

Overview of Current US Longwall Gateroad Support Practices



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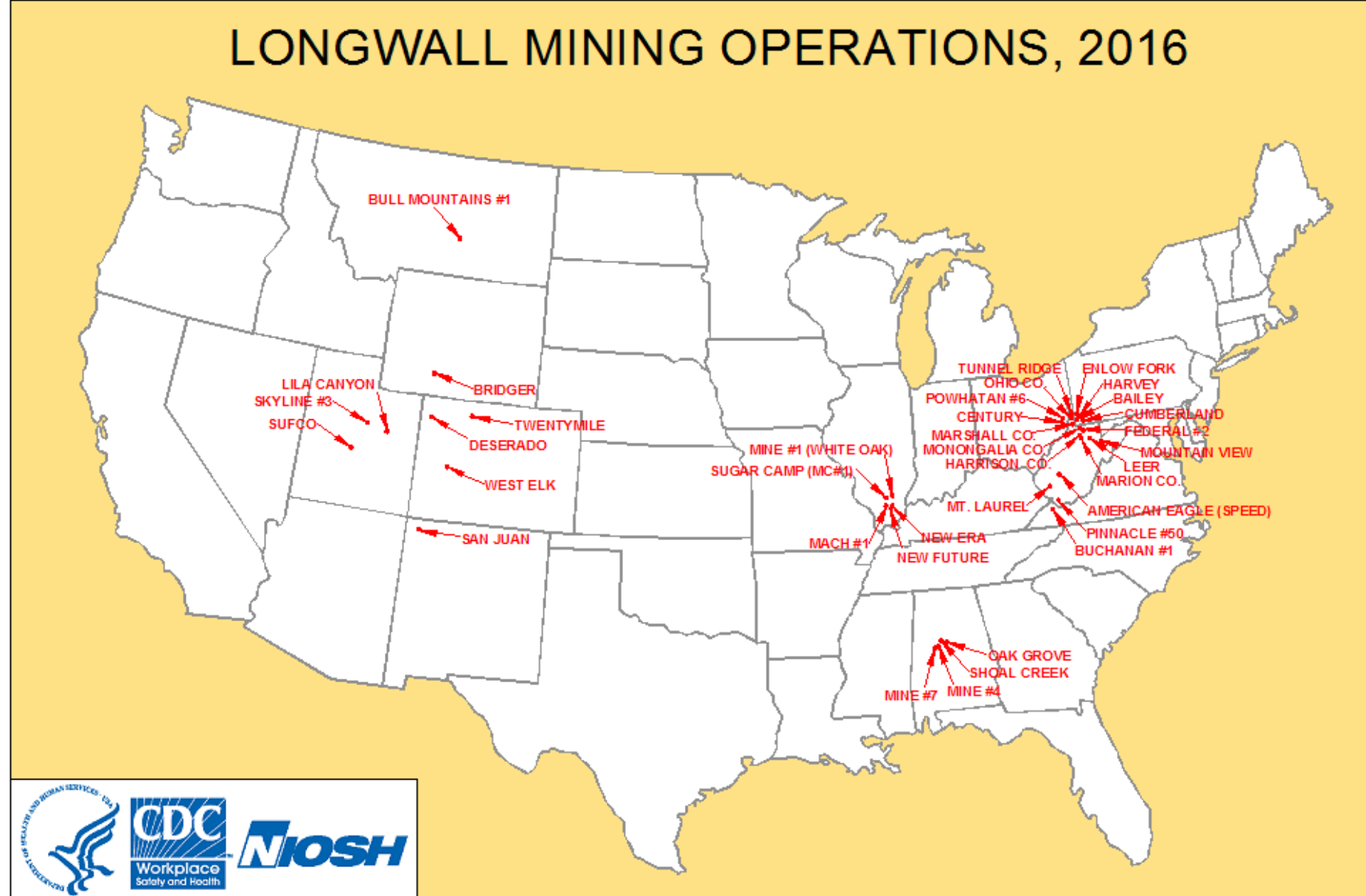
Gabriel S. Esterhuizen



