HB

4

(File 2)

HNR: FYI Heather

Subject: Re: Federal .08 penalties
Date: Thu, 08 Feb 2001 09:45:37 -0900
From: Dennis Poshard <Dennis_Poshard@dot.state.ak.us>
To: Heather Nobrega <Heather_Nobrega@legis.state.ak.us>

Yes. This is a true statement.

Heather Nobrega wrote:

> Someone has told Rep. Rokeberg that if a state implements a .08 legal limit by Federal Fiscal Year 2007, the state will receive all of the federal highway funds withheld from FFY 2004-2007. Is this a true statement? Thanks.
>
> Heather Nobrega

Poshard, Dennis <dennis_poshard@dot.state.ak.us>
Special Assistant
Department of Transportation and Public Facilities

Subject: HB 4 Information
Date: Mon, 12 Mar 2001 11:27:24 -0900
From: "Hargis, Sue" <SHargis@CGAlaska.USCG.mil>
To: "'Representative_Norman_Rokeberg@legis.state.ak.us'" <Representative_Norman_Rokeberg@le
"'Representative_John_Coghill@legis.state.ak.us'" <Representative_John_Coghill@legis.state.ak
CC: "'Jeff Johnson'" <jeffj@dnr.state.ak.us>

Representatives Rokeberg and Coghill,

Below is some follow-up information for you on alcohol involvement in boating fatalities. Please check the statistics below, as my figures were incorrect during the hearing.

1. Non-Commercial Fatality Statistics:

Year	*Alcohol Involved	Unknown Involvement	No Alcohol	Total Fatalities
1991	14	13	2	29
1992	0	12	7	19
1993	8	6	0	14
1994	9	5	1	15
1995	2	17	0	19
1996	4	6	4	14
1997	7	1	15	23
1998	9	16	13	38
1999	3	3	20	26
2000	4	0	15	19
Total	60	79	77	216

RECEIVED
MAR 12 2001

Fatalities: Overall 28% confirmed alcohol involvement, 36% unknown involvement, and 36% alcohol not involved. This means that 28-64% of boating fatalities in the past ten years involved alcohol.

*Note this includes only alcohol involvement that was CONFIRMED in boating fatalities. Another 36% of fatalities during this period had unknown alcohol involvement, due to loss of the body or lack of full accident investigation.

Statistics include all non-commercial (also termed recreational) boating fatalities in Alaska.

****

2. Commercial Operator Alcohol Issues:
First time application for license: Cannot have DUI/BWI within 1 year. Must wait until
1 year is up before applying for license.
Current holders of merchant marine licenses: Depends on if infraction was during
operation of vessel, also on consequences (was someone killed,

etc.). Penalties range
from 6 months suspension to permanent revocation of license. Mariners can appeal
permanent revocation with a request for administrative clemency five years after permanent
revocation. Clemency is then determined based on rehabilitation of individual and
assessment of future risk.

Please let me know if you need any further information for this proposed legislation.

Regards,
Sue Hargis
17th District Boating Safety Coordinator
shargis@cgalaska.uscg.mil
(907)463-2297
(907)463-2256 fax

Subject: Re: [Fwd: .08 BAC]
Date: Fri, 09 Mar 2001 11:27:42 -0900
From: Kurt Parkan <Kurt_Parkan@dot.state.ak.us>
To: Heather Nobrega <Heather_Nobrega@legis.state.ak.us>
CC: Mary Moran <mary_moran@dot.state.ak.us>,
Dennis Poshard <dennis_poshard@dot.state.ak.us>

Heather-
I forwarded your email to Mary Moran. I am including her response. Does Rep. Rokeberg want an official fiscal note or is this response sufficient? Please let me know if you have any further questions. Thanks.
- Kurt Parkan

1. Yes, a state will receive the withheld federal highway funds if it passes and enforces .08 BAC legislation prior to ffy 2007.

2. If .08 was passed during thi legislative session and being enforced prior to July 15, we (DOT) would be eligible to receive approximately $348,000 in incentive grant funds for fy2001. We would continue to be eligible to receive an annual incentive grant of approximately $800,000 for the duration of TEA-21 (fy2003) or until the program is modified by congress. The annual amount will depend upon the number of states that qualify for the incentive award.

Section 163 funds can be used for any project eligible for assistance under Title 23, USC. However, since funding is based on a state's .08 BAC, it is strongly encouraged by the U.S. DOT that these funds be used for highway safety related purposes. In regard to HB4, the funds could be used for drunk driving enforcement and other alcohol-related education programs, but not for treatment programs. The funds will be jointly administered by the state department of transportation and the state highway safety office.

4. In addition to passage and enforcement of .08 BAC, there are six elements that must be met in order to satisfy the federal requirement. The elements are described below:

1. Any Person. A state must enact and enforce a law that establishes a BAC limit of 0.08 or greater that applies to all persons. The law can provide for no exceptions.

2. Blood Alcohol Concentration (BAC) of 0.08 Percent. A State must set a level of no more than 0.08 percent as the legal limit for blood alcohol concentration, thereby making it an offense for any person to have a BAC of 0.08 or greater while operating a motor vehicle. (Some states have multiple BAC levels).

3. Per Se Law. A State must consider persons who have a BAC of 0.08 percent or greater while operating a motor vehicle in the State to have committed a per se offense of driving while intoxicated. In other words, States must establish a 0.08 "per se" law, that makes driving with a BAC of 0.08 percent or above, in and of itself, an offense.

4. Primary Enforcement. A State must enact and enforce a 0.08 BAC law that provides for primary enforcement.

5. Both Criminal and ALR Laws. A State must establish a 0.08 BAC per se level under its criminal code. In addition, if the State has an administrative license
revocation or suspension (ALR) law, the State must establish an illegal 0.08 BAC per se level under its ALR law, as well.

6. Standard Driving While Intoxicated Offense. The State's 0.08 BAC per se law must be deemed to be or equivalent to the State's standard driving while
intoxicated offense.

It is my understanding via Royce, etc, that Alaska is in compliance with all six criteria.

Heather Nobrega wrote:

> Since Dennis Poshard is out of the office, I am forwarding this e-mail
> to you. Thank you.
>
> Heather Nobrega
>
> ---
>
> **Subject:** .08 BAC
> **Date:** Thu, 08 Mar 2001 10:51:35 -0900
> **From:** Heather Nobrega <Heather_Nobrega@legis.state.ak.us>
> **Organization:** Representative Norman Rokeberg, Alaska State House
> **To:** Dennis Poshard <Dennis_Poshard@dot.state.ak.us>
>
> Dennis,
>
> I am still waiting for a memo from the DOT regarding the fact that a state can receive federal highways funds withheld from FFY 2004-2007 if they implement a .08 BAC by Federal Fiscal Year 2007.
>
> Also, Rep. Rokeberg would like a fiscal note for HB 4 reflecting the fact that implementation of .08 BAC before 2004 will entitle the state to incentive funds, roughly $800,000.
>
> In regards to the HB 4 hearing tomorrow on the .08 BAC provisions, Rep. Rokeberg would like further clarification on what exactly those incentive funds can be used for, specifically in regards to HB 4.
>
> Rep. Rokeberg would also like the DOT to be prepared to discuss if there are further changes that need to be made to the statutes in order to comply with the Federal government's .08 BAC requirements.
>
> Thanks.
>
> Heather Nobrega

US DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
ANNUAL CORE APPORTIONMENTS AND POTENTIAL PENALTIES UNDER SEC. 163(a)
FOR FY 2004 AND THEREAFTER*
(Assuming Various Rates of Penalty)

Federal Oct. 1, 2003

State	IM / STP / NHS Total	.08 BAC adopted as Legal Standard	2% Penalty	4% Penalty	6% Penalty	8% Penalty
Alaska	**179,048,339**	-	**3,580,967**	**7,161,934**	**10,742,900**	**14,323,867**
Washington	297,631,829	X	0	0	0	0
Oregon	221,819,579	X	0	0	0	0
Idaho	140,668,319	X	0	0	0	0
Wyoming	156,383,521	-	3,127,670	6,255,341	9,383,011	12,510,682

- Based on estimated FY 2003 apportionments, after distribution of Minimum Guarantee funds

Alaska Highway Safety Office, ADOT&PF 01/01

APD REVISED 03/08/2001

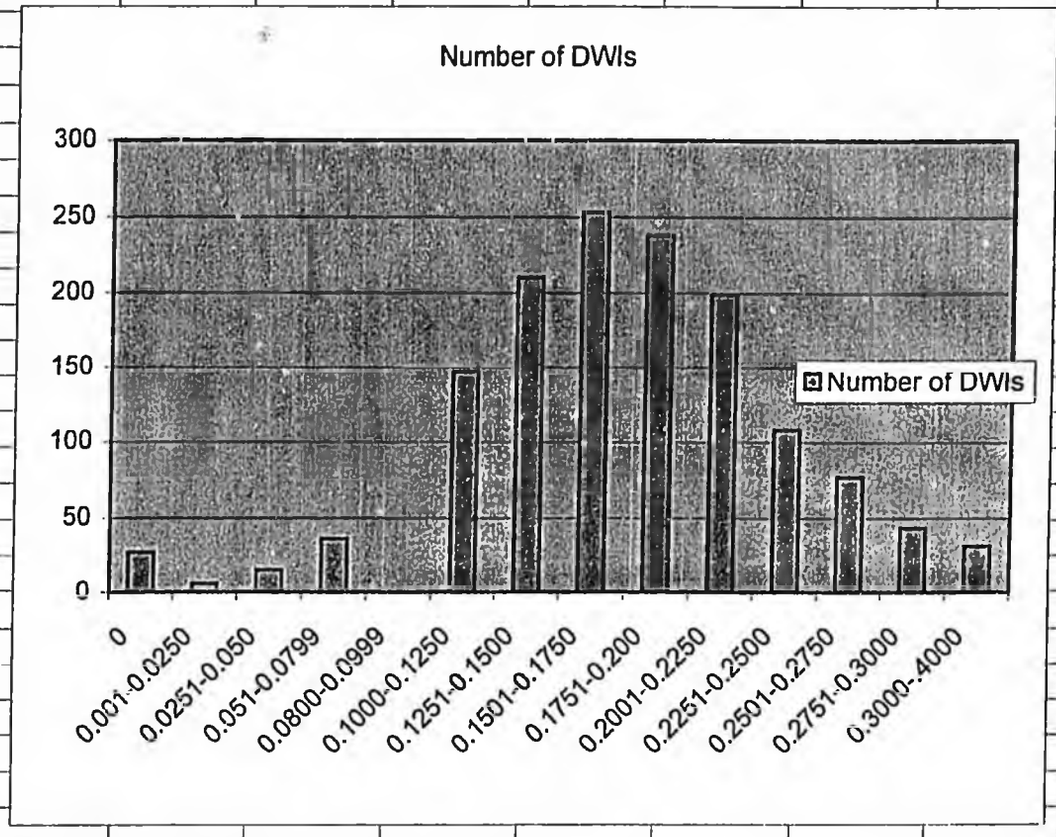
DWIs by BAC

01/01-00 - 12/31/00

BAC	Number of DWIs
0	27
0.001-0.0250	6
0.0251-0.050	15
0.051-0.0799	36
0.0800-0.0999	61**
0.1000-0.1250	147
0.1251-0.1500	210
0.1501-0.1750	253
0.1751-0.200	238
0.2001-0.2250	199
0.2251-0.2500	108
0.2501-0.2750	77
0.2751-0.3000	43
0.3000-.4000	31

Total = 1,451

**Net change of -3



Note: 1) A few tests may not have been counted due to loss of data in uploading process

2) The highest BAC recorded during this period was 1 test @ 0.3996

*Note: Between 01/01/98 - 12/31/99, 168 breath tests were run at APD with BACs between .0800 and .1000

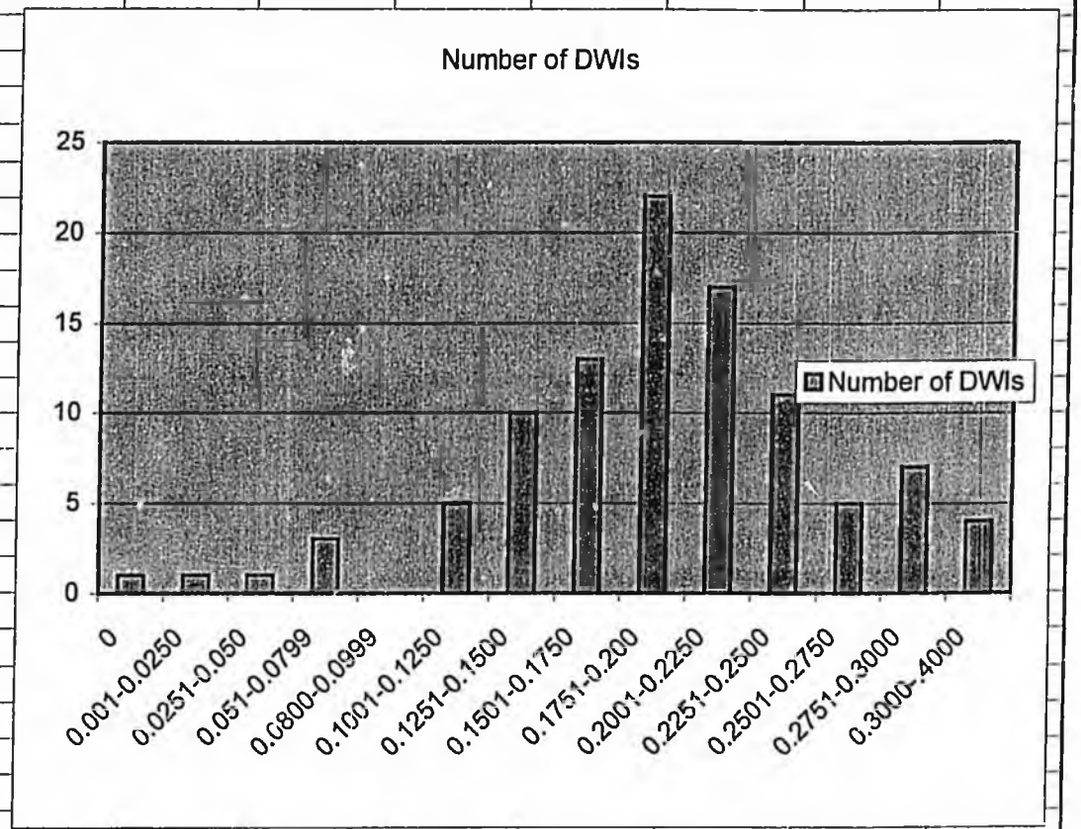
(2yr. prd) approx. 84/yr

Bethel	REVISED 03/08/2001
DWIs by BAC	
01/01-00 - 12/31/00	

BAC	Number of DWIs
0	1
0.001-0.0250	1
0.0251-0.050	1
0.051-0.0799	3
0.0800-0.0999	2**
0.1001-0.1250	5
0.1251-0.1500	10
0.1501-0.1750	13
0.1751-0.200	22
0.2001-0.2250	17
0.2251-0.2500	11
0.2501-0.2750	5
0.2751-0.3000	7
0.3000-.4000	4

Total = 102

**Net change of 0



Note: 1) A few tests may not have been counted due to loss of data in uploading process

2) The highest BAC recorded during this period was 1 test @ 0.3327

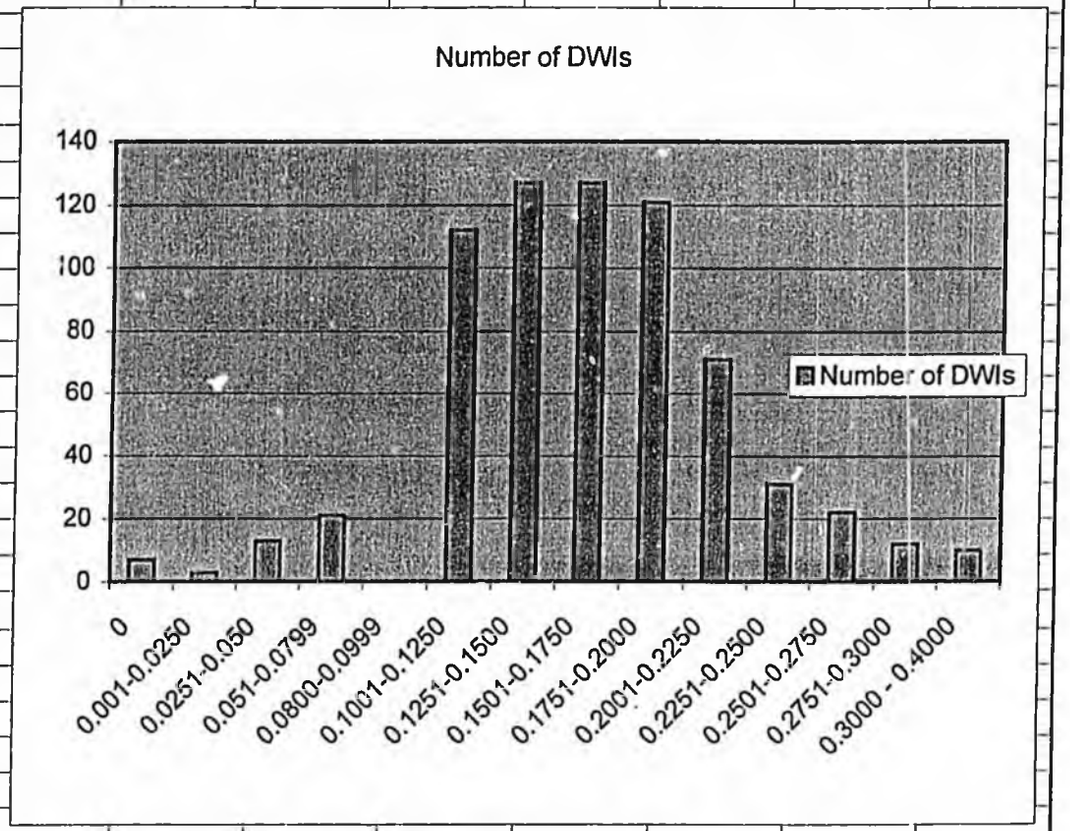
*Note: Between 01/01/98 - 12/31/99, 5 breath tests were run in Bethel with BACs between .0800 and .1000

FPD, AST/Fairbanks, Fairbanks Airport Police, North Pole PD, UAF Police Dept. REVISED 03/08/2001

DWIs by BAC
01/01-00 - 12/31/00

BAC	Number of DWIs
0	7
0.001-0.0250	3
0.0251-0.050	13
0.051-0.0799	21
0.0800-0.0999	41**
0.1001-0.1250	112
0.1251-0.1500	127
0.1501-0.1750	127
0.1751-0.2000	121
0.2001-0.2250	71
0.2251-0.2500	31
0.2501-0.2750	22
0.2751-0.3000	12
0.3000 - 0.4000	10

Total = 718
**Net change of -2



Note: 1) A few tests may not have been counted due to loss of data in uploading process
2) The highest BAC recorded during this period was 1 test @ 0.354

*Note: Between 01/01/98 - 12/31/99, 59 breath tests were run in Fairbanks with BACs between .0800 and .1000

**Note: No data from military bases included here

JPD, AST/Juneau REVISED 03/08/2001

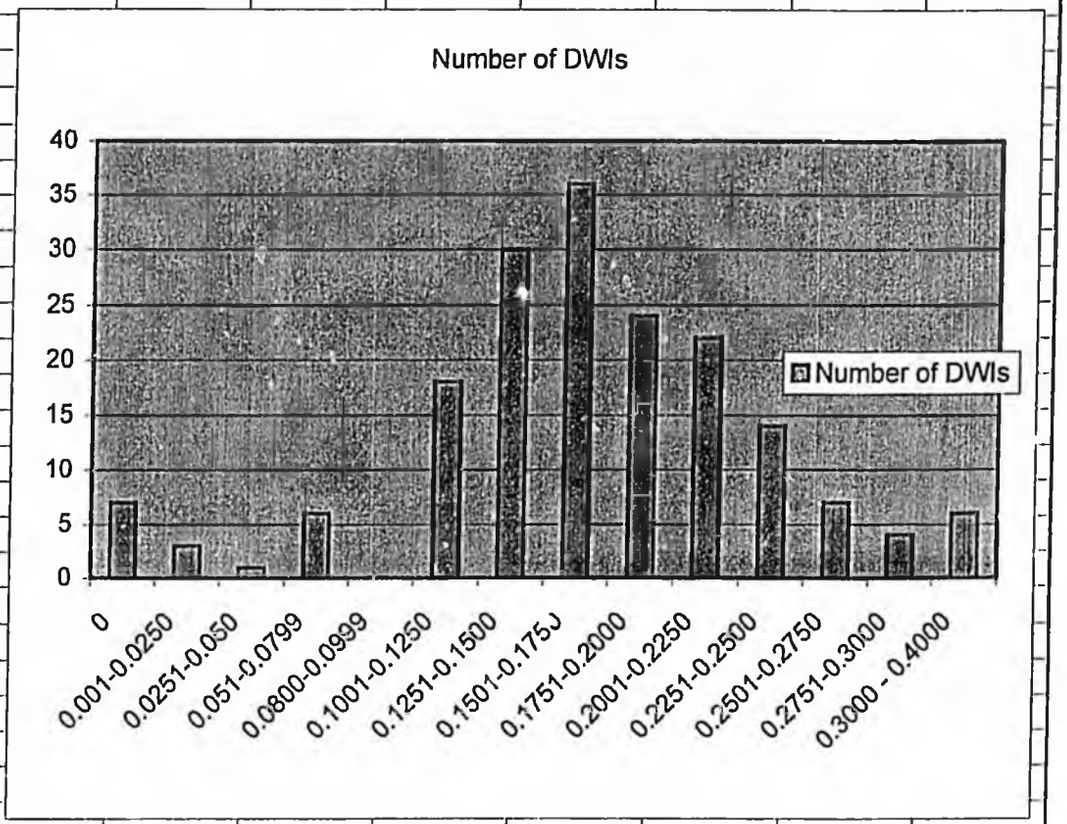
DWIs by BAC

01/01-00 - 12/31/00

BAC	Number of DWIs
0	7
0.001-0.0250	3
0.0251-0.050	1
0.051-0.0799	6
0.0800-0.0999	8**
0.1001-0.1250	18
0.1251-0.1500	30
0.1501-0.1750	36
0.1751-0.2000	24
0.2001-0.2250	22
0.2251-0.2500	14
0.2501-0.2750	7
0.2751-0.3000	4
0.3000 - 0.4000	6

