SENSE

society for Safety by Education Not Speed Enforcement

200 - 1687 West Broadway
Vancouver, BC V6J 1X2

voicemail: +1 (604) **871-3383**
fax: +1 (604) 734-8484

web-site: **www.sense.bc.ca**
e-mail: info@sense.bc.ca

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Traffic Services Study
P.O. Box 9206 STN PROV. GOVT
Victoria BC V8W 9J1

By Fax 250-387-0103

Dear Members of the Traffic Services Study,

Re: SENSE response to the *Traffic Services Study Discussion Paper*

We are pleased to respond to the issues raised within your discussion paper and trust that our information will provide important context. The discussion paper raises significant points that SENSE had previously raised but which were labelled as nonsense by the proponents of photo radar.

SENSE is a politically neutral not-for-profit society formed by concerned citizens with an interest in promoting meaningful traffic safety and opposing ineffective or revenue generating measures. We operate with no funding other than the donations from concerned citizens. The timing and submission deadline have dictated the amount of information supplied below and we encourage you to contact us for additional information if required. We trust you will see that there are significant facts that, up until now, have not been well considered.

Points are addressed in the general order that they are raised within the discussion paper, and are followed by a number of recommendations. We concur with the discussion paper on a number of points, and are addressing only those that require additional explanation.

"WHAT ARE THE KEY PUBLIC SAFETY CONCERNS?" (PAGE 4)

Certainly impaired driving remains a very significant issue, but the inclusion of speeding as number two raises questions about the validity of these conclusions and the methods used to generate them. Where, for instance, are the often-cited concerns about declining (non-existent?) driver courtesy and cooperation, and the skills and abilities of drivers who hold valid drivers licences? Both the Insurance Corporation of British Columbia (ICBC) and the British Columbia Automobile Association (BCAA) have conducted driver surveys where respondents have cited slow drivers to be one of their major safety concerns.

Five years ago British Columbia initiated one of the most aggressive anti-speed awareness campaigns in the world and one would anticipate that a campaign of this sort would bias the results of any top-of-mind attitude survey. With millions of dollars of anti-speeding advertising, approaching $100 million in capital and operating costs, and over two million speeding tickets issued, there remains a question of what, if anything has this approach contributed to traffic safety?

The United States, which for years federally mandated maximum speed limits at 55 mph in response to the oil crisis, allowed states to raise limits in late 1995. The safety lobby – well funded by the insurance companies who raise rates when drivers receive tickets – launched an emotional lobby against the proposed speed limits increases. They loudly protested that "the speed limit repeal alone will kill more than 6,400 Americans annually at a cost of nearly $20 billion"[1] – a 15% increase in expected fatalities simply by allowing motorists to lawfully travel at speeds which they were already travelling at. The rhetoric, which mirrors that of ICBC's "speed is killing us" campaign, featured testimonials by trauma physicians, crash victims, and visions of "a pending disaster on our highways, in our trauma centres, in our rehabilitation hospitals, and in the homes of so many American families."

Fortunately, as had been predicted by the transportation engineers that SENSE consults with, *nothing happened*. Despite the envisioned 15% increase in carnage, the total fatalities increased an insignificant fraction of a percent, and both the fatality rate and injury rate have continued to drop in each and every year since 1995.[2] For a detailed discussion, see *Speed Doesn't Kill - The Repeal of the 55-MPH Speed Limit*,[3] which found:

> All of the evidence thus far indicates that Americans have not responded to higher speed limits by converting the highways into stretches of the Indianapolis 500. Any loss of life has been very minimal—and at most a tiny fraction of what had been predicted by the safety lobby. Meanwhile, Americans have saved some 200 million manhours in terms of less time spent on the road. The net economic benefit of raising the speed limit has been between $2 and $3 billion a year.

Note that many of the speed limit studies proffered by the slower-is-safer advocates (particularly those which suggest that a drop in average speeds equate to a known drop in crashes) suffer from failures to account for exogenous factors. These include changes in the economy,[4] other safety programs, continuous improvements in vehicle safety features, traffic-volume related decreases related to reduced travel, etc. Least credible are the 1970's-era US studies and many of the European studies that fail to control for significant economic downturns and/or shortages in fuel.

Photo radar studies suffer from the same problems. The chief culprit is police self-reported evaluations that are received as if they were conducted using proper methodology. Even the professional evaluations make serious errors – a frequent concern is that the evaluators are not at arms-length from the programs, as many evaluators receive their funding from the same agencies sponsoring the photo radar program. A recent review of a number of photo radar and speed-reader board studies made the following observations:

> The second, and more important reason [for incomplete reliable empirical evidence], is that methodological problems are widespread—particularly in studies concerned with traffic crashes. Of 19 reports located for this evaluation, more than half have serious research design

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[1] http://www.saferoads.org/press/95/rel-conf.html

[2] http://www.nhtsa.dot.gov/people/ncsa/reports/2000/99summary.html

[3] http://www.cato.org/pubs/pas/pa-346es.html

[4] For a discussion on the effects of the economy on traffic crashes, see: Peter J. Cooper, *The Nature and Causes of the 1982 Traffic Accident Casualty Reductions in British Columbia* (Vancouver: Insurance Corporation of British Columbia, undated). Of note: "the major part [63%] of the observed traffic accident casualty decrease in British Columbia can be attributed to the effects of the economic recession and reduced travel was undoubtedly a substantial factor…" "Total accidents were reduced by about 12% while injuries and fatalities went down by 23% and 30% respectively." This drop in fatalities is clearly evident on the attached GRAPH 5.

> problems. Common among these is the failure to: control for external events, such as the implementation of other traffic safety programs; employ tests of statistical significance; use adequate comparison sites; and control for long-term changes in crash trends. Comparison sites are particularly important in evaluating speed control devices in areas with notably high crash or speeding rates since rates in such areas often drop naturally on their own ("regression to the mean").[5]

> "IN B.C., POLICE ISSUE FAR MORE VIOLATION TICKETS FOR SPEEDING THAN ANY OTHER OFFENCE. SPEED WAS IDENTIFIED AS A CONTRIBUTING FACTOR IN ONE THIRD OF THE FATAL CRASHES IN B.C. IN 1998, BUT OTHER HIGH-RISK BEHAVIOURS MAY BE JUST AS IMPORTANT OR MORE IMPORTANT." (PAGE 5)

Prior to 1994, the Motor Vehicle Branch annually reported crashes by primary cause. In 1994, they began reporting crashes by the up-to-three contributing factors, not just one major factor. The net effect of this was to propel unsafe speed from third place (fifth overall)[6] to first place[7] in fatal traffic collisions, above alcohol. Its timing (immediately preceding ICBC's "Speed is Killing Us" campaign) was too coincidental to not consider it misleading.

While this methodology must appeal to the promoters of anti-speeding campaigns, even ICBC's own research contradicts this approach. In a 1994 toxicological study on the presence of drugs and alcohol in British Columbia traffic crashes,[8] the author's data is unequivocal *in that fully two-thirds of fatal crashes where police indicate unsafe speed as a contributing factor, the fatally injured driver had alcohol and/or drugs (both recreational and prescription) in the bloodstream at time of death*[9] – a significantly higher rate than that suggested through police reports. One can extrapolate that unsafe speed *injury* crashes also have a somewhat higher presence of drugs and/or alcohol than reported.

Automated enforcement programs dispensing tickets well after the offence will surely have no effect upon drivers who choose to drive in a criminally reckless fashion – who are ultimately responsible for tremendous amount of the carnage that automated enforcement advocates would have us believe is addressed through the technology.

An ICBC study published in 1995 looked at the predictive ability of traffic tickets and whether there was an empirical foundation for British Columbia's penalty point system.[10] Presented in a simplified form (without confidence intervals), GRAPH 1 displays the coefficient of future at-fault accident risk versus the 1998 total convictions in British Columbia for the various groups of offences. Despite the fact that five categories of offences are more predictive of crash risk than speeding, they received only approximately 6.8% of total tickets, whereas speeding

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[5] Steven A. Bloch, "A Comparative Study of the Speed Reduction Effects of Photo-radar and Speed Display Boards," *Transportation Research Record* 1640 (December 1998).
http://www.aaa-calif.com/members/corpinfo/radar.asp

[6] Ministry of Transportation and Highways, *1993 Traffic Accident Statistics*, (Victoria: Queen's Printer, 1994), p. 28.

[7] Ministry of Transportation and Highways, *1995-97 Traffic Accident Statistics*, (Victoria: Queen's Printer, 1998), p. 13.

[8] G. William Mercer, *An Estimation of the Presence of Alcohol and Drugs in Traffic Accidents in British Columbia*, (Vancouver: Insurance Corporation of British Columbia, December 1994).

[9] Ibid., table 16. Calculation details from the author's Venn table, including a letter to the author of the study is available from SENSE upon request.

