both categories were greater than their 2019 levels.





B. Multiple Stand-Downs Across Years

The Stand-Down continues to both attract new participants and retain long-time participants. Among organizations that reported their number of years participating, **over one third of organizations reported they were participating for the first time** in 2023 (37%, 1,211).

Revisions made to the Certificate Form in 2023 allowed for more in-depth analysis of how many participants report holding multiple stand-downs across consecutive years since the Stand-Down began in 2014. Instead of only offering 1-5 years of participation as answer options, the answer options were expanded to be 1-10 to include all ten possible years of participation. **Fifteen percent of participants (478) reported this was their tenth event, and thus that they had held an event every year since the Stand-Down began in 2014**.



C. Participation By Language

In 2022, the Certificate of Participation was updated to allow participants to fill out the form and obtain their certificate in Spanish. They had the option to receive a certificate in English, Spanish, or both.

Despite an increase in overall participation, **the number and percentage of participants who requested certificates in Spanish fell in 2023 compared with 2022**. While 8% (261) of respondents used the new option to obtain a certificate in Spanish in 2022, only 5% (168) of respondents requested certificates in Spanish in 2023.



D. Multiple Stand-Downs Within Organizations

To evaluate how widespread participation was within organizations, we investigated how common it was for organizations to report that they held multiple stand-down events. This captures organizations that held stand-downs at different jobsites and organizations that held multiple stand-downs on separate days.

Most participating organizations hosted a single event rather than multiple events. Among the 1,613 organizations that registered for certificates of participation, 74% (1,201) hosted a single stand-down whereas 26% (412) hosted multiple events. This trend was similar for residential construction stand-downs: 66% (91) of participating residential construction organizations held a single event, whereas 34% (47) held multiple events.

Stand-Down Demographics

A. Participation by Sector

Stand-Downs by Type of Construction

Respondents were asked to report whether they primarily worked in the commercial construction, residential construction, other construction, non-construction, highway, or government sectors. **Commercial construction remained the most selected sector** in 2023, with 41% (1,450) of the total stand-downs. Other construction was the second-most selected category, making up 21% (765) of the stand-downs.



The Falls Campaign seeks to prioritize residential construction employers and workers due to their greater risks for fatal falls.⁷ In 2023, **residential construction organizations held a total of 465 events, making up 13% of all reported stand-downs**. Roughly double the number of residential construction events were held in 2023 compared with 2022. Part of this increase was due to one residential construction organization that held 128 events, making up 28% of all residential construction events held in 2023.



⁷ CPWR – The Center for Construction Research and Training. (2021). New Trends of Fatal Falls in the Construction Industry. <u>https://www.cpwr.com/wp-content/uploads/DataBulletin-Falls-Special-Issue-2020.pdf</u>. (Accessed November 2021).

Workers Reached by Type of Construction

Respondents were asked what type of construction they perform and how many workers attended the stand-downs they hosted. This data provides an indicator of how many workers were performing that type of construction when the Stand-Down occurred, however we cannot conclude whether the workers attending self-identify as part of that sector. Individuals completing the certificate form can only choose one sector and likely default to the primary sector for their company, which may or may not reflect the primary sector of the workers who attended. For example, a general contractor who selected "commercial construction" as their type of construction may have hosted participating workers who primarily work in a different sector.

Based on the data available, we calculated the numbers of workers reached as part of a standdown event in a particular sector. The **three most selected sectors were commercial construction** (30%, 136,994), **government** (28%, 130,754), and **other construction** (26%, 118,143).



As mentioned above, residential construction workers are a primary target audience of the stand-down. **Six percent (28,702) of workers reached worked in the residential construction sector.** This was the highest number of residential construction workers reached since 2019, and reflects greater participation in this priority group since the pandemic ended.



B. Stand-Down Size

Residential contractors often have fewer employees than those in other sectors, but small employers in any sector are at a higher risk for falls. Alongside the goal of reaching those in residential construction, the Stand-Down seeks to prioritize small contractors. The Certificate of Participation database does not ask respondents to state their organization's total size, but it does ask how many employees were present at the stand-down event. Although responses do not distinguish between different stand-down structures – such as when a large employer split their events into multiple events – the data provides insight into jobsite size where stand-downs occur.

Across sectors, stand-downs were mostly held with small groups of workers: 42% (1,508) of stand-downs were held at sites with one to 19 workers present. The next most common size was 20 to 99 workers, which represented 36% (1,279) of stand-downs held. Residential construction stand-downs were more likely to be larger events: 56% (259) of residential construction events had 20 to 99 workers, whereas 27% (127) of residential construction events had 1 to 19 workers.