Total = 186

**Net change of 0



Note: 1) A few tests may not have been counted due to loss of data in uploading process

2) The highest BAC recorded during this period was 1 test @ 0.345

*Note: Between 01/01/98 - 12/31/99, 21 breath tests were run in Juneau with BACs between .0800 and .1000

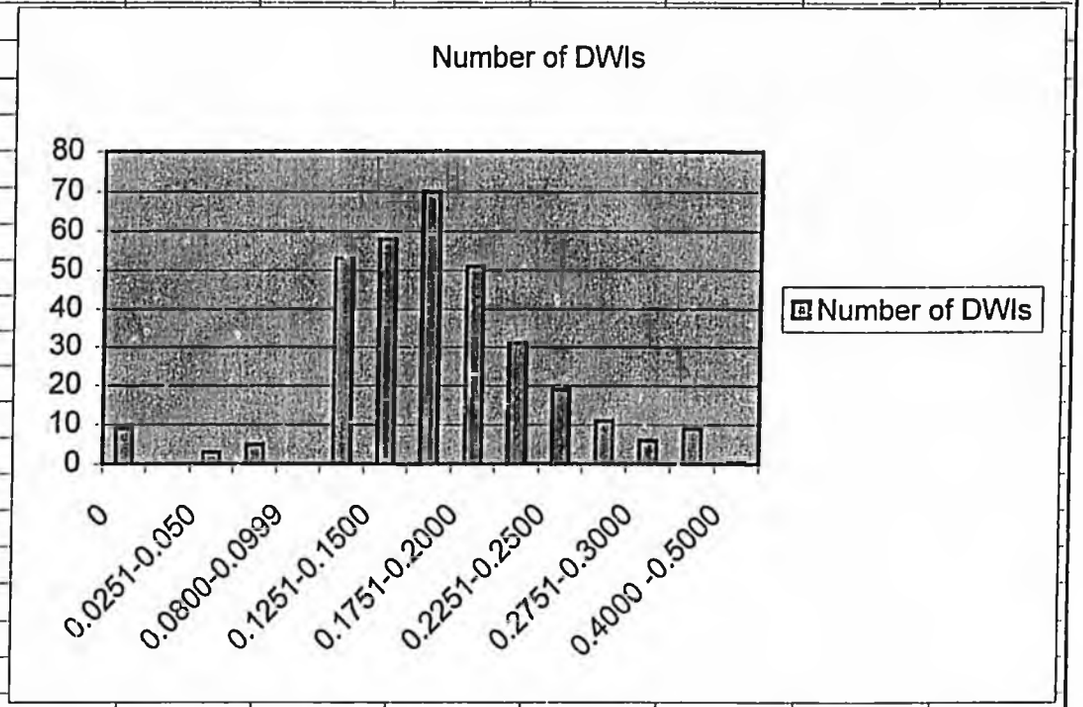
Soldotna PD, AST/Soldotna, Kenai PD, Homer PD, Seward PD | REVISED 03/08/2001

DWIs by BAC
01/01-00 - 12/31/00

BAC	Number of DWIs
0	9
0.001-0.0250	0
0.0251-0.050	3
0.051-0.0799	5
0.0800-0.0999	23**
0.1001-0.1250	53
0.1251-0.1500	58
0.1501-0.1750	70
0.1751-0.2000	51
0.2001-0.2250	31
0.2251-0.2500	19
0.2501-0.2750	11
0.2751-0.3000	6
0.3000 -0.4000	9
0.4000 -0.5000	1

Total = 349

**Net change of +1



Note: 1) Some tests may have been lost due to loss of data in uploading process
2) The highest BAC recorded during this period was 1 test @ 0.407 from Homer

*Note: Between 01/01/98 - 12/31/99, 40 breath tests were run on the Kenai Penisula with BACs between .0800 and .1000

Wasilla PD, AST/Palmer, Palmer PD REVISED 03/08/2001

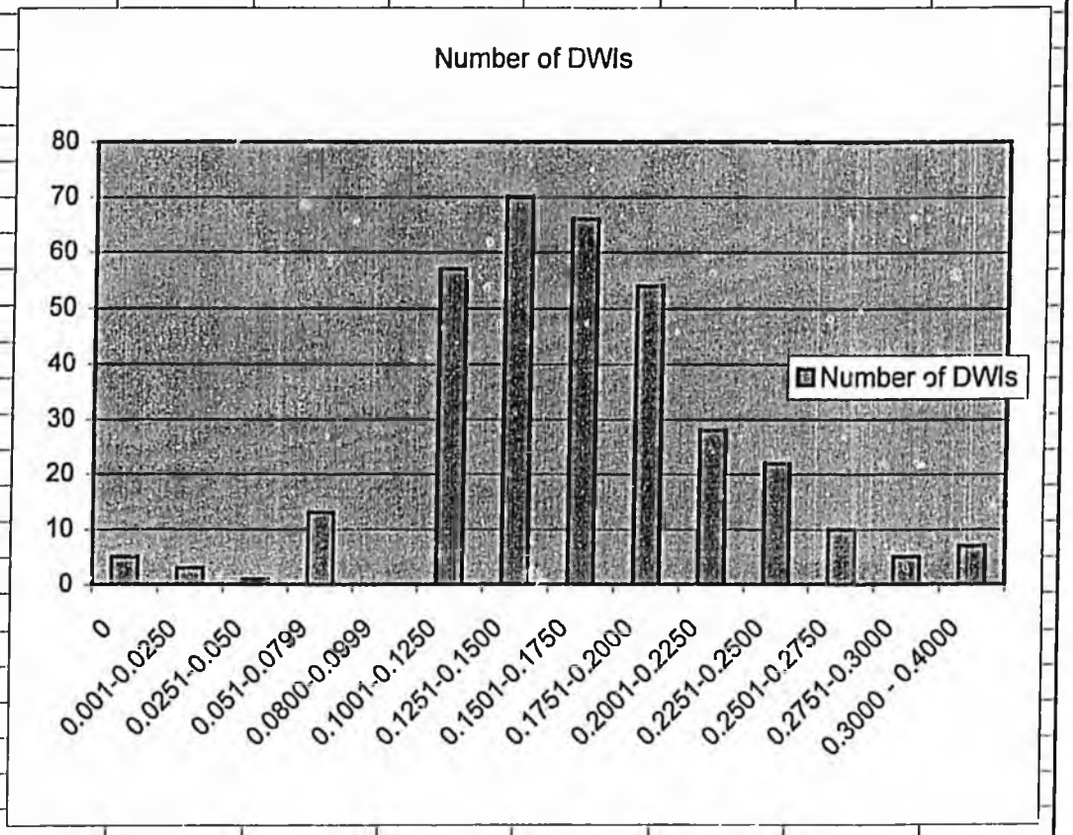
DWIs by BAC

01/01-00 - 12/31/00

BAC	Number of DWIs
0	5
0.001-0.0250	3
0.0251-0.050	1
0.051-0.0799	13
0.0800-0.0999	17**
0.1001-0.1250	57
0.1251-0.1500	70
0.1501-0.1750	66
0.1751-0.2000	54
0.2001-0.2250	28
0.2251-0.2500	22
0.2501-0.2750	10
0.2751-0.3000	5
0.3000 - 0.4000	7

Total = 358

**Net change of 0



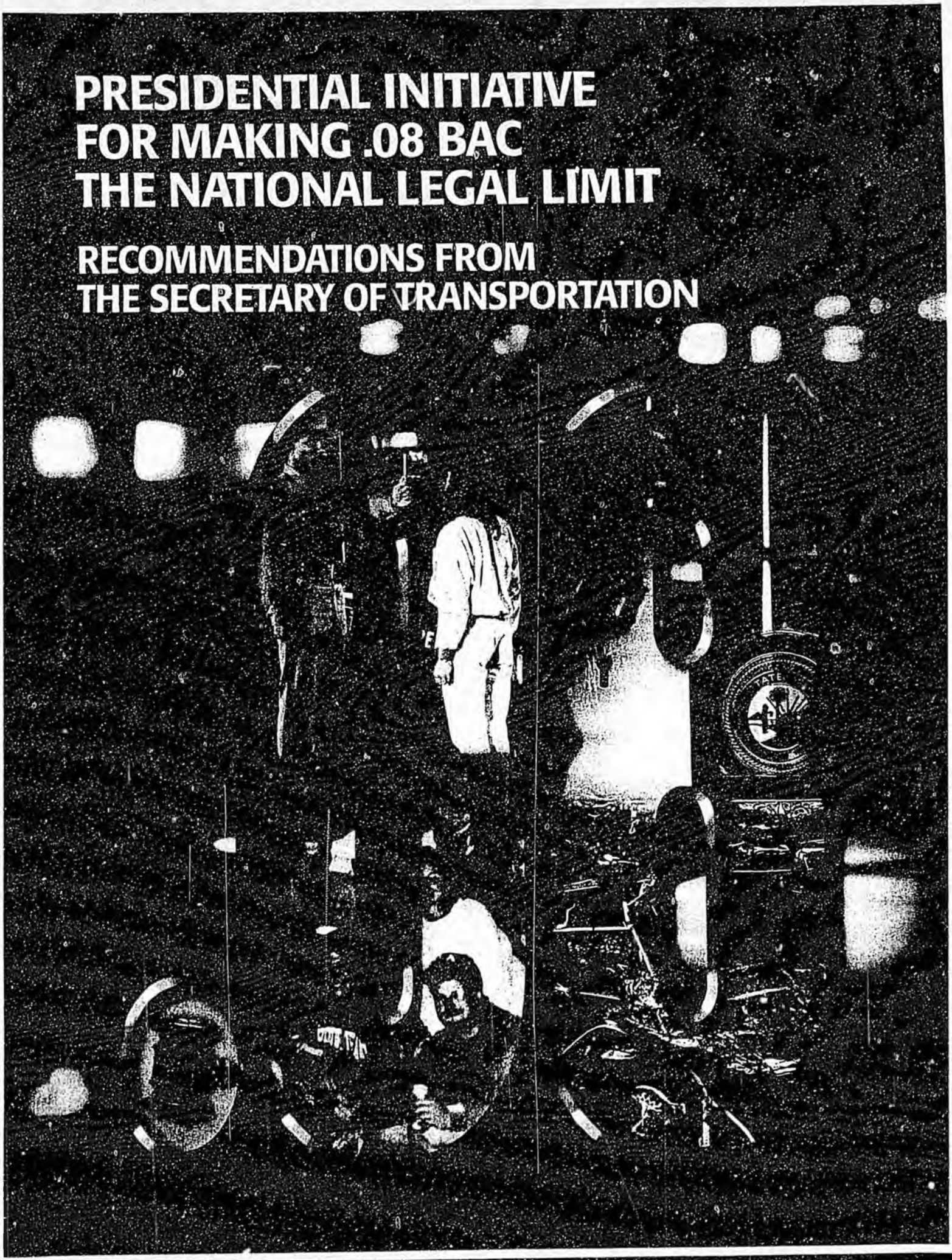
Note: 1) Several tests from AST/Palmer between 02/00 - 04/00 were lost due to loss of data in uploading process

2) The highest BAC recorded during this period was 1 test @ 0.362

*Note: Between 01/01/98 - 12/31/99, 73 breath tests were run in the Mat-Su area with BACs between .0800 and .1000

PRESIDENTIAL INITIATIVE FOR MAKING .08 BAC THE NATIONAL LEGAL LIMIT

RECOMMENDATIONS FROM THE SECRETARY OF TRANSPORTATION



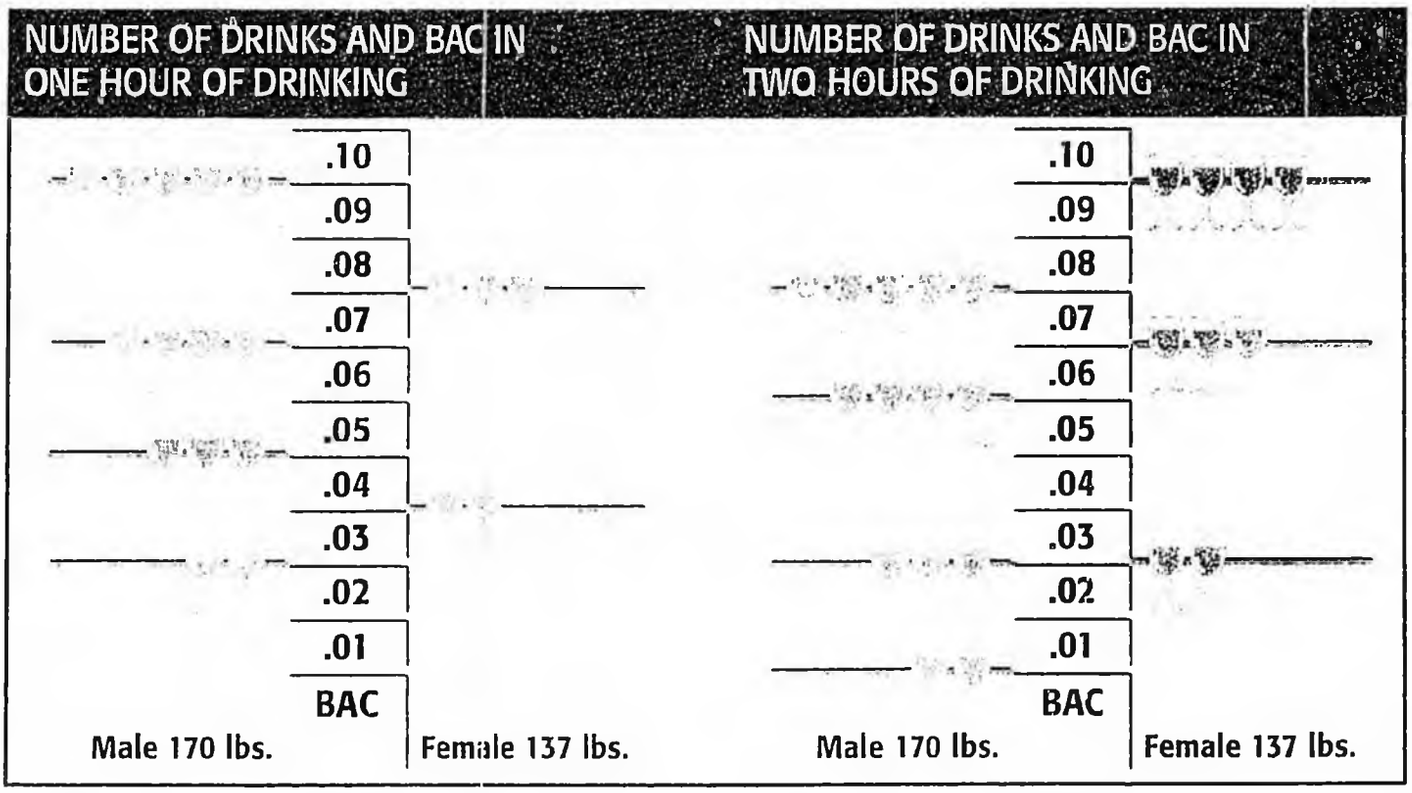
What is .08 BAC?

Measuring Impairment

The amount of alcohol in a person's body is measured by the weight of the alcohol in a certain volume of blood. This is called the blood alcohol concentration or BAC. BAC measurements provide an objective way to identify levels of impairment, because alcohol concentration in the body is directly related to impairment.

The BAC measurement is expressed as grams per deciliter (g/dl) of blood, and in most states a person is considered legally intoxicated if his or her BAC is .10 g/dl or greater. Breath testing is the primary method used by law enforcement agencies for measuring BACs. At the time of the first face-to-face contact with a suspected impaired driver, techniques for detecting whether alcohol is present or absent can be performed easily by law enforcement officers during roadside stops using hand-held passive alcohol sensors. Use of these devices is non-invasive and can even be performed while the person is still in his or her vehicle.

NHTSA tests evidential breath testing equipment for precision and accuracy. Devices on NHTSA's Conforming Products List meet the agency's model specifications and are accurate within plus or minus .005 BAC of the true value.

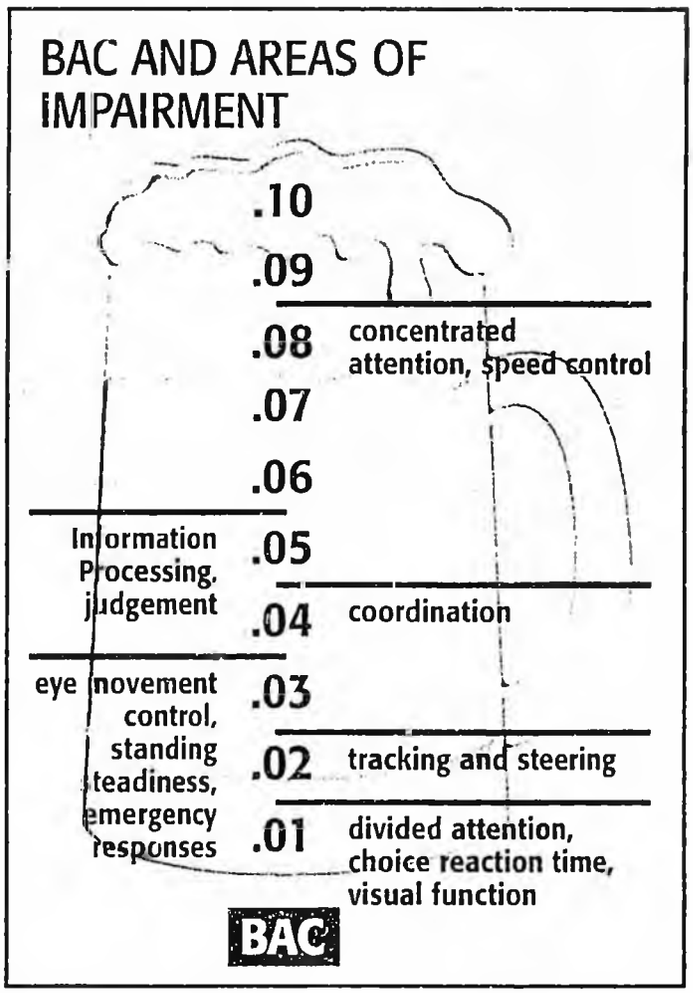


What is .08 BAC?

The Effect of Alcohol on Ability

With each drink consumed, a person's blood alcohol concentration increases. Although outward appearances vary, virtually all drivers are substantially impaired at .08 BAC. Laboratory and on-road research shows that the vast majority of drivers, even experienced drivers, are significantly impaired at .08 with regard to critical driving tasks such as braking, steering, lane changing, judgment and divided attention. Decrements in performance for drivers at .08 BAC are on the order of 40-60% worse than when they are at .00 BAC. Research findings suggest that the most crucial aspect of impairment is the reduction in the ability to handle several tasks at once. This skill is precisely what driving a motor vehicle requires.

The risk of being in a motor vehicle crash also increases as the BAC level rises. The risk of being in a crash rises gradually with each BAC level, but then rises very rapidly after a driver reaches or exceeds .03 BAC compared to drivers with no alcohol in their system. Research by the Insurance Institute for Highway Safety indicates that the relative risk of being killed in a single vehicle crash for drivers at BACs between .05 and .09 is 11 times that of drivers with no alcohol in their system.



HOUSE JUDICIARY COMMITTEE

March 9, 2001

.08 INFORMATION

(IN ADDITION TO ORIGINAL PACKET)

Final Report
of the
DUI Prevention Task Force

Municipality of Anchorage

October 30, 2000

Summary of Task Force Recommendations

The Task Force addressed the broad spectrum of legislative modifications, enforcement issues, potential government programs, and other types of public and private organizations within the scope of the charter statement and reached consensus on the following recommendations:

State and Municipal Legislative Recommendations

- Change the legal designation from DWI (Driving While Intoxicated) to DUI (Driving Under the Influence)
- Update present statutes to reflect subsequent court decisions
- Make third and subsequent DUIs felonies by eliminating "look back" provisions
- Identify enhancements for charging and sentencing considerations
- Graduate Blood Alcohol Concentration (BAC) levels and penalties from.08, and consider modifying AS 28.35.032, Refusal To Submit To A Chemical Test, to reflect the graduated penalty implications
- Require a valid driver's license and proof of insurance to register a vehicle
- Adopt a mandatory impoundment and forfeiture procedure at the state level
- Explore the feasibility of a centralized clearinghouse for licenses and investigate the expanded options provided by technological advances for tracking licenses whose holders have convictions for certain alcohol related offenses
- Require mandatory alcohol awareness training and a victim's panel as a prerequisite for a obtaining a valid resident driver's license
- Provide parameters for monitored, certifiable residential treatment in sentencing when enhancement factors are present
- Offer screening, mandatory alcohol education, and mandatory alcohol assessment during incarceration for DUI
- Provide for monitored alcohol treatment and ensure certifiable minimum standards in all DUI treatment programs
- Adopt Alaska Criminal Justice Assessment Commission recommendation #15 that the state should encourage the expansion of the Department of Health and Social Services Alcohol Safety Action Program (ASAP) through legislation and funding
- Recognize that halfway houses are not appropriate for repeat offenders and analyze halfway house administration
- Adopt Alaska Criminal Justice Assessment Commission recommendation #8 which relates to underage drinkers
- Make AS 04.16.050, Possession, Control, or Consumption by Persons Under 21 a misdemeanor and provide for alcohol treatment or counseling, peer options such as Youth Court, and parental/guardian notification
- Repeal AMC 10.50.015(H), Solicit the Purchase, Attempt to Purchase, or Possess Intoxicating Liquor, and require these offenses be charged under a revised AS 04.16.050

- Establish and fund a DUI Court
- Make As 28.05.095, Use of Seat Belts and Child Safety Devices Required, a primary law

Enforcement Recommendations

- Encourage focused enforcement of youthful offenders
- Encourage the state to enforce and prosecute AS 28.35.280, Minor Operating a Vehicle After Consuming
- Establish a Report Every Drunk Driver Immediately (REDDI) program in Anchorage
- Expand "Drunk Busters" program, and initiate year round saturation patrols
- Streamline drunken driver arrest processing procedures
- Initiate safety checkpoints when deemed appropriate by law enforcement
- Implement ignition interlock devices as a condition of probation for DUI offenders after their driving priviieges have been reinstated

Other Government Programs

- Increase alcohol server mandatory training from every three years to every two years
- Establish media awareness campaigns that target the "uncaught offender"
- Establish mandatory alcohol education and awareness programs in schools
- Study alternative forms of transportation between Girdwood and Anchorage
- Establish an umbrella group to facilitate continued coordination, compilation and exchange of data, and exchange of materials between interested groups and organizations

Public/Private Organizations

- Establish a Responsible Hospitality Institute Chapter in Anchorage

the philosophy that the seriousness of impaired driving offenses are aggravated by such factors.