[10] Wenjun Chen, Peter J. Cooper, and Mario Pinili, "Driver Accident Risk in Relation to the Penalty Point System in British Columbia," *Accident Analysis and Prevention* 26.1 (1995): pp. 9-18.

received 72% of total tickets.[11] A safety-based (as opposed to the present revenue based) approach to traffic enforcement would see ticket levels proportionate to each risk of each offence.

Note that despite the fact that a risk is associated to those who have speeding tickets, both speeding tickets and crashes vary with driving exposure. In fact, one ICBC researcher noted to SENSE that because there are so many speeding tickets issued, these tickets can be a proxy for exposure. For example, one who drives frequently is more likely to have crashes (while not necessarily at-fault), and one who drives frequently is more likely to have speeding tickets. Simply put, a greater number of speeding tickets may merely be an indicator of exposure and not risk.

> "IN 1998, ALCOHOL WAS INVOLVED IN ALMOST A THIRD OF ALL THE FATAL COLLISIONS IN B.C. AND 12 PER CENT OF COLLISIONS RESULTING IN INJURY." (PAGE 7)

The Traffic Services Study might be interested to review the paper by Dr. Mercer, *An Estimation of the Presence of Alcohol and Drugs in Traffic Accidents in British Columbia*, which notes:

> Arguably, from these data and projections, drugs other than alcohol play a significant role in the generation of driver impairment and traffic crashes. Equally arguably, these estimations probably have a significant degree of error in their approximations. That is, they likely do not represent the reality of alcohol, alcohol and drug, and drug use or crash involvement within even a 10% error rate in either direction. Issues of substance presence vs. impairment, the validity of the proportional changes from crash severity to severity and so on are all salient, and certainly can not be adequately estimated from a base B.C. sample of a few hundred toxicologies from fatally injured drivers.
>
> However: when the data suggest that the issue of impairment by drugs other than alcohol, either in the presence of alcohol or alone, may be of a magnitude as great as current Traffic Accident Report estimates of the influence of alcohol, then the issue must be taken very seriously – even if the estimations are out by 50%, there is still a very substantial presence.
>
> Overall, these analyses suggest that drugs other than alcohol are contributing to fatal traffic accidents in British Columbia. In particular, impairment by alcohol and drugs is being identified by investigating police officers as alcohol-only impairment, while some alcohol-only impairment may be being missed entirely.
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> […]
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> 4. Whenever "due care" or "speed" are cited as traffic accident causes, impairment should be suspected, the absence of "alcohol" as a police-recognized cause notwithstanding.[12]

Dr. Mercer's figures estimate that 57% of fatality, 28% of injury, and 18% of property-damage-only crash costs have drug and/or alcohol presence – contrast this with police reported figures

[11] Graph and underlying data available from SENSE in Microsoft Excel format. Convictions data obtained from ICBC, *ANN013: Contraventions and Violations for Calendar year 1998 for Licensed Drivers*.

[12] Mercer, *An Estimation of the Presence of Alcohol and Drugs in Traffic Accidents in British Columbia*, pp 30-33.

of alcohol in an average of 30% of fatality and 12.5% of injury collisions.[13] In total, 26% of *all* traffic crash costs are estimated to have the presence of drugs and/or alcohol.[14]

> "MOST DRIVERS SPEED, AT LEAST ON OCCASION, AND MANY ARE UNDER THE IMPRESSION THAT THE "TRUE" SPEED LIMIT IN B.C. IS 10 KM/H OVER THE ACTUAL POSTED LIMIT." (PAGE 12)

There is the conventional notion that compliance within the letter of the law is paramount – that the law alone dictates safety. The alternative view is that speed limits should be based substantially upon the measured speeds of free-flow traffic and posted at the 85th percentile, and that this approach minimizes crashes while maximizing safe travel. SENSE's position is that speed limits must be based solely on professional engineering recommendations and that limits should be posted to define the upper end of safe travel speed.

The document *Speed Zoning on Texas Highways* summarizes our position on speed zoning:

> Fundamental to most laws in America is the thought that the behaviour of a majority of people is reasonable. Laws are written to single out the unreasonable behaviour of a minority of the population.
>
> […]
>
> Reasonable people want to get to their destination as quickly as possible, but they also are careful drivers and do not wish to endanger themselves or anybody else. On any section of road, reasonable drivers will select a speed they are comfortable with, not too slow or too fast, but one that will get them where they want to go safely and without undue delay. In selecting their speed, they will intuitively consider things like roadway geometry, traffic conditions, weather, pedestrians, and the like. As will be discussed later, the number posted on a speed limit sign has little effect on the speed they choose.[15]

Data from a 1994 Ministry of Transportation and Highway study of free-flow traffic speeds on various rural BC highways showed an average compliance of just 31% – thus an average of 69% of vehicles were "speeding".[16]

The *Speed Zone Guidelines* of the international organization of professional traffic engineers, the Institute of Transportation Engineers, recommends that speed zones generally be set at the nearest 5 mph increment to the 85th percentile speed. With many BC rural highways demonstrably posted at an average 31st percentile,[17] these professional guidelines are clearly not the methodology that is ultimately applied to BC speed limits. SENSE is not advocating speed limit increases in school or playground zones, residential streets, or areas with heavy pedestrian traffic. What we do advocate is reasonable limits on main arterial roads and highways.

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[13] Ministry of Transportation and Highways, *1995-97 Traffic Accident Statistics*, p. 75.

[14] Mercer, *An Estimation of the Presence of Alcohol and Drugs in Traffic Accidents in British Columbia*, p 29.

[15] Texas State Department of Highways and Public Transportation, *Speed Zoning on Texas Highways* (October 1990), 4 pages.

[16] Mike Kawczynski, *Speed-Flow Relationships on Rural Roads in British Columbia – Appendix*, (Victoria: 1994). Data obtained directly from author and from interpolation of graphs.

[17] In 1997, a number of speed limit increases occurred on various rural highways in BC. While this would increase the compliance to near the 85th percentile range on some roads, there remain many roads that require a 10 – 20 km/h increase.

Often, the myths and misconceptions of speed limits overshadow the application of proper engineering judgment in posting speed limits. The members of the Traffic Services Study are encouraged to review the *Synthesis of Safety Research Related to Speed and Speed Management*.[18]

The Institute of Transportation Engineer's *Traffic Information Program Series* document on speed limits highlights some facts:

> Why not lower the speed limit to reduce hazards in our area?
> An unrealistically low speed limit can actually lead to accidents. Here's why:
>
> - First, many studies conducted over the last several decades in all parts of the country have shown that a driver's speed is influenced more by the appearance of the roadway and the prevailing traffic conditions than it is by the posted speed limit.
> - Second, some drivers will obey the lower posted speed while others will feel it's unreasonable and simply ignore it. This disrupts the uniform traffic flow and increases accident potential between the faster and the slower drivers. Research has shown that when vehicles travel about the same speed, accidents are minimized.
> - Third, when traffic is traveling at different speeds, the accuracy of the judgement of speeds by crossing pedestrians and motorists decreases.[19]

These statements are echoed in the Arizona Department of Transportation's *Establishing Speed Limits - A Case of 'Majority Rule'*:

> Generally speaking, traffic laws that reflect the behavior of the majority of vehicle operators are found to be successful, while laws that arbitrarily restrict the majority of drivers encourage wholesale violations, lack public support, and usually fail to bring about desirable changes in driving behavior. This is especially true of speed zoning.
>
> Speed zoning is based upon several fundamental concepts deeply rooted in our American system of government and law.
>
> 1. Driving behavior is an extension of social attitude, and the majority of drivers respond in a safe and reasonable manner as demonstrated by their consistently favorable driving records.
> 2. The normally careful and competent actions of a reasonable person should be considered legal.
> 3. Laws are established for the protection of the public and the regulation of unreasonable behavior on the part of individuals.
> 4. Laws cannot be effectively enforced without the consent and voluntary compliance of the public majority.[20]

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[18] Jack Stuster, Zail Coffman, and Davey Warren, *Synthesis of Safety Research Related to Speed and Speed Management*, (July 1998)
http://www.tfhrc.gov/safety/speed/spdtoc.htm

[19] http://www.ite.org/pdf/lower-speed.PDF

[20] http://www.dot.state.az.us/ROADS/traffic/speed.htm

"LASER JAMMERS CAN OBSTRUCT POLICE ENFORCEMENT EFFORTS" (PAGE 13)

Currently, there exists no federal or provincial statute or regulation that prohibits the possession or use of laser jammers. Nor has the attorney general made any statements concerning these devices that are readily available from reputable establishments. However, there appear to be a small group of police officers that have arrested drivers who were then charged for obstruction of a peace officer contrary to section 129(a) of the Criminal Code of Canada. In one case, the officer testified under oath that this was equivalent of using a "sledgehammer on a flea."

In all cases that we are aware of, the defendants are upstanding citizens, the use of the devices was merely as protection against over zealous enforcement of under posted speed limits, and the drivers were travelling below any enforcement tolerance (in one case, well below the limit). Both the high volume of speeding tickets evidenced in our findings and that of the Traffic Services Study and the demonstrably under posted limits suggest that laser jammers are not an irrational approach to driving BC highways.

