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Rural Highway Safety and Speed Review

Post Implementation Update

June 28, 2016



Rural Safety and Speed Review Recommendations:

Speed limits

- Increase speed on 1300km of rural highway
- Pilot variable speed limits at three locations

Winter tires

- Update winter tire regulations and post new winter tire signs

Slow moving vehicles

- Introduce new left lane legislation
- Revise pavement markings and signing at passing lanes
- Pilot pullover signing on Highway 4

Wildlife

- Implement 2 wildlife detection systems on Highway 3
- Install gateway wildlife signs
- Install LED wildlife signs
- CMS wildlife messaging



Speed Limit Review

- Reviewed over 9,100 km of rural provincial highways
- Assessment based on Institute of Transportation Engineers speed zone practices
 - 85th Percentile
 - Safety history, geometry, land use, consistency
- Increased speed limit to match operating speeds on 33 highway segments (approx 1,300 km)

New Speed Limit km/h	Number of Segments
90	9
100	17
110	4
120	3



Post Implementation Speed Surveys

- Changes in speeds varied by corridor
 - 14 of the sections had speeds remain the same or decline;
 - 19 saw increased speeds
 - Highway 99 north of Whistler dropped 5 km/h
 - Highway 5 from Hope to Kamloops remained unchanged
 - Highway 5 north of Kamloops increased 9 km/h
 - Average increase was 2 km/h
 - 19 sections were within +/- 3 km/h of their pre-implementation 85% speed



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Safety Data Overview

- 1 year post-implementation review (November 1, 2014 to October 31, 2015)
- Serious collisions are reported as a collision rate
 - Traffic volume
 - Section length

RURAL HIGHWAY SAFETY AND SPEED REVIEW POST IMPLEMENTATION 2016

Highway 5 Coquihalla

Hope to Kamloops

Physical Characteristics

Start Point: Othello Interchange

End Point: Hwy 1 Junction

Length 180 km

Number of Lanes 4

Divided No

Operational Characteristics

Average Daily Traffic—Hope to Merritt 10,600

% Trucks22%

Average Daily Traffic—Merritt to Kamloops 7,800

% Trucks22%

Previous Speed Limit 110 km/h

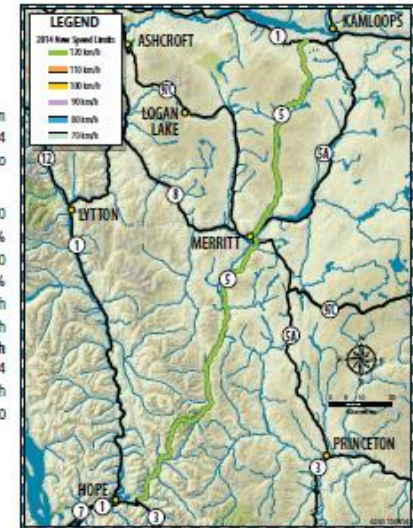
Previous 85th Percentile Speed 127 km/h

New Speed Limit **120 km/h**

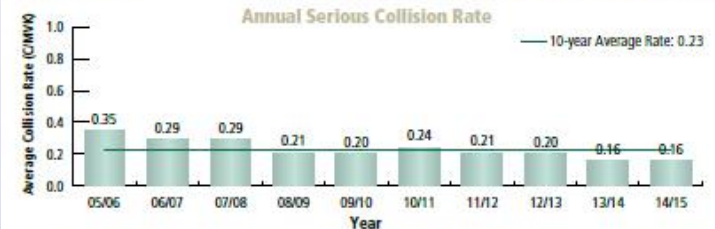
Implementation Date July 2, 2014

Current 85th Percentile Speed 127 km/h

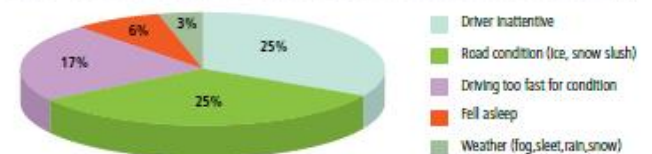
Change in 85th Percentile Speed 0



Safety Trends



Top 5 – 1st Contributing Factors (Nov. 1, 2014 to Oct. 31, 2015) Post Implementation



* These values may not add up to 100%, as there are other contributing factors.