Action Needed: Change State law

Responsible Entity: State Legislature

5. **Graduated Blood Alcohol Content (BAC) levels and penalties:**
   - **.08 to .15 - existing penalties**
   - **Above .15 to below .20 - increase penalties with enhancement factors**
   - **.20 and above - felony**

Goal: Bring the state into conformance with federal guidelines, and to provide statutory recognition that higher BAC levels are directly tied to the seriousness of the offense and the likelihood to re-offend

Discussion: The Task Force recognized that .08 BAC brings the state into conformance with new federal guidelines for a legal intoxicated driving threshold. Charges and penalties should be based on the level of intoxication and consideration of previously discussed enhancement factors. According to a recent study by the Preusser Research Group for the AAA Foundation for Traffic Safety, 24% of all drunk driver fatality accidents involve drinking drivers with a BAC between .15 and .19, inclusive. The figures jump to 42% for drivers with a BAC of .20 and greater. Finally, it should be recognized that higher BAC levels are directly tied to the seriousness of the offense and the likelihood to re-offend. Local statistics provided by the Municipal Prosecutor show that the average BAC of a first offender who re-offends is .189. There is, however, a potential loophole in the Task Force recommendation for making .20 and above a felony. As long as AS 28.35.032, Refusal to Submit to a Chemical Test remains a misdemeanor, there is a potential for highly intoxicated individuals to refuse to provide a breath sample and circumventing the potential to be charged with a felony. A possible consideration is to change AS 28.35.032 to a felony.

Action Needed: Change State law

Responsible Entity: State Legislature

6. **Require a valid driver's license and proof of insurance to register a vehicle.**

LEGAL SERVICES

DIVISION OF LEGAL AND RESEARCH SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

State Capitol
Juneau, Alaska 99801-1182
Deliveries to: 129 6th St., Rm. 329

MEMORANDUM February 8, 2001

SUBJECT: HB 4 - driving while intoxicated.

TO: Representative Norman Rokeberg
Attn: Janet

FROM: Michael F. Ford
Legislative Counsel

You have asked if HB 4 satisfies the requirements imposed by federal law that States must adopt a 0.08 blood alcohol level for purposes of D.W.I. offenses in order to avoid losing federal highway funds. As explained in this memo, I believe that with one exception, the bill meets federal requirements.

Congress included a provision in a transportation appropriations bill providing that two percent of federal highway funding will be withheld beginning in FY 2004, in a State that has not adopted the 0.08 standard. The federal provision requires enactment and enforcement of a provision described in 23 U.S.C. 163(a). Under 23 U.S.C. 163(a), States are required to enact and enforce a "law that provides that any person with a blood alcohol concentration (BAC) of 0.08 percent or greater while operating a motor vehicle in the State shall be deemed to have committed a per se offense of driving while intoxicated." There are federal regulations that implement this provision of law. The U.S. Department of Transportation has promulgated 23 C.F.R. 1225 which spells out the requirements of a 0.08 BAC law. Under 23 C.F.R. 1225.5, a 0.08 law must

(1) apply to all persons;
(2) set the blood alcohol legal limit not higher than 0.08;
(3) make operating a motor vehicle in violation of the 0.08 level a per se offense;
(4) provide for primary enforcement;
(5) make the 0.08 standard a criminal offense and apply the same standard in administrative license revocation proceedings; and
(6) be deemed to be or be equivalent to the standard driving while intoxicated offense in the state.

I believe HB 4 satisfies each requirement imposed under 23 C.F.R. 1225.5, with the exception of the definition of "operate a motor vehicle" contained in Sec. 31. Under this definition, a person would have to be in control of a moving motor vehicle, in order to commit the offense. Under 23 C.F.R. 1225.3, operating a motor vehicle means driving or

"being in actual physical control of a motor vehicle." In this respect, HB 4 appears to be in conflict with the federal requirement and Alaska could not be certified as in compliance with the federal requirement.

If the definition of "operate a motor vehicle" were deleted or amended from HB 4, I believe that the bill would satisfy federal requirements and would avoid loss of federal highway funding.

Please contact me if you have further questions.

MFF:glc
01-111.glc

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

OFFICE OF THE COMMISSIONER

TONY KNOWLES, GOVERNOR

3132 CHANNEL DRIVE
JUNEAU, ALASKA 99801-7898

TEXT: (907) 465-3652
FAX: (907) 586-8365
PHONE: (907) 465-3900

February 8, 2001

Honorable Norman Rokeberg
Chair, House Judiciary
State Capitol, Room 118
Juneau, AK 99801

Dear Chairman Rokeberg:

Thank you for hearing the .08 BAC issue in your committee. As we stated, the Department supports implementation of .08 BAC as the state standard for driving while intoxicated for the following reasons:

With the passage of .08 BAC the State of Alaska will:

1. Avoid federal sanctions that take effect on October 1, 2003 at which time the federal government will withhold an estimated $3.58 million in federal highway funds for the first year, $7.1 million for the second year, $10.7 million for the third year, and $14.3 million for the fourth year that the state is out of compliance,

2. Qualify for additional federal funding for highway safety programs, and

3. For the reasons listed below:

THE MERITS OF A .08 BAC PER SE LAW FOR ADULT DRIVERS

The National Highway Traffic Safety Administration (NHTSA) recommends that all states and the District of Columbia establish .08 BAC as the illegal limit per se for drivers aged 21 and older for the following reasons:

(1) Virtually all drivers are substantially impaired at .08 BAC. Laboratory and test track research shows that the vast majority of drivers, even experienced drinkers, are impaired at .08 with regard to critical driving tasks. There are significant decrements in performance in areas such as braking, steering, lane changing, judgement, and divided attention at .08 BAC. Studies report that performance decrements in some of these tasks are as high as 60%-70% at .08 BAC.

(2) The risk of being involved in a crash increases substantially by .08 BAC. The risk of being in a crash gradually increases at each BAC level, but rises very rapidly after a driver reaches or exceeds .08 BAC compared to drivers with no alcohol in their blood systems. Research by the Insurance Institute for Highway Safety indicates that the relative risk of being killed in a single vehicle crash for drivers at BACs between .05 and .09 is 11 times that of drivers at .00 BAC (no alcohol).

(3) Lowering the per se limit is a proven effective countermeasure which will reduce alcohol-related traffic fatalities. There is evidence from California that significant reductions in alcohol-related fatalities occurred in 1990 (a 12% reduction), the year .08 and an administrative license revocation law went into effect. A study by Boston University compared five states that lowered their illegal limit from .10 to .08 with five states that did not do so. They found a 16% reduction in the proportion of fatal crashes involving fatally injured drivers whose BACs were .08 or higher in the five .08 states. That same study showed an 18% reduction in the proportion of fatal crashes involving fatally injured drivers at very high BACs (.15 or higher) in those .08 states. A 1995 NHTSA study found significant decreases in four states that adopted .08 on nine measures of alcohol-related fatalities. Decreases in alcohol-related fatalities ranged from 4% to 40% in those states analyzed.

(4) .08 is a reasonable level to set the limit. A .08 BAC is not typically reached with a couple of beers after work or a glass or two of wine with dinner. The average 170 pound male would have to consume more than four 12oz. cans of beer within 1 hour on an empty stomach to reach .08 BAC. The average 137 pound female would need at least three cans of beer in one hour on an empty stomach to reach that level. That female driver would need 4 equivalent drinks over a 2 hour period to get above .08 BAC and the male would need 5 equivalent drinks.

(5) The public supports levels below .10 BAC. NHTSA surveys show that most people would not drive after consuming 2 or 3 drinks in an hour and believe the limit should be no higher than that. Recent polls show that 2 out of every 3 Americans favor lowering the limit to .08 when they are aware of how much alcohol it takes to reach that level.

(6) Most other industrialized nations have set BAC limits at .08 or lower and have had these laws in place for many years. For example, Canada and Great Britain set their limits at .08--as do Austria and Switzerland. All States in Australia now have a .05 limit. France and Germany recently lowered their limit to .05, while Sweden's illegal limit is .02 BAC.

Please find attached information that we hope will clear up any confusion regarding federal highway safety incentive and sanction programs. We have also the requested fiscal year timelines for your use. Please call if you have any questions.

Sincerely,

Joseph L. Perkins, P.E.
Commissioner

Enclosures

Alaska Highway Safety Office
Alaska Department of Transportation & Public Facilities

SAFETY-RELATED SANCTIONS AND FEDERAL FUNDING PROGRAMS FOR SAFETY

The most recent reauthorization of the federal surface transportation act established sanctions as well as the prospect of additional funding to encourage states to adopt more stringent highway safety-related laws. Funding for the Alaska Highway Safety Office (AHSO) is received through a series of grant programs established by Congress and administered by the National Highway Traffic Safety Administration (NHTSA), US DOT. The rules and requirements for each source vary from program to program. Most funding is directed toward specific traffic safety related issues such as occupant protection, injury prevention, drunk driving, and other areas. The agency in turn awards one-year grants for highway safety projects based on preset criteria. The sanctions and the federal highway safety-related alcohol programs are described below.

- **Section 163(a) - .08 BAC Sanction legislation 23 USC 163(a)**

Legislation passed by Congress now requires that states pass .08 BAC legislation in order to avoid the withholding of federal highway funds. Beginning in FY 2004, 2 percent of federal highway funds will be withheld if a state has enacted and is not enforcing a .08 BAC. In FY 2005, 4 percent of federal highway funds will be withheld, in FY 2006, 6 percent of federal highway funds will be withheld, and in FY 2007, and each year thereafter, 8 percent of federal highway funds will be withheld.

Current Status: Sanctions are scheduled to begin in FY 2004 if .08 BAC is not enacted and implemented. ***During the first year, FY 2004, $3,580,967 would be withheld, based on estimated FY 2003 highway program apportionments.***

- **Section 154 – Open Container Requirements (23 USC 154)**

TEA-21 established a program to encourage states to enact Open Container laws. A state that does not have a conforming Open Container law by the beginning of a federal fiscal year, starting with FY 2001, will have certain Federal – aid highway funds transferred to the state's Section 402 State and Community Highway Safety grant program during that fiscal year. These funds can be used for alcohol-impaired driving programs and hazard elimination programs.

Current Status: For FY 2001, $750,000 of Federal Highway program funds were transferred to the Section 402 State and Community Highway Safety Programs. The remainder of the penalty funds ($1,493,065) were transferred to the hazard elimination (Section 152) program.

- **Section 164 – Minimum Penalties for Repeat Offenders for DWI or DUI (23 USC 164)**

TEA-21 established a program to encourage states to establish minimum penalties for repeat drunken driving offenders. A state that does not have a conforming law by the beginning of a federal fiscal year, starting with FY 2001, will have certain Federal – aid highway funds transferred to the state's Section 402 State and Community Highway Safety grant program during that fiscal year. These funds can be used for alcohol-impaired driving programs and hazard elimination programs.

Current Status: For FY 2001, $2,243,065 of these funds were transferred to the hazard elimination program. None is being used for alcohol-related projects this year.

SAFETY-RELATED SANCTIONS AND FEDERAL FUNDING PROGRAMS FOR SAFETY
(continued)

➢ **Section 402 – State and Community Highway Safety Programs (23 USC 402)**

Section 402 funds are to be used for the implementation of a program that addresses a wide range of highway safety problems that are related to human factors and the roadway environment and that contribute to the reduction of crashes, deaths, and injuries resulting therefrom. Section 402 enhances the state's program by providing resources to start up new, more effective projects; by catalyzing or accelerating state programs to address major safety issues with well-planned strategies; and by leveraging additional state and local investment in highway safety.

Current Status: Alaska Highway Safety Office base funding source. The amount is formula-based and is used is for an array of traffic safety-related projects for state, local, and non-profit agencies. Some of these projects are alcohol-related. The amount varies each year depending upon projects submitted for funding. $736,250 received for FY 2001.

➢ **Section 163 – Safety Incentives To Prevent the Operation of Motor Vehicles by Intoxicated Persons (23 USC 163)**

TEA-21 established a program of incentive grants to encourage states to establish .08 percent blood alcohol concentration (BAC) as the legal limit for drunk driving offenses. A state may use these grant funds for any project eligible for assistance under Title 23. Funds allocated to highway safety can be used for most highway safety education, enforcement, and traffic data activities and take on the characteristics of the program in which they are used.

Current Status: Alaska does not qualify for this funding at this time. ***With the passing of .08 BAC, the Alaska Highway Safety Office would receive approximately $800,000 a year in additional funding.*** *The actual amount would depend upon the number of other qualifying states.*

➢ **Section 410 – Alcohol Impaired Driving Countermeasures (23 USC 410)**

TEA-21 amended the alcohol-impaired driving countermeasures incentive grant program to encourage states to adopt and implement effective programs to reduce traffic safety problems resulting from individuals driving while under the influence of alcohol. A state may use these grant funds only to implement and enforce impaired driving programs. New matching criteria for Section 410 began in 1998 with the passage of TEA-21. Therefore, Section 410 funds received prior to FY98 (pre-TEA-21) are treated differently.

Current Status: Due to changes in TEA-21 program requirements, Alaska does not qualify for 410 funding. The state did qualify prior to FY 98 under the previous transportation authorization (ISTEA).

Federal Highway Safety Incentive Grant Timeline

DATE	ACTION	NOTE
Jul 1, 00	State FY 01 begins	
Oct 1, 00	Federal FY 01 begins	
Jan - May 01	Alaska Legislative Session	Passage of .08 BAC & increase in federal authority for receipt & expenditure of FFY 01 funds in state FY 02 budget. Sec. 163 funds require no state match – 100% federal funding.
Jul 1, 01	.08 BAC program	.08 BAC program must be in effect and application for FFY 02 incentive grant funds must be submitted to NHTSA to qualify for FFY 01 incentive grant funding.
Sep 30, 01	FFY 01 Section 163	Grant funds available no later than this date.
Oct 1, 01		Applications for FFY 02 Section 163 funding may be submitted to NHTSA with AHSO's annual Highway Safety Plan.

Federal Highway Funds Sanction Timeline

Jul 1, 00	State FY 01 begins	
Oct 1, 00	Federal FY 01 begins	
Jan - May 01	Alaska Legislative Session	
Jul 1, 01	State FY 02 begins	
Oct 1, 01	Federal FY 02 begins	
Jan - May 02	Alaska Legislative Session	
Jul 1, 02	State FY 03 begins	
Oct 1, 02	Federal FY 03 begins	
Jan – May 03	Alaska Legislative Session	➢ Legislature must pass .08 BAC this session in order to avoid sanction.
Jul 1, 03	State FY 04 begins	
Oct 1, 03	Federal FY 04 begins	Sanction takes effect $3.58 million in federal highway funds is withheld.

Subject: Re: Federal .08 penalties
Date: Thu, 08 Feb 2001 09:45:37 -0900
From: Dennis Poshard <Dennis_Poshard@dot.state.ak.us>
To: Heather Nobrega <Heather_Nobrega@legis.state.ak.us>

Yes. This is a true statement.

Heather Nobrega wrote:

> Someone has told Rep. Rokeberg that if a state implements a .08 legal limit by Federal Fiscal Year 2007, the state will receive all of the federal highway funds withheld from FFY 2004-2007. Is this a true statement? Thanks.
>
> Heather Nobrega

Poshard, Dennis <dennis_poshard@dot.state.ak.us>
Special Assistant
Department of Transportation and Public Facilities

Kenai Peninsula Online

Powered By

Web posted **Friday, September 15, 2000**

Man gets nine years imprisonment in drunken driving fatal

ANCHORAGE (AP) -- An Anchorage man has been sentenced to nine years in prison for a drunken driving incident that killed one person and injured another.

Ray Fine lost control of his truck in May of last year while fumbling for a dropped cigarette, killing Lyman Reese Smith, who was riding a motorcycle with his 10-year-old grandson.

Prosecutors said **Fine** had consumed at least a six-pack of beer and had a blood alcohol level of .08.

Fine had pleaded no contest to criminally negligent homicide for the death of Smith and third-degree assault for injuries to the grandson. He also was convicted of drunken driving.

Superior Court judge Larry Card sentenced the 30-year-old **Fine** to consecutive terms of five years for negligent homicide and four years for assault.

He ordered **Fine** to serve a one-year sentence for drunken driving, concurrently with the other charges.

Fine was ordered to pay almost $58,000 in restitution, and his license was revoked for life.

Sentencing came Thursday, in the midst of a rash of drunken driving accidents that have angered many around the region.

"I cannot be insulated from the fact that the community cries out for greater punishment for these offenses," Card said.

"It's a horrible thing that happened, and it's also a horrible thing to live with," said Rex Butler, **Fine**'s attorney, who had asked that his client be

given probation for five years and no more than four years in jail.

"That is **Ray Fine**'s reality for the rest of his life," Butler said.

Before Card handed down the sentence, **Fine** unfolded a piece of paper from his pocket and read statements to the judge and all those present in the courtroom.

He apologized, through tears, to the friends and relatives of Smith. He also apologized to his own wife and son and asked for forgiveness.

"I will accept any punishment that is handed down to me," he said.

Card said he believed **Fine** felt bad and accepted responsibility but that alcohol had been present in **Fine**'s life for 15 years and he made no attempt to get treatment.

"In this case it caused harm, serious harm," the judge said.

Discuss this story in our Discussion Forum

E-mail this story to a friend

Comments or questions? Contact the web master at Peninsula Clarion

Copyrighted by Peninsula Clarion, a Division of Morris Communications
Privacy and terms of use.

Kenai Peninsula Online

Powered By

Web posted **Tuesday, April 18, 2000**

Anchorage man pleads no contest in roadway death

ANCHORAGE (AP) -- An Anchorage man will be sentenced in September after pleading no contest to criminally negligent homicide.

Ray William **Fine** 29, lost control of his truck and killed a motorcyclist while fumbling for a dropped cigarette last May, authorities said. He also was convicted of drunken driving in the death of Lyman Smith.

Fine also pleaded to third-degree assault for injuring Smith's 10-year-old grandson, who was riding on the motorcycle with his grandfather at the time of the collision.

He had consumed at least a six-pack of beer and had a blood alcohol level of .08, investigators said.

Fine swerved into the oncoming lane and tried to stop when he saw Smith but couldn't do so in time, authorities said.

Fine originally had been indicted for manslaughter and first-degree assault, but prosecutors reduced the charges in return for **Fine**'s plea.

Discuss this story in our Discussion Forum

E-mail this story to a friend

Comments or questions? Contact the web master at Peninsula Clarion

Copyrighted by Peninsula Clarion, a Division of Morris Communications
Privacy and terms of use.

Impaired Driving in Alaska

Incidence of Impaired Driving

For one of every 150 miles driven in Alaska in 1998, a legally intoxicated person (BAC $.10) sat behind the wheel. Alaska police report 1,115 crashes involving a driver or pedestrian with a positive blood alcohol concentration (BAC). Formulas developed by NHTSA were used to estimate the number of alcohol-related crashes where alcohol involvement is not reported by the police. An estimated total of 2,850 crashes in Alaska involved alcohol. These crashes killed 31 and injured an estimated 1,700 people.

Impaired Driving by Blood Alcohol Concentration (BAC)

In 1998, Alaska drivers with:

- BACs of .10 and above were involved in an estimated 2,700 crashes that killed 28 and injured 1,500
- BACs between .08-.09 were involved in an estimated 50 crashes that killed 1 and injured 100
- Positive BACs below .08 were involved in an estimated 100 crashes that killed 2 and injured 100

Costs

Alcohol is a factor in 37% of Alaska crash costs. Alcohol-related crashes in Alaska cost the public more than $0.3 billion in 1998, including nearly $0.1 billion in monetary costs and over $0.2 billion in quality of life losses. (For definitions of the cost categories, see the definitions fact sheet.) Alcohol-related crashes are deadlier and more serious than other crashes. People other than the drinking driver paid $0.2 billion of the alcohol-related crash bill.

