

# Intelligence MEMOS



**From:** Evan Herrstadt and Richard L. Sweeney  
**To:** The Honourable Minister of Environment and Climate Change and the Canadian Environmental Assessment Agency  
**Date:** November 1, 2017  
**Re:** **WHAT LIES BENEATH: PIPELINE AWARENESS AND AVERSION**

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According to the US Federal Energy Regulatory Commission, new natural gas pipelines “are facing unprecedented opposition from local and national groups” despite the fact that they result in very few fatalities per year. The primary source of this opposition, particularly in densely populated areas, is concern about pipeline safety.

In Canada, most opposition involves oil pipelines, but as with natural gas pipeline opposition, it stems from a combination of global and local concerns. We focus here on the latter.

While there is a long literature in economics and psychology grounding seemingly excessive fears involving salient or dreadful risks, there is also a growing sense among regulators that these stated preferences are being inflated to bolster opposition rooted in other motives. One way to examine the matter is to look for evidence on the extent of this fear revealed through location decisions in the housing market.

Estimating willingness to pay (WTP) to avoid pipeline risk using housing prices is complicated by the fact that pipelines may be spatially correlated with other factors affecting house values. To make matters worse, the existing pipeline network is hidden underground and does not draw attention to itself. For example, one study found that 55 per cent of Washington homeowners next to pipelines flatly denied living near one. In this environment it is difficult to know whether the widely perceived indifference to current pipeline proximity reflects true ambivalence or simply lack of attention and awareness.

We attempted to untangle these issues by studying how the housing market responded to one of the deadliest pipeline incidents in US history. In 2010, a natural gas transmission pipeline exploded in a densely populated suburb of San Francisco, killing nine people and thrusting this rarely discussed, hidden pipeline to the forefront of national attention. In the aftermath, it was revealed that homeowners and even first responders were unaware that such a potentially explosive pipeline was located there. As part of its settlement, the pipeline owner agreed to send letters to all households near pipelines informing them of their proximity.

We collected data on the universe of home transactions in California, and mapped each home to the nearest natural gas pipelines. We then looked for changes in housing prices near pipelines both after the explosion, which gained people’s shocked attention, and after the letter, which shocked them with information. Across a wide variety of specifications, the analysis finds no evidence that these events caused a shift in house prices. Housing prices near a pipeline (0-2,000 feet) relative to those further away (2,000-4,000 feet) did not systematically change in the aftermath of the explosion or after receipt of the letters.

While we are able to rule out relatively small house price changes (bounded consistently below 2 percent of home values), translating this bound into willingness to pay requires knowledge of just how much attention and information about pipeline locations changed across these windows. Although this change is not directly observable, there are several reasons to suspect that pre-explosion information was very low (the local fire chief was unaware of the San Bruno pipeline) and post-explosion attention was very high (there was considerable nightly news coverage, and related Google search activity spiked). With the appropriate caveats, we conclude that this had only a relatively small effect on true willingness to pay, in line with a rational risk assessment.

While there are many good reasons to increase pipeline awareness, lack of attention to, or information on, pipeline locations does not appear to be significantly altering location decisions in the housing market. Similarly, while there are many “global” reasons to oppose pipelines (e.g., opposition to fracking, concern about carbon emissions), these results suggest that the actual local impact of a new pipeline on house prices and capitalization is likely to be quite small once construction is complete.

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