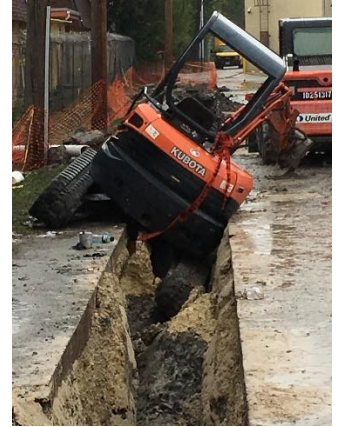
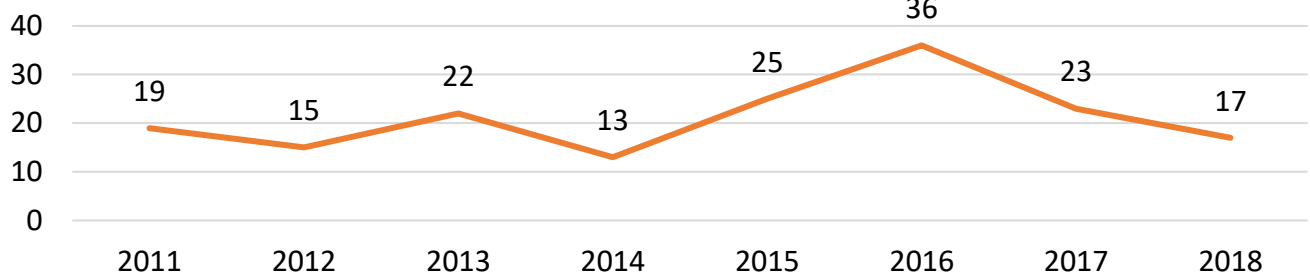


**2020 National Trench Stand Down\*** (v1 04/2020)

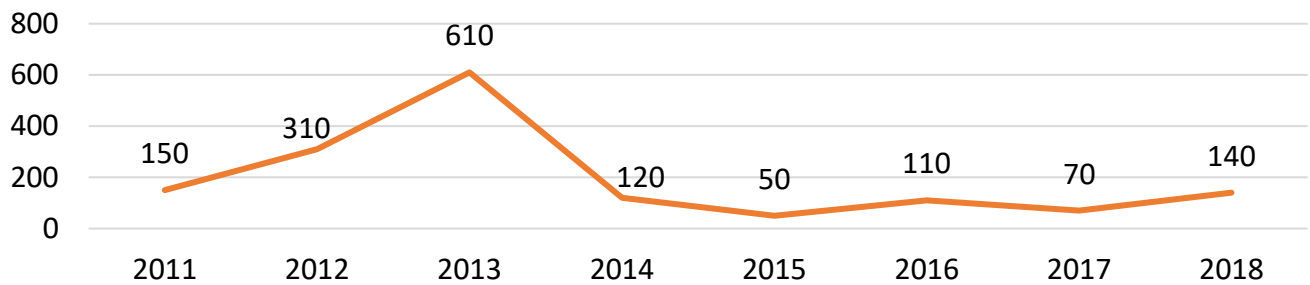
Trenching and excavation work presents serious hazards to all workers involved. Cave-ins pose the greatest risk and are more likely than some other excavation-related incidents to result in worker fatalities. One cubic yard of soil can weigh as much as a car and an unprotected trench can be an early grave. In Fiscal Year (FY) 2019 (the time period covered by this flyer) SE Texas area didn't have any cave-in related fatalities. However, we've started FY 2020 with two cave-in fatalities. We need to do better. Protecting workers from excavation related hazards is a National Emphasis Program (NEP) and OSHA priority goal to increase the number of employees removed from excavation hazards. This stand down is an opportunity to spread the word on excavation safety and to review your training, programs, and procedures to ensure your workers are provided a safe working environment. Let's send everyone home safe – every day.