C. Participation by Location

Stand-Downs by State

Stand-downs were held in **every state** in 2023. The states with the highest number of standdowns were **Texas** (434), **California**, (232), **Florida** (205), **New York** (167), and **Louisiana** (151). For additional information on fall fatalities by state, consult <u>CPWR's Construction Fatality Map</u> <u>Dashboard</u>. Stand-downs were also held in Puerto Rico (78), Guam (17), the Northern Mariana Islands (2), American Samoa (1), and the Virgin Islands (9).

There were 133 Stand-Downs held internationally.⁸



⁸ While international participants were not specifically asked to report which country they were located in, some participants identified their location in their entries. Participants reported holding events in countries such as Brazil, Japan, India, Egypt, Morocco, Saudi Arabia, the United Arab Emirates, Kuwait, Botswana, and Mexico.

Workers Reached by State

A total of **343,403 U.S. workers** were reached in the 2023 Stand-Down. The states where events reached the highest numbers of workers were **Texas** (41,033), **Virginia** (32,005), **Florida** (26,043), **California** (25,397), and **Louisiana** (24,110). For additional information on fall fatalities by state, consult <u>CPWR's Construction Fatality Map Dashboard</u>.



An additional 120,191 workers were reached internationally.9

⁹ While international participants were not specifically asked to report which country they were located in, some participants identified their location in their entries. Participants reported holding events in countries such as Brazil, Japan, India, Egypt, Morocco, Saudi Arabia, the United Arab Emirates, Kuwait, Botswana, and Mexico.

Stand-Downs and Workers Reached by OSHA Region

OSHA regional offices and training centers promote and facilitate stand-down events nationally and throughout the territories.

The largest numbers of stand-downs were held by **Region 4** (687), **Region 6** (680), and **Region 9** (451). In terms of workers reached, **Region 6** (75,317), **Region 3** (63,986), and **Region 4** (61,301) reported reaching the largest numbers of employees in their events.

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	Region 8	Region 9	Region 10
Stand- Downs	122	345	334	687	387	680	109	132	451	174
Workers Reached	8,440	29,822	63,986	61,301	40,951	75,317	9,035	9,680	37,784	7,087



Stand-Down Content

Respondents were asked to describe their Stand-Down events in an open-ended format. They were asked what they did, what materials they used, how the event went, and what they expected to happen because of the event.

A. Popular and Unique Activities

When participants wrote about what they did in their stand-downs, many described specific activities. The activities they mentioned most often were **trainings** (442), **meetings/huddles** (309), **demonstrations** (239), **toolbox talks** (221), and **refreshments** (197).



As in past years, it was common for participants to combine multiple activities and approaches during an individual event or during multiple events throughout the week. For example, one participant described how they combined training on ladder safety and correct harness use, reviewing protocols for work on elevated surfaces, performing equipment demonstrations, holding hands-on activities, facilitating group discussions, and discussing case studies, explaining "the multi-faceted approach was designed to accommodate different learning styles and facilitate better retention of safety information."

Some respondents described holding activities that were unique. These less commonly mentioned ideas for events included:

- Purchasing new safety equipment and harnesses and using the Stand-Down as a time to train workers on how to use new equipment.
- Hosting a discussion space in which management and workers shared accounts of their experiences with falls, including remembering loved ones who had died because of falls.
- Raising awareness of the elevated risk of fatal falls for Hispanic workers and creating focus in the event about preventing and addressing health disparities.

- Engaging workers' families by providing coloring sheets for employees' children that explained key safety and PPE issues.
- Facilitating a discussion space focused on *"finding your personal reason to work safely (family, friends, etc.)."*
- Hosting a variety of games and competitions that included interactive activities, puzzles, treasure hunts, prizes, charades, and game show-style structures like Jeopardy.

B. Popular and Unique Topics

Many respondents used key fall-related topics in their descriptions of their stand-down activities. The topics mentioned most often were fall protection (1,228), ladders (692), inspections (343), harnesses (332), and scaffolds (198).



Some respondents also described providing training on non-fall-related topics as part of their stand-down events. They said they trained on topics such as heat illness, struck-by incidents, and mental health. Heat was the most mentioned alternative training topic.

Between 2022 and 2023, there was a 47% (76, 112) increase in the number of times "rescue" was mentioned as a topic. While rescue was still not a top topic in 2023, the increase is noteworthy. The Falls Campaign produced a series of new resources on rescue that it released for the 2023 Stand-Down, and this increase in mentions of the topic may correspond to the availability and promotion of additional resources on rescue.