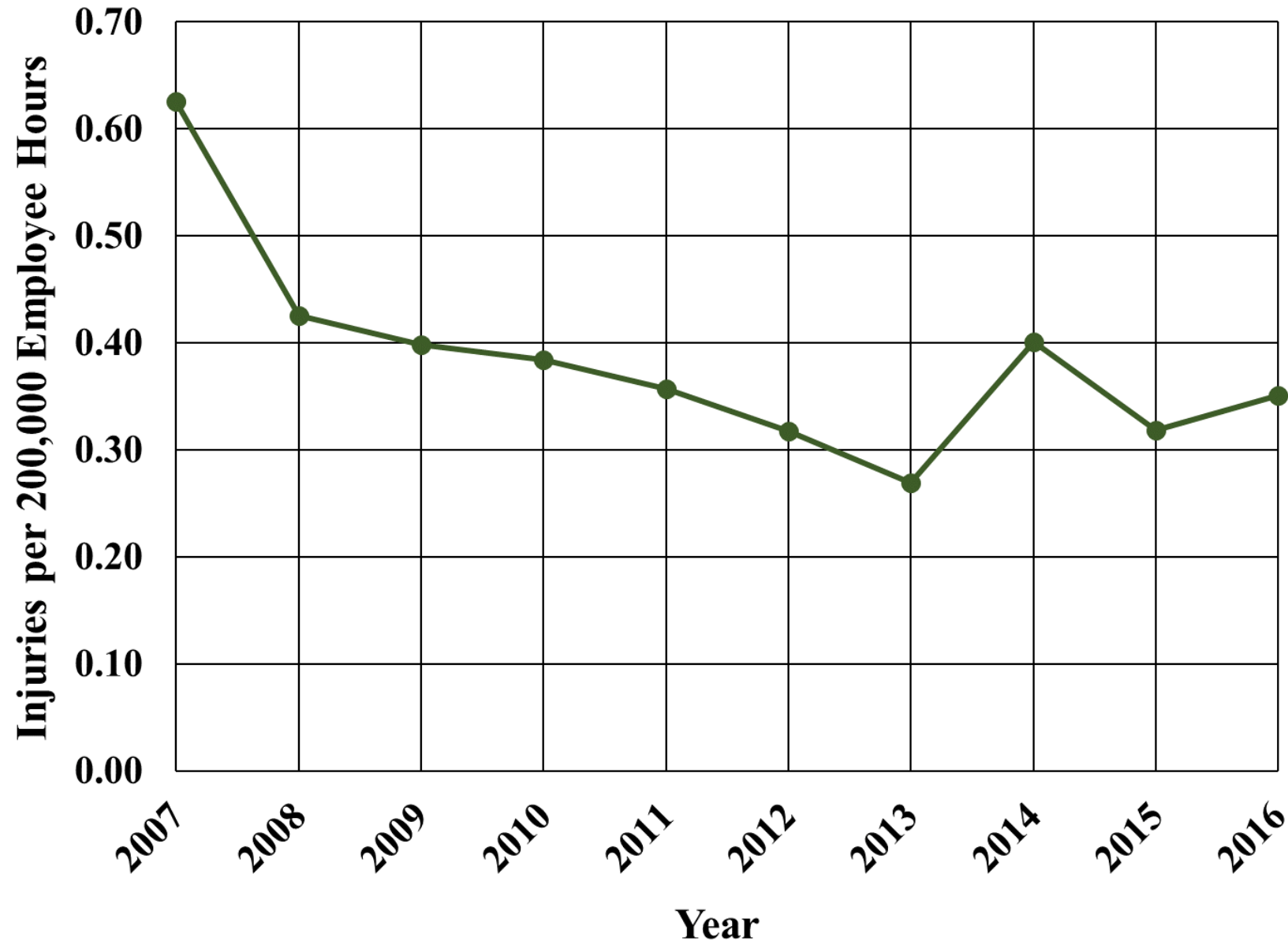
NIOSH Mining Program



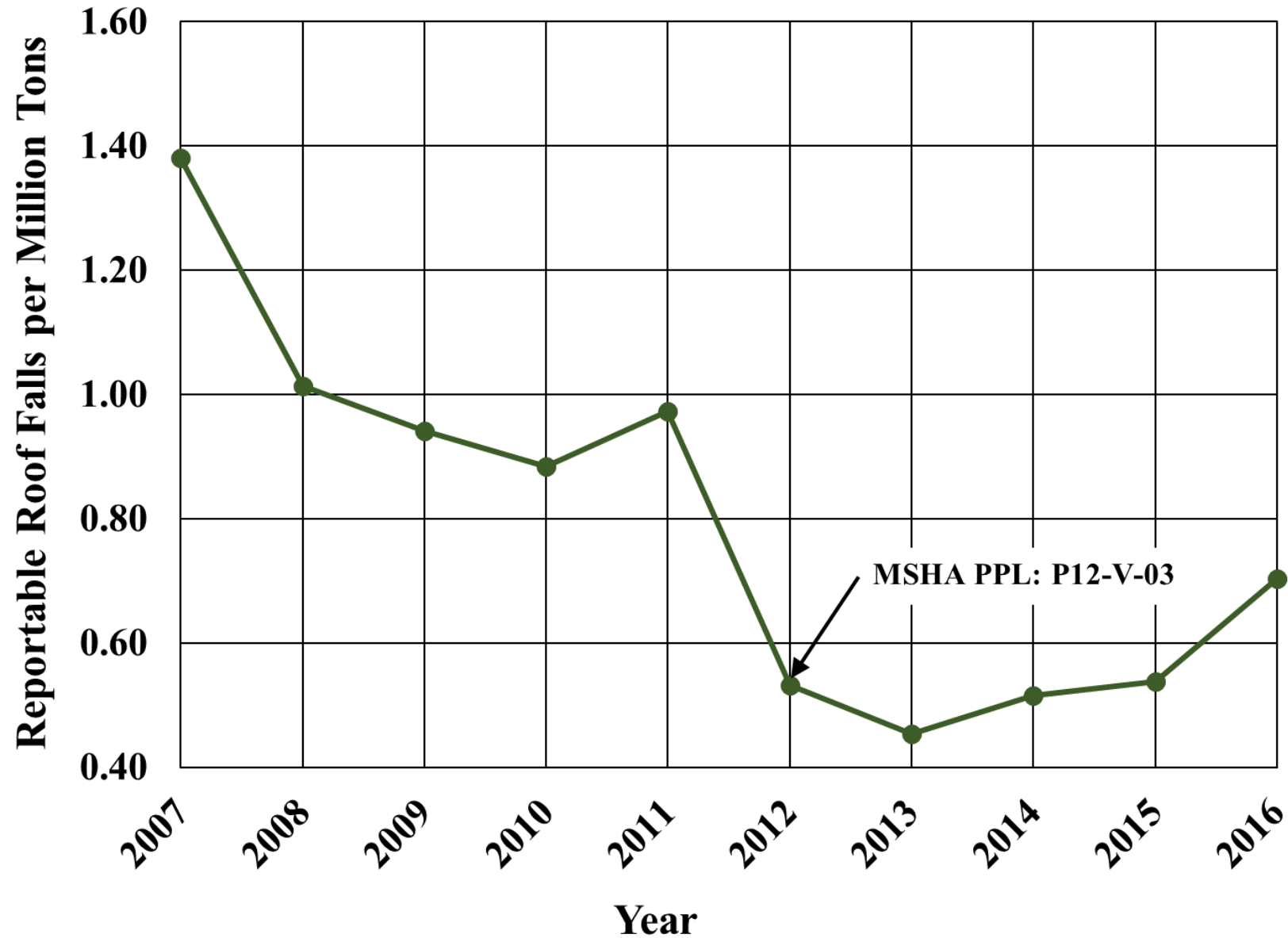
In 2016, 37 longwall mines produced 62% of US underground coal.