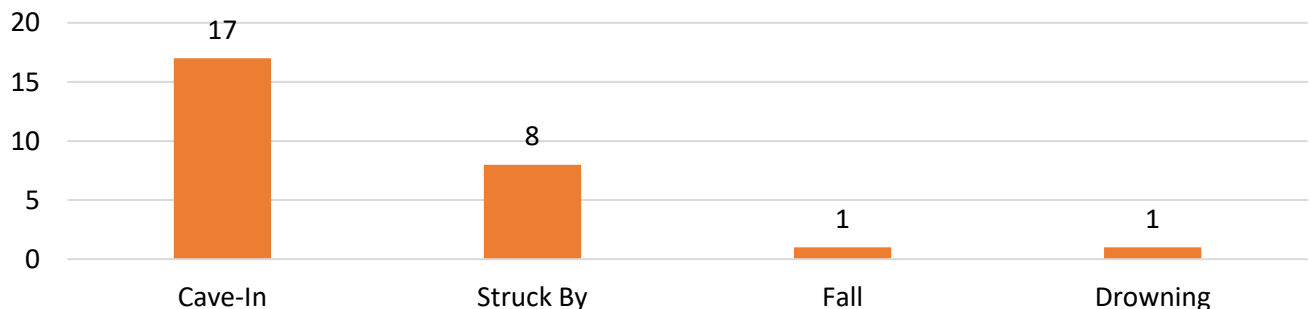
**BLS Fatal Cases Excavation or Trenching Cave-In 651XXX**



**BLS Days Away Cases Excavation or Trenching Cave-In 651XXX**



**FY 19 OSHA Excavation Related Incidents**



## A review of OSHA records and news reports found about 27 excavation and trenching related fatalities in FY 19\*

### Cave-In

- *Covington, GA* - A worker was taking depth measurements with an engineering rod when the 11' trench below him collapsed crushing and asphyxiating him.
  - <https://www.covnews.com/news/county/man-dies-after-december-ditch-collapse/>
  - <https://www.covnews.com/news/county/man-airlifted-after-ditch-collapse/>
  - Citations issued:
    - 1926.21(b)(2) – Training on recognizing and avoiding hazards
    - 1926.651(j)(1) - Protection from loose rock or soil on excavation face
    - 1926.651(j)(2) - Protection of employees from materials falling or rolling in
    - 1926.651(k)(1) - Daily inspections of excavation by competent person
    - 1926.652(a)(1) - Protection from cave-ins
- *Raleigh, NC* - Employee was working in the bottom of a trench, 25' deep x 30' wide x 90' long trying to shoot grade for a retaining wall. The trench collapsed killing him. Another employee was buried to the waist and extricated.
  - <https://www.paintsquare.com/news/?fuseaction=view&id=20497>
  - <https://www.constructiondive.com/news/worker-killed-2-injured-in-excavation-collapse-at-north-carolina-jobsite/546694/>
  - <https://www.nconstructionnews.com/construction-worker-killed-two-injured-in-north-raleigh-construction-accident/>
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.651(k)(1) - Daily inspections of excavation by competent person
    - 1926.652(a)(1) - Protection from cave-ins
- *Saint George, UT* - Employee standing near a trench fell into it when the trench collapsed and died from crushing injuries and asphyxiation.
  - <https://fox13now.com/2019/02/19/construction-worker-critically-injured-in-trench-collapse-in-st-george/>
  - <https://www.ksl.com/article/46494413/man-critically-injured-in-st-george-trench-dies-from-injuries>
  - <https://gephardtaily.com/local/update-officials-id-man-killed-in-trench-collapse-at-st-george-construction-site/>
  - No citations found
- *Spencer, TN* - Employee was repairing a broken water line that had been ruptured during the installation of a water culvert during a road maintenance operations. The sides of the 9' deep trench collapsed about 30 minutes after the repair was started totally engulfing him.
  - <https://www.wkrn.com/news/officials-identify-city-of-spencer-employee-killed-in-trench-collapse/1897680512/>
  - <https://www.newschannel5.com/news/crews-work-to-free-utility-worker-trapped-underground>
  - [https://www.wsmv.com/news/employee-dies-after-ditch-collapses-during-water-line-repair-in-van-buren-county/article\\_95a20c3e-55a6-11e9-b1c5-23ae48f8e823.html](https://www.wsmv.com/news/employee-dies-after-ditch-collapses-during-water-line-repair-in-van-buren-county/article_95a20c3e-55a6-11e9-b1c5-23ae48f8e823.html)
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.100(a) – Head protection
    - 1926.651(c)(2) - Safe means of egress
    - 1926.651(h)(1) - Precautions for excavations with water

