

Damage Prevention Event Report Analysis

DPR Workshop #5
29 May, 2024
Safety and Damage Prevention



Topics for Discussion

- Data Quality
- DP Regulations(DPR) Event and Damage to Pipe (DTP) Overview
- Preventive Action Analysis
- Cause Analysis
- Public Awareness

The presentation today will begin with a some basic comments on data quality and CER intentions when collecting DPR reports after which I will describe some more general and targeted analysis that I have completed with respect to:

General DPR reporting rates

Preventive causes in General

Causes related to Damage to Pipe Events

Data around Public Awareness efforts

Data Quality

Observations by CER Inspectors



The CER Damage Prevention team analyzes DPR Reporting Data to focus our activities through the identification of themes. This presentation will build on the information presented at the last workshop in November 2023 with updated data.

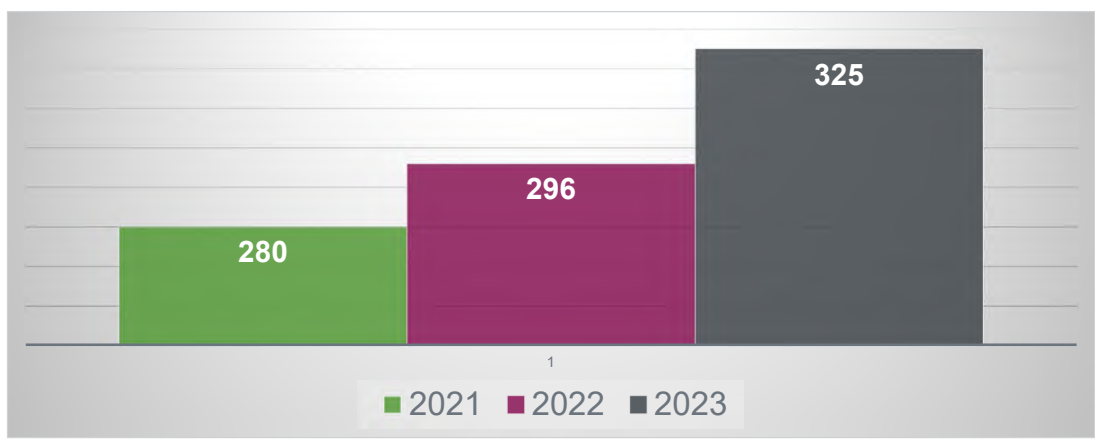
The Data analyzed in this presentation compares 2023 to the aggregate data of Calendar years 2021, 2022 and 2023 to November. Let's see if we can see any changes and use it to ask meaningful questions and to spark conversation and debate.

The data collected is submitted by you, our regulated companies and it's our hope that through this presentation and your own internal analysis, that the benefit of submitting quality reports will become evident.

General DPR/DTP Overview

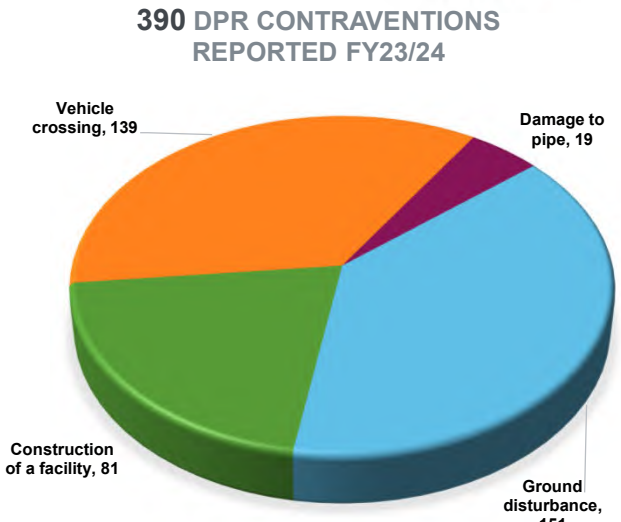
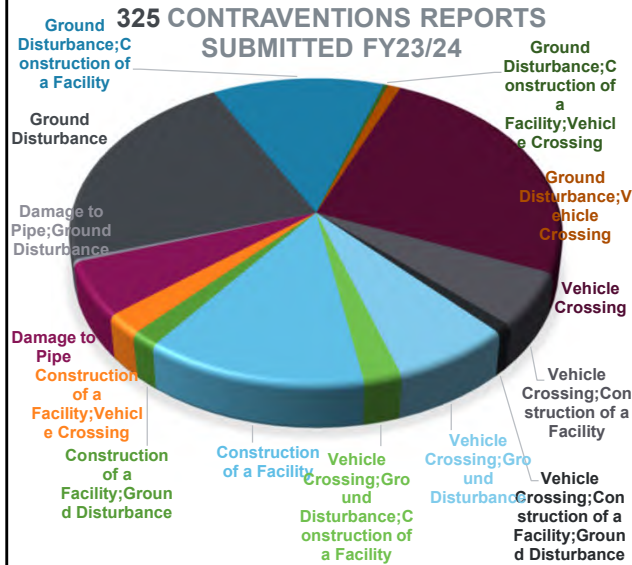


