

# Ground Disturbance in U.S. Onshore Upstream

## Oil and Gas Construction and Maintenance Activities

Striking any line while excavating, digging, grading, driving stakes, or doing other ground disturbance activities near underground utilities can harm workers, the public, and the environment. These incidents can occur immediately, or months or years later if damage is not reported or repaired.

**8,000 natural gas line strikes** in U.S. Onshore Upstream industry in 2016:



**Improper locating: 22%**



**No One-Call: 25%**



**Improper excavation: 47%**

**5 deaths** from 2006-2016 in this industry

## Operators

- **Call 811 before you dig!**
- Use a written ground disturbance/crossing permit program
- Determine when hydrovac/potholing/hand digging is appropriate
- Update plot plan of work area, enter lines into 811 system
- When adding/selling properties:
  - Update plot plan and 811 when lines are added or abandoned
  - Use tracer or marker plates for poly or fiberglass lines
  - Isolate and/or remove unused or decommissioned lines
- Maintain accurate pipeline markers and signage
- When using contract excavation companies or locators:
  - Before work begins, review contractors to ensure they are experienced in disturbing ground around high-risk buried equipment
  - Verify training for excavators and locators
  - Field verify for competency of excavators and locators
  - Conduct planning and a Job Hazard Analysis (JHA) with the contractor onsite before excavation

## Excavators

- Call 811 and follow Common Ground Alliance Best Practices:
  - [www.call811.com](http://www.call811.com)
  - [www.commongroundalliance.com/best-practices-guide](http://www.commongroundalliance.com/best-practices-guide)
- Plan job with operator onsite if possible
- Have accurate plot planning/boring profiles and access agreements before starting work
- Maintain minimum clearances (tolerance zones)
- Conduct awareness level onshore oil and gas competency training (See API RP 76)
- Notify owners, 811, and state regulators of real or suspected damage – **Do not cover damages**
  - Damage Information Reporting Tool (DIRT): [www.commongroundalliance.com/programs/damage-information-reporting-tool-dirt](http://www.commongroundalliance.com/programs/damage-information-reporting-tool-dirt)
- Report lines not in system or with an unknown owner

## Line Locators

- Follow Common Ground Alliance Best Practices
- Provide and document a training program that should include:
  - Potential consequences from improper locating;
  - Poly and non-ferrous lines/sizes/contents/tracer techniques;
  - Inductive sweeping techniques;
  - Two-man sweeping for unknown and unmarked lines; and
  - Reporting previously unidentified lines.

If you're uncertain about potential risks or have questions,  
**STOP THE JOB AND ASK — IT COULD SAVE YOUR LIFE!**