- 1926.651(k)(1) - Daily inspections of excavation by competent person
  - 1926.652(a)(1) - Protection from cave-ins
- *Lake Village, AR* - Employee stepped out of trench box into the trench to lube a sewer pipe when a portion of the trench collapsed asphyxiating/suffocating him.
  - [https://www.chicotnewspapers.com/news/local-killed-on-the-job-when-trench-collapses/image\\_b24c369c-56e7-11e9-be31-efd253a9ba13.html](https://www.chicotnewspapers.com/news/local-killed-on-the-job-when-trench-collapses/image_b24c369c-56e7-11e9-be31-efd253a9ba13.html)
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.651(j)(2) - Protection of employees from materials falling or rolling in
    - 1926.652(a)(1) - Protection from cave-ins
    - 1926.652(b)(2) – Determination of slopes and configurations using Appendix A and B
- *Sugarcreek, OH* - Employee was installing a 4" PVC sewer line inside an unprotected 11' deep trench. The soil in the trench collapsed on the employee suffocating him.
  - <https://www.osha.gov/news/newsreleases/region5/08022019>
  - <https://dayton247now.com/news/local/osha-opens-investigation-after-worker-killed-in-sugarcreek-twp-trench-collapse>
  - <https://dayton247now.com/news/local/trench-rescue-underway-in-sugarcreek-township>
  - <https://www.wdtn.com/news/local-news/osha-investigating-deadly-trench-collapse/1909378891/>
  - Citations issued:
    - 1926.651(k)(1) - Daily inspections of excavation by competent person
    - 1926.652(a)(1) - Protection from cave-ins
    - 1926.652(c)(3)(iii) – Tabulated data maintained on job site
- *Marysville, OH* - Employee was working with several coworkers to uncover an 8" water line with a loader. The employee remained in the trench that was dug to 14' while his coworker assembled a section of pipe to be installed. He was walking through the trench when it collapsed on top of him and asphyxiated him.
  - <https://www.dispatch.com/news/20190408/osha-investigating-trench-collapse-that-killed-worker-in-marysville>
  - <https://www.whio.com/news/local/second-trench-death-this-week-reported-marysville/ioVfXDjvms1Tsy5Qm5rYfP/>
  - <https://www.10tv.com/article/construction-worker-killed-after-getting-buried-trench-marysville-2019-apr>
  - <https://abc6onyourside.com/news/local/authorities-worker-died-after-trench-collapsed-in-marysville>
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.651(c)(2) - Safe means of egress
    - 1926.652(a)(1) - Protection from cave-ins
- *New Plymouth, ID* - Two employees were working in the trench and a third was operating the backhoe when the trench collapsed killing the two workers inside.
  - <https://www.ktvb.com/video/news/local/2-workers-killed-in-new-plymouth-trench-collapse/277-a54c94c9-7854-4476-9fce-90f5871d71cc>
  - <https://www.ktvb.com/article/news/2-men-trapped-in-new-plymouth-trench-collapse/277-b67332ae-cafe-4e8d-9c19-d4cee6848747>
  - [https://www.argusobserver.com/news/men-who-died-in-trench-collapse-from-new-plymouth-vale/article\\_6c87e7f4-5c74-11e9-acb1-9380177133f8.html](https://www.argusobserver.com/news/men-who-died-in-trench-collapse-from-new-plymouth-vale/article_6c87e7f4-5c74-11e9-acb1-9380177133f8.html)
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.651(k)(1) - Daily inspections of excavation by competent person