Costs Per Alcohol-related Injury

The average alcohol-related fatality in Alaska cost $5.1 million:

- $1.7 million in monetary costs
- $3.4 million in quality of life losses

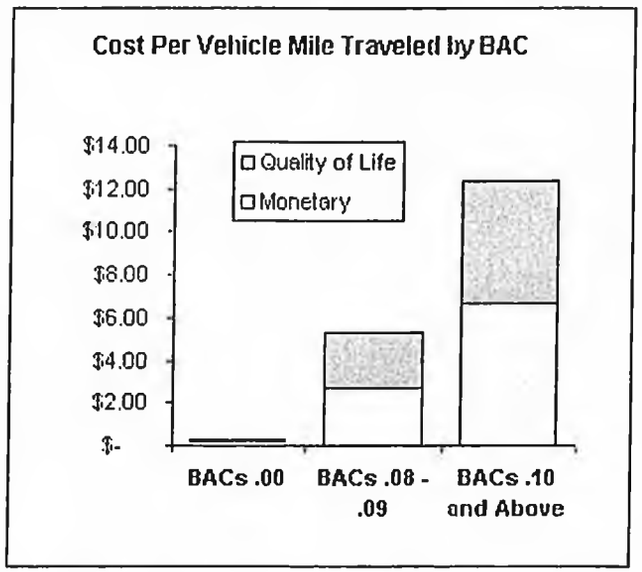
The estimated cost per injured survivor of an alcohol-related crash averaged $126,000

- $52,000 in monetary costs
- $74,000 in quality of life losses

Costs Per Mile Driven

Crash costs in Alaska averaged:

- $12.40 per mile driven at BACs of .10 and above
- $5.30 per mile driven at BACs between .08-.09
- $0.20 per mile driven at BACs of .00



Costs Per Drink

The societal costs of alcohol-related crashes in Alaska averaged $0.90 per drink consumed. People other than the drinking driver paid $0.50 per drink.

Impact on Auto Insurance Rates

Alcohol-related crashes accounted for an estimated 14% of Alaska's auto insurance payments. Reducing alcohol-related crashes by 10% would save $6 million in claims payments and loss adjustment expenses.

Prevention Savings

Alaska already has many important impaired driving laws. However, a number of additional strategies can be used to mitigate the harm from impaired driving.

- **Enforcing Serving Intoxicated Patrons Law:** Using undercover police officers to enforce Alaska's law against serving alcohol to intoxicated bar and restaurant patrons would reduce alcohol-related crash fatalities by an estimated 11%. It would cost $0.50 per licensed driver and save $50 per licensed driver.
- **.08 BAC Law:** Lowering Alaska's BAC limit to .08 would reduce alcohol-related fatalities by 8% and save an estimated $5 per licensed driver. The value of mobility losses and alcohol sales reductions resulting from the law are the large majority of the $0.30 cost per licensed driver.
- **Graduated Licensing:** Graduated licensing would impose a nighttime driving restriction or passenger limits for young novice drivers in Alaska. Graduated licensing with a midnight curfew would reduce youth fatalities by 5%-8% and total alcohol-related fatalities by 2%. It would save an estimated $1,200 per youthful driver. The value of the mobility lost by youth is the large majority of the $110 cost per youthful driver.
- **Sobriety Checkpoint Program**: Intensive enforcement of Alaska's BAC limit with highly visible sobriety checkpoints would reduce alcohol-related fatalities by at least 15% and save $95,400 per checkpoint. Including costs of travel delay and the value of mobility losses

by impaired drivers apprehended and sanctioned, the costs of conduction a checkpoint would average $14,300 including police resources.

- **Primary Belt Law:** Primary belt laws allow law enforcement to stop and ticket a driver for non-use of a safety belt without requiring the driver to be cited for or have committed another offense. Unbelted drivers account for 75% of impaired driving fatalities. A primary belt law can reduce alcohol-related fatalities in Alaska by 10%. The law would save $300 per licensed driver. If enforced with frequent belt-use checkpoints, the value of temporary discomfort experienced by some new belt wearers and travel delay costs at checkpoints would be the large majority of the law's $6.30 cost per licensed driver.

Public Services Research Institute
8201 Corporate Drive, Suite 220
Landover, MD 20785
(301) 731-9891

The estimates reported here were produced under National Highway Traffic Safety Administration Partners in Progress Cooperative Agreement No. DTNH22-97-H-55072.

MADD

Mothers Against Drunk Driving • Juneau Chapter

211 Fourth St. Suite 102 • Juneau, AK 99801

.08 Drunk Driving Limit Makes Sense

By: Millie I. Webb
Mothers Against Drunk Driving(MADD) National President

If you think drunk driving and the carnage it creates is something that happens to other people, think again.

About thirty percent of Americans will be involved in an alcohol-related crash at some time in their lives. Last year, alcohol-related crashes killed more than 15,000 people and injured more than 600,000 others – many of them disfigured and/or disabled for life.

The facts are simple. It takes a 170-pound man about four drinks in one hour, on an empty stomach to get to a .08 BAC. This is hardly social drinking. Research shows that virtually everyone, no matter the number of drinks it takes to get to that level, is impaired at .08. Critical driving skills – breaking, steering and reaction time – are affected at .08 BAC, putting everyone risk.

My daughter, Lori, and nephew, Mitchell, died as a result of a drinking driver with a .08 BAC. My husband and I were severely burned in the crash that also caused my daughter Kara to be born premature and legally blind.

About 500 other lives would be saved every year if .08 laws were passed in every state. Last year, the U.S. Congress passed a law that requires all states to pass .08 BAC laws by Oct. 1, 2003 or face the loss of federal highway funding. States that pass .08 BAC laws this year will be rewarded with unrestricted federal highway funding.

I hope that state legislators will see the wisdom in passing .08 BAC laws this year. It will bring additional funds to states, but more importantly, it will save hundreds of lives and prevent thousands of injuries. Time lost equals lives lost. Let's focus on saving lives.

###

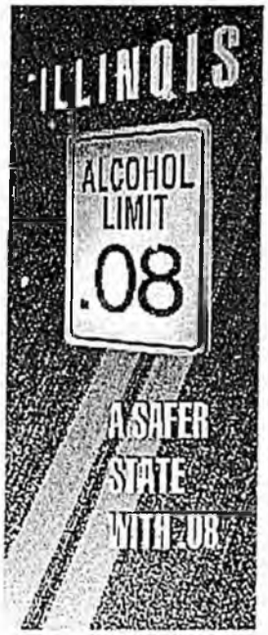
Phone: (907) 463-2562 • Fax: (907) 463-2540 • E-mail: jnumadd@ptialaska.net

THE
FOLLOWING
DOCUMENT(S)
ARE
POOR
ORIGINAL
COPIES

ILLINOIS GATEWAY
Secretary of State's Office
JESSE WHITE • SECRETARY OF STATE

This brochure is also available in PDF format
click here to skip to the download area.

A Safer State With .08



Dear motorist,
The creation of Illinois' new .08 law marks an important milestone in our state's efforts to end drunk driving and improve safety on our roadways.
With this law, Illinois joins a growing number of states that now recognize a blood-alcohol content (BAC) of .08 percent as the level at which all motorists are too impaired to drive. Any person who now drives in Illinois with a BAC of .08 or more risks being charged with Driving Under the Influence (DUI).
Unfortunately, alcohol involvement is still the most common factor in highway deaths and injuries. Only 7 percent of all crashes involve alcohol use, but 41 percent of fatal crashes do.
I pushed for passage of a .08 law because research shows that states with this BAC limit experience a significant decline in alcohol-related crashes, injuries and deaths. They do so primarily because .08 laws make all motorists - even habitual drunk drivers - far more reluctant to drink and drive.
By setting a more sensible limit on the amount of alcohol motorists can consume before driving, I hope we in Illinois also can save lives and spare more families from heartbreaking, needless tragedies.
I encourage you to read this brochure about the .08 law and share this information with your family and friends.

What is .08?

In Illinois, it's the law — the blood-alcohol content at which a person is considered legally drunk. A driver's BAC is determined by the ratio of alcohol to breath or blood and may be measured by a breathalyzer or blood test.
Any person found operating a motor vehicle in Illinois with a BAC of .08 percent or more can be charged with Driving Under the Influence. A DUI arrest triggers an automatic driver's license suspension.
Studies show that .08 laws are a general deterrent to impaired driving and result in a significant decrease in alcohol-related crashes and fatalities.
Experts estimate that as many as 65 lives could be saved each year in Illinois — and thousands of injuries prevented — due to the .08 law.

Is a person really impaired at .08 BAC?

Research shows that critical driving skills are impaired for anyone with a .08 BAC. A driver's attention, comprehension and re-action time are substantially

diminished at .08. Specific skills, such as lane changing, braking and acceleration, also are significantly affected.
At .08, a motorist is 11 times more likely to be killed in a single vehicle crash than a non-drinking driver.

How does the law affect you?

While all drivers have a responsibility to avoid intoxication, .08 does not target the social drinker who may have a couple of drinks after work or a glass or two of wine with dinner.
The new .08 limit encourages people to think twice about getting behind the wheel after they have had too much to drink. Drivers must make responsible decisions about transportation — before they drink — such as using a designated driver or calling a cab.

What are the consequences of a DUI?

Driving Under the Influence is a serious criminal offense with devastating consequences.

- A person caught driving with a BAC of .08 percent or more can be arrested and charged with DUI and will face an automatic driver's license suspension. DUI offenders are handcuffed, booked, finger printed and put in jail.
- Getting a DUI is costly, embarrassing and leaves a permanent blemish on a person's driving record. Bail bond, fines, attorney fees, court costs, increased insurance premiums and alcohol education programs all contribute to the $9,000 average cost to a DUI offender.
- By far, the most devastating con-sequences of DUI are thousands of needless, senseless injuries and deaths. Nationally, more than 17,000 people die each year in alcohol-related crashes, and about 1 million people are injured.

What can you do?

- Think before you drink. Before you begin drinking, choose a designated driver — a person who voluntarily abstains from drinking alcohol and pledges to take everyone home safely.
- If you or someone you know has been drinking, arrange for a taxi or other means of safe transportation home.
- Keep in mind that alcohol impairs judgment. After several drinks you may convince yourself that you can drive safely. Statistics prove otherwise.

Remember...

.08 is a limit at which all motorists are too impaired to drive safely!

Forms/Brochures are provided in PDF (Portable Document Format) files,

which can be viewed or printed using your Web browser and Adobe's Acrobat Reader software. Macintosh and Windows versions of Acrobat Reader may be downloaded free of charge from Adobe.

Get Acrobat Reader Click here to find out how to obtain the Adobe Acrobat Reader.

brochure **"A Safer State With .08" (Being Updated)**

For more information on A Safer State With .08
please call (217) 785-7548
(800) 252-2904(Voice or TTY)

or write
Office of the Secretary of State
Driver Services Department
2701 S. Dirksen Parkway
Springfield, IL 62723

CyberDrive Illinois home page

CyberDrive Illinois ()

State Drunk Driving Laws

The .08 BAC Standard

As of October 2000, 19 states and the District of Columbia have adopted .08 BAC illegal *per se* laws, as the legal level of intoxication in their state. All other states have established .10 BAC as the legal level for drunk driving, with the exception of Massachusetts and South Carolina, which have not adopted illegal *per se* laws.

Illegal *per se* means that a BAC level above the set limit is a violation in and of itself-impairment need not be demonstrated. Note that while Massachusetts has no illegal per se law, it has adopted a .08 administrative *per se* law for the purposes of administrative license revocation.

States with .08 BAC

- **Alabama**
- **California**
- **District of Columbia**
- **Florida**
- **Hawaii**
- **Idaho**
- **Illinois**
- **Kansas**
- **Kentucky**
- **Maine**
- **New Hampshire**
- **New Mexico**
- **North Carolina**
- **Oregon**
- **Rhode Island**
- **Texas**
- **Utah**
- **Vermont**
- **Virginia**
- **Washington**

Sources: Digest of State Alcohol-Highway Safety Related Legislation, US Dept. of Transportation, National Highway Traffic Safety Administration; and Westlaw bill tracking database searches.

.08 BAC Studies

Highway Safety: Effectiveness of State .08 Blood Alcohol Laws
U.S. General Accounting Office
http://www.gao.gov/

.08 BAC: Setting Limits, Saving Lives
National Highway Traffic Safety Administration
US Dept. of Transportation

Evaluation of the Effects of North Carolina's .08 BAC Law (PDF Download)
Highway Safety Research Center

University of North Carolina

Visitor counts for this page.

National Conference of State Legislatures
INFO@NCSL.ORG (autoresponse directory)

Denver Office:
1560 Broadway, Suite 700
Denver, CO 80202
Tel: 303-830-2200
Fax: 303-863-8003

Washington Office:
444 North Capitol Street, N.W., Suite 515
Washington, D.C. 20001
Tel: 202-624-5400
Fax: 202-737-1069

Traffic Tech

NHTSA People Saving People www.nhtsa.dot.gov

Technology Transfer Series

Number 232 September 2000

AN EVALUATION OF THE .08 PER SE LAW IN ILLINOIS FINDS 13.7 PERCENT FEWER FATAL CRASHES WITH POSITIVE BACS

As of August 2000, 19 states plus the District of Columbia and Puerto Rico have enacted .08 *per se* laws. These laws make it illegal to drive with a blood alcohol concentration (BAC) at or above .08 percent. Several studies have been conducted evaluating the effectiveness of .08 laws. The preponderance of the evidence has demonstrated that .08 leads to a reduction in alcohol-related fatalities, especially when implemented in concert with a strong publicity campaign and highly visible enforcement.

One concern that has been voiced about the legislation is that it would lead to more DWI arrests (since now people with BACs in the .08 to .10 range are more likely to be arrested), and that additional arrests would overburden the criminal justice system.

As several states are considering legislation to lower their current .10 *per se* limit to .08, more information is needed on both the effectiveness of .08 legislation and the impact of the law on the enforcement and court systems.

The Pacific Institute for Research and Evaluation conducted a study for the National Highway Traffic Safety Administration (NHTSA) to examine Illinois' .08 *per se* law. The law became effective on July 2, 1997.

Evaluation of the Law

To determine the impact on alcohol-related crashes, the researchers conducted time series analyses using NHTSA's Fatality Analysis Reporting System (FARS) data. The FARS contains data about every reported motor vehicle traffic crash in the United States that involves a fatality.

Alcohol positive drivers involved in fatal crashes in the years 1988 through 1998 were analyzed. For comparison, the same time series analytic approach was used with data from five adjacent states (Indiana, Iowa, Kentucky, Missouri, and Wisconsin), all of which have .10 laws. In each case, the trend for nondrinking drivers involved in fatal crashes in the same period was entered as a covariate to reduce the influence of factors

that are unrelated to drinking and driving (such as the number of vehicle miles driven).

Site visits were made to three communities to learn whether the .08 law caused any problems for local agencies. Police officers, prosecutors, judges, licensing agency representatives, and others were interviewed in Chicago, Peoria, and Springfield.

Alcohol-Related Fatalities Decline 13.7 Percent

The number of drivers with positive BACs (BAC>.00) in fatal crashes decreased 13.7 percent in Illinois after implementation of the .08 law. This is a statistically significant reduction, and included drivers at both low and high BACs. There were no significant changes in alcohol-related fatalities in the surrounding states during this time. The researchers estimated that the .08 law may have saved 47 lives in Illinois in 1998. The 13.7 percent reduction in Illinois is higher than typically has been found in other studies of the effects of .08 laws. It is likely, however, that the greatest effects of a new law are realized when it is first implemented. The effects may decrease in later years. This question will be addressed with additional analyses of the Illinois data in 2001.

Between 1996, the last full year before the .08 law, and 1998, Driving Under the Influence (DUI) arrests increased 11 percent in Illinois. The percentage of arrests involving drivers with BACs in the .08 to .09 range also increased, from less than 1 percent of all DUIs to 8 percent of DUI arrests.

Law Enforcement Officers' Perspective

Law enforcement officers did not express any major concerns about the new law, other than saying that arrest forms need to be revised and breath testing machines need to be recalibrated. Some officers expressed confusion over whether the Standardized Field Sobriety Test (SFST) is valid at .08, since it had originally been validated at the higher .10 level. The SFST is valid at .08 BAC, and NHTSA validated it for this BAC level (see *Traffic Tech* 196, March 1999). Law enforcement agencies were not overwhelmed with new arrests, and many officers said they felt more confident making arrests that used to be considered borderline at the .10 to .12 BAC levels.

Interestingly, officers said they thought that the number of persons who refused to submit to chemical testing increased, but the number of refusers actually decreased slightly.

Prosecutors' and Judges' Perspectives

Prosecutors and judges did not report any change in policies or procedures related to the .08 law. Like the police, they also reported a *"lowering of the bar"* with .10 cases no longer seen as being borderline. These cases are now challenged less often by defense attorneys.

BAC at Time of Arrest Averages .16

Persons in the sanctioning system (jail, probation, licensing office, treatment programs) reported no significant changes due to the new law. As

the average BAC at time of arrest is .16 BAC (it was .18 prior to the .08 law). the number of administrative license hearings has been relatively unaffected by the .08 law.

Conclusions

Based on only a year and a half of experience, alcohol-related fatalities decreased 13.7 percent after implementation of the .08 *per se* law in Illinois. These data suggest that the law has had an impact in the state and has saved a significant number of lives. No major problems were reported by the local law enforcement or sanctioning systems. NHTSA will analyze the fatality data again in a year to determine the longer term impact of the .08 law.

HOW TO ORDER

For a copy of ***Effectiveness of the Illinois .08 Law*** (39 pages), write to the Office of Research and Traffic Records, NHTSA, NTS-31, 400 Seventh Street, S.W., Washington, DC 20590 or send a fax to (202) 366-7096, or download from *www.nhtsa.dot.gov* Amy Berning was the contract manager for this project.

U.S. Department
of Transportation
National Highway
Traffic Safety
Administration
400 Seventh Street, S.W. NTS-31
Washington, DC 20590

Traffic Tech is a publication to disseminate information about traffic safety programs, including evaluations, innovative programs, and new publications. Feel free to copy it as you wish. If you would like to receive a copy contact:
Linda Cosgrove, Ph.D., Editor, Evaluation Staff
Traffic Safety Programs
(202) 366-2759, fax (202) 366-7096
E-MAIL: lcosgrove@nhtsa.dot.gov

Subject: .08 DWI Legislation
Date: Wed, 28 Feb 2001 16:11:16 -0900
From: "Mann, Don" <DMann@ci.anchorage.ak.us>
To: "'Janet_Seitz@legis.state.ak.us'" <Janet_Seitz@legis.state.ak.us>

Janet -

I do not have all the legislators e-mail addresses and would ask your assistance: Please pass this message on to all legislators.

There seems to be continuing ignorance on the part of the legislature regarding the impairment effects of alcohol, how much (or how little) alcohol causes impairment, how alcohol impairment really interacts with a driver's ability to safely drive a car, just what .08 or .10 really means, and how effective our laws really are. These facts or perceptions have been made very clear by the idea that DWI violators who are between .08 and .10 would be considered as somehow less of a threat or hazard to the rest of the driving population and therefore, if convicted, should have a sentencing diversion eliminating the mandatory 3 day jail sentence (which really isn't jail if served in a halfway house or Palmer Bed & Breakfast!).

I am an APD officer with 18 years experience, currently assigned as a full time staff instructor at the APD Training Center. I have been qualified as an expert witness in the physiological effects of alcohol, DWI Detection and Standardized Field Sobriety Tests, Breath Alcohol Testing, and Police Officers' training. I have testified as an expert witness in the courts of Alaska in these areas in DWI Trials 200-300 times over the last 14 years.

I will be conducting DWI Detection and Standardized Field Sobriety Test training and Breath Alcohol Test training at the APD Academy the week of March 12-16, 2001. There will be two drinking clinics like the one I did in November for the legislators at Rep. Rokeberg's request, on Wednesday, March 14 and Friday, March 16. I invite any and all legislators (or anyone else) who truly are interested in learning more about the effects of alcohol and who want to be able to make informed decisions about DWI laws, which will have significant ramifications on our society, to attend either session, either as an observer or as a drinker. Please contact me with any questions regarding the training or the real and practical matters and facts about the effects of alcohol on drivers.

