Evaluation of 75 mph speed limit in Washington

Washington Transportation Commission

Moses Lake

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Why is the speed limit being reviewed?

- HB 2181 passed the 2015 Legislature allowing the Secretary of Transportation to increase the speed limit on any highway to a maximum 75 mph (RCW 46.61.410).
- Lawmakers in eastern Washington have asked WSDOT to consider such an increase on I-90.
- Since August, WSDOT has worked with the state Traffic Safety Commission and the Washington State Patrol to evaluate the I-90 request.

RCW 46.61.410

Increases by secretary of transportation – Maximum speed limit for trucks – Auto stages – Signs and notices.

…the secretary may increase the maximum speed limit on any highway portion thereof to not more than **seventy-five** miles per hour in accordance with:

- **Design Speed** (taking into account all safety elements included therein), or
- Whenever the secretary determines upon the basis of an **engineering and traffic investigation** that such a greater speed is reasonable and safe under the circumstances existing on such part of the highway.

and

(2) The maximum speed limit for vehicles over ten thousand pounds gross weight and vehicles in combination except auto stages shall not exceed **sixty** miles per hour and may be established at a lower limit . . .

Evaluation process

The 75 mph speed limit evaluation process included:

- gathering information from other states that have raised speed limits
- developing criteria to evaluate where and how speed limits might be raised
- assessing the effects of an increase and identifying any needed highway feature modifications
- examining how decisions about speed limit increases can take into account vehicle crash history, societal costs due to crashes, fuel costs and benefits associated with travel time savings.

Findings from other states where speeds were raised above 70 mph

- Speeds increase 1-4 miles per hour
- Criteria like eliminating mountainous terrain, Average Daily Traffic (ADT), crash analysis
- After crash data: no conclusive evidence except simple-before after in Kansas where some highways saw 25% increase in crashes
- National Cooperative Highway Research Program (NCHRP) Report evaluating speed increases above 70 mph underway