- 1926.651(c)(2) - Safe means of egress
  - 1926.651(j)(2) - Protection of employees from materials falling or rolling in
  - 1926.652(a)(1) - Protection from cave-ins
- *Windsor, CO* - Employee was laying sewer pipe in a trench when it collapsed killing him from asphyxiation.
  - <https://www.9news.com/article/news/local/citations-fines-after-fatal-trench-collapse-in-windsor/73-57fd32e4-50af-434b-b3fd-855d16e63c2f>
  - <https://kdvr.com/news/men-killed-in-windsor-trench-collapse-identified/>
  - <https://www.coloradoan.com/story/news/2019/04/24/wife-man-killed-colorado-trench-collapse-plans-take-legal-action-windsor/3561521002/>
  - <https://www.coloradoan.com/story/news/2019/04/16/two-trapped-trench-collapse-windsor-colorado/3490131002/>
  - Citations issued:
    - 1910.1200(g)(8) – Safety Data Sheets maintained in the workplace and accessible
    - 1910.1200(h)(1) – Hazard communication employee training
    - 1926.651(h)(1) - Precautions for excavations with water
    - 1926.651(k)(2) - Employee removal from hazardous trench by competent person
    - 1926.652(a)(1) - Protection from cave-ins
    - 1926.1053(b)(15) – Ladders inspected by a competent person
    - 1926.1053(b)(16) – Defective ladders tagged and/or removed
- *Alpine, UT* - Employee was locating conduit in a trench when the spoil pile collapsed onto the employee trapping him in trench. He was asphyxiated due to the weight of the soil.
  - <https://fox13now.com/2019/04/25/one-person-killed-after-trench-collapses-in-alpine/>
  - <https://www.ksl.com/article/46539031/authorities-identify-man-killed-in-alpine-trench-collapse>
  - <https://gephardtaily.com/local/officials-id-construction-worker-killed-in-trench-collapse-in-alpine/>
  - Citations issued:
    - 1926.651(j)(2) - Protection of employees from materials falling or rolling in
    - 1926.652(a)(1) - Protection from cave-ins
- *Stone Mountain, GA* - Employee was standing at the edge of an 18' excavation guiding the backhoe operator when the street he was standing on gave way causing him to drop into the excavation. The opposite side of the excavation then sloughed off on top of him killing him.
  - <https://www.11alive.com/article/news/local/stone-mountain/man-dies-after-falling-into-16-foot-trench-in-stone-mountain/85-48ddeb1-4a53-4f54-9aa1-653add8ee9e0>
  - <https://www.wsbtv.com/news/local/dekalb-county/breaking-person-trapped-in-25-foot-deep-trench-fire-officials-say/943771416/>
  - <https://www.fox5atlanta.com/news/construction-worker-who-fell-into-trench-dies>
  - Citations issued:
    - 1926.651(i)(3) - Support for sidewalks, pavements, and appurtenant structures
- *Encino, CA* - Employee was digging inside of an unprotected 10' trench while looking for sewer line. The trench was not shored or otherwise protected and the west wall of the trench collapsed on top of him.
  - <https://www.dailynews.com/2019/07/06/worker-killed-in-encino-trench-collapse-identified/>
  - <https://abc7.com/encino-trench-rescue-man-trapped-in-collapse/5377670/>
  - <https://www.ktvu.com/news/1-person-killed-after-trench-collapses-in-encino>
  - No citations found
- *Taylor, MS* - Employee was preparing to install 8" x 14' section of PVC sewer pipe into an outlet of manhole while standing at the bottom of a 10' deep vertical side wall trench. The North side wall collapsed and covered his entire body.
  - <https://www.osha.gov/news/newsreleases/region4/01162020>