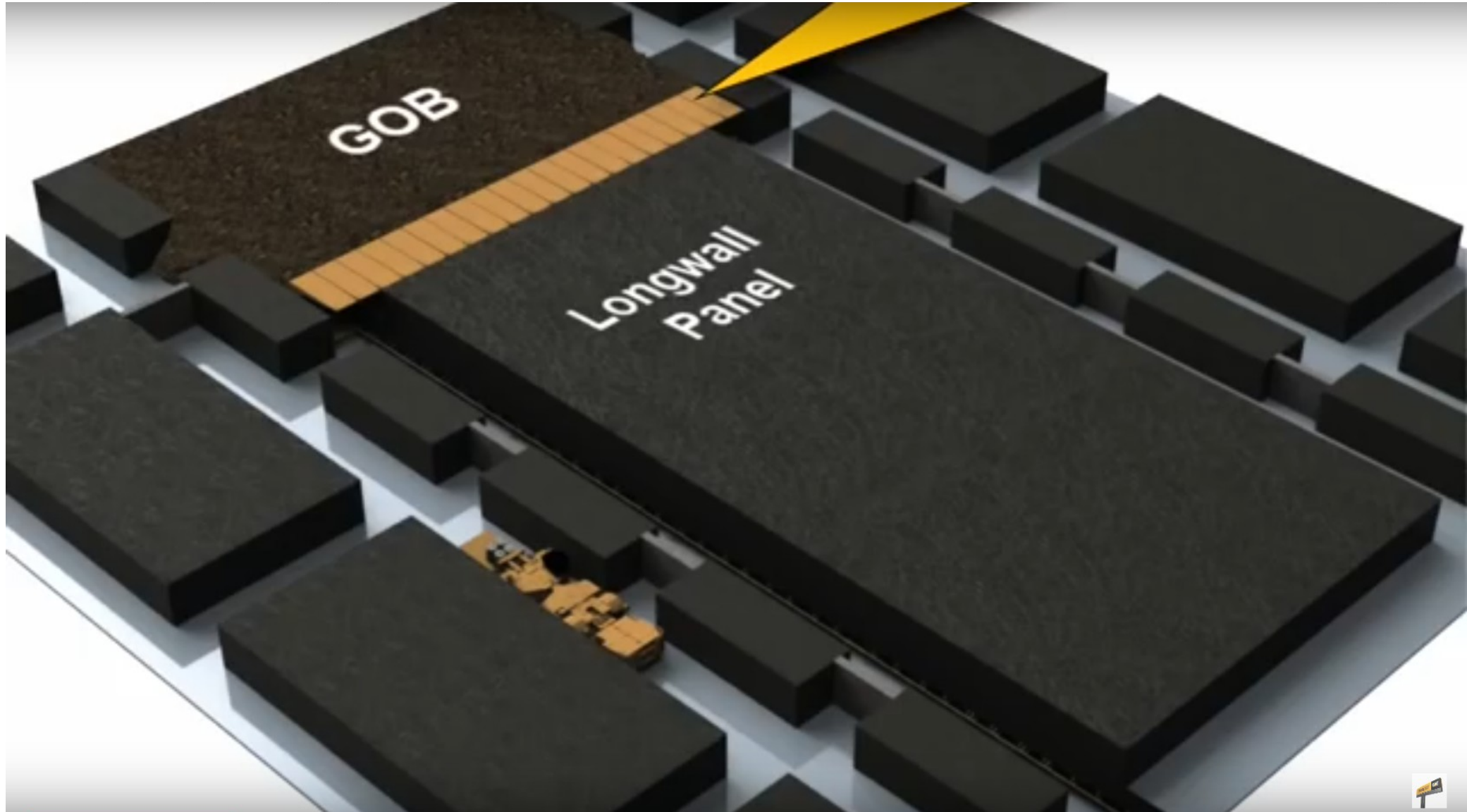
Roof Fall injury rates in longwall mines nearly halved over the past decade.