Under Consideration for 75 mph increase

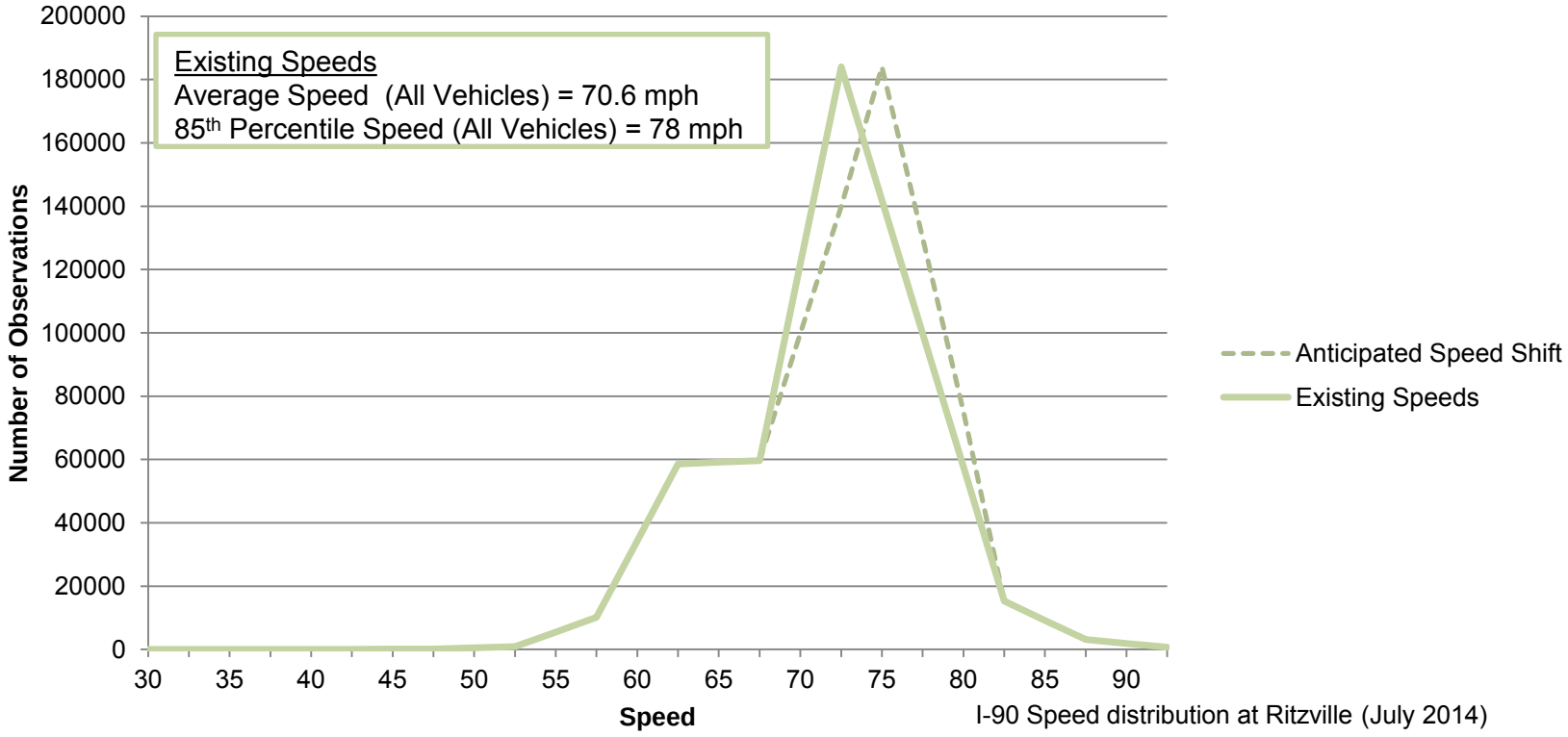
Interstate 90

- Approximately 107 mile section from near George to the vicinity of the west Spokane County line

Findings

- Fairly low traffic volumes and heavy right lane usage allows ample passing opportunities
- 15 fatal and 27 serious injury crashes from 2011 to 2015
- 38 Single Vehicle-Crashes and 20 Multi-Vehicle Crashes
- Most frequent contributing crashes: under influence of alcohol, exceeding safe speed and driver apparently asleep

I-90 speed distribution with potential 75 mph increase

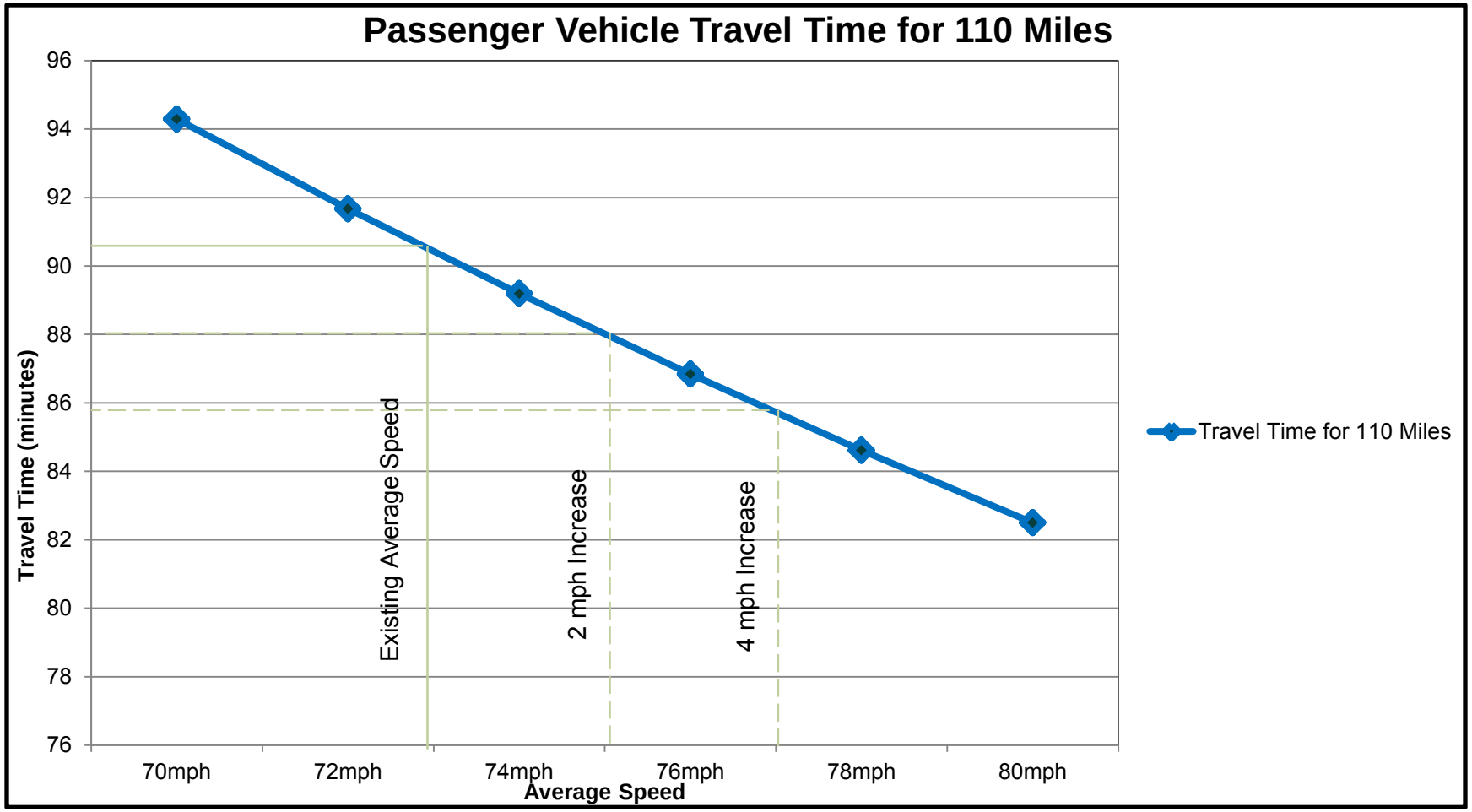


I-90 Speed distribution at Ritzville (July 2014)

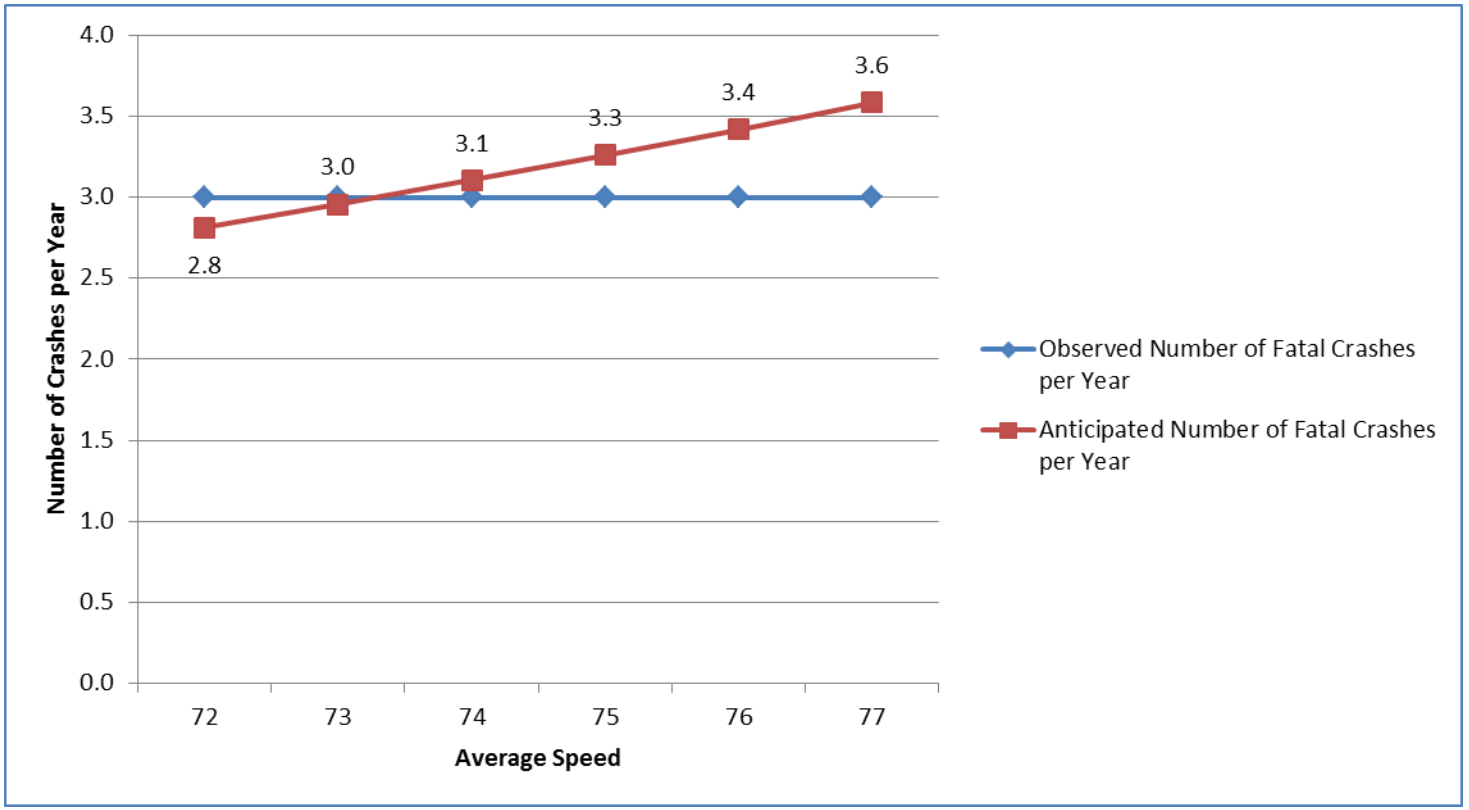
For a current posted speed limit of 70 mph:
the average passenger vehicle speeds are about 73 mph