- <https://sunnewsreport.com/fatal-trench-collapse-in-mississippi/>
- <https://www.oxfordeagle.com/2019/07/09/trench-collapse-victim-identified/>
- Citations issued:
  - 1926.100(a) - Head protection
  - 1926.651(k)(2) - Employee removal from hazardous trench by competent person
  - 1926.652(a)(1) - Protection from cave-ins
  - 1904.39(a)(1) – Work related fatalities reported within 8 hours
  - 1910.1200(e)(1) – Hazard communication program
  - 1910.1200(g)(1) – Safety data sheet in the workplace for every hazardous chemical
  - 1910.1200(h)(1) - Hazard communication employee training
- *McLean, VA* – Employees were installing pipe in an unsecured trench at a residential construction site. Two employees were in the trench when a sidewall collapsed, trapping both employees. One employee was buried in the collapsed soil and killed by asphyxiation. The other employee was rescued and admitted and treated at the hospital.
  - <https://www.wusa9.com/article/features/producers-picks/teen-who-died-in-mclean-trench-collapse-may-not-have-been-old-enough-to-work-there/65-f72df8f9-058d-427b-96a1-c0c682e151be>
  - <https://www.wusa9.com/article/news/local/owner-of-construction-company-faces-charges-after-teen-dies-in-trench-collapse/65-fc8e8602-d4bf-4f7a-a429-cda53125cf08>
  - <https://www.localdvm.com/news/virginia/construction-company-owner-indicted-on-charges-related-to-teens-death/>
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.50(c) – First aid
    - 1926.651(c)(2) - Safe means of egress
    - 1926.651(k)(1) - Daily inspections of excavation by competent person
    - 1926.651(j)(2) - Protection of employees from materials falling or rolling in
    - 1926.652(a)(1) - Protection from cave-ins
    - 1926.651(h)(1) - Precautions for excavations with water
- *Hoover, AL* - Two employees were working in a trench to expose a drainage pipe for removal. A trench sidewall collapsed onto them and then the other side collapsed on top of them burying both employees under approximately 2' feet of soil. Both employees were asphyxiated.
  - <https://www.osha.gov/news/newsreleases/region4/01302020>
  - <https://www.al.com/news/birmingham/2019/07/workers-killed-in-hoover-trench-collapse-were-vivacious-honest-extremely-loyal.html>
  - <https://www.wvtm13.com/article/hoover-trench-collapse-victims-likely-died-within-minutes/28500200>
  - <https://www.wvtm13.com/article/2-workers-trapped-after-trench-collapse-in-hoover-fire-officials-say/28485189>
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.100(a) - Head protection
    - 1926.651(c)(2) - Safe means of egress
    - 1926.651(j)(2) - Protection of employees from materials falling or rolling in
    - 1926.651(k)(1) - Daily inspections of excavation by competent person
    - 1926.652(a)(1) - Protection from cave-ins
- *Roanoke, VA* - Employee was working on connecting a water utility line and installing a manhole when he stepped outside the trench box to perform an unknown task. This area was slated to be expanded so

another trench box located onsite could be used. At that time the unsupported excavation collapsed on to the employee burying him. He later died from his injuries.

- Citations issued:
  - 1926.21(b)(2) - Training on recognizing and avoiding hazards
  - 1926.651(k)(1) - Daily inspections of excavation by competent person
  - 1926.652(a)(1) - Protection from cave-ins

- *Shinnston, WV* - An employee was working in a trench, approximately 6' deep, while excavating for a new storm-water drain. He became completely engulfed when the trench collapsed on him.
  - <https://www.wdtv.com/content/news/orker-rescued-after-falling-into-hole-in-Harrison-County-511298971.html>
  - No citations found

## Struck By

- *Imlay City, MI* - Employee was installing sanitary pipe when the excavation caved-in. According to news reports it's also been alleged he was struck by excavation equipment and buried
  - <https://www.abc12.com/content/news/Worker-dies-in-trench-collapse-at-Imlay-City-condo-complex-under-construction-560163361.html>
  - <https://www.jnewsradio.com/articles/news/criminal-charges-sought-implay-city-trench-collapse>
  - No citations found
- *Baltimore, MD* - Employee and a co-worker were hand shoveling mud and muck into the bucket of an excavator. The operator of the excavator would then lift the bucket out of the trench to empty it under the direction of the foreman. The operator of the excavator was walking off site to take his lunch break when the foreman asked the operator if he could move the bucket back some. The operator got back into the excavator and began to operate the excavator. When he moved the bucket it pinned the employee in the trench against the side wall of the trench causing internal injuries to his abdomen.
  - No citations found
- *Godley, TX* - Employee was installing a new septic tank inside a trench for a newly constructed home. The trench had water and no ladder. Employee asked his son to operate the excavator to pick him up. The son got into the cab of the excavator and said there was a lot of play in the arm. He attempted to move a lever, when the bucket moved and it struck the employee in the back causing blunt force trauma and penetrating force injuries from the heavy machinery.
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.652(a)(1) - Protection from cave-ins
- *Cumming, GA* - Employee was assisting the equipment excavator operator in installing the head wall for pipe laying. He was in the process of setting a pre-cast concrete head wall inside an excavation when the slab began to lean. The slab broke apart and parts of it fell and crushed his chest.
  - Citations issued:
    - 5(a)(1) – General Duty Clause
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
- *Dickinson, TX* - Employee was connecting water pipes in a 3' excavation. A backhoe was being used to assist with connecting water pipes. As the backhoe was moving positions it slid down the approximately 23° grade striking him in the head causing blunt force trauma.
  - Citations issued:
    - 1926.602(a)(3)(i) – Safe access roads and grades
- *Anaheim, CA* - Employees were installing an 18" chill water line for a cooling tower. During the installation of the 40' long, 18" diameter, carbon steel pre-insulated pipe into a shored trench, a 90° elbow on one end of