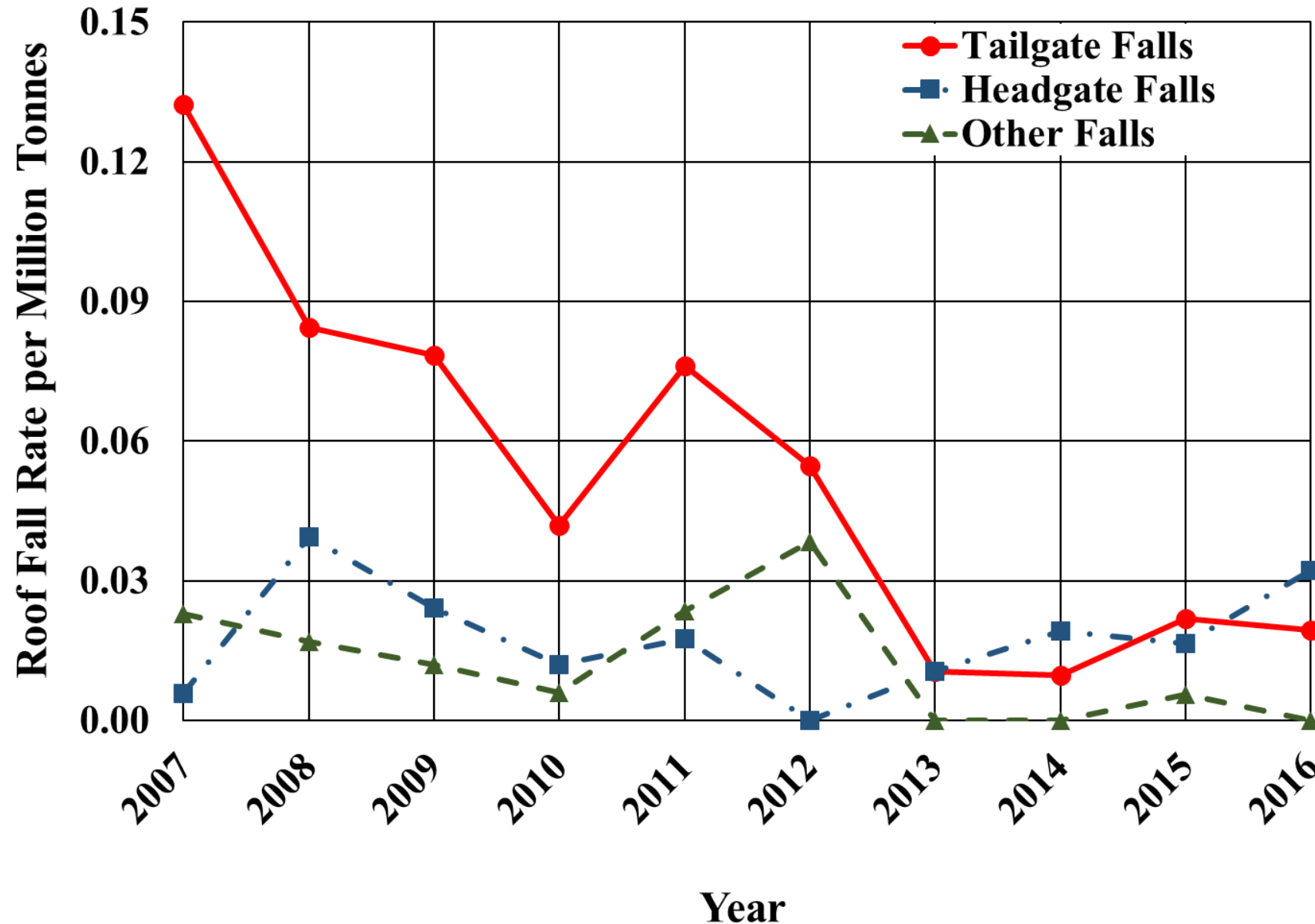
Reportable roof fall rates have increased over the past 5 years.



The principle area of interest is the longwall tailgate.



Roof falls rates in the tailgate entry have reduced over the past decade.



Thirteen longwall mines were visited over the last two years.

[illegible]

Data from the 2016 longwall census provides boundaries for the population.

Depth			

Source: “U.S. Longwall Census” Coal Age, JAN-FEB 2017.

Primary support consisted of rebar, tensioned rebar, and combination bolts.

Length	5 ft			

20% of visited mines used more than one type of support regularly.



34% of visited mines used can type supports.



28% of visited mines used pumpable cribs.



21% of visited mines used wood cribs.