These charges clearly bring the administration of justice into disrepute and we call upon the Attorney General of British Columbia to stay all prosecutions on these matters and instruct officers to cease arrests. If such devices were a concern, a responsible government would enact a regulation prohibiting the use of laser jammers (coupled with an appropriate fine – *not a criminal record*). It should be noted that traffic officers are trained to visually estimate the speed of a vehicle and that speeding convictions based solely on visual evidence are common – these devices do not prohibit the enforcement of speeding laws.

No detector or jammer can provide absolute protection against tickets. False signals and other speed measurement techniques ensure that owners remain alert and conscious of their speeds – perhaps more so than other drivers.

"SPEED IS JUST ONE ELEMENT OF AGGRESSIVE DRIVING AND MAY BE INDICATIVE OF OTHER HIGH-RISK BEHAVIOURS" (PAGE 13)

As the paper by Dr. Mercer clearly demonstrates, the majority of speed-related crashes leading to fatalities are by impaired drivers. Common sense tells us that a driver who willingly violates the Criminal Code is not going to be persuaded to change behaviour through the threat of a relatively small monetary fine in the mail.

As early as 1994, focus groups commissioned for ICBC showed that "there is substantial frustration with the emphasis on speeding enforcement and the absence of attention to intersection and other moving violations."[21] Note that this is prior to the introduction of photo radar and corridor speed enforcement and the resulting doubling of the number of speeding tickets.

Most discussions of "speeding" fail to draw any distinction between the legal definition of speeding (*any* amount over the posted limit) and the point where the speed becomes excessive and truly dangerous.

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[21] C. Thomas Hathaway Associates Inc., *Radar Camera Public Opinion Research Bid #5085*, (Vancouver: July 31, 1994), p. 7.

The majority of drivers define speeding relatively, whereas the law defines it absolutely – public opinion polls found that only 9%[22] or 18%[23] of drivers define speeding as the *Motor Vehicle Act* does. One poll noted, "posted speed limits don't mean much (54%)."[24] Drivers intuitively include many factors in their determination of a travel speed and as a society we trust drivers to make similar decisions constantly during everyday driving (for example, when it is safe to merge).

Imposing speed limits that are below that chosen by a reasonable driver serves only to reduce respect for traffic laws. As ICBC research on photo radar (which can be generalized to conventional traffic enforcement) shows:

> "… We may not have much sympathy for drivers who knowingly transgress our traffic laws. But, ultimately, the effectiveness of authority depends upon the willingness of those subjected to it to accept and conform. The outcome of a significant perception of unfairness may be a reduced respect for authority and, ultimately, a negation of the effectiveness of all traffic enforcement -- not only that employing automatic cameras."[25]

> "If the practice of the past three years with respect to speed limit enforcement [by camera] is continued, where only 'excessive' violators are targeted, then the acceptance level may not fall below 60%. However, if more of the 'everyday' transgressors are ticketed then it is possible that the level of positive response will drop further." […] "… A lack of belief in camera efficacy (to improve safety) carries more serious driver behaviour implications."[26]

In summary,

> "Our findings could indicate that radar cameras have the potential for an opposite effect from reduced speeding. Moreover, the sum total of the resistance to the perceived unfairness of this enforcement may be generalized to other forms of law enforcement."[27]

Consistent with the position that drivers define their speeds relatively, the same research on photo radar (which can again be generalized to conventional traffic enforcement) shows that "the judgement of fairness of the radar camera was significantly and positively linked to the belief about its ability to slow <u>other</u> drivers down."[28]

Given the findings that compliance to posted BC highway speed limits has averaged 31% (in some cases as low as 0% to 5%),[29] coupled with the general knowledge that a fair percentage of drivers will state that they never speed, it becomes clear that there is a disparity between perception and reality. These facts are further reinforced by findings such as "an average

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[22] Angus Reid Group, Inc., *BCAA Member Views: Government Traffic Safety Initiatives: Press Release Summary Results*, (Vancouver: September 21, 1995), p. 2.

[23] Angus Reid Group, Inc., *Speed Attitudes Baseline (for ICBC)*, p. 19.

[24] Angus Reid Group, Inc., *BCAA Member Views: Government Traffic Safety Initiatives: Press Release Summary Results*, p. 2.

[25] Peter J. Cooper, et. al., *Public Attitudes Towards the use of Automated Cameras for Enforcement of Traffic Law Infractions*, (Vancouver: Insurance Corporation of British Columbia, undated) p. 60.

[26] Ibid., p. 20.

[27] Ibid., p. 47.

[28] Ibid., p. 48.

[29] Kawczynski, *Speed-Flow Relationships on Rural Roads in British Columbia – Appendix*.

driver, i.e. a driver whose average speed is equal to the overall average, can be expected to exceed the 85-percentile speed about 11 percent of the time."[30]

In summary, responsible drivers choose safe travel speeds based upon many factors, the least of which is the posted speed limit. Drivers tend to underestimate their true travel speeds, and while the speed is not necessarily dangerous, it can place them within enforcement zones. While drivers can be shown to support photo radar or conventional enforcement, it is based upon their belief that it will target *other* drivers travelling at speeds higher *relative* to their speed. When responsible drivers are targeted for enforcement, the respect for both the police and the law is diminished – a clearly undesirable effect. From our observations, BC's speed enforcement policies are already producing these effects among traditionally strong supporters of the police.

It may have been noted to the Traffic Services Study that approval for photo radar remains high. Note that the opinion survey question utilized by ICBC did not ask the simple question "do you support photo radar," but instead generated their response through an entirely different question which reads: "do you feel that using radar cameras to catch speeders is a good way or a bad way to prevent speed-related accidents and injuries in BC?" Most respondents would not equate that "radar cameras" equals "photo radar", but would instead answer affirmatively to the apparently logical assumption that "catching speeders" prevents "speed-related accidents."[31]

As an aside, the prevalence of speeding as a primary concern is contrary to a number of public opinion polls. ICBC found that "the issue seen as the greatest concern was slow drivers. Almost 85% of the drivers felt that slow drivers were occasionally, very frequently or always a problem. Almost 50% considered slow drivers as frequently or always a problem."[32] An Angus Reid telephone survey for ICBC found that: "53% of residents [view] that slower moving vehicles are more of a safety hazard than fast moving vehicles…"[33] BCAA similarly found that "over one-half of members (57%) fell that slow moving vehicles are more of a safety hazard than fast-moving ones…"[34]

> "IN THE FALL OF 1995, LOCAL RCMP DETACHMENTS TEAMED UP WITH ICBC TO ADDRESS SPEEDING ON THE SEA TO SKY HIGHWAY BETWEEN PEMBERTON AND WHISTLER." (PAGE 15)

This pilot project, in which police officers were paid overtime to issue speeding tickets, only further proves the well documented fact that visible police presence can create a change in driver behaviour – it *does not* establish that police officers must issue speeding tickets to achieve this effect. Interestingly, other studies have shown that cardboard cut-outs of police vehicles can achieve similar results. Targeting driver behaviours *other than speeding* should produce identical results and instead identify *genuinely* high-risk drivers. One method achieving this would be to introduce roving highway patrols on BC highways.

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[30] B. A. Lefeve. "Speed Habits Observed on a Rural Highway." *Highway Research Board Proceedings*, 33 (1954), abstract.

[31] For more information, see SENSE "Old News - 1998" for January 28, 1998. http://www.sense.bc.ca/news3.htm

[32] Cooper, *Public Attitudes Towards the use of Automated Cameras for Enforcement of Traffic Law Infractions.*, p. 39.

[33] Angus Reid Group, Inc., *Speed Attitudes Baseline* (Vancouver: April 1995), p. 3.

[34] Angus Reid Group, Inc., *BCAA Member Views: Government Traffic Safety Initiatives: Press Release Summary Results*, p. 2.

> "HOWEVER, THERE IS NO DOUBT THAT SPEED IS OFTEN THE ROOT CAUSE OF OTHER AGGRESSIVE DRIVING BEHAVIOURS SUCH AS FOLLOWING TOO CLOSELY, UNSAFE LANE CHANGES OR RUNNING RED LIGHTS THEREFORE SPEED ENFORCEMENT WILL ALWAYS BE NEEDED." (PAGE 15)

While there is no debate that there should be enforcement aimed at drivers unsafely exceeding properly posted speed limits, there is little logic to the belief that the issuance of speeding tickets will correct *other* undesirable behaviours. Anecdotal observations suggest that drivers who partake in the above noted unsafe behaviours are not necessarily doing as a result of a decision to speed – and thus would remain unlikely to be ever targeted for enforcement. Poor judgment, poor driving skills, and distractions appear to be highly correlated with these offences.