the pipe being installed struck a shore. The shore dislodged resulting in a steel shoring plate falling onto an employee killing him.

- Citations issued:
  - 1541(f) - Warning system for mobile equipment
  - 1541.1(a)(1) - Protection from cave-ins
  - 1541.1(c) - Design of support systems, shield systems, and other protective systems.
  - 1541.1(d) - Protective systems free from damage or defects
  - 1541.1(g) - Shield systems

*Kingsland, GA* - Employees were excavating a dirt roadway median on an active 2-lane roadway. During the excavation of the median, a motorist traveling in the westbound lane drove into the median where the employees were working. The motorist struck the three employees standing in the median and then collided with the bucket of the mini excavator and eventually the front of the excavator where the vehicle came to rest. Two of the employees struck by the vehicle were propelled into the air and landed in the westbound lane. The third employee was grazed by the side of the vehicle and fell to the ground inside the median. One employee died from blunt impact injuries, another was hospitalized with two fractures of the left leg, ligament damage to the right leg, and head/scalp lacerations, and the third sustained back and wrist strain injuries along with a torn meniscus in his right knee.

- No citations found
- *Bellingham, WA* - A laborer was struck by a dump truck and crushed while performing excavation work. He was holding a grading pole and had his back turned when an empty dump truck backed over him.
  - Citations issued:
    - 296-155-610(2)(F)(I) – Operable automatic reverse signal alarm dump truck
    - 296-155-035(2) - Guarding
    - 296-155-610(2)(L) - Vehicle safety inspections
    - 296-155-110(5) - Crew leader-crew safety meetings

## Fall

- *Cottage Grove, OR* - Worker leaning over a 40" deep trench and fell striking his head on the lip of the opposite side of the trench and was fatally injured.
  - No citations found

## Drowning

- *Pembroke Pines, FL* - Employee was working inside a catch basin, sealing around a newly installed drain pipe. He drowned when a plug that was used to seal an opening failed and allowed water to flood the catch basin.
  - Citations issued:
    - 1926.21(b)(2) - Training on recognizing and avoiding hazards
    - 1926.1203(a) – Competent person to identify any confined and permit spaces
    - 1926.1203(d) – Confined space written program
    - 1926.1204(c)(3) – Entry employer must isolate permit space and physical hazards
    - 1926.1204(c)(6) – Entry employer provides barriers to protect entrants
    - 1926.1204(i) – Procedures for summoning rescue and emergency services
    - 1926.1207(a) – Employee training on permit required confined spaces
    - 1926.652(a)(1) - Protection from cave-ins