Officer Donald Mann
Anchorage Police Department Training Center
3760 W. Dimond Blvd.
Anchorage, Alaska 99515
343-6407
762-0829 pager

> ----------
> *From:* *James Gay*
> *Reply To:* *james_gay@correct.state.ak.us*
> *Sent:* *Tuesday, February 27, 2001 6:02 PM*
> *To:* *Tom McGrath; Susan Niman; Sam O'Connor; Ronald F Taylor; Ron Greene;*
> *Ralph/Mae Robateau; Ralph Robateau; Marti Greeson; Marcia Rom; Judith G*
> *Kalles; Jim Crary; Jessie Kullberg; Donald Mann; Don Mann; Diana Hudson;*
> *Colleen Ackerman; Bruce Roberts; Brandy L Warnock; Robert Lane*
> *Cc:* *Lori J. Taylor; Beth A Imig; Timothy M Astle; Jason J Allen; Howard*
> *S Graves; Christy L Flintoff; Billy L Houser; Precyous P Council; Roger B*
> *Rom; Andy Brennen; Bob Bailey; Caralyn Holmes; Carrie Longoria; Colleen C*
> *Tafs; David Paperman; Garry Gilliam; John (J.R.) Richard; Kathy Shanti;*
> *Ken Cole; Lori Varick; Michael D Gimm; Pete Potter; Rhonda J Lundborg;*
> *Robert Young; Timothy Sullivan; walt monegan*
> *Subject:* *FW: .08 Legislation*

> FYI info, to all those watching alcohol legislation. j.g.
>
> -----Original Message-----
> From: MADD Anchorage Chapter [mailto:madd@corecom.net]
> Sent: Friday, February 23, 2001 1:33 PM
> To: James_Gay@correct.state.ak.us; Ronald_Taylor@health.state.ak.us
> Subject: Fw: .08 Legislation
>
>
>
> Passing on information.
>
> Marti
> ----------
> From: David W. Rochford <rochfor@concentric.net>
> To: MADD Anchorage Chapter <madd@corecom.net>
> Subject: Fw: .08 Legislation
> Date: Friday, February 23, 2001 10:32 AM
>
> Marti,
> FYI here's Pete Kott's response to my letter.
> Dave
> ----- Original Message -----
> From: Pete Kott
> To: David W. Rochford
> Sent: Friday, February 23, 2001 9:54 AM
> Subject: Re: .08 Legislation
>
>
> Dave,
> Thanks for the email regarding .08. The diversion idea is part of Rep.
> Rokeberg's bill that deals with DWI.s. I have also introduced a bill that
> reduces the blood alcohol level to .08 without the d version. I will
> bring
> your concerns to the attention of others. Appreciate you taking the time
> to bring this matter to my attention.
>
> Sincerely,
>
>
> Pete
>
> "David W. Rochford" wrote:
>
> Pete,I'm a constituent, APD officer with 29 years of law enforcement
> experience, 19 year Eagle River resident, and very concerned citizen when
> it comes to DWI enforcement, having seen the devastating results of
> impaired drivers over the years.I'm writing now concerning the bill to
> lower the presumptive level of intoxication to .08. I understand that the
> bill has been worded so DWI drivers between .08 and .10 will have a
> sentencing diversion which eliminates the mandatory 3 day jail sentence.
> This would be a serious mistake. Eliminating the jail sentence would in
> effect make the new law weaker than the current law. As the law reads
> today, we can convict (and do convict) .08 to .10 drivers of DWI if we can
> show impairment. The bill would lower the penalties for this group of
> violators. It's also worth noting that the class of DWI's between .08 and
> .12 are the most dangerous drivers because they are mentally impaired, but
> not so drunk that they understand that they are impaired. This is the
> group that runs red lights at 20 mph over the speed limit.I can assure you
> that nearly every DWI driver on the road thinks he's either sober or under
> .10 when they start to drive. I commonly see in custody DWI's confident
> that they'll be under .10 and show a state of disbelief when they see the

> breath test result of say .15 or whatever the result is. If this law
> passes as worded, it will send a signal to every impaired driver that it's
> safe to drive because even if caught, there will only be a fine or
> whatever
> the bill states the punishment will be. I urge the legislature, in the
> strongest terms, to reconsider this part of the bill. This bill will
> increase the danger on our streets and make the job of law enforcement
> much
> more difficult. Alaska has one of the worst (2nd in the nation according
> to one study I been informed of) alcohol problems in the country. We need
> serious and strict laws to stop the carnage on our streets. It would be
> better for the community to leave the law as is rather than have the
> proposed bill passed into law. Eliminating the jail sentence for some
> offenders will make our bad situation worse.Dave Rochford
> Anchorage P.D.
>

DRIVEN
Fall 1998

Table of Contents

How May Bites of the Apple Do We Give Convicted Drunk Driving Offenders?

By Brandy Anderson
MADD National Assistant Director of Public Policy

PUBLIC POLICY

New Study Proves Effectiveness of Maine's .05 Blood Alcohol Limit For Convicted Drunk Driving Offenders

Related links

- Personal, memorial or honorary donations to MADD
- MADD's corporate sponsors

Julian Ptacin was only 14 years old in October 1997 when a hard-core drunk driver with a persistent disregard for human life barreled into the family car and killed him. Julian's father, Phillip, a physician, held him at the side of the road as his life slipped away.

The drunk driver was a three-time convicted, repeat offender. He was convicted of second-degree murder in Julian's death and sentenced to serve at least eight years in prison.

Today, the Ptacins are MADD members. Julian's mother, Maria, a restaurant owner, is the Public Policy Liaison for MADD, Michigan. She's leading the charge in Michigan to pass bills that crack down on repeat offenders and lower the illegal blood alcohol content (BAC) limit to .08 percent.

Julian's death is one of 16,189 such tragedies that shattered families nationwide in 1997 when their loved ones were killed in alcohol-related traffic crashes. Drunk drivers also injured more than one million others last year.

A 1994 study found that fatally-injured drivers in alcohol-related crashes were eight times more likely to have had DUI/DWI convictions in the previous five years than drivers randomly selected from the general population of licensed drivers. However, a study published in the September/October 1998 issue of Public Health Reports suggests a promising new approach for controlling the menace of convicted drunk driving offenders. The study shows the effectiveness of a Maine law lowering the illegal BAC limit from .10 percent to .05 for people previously convicted of drunk driving.

Repeat drunk driving offenders are among the most stubborn, persistent, and deadly threats on U.S. roads. They continue to commit the violent crime of drunk driving despite punishment and efforts to rehabilitate them. Whatever sanctions the court system imposed upon them the first time didn't work, yet the law continues to apply the same illegal BAC limit to them that applies to drivers without drunk driving convictions. Repeat drunk driving offenders get another bite from the same apple, which repeatedly has produced fatal consequences.

Repeat drunk drivers account for about one-third of DUI arrests annually and

10 to 20 percent of drinking drivers in fatal crashes. They're over-represented in fatal alcohol-related crashes, although not responsible for the majority of them. Their behavior is difficult to affect. Many have alcohol problems. They tend to be more aggressive and hostile than other drivers, they don't view drunk driving as a serious issue, and they rarely feel too impaired to drive.

It's a daunting challenge to reduce recidivism among repeat drunk driving offenders while also deterring all drivers from drinking and driving. No single law is the "silver bullet" solution to America's drunk driving problem. The nation needs a comprehensive legislative strategy consisting of innovative and scientifically proven solutions that target each segment of the population. Effective enforcement of all drunk driving laws is also critical.

Over the last two years, the fight to lower the illegal BAC limit to .08 in every state has generated tremendous debate, publicity and public support. A 1996 study conducted by Dr. Ralph Hingson of Boston University's School of Public Health and published by the American Journal of Public Health, proved that .08 BAC laws reduced by 16 percent the proportion of crashes with a fatally injured driver whose BAC level was .08 or higher.

The 1996 Hingson study also shows that .08 BAC limits are even more effective at deterring drivers at high BAC levels. The study revealed an 18 percent reduction in the proportion of crashes involving fatally injured drivers with BAC levels of .15 and higher.

Now, a new study on the Maine law shows that lower-BAC laws for convicted drunk driving offenders may substantially reduce their involvement in alcohol-related fatal traffic crashes. This research supports lowering BAC levels to combat repeat offenders.

In 1988, Maine adopted a .05 BAC limit for convicted DUI offenders. Under the law, drivers with a previous drunk driving conviction who are subsequently arrested for violating the lower BAC limit will have their licenses suspended immediately. To assess the effectiveness of the Maine law, Ralph Hingson, Sc.D., conducted a study with Timothy Hereen, Ph.D., and Michael Winter, MPH of the Boston University School of Public Health.

In the six years after Maine reduced the illegal BAC limit from .10 to .05 for convicted offenders, the proportion of fatal car crashes involving such drivers dropped by 25 percent. Meanwhile, the rest of New England experienced a whopping 46 percent increase in the proportion of fatal crashes involving this type of offender.

Maine was the first state to adopt the .05 BAC limit for drivers with previous convictions and the benefits appear to be substantial. The law was associated with reductions in fatal crash involvement not only among drivers with BAC levels in the .05 to .14 range but particularly among those with BAC levels at or above .15. The researchers who conducted this new study recommend that all states consider .05 BAC limits for convicted DUI offenders.

Maine has continued cracking down on repeat DUI offenders. With the .05 BAC law producing great results, in 1995 Maine become the first state to pass a zero tolerance law for convicted offenders, making it illegal for them to drive after drinking any alcohol.

More than one million people are arrested annually for drunk driving. It's estimated that DUI offenders drove drunk 200 to 2,000 times before they were arrested the first time.

MADD has long supported a .08 BAC illegal limit for adult drivers. In the past, this illegal BAC level has applied to first offenders and repeat offenders. But

the Maine law suggests that a lower illegal blood alcohol level should be applied to offenders with a prior conviction than to drivers who haven't previously violated drunk driving laws. Why should we give repeat offenders "more bites of the apple" when they've shown that they couldn't handle the first, second, third or fourth bites and more?

Last year in this country, there were two alcohol-related traffic deaths per hour, 45 per day and 315 per week. That's the equivalent of two jetliners crashing with no survivors weekly. The public outcry for action to prevent this violent crime should be deafening.

Lawmakers must pass progressive sanctions to stop people who continually drink and drive. We must target specific populations - such as convicted and repeat offenders - with specific deterrent legislation while also focusing on general deterrent measures such as .08 BAC. The newest study on Maine's .05 law points to one important element of the comprehensive solution to drunk driving in America.

For a copy of the Maine study, "Effects of Maine's 0.05% Legal Blood Alcohol Level for Drivers with DWI Convictions," *Public Health Reports*, September/October 1998, Volume 113, 440-446, contact MADD's National Public Policy Department.

Volunteers: the Heart and Soul of MADD | Volunteer Profiles | President's Letter | Repeat Offenders | Zero Tolerance laws | MADD's Youth In Action on Zero Tolerance | Grassroots: Hula Hoops | Youth Awareness: Brain 101 | wwweb Watchers | Guidant's Light | Business Sense | An Honorable Cause | star-appeal.shtml | Victims Issues: Panel Discussions | Ways to Support MADD
DRIVEN homepage

Teaching Drivers About the Costs of Drinking

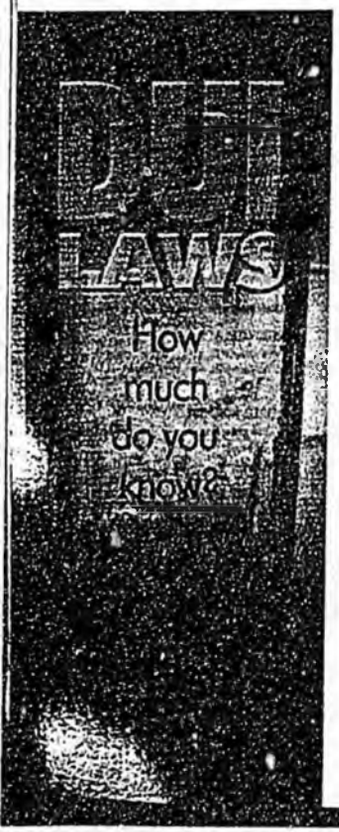
A recent national survey by The Century Council revealed that 70 percent of Americans don't know the legal blood alcohol content (BAC) limit for their state.

The Century Council is a national not-for-profit organization funded by leading alcohol beverage distillers. The goal of the survey was to raise public awareness of BAC laws and alcohol's effect on drivers.

States have traditionally relied on public service campaigns to increase driver awareness of the dangers of drinking and driving. The National Highway Traffic Safety Administration, Mothers Against Drunk Driving and other traffic safety advocates have provided public service advertisements for print media and television aimed at reducing drunk driving, and such campaigns are considered successful.

But the results of The Century Council's survey show that more needs to be done to educate the driving public.

A number of states are using innovative means to inform drivers about drunk driving laws and penalties.



The New Hampshire legislature passed a law in 1997 that requires first-time applicants for a driver's license be told about the state's BAC limits, the penalties for violating the laws or refusing a breath test, the fees to have a license reinstated and the sanctions for unlawful possession or consumption by minors. To make sure the word gets out, New Hampshire has developed several brochures, including one called "What's the Cost for You?" which is available online and also in booklet form. The brochure is geared toward younger drivers, but covers the basics of drunk driving laws for all drivers. Few states currently provide any drunk driving information at the time of licensing.

Illinois has also issued a booklet through the secretary of state's office describing the state's drunk driving laws and penalties. "Sobering DUI Laws: How Much Do You Know?" is a comprehensive overview of the basic laws and describes related DUI offenses, such as aggravated DUI, child endangerment, driving on a revoked or suspended license, and vehicle impoundment and seizures. The booklet also covers the criminal penalties that may result, including fines and prison sentences.

States are also using the Internet to educate the public. Although most states have basic driver's licensing information online, a few are using their Web sites to spread the word about drunk driving laws and penalties.

New Jersey's Motor Vehicle Services office has developed an on-line overview of the state's point system and includes the penalties for violating drunk driving laws. As a state with some of the most severe penalties for drunk driving and related offenses, New Jersey has found advertising those penalties an effective means of reducing drunk driving.

Michigan's Department of State has also used its Web site to cover the state's new drunk driving laws and provide consumers with easy-to-understand overviews of the vehicle, traffic and licensing laws. Michigan enacted a major reform of its drunk driving laws during 1999, and the state has devoted much effort to informing citizens of the new requirements and penalties.

For more information about The Century Council survey, visit its Web site at http://www.centurycouncil.org.

Alligators in West Virginia?

What do dead chickens and hungry alligators have in common?

Well, at least in West Virginia, both may become lucrative.

The West Virginia Legislature gave the state Department of Agriculture $60,000 this spring to develop an experimental alligator farm in the Eastern Panhandle of the state—near the area's largest cluster of poultry farms.

Since the large, scaly reptiles relish chickens and avian parts, they can help dispose of the dead ones. Add to this that alligator skins bring in revenue. The skin from a four-foot alligator is worth between $75 and $80, although it takes about 18 months for a 'gator to grow to that size. The 65 alligator farms in Louisiana produce about 200,000 hides a year.

The giant lizards also produce a bland, white meat considered a delicacy that can bring from $5.50 to $6 a pound, according to alligator specialist Mark Shirley.

Delegate Harold Michael, chairman of the finance committee, was a legislative supporter of the pilot program. He represents an area that has a number of large poultry farms. "I certainly support the idea. We're always looking for innovative ways to solve the problems associated with farm operations, whether it's livestock or poultry."

At the moment, dead chickens in the area where the farm is planned are put through a processing machine that uses microbes to break the carcasses down into fertilizer. Although the machine is useful, points out Agriculture Commissioner Gus Douglass, it doesn't bring in the potential revenue alligator farming will.

"It's a project we need to get started on right away," he said.

Home
News
Supporting MADD
Find Your Chapter
Links
DRIVEN magazine

Search site:
Submit

About MADD
Victim's Assistance
Under 21
Programs
Public Policy
Store
Calendar
Hot Issues

hot issues

.08 BAC: The Facts

.08 Means Dangerous Impairment

- An average 170-pound man must have four drinks in one hour on an empty stomach to reach a .08 percent blood alcohol concentration (BAC) level. A 137-pound woman would reach .08 BAC after about three drinks in an hour on an empty stomach (National Highway Traffic Safety Administration) - a level that exceeds what is commonly accepted as social drinking.

- Regardless of how much alcohol it takes to get to this level, at .08 BAC any driver is a dangerous threat on the road. .08 BAC is the level at which the fatal crash risk significantly increases and virtually everyone is seriously impaired, affecting all of the basic critical driving skills including: braking, steering, lane changing, judgment and response time (NHTSA).

- The risk of a driver being killed in a crash at .08 BAC is at least 11 times that of drivers without alcohol in their system. At .10 BAC the risk is at least 29 times higher (Zador).

- More than 20 percent of alcohol-related traffic deaths involve BAC levels below .10 percent (NHTSA).

.08 Saves Lives

- If every state passed a .08 BAC law, about 500 lives would be saved each year (Hingson, et al).

- .08 BAC is a proven effective measure to reduce alcohol-related traffic deaths. Studies have shown a 6 to 8 percent reduction in alcohol-related traffic deaths in states following the passage of .08 BAC (MADD).

A Sanctions Approach Needed for a Uniform .08 Law

- 32 states still define intoxicated driving as .10 BAC -- the most lenient definition of drunk driving in the industrialized world. Currently, only 18 states and the District of Columbia comply with the law (AL, CA, FL, HI, ID, IL, KS, KY, ME, NH, NM, NC, OR, TX, UT, VT, VA and WA). The BAC level is .08 in Canada, Austria, Great Britain and Switzerland.

- The .08 BAC provision in the Senate passed version of the transportation appropriations bill mirrors the same approach taken by "states rights" leader President Reagan and Congress in 1984 to establish the national uniform 21 minimum drinking age law. This law saves about 1,000 lives each year (NHTSA).

- Since 1998, only two states have passed .08 BAC laws under the current incentive grants approach. With heavy opposition from the alcohol industry, MADD, Advocates for Highway and Auto Safety and insurance, auto, medical, consumer and safety groups stress that a sanctions approach is needed to make .08 the law of the land.

- Seventy percent of Americans support lowering the illegal drunk driving limit to .08 BAC (independent public opinion poll released in 1998 by Allstate Insurance and MADD)

policy@madd.org

About MADD | Victims' Assistance | Under 21 | Programs | Public Policy | MADD's Guide to Congress | Store | Calendar | Hot Issues | News | Become a Member | Find Your Chapter | Statistics | MADD Chat | Donate to MADD | MADD Homepage

MADD.
Mothers Against Drunk Driving

© Mothers Against Drunk Driving. All rights reserved.

STATE LEGISLATIVE
FACT SHEETS

January 2001

State Legislative Fact Sheets Menu: Bicycle Helmet Use Laws

US Department of Transportation
National Highway Traffic Safety Administration

NHTSA
People Saving People
http://www.nhtsa.dot.gov

.08 BAC Illegal *Per Se* Level

It is illegal *per se* to drive a motor vehicle with a blood alcohol concentration (BAC) at or above a specified level in all but one state in the U.S. The customary level in most states has been .10 BAC for drivers aged 21 and above, although 19 states, the District of Colombia and Puerto Rico now have set a lower level of .08 BAC. In a 1992 Report to Congress, NHTSA recommended that all states lower their illegal *per se* level to .08 for all drivers 21 years of age and above.

In 1998, as part of the Transportation Equity Act for the 21st Century (TEA-21), a new Federal incentive grant program was created to encourage states to adopt a .08 BAC illegal *per se* level.

Most recently, Congress passed .08 BAC as the national standard for impaired driving as part law providing appropriations to the U.S. Department of Transportation's for Fiscal Year 2001 (Public Law 106-346 which incorporated HR 5394). States that do not adopt .08 BAC by October 1, 2003, would have 2% of certain highway construction funds withheld each year, with the penalty increasing to 8% by FY 2007. States adopting the standard by 2007 would be reimbursed for any lost funds. The bill was signed it into law on October 23, 2000.

Key Facts

- In 1999, 38 percent of the 41,611 motor vehicle deaths were alcohol-related. This

translates to 15,736 alcohol-related motor vehicle deaths in that year and represents an average of one alcohol-related fatality every 33 minutes.

- Over 80 percent of drivers involved in fatal crashes with positive tests for alcohol had levels exceeding .08 BAC.

- n A new, comprehensive NHTSA laboratory study provides what is perhaps the clearest laboratory evidence to date of the significant impairment that exists in driving-related skills at .08 BAC. In addition, this study finds that impairment exists in relative equal level among all age groups, sexes, and drinker types.

- Another reason for supporting .08 BAC laws is because these laws are effective in reducing alcohol-related fatal crashes. At least nine independent studies have been conducted, covering nearly all of the states that have enacted .08 BAC laws. These studies have consistently shown that .08 BAC laws are associated with reductions in alcohol-related fatalities, particularly in conjunction with administrative license revocation (ALR) laws, already in place in 40 states.

- NHTSA released four new comprehensive studies of the effectiveness of .08 BAC laws. These studies found consistent and persuasive evidence that .08 BAC laws are associated with alcohol-related fatal crashes. The most recent, a study of the effectiveness of a .08 BAC law implemented in Illinois in 1997, found that the .08 law was associated with a 13.7 percent decline in the number of drinking drivers involved in fatal crashes. The reduction included drivers at both high and low BAC levels. This is significant because critics of .08 BAC laws have often claimed that they do nothing to affect high BAC drivers. The study also found that there were no major problems reported by local law enforcement or court systems.

- A 1999 report by the U.S. General Accounting Office (GAO) reviewed the studies available at that time and found *strong indications that .08 BAC laws, in combination with other drunk driving laws (particularly license revocation laws), sustained public education and information efforts, and vigorous and consistent enforcement, can save lives.* The GAO report also concluded that a .08 (BAC) law can be *an important component of a state's overall highway safety program.*

- Recently (2000), another study was released by a Boston University research group. This study found an overall 6 percent impact of the law in six states with enacted .08

BAC laws in 1993 and 1994.

- The .08 BAC limit is reasonable and has the potential for saving hundreds of lives and reducing thousands of serious injuries each year on the highways if implemented by all states.

Why .08?

The research is clear. Virtually all drivers, even experienced drinkers, are significantly impaired at .08 BAC. As early as 1988, a NHTSA review of 177 studies clearly documented this impairment. NHTSA has recently released a review of 112 more recent studies. This review provided additional evidence of impairment at .08 BAC. The results of the nearly 300 studies reviewed have shown that, at .08 BAC, virtually all drivers are impaired with regard to critical driving tasks such as divided attention, complex reaction time, steering, lane changing, and judgment.

The risk of being involved in a crash increases substantially by .08 BAC. The risk of being in a crash gradually increases at each BAC level, but rises very rapidly once a driver reaches or exceeds .08 BAC compared to drivers with no alcohol in their blood systems. Recent research by NHTSA indicates that between .08 and .10, the relative risk of a fatal single vehicle crash varied between 11% (for drivers 35 and older) and 52% (male drivers age 16-20).

Lowering the per se limit is a proven effective countermeasure which will reduce alcohol-related traffic fatalities, especially when combined with an administrative license revocation (ALR) law. There was a 12 percent reduction in alcohol-related fatalities in California in 1990, the year .08 and an administrative license revocation law went into effect. The decrease in alcohol-related fatalities occurred at both high and low BAC levels, including even drivers with BACs of .20 or greater. A 1996 study at Boston University showed that states adopting .08 laws experienced 16 percent and 18 percent post-law declines in the proportions of fatal crashes involving fatally injured drivers whose BAC levels were .08 or higher and .15 or higher, respectively. Two recent national analyses concluded that .08 laws have reduced alcohol- related fatalities in several states that have adopted them. One of the studies estimated that 275 lives were saved in 1997 in states with .08 laws. It was estimated that an additional 590 lives could have been saved in 1997 if all states had adopted .08 laws.

The public supports a .08 BAC level. Surveys conducted by NHTSA show that most people would not drive after consuming two or three drinks in an hour. Recent polls show that 2 out of every 3 Americans favor lowering the limit to .08 when they are aware of how much alcohol it takes to reach that level.