DPR/DTP Reported



Here we see the total events reported year over year

Total event reports are increasing with 2023 topping 325 total reports.



You can see from the graph on the left that there are often multiple contravention types reported at each event, and in every conceivable combination. I broke the contravention types down into their own categories.

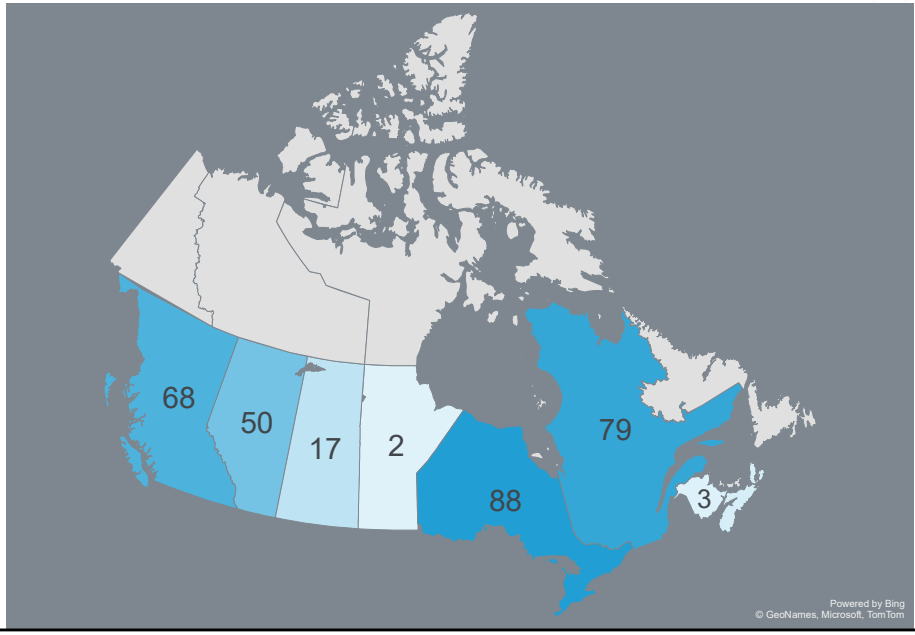
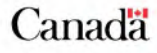
This graphic causes me pause when I think about report quality. How many of the ground disturbance report should have had a vehicle crossing identified also. Same goes for Construction of a facility.

It is important that the entire contravention is captured when you report these events.



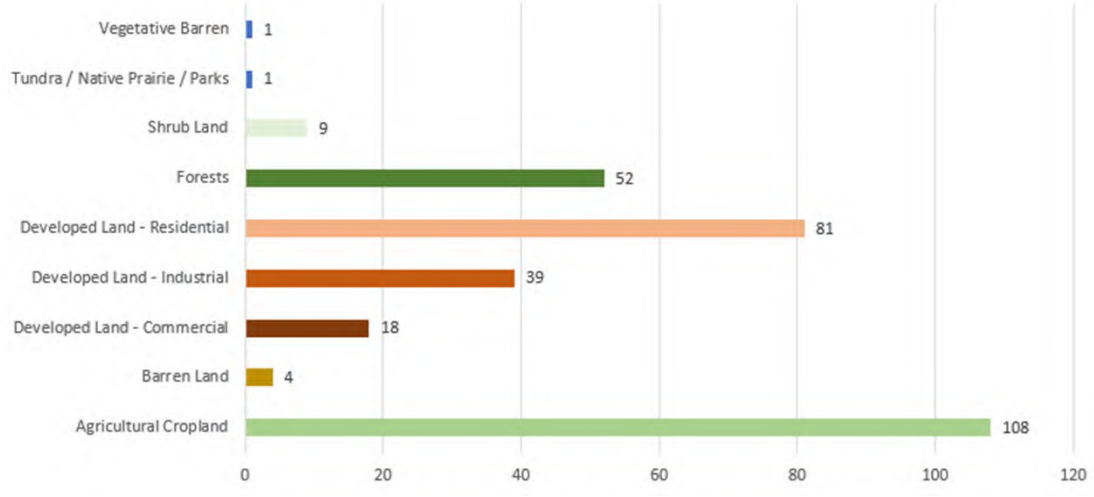
Canada Energy Regulator
Régie de l'énergie du Canada

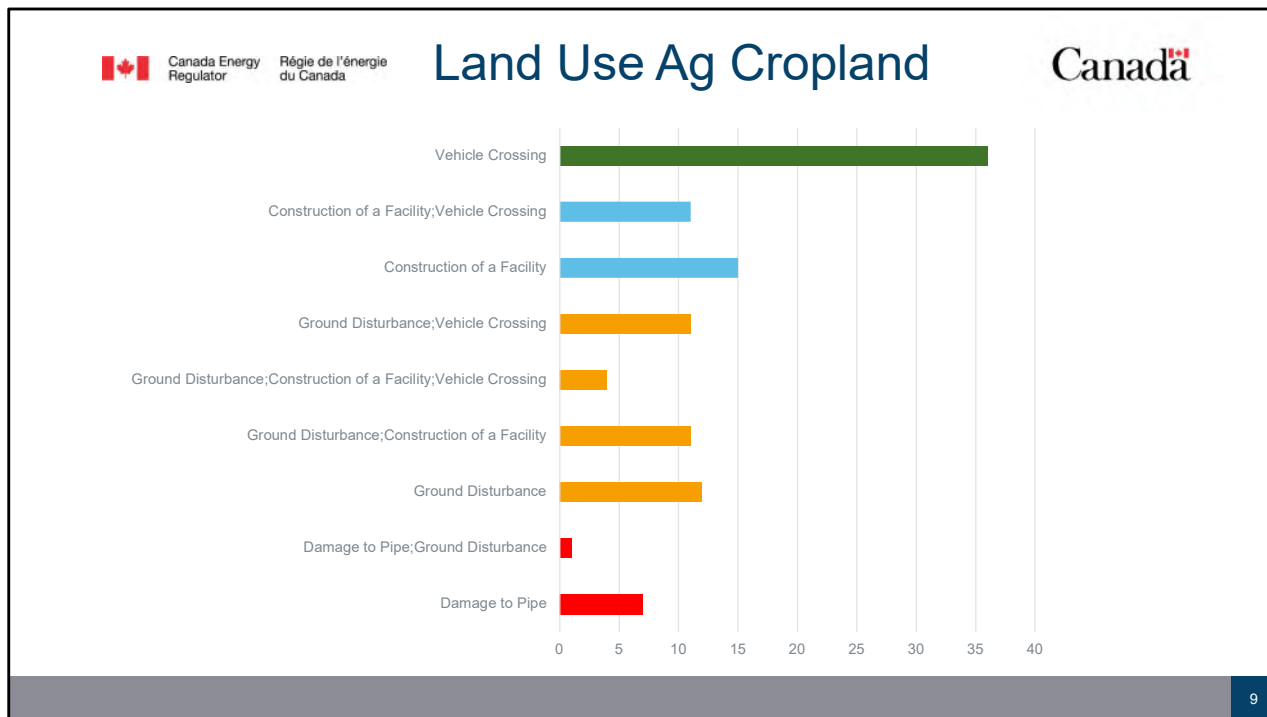
Contravention reports by province



Powered by Bing
© GeoNames, Microsoft, TomTom

Land Use



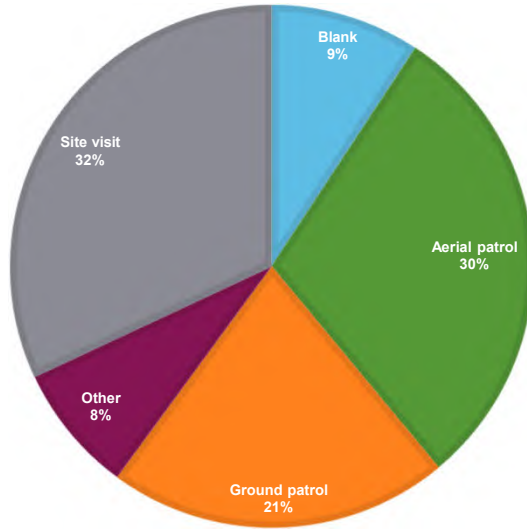


Interesting that Agricultural cropland is where we see the highest number of reports; ag vehicle crossings is the only exemption in the regs.

The big concern is the DTPs – a damage on cropland is what prompted the crossing regulations back in 1986 when a drain tiling contractor was killed hitting a high-pressure gas line. This land use is where half of the DTPs are happening. Are companies paying attention to DOC? To the activities on the land?

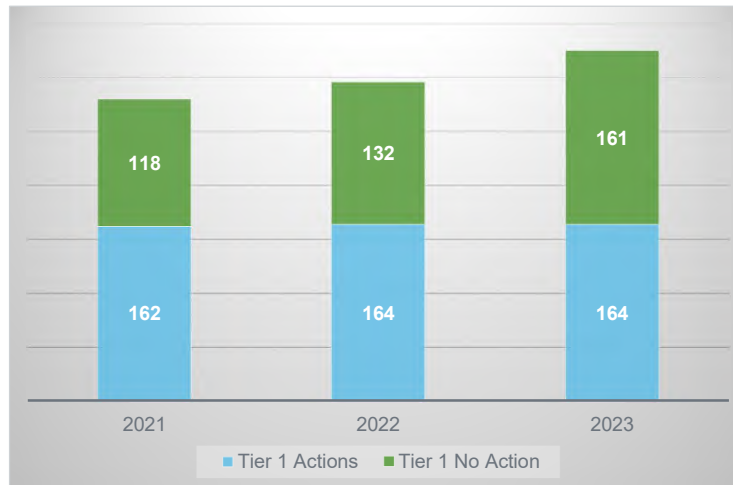
Even if a number of those are historical damages, you have to be asking questions about how it happened and how it can be prevented. These aren't even near-hits, they're hits – we absolutely have to learn from these events.

Discovery Method



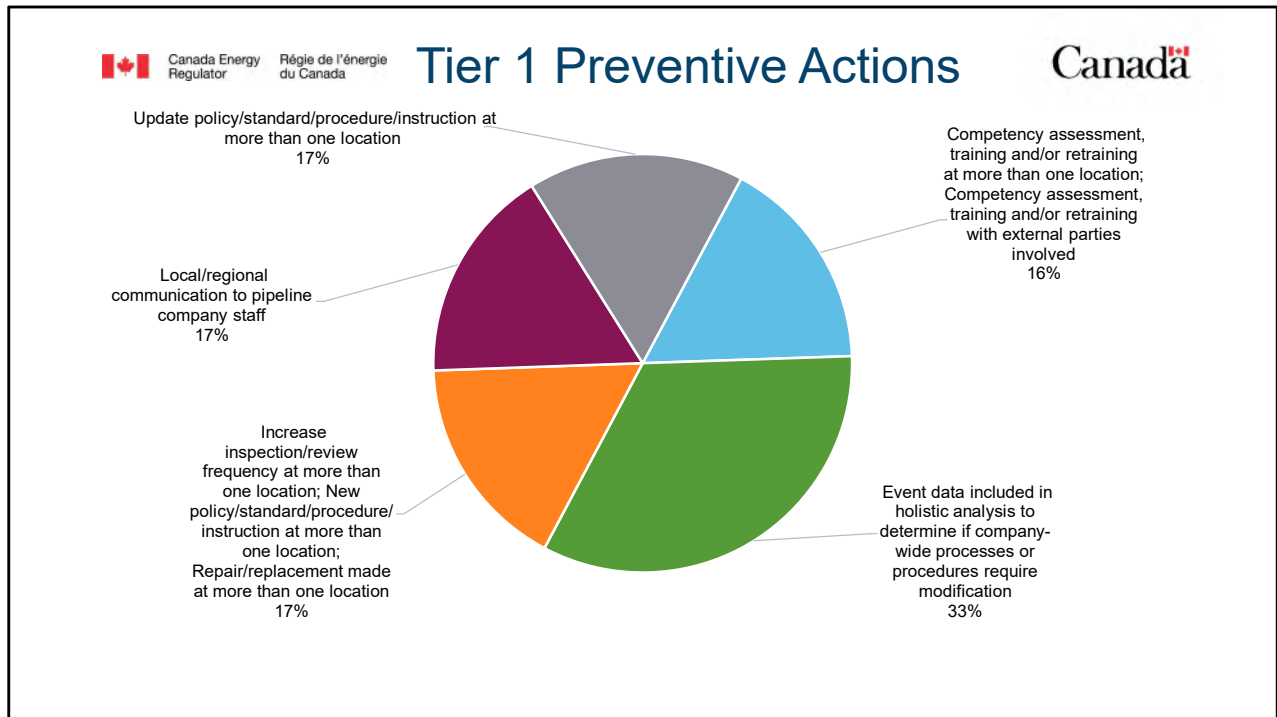
Other is usually things like reported by another pipeline in the same ROW, or someone else called it in.

Tier 1 Preventive Action



In 54% of the events over the last 3 years Tier 1 preventive actions were identified. Meaning 46% percent do not. That is a slight drop from the last workshop where 58% had Tier 1 actions

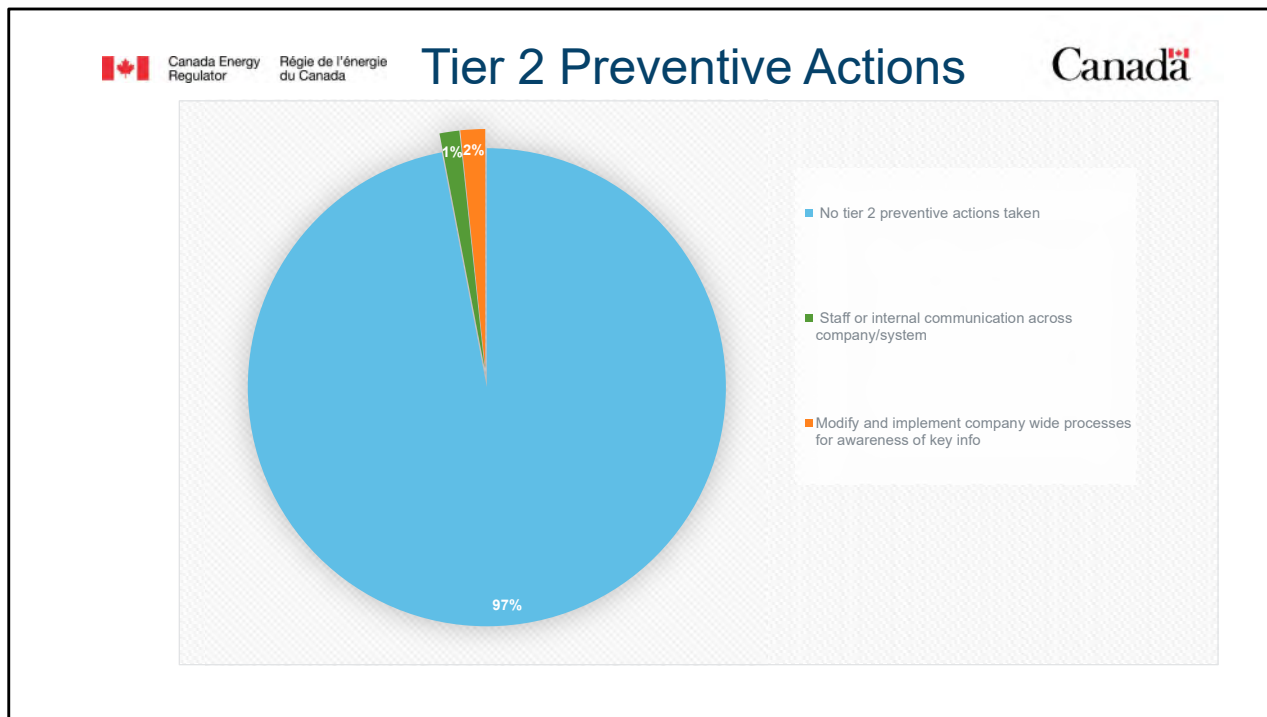
We will dig a little deeper into what actions companies are taking in the next few slides.



This is for 2023 - 52% of events resulted in a tier 1 preventive action: include the event data in holistic analysis to determine if company-wide processes or procedures require modification is the most frequently selected.

In the last report that looked at 2021– 23 , this was selected 62% of the time, in 2023 alone, it was 33%. I’m actually happy to see that there are other actions being selected.

One could argue that simply included the event data in an analysis is not, in itself, a preventive action. It’s the implementation of learning that is a result of holistic analysis that we are really interested in. Companies should be conducting this analysis as per OPR section 6.5(1) c and s. If anyone in the audience want to share a system improvement that has arisen from holistic data analysis, I’m sure the entire group would benefit from hearing examples of continuous improvement efforts.

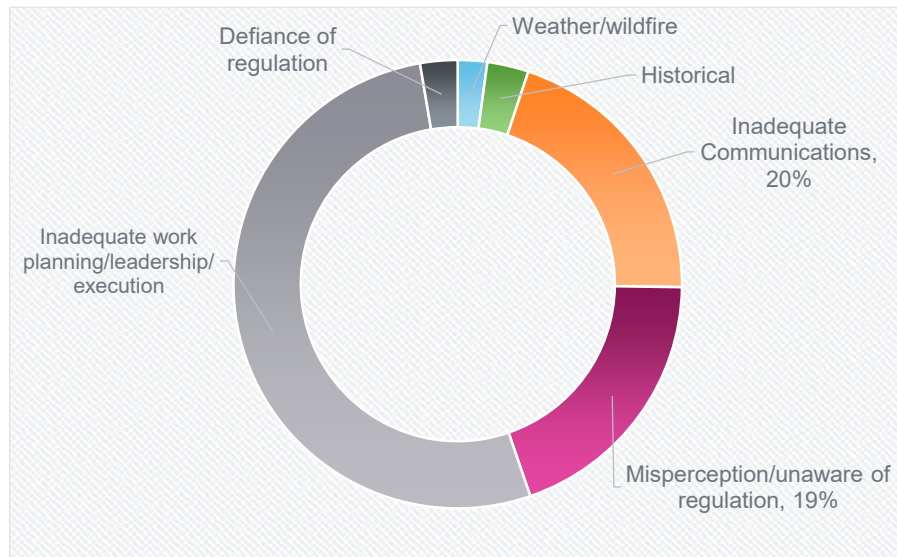


97% of events do not identify tier 2 preventive actions – that is up from the average for the past 3 years. T

It is understood that not all DPR events are created equal and that each company may handle events differently. It is required however that the methodology to addressing these events is logical and systematic. The CER requires Detailed event reports that include basic cause, corrective action at minimum. We do expect that, preventive actions are taken to improve the company's managements system when warranted.

Companies should be prepared to describe and defend their internal classification system of Damage Prevention Regulation Events and how the system triggers a response, including the assembly of investigative teams to conduct fulsome root cause analysis and investigations when required. In future workshops it would be great if any of our companies were willing to share their risk matrices, classification systems and investigation standards as they relate to DPR events.

Basic Causes reported



When we are looking at 3rd party damages and see things like Inadequate work planning & leadership, well, that can be a little judgy; although on 1st & 2nd party damages you can say that after you've done your investigation.

When you see the misperception/unaware of reg is 19% you should take a look at PA programs – are they effective?

Inadequate communications at 20% is a concern – where are the comms breaking down? Have you given the safety information to those exposed to the hazard, or have you subdelegated that OPR regulatory responsibility to the GC?(not compliant)

Although it's a small fraction of basic causes, Defiance of Regulation is very concerning – companies usually work hard to develop and maintain relationships with landowners – what happened that they are so ticked off that they are willing to risk their life?

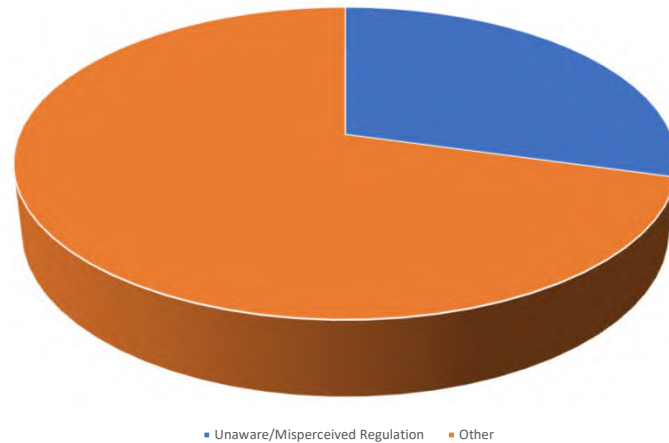
And we talked about historical damage and how we should be asking some deeper questions. You may not always find answers, but you can sleep at night if you've at least looked for them.

Public Awareness



The next few slides speak to public awareness efforts. This is a member of the public who, until she was on the technical committee for CSA Z663 Land Use Planning in the vicinity of pipelines committee, thought that this was a bus stop in her neighborhood...her house backed on the ROW.

UA Basic Cause: Unaware/Misperceived Regulations 2021-23



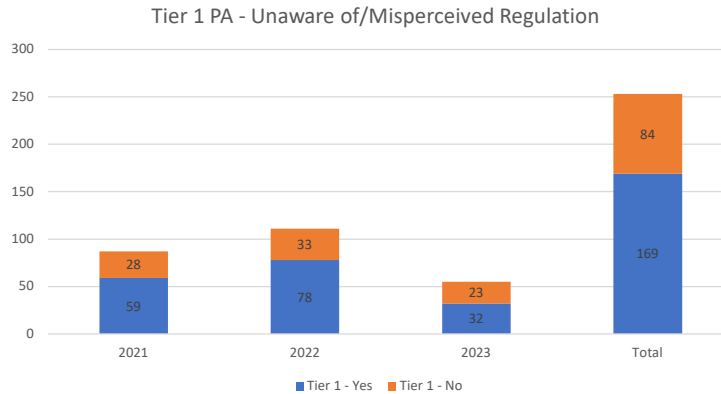
The goal of every PA program is to communicate the requirements of living and working near pipelines and ensuring that those requirements are understood.

If we look at the 3 year trend, regardless of the party involved we have seen 1/3 of all Basic Causes include either

1. Unaware of the regulations
2. Misperceived regulations.

When CER staff are reviewing DP event and see either of these basic causes we immediately look to the justification section to understand how and why the contravening party was unaware of their obligations.

Unaware of/Misperceived Regulations– Tier 1 Preventive Actions



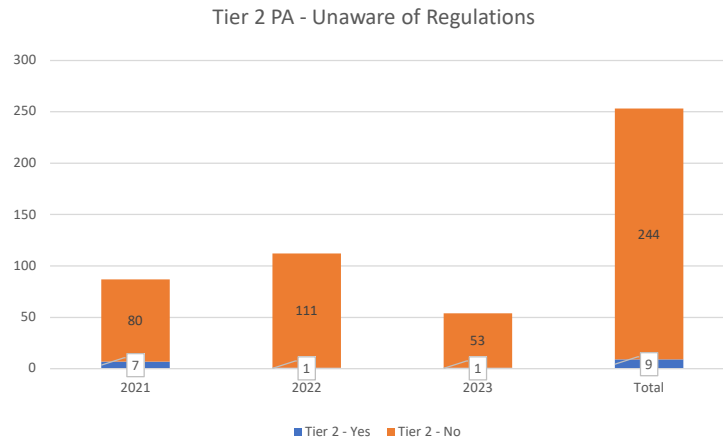
Not only should companies be drilling down to understand why a regulation was unknown or misperceived but they should also be self-reflecting, and when required, making changes to PA programs to address the causes of unauthorized activities attributed to gaps in public awareness programs.

Gap closure related to PA programs would typically be captured in Tier 1 and 2 preventive actions which were discussed earlier

And we do see 2/3 of the events caused by misperceived and unknown regulations have identified Tier 1 preventive actions.

However, as we have seen with the DPR events in general that action is most often, simply, the inclusion of the data in holistic analysis.

Unaware of/Misperceived Regulations– Tier 2 Preventive Actions



And The rates at which companies are identifying tier 2 preventive actions are almost nil.

We are hoping that all of the holistic analysis that is occurring is leading to meaningful continuous improvement opportunities.



So I hope the slides have given you something to think about they will be available for distribution so that you can take a closer look.

If there is something in the data that can support your efforts and initiatives then that's great.

We will continue to analyze the reports we receive as this information does inform our strategic plan.

I'll end on the same note I began with.

The integrity of the data is key. Quality reports will result in quality analysis and meaningful learning.