## FY 2019 OSHA News Releases Related to Trenching and Excavation

- Missouri Plumbing Contractor Admits to Violating Trench Safety Requirements - \$225,000
  - <https://www.osha.gov/news/newsreleases/region7/10302018>
- U.S. DOL Cites Dallas Utilities Contractor after Worker Suffers Fatal Gas Exposure - \$422,006
  - <https://www.osha.gov/news/newsreleases/region6/01112019>
- U.S. DOL Cites Utility Contractors Following Fatal Explosion in Wisconsin - \$12,934
  - <https://www.osha.gov/news/newsreleases/region5/01102019>
- U.S. DOL Cites Pennsylvania Excavation Company for Exposing Employees to Trenching Hazards - \$106,057
  - <https://www.osha.gov/news/newsreleases/region3/01082019-0>
- U.S. DOL Fines Georgia Contractor for Trenching Violations - \$106,078
  - <https://www.osha.gov/news/newsreleases/region4/03252019>
- U.S. DOL Fines Pennsylvania Construction Company \$208,560 for Exposing Employees to Trenching Hazards
  - <https://www.osha.gov/news/newsreleases/region3/03052019>
- U.S. DOL Cites Georgia Preparatory College for Exposing Employees to Trenching Hazards - \$381,882
  - <https://www.osha.gov/news/newsreleases/region4/04252019>
- U.S. DOL Cites Nebraska Excavating Company after Two Employees Injured in Trench Collapse - \$106,078
  - <https://www.osha.gov/news/newsreleases/region7/05152019>
- U.S. DOL Cites Missouri Contractor for Exposing Employees to Trench Engulfment Hazards - \$212,158
  - <https://www.osha.gov/news/newsreleases/region7/07162019>
- U.S. DOL Cites Missouri Contractor for Exposing Employees to Excavating and Trenching Hazards \$143,206
  - <https://www.osha.gov/news/newsreleases/region7/08202019>
- U.S. DOL Cites South Dakota Contractor for Exposing Employees to Trenching Hazards - \$58,343
  - <https://www.osha.gov/news/newsreleases/region8/08202019>
- U.S. DOL Cites Ohio Plumbing Contractor Exposing Employees to Trenching Hazards Following Fatality \$145,860
  - <https://www.osha.gov/news/newsreleases/region5/08022019>
- U.S. DOL Cites Colorado Utility Company for Exposing Employees to Trenching Hazards - \$92,819
  - <https://www.osha.gov/news/newsreleases/region8/09192019>
- U.S. DOL Fines WI Excavation Company for Exposing Employees to Trenching Hazards - \$65,921
  - <https://www.osha.gov/news/newsreleases/region5/09162019>
- U.S. DOL and Michigan Pipeline Company Agree To Resolve Citations Issued for Trenching Hazards - \$509,071
  - <https://www.osha.gov/news/newsreleases/region8/09092019>



## FY 2019 OSHA Most Frequently Cited Subpart P Excavations

Standard	Cited	Narrative
1926.652(a)(1)	801	Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with paragraph (b) or (c) of this section except...
1926.651(c)(2)	396	A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) of lateral travel for employees
1926.651(j)(2)	332	Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary
1926.651(k)(1)	304	Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated
1926.651(k)(2)	106	Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.
1926.651(h)(1)	51	Employees shall not work in excavations where there is accumulated water, or where water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. Precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.
1926.651(j)(1)	37	Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection
1926.651(i)(3)	30	Sidewalks, pavements, and appurtenant structure shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures
1926.651(b)(4)	27	While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees.
1926.651(e)	24	No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped, in accordance with §1926.601(b)(6), to provide adequate protection for the operator during loading and unloading operations.

## Construction eTool Guide for Daily Inspections of Trenches and Excavations

Project:

Weather:  Date:  Trench Depth:

Soil Type:  Width:  Length:

Type of Protective System:

Yes	No	NA	Excavation
			Excavations and Protective Systems inspected by Competent Person daily, before start of work.
			Competent Person has authority to remove workers from excavation immediately
			Surface encumbrances supported or removed
			Employees protected from loose rock or soil
			Hard hats worn by all employees
			Spoils, materials, and equipment set back a minimum of 2' from edge of excavation
			Barriers provided at all remote excavations, wells, pits, shafts, etc.
			Walkways and bridges over excavations 6' or more in depth equipped with guardrails
			Warning vests, or other highly visible PPE provided and worn by all employees exposed to vehicular traffic
			Employees prohibited from working or walking under suspended loads
			Employees prohibited from working on faces of sloped or benched excavations above other employees
			Warning system established and used when mobile equipment is operating near edge of excavation
Yes	No	NA	Utilities
			Utility companies contacted and/or utilities located
			Exact location of utilities marked when near excavation and reviewed with operator
			Overhead lines located, noted, and reviewed with operator
			Underground installations protected, supported, or removed when excavation is open
Yes	No	NA	Wet Conditions
			Precautions taken to protect employees from accumulation of water
			Water removal equipment monitored by Competent Person
			Surface water controlled or diverted
			Inspection made after each rainstorm
Yes	No	NA	Hazardous Atmosphere
			Atmosphere tested when there is a possibility of oxygen deficiency or build-up of hazardous gases
			Oxygen content is between 19.5% and 21%
			Ventilation provided to prevent flammable gas build-up to 20% of lower explosive limit of the gas
			Testing conducted to ensure that atmosphere remains safe
			Emergency Response Equipment readily available where a hazardous atmosphere could or does exist