Recommendations for Future Stand-Downs

Respondents were asked if they had recommendations for how to improve the Stand-Down. Many participants provided positive feedback about the event, submitting comments like "*Keep it going as is. It's very helpful each year*." Although many participants expressed enthusiastic satisfaction, they also offered ideas about how to improve future events.

A. Repeated Feedback from Prior Years

Commonly, participants provided similar feedback this year as they had in past years. Feedback analyzed in previous evaluations was consistently shared again this year, such as requests to:

- Hold more events throughout the year;
- Advertise the event earlier and more widely;
- Provide more materials in Spanish; and
- Expand the event to focus on sectors beyond construction

Some participants even referenced their previous comments about these recommendations. For example, one participant mentioned he was submitting feedback about expanding sectors included in the Stand-Down that he had already provided: *"I have said it over the years, so one more time won't hurt. You still focus on the Construction Industry, and they are not the only workers that fall prevention applies to."*

The Falls Campaign has sought to respond to this feedback and continues to integrate it into its planning for future activities. The Campaign has added events throughout the year, started advertising earlier in the year and using additional advertising channels, and continues to expand its Spanish-language translation options. The Campaign has not expanded the event to focus on sectors beyond construction but is aware of this input from participants.

B. Analysis of Additional Feedback

In addition to repeating feedback analyzed in previous years' evaluation reports, participants also provided recommendations about other areas of input. Since these areas have not been analyzed in depth in previous reports, they are highlighted in this year's report.

Expand Resources

Participants provided recommendations on how resources could be expanded for future years. Some recommended creating entirely new resources, such as new high production value videos, first-person testimonial resources about actual experiences with falls, additional training materials, new visual aids, and a PowerPoint presentation.

Others asked for updates to existing resources. They highlighted issues with outdated statistics and asked for updated data, stating observations such as: *"Old statistics aren't relevant."* Another participant explained they had had difficulty finding the newest statistics on the Campaign's website, stating: *"I did locate [the most updated statistics about fall fatalities and injuries] but it needed to be tracked down by myself to include in the stand down numbers."* In addition, other participants asked for updates to visuals used in the campaign, highlighting repetition in images used. In what was likely a reference to the Falls Campaign poster that has stayed consistent since it was originally developed for the launch of the campaign, one participant asked: *"How many years will the poster be the same guy?"* The same participant also recommended that updating the sticker design beyond changing the colors annually would be beneficial.

Others recommended expanding existing resources. They asked for additional webinars and free online trainings, updated infographics, more stories of successful events that could be used as inspiration for others' events, and additional training materials. Moreover, multiple participants specifically asked for more visually engaging materials. As one stated: *"Some of the information we used was kind of plain and blah, and not engaging enough. People don't want to read a lot of words but they like seeing information and details shown in a more visual way."*

Expand Recognition

Some participants offered recommendations on how to strengthen recognition for participating organizations and individuals. While, as one participant said, *"certification recognition is a great talking point with our team,"* others felt providing additional avenues for recognition could help support participation. They provided a range of recommendations, such as creating tiers to gamify the program in which participations could get additional recognition based on the extent of their activities, providing incentives to participating companies such as financial support for fall protection, issuing plaques instead of certificates, and creating additional "trinkets" such as pencils, shirts, key chains, glove clips, or other free materials to give participants.

In addition, some participants recommended participation recognition strategies the Stand-Down already employs, such as providing free hardhat stickers, hazard alert cards, and customizable signs for companies that participate. Their recommendations underscore the need to ensure information about available resources and sources of recognition is widely disseminated. Similarly, a participant explained *"I found that myself and some other safety professionals were unaware of the certificate for participation."* Sharing information more widely information about already available sources of recognition may help to respond to some of these pieces of feedback.



For more information on the National Campaign to Prevent Falls in Construction and the Safety Stand-Down, visit the OSHA-NIOSH-CPWR campaign site: www.stopconstructionfalls.com

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Appendix: OSHA Certificate of Participation Survey Text (English and Spanish)

- 1. Name of Business*
- 2. Project Title:
- 3. State*:
- 4. Type of Industry*: Choose [Commercial Construction; Government; Highway; Non-Construction; Other Construction; Residential Construction]
- 5. Number of Employees who Participated*:
- 6. Number of years of participation:
- Please tell us about your Stand-Down. What did you do? What materials did you use? How did it go? What do you expect to happen as a result of the Stand-Down? (*Optional*. *Limit entry to 1500 characters.*)

Please indicate if you give the Agency consent to use your comments in our program assessment and promotional activities. Yes □ No □:

How can we improve future initiatives like this? What could have been better?
(Optional. Limit entry to 1500 characters.)

Please indicate if you give the Agency consent to use your comments in our program assessment and promotional activities. Yes \square No \square :