For a speed limit of 75 mph:
the expected average passenger vehicle speeds will be between 75 & 77 mph

Passenger Vehicle Travel Time



Potential Change in Fatal Crashes Based on Passenger Vehicle Average Speeds



Anticipated change based on national research and accepted practice.

Summary of 2 mph change in average passenger vehicle speeds

	Existing Value	With Potential 2 MPH Passenger Vehicle Speed Increase
Benefits		
Travel Time		
Minutes Saved for Passenger Vehicle Trip from George to West of Cheney	90.4 minutes	- 2.4 minutes
Value of Time Saved		+ $1,862,750
Benefit Subtotal		**+ $1,862,750**
Costs		
Increased Crash Costs		
Average Number of Fatal & Serious Injury Crashes Per Year	8.6 Crashes per Year	+ 0.62 crashes per year
Societal Cost of **All** Crash Severities per Year	$50,660,282	+ $4,046,150 per year
Increased Fuel Consumption		
Increased Passenger Vehicle Fuel Consumption per Year	20,790,200 gallons/year	735,000 more gallons per year
Cost per year at $2.25 per gallon	$45,738,440	$1,653,750
Increased Greenhouse Gases		
Increased Carbon Dioxide Equivalents (CO2e) per Year - Passenger Vehicles	135,700 metric tons CO2e/year	2,245 more metric tons CO_2e per year
Annual Cost at $59.00 per ton		$132,455
Annual Infrastructure Upgrade Costs		$177,979
Cost Subtotal Range		**$6,010,334**

Summary of 4 mph change in average passenger vehicle speeds

	Existing Value	With Potential 4 MPH Passenger Vehicle Speed Increase
Benefits		
Travel Time		
Minutes Saved for Passenger Vehicle Trip from George to West of Cheney	90.4 minutes	- 4.7 minutes
Value of Time Saved		+ $3,628,750
Benefit Subtotal		**+ $3,628,750**
Costs		
Increased Crash Costs		
Average Number of Fatal & Serious Injury Crashes Per Year	8.6 Crashes per Year	+ 1.27 crashes per year
Societal Cost of **All** Crash Severities per Year	$50,660,282	+ $8,325,750 per year
Increased Fuel Consumption		
Increased Passenger Vehicle Fuel Consumption per Year	20,790,200 gallons/year	1,523,900 more gallons per year
Cost per year at $2.25 per gallon	$45,738,440	$3,428,775
Increased Greenhouse Gases		
Increased Carbon Dioxide Equivalents (CO2e) per Year - Passenger Vehicles	135,700 metric tons CO2e/year	4490 more metric tons CO_2e per year
Annual Cost at $59.00 per ton		$264,910
Annual Infrastructure Upgrade Costs		$177,979
Cost Subtotal Range		**$12,197,414**

Next Steps

- Analyze public comments and consult with traffic safety partners.
- WSDOT will make a decision in May whether to raise the speed limit for this section of I-90.
- If a decision is made to increase the speed limit, the new limit would go into effect once any identified safety elements have been fully addressed and new signs are posted along the affected segment of roadway.

QUESTIONS?

For additional information regarding the evaluation of the 75 mph speed limit in Washington, please contact:

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