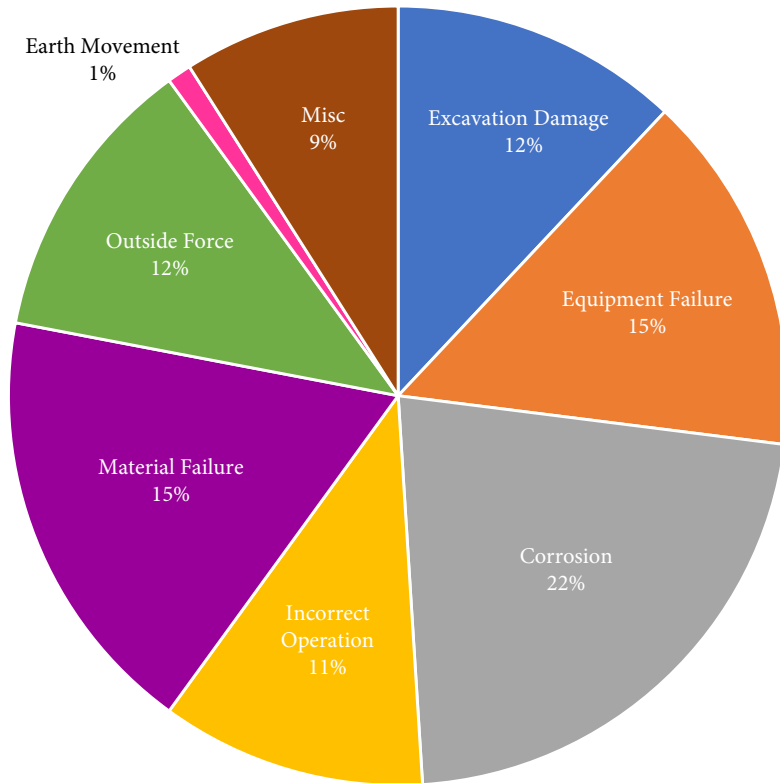
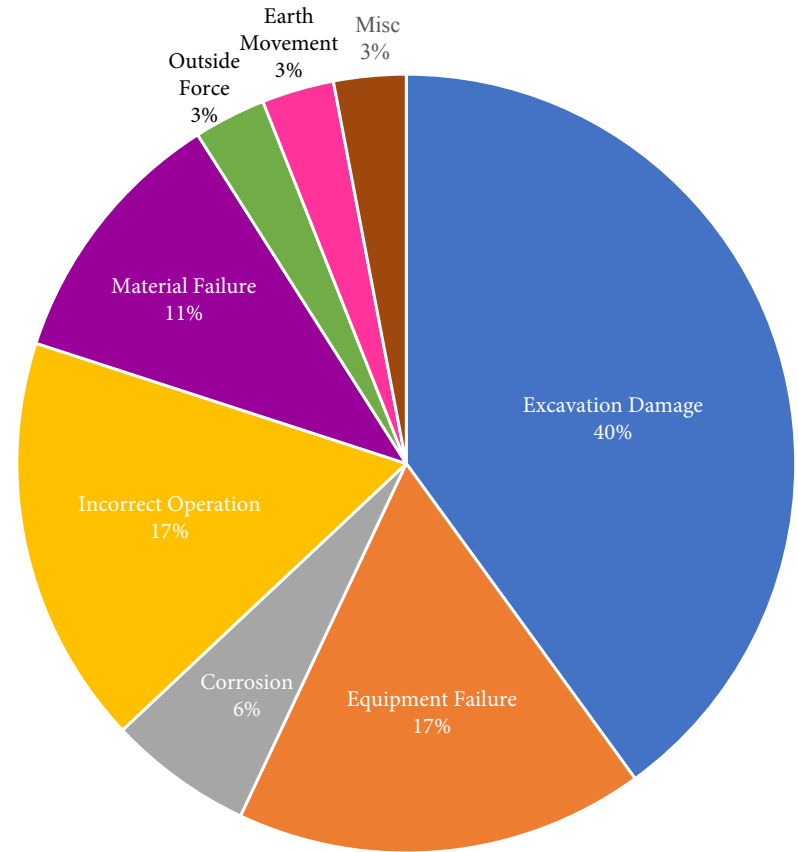


# Gas Transmission Safety Incidents by Cause Category

All U.S. Transmission Pipeline Operators  
Significant PHMSA<sup>1</sup> Incidents - 2017