Individual Segments Summary

- Over half of the segments (19 of 33) the collision rate stayed the same or decreased
- Of the 14 sections where crashes increased, speed decreased or stayed the same on 7
- 7 segments had the speed increase, serious collision increase

	Crashes Decreased or no change	Crashes Increased
Speed Increased	12	7
Speed decreased or no change	7	7



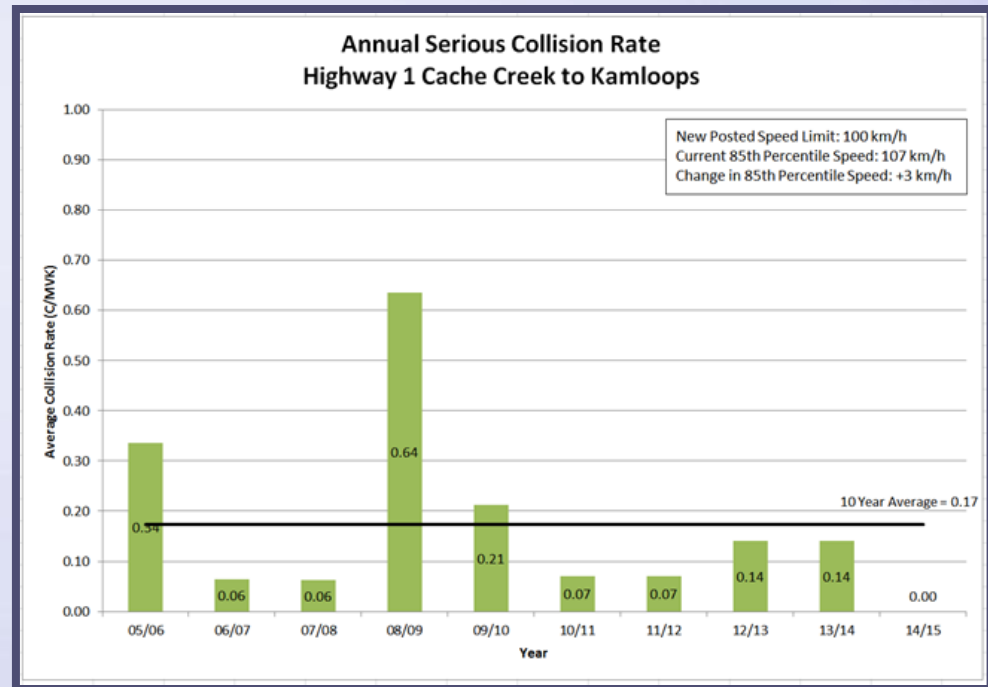
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Collision Data Variability

- One year of data does not make a trend
 - Typically 3 years of data are used
- Year to year data can vary significantly
- Factors affecting crashes
 - Number of vehicles on the road
 - Economic activity
 - Price of fuel
 - Weather patterns