Most other industrialized nations have set BAC limits at .08 or lower and have had these laws in effect for many years. For example, Canada, Great Britain, Austria, and Switzerland have .08 illegal per se laws. Norway, France and Australia have .05 BAC illegal per se laws, and Sweden's BAC level is at .02.

Point-Counterpoint

States considering .08 legislation should review all the facts, including the rationale behind .08 and the potential impact on alcohol-related deaths. Opposition to .08 legislation generally includes the following claims:

- ***Point:*** The U.S. General Accounting Office (GAO) has recently conducted a crital review of the .08 studies and has concluded that these laws are not effective in reducing alcohol-related fatalities.

- ***Counterpoint:*** This statement is not correct! The GAO report stated that there are *"strong indications that .08 BAC laws in combination with other drunk driving laws (particularly license revocation laws), sustained public education and information efforts, and vigorous and consistent enforcement can save lives"* (p2).

- ***Point:*** ".08 BAC legislation will not affect problem drinker drivers who have high BAC levels."

- ***Counterpoint:***. The latest research shows that .08 laws not only reduce the incidence of impaired driving at lower BACs, they also reduce the incidence of impaired driving at higher BACs (i.e., over .10). A .08 law serves as a general deterrent to all drinking and driving. It sends a message that the state is getting tougher on impaired driving, and it makes many people think twice about getting behind the wheel after they've had too much to drink. A .08 law is a key component of an overall program to reduce impaired driving. While problem drinkers do account for a significant part of the problem, most fatally injured drinking drivers (70-80%) have no prior alcohol-related offenses.

- ***Point:*** .08 BAC laws make criminals out of normal social drinkers.

- ***Counterpoint:*** Impairment and crash risk are the issues - not how many drinks it may take to get to .08 BAC. Scores of studies have been conducted which indicate that at .08 BAC, virtually everyone is impaired in important skills related to driving and that the risk of being involved in a fatal crash is many times greater that at .00 BAC.

- ***Point:*** ".08 is just the first step toward even lower BACs and eventually another attempt at prohibition."

- ***Counterpoint:*** The notion that safety organizations seek a return to prohibition is unfounded. Although there is strong research evidence that driving-related skills begin to deteriorate below .08 BAC, most safety advocates have adopted .08 BAC as a reasonable and acceptable compromise that will save lives, prevent injuries and reduce costs to society.

- ***Point:*** .08 BAC laws will overwhelm police and clog the criminal justice system.

- ***Counterpoint:*** Two studies have looked at the impact of .08 BAC laws on enforcement efforts and the criminal justice system. These studies have not found any significant problems for the police or for the court systems.

Section 163 of 23 U.S.C.

Section 163 of the Transportation Equity Act for the 21st Century (TEA-21) created incentive grants for states enacting and enforcing a qualifying .08 BAC illegal per se law.

To be eligible for a grant under 23 U.S.C. Section 163, a state's law must meet six basic elements:

- It must apply to all drivers.

- It must set a BAC level of no more than .08.

- It must establish driving at .08 BAC as an illegal per se offense.

- It must provide for primary enforcement of the law (rather than requiring probable cause that another violation had been committed before allowing enforcement of the .08 BAC law).

- It must apply to the criminal code and, in states with administrative license revocation (ALR) laws, to the ALR law as well.

- It must be deemed to be equivalent to the state's standard "driving while intoxicated" offense.

Section 163 Incentive Grant Terms

Grant funds can be used for highway safety and highway construction projects. No state matching funds are required for these grants.

A total of $500 million has been authorized for this grant program: $55 million in FY 1998, $65 million in FY 1999, $80 million in FY 2000, $90 million in FY 2001, $100 million in FY 2002, and $110 million in FY 2003.

New Penalty Program

As mentioned previously, Congress passed .08 BAC as the national standard for impaired driving as part of the Transportation spending bill (October 2000). States that do not adopt .08 BAC by October 1, 2003, would have 2% of certain highway construction funds withheld each year, with the penalty increasing to 8% by FY 2007. States adopting the standard by 2007 would be reimbursed for any lost funds. The bill was signed it into law on October 23, 2000.

Information Sources

Effectiveness of the Illinois .08 Law, Robert Voas et.al., September 2000, (in press, available on NHTSA website www.nhtsa.dot.gov/people/injury/reserach).

On DWI Laws in Other Counties, Kathryn Stewart, March 2000, DOT HS 809 037.

Relative Risk of Fatal Crash Involvement by BAC, Age, and Gender, Paul Zador and Sheila Krawchuk of Westat, Inc., and Robert B. Voas of Pacific Institute for Research and

Evaluation, April 2000, DOT HS 809 050.

A Review of the Literature on the Effects of Low Doses of Alcohol on Driving-Related Skills, Herbert Moskowitz and Dary Fiorentino, April 2000 DOT HS 809 028

Driver Characteristics and Impairment at Various BACs, Herbert Moskowitz et al., Southern California Research Institute, April 2000, DOT HS 809 075

The Relationship of Alcohol Safety Laws to Drinking Driver in Fatal Crashes, Robert Voas and A. Scott Tippetts, September 1999, DOT HS 808 980.

The Effects of .08 BAC Laws, Robert Apsler, A.R. Char, and Wayne M. Harding, Rainbow Technology, and Terry M. Klein, NHTSA, March 1999, DOT HS 808 892.

Evaluation of the Effects of North Carolina's .08% BAC Law, Robert Foss, J.Richard Stewart, and Dadd W. Reinfurt, UNC Highway Safety Research Center, March 1999, DOT HS 808 893.

Effectiveness of State .08 Blood Alcohol Laws, General Accounting Office (GAO) Report to Congressional Committees, June 1999, GAO/RCED-99-179.

Presidential Initiative for Making .08 BAC the National Limit: A Progress Report, NHTSA, November 1999, DOT HS 808 000.

Presidential Initiative for Making .08 BAC the National Limit, Recommendations from the Secretary of Transportation. NHTSA, August 1998, DOT HS 808-756.

Setting Limits, Saving Lives: The Case for .08 BAC Laws. National Safety Council and NHTSA, revised December 1999, DOT HS 808 524.

Validation of the Standardized Field Sobriety Test Battery at BACs Below 0.10 Percent, Jack W. Stuster and Marcelline Burns, Anacapa Sciences, Santa Barbara, CA, August 1998, DOT HS 808 839.

Detection of DWI at BACs Below 0.10 Percent, Anacapa Sciences, September 1997, DOT HS 808 654.

"Lowering State Legal Blood Alcohol Limits to .08%: The Effect on Fatal Motor Vehicle

Crashes." Hingson, Ralph, Timothy Heeren, and Michael Winter, *American Journal of Public Health*, Vol. 86, No. 9., September 1996.

The Impact of Lowering Illegal BAC Limit to .08 in Five States in the U.S., Delmas Johnson and James Fell, NHTSA, 39th AAAM Proceedings, 1995.

Driving Under the Influence: A Report to Congress on Alcohol Limits. NHTSA, October 1992, DOT HS 807 879.

Alcohol Limits for Drivers: A Report on the Effects of Alcohol and Expected Institutional Responses to New Limits. NHTSA, April 1991, DOT HS 807 692.

"Alcohol-Related Relative Risk of Fatal Driver Injuries in Relation to Driver Age and Sex." Paul Zador, Insurance Institute for Highway Safety, *Journal of Studies on Alcohol*, 52, 4, 1991.

The Effects Following the Implementation of an .08 BAC Limit and an Administrative Per Se Law in California. NHTSA, August 1991, DOT HS 807 777.

The Effects of Low Doses of Alcohol on Driving Skills: A Review of the Evidence. Moscowitz, Herbert and Christopher D. Robinson, National Technical Information Service, Springfield, VA, July 1988, DOT HS 807 280.

The reports and additional information are available from your State Highway Safety Office, the NHTSA Regional Office serving your State, or from NHTSA Headquarters, Traffic Safety Programs, ATTN: NTS-11, 400 Seventh Street, S.W., Washington, DC 20590; 202-366-9588; or NHTSA's website at www.nhtsa.dot.gov.

.08 BAC-Federal Agency Activity Update

November 1, 2000

Much has happened since the Presidential directive [to promote a national legal limit, under which it would be illegal *per se* to operate a motor vehicle with a blood alcohol concentration (BAC) of .08 or higher, across the country, including on Federal property] was issued to the Secretary of Transportation in March 1998. Most recently, and most importantly, Congress passed .08 BAC as the national standard for impaired driving as part of the Transportation Appropriations Bill (October 2000). States that do not enact .08 BAC laws by 2004 would have 2% of certain highway construction funds withheld, with the penalty increasing to 8% by 2007. States adopting the standard by 2007 would be reimbursed for any lost funds. The President, a strong supporter of this legislation, signed it into law on October 23, 2000.

These Federal agencies have made the following accomplishments in addressing .08 BAC:

U.S. Department of Transportation,

National Highway Traffic Safety Administration (NHTSA)

- NHTSA research *(Driver Characteristics and Impairment at Various BACs, April 2000)* shows that virtually all drivers, even experienced drinkers, are substantially impaired at .08 BAC with regard to critical driving tasks. There are significant decrements in performance in areas such as braking, steering, lane changing, judgement, and divided attention at .08 BAC.

- NHTSA released a literature review *(A Review of the Literature on the Effects of Low Doses of Alcohol on Driving-Related Skills, April 2000)* that provides strong evidence of impairment in a variety of driving-related tasks at BACs as low as .02.

- NHTSA research *(Relative Risk of Fatal Crash Involvement by BAC, Age, and Gender, April 2000)* has shown that the risk of being in a motor vehicle crash increases substantially by .08 BAC. The risk of being in a crash gradually increases at each BAC level, but rises very rapidly after a driver reaches or exceeds .08 BAC, compared to drivers with no alcohol in their system. The new research shows that between .08 and .10 BAC, the relative risk of a fatal single vehicle injury varied from 11% (for drivers 35 and older) and 52% (for male drivers, age 16-20).

- NHTSA completed four studies in 1999-2000 examining the effects of states with .08 BAC per se laws. The most comprehensive study (*The Relationship of Alcohol Safety Laws to Drinking Drivers in Fatal Crashes*, March 1999), covering all 50 states, analyzed the effects of both .08 and .10 per se laws, as well as administrative license revocation (ALR) laws. This study found that .08 laws had an 8% effect in reducing fatal crashes involving drivers at both high BACs and lower BACs, and resulted in 275 fewer fatalities in the 15 states where they were in effect in 1997. If all states had .08 laws in 1997, this report estimated that an additional 590 lives would have been saved.

An 11-state study (*The Effects of 0.08 BAC Laws*, March 1999) also examined the effects of .08 and administrative license revocation (ALR)

laws. It found that .08 BAC legislation was associated with reductions in alcohol-related fatalities, alone or in conjunction with ALR laws, in seven of the eleven states studied. In five of these states, implementation of the .08 law by itself was associated with significantly lower rates of alcohol-related fatalities.

The third study *(Evaluation of the Effects of North Carolina's 0.08% BAC Law*, March 1999) analyzed the effects of .08 in North Carolina, a state which had already been experiencing a sharp decline in alcohol-related fatalities since 1987. This study concluded that there was little clear effect of the lower BAC limit. Results from various analyses suggested that some portion of the reductions may have been associated with the law, but the magnitude of these effects was not sufficient to make this conclusion.

The fourth study *(Effectiveness of the Illinois .08 Law)* examined the effectiveness of a .08 BAC law implemented in Illinois in 1997 (in press, available at www.nhtsa.dot.gov). This study found that the .08 law was associated with a 13.7 percent decline in the number of drinking drivers involved in fatal crashes. The reduction included drivers at both high and low BAC levels. This is significant because critics of .08 BAC laws have often claimed that these laws do nothing to affect high BAC drivers. The study also found that there were no major problems reported by law enforcement of sanctions systems.

Nearly all the findings of these and previous studies show changes that suggest that .08 BAC laws have contributed to the trend toward reduced alcohol-related fatalities that have been experienced across the nation.

- NHTSA completed studies to validate the driving cues (*Detection of DWI at BACs Below 0.10*, Sept. 1997) and the Standardized Field Sobriety Tests (SFSTs) (*Validation of the Standardized Field Sobriety Test Battery at BACs Below 0.10 Percent,* Aug. 1998) for people with a BAC of below .10. A brochure, video and report on the validated driving cues were distributed to law enforcement agencies across the country. The report on the validation of the SFSTs was also be distributed to law enforcement agencies.

- NHTSA has partnered with law enforcement across the country to increase enforcement of impaired driving laws, including .08 BAC. NHTSA has worked to provide law enforcement agencies with the latest training programs on standardized field sobriety testing and drug recognition, the use of sobriety checkpoints and saturation patrols to apprehend impaired drivers, and enforcement of underage drinking and driving. NHTSA has partnered with law enforcement and our safety partners such as MADD to conduct high visibility sobriety checkpoints and saturation patrols as the *You Drink & Drive. You Lose.* national public information campaign is implemented. The campaign includes two major enforcement mobilization periods (July 4th holiday weekend and the December holiday periods). It has garnered the support of law enforcement in all 50 states and approximately 70 national organizations to help get the word out, if you drive impaired - you will be caught by law enforcement.

- NHTSA conducted a research study for in-house use to learn what people know about .08 laws, and to determine education strategies for better informing the public about .08 per se. The study's results are used in fine-tuning messages and in developing strategies for reaching the public, as well as in materials that are developed for the public.

- NHTSA conducted a research study for in-house use to learn what people know about .08 laws, and to determine education strategies for

better informing the public about .08 per se. The study's results are used in fine-tuning messages and in developing strategies for reaching the public, as well as in materials that are developed for the public.

- NHTSA conducted a study to examine the legislative history of .08 per se laws (*Legislative History of .08 Per Se Laws*). The project developed historical case studies of four states that lowered their per se law from .10 to .08 BAC and two states that were unsuccessful in their attempts to pass .08 per se. The objective of the research is to learn from past experience strategies that bolstered support for the laws, and barriers that were encountered in attempting to get the laws passed. The report also provided factual responses to the criticisms of .08. The draft report is now under NHTSA review.

U.S. Department of Transportation,

U.S. Coast Guard

- The U.S. Coast Guard has published in the Federal Register its intent to amend its regulations to establish .08 BAC as the legal limit for the public to operate a recreational boat. In July, comments were received and are being incorporated into a final rule. The rule is expected to be final by April 2001.

- Policy guidance was issued that supports expanding use of .08 BAC by the states. Currently, 22 states have a .08 BAC standard for recreational boating.

- The Coast Guard launched a multi-year national anti-Boating Under the Influence campaign, "It's a Different World on the Water," that encourages boaters to boat safe and sober. The campaign is being carried out in partnership with the National Association of State Boating Law Administrators and the National Safe Boating Council which consists of over 200 U.S. and Canadian organizations with an interest in boating safety and education. The goal of this major campaign is to educate boat operators and passengers about the dangers involved when using alcohol while boating.

- The Coast Guard continuously promotes improved collection of alcohol data, and this is reinforced through courses provided to state officers and accident investigators.

- Coast Guard boarding officer training includes administering field sobriety test batteries and identifying indicators of intoxication in accordance with the Field Sobriety Test Performance Report. Reports on results of Coast Guard field sobriety test research were previously disseminated to states to improve alcohol enforcement techniques.

Department of Defense (DoD)

- The Department of Defense Legislative Proposal for Fiscal Year 2000 contained a provision to amend the Uniform Code of Military Justice, to reduce, from 0.10 grams to 0.08 grams, the blood and breath alcohol levels for the offense of drunken operation of a vehicle,

aircraft, or vessel on military installations. It became Section 562 of S 1059. The House Bill of the FY 2000 National Defense Authorization Act contained no similar provision. The Senate receded and the Conference report states:

"The conferees note that a recent General Accounting Office study (GAO/RCED-99-179) could not conclude that merely lowering the statutory blood alcohol level resulted in lowering the number and severity of alcohol-related traffic accidents. However, the report did find strong indications that a comprehensive approach, including license revocation and lowered blood alcohol statutes, public education campaigns, and increased enforcement would have that effect. The conferees directed the Secretary of Defense to submit a report to The Committee on Armed Services of the Senate and the House of Representatives before April 1, 2000, on the Department's efforts to reduce alcohol-related disciplinary infractions, traffic accidents, and other such incidents. The report should include the Secretary's recommendations for any appropriate legislative changes."

In May 2000, the Department of Defense completed a study about .08 BAC and sent a report to Congress recommending that the UCMJ be amended to .08 BAC the criminal standard on military installations. Discussions are taking place to further propose this amendment as part of the FY 2002 DoD legislative package.

- A proposed change to the secretarial level directive will automatically incorporate any legislative action to reduce the blood alcohol level under the Uniform Code of Military Justice (UCMJ). Thus, if legislation reducing the UCMJ standard to .08 BAC is enacted, .08 would become the standard for all purposes on military installations. This means that anyone driving on a military installation would be subject to the .08 BAC standard.

- Eliminating impaired driving is a high priority for DoD. In addition to the legislative proposal, the Secretary of Defense has established a Prevention, Safety and Health Promotion Council (PSHPC). The Council membership consists of Senior DoD policymakers from DoD and Service secretariat offices and includes the Service Surgeons General. The Council has three proposed action plans addressing Alcohol Abuse, Tobacco Use, and Injury/Occupational Illness Prevention. The Council has oversight and responsibility for six committees including the Alcohol Abuse Tobacco Use Reduction Committee (AATURC). The proposed Alcohol Abuse plans address the specific areas of: 1) Ongoing Surveillance, 2) Education and Training, 3) Identification of high risk groups, and 4) Assessment and Development of Best Practices Guidelines.

- The individual Services track statistics for alcohol-related incidents, alcohol-related deaths, and DUIs. Each of the Services also has an ongoing program of alcohol education and there are research efforts to identify the efficacy of targeted interventions.

- The DoD conducts, on a triennial basis, a study of Health Related Behaviors of Active Duty Personnel. The latest study identified three major areas of concern to them including an unchanged rate of heavy drinking. This is an area of special interest to the PSHPC.

Department of Interior, National Park Service

- In November 2000, the National Park Service will begin development of a proposed rule to establish .08 BAC as the legal limit for anyone

driving in national parks. They anticipate completion of a final rule by the Summer 2001 tourist season.

Indian Health Service (IHS)

- Passing .08 BAC laws on Indian Reservations is among the highest priorities for the IHS. Educational, enforcement and other efforts are continuing, such as the "None for the Road" campaign.
- IHS published an article entitled, "Advocating Impaired Driver Laws: The Adoption of .08 BAC in Indian Country" in the November 1998 issue of the IHS Provider Magazine, a journal for health professionals working with American Indians and Alaska Natives.
- The Indian Health Service, in partnership with NHTSA, produced the video "Cry the Eagle," which addresses benefits of .08 laws; alcohol and drunk driving issues in Indian Country; and movements in education, enforcement and treatment.
- In conjunction with NHTSA's *You Drink & Drive. You Lose.* campaign, the IHS supplied information to the American Indian and Alaska Native media [200+ media outlets] supporting the campaign and particularly the benefits of .08 BAC. Area IHS Injury Prevention Specialists receive and distribute *You Drink & Drive. You Lose* campaign updates to Tribal program representatives.
- The IHS conducted an updated inventory of Tribal Traffic Safety Laws. Of the approximately 200 tribes which have the ability to pass their own legislation, 37 Tribal Nations (out of 104 Tribes reporting) reported having adopted either a separate Tribal law or the state's .08 BAC law.

INDIAN TRIBES WITH .08 BAC LAWS

TRIBE	STATE	STATE/TRIBAL LAW	ZERO TOLERANCE <21	IMPLIED CONSENT
Andarko Agency Oles	Oklahoma	Tribal/State	yes	yes
Bay Mills Indian Community	Minnesota	Tribal	yes	yes
Burns Paiute Tribe	Oregon	State		
Cabazon Band of Mission Indians	California	Tribal		
Chemawa Indian School	Oregon	State		
Coquille Indian Tribe	Oregon	State		
Ely Shoshone Tribe	Nevada	State	no	yes
Grand Traverse Band	Michigan	*.07-.08		
Hoopa Valley Tribe	California	State		
Iowa Tribe	Kansas	State		

Jamestown S'Klallam	Washington	State/Tribal		
Kalispel Tribe	Washington	State	yes	yes
Klamath Tribe	Oregon	State	yes	yes
Lac Vieux Desert Band of Lake Superior Chippewa	Michigan	Tribal/State	yes	yes
Lower Elwha Klallam	Washington	Tribal/ no .08		yes
Miccosukee Tribe	Florida	Tribal		
Nambe/San Ildefonso	New Mexico	Tribal	yes	yes
Northern Ute Indian Tribe	Utah	State/Tribal	yes	yes
Osage Nation	Oklahoma	*Tribal law passed, awaiting BIA approval		
Passamoquoddy Tribe	Maine	State		
Penobscot Nation	Maine	State		yes
Poarch Creek Indians	Alabama	Tribal		
Pueblo of San Ildefonso	New Mexico	Tribal	yes	yes
Pueblo of Laguna	New Mexico	State/Tribal		yes
Pueblo of Nambe	New Mexico	Tribal	yes	yes
Pueblo of Sandia	New Mexico	State/Tribal		
Quileute Tribe	Washington	State	yes	yes
***Sac & Fox Tribe	Kansas	Tribal		yes
Santa Ana Pueblo	New Mexico	State		
Santa Clara Tribe	New Mexico	State/Tribal	yes	yes
Spokane Tribe	Washington	State		yes
Swinomish Tribe	Washington	Tribal	yes	yes
Taos Pueblo Indian Tribe	New Mexico	Tribal	yes	yes
Tulalip Tribes	Washington	State		
Ute Mountain Ute	Colorado	Tribal * .05 considered "driving while ability impaired"		
Yakama Nation	Washington	Tribal	yes	yes
Zuni Pueblo	New Mexico	Tribal	yes	yes

- In addition, The Turtle Mountain Chippewa tribe of North Dakota has been very pro-active in passing legislation to reduce injury on their reservation. The Turtle Mountain Chippewa has been considering .08 as the legal limit for impaired driving.