PG&E Transmission Pipeline Incidents  
5-Yr Avg as of 2017<sup>2</sup>



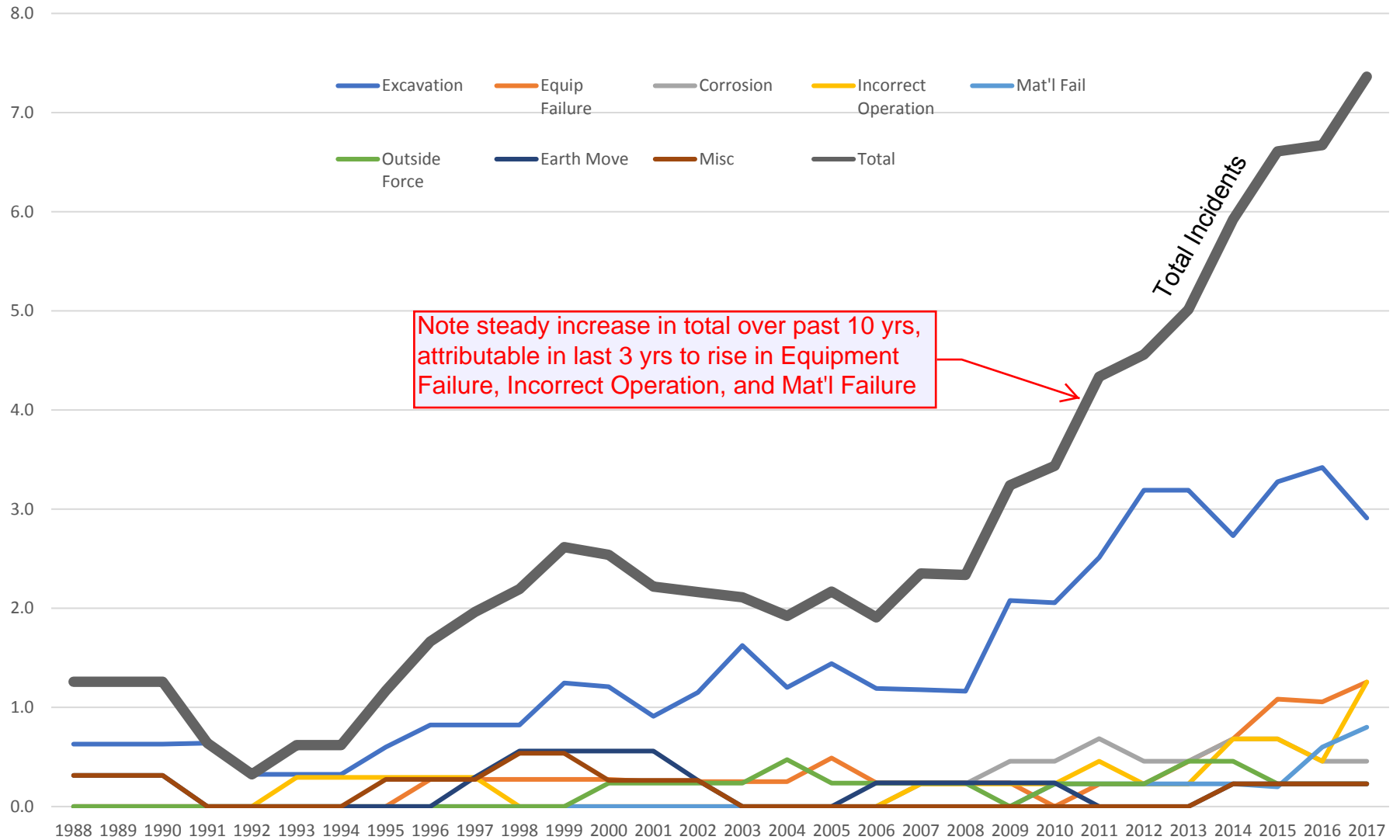
<sup>1</sup> PHMSA = Pipeline & Hazardous Materials Safety Admin, the federal pipeline safety regulator (agency of U.S. Dept of Transportation)

<sup>2</sup> as reported by PG&E to PHMSA, see p 5 for data source

This report was prepared by Save Lafayette Trees; published 6/18/18. PG&E reported zero PHMSA incidents to its transmission pipelines caused by trees during 1984-2017. To read more about the pipeline safety risk of trees, see [https://docs.wixstatic.com/ugd/de4240\\_2885a55f38fe4ffd8476bb01d3bc5a11.pdf](https://docs.wixstatic.com/ugd/de4240_2885a55f38fe4ffd8476bb01d3bc5a11.pdf)

## PG&E Transmission Pipeline Incidents/Yr, By Cause<sup>1</sup> (5-yr moving average)

Incidents per Year



<sup>1</sup> see p 4 for normalized year-by-year category data used as basis for this chart

To read more about PG&E gas pipeline safety performance during 2006-2017, see [https://docs.wixstatic.com/ugd/de4240\\_988b8bd6733642a0af64172776fd2803.pdf](https://docs.wixstatic.com/ugd/de4240_988b8bd6733642a0af64172776fd2803.pdf)