Yes	No	NA	Hazardous Atmosphere
			Employees trained in the use of Personal Protective and Emergency Response Equipment
			Safety harness and life line individually attended when employees enter deep confined excavation
Yes	No	NA	Entry & Exit
			Exit (i.e. ladder, sloped wall) no further than 25 feet from ANY employee
			Ladders secured and extend 3 feet above the edge of the trench
			Employees protected from cave-ins when entering or exiting the excavation

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Signature Competent Person:

Date:

## Resources

A screenshot of the NUCA Trench Safety Stand Down webpage. The page features the NUCA logo at the top left, navigation menus for ABOUT, ADVOCACY, SAFETY, EDUCATION, EVENTS, BENEFITS, and PUBLICATIONS. The main heading is 'TRENCH SAFETY STAND DOWN' with a sub-heading '2020 Trench Safety Stand Down June 15-19, 2020'. There are sections for 'TRENCH SAFETY STAND DOWN', 'TRENCH SAFETY STAND DOWN', and 'TRENCH SAFETY STAND DOWN'.

- **NUCA Trench Safety Stand Down Webpage**  
<http://www.nuca.com/tssd>  
Tools and resources on excavation safety that can be used to for a safety stand down. A certificate of participation can also be obtained.

A screenshot of an OSHA webpage titled 'Trenching and Excavation'. It features a large image of a trench and a list of publications. The text includes 'OSHA Publications' and 'OSHA Publications'.

- **OSHA Trench and Excavation Publications**  
<https://www.osha.gov/pls/publications/publication.athruz?pType=Industry&pID=213>
- **OSHA Trenching and Excavation Safety and Health Topic Page**  
<https://www.osha.gov/SLTC/trenchingexcavation/index.html>
- **OSHA Harwood Grants Excavation and Trenching**  
<https://www.osha.gov/harwoodgrants/grantmaterials/bytopic/>
- **OSHA Trenching and Excavation Videos**  
<https://www.osha.gov/video/>
- **OSHA Technical Manual Trenching and Excavations**  
[https://www.osha.gov/dts/osta/otm/otm\\_v/otm\\_v\\_2.html](https://www.osha.gov/dts/osta/otm/otm_v/otm_v_2.html)

\*Disclaimer: Preliminary information - Fatalities and Catastrophes are logged or recorded in various mediums and reports generated using various criteria. Late reporting, natural causes which may have generated an initial report, fatalities transferred to other jurisdictions and other factors may affect the overall numbers over time. Data is edited and key word search to determine a count of fatalities/catastrophes under OSHA jurisdiction and may change over time as records are updated. Narratives are rewritten and edited and may not reflect the final results of an investigation. In some cases narratives may be updated using news sources regarding the incident. Citation data was obtained on the OSHA website and reflects what was issued and not the final disposition. The numbers and information are for accident prevention purposes and trending and is not intended to be a statistical study or evaluation. For questions contact the Houston North OSHA Office, Jim Shelton, CAS, at [shelton.james@dol.gov](mailto:shelton.james@dol.gov)

This information has been developed by an OSHA Compliance Assistance Specialist and is intended to assist employers, workers, and others as they strive to improve workplace health and safety. While we attempt to thoroughly address specific topics [or hazards], it is not possible to include discussion of everything necessary to ensure a healthy and safe working environment in a presentation of this nature. Thus, this information must be understood as a tool for addressing workplace hazards, rather than an exhaustive statement of an employer's legal obligations, which are defined by statute, regulations, and standards. Likewise, to the extent that this information references practices or procedures that may enhance health or safety, but which are not required by a statute, regulation, or standard, it cannot, and does not, create additional legal obligations. Finally, over time, OSHA may modify rules and interpretations in light of new technology, information, or circumstances; to keep apprised of such developments, or to review information on a wide range of occupational safety and health topics, you can visit OSHA's website at [www.osha.gov](http://www.osha.gov).