Evaluation of the Effects of North Carolina's 0.08% BAC Law

Robert D. Foss, Ph.D.
J. Richard Stewart, Ph.D.
Donald W. Reinfurt, Ph.D.

Highway Safety Research Center
University of North Carolina

November, 1998

List of Tables

List of Figures

Executive Summary

Sixteen states have reduced the *per se* illegal blood alcohol concentration (BAC) limit for drivers to 0.08%. There is a substantial amount of evidence from experimental studies to indicate that a variety of individual skills are impaired at BACs well below 0.08%. Epidemiologic studies indicate that the risk of a crash increases sharply for drivers with BACs above 0.08%. To date, however, few studies have been done to determine whether reducing the legal BAC limit translates into reduced numbers of alcohol-related motor vehicle crashes.

Four previous studies of the effects of 0.08% laws on motor vehicle crashes have found equivocal and somewhat conflicting results. In California, a 1991 study reported a 12% decrease in alcohol-related fatalities following implementation of an 0.08% BAC limit. However, California also enacted an Administrative License Revocation (ALR) law six months after lowering the BAC limit, and it was not possible to determine whether the ALR law , the 0.08% law, or the combination of the two was responsible for the decrease. A later study of the California law, looking at longer time periods, found no significant decrease in alcohol-involved crashes as a result of the lower BAC limit.

Two studies examined the first five states to reduce their BAC limit to 0.08%. One study found decreases in at least one indicator of drinking-driving in four of the five states. A second study, using a somewhat different research design, found a decrease in high BACs among fatally injured drivers in three of the five states. Again, however, it was not possible to disentangle effects of ALR laws from those of the lower BAC limit in three of the states studied. Further clouding the issue is the fact that the two states that showed no decrease in the second study were among those in which the earlier study had found an apparent decline in drivers with high BACs.

The present study was conducted in an effort to clarify the effect of reducing the BAC limit to 0.08%. North Carolina enacted an 0.08% BAC limit on October 1, 1993. No other legislation that would significantly affect drinking-driving was enacted in close proximity to the 0.08% law.

Using telephone survey data, we were able to gauge public knowledge and awareness of the 0.08% BAC limit in North Carolina. Interviews with 802 randomly sampled persons in four counties found that about two-thirds believed the BAC limit had changed in the past two years. Just over one-third were able to report the limit correctly as 0.08%. A substantial proportion of the sample did not drink and, as would be expected, drinkers were more aware that the limit had changed (73%) than non-drinkers (56%). They also were twice as likely to know the new limit (50% vs. 26%). Those who reported drinking at least once a week were even more likely to know the new limit (67%). Respondents overwhelmingly (85%) believed that lowering the BAC limit increased the likelihood that individuals would be arrested for drinking-driving.

To determine whether the 0.08% law produced a decrease in alcohol-related crashes, we examined several indicators. Alcohol involvement in all crashes in North Carolina between 1991 and 1995, as well as fatal and serious injury crashes only were examined. In addition, surrogate measures of alcohol-related crashes (nighttime crashes; nighttime fatal and serious injury crashes) were also examined. All these measures have been declining, almost continuously, in North Carolina since the early 1980s. To control for the effects of this general trend, as well as seasonal fluctuations, we carried out structural time series analyses examining monthly crash statistics. In each case we looked for evidence of either an immediate decrease in the rate or a change in the general trend of alcohol-related crashes following implementation of the lower BAC limit. There was no significant change in the rate, nor in the trend, coinciding with introduction of the lower BAC limit, for any of the measures examined.

To determine whether the trend in alcohol-related crashes in North Carolina may have benefitted in comparison with a broader general trend in the U.S. (which had leveled out and appeared to be on the verge of increasing again), we compared North Carolina fatal crash data with those from 11 other states that have high rates of alcohol testing for fatally injured drivers. The data series representing the North Carolina proportion of all fatally injured drivers in the 12 states who had BACs in excess of 0.10% was examined for either a step shift or a change in the trend. Again there was no evidence that the pattern in North Carolina changed following enactment of the lower BAC limit, or that it differed in comparison to the other 11 states.

To see whether the BAC levels of persons had been reduced by the 0.08% law, even if not brought below the 0.10% threshold of the previous limit, we examined the mean monthly BACs of fatally injured drivers whose BAC was above 0.10%. Again there was no evidence of an effect of the new BAC limit. The monthly average BACs remained essentially unchanged from 1990 through 1995, with an overall mean of 0.21%.

Finally, we conducted a series of simple before-after comparisons of various indicators of alcohol involvement in fatal crashes. These analyses examined each of the six measures that the National Highway Traffic Safety Administration used in its initial examination of the effect of 0.08% laws: (1) driver BAC $\geq$ 0.01%, (2) driver BAC $\geq$ 0.10%, (3) police-reported alcohol involvement, (4) single vehicle nighttime crash, (5) single vehicle nighttime male driver crash, and (6) estimated alcohol involvement. To examine changes in these measures we used the same analytic approach employed by Hingson et al. (1996) in their widely-cited study of the first five states to enact 0.08% limits – comparing changes in North Carolina rates with those in comparison states. To avoid potential pitfalls of trying to select a single appropriate comparison state, we compared North Carolina data with all 37 states that had retained higher per se limits from 1991 through 1996.

Of the six measures considered, two showed a significantly greater decrease in North Carolina than in the comparison states: police-reported alcohol and estimated alcohol, which is based in part on police report as well. For both these measures, the apparent effect of the 0.08% law is an artifact of grouping several months data before the law took effect, rather than an effect of the law itself. During the pre-0.08% period, noteworthy changes occurred in North Carolina that are obscured when the data are grouped. When analyses to ameliorate this artifact were conducted, none of the six measures showed a significantly greater decrease in North Carolina than in the states that retained a higher BAC limit.

Although North Carolina has a reputation for being progressive and aggressive in its efforts to deal with drinking drivers, it does not appear that the state is so different as to render it non-comparable to other states. Several indicators of alcohol use in fatal crashes during the early 1990s were similar to those for other states. On the salient measures of police-reported alcohol involvement and the proportion of killed drivers with a BAC in excess of 0.10%, the rates in North Carolina were lower by differences of 2.3% and 1.7%, respectively, both of which are statistically significant.

In conclusion, it appears that lowering the BAC limit to 0.08% in North Carolina did not have any clear effect on alcohol-related crashes. The existing downward trend in alcohol-involvement among all crashes and among more serious crashes continued, but does not appear to have changed following enactment of the lower BAC limit. When compared with the 11 other states that measure alcohol use by the large majority of fatally injured drivers, as does North Carolina, the measured BACs of fatally injured drivers did not decline as a result of the 0.08% law in North Carolina. Finally, the North Carolina trend in several other commonly used indicators of alcohol involvement in fatal crashes did not differ in comparison with the 37 states that retained higher BAC limits.

(5)

United States General Accounting Office

GAO

Report to Congressional Committees

June 1999

HIGHWAY SAFETY

Effectiveness of State .08 Blood Alcohol Laws

COMPLIMENTS OF THE
ALASKA STATE LIBRARY

GAO

Accountability * Integrity * Reliability

GAO/RCED-99-179

GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-280883

June 23, 1999

The Honorable John McCain
Chairman
The Honorable Ernest F. Hollings
Ranking Minority Member
Committee on Commerce, Science,
and Transportation
United States Senate

The Honorable Bud Shuster
Chairman
The Honorable James L. Oberstar
Ranking Democratic Member
Committee on Transportation and Infrastructure
House of Representatives

In 1997, someone in the United States died in an alcohol-related motor vehicle crash every 32 minutes. For years, the Congress and the states have grappled with and sought solutions to the problem of drunk driving. Most states have laws making it illegal for people to drive with a specified level of alcohol in their blood, usually set at .10 blood alcohol concentration (BAC)—the level at which a person's blood contains 1/10th of 1 percent alcohol. However, 16 states have more stringent laws setting the limit at .08 BAC. In 1998, the Clinton administration endorsed a bill that would have required all states to enact and enforce .08 BAC laws or face reductions in federal highway funds. The Senate approved this bill; the House took no action.

The Transportation Equity Act for the 21st Century directed GAO to evaluate the effectiveness of state .08 BAC laws in reducing the number and severity of crashes involving alcohol.[1] To accomplish this objective, we reviewed (1) the policies and positions of the Department of Transportation's (DOT) National Highway Traffic Safety Administration (NHTSA) on .08 BAC laws and other drunk driving countermeasures and (2) seven published studies on the effect of .08 BAC laws on the number and severity of crashes involving alcohol, including three studies released on April 28, 1999.

[1]The Transportation Equity Act for the 21st Century also directed us to study the effectiveness of .02 BAC laws for drivers under 21 in reducing the number and severity of crashes involving alcohol. The National Highway System Designation Act of 1995 required all states to enact and enforce such laws or face reductions in federal highway funds. However, as agreed to by your staff, we will not address the impact of .02 BAC laws, since all 50 states and the District of Columbia now have laws establishing BAC levels of .02 or less for drivers under 21.

Results in Brief

Overall, the evidence does not conclusively establish that .08 BAC laws, by themselves, result in reductions in the number and severity of alcohol-related crashes. There are, however, strong indications that .08 BAC laws in combination with other drunk driving laws (particularly license revocation laws), sustained public education and information efforts, and vigorous and consistent enforcement can save lives. For example, while two studies have concluded that California's .08 BAC law was not directly associated with the decline in drunk driving deaths the state experienced in the early 1990s, these studies found that the .08 BAC law was effective when paired with the state's license revocation law, which took effect 6 months later.

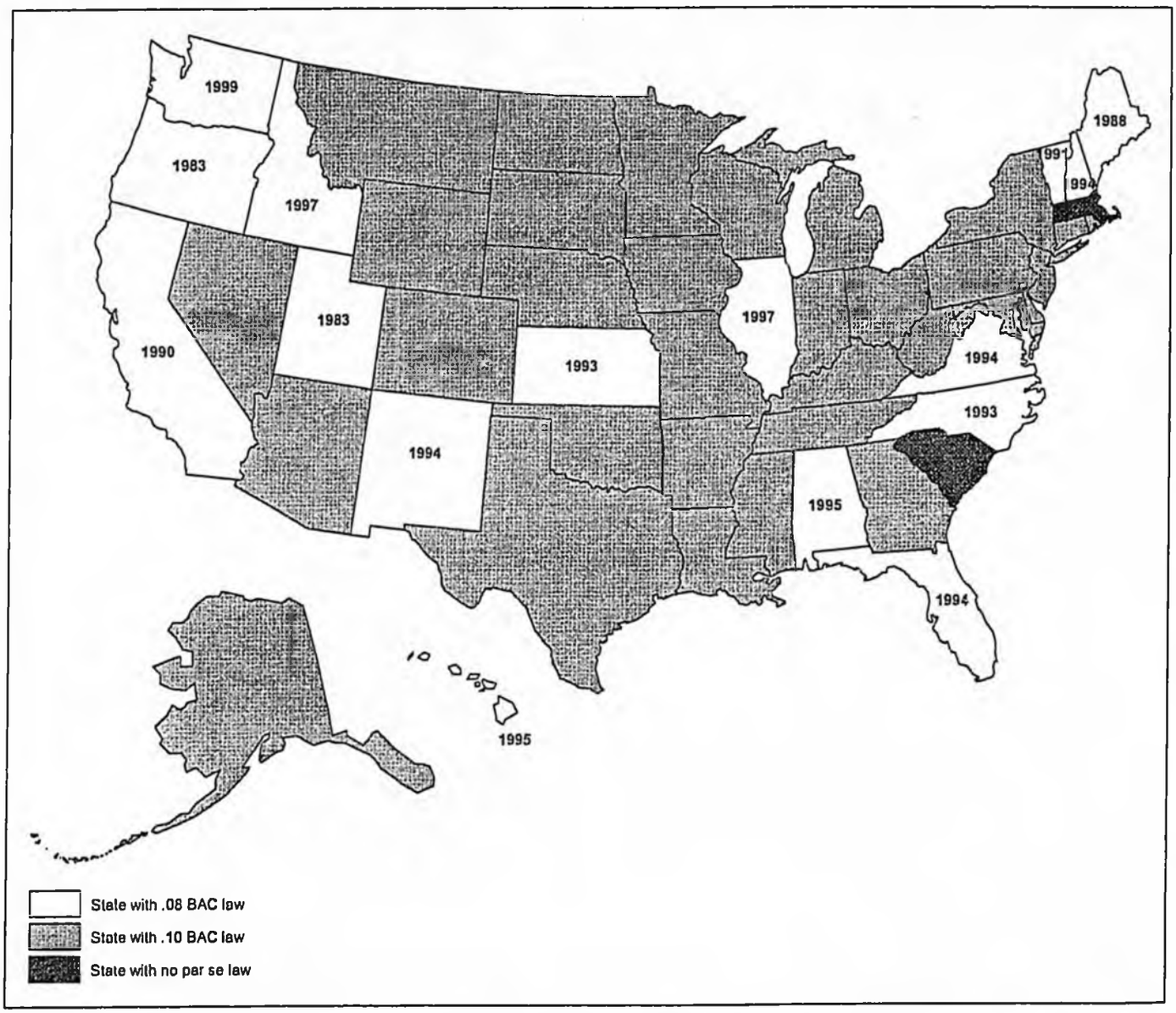
Until recently, only four published studies examined the effectiveness of .08 BAC laws in five states and, while NHTSA characterized the studies as conclusively establishing that .08 BAC laws by themselves were effective, the studies had limitations and raised methodological concerns calling their conclusions into question or reported mixed results. In April 1999, three additional studies were released that were more comprehensive and showed many positive results but nevertheless fell short of providing conclusive evidence that .08 BAC laws were, by themselves, responsible for reductions in alcohol-related crashes and fatalities. It is difficult to accurately predict how many lives would be saved if all states enacted .08 BAC laws because whether a state sees reductions after enacting a .08 BAC law depends on a number of factors, including the degree to which the law is publicized, how well it is enforced, other drunk driving laws in effect, and public attitudes concerning alcohol. Despite the absence of a strong causal link between .08 BAC laws by themselves and reductions in traffic fatalities, other evidence, including medical evidence on drivers' impairment, should be considered when evaluating the effectiveness of .08 BAC laws.[2]

Background

It is illegal in every state and the District of Columbia to drive a motor vehicle while under the influence of alcohol. In addition, all states but two have blood alcohol "per se" laws—laws that make it unlawful for a person to drive a motor vehicle with a *specific* amount of alcohol in his or her blood. As figure 1 shows, 32 states and the District of Columbia have set that amount at .10 BAC. In 16 states, the per se limit is 20 percent lower, or .08 BAC.

[2]Because the Transportation Equity Act for the 21st Century directed us to review the effectiveness of .08 BAC laws in reducing the number and severity of crashes involving alcohol, we did not evaluate the medical impairment evidence.

Figure 1: State Blood Alcohol "per Se" Laws



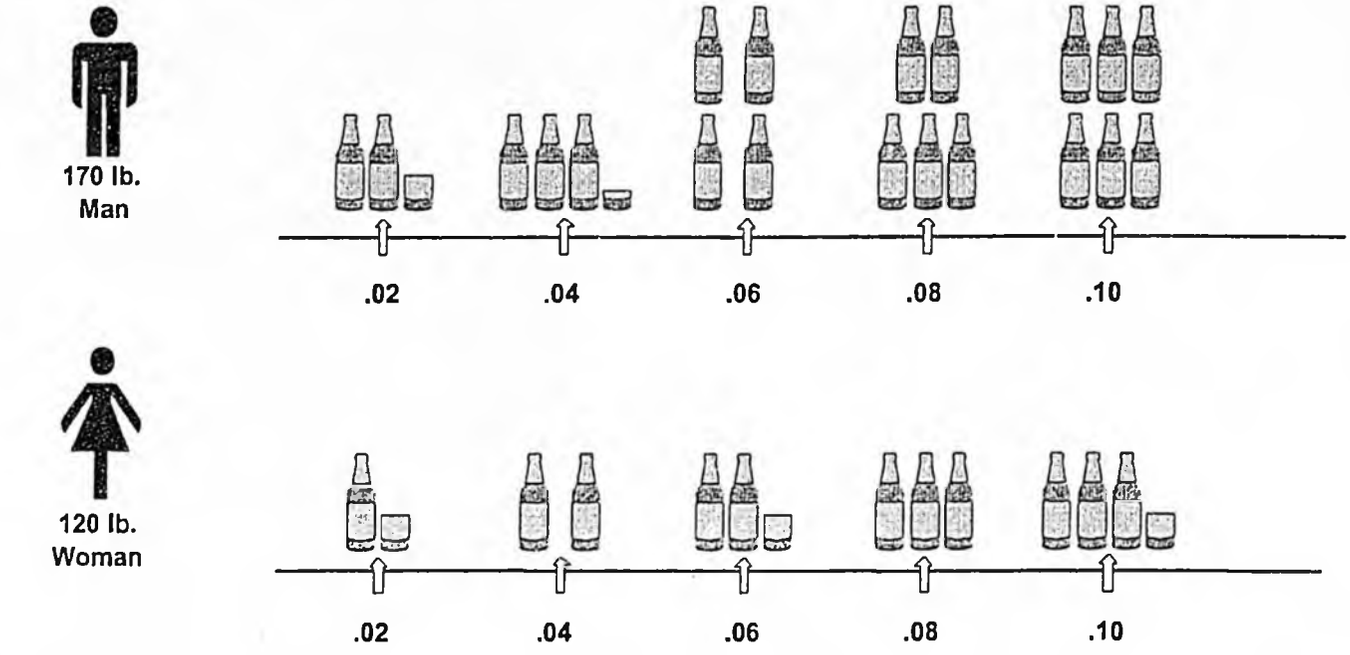
Note: States with .08 BAC laws are shown with the year the law became effective.

Source: GAO's illustration based on information from NHTSA.

On average, according to NHTSA, a 170-pound man reaches .08 BAC after consuming five 12-ounce beers (4.5-percent alcohol by volume) over a 2-hour period. A 120-pound woman reaches the same level after consuming three beers over the same period. NHTSA publishes a BAC estimator that computes the level of alcohol in a person's blood on the basis of the person's weight and gender and the amount of alcohol consumed over a specified period of time. This estimator assumes average physical attributes in the population—in reality, alcohol affects individuals differently, and this guide cannot precisely predict its effect on everyone. For example, younger people have higher concentrations of body water than older people; therefore, after consuming the same amount of alcohol, a 170-pound 20-year-old man attains a lower BAC level on average than a 170-pound 50-year-old man.

As figure 2 illustrates, NHTSA's estimator shows that the difference between the .08 BAC and .10 BAC levels for a 170-pound man is one beer over 2 hours. The difference between the .08 BAC and .10 BAC levels for a 120-pound woman is one-half a beer over the same time period.

Figure 2: Alcohol Consumption and Blood Alcohol Levels



Source: GAO's illustration based on NHTSA's BAC estimator.

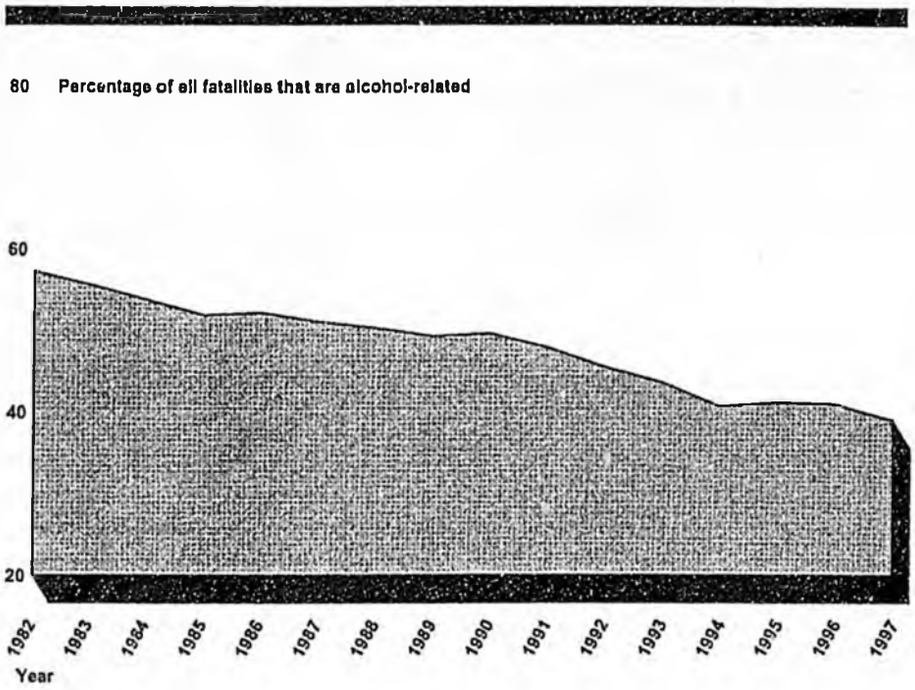
Alcohol use is a significant factor in fatal motor vehicle crashes. In 1997, the most recent year for which data are available, there were 16,189 alcohol-related fatalities, representing 38.6 percent of the nearly 42,000 people killed in fatal crashes that year. In the states with .08 BAC laws, alcohol was involved in 36 percent of all traffic fatalities, lower than the national average and the 39.5-percent rate of alcohol involvement in the

rest of the states.[3] Utah had the lowest level at 20.6 percent; the District of Columbia had the highest at 58.5 percent. Among the 10 states with the lowest levels of alcohol-related fatalities, 3 were states with .08 BAC laws and 7 were states with .10 BAC laws. Among the 10 states with the highest levels of alcohol-related fatalities, 2 were states with .08 BAC laws, 7 were states with .10 BAC laws, and 1 had no BAC per se law.