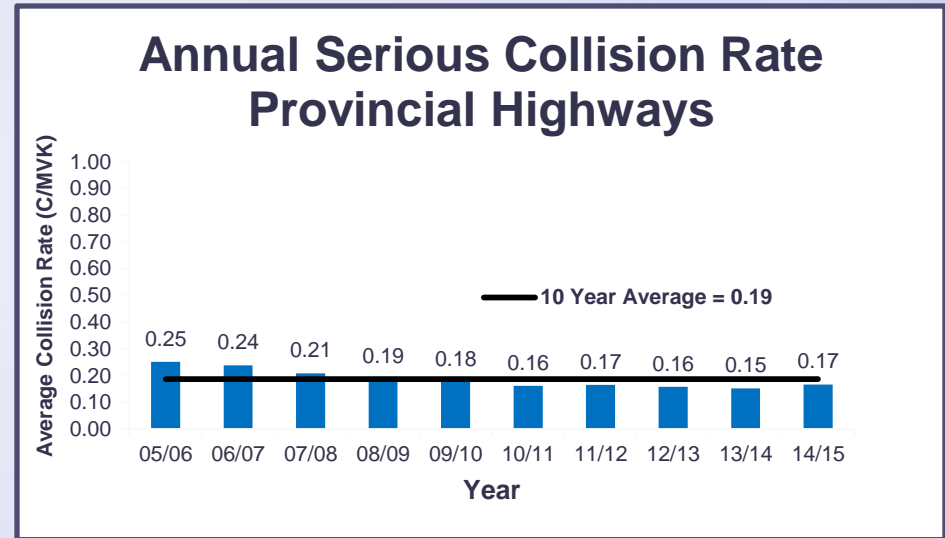


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Over-all Safety Data

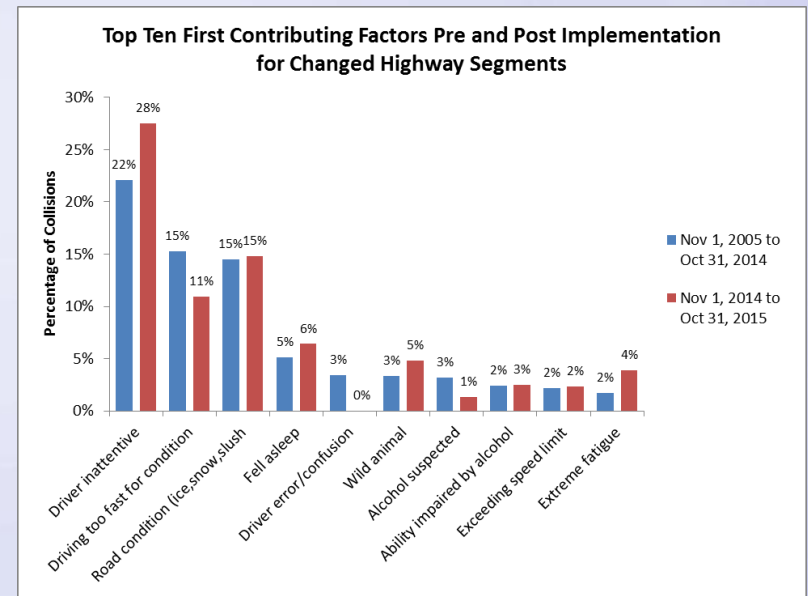
- 32% reduction in serious collision rate over 10 years
- UBC statistical model estimated 11% over-all increase in segments where the speed was changes
 - Trending down
 - too few crashes to come to segment specific conclusions
- Single year data shows a 9% increase in serious crashes across the whole provincial highway system





Contributing Factors

- Top 3 contributing factors for all changed segments
 - Driver inattentiveness showed an increase of 6%
 - Driving too fast for conditions showed a decrease of 4%
 - Road conditions remained the same
- Represent 54% of all crashes





Safety Trends in Other Countries

Fatalities in United States

Jan to June 2015

Oregon +59%

Florida +29%

Georgia +26%

Minnesota +26%

Indiana + 23%

North Dakota +22%

South Carolina +21%

California +20%

Louisiana +20%

Maryland +19%

North Carolina +19%

Utah +19%

Wisconsin +19%

Arizona + 18%

Colorado +18%

Ohio +17%

Arkansas +14%

Vermont +12%

Fatalities internationally

United Kingdom +5% (2014)

Sweden +4% (2014)

Australia +2.5% (2015)



Conclusions

- Ministry analysis aligns with UBC statistical modelling
- Operating speeds have not changed significantly
- Driver inattentiveness and Off-road collision types are showing an increase
- Recent changes aimed at improving safety have been implemented
 - 3 New Variable Speed Limit Systems
 - 2 New Wildlife Detection Systems
 - BC On the Move Road Safety Improvements
 - Increased distracted driving penalties



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Thank You