## PG&E Transmission Line Safety Incidents as Reported to PHMSA<sup>1</sup>

Year	Excavation	Equip Failure	Corrosion	Incorrect Operation	Mat'l Fail	Outside Force	Earth Move	Misc	Trans Miles	Norm Factor
1984									4145	1.6
1985									4149	1.6
1986	1						1	1	4154	1.6
1987	1								4157	1.6
1988									4157	1.6
1989									4295	1.5
1990									4325	1.5
1991	1								4026	1.6
1992									4041	1.6
1993				1					4444	1.5
1994									4436	1.5
1995	1							1	4762	1.4
1996	2	1							4769	1.4
1997							1		4401	1.5
1998							1	1	4971	1.3
1999	2								6170	1.1
2000	1					1			5545	1.2
2001	1	1							5225	1.3
2002	1								5397	1.2
2003	2								5538	1.2
2004						1			5503	1.2
2005	2	1							5471	1.2
2006							1		5483	1.2
2007	1		1	1					5711	1.1
2008	2								5721	1.1
2009	4		1						5722	1.1
2010	2				1	1			5727	1.1
2011	2	1	1	1					5744	1.1
2012	4								5751	1.1
2013	2	1				1			5737	1.1
2014	2	1	2	2			1	1	5733	1.1
2015	5	2			1				6541	1.0
2016	3	1			2				6530	1.0
2017	2	1		4	1				6535	1.0

<sup>1</sup> from <https://www.phmsa.dot.gov/data-and-statistics/pipeline/distribution-transmission-gathering-lng-and-liquid-accident-and-incident-data>

## PG&E Transmission Line Safety Incidents—Normalized to Adjust for Lower System Mileage in Earlier Years<sup>1</sup>

Year	Excavation	Equip Failure	Corrosion	Incorrect Operation	Mat'l Fail	Outside Force	Earth Move	Misc
1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986	1.6	0.0	0.0	0.0	0.0	0.0	1.6	1.6
1987	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
1994	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4
1996	2.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0
1997	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0
1998	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
1999	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	1.2	0.0	0.0	0.0	0.0	1.2	0.0	0.0
2001	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
2002	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
2005	2.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0
2006	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0
2007	1.1	0.0	1.1	1.1	0.0	0.0	0.0	0.0
2008	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	4.6	0.0	1.1	0.0	0.0	0.0	0.0	0.0
2010	2.3	0.0	0.0	0.0	1.1	1.1	0.0	0.0
2011	2.3	1.1	1.1	1.1	0.0	0.0	0.0	0.0
2012	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	2.3	1.1	0.0	0.0	0.0	1.1	0.0	0.0
2014	2.3	1.1	2.3	2.3	0.0	0.0	1.1	1.1
2015	5.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0
2016	3.0	1.0	0.0	0.0	2.0	0.0	0.0	0.0
2017	2.0	1.0	0.0	4.0	1.0	0.0	0.0	0.0

<sup>1</sup> This is same data shown on preceding page, except that the incident rates in earlier years have been adjusted to reflect the lower total system transmission mileage in those years. The purpose is to make year-to-year comparison more appropriate.

**% Each Category Represents of Total PG&E Incidents  
(Based on 5-Yr Running Averages for Each Category<sup>1</sup>)**

Year	Excavation	Equip Failure	Corrosion	Incorrect Operation	Mat'l Fail	Outside Force	Earth Move	Misc
1988	50%	0%	0%	0%	0%	0%	25%	25%
1989	50%	0%	0%	0%	0%	0%	25%	25%
1990	50%	0%	0%	0%	0%	0%	25%	25%
1991	100%	0%	0%	0%	0%	0%	0%	0%
1992	100%	0%	0%	0%	0%	0%	0%	0%
1993	52%	0%	0%	48%	0%	0%	0%	0%
1994	52%	0%	0%	48%	0%	0%	0%	0%
1995	51%	0%	0%	25%	0%	0%	0%	24%
1996	49%	16%	0%	18%	0%	0%	0%	16%
1997	42%	14%	0%	15%	0%	0%	15%	14%
1998	37%	12%	0%	0%	0%	0%	26%	24%
1999	48%	10%	0%	0%	0%	0%	21%	21%
2000	48%	11%	0%	0%	0%	9%	22%	10%
2001	41%	11%	0%	0%	0%	11%	25%	12%
2002	53%	12%	0%	0%	0%	11%	12%	12%
2003	77%	12%	0%	0%	0%	11%	0%	0%
2004	62%	13%	0%	0%	0%	25%	0%	0%
2005	66%	23%	0%	0%	0%	11%	0%	0%
2006	63%	13%	0%	0%	0%	12%	13%	0%
2007	50%	10%	10%	10%	0%	10%	10%	0%
2008	50%	10%	10%	10%	0%	10%	10%	0%
2009	64%	7%	14%	7%	0%	0%	7%	0%
2010	60%	0%	13%	7%	7%	7%	7%	0%
2011	58%	5%	16%	11%	5%	5%	0%	0%
2012	70%	5%	10%	5%	5%	5%	0%	0%
2013	64%	9%	9%	5%	5%	9%	0%	0%
2014	46%	12%	12%	12%	4%	8%	4%	4%
2015	50%	16%	10%	10%	3%	3%	3%	3%
2016	51%	16%	7%	7%	9%	3%	3%	3%
2017	40%	17%	6%	17%	11%	3%	3%	3%

<sup>1</sup> 5-Yr running averages were compiled from the normalized yearly data shown on p 4