Although alcohol use remains a significant factor in fatal crashes, fatalities involving alcohol have declined sharply over the last 15 years. In 1982, 25,165 people died in crashes involving alcohol, 57.3 percent of the nearly 44,000 traffic fatalities that year. The proportion of fatal crashes that involved alcohol declined during the 1980s, falling below 50 percent for the first time in 1989. The involvement of alcohol in fatal crashes declined markedly in the early 1990s, from about 50 percent of the fatal crashes in 1990 to nearly 40 percent in 1994. During this time, the number of people killed in crashes involving alcohol declined by around 25 percent. The proportion of fatalities involving alcohol rose slightly in the next 2 years before falling, in 1997, to its lowest level since 1982, as figure 3 shows.

[3]This analysis excludes Idaho and Illinois, states that had .08 BAC laws take effect during 1997.

Figure 3: Alcohol-Related Fatalities, 1982-97



Source: GAO's illustration based on NHTSA's Traffic Safety Facts, 1997.

Each state reports, and NHTSA collects and publishes, data on fatal crashes through the Fatal Accident Reporting System (FARS), a comprehensive national database of all crashes in which a person dies within 30 days of the crash. These data include (1) the number of fatalities that occur in all crashes and (2) the number of drivers involved in fatal crashes. FARS also includes whether crashes involved drivers who had been drinking. However, FARS has limitations regarding alcohol involvement in crashes—for example, fewer than half of the drivers at the scene of fatal accidents are tested for alcohol. To address the missing data, NHTSA developed a statistical model, first used in 1982, to estimate alcohol involvement in cases in which data are not available. The model provides estimates in three broad categories—sober (.00 BAC), "low BAC" (.01- .09 BAC), and "high BAC" (.10 BAC and above).[4] Therefore, certain questions—such as how many fatal crashes involve drivers with .08 BAC

[4]When cataloguing fatalities in crashes in which more than one driver had been drinking, FARS uses the driver with the higher BAC.

levels versus other levels or what the average BAC of drunk drivers involved in fatal crashes is—cannot be reliably answered by this model. NHTSA plans to release a new model in 1999 that will estimate specific BAC levels.

NHTSA Believes All States Should Have Alcohol Deterrence Measures, Including .08 BAC Laws

NHTSA believes that the best countermeasure against drunk driving is a combination of laws, public education, and enforcement. Since 1970, NHTSA has espoused a "systems approach" to reducing drunk driving including enforcement, judicial, legislative, licensing, and public information components. In 1997, NHTSA published an action plan developed with other participants to reduce alcohol-related driving fatalities to 11,000 by the year 2005. This plan recommended that all states pass a wide range of laws, including ones establishing .08 BAC limits, license revocation laws—under which a person deemed to be driving under the influence has his or her driving privileges suspended or revoked, comprehensive screening and treatment programs for alcohol offenders, vehicle impoundment, "zero tolerance" BAC and other laws for youth, and primary enforcement laws for safety belts.[5] The plan also called for increased public awareness campaigns, with an emphasis on target populations such as young people and repeat offenders. Similarly, "The Presidential Initiative for Making .08 BAC the National Legal Limit," published by NHTSA in August 1998, contained a four-point plan that recommended the expansion of public education campaigns; the building of public-private partnerships; and active, high-visibility enforcement of several alcohol laws.

The value of public education and enforcement has been demonstrated in a number of studies. A recent NHTSA evaluation of a sobriety checkpoint program in Tennessee, a state with a .10 BAC limit, concluded that the program and its attendant publicity reduced alcohol-related fatal accidents in that state by 20.4 percent. A systems approach to traffic safety is not limited to preventing drunk driving. Our January 1996 report concluded that the states that have been most successful at increasing safety belt use among all drivers are the ones with primary enforcement laws, visible and aggressive enforcement, and active public information and education programs.[6]

[5]Primary enforcement laws permit officials to enforce safety belt requirements independently of other traffic safety laws, in contrast to secondary enforcement laws, which allow officials to enforce safety belt requirements only when other traffic safety laws are being enforced.

[6]Motor Vehicle Safety: Comprehensive State Programs Offer Best Opportunity for Increasing Use of Safety Belts (GAO/RCED 96-24, Jan. 3, 1996).

Since 1992, when it first recommended in a report to the Congress that all states have .08 BAC laws, NHTSA's position has changed from urging the states to pass .08 BAC laws to favoring that states be required to do so. The latter position was embodied in the President's endorsement of a Senate bill entitled the Safe and Sober Streets Act. This bill would have required all states to enact and enforce .08 BAC laws by October 1, 2001, or lose 5 percent of certain federal highway funds the first year and 10 percent each succeeding year. The Senate approved this bill on March 4, 1998, but the House took no action before the 105th Congress adjourned.[7]

As figure 4 shows, NHTSA has a number of reasons why it believes all states should adopt .08 BAC laws.

Figure 4: NHTSA's Reasons Why All States Should Adopt .08 BAC Laws

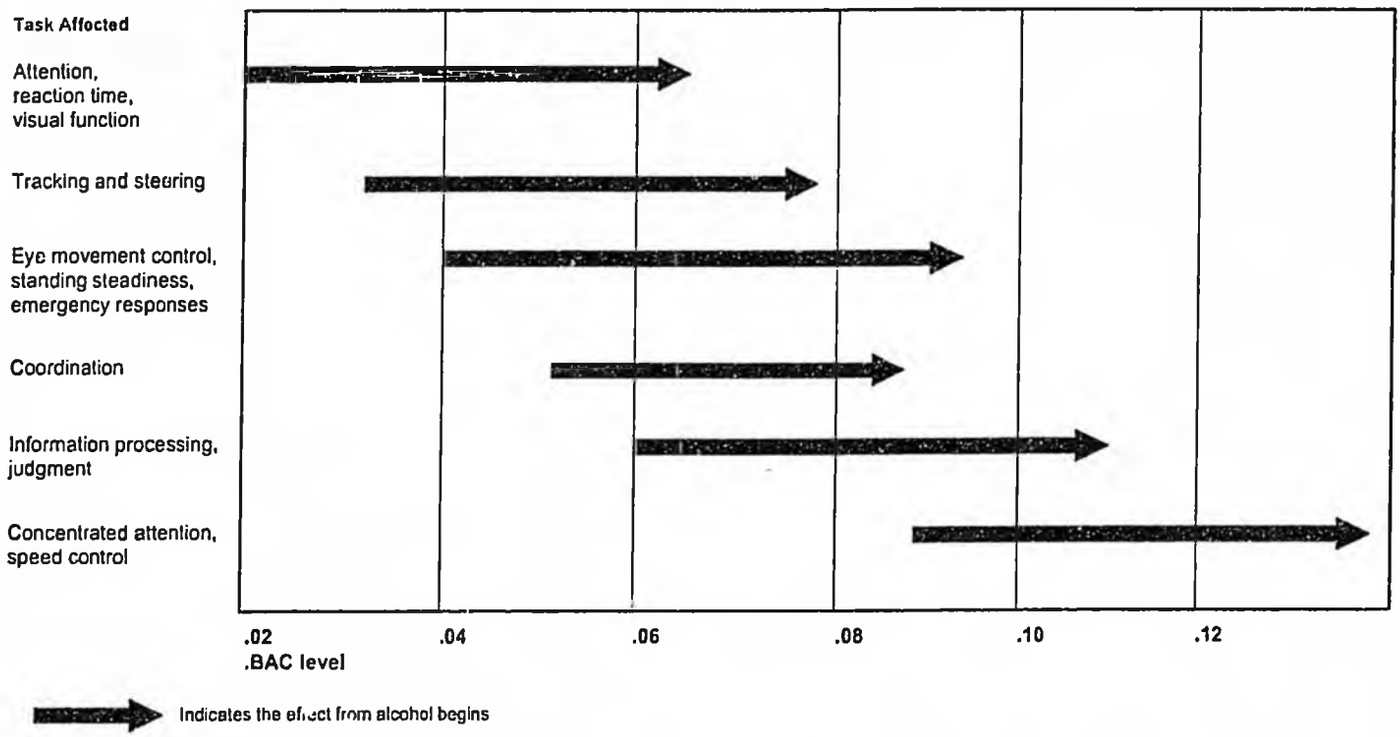
- Virtually all drivers are substantially impaired at .08 BAC with regard to critical driving tasks.
- The risk of being in a crash increases substantially when a driver reaches .08 BAC.
- .08 is a reasonable level to set the limit.
- The public supports lower BAC limits.
- Other industrialized nations have .08 or lower BAC laws.
- Lowering the limit to .08 is a proven effective countermeasure that will reduce crashes and save lives.

One of NHTSA's principal arguments for nationwide adoption of .08 BAC laws is that the medical evidence of drivers' impairment at that level is substantial and conclusive. According to NHTSA, and as shown in figure 5, reaction time, tracking and steering, and emergency responses are impaired at even low levels, and substantially impaired at .08 BAC. As a result, the risk of being in a motor vehicle crash increases when alcohol is involved, and increases dramatically at .08 BAC and higher levels. In contrast to NHTSA's position, industry associations critical of .08 BAC laws contend that .08 BAC is an acceptable level of impairment for driving a motor vehicle and that these laws penalize "responsible social drinking." These associations also believe that .08 BAC laws do not address the problem of drunk driving because many more drivers using alcohol are reported at the "high" BAC levels (above .10 BAC) than the lower BAC levels.

[7]The Senate approved this bill as an amendment to its surface transportation reauthorization bill. However, these provisions were not included in the House bill and were not included in the final version of the Transportation Equity Act for the 21st Century.

Because we were directed to review the impact of .08 BAC laws on the number and severity of crashes involving alcohol, we did not review the medical evidence on impairment or other arguments in favor of or in opposition to .08 BAC laws.

Figure 5: NHTSA's Position on Medical Evidence of Drivers' Impairment



Source: GAO's illustration based on information from NHTSA.

NHTSA also believes that lowering the BAC limit to .08 is a proven effective measure that will reduce the number of crashes and save lives. For example, in a December 1997 publication, NHTSA stated that "recent research . . . has been quite conclusive in showing the impaired driving reductions *already attributable to .08,* as well as the potential for saving additional lives if all states adopted .08 BAC laws" (emphasis added). In

May 1998, the NHTSA Administrator stated, "The traffic safety administration is aware of four published studies, . . . [and] each study has shown that lowering the illegal blood alcohol limit to .08 is associated with significant reductions in alcohol-related fatal crashes." In a fact sheet distributed to state legislatures considering these laws, NHTSA stated that the agency's "analysis of five states that lowered the BAC limit to .08 showed that significant decreases in alcohol-related fatal crashes occurred in four out of the five states *as a result of the legislation*" (emphasis added). NHTSA used these study results to encourage states to enact .08 BAC laws, testifying in one instance before a state legislature, "We conservatively project a 10-percent reduction in alcohol-related crashes, deaths, and injuries" in the state.

Seven Studies Have Examined the Effectiveness of .08 BAC Laws

Seven studies have been published assessing the effect of .08 BAC laws on motor vehicle crashes and fatalities in the United States. Four studies published between 1991 and 1996 assessed the effectiveness of .08 BAC laws in the five states that enacted them between 1983 and 1991. On April 28, 1999, NHTSA released three additional studies. Table 1 summarizes the seven studies that examine .08 BAC laws.

Table 1: Studies on the Effectiveness of .08 BAC Laws

Title of study	Released	Conducted by	Funded by	Scope
The Effects Following the Implementation of an .08 BAC Limit and an Administrative Per Se Law in California	1991	Research and Evaluation Associates	NHTSA	California
A Preliminary Assessment of the Impact of Lowering the Illegal BAC Per Se Limit to .08 in Five States	1994	NHTSA staff	NHTSA	Ca lifornia, Utah, Oregon, Maine, and Vermont
The General Deterrent Impact of California's .08% Blood Alcohol Concentration Limit and Administrative Per Se License Suspension Laws	1995	Department of Motor Vehicles, State of California	California Offi raffic Safety	California
Lowering State Legal Blood Alcohol Concentration Limits to .08%: The Effect on Fatal Motor Vehicle Crashes	1996	Researche.s from Boston University's School of Public Health	Grants, including ones from the National Institute on Alcohol Abuse and Alcoholism and the U.S. Centers for Disease Control and Prevention	California, Utah, Oregon, Maine, and Vermont
The Effects of 0.08 Laws	1999	Rainbow Technology Inc., and NHTSA's National Center for Statistics and Analysis	NHTSA	California, Utah, Oregon, Maine, Vermont, New Hampshire, North Carolina, Kansas, New Mexico, Florida, and Virginia.
Evaluation of the Effects of North Carolina's 0.08% BAC Law	1999	University of North Carolina	NHTSA	North Carolina
The Relationship of Alcohol Safety Laws to Drinking Drivers in Fatal Crashes	1999	Pacific Institute for Research and Evaluation	NHTSA	50 states and the District of Columbia

The First Four Published Studies Had Limitations and Raised Methodological Concerns

Although NHTSA characterized the first four studies on the effectiveness of .08 BAC laws as conclusively establishing that .08 BAC laws resulted in substantial reductions in fatalities involving alcohol, we found that three of the four studies had limitations and raised methodological concerns that called their conclusions into question. For example, while a NHTSA-endorsed Boston University study concluded that 500 to 600 fewer fatal crashes would occur each year if all states adopted .08 BAC laws, this study has been criticized for, among other reasons, its method of comparing states; and a recent NHTSA study characterized the earlier study's conclusion as "unwarranted." The fourth study reported mixed

results. Therefore, these studies did not provide conclusive evidence that .08 BAC laws by themselves have resulted in reductions in drunk driving crashes and fatalities. A task force of the New Jersey State Senate examined this evidence and, in a report issued in December 1998, reached a similar conclusion.[8]

The California Studies

NHTSA has cited California's experience as evidence of the effectiveness of .08 BAC laws. For example, in a publication promoting the need for .08 BAC laws, NHTSA stated that "alcohol-related fatalities significantly decreased after the state's BAC limit was lowered to .08 in 1990." In another publication, it said "California's .08 law was analyzed by NHTSA, [and] . . . the state experienced a 12% reduction in alcohol-related fatalities, although some of this can be credited to the new administrative license revocation law."

While NHTSA's 1991 study by Research and Evaluation Associates (see table 1) did find a 12-percent decline in alcohol-related fatalities after the .08 BAC law took effect, the study had important limitations. For example, the authors had available to them only 1 year of data for the period after the law went into effect, an unusually short period of time to analyze trends, and the authors acknowledged this limitation. California also had a license revocation law—under which a person deemed to be driving under the influence has his or her driving privileges suspended or revoked—take effect 6 months after the .08 BAC law. Although the authors concluded that this law had no effect, they stated that they were unable to accurately account for the separate effects of the two laws.

A more comprehensive, methodologically sound study of California was released by the state's Department of Motor Vehicles in 1995. In contrast to the 1991 review, this study was based on 4 years of data after the law became effective and found mixed results. The study concluded that the .08 BAC law was not associated with any statistically significant reductions in crashes resulting in fatalities or serious injuries in which drivers were reported to have been drinking, but that reductions did occur in accidents that took place during hours in which alcohol involvement is probable, such as nighttime crashes between 2 and 3 a.m. The study found

[8]State of New Jersey, Senate Task Force on Alcohol-Related Motor Vehicle Accidents and Fatalities, Dec. 11, 1998. Created by the leaders of the New Jersey State Senate, the task force was composed of elected officials and representatives from the state's judicial, medical, academic, and law enforcement communities. The task force was charged with, among other things, evaluating the available studies, and determining whether reducing the BAC limit to .08 would reduce the number of alcohol-related accidents and fatalities in New Jersey. The task force concluded that "the impact of laws that reduce the per se BAC level from .10 to .08, in isolation, is inconclusive" and that the effect of public education and awareness campaigns and license revocation laws "can be greater than changing the legal BAC."

reductions associated with the state's license revocation law—a 9 to 13 percent decline in crashes resulting in fatalities or serious injuries in which drivers were reported to have been drinking. However, given the 6-month time period separating the effective dates of the two laws, the authors concluded that .08 BAC and license revocation laws most likely worked together to lower fatalities.

Although the 1995 study was more comprehensive than the 1991 study, NHTSA's public statements and literature often quote the 12-percent reduction cited in the 1991 study and rarely refer to the 1995 study. California continued to experience a decline in alcohol-related fatalities through the 1990s—from 47 percent of fatalities in 1991 to 36 percent in 1997. California traffic safety and law enforcement officials believe that this progress is attributable to the combination of stronger laws, a sustained public information campaign, and vigorous enforcement.

The Boston University Study

A 1996 study by researchers from the Boston University School of Public Health published in the American Journal of Public Health compared the first five states to adopt .08 BAC laws with five "nearby" states that retained .10 BAC laws. It found a 16 percent greater decline in the proportion of alcohol-related fatalities among drivers in the states adopting the lower limit and concluded that if all states adopted .08 BAC laws, 500 to 600 fewer fatal crashes would occur annually. These study results were endorsed by NHTSA and often cited in the agency's literature and public statements. President Clinton cited the study in a March 1998 statement and said ". . . if all states lower their BAC to .08, it will result in 600 fewer alcohol-related deaths each year."

However, this study has been criticized by many traffic safety experts both inside and outside of NHTSA and has methodological limitations that call its results into question. For example:

- Many traffic safety experts question this study's method of comparing one state to another. The study does not explain the criteria used to select the comparison states. Using one state as a control to assess the impact of a new law in another state assumes that all other conditions are held equal except for the introduction of the law. One critic noted, for example, that one of the states with a .08 BAC law employs random roadside sobriety checkpoints and was compared to a state with a .10 BAC law that prohibits the practice. Changing the selection of comparison states can dramatically change this study's results. According to NHTSA, while other traffic safety studies have made single state comparisons, it is best to compare one state

to several or to the rest of the nation.

- Three of the five states had license revocation laws take effect within 10 months of their .08 BAC laws. This study made no effort to separately analyze the relative contribution of the two types of laws to any subsequent decline in fatal motor vehicle crashes in those three states. Thus, in at least three states, the authors' findings could as easily apply to the license revocation law as the .08 BAC law. The authors acknowledged this limitation, but it is rarely cited in NHTSA's literature and public statements endorsing this study and its findings.

- The study's conclusion that 500 to 600 fewer fatal crashes would occur annually if all states had .08 BAC laws is unfounded. The study does not explain how this estimate was derived or how the reduction could be credited to .08 BAC laws since the .08 BAC and license revocation laws went into effect within 10 months of each other in three of the five states. The authors told us that the estimate assumed that all states without .08 BAC laws would experience a reduction of up to 10 percent in alcohol-related crashes after enacting the laws. However, the study provides no basis for assuming that reductions of that magnitude would occur. Even this particular study found that while three of the five states experienced reductions greater than their comparison state, two of the five did not. NHTSA's April 1999 study of the effect of .08 BAC laws in 11 states (see table 1) characterized this conclusion as "unwarranted."

NHTSA Staff Study

In 1994, NHTSA staff conducted a study that examined FARS data in the first five states that enacted .08 BAC laws (see table 1). NHTSA has often cited this study as evidence of the effectiveness of .08 BAC laws. For example, a December 1997 publication with the National Safety Council said, "... significant reductions in alcohol-related fatal crashes were found in 4 out of the 5 states ranging from 4% to 40%. ..."

The staff study examined 6 measures of alcohol involvement, ranging from fatal crashes involving drivers with high BACs to single-vehicle crashes late at night, in each of the five states (for a total of 30 measures) and found statistically significant decreases in 9 of the 30 measures. The study also had several important limitations, which the authors acknowledged. For example, as with the Boston University study, the staff study made no effort to separately account for the relative contributions of .08 BAC laws and license revocation laws in the three states that enacted them within a short period. The staff study cautioned that the results were preliminary and that they pointed to the need for further research. NHTSA's public

statements, however, were more definitive—conveying, for example, the impression that fatal crashes involving alcohol went down 40 percent in one of the five states. However, the 40-percent figure refers to only one of the six measures in Vermont, a state that experiences fairly significant year-to-year variations in fatal crashes. One of the authors told us he viewed the results as indicative of positive but not clear results.

Recent Studies Are More Comprehensive, but Results Are Mixed

On April 28, 1999, NHTSA released three studies that it sponsored (see table 1). These studies are more comprehensive than the earlier studies and show many positive results but fall short of conclusively establishing that .08 BAC laws by themselves have resulted in reductions in alcohol related fatalities. For example, during the early 1990s, when the involvement of alcohol in traffic fatalities declined from around 50 percent to nearly 40 percent—a trend in states with both .08 BAC and .10 BAC laws—eight states' .08 BAC laws became effective, and the recent studies disagree on the degree to which .08 BAC laws played a role. Two of the studies reached different conclusions about the effect of one state's .08 BAC law—one concluded that the law brought about reductions in drunk driving deaths in North Carolina, while another concluded that the state's reductions occurred as the result of a long-term trend that began before the law was enacted. In a statement releasing the three studies, NHTSA credited the nation's progress in reducing drunk driving to a combination of strict state laws and tougher enforcement and stated that "these three studies provide additional support for the premise that .08 BAC laws help to reduce alcohol-related fatalities, particularly when they are implemented in conjunction with other impaired driving laws and programs."

Eleven-State Study

An April 1999 NHTSA study of 11 states with .08 BAC laws (see table 1) assessed whether the states experienced statistically significant reductions in three measures of alcohol involvement in crashes after the law took effect: (1) the number of fatalities in crashes in which any alcohol was involved, (2) the number of fatalities in crashes where drivers had a BAC of .10 or greater ("high BAC"), and (3) the proportion of fatalities involving "high BAC" drivers to fatalities involving sober drivers. The study performed a similar analysis for license revocation laws and also modeled and controlled for any preexisting long-term declining trends these states may have been experiencing when their .08 BAC laws went into effect. The study found that 5 of the 11 states had reductions in at least one measure and that 2 of the 11 states had reductions in all three measures. Table 2 summarizