



Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada



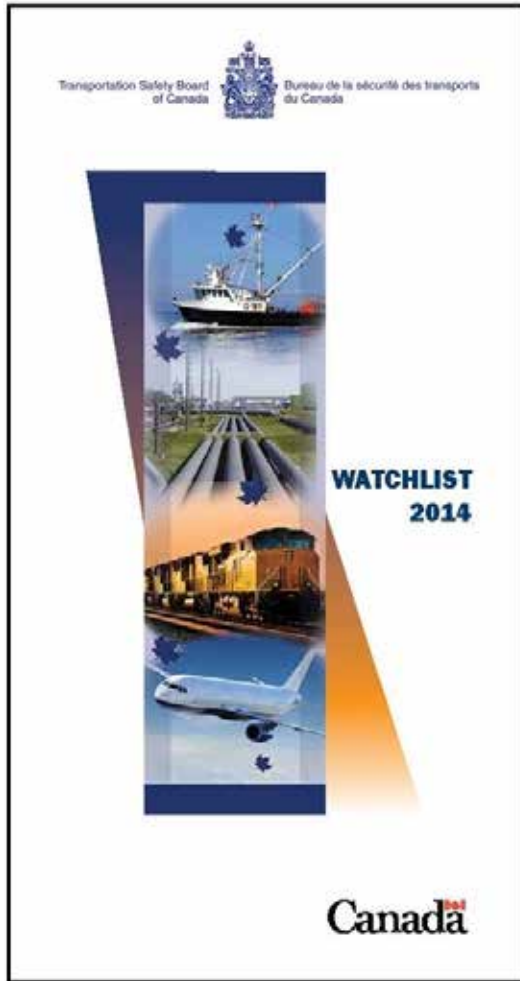
Watchlist 2016 (Rail)

Presentation to National Railway Day

Faye Ackermans,
Member, Transportation Safety Board of Canada
Ottawa, Ontario 01 November 2016

Canada

Watchlist 2016



~~Railway crossing safety~~



Transportation of flammable liquids by rail



Following railway signal indications



On-board voice and video recorders



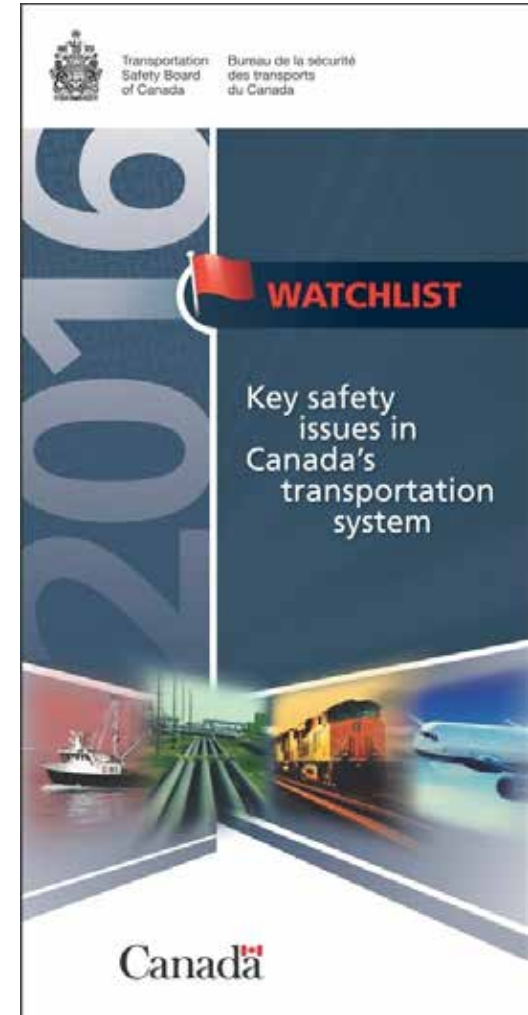
Fatigue management systems for train crews



Safety management and oversight



Slow progress addressing TSB recommendations



Issue removed: Railway crossing safety

- TC published new ***Grade-Crossings Regulations and Standards*** (2014)
- Crossing accidents are now declining

YTD (January-September)	
2011-2015 (avg.)	129
2015	117
2016	89

Source: TSB website

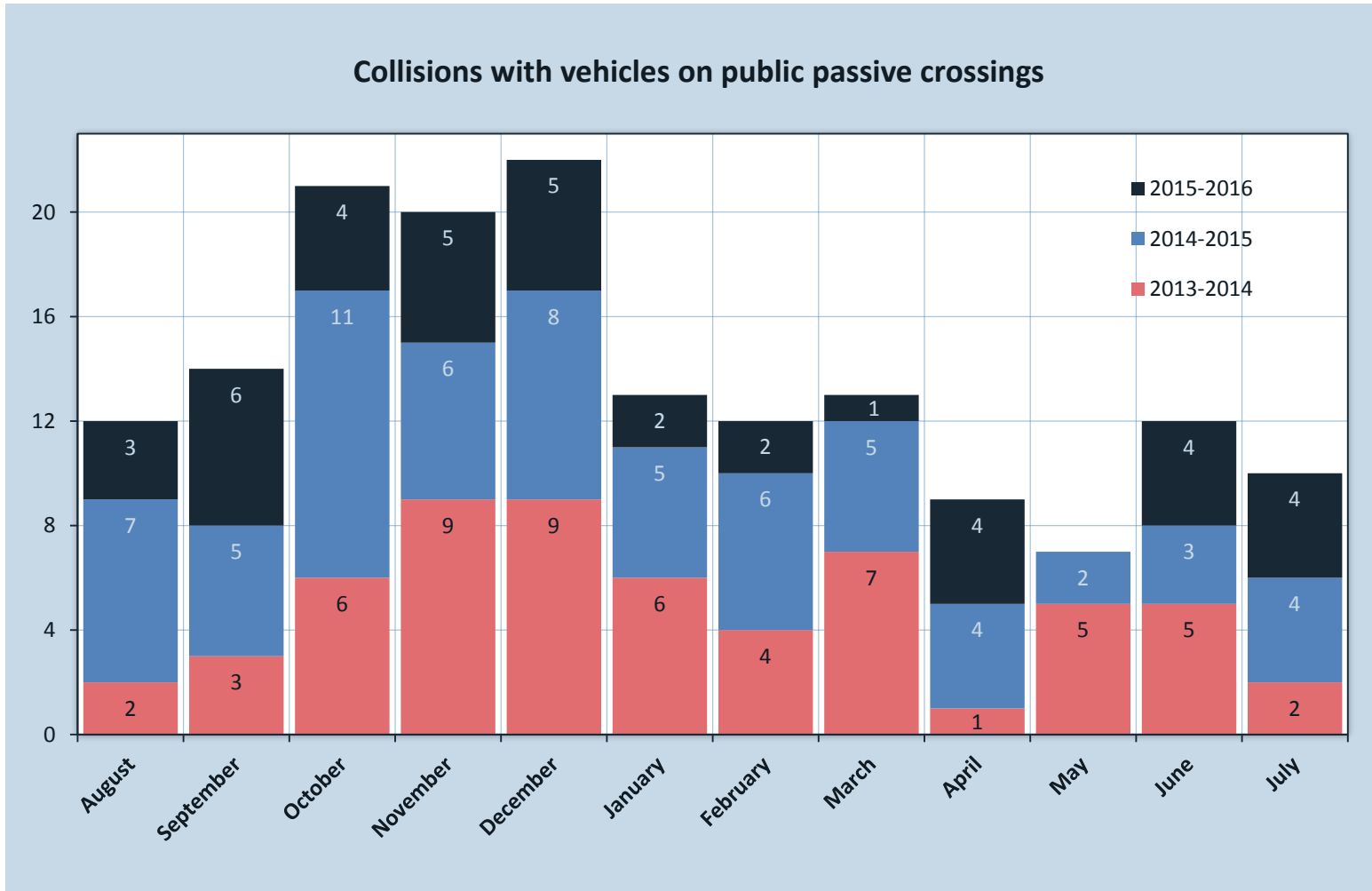


Collisions with vehicles by crossing type

	Aug 2013 – July 2014	Aug 2014 – July 2015	Aug 2015 – July 2016
Farm/Private	17	39	26
Public-Passive	59	66	40
Public-Automated	79	76	66
TOTAL	155	181	133



Railway crossing safety (continued)



Railway crossing safety (continued)

Action required:

- Need ongoing commitment by all
- Continued funding to sustain improvements, particularly at public/automated crossings
- Driver education remains key
- TSB will continue to investigate and learn from accidents at crossings
- TSB will continue to support Operation Lifesaver



On-board locomotive voice and video recorders



On-board locomotive voice and video recorders (continued)

Without these, key information to advance railway safety may not always be available for accident investigations and proactive safety management.

Recent actions:

- May 2015: TSB safety study → released September 2016
- The report identified best practices, implementation issues, and collected background info to support action plan



On-board locomotive voice and video recorders (continued)

Issues:

- Differences in opinion on appropriate use. Need to resolve these disagreements.
- Rights and obligations of all parties must be balanced to use this information in a proactive safety management framework.
- The TSB will continue its work to prepare for expanded use.
- Legislative changes required.

Action Required:

- Recorders must be installed on all lead locomotives operating on main track.



Following signal indications



Following signal indications (continued)

Railways signals are not consistently recognized and followed, which poses the risk of serious collisions or derailments

Any progress?

- VIA is in the early stages of testing new technology.

Action required:

- Additional physical safety defences must be implemented to ensure signals are consistently recognized and followed.



Transportation of flammable liquids



Transportation of flammable liquids (continued)

The transportation of flammable liquids, such as crude oil, by rail across North America, has created an elevated risk that needs to be mitigated effectively.

Progress so far:

- New tank car standards
 - Retrofit provisions, implementation timelines, monitoring & enforcement
- Significant decline in use of “legacy” Class 111 tank cars

Action required:

- Companies must conduct thorough route-planning and analysis, perform risk assessments, and ensure **effective risk-control measures**
- Use more robust tank cars when large amounts of flammable liquids are transported by rail



New issue: *Sleep-related fatigue in operating crew can impair the safe operation of freight trains.*

Why this matters:

- Since 1994, **20%** of TSB investigations involving human factors showed fatigue as a contributing or risk factor.
- **Almost all** of these (19 of 23) involved operating crews on **freight trains**
- A recognized problem for over 20 years
- Initiatives to date are inadequate

Action required:

- TC to complete review of fatigue-management systems
- TC and railways to implement effective mitigation strategies



Multi-modal issue: SMS and oversight

- *Some transportation companies do not manage safety risks effectively*
- *Many [air and marine operators] aren't required to have formal safety management processes in place.*
- *TC oversight and intervention aren't always effective at changing companies' operating practices.*

Action required:

- If you have an SMS, you must **demonstrate that it works**
- When TC intervenes, it must change unsafe operating practices



New issue: *Transport Canada action to address TSB recommendations is too slow.*

Why this matters:

Mode	10–14 years	15–19 years	More than 20 years	Total
Air	3	4	32	39
Rail	1	1	1	3
Marine	3	1	6	10
Total	7	6	39	52

Action required:

- TC: a clear commitment to action
- Government: accelerate the process to take action
- Backlog of outstanding recommendations must decrease



Next steps:

- The TSB is being more proactive. *Your* phone may ring.
- We want to see concrete action. You don't have to wait for TC.
- **Crossing safety:** Ongoing commitment and funding required.
- **Robust tank cars:** We need more, and sooner.
- **Following signal indications:** We need more physical fail-safe defences.
- **LVVR:** The sooner, the better.
- **Fatigue:** Apply the science and take mitigation measures.
- **SMS:** Does yours work? Can you prove it?



QUESTIONS?



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