> "IN 1999, THE ENHANCED CORRIDOR ENFORCEMENT PROGRAM WAS RENAMED TARGETED TRAFFIC ENFORCEMENT PARTNERSHIP (TTEP) AND ITS FOCUS WAS EXPANDED TO INCLUDE ALL AGGRESSIVE DRIVING VIOLATIONS." (PAGE 16)

Despite the euphemistic change in name, the program demonstrably fails to achieve the goals that the public would expect in a campaign against the broad range of aggressive driving violations. Figures for April through June 1999 show that the vast majority (89.7%) of tickets issued under this program were for the singular offence of speeding.[35]

> "WHEN ENHANCED ENFORCEMENT BEGAN, POLICE OFFICERS WERE KEEN TO WORK OVERTIME. SINCE THEN, SOME OF THE ENTHUSIASM HAS FADED, WITH MORE OFFICERS PREFERRING TIME OFF TO OVERTIME DUTY. IN SOME DETACHMENTS OR DEPARTMENTS, OFFICERS MAY WORK AN OVERTIME SHIFT THEN TAKE LEAVE OR CALL IN SICK ON THEIR REGULAR SHIFT. AS A RESULT, POLICE MANAGERS MAY FIND THEIR RESOURCES STRETCHED AND IT MAY IMPACT THEIR ABILITY TO MAINTAIN THE BASE ENFORCEMENT." (PAGE 16)

Confidential sources to SENSE, which include current and former high raking police and ICBC personnel, have made similar comments – while the government and ICBC benefit from increased revenue, it is clearly at the expense of the communities that the police officers should be serving. While the TTEP benefits the goals of ICBC, it is creating a strain on law enforcement resources.

> "IN 1998, OFFICERS IN THE 46 POLICE AGENCIES INVOLVED IN THE ENHANCED PROGRAM WROTE ONE-FIFTH OF ALL THE SPEEDING TICKETS ISSUED IN THE PROVINCE WHILE THEY WERE ON OVERTIME." (PAGE 16)

A simple calculation shows that for the $4 million that ICBC paid in police overtime in 1998,[36] approximately $9 million was generated for general revenue through fines.[37] In addition, ICBC could expect considerable penalty-point revenue from these efforts as officers would more

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[35] Carla Wilson, "Beefed-up police presence battles road rage," *The Vancouver Sun* (August 21, 1999), p. B3.

[36] Annual costs for enhanced corridor enforcement programs obtained from ICBC public affairs by e-mail.

[37] The *Traffic Services Study Discussion Paper* fails to indicate whether the "one-fifth of all the speeding tickets" includes those issued by photo radar (approximately 588,000 tickets total), or just conventional tickets (estimated 300,000 tickets). Using the more conservative 300,000, this would equate to 60,000 speeding tickets at an estimated average $150 per ticket for a total $9 million revenue. [REVISION: *Was originally erroneously calculated as $90 million*.]

often, under the new program, issue tickets for multiple offences thus immediately placing a driver above the threshold for paying penalty points. The considerable increase in tickets would then result in a proportionate increase in penalty point revenue to ICBC. ICBC figures suggest a near $4 million increase in driver premiums earned for 1999 (the year in which the premiums the 1998 tickets would first become payable).[38]

> "BRITISH COLUMBIA INTRODUCED 30 PHOTO RADAR VANS IN 1996 IN RESPONSE TO UNSAFE SPEEDS BEING A SIGNIFICANT CONTRIBUTING FACTOR IN POLICE-REPORTED COLLISIONS." (PAGE 18)

The following two sections are at the very least embarrassing – at the worst scandalous – for ICBC and the provincial government. Either knowingly or unknowingly the effects of this entire program have been misrepresented to the world.

As is mentioned earlier in this submission, changes in provincial reporting of crashes in 1994 propelled unsafe speed from third place (fifth overall) to first place in fatal traffic collisions. BC's traffic collision statistics remain unremarkable from other jurisdictions in North America and this move was clearly designed to manufacture consent for the anti-speeding campaigns – not demonstrate a real need.

A significant problem with BC data on speed-related crashes is the lack of distinction between "speed over the limit" and "speed too fast for conditions" (below the limit). This distinction is fundamental as the former is an issue of compliance with the law and the latter an issue of driver training and experience. BC's accident reports give police only one choice: "unsafe speed," while many other jurisdictions record this critical difference. Of the eight Canadian provinces and territories that do draw a distinction, speed too fast for conditions, not speeding over the limit, was the problem in 59% of *speed-related* fatal and 81% of *speed-related* injury crashes (80% of total *speed-related* fatal and injury crashes). Speed over the limit was the primary cause of just 6.05% of *all* fatal crashes and 1.25% of *all* injury crashes.[39]

As we've also shown, alcohol and drug impairment plays a very considerable role in speed-related crashes. This suggests that a significant portion of speed-related crashes involve young-thrill-seekers and chronic-anti-social drivers – not the responsible citizens who would be expected to respond positively to photo radar-type measures.

Thus given that approximately one-third of all motor vehicle fatalities involve unsafe speed, that only one-third of BC's speed-related fatalities don't involve drugs and/or alcohol, and that approximately 41% are above the limit, the resulting product[40] suggests that barely 5% of motor vehicle fatalities could be addressed through speed enforcement. Similar extrapolations can be made for injury and property-damage-only crashes. We would note that this figure is

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[38] *Insurance Corporation of British Columbia 1999 Annual Report: Statements of Operations and Retained Earnings* http://www.icbc.com/office/Ar99/statmnts_ops_ret_earnings.htm

[39] Transport Canada: Safety and Security: Road Safety, *Traffic Collision Statistics in Canada – 1995*, (Ottawa: November 1997), table A22 "Drivers Involved in Fatal or Personal Injury Traffic Collisions by Drivers Action – 1995". From calculations of the distinguishing provinces.

[40] Calculations: 59% of *speed-related* fatal crashes are speed too fast for conditions, thus 41% are speed above the limit. Therefore… 1/3 x 1/3 x 41% = 4.6%.

consistent with traffic collision statistics obtained by SENSE throughout North America – typically in the range of 2–6%.[41]

Clearly, the use of statements similar to "in 1998, unsafe speed was cited as a major contributing factor in one third of all fatal crashes in B.C. and 16 per cent of all injury crashes,"[42] in vastly overstate both the magnitude of the speeding "problem" and the achievable benefits of anti-speeding campaigns.

> "STATISTICS SHOW PHOTO RADAR HAS REDUCED SPEEDS AT DEPLOYMENT SITES BUT HAS HAD LESS EFFECT ON GENERAL SPEEDING PROVINCEWIDE." (PAGE 18)

First, while the *Traffic Services Study Discussion Paper* itself raises the question as to whether photo radar is located near justifiable speed-related high-crash zones, it remains that it can be physically impossible to locate the cameras *at* the high-crash zones – more likely they are located *near* the zones.

The Integrated Traffic Camera Unit releases generalized locations of photo radar vans publicly, and specific locations are broadcast continuously on radio traffic reports. Combined with the visibility of the vans, the observant driver has little difficulty in recognizing the van, slowing down while passing, and then resuming normal speed. From our observations, it is argued by SENSE that some regular commuters will habitually slow down in the known location of photo radar vans despite the lack of a van. Thus covert speed measurements at the regular locations of photo radar vans will show reductions in mean speeds – however, this does not equate that these speed reductions occur outside the normal van location and *throughout* the high-crash zone.

The provincial speed-loop data obtained from various monitoring sites suffers from a critical lack of "before" data. The government collected approximately seven months of data, not enough to reliably isolate the effects of seasonal variations and weather. This value of this data should be viewed with considerable scepticism.

A newly published evaluation of the BC photo radar program[43] ("the evaluation") raises more questions than it answers. The primary issues identified by SENSE and others are the reliability of the source data, the choice of the specific "before" time frame, the application of the statistical methods, and the ability to draw specific conclusions from general data.

As the *Traffic Services Study Discussion Paper* acknowledges on page 20:

> To date, there have been problems both with the completeness of crash reports provided by police and, as a result, the usefulness of the data provided in return by ICBC. Consequently, police have not had access to data that would assist in identifying sites that would benefit from the use of strategic enforcement such as photo radar.

This is likewise acknowledged within *Traffic Collision Statistics* for 1995-97:

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[41] For example: 2.19% (State of California, Department of California Highway Patrol, *1977 Annual Report of Fatal and Injury Motor Vehicle Traffic Accidents*, p. 67. – last year of statistics available before merging into one "unsafe speed" category) and 3.16% (State of Arizona, *Arizona Motor Vehicle Crash Facts for 1993*, table 5-9).

[42] *Traffic Services Study Discussion Paper*, p. 12.

[43] Greg Chen, Jean Wilson, Wayne Meckle, and Peter Cooper, "Evaluation of photo radar program in British Columbia," *Accident Analysis and Prevention* 32 (July 2000): 517–526.

> In 1996, important changes took place regarding police reporting of collisions. Many police agencies changed their standards or practices for collision reporting. Collisions which were formerly reported may not be reported according to these new standards or practices, thus resulting in fewer reported collisions overall, in particular those involving property damage only or minor injury. In addition, such changes have also made comparisons of annual statistics undesirable. For example, the total number of collisions in all categories were reduced dramatically, particularly in 1997. However, this may be largely due to the reduced number of reports from police rather than an actual reduction in collisions.[44]

While the authors of the evaluation acknowledge a problem, their statements conflict with those above when they state that "data after April 1997 were not included in the analysis as a change in police collision reporting practice took place at that time" (emphasis added).[45]

SENSE obtained the author's original data series for the fatalities (derived from MVB/police reported fatalities), Coroner's motor vehicle fatalities from the Office of the Provincial Coroner, and death benefit claims from ICBC. Attached GRAPH 2 and GRAPH 3 compare total fatalities used in the evaluation versus total fatalities from the comparison sources – in contrast, the evaluation drew conclusions from just daytime fatalities. It would be no small task to extract daytime fatalities by detachment from either of the alternative data sets – however; this *does not* invalidate the points we make below. Further, the authors attempted to minimize reporting errors by excluding selected police detachments – again, this *does not* invalidate the points we make below.

Using 12-month moving averages and comparing between the evaluation and Coroner's datasets (GRAPH 2 – top portion), note the very close correspondence between the peaks and valleys of the two data series. The police typically reported 4 fewer fatalities per month (GRAPH 2 – bottom portion) than did the Coroner's for the period between late-1991 and late-1993. This then dropped to approximately 6 fewer fatalities until early-1996, but falls substantially to as many as 10 fewer fatalities over the photo radar introduction period. **The highly reliable Coroners data establishes that people continued to be killed in motor vehicle crashes, but the police/Motor Vehicle Branch reporting used as the base of the evaluation was failing to track these fatalities.** The reporting problems occurred over the implementation of photo radar and thus would materially affect the validity of any conclusions.

A comparison between the study and ICBC Death Benefit Claims yields similar results (GRAPH 3 – top portion), but the data series are not as closely related (GRAPH 3 – bottom portion) – perhaps partially due to competition and/or time delays in making claims. However, up until just before the start of the photo radar warning notices, ICBC death benefit claims have always been **less** than the police reported fatalities. **About the time photo radar started, the police began reporting fewer fatalities than ICBC was receiving in death benefit claims – a sign that the police/Motor Vehicle Branch reporting system was failing to track these fatalities.** Again, the reporting problems occurred immediately prior to the implementation of photo radar and thus would materially affect the validity of any conclusions.

GRAPH 4 is the author's baseline data for the study derived from MVB/police reported crashes, and excluding some detachments. It shows the differences between the total fatalities (top

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[44] Ministry of Transportation and Highways, *1995-97 Traffic Accident Statistics*, p. xi.

[45] Greg Chen, et. al., "Evaluation of photo radar program in British Columbia," p. 523.

curve), daytime fatalities used in the study (middle curve), and night time fatalities (bottom curve). **This chart clearly shows (for both total and daytime fatalities) that a downward trend in fatalities began some 12 months prior to the introduction of the photo radar warning notice phase, and that this trend did not improve after photo radar began.** It is only through the statistical methods employed by the researchers and the specific time period selected that a straight line fitted to the "before" data is an upward curve[46] – erroneously suggesting an increasing trend in fatalities. Any time periods selected after the photo radar introductions yield a downward curve – an illusory effect suggesting that photo radar *caused* the change, **but it is clearly evident that the improving fatality count began well before photo radar and did not get "better" after**.

GRAPH 5, shows the close relationship between British Columbia motor vehicle fatalities (note that BC Motor Vehicle Branch data for 1996 and 1997 is shown above to be understated, 1998 was not available) and the Transport Canada Canadian motor vehicle fatalities. This graph proves a long-term downward trend in fatalities. The downward trend is contrary to the upward trend in fatalities espoused by the authors of the study as a result of their choice of time frames and then used as the basis for the calculations that photo radar produced a 17% drop in fatalities. **The arbitrary choice of a one-year, ten-year, or twenty-year "before" period would have yielded dramatically different conclusions**.

In summary: it is clear that this study has significant methodological problems, that the author's choice of time periods significantly influenced the findings, and that no visible improvement in fatalities occurred about the time of implementation of photo radar.

The study also provides four further evaluations:

1. Traffic speed at photo radar sites – inconclusive, see our comments under the heading "Statistics show photo radar has reduced speeds at deployment sites but has had less effect on general speeding province wide." (page 18).

2. Traffic speed at sample monitoring sites across the province – unreliable, see same comments above and note the new finding disclosed in the *Traffic Services Study Discussion Paper* that speeds are returning to prior levels.

3. Daytime unsafe speed related collisions – without credibility, derived from the same police-reported data that clearly *cannot be accepted as reliable*.

4. Daytime traffic collision injuries carried by ambulances – not yet evaluated by SENSE, but the choice of statistical methods may obscure the point when the decline began. Also, changes in ambulance service reporting procedures, response times, and funding levels must be fully investigated.

Additionally, the economy is a significant factor[47] that may need further investigation than was included in the study. While there was an apparent small increasing trend in fuel sales, this may be partially due to the increasing numbers of gas-guzzling sport utility vehicles and mini-vans, not necessarily an increase in vehicle-kilometres. Also, the on-going economic

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[46] Ibid., p. 525, Table 4 – note the moving average estimate of 0.547 (positive = increasing) prior to photo radar, then –0.232 and –0.176 for the warning letter and violation ticket phases respectively. The author's graphical presentation (Figure 7) of the raw data (i.e. not 12-month moving average) obscures the fact that the downward trend started well before photo radar began.

[47] Cooper, *The Nature and Causes of the 1982 Traffic Accident Casualty Reductions in British Columbia*.

malaise in British Columbia is apparently not evident in the unemployment statistics, which may be due to people leaving the province or leaving the workforce.

The evaluation of the findings in this study remains an active issue – and a number of other issues require commentary beyond the scope of this submission. We are unable to complete a statistically based critique before August 18, 2000, but will provide future results upon request.

We understand that a further study is in progress that examined crash results at specific photo radar locations. The substantial reductions in police attendance at crashes and police reporting (which is much more highly magnified in less severe crashes) raise serious doubts about the comparability of totals between reporting periods. Despite any assurances that such issues have been considered or controlled for, we urge the members of the Traffic Services Study to view such data with great scepticism.

Interestingly, at an early BC press conference promoting the safety results attributed to photo radar in the state of Victoria, Australia, a graph provided showed a similar pattern – the decline began a considerable number of months *before the introduction of photo radar*. A significant number of methodological problems exist within the various studies praising the success of photo radar in Victoria, Australia, – primarily regression-to-the-mean, a major recession, and significant concurrent safety programs. We will be pleased to address these issues upon request.

Our analysis is derived from conversations with a number of prominent academic and consulting transportation researchers that includes members of the *FHWA Study Tour for Speed Management and Enforcement Technology* cited in your bibliography.

> "According to the 1998 B.C. Traffic Collision Statistics casualty collisions involving unsafe speed more likely occurred on weekend days (Friday, Saturday, Sunday) than on weekdays." (page 21)

This is consistent with the significant intersection between unsafe speed and drug/alcohol use, and suggests once again that conventional enforcement (not automated enforcement) is required to ascertain whether a motorist is licensed, insured, and unimpaired.

> "...only 82 officers are seconded to the [photo radar] program..." (page 22)

Given that photo radar issued 292,000 tickets in 1998 and required approximately 82 officers to operate, this is equivalent to each officer writing a mere 2.7 tickets per hour[48] – efforts achievable through conventional enforcement. And, given the capital costs (over $1 million per van to establish the entire program), the operating, maintenance, and processing costs, coupled with the inherent due process issues, the BC photo radar program is clearly neither cost effective nor capable of achieving substantial safety benefits.

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[48] $\frac{292{,}000 \text{ tickets}}{\text{year}} \times \frac{\text{year}}{\frac{2}{3} \times 2000 \text{ hours}} \times \frac{1}{82 \text{ officers}} \Rightarrow 2.67$ tickets per officer per hour. Typical work year calculated at 2/3 of 2000 hours to allow for vacations, sick time, training, etc.

> "THE POLICE AND ICBC HAVE ARGUED THAT 30 VANS ARE TOO FEW TO ATTAIN THE DESIRED CRASH REDUCTIONS." (PAGE 23)
> "THE CURRENT COMPLEMENT OF 30 PHOTO RADAR VANS MAY NOT BE ADEQUATE..." (PAGE 27)

The high capital and operating costs of the photo radar program raise serious questions about the value of obtaining additional equipment. Recognizing that one of the often-promoted underlying foundations of photo radar is general deterrence ("the *perceived threat* of getting a speeding ticket through visible enforcement"), one could speculate that an identical effect would be achieved simply through leasing identical vans, equipping them with replica cameras and flashes, and staffing with suitably dressed lower-wage contractors. The ***only*** reason for rejecting this approach is that it does not produce revenue.

The *Traffic Services Study Discussion Paper* indicates that the vans are averaging just "3.5 hours of deployment per shift." Over the typical 12-hour shift, the vans are enforcing the law only 29% of the time. SENSE has regularly observed photo radar officers using the photo radar vans as transportation when attending traffic court – frequently for hours at a time. Efficiencies surrounding the use of current equipment should be better examined before the taxpayer is burdened with any additional expenditures.

Clearly contrary to often-cited suggestions that automated enforcement systems free up police resources to target other offences, this has not occurred as tickets for other traffic offences have dropped since the start of photo radar.[49]

The operational costs of photo radar and the dramatically overstated benefits are not well considered by those who implemented and continue to support the program. A recent study found that "cost-effectiveness estimates demonstrated consistently that the unenforced speed display board was the most cost-effective, the enforced display board was second and photo-radar third."[50] The author's Table 3 shows that unenforced speed-reader boards cost 1/55th that of photo radar – a deployment cost of $0.55 US per driver exposed to photo radar versus $0.01 US per driver exposed to a speed-reader board.[51] Author's Figure 3 shows that both enforced and unenforced speed-reader boards create *significantly better downstream short-term and long-term speed reductions than photo radar*.[52]

> "CURRENTLY, MANY HIGH-CRASH SITES DO NOT RECEIVE PHOTO RADAR ENFORCEMENT. IN AN EFFORT TO PROVIDE PHOTO RADAR TO ALL INTERESTED COMMUNITIES, INCLUDING SOME WITH COMPARATIVELY SMALL CRASH PROBLEMS, MANY HIGH-CRASH LOCATIONS ARE NOT ENFORCED DUE TO TOO FEW VANS." (PAGE 23)

These comments suggest that photo radar is much more a public relations exercise than an attempt to efficiently and responsibly use costly and limited enforcement resources. Such deployments would surely lower the tickets per officer-hour further below that of conventional (and much less costly) enforcement.

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[49] As evidenced by *Motor Vehicle Act* convictions 1993–1998 obtained from MVB/ICBC ANN012 "Total Number of Offences as Recorded on All B.C. Drivers' Records" and ANN013 "Contraventions and Violations for Calendar Year" reports.

[50] Bloch, *A Comparative Study of the Speed Reduction Effects of Photo-radar and Speed Display Boards*.

[51] http://www.aaa-calif.com/members/corpinfo/radtbl_3.asp

[52] http://www.aaa-calif.com/members/corpinfo/radfig_3.asp

> "APPROXIMATELY 29 PER CENT OF THE TOTAL NUMBER OF PHOTO RADAR TICKETS ISSUED TO DATE HAVE NOT BEEN PAID BECAUSE THEY HAVE NOT YET BEEN SERVED TO THE OWNERS OF THE SPEEDING VEHICLES." (PAGE 26)

This is an inherent result of the government's **choice** to use automated enforcement technology. Amending the legislation would, by legal necessity, leave similar loopholes that would inevitably be exploited. A return to conventional enforcement of traffic laws would eliminate these issues.

The *Traffic Services Study Discussion Paper* did not discuss the related legal issues and legal challenges to the photo radar legislation. There are a number of significant issues that both reduce the effectiveness of automated enforcement and shift the burden to the accused. Owners are responsible for tickets accrued on their vehicles, yet no mechanism is available to force drivers to take financial responsibility for their tickets. By not requiring owners to identify the driver, there is no method to for regulators to identify dangerous drivers. The lack of immediate notification can prevent an owner or driver from advancing a valid defence (e.g. defence of necessity). The equipment cannot not make qualitative judgments in situations where an officer would not charge – thus owners may be required to travel some distance to defend a charge. The lack of corroborative police evidence can result in innocent owners being charged due to equipment malfunction or misreading. Due to the strain on resources, court delays of several months to over a year are not uncommon.

> "THE RESPONSE [TO INTERSECTION OFFENCES] COULD BE ENFORCEMENT OR OTHER SOLUTIONS, INCLUDING ENGINEERING IMPROVEMENTS OR A SELECTIVE TRAFFIC ENFORCEMENT PROGRAM (STEP) THAT BRINGS TOGETHER ENFORCEMENT AND PUBLIC/POLICE AWARENESS." (PAGE 29)

SENSE wholly supports the formation of dedicated traffic enforcement units to visibly, efficiently, and effectively enforce intersection (and other) violations. As we have stated previously in this response, the resources already exist – but they are currently focused almost without exception on speeding.[53]

SENSE Recommendations:

1. That due principally to high cost per violation and limited effectiveness, no further investments be made in any form of photo radar speed enforcement technology, and further that all current photo radar operations be abandoned and the resources freed for more efficacious use.
2. That *legitimate* speeding issues identified by communities be addressed through local volunteers using speed-reader boards supplemented by occasional downstream enforcement.
3. Teams of traffic officers should be utilized to deliver high visibility enforcement against ***all*** traffic offences in a planned and targeted method utilizing properly analyzed traffic

[53] As evidenced by *Motor Vehicle Act* convictions 1993–1998 obtained from MVB/ICBC ANN012 "Total Number of Offences as Recorded on All B.C. Drivers' Records" and ANN013 "Contraventions and Violations for Calendar Year" reports.

crash data. Existing TTEP funds from ICBC in the form of a grant could supplement the costs, but a considerable amount of resources would be available simply by decreasing the resources used currently to issue the tremendous volume of conventional speeding tickets. Advertising funds currently utilized to support speeding and other campaigns would then be used to create a perception of mobile, targeted, and high-intensity enforcement. Using the principles of general and specific deterrence, drivers would see the teams working at various locations and, coupled with the advertising, come to the conclusion that any traffic offence could be targeted at any place and any time.

4. ICBC should be prohibited from providing police traffic funding or directing police activities. ICBC remains in a direct conflict of interest in that it (1) functions at the whim of the government which benefits from fine revenue that flows to general revenue, (2) ICBC receives penalty point premiums from tickets, and (3) the public relations-motivated priorities of ICBC are not necessarily those of the traffic safety-motivated police.

   We recommend that if ICBC is to continue providing funding to the police, that funds be provided as a general traffic safety grant under the sole discretion of the police authorities. This would provide for permanent positions, eliminate the costs associated with overtime, and eliminate the undesirable officer burnout, etc., that the *Traffic Services Study Discussion Paper* highlights.

5. ICBC's role in traffic safety could be seen by some as merely a branding exercise. In light of increasing competition, we recommend that a publicly accountable independent road safety organization be formed, that all road safety functions be transferred from ICBC, and that all automobile insurers be legislated to contribute based upon a prescribed formula, so that ICBC can focus solely on is mandate to provide automobile insurance.

6. That the Ministry of Transportation and Highways undertake to base their speed zoning methodology on that recommended the by Institute of Transportation Engineers (the 85th percentile) as the exercise of professional engineering judgment, and reduce or eliminate the input of police, politicians, and special interest groups.

7. That the Attorney General immediately cease criminal prosecutions against drivers using laser jammers.

8. That the ambiguous "Slower Traffic Keep Right" signs located throughout the province be replaced with the more recognized and enforceable "Keep Right Except to Pass."[54] Implement necessary legislative changes to make the Slow Driving offence (*Motor Vehicle Act* section 145(1)) more enforceable by removing "or in compliance with law."

9. That the government implement laws requiring that on two lane highways, any slow moving vehicle, which is impeding the progress of five or more vehicles, turn off the roadway at either a posted turnout or wherever sufficient safe area exists. And, that the government erect such signs where required and construct pullouts where required.

10. That if the government continues to use photo radar enforcement, that it enact in statute or regulations *quantitative* operational guidelines for the fair, safe, and effective deployment of photo radar. The current "fairness code" is unenforceable in court and

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[54] SENSE raised the issue with the Minister of Transportation and Highways in August 1996: http://www.sense.bc.ca/news/
BCAA recently raised it in their *2000 Brief to Government*: http://www.bcaa.com/advoca/brief/advoca_brief_other00.html

does not require, for instance, that there be greater than "x" crashes per million vehicle-kilometres, or that the posted speed limit be reasonable under objective criteria.

11. That the government protect motorists from marginal violations of under posted speed limits and/or revenue-motivated enforcement of speed limits by adopting *prima facie* speed limit laws. These laws would not reduce the ability of police to ticket truly dangerous drivers – thus the only defence to not enacting these changes is the knowledge that current laws permit revenue to be raised from **safe** drivers. For example, the statute would be based upon the following principles:

    - The burden of proof is on the officer to document the conditions that required reduced speeds as well as the defendant's failure to drive at speeds that reflected those conditions.
    - Exceeding *prima facie* speed limits is evidence of illegal "speeding." Evidence entered on the defendant's behalf that proves to the court that the defendant was not driving in an unsafe or irresponsible manner shall be considered a valid defence to justify dismissal of the speeding charge. For example, a driver overtaking another driver determines that he or she must exceed the posted limit to safely complete the pass.
    - It shall be an absolute defence in any trial for exceeding either an absolute or prima facie speed limit if the defendant was not exceeding the 85th percentile speed as determined by a valid speed survey for the subject roadway.
    - Vehicle operator may be charged with driving "too fast for conditions" even if the numerical limit has not been exceeded.[55]

12. That based upon the findings of the study *Driver Accident Risk in Relation to the Penalty Point System in British Columbia* the government review both the penalty points and fines structure applied to traffic offences in BC, and make revenue-neutral changes required to better recognize the true proportionate risk involved with each type of offence.