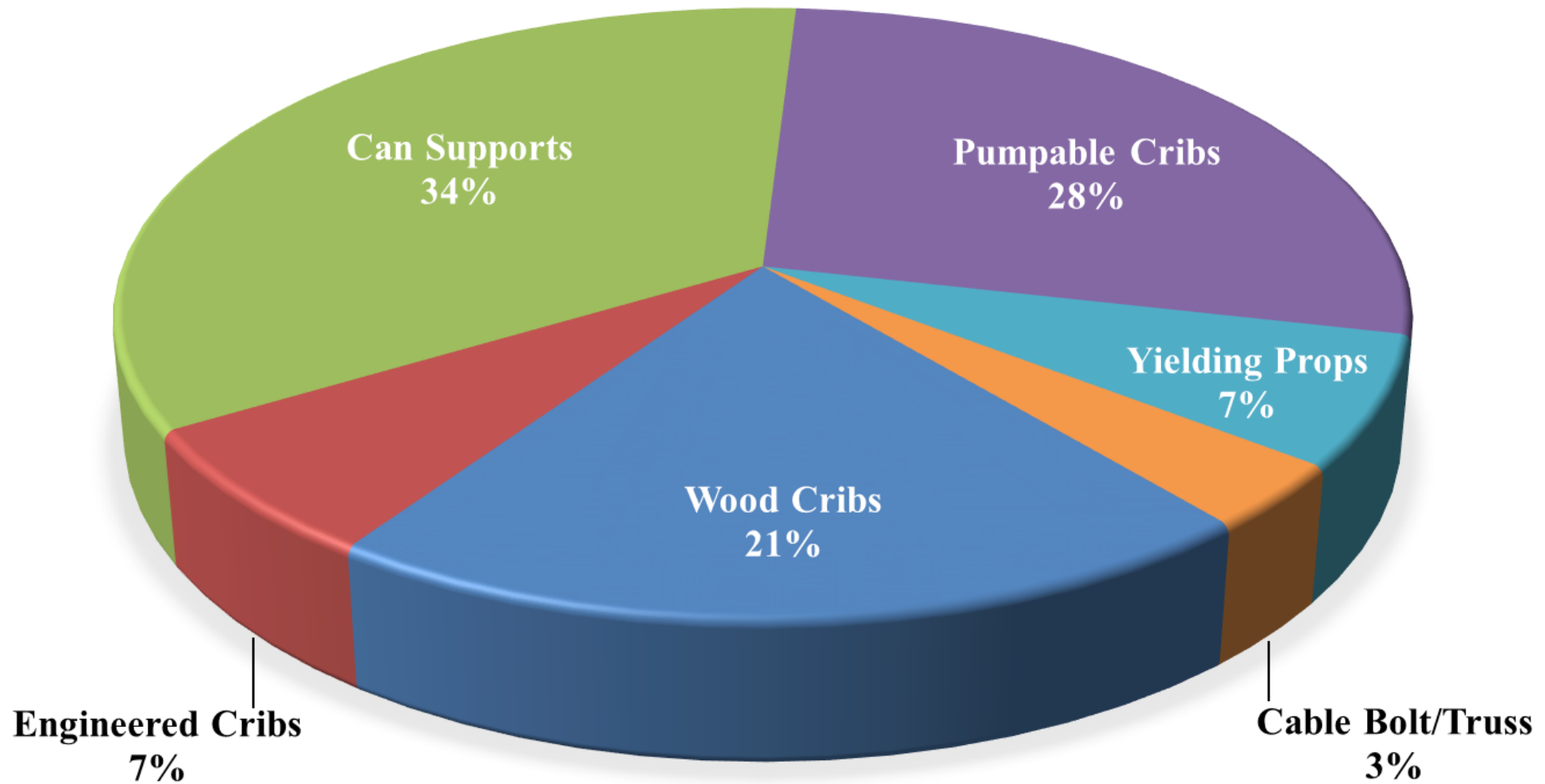
7% of visited mines used yielding props.