13. That based upon the findings of the study *Driver Accident Risk in Relation to the Penalty Point System in British Columbia* the government and ICBC undertake to ascertain points against drivers who are clearly and demonstrably at fault in crashes where the crash was preventable.

14. That non-safety-related *Motor Vehicle Act* offences should not have penalty points attached. While we do not condone any of the following behaviours, the application of penalty points (which accrue to ICBC) do not represent any real increase in risk. The preferable alternative would be to eliminate the points and (if necessary) increase the applicable fine. The primary offences of concern are HOV lane violations and failure of new drivers to display the "N" or "L" new driver signs.

    (While ICBC refuses to publicly acknowledge any responsibility for the problem, there have been a considerable number of reports of the new driver signs supplied by ICBC failing to remain adhered to the vehicle. These penalty points can ultimately result in loss of driving privileges.)

[55] http://www.motorists.org/issues/speed/ModelLaw.html

Further, the above situation is clearly illogical when demerit points are not assessed for the more safety related issue of failing to wear occupant restraints – as noted by the *Traffic Services Study Discussion Paper*.

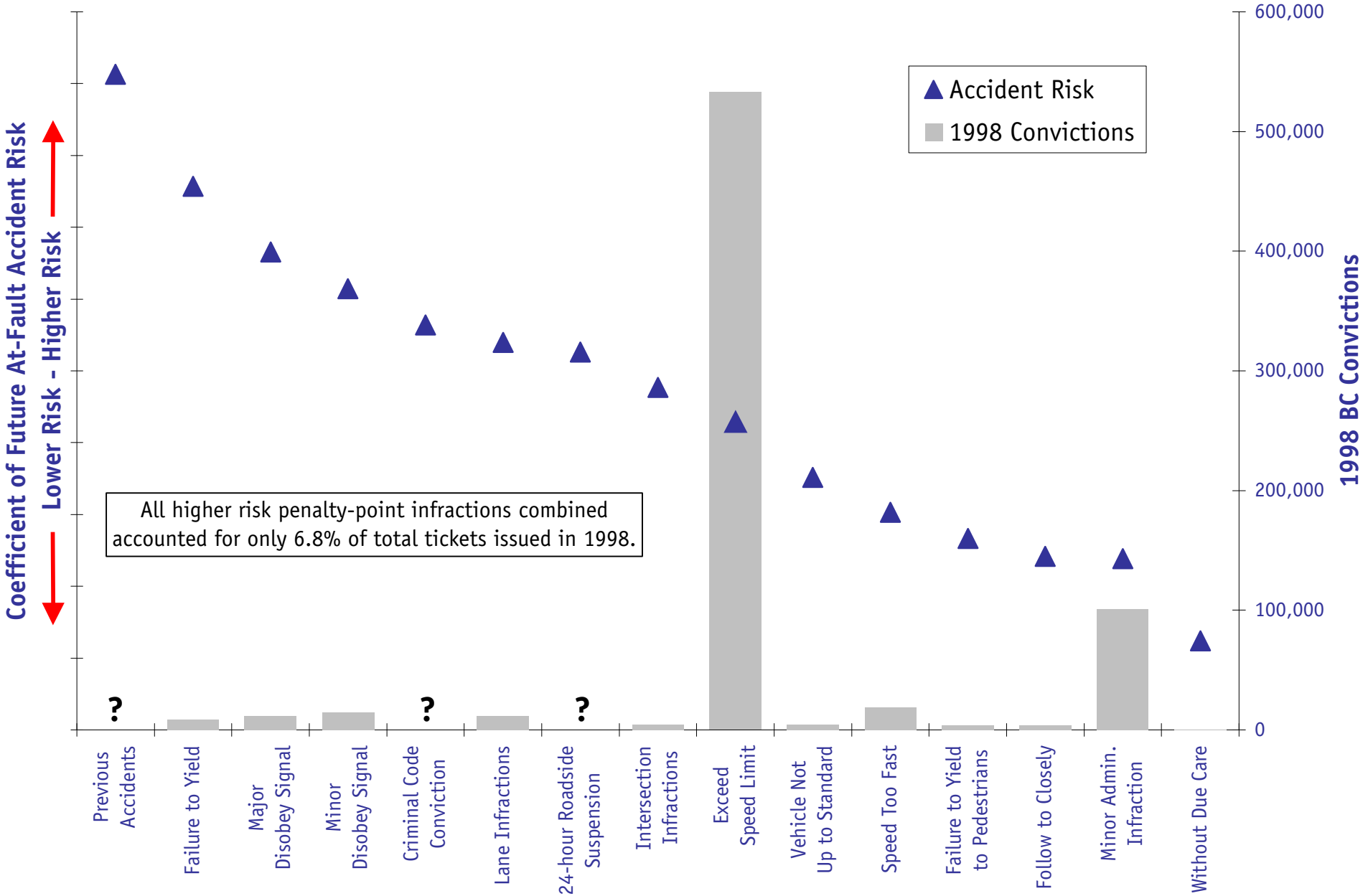
As a volunteer, donation-based group, we have not included copies of footnoted materials for reasons of cost, time, and copyright issues. If you are interested in any further information, additional detail, or cannot obtain copies of source material please do not hesitate to contact the writer.

Yours truly,

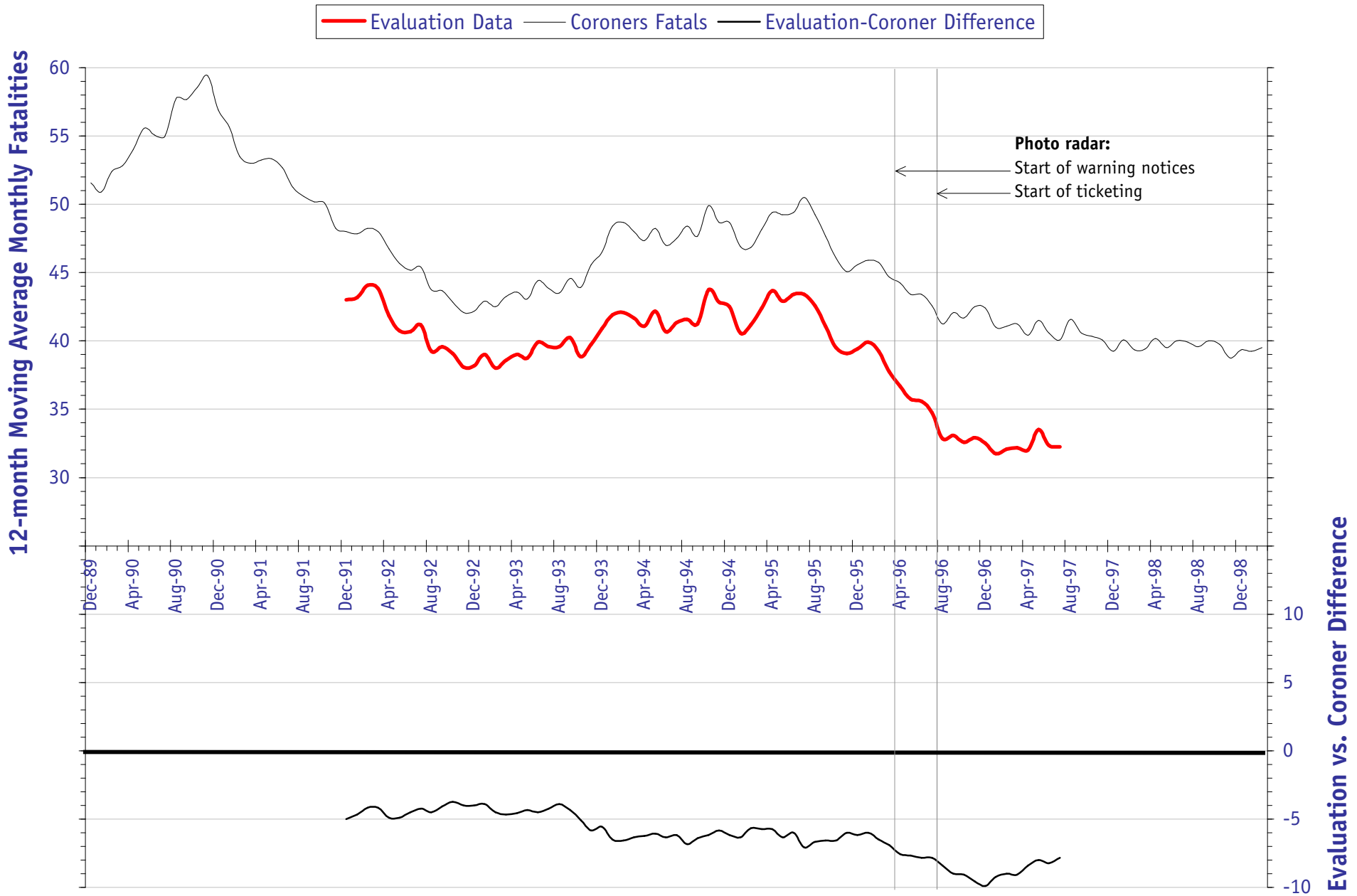
J. Michael Cain
Director of Research, SENSE
mcain@sense.bc.ca

Attachments: 5 graphs

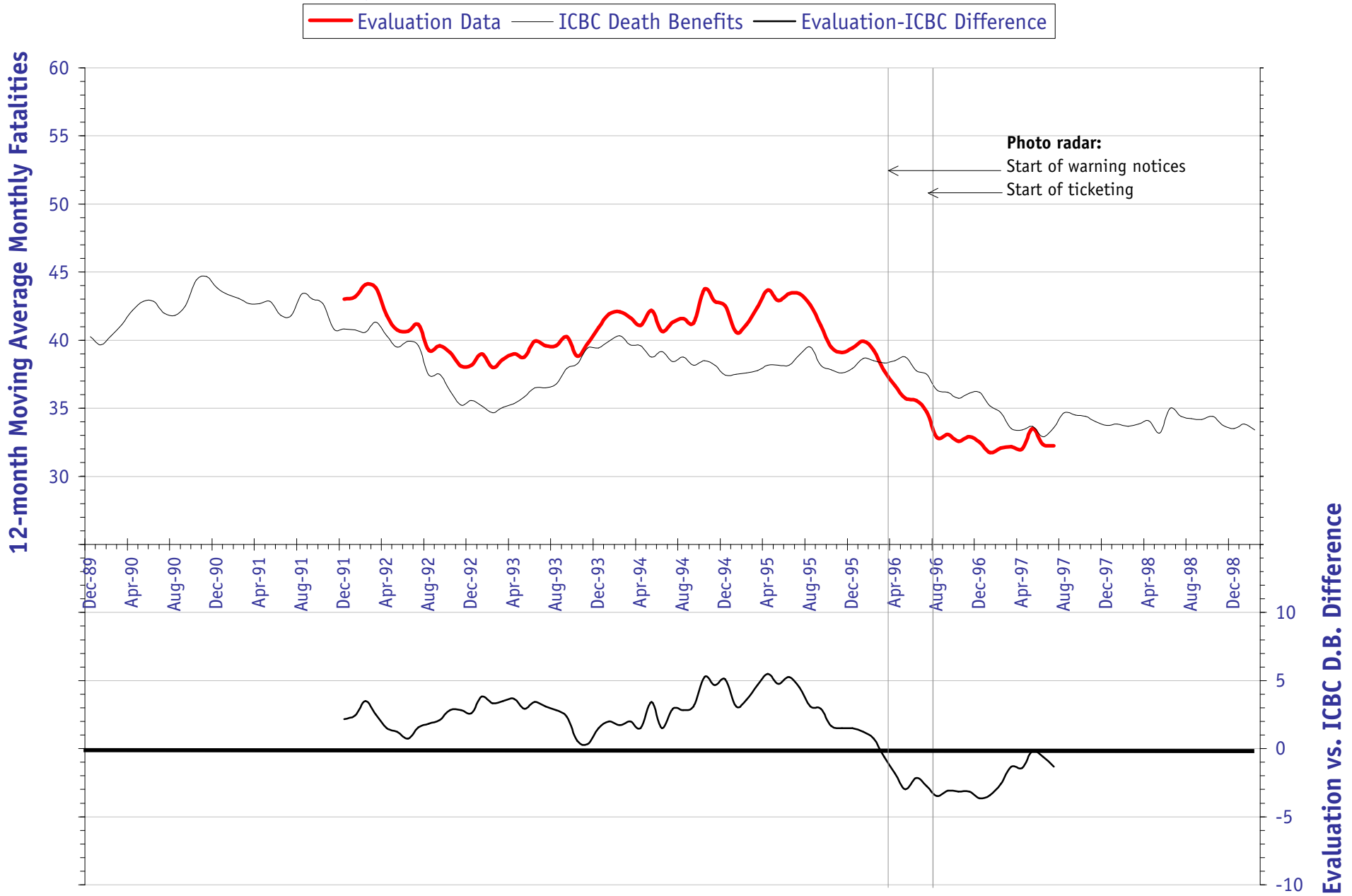
Graph 1: 1998 Convictions vs. Crash Risk



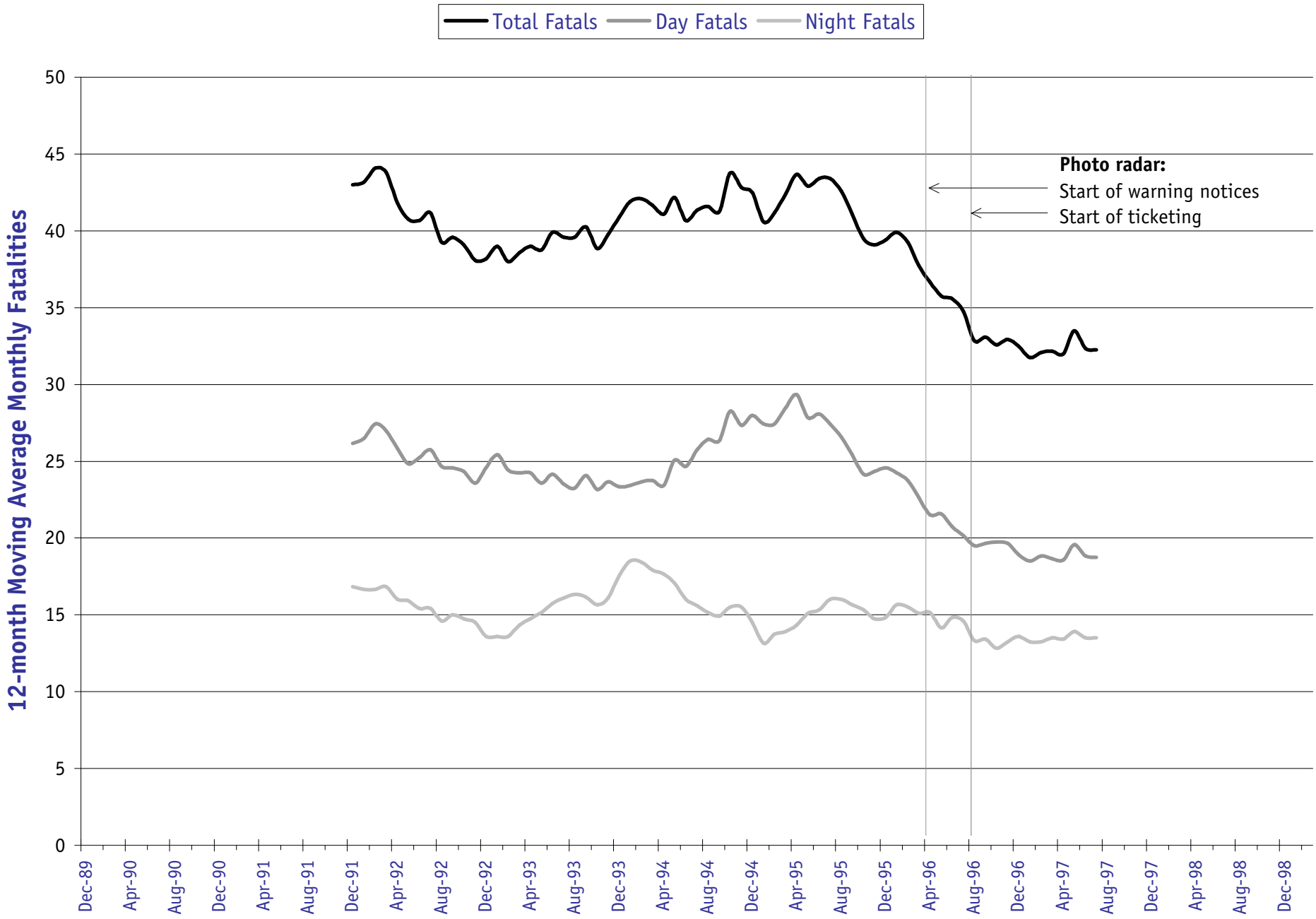
Graph 2: Evaluation Data vs. Coroners Fatalities



Graph 3: Evaluation Data vs. ICBC Death Benefits



Graph 4: Evaluation Data - Day, Night, Total Fatalities



Graph 5: Annual Canadian and BC Motor Vehicle Fatalities