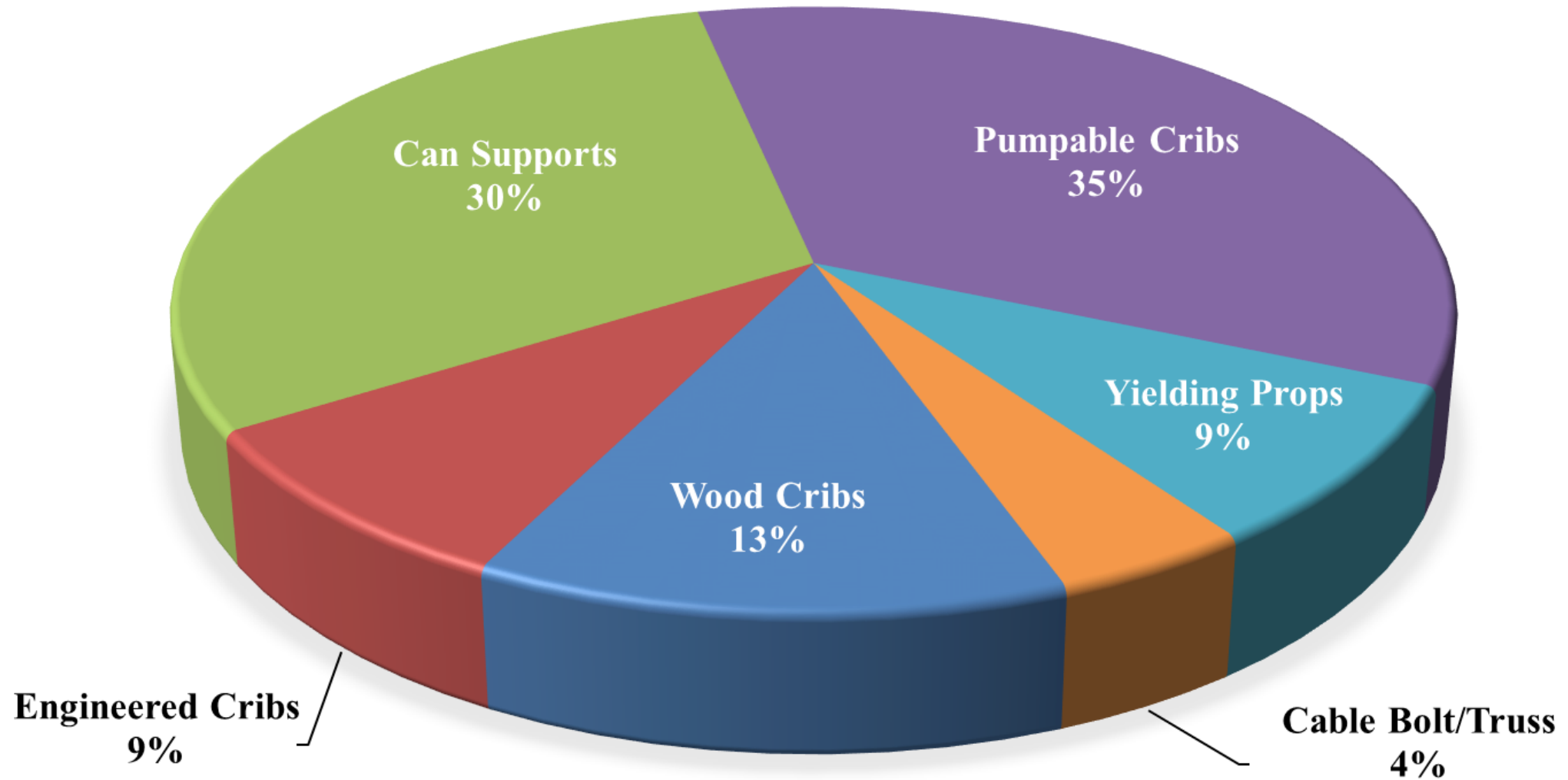
7% of visited mines used engineered wood cribs.



Can type supports and pumpable cribs share nearly 2/3 of the observations.



Six mines in the database have ceased production since data collection.



On average, the tailgate and #2 entry support densities were similar.

# / Row in Tailgate				

Questions?



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NIOSH Mining Program – www.cdc.gov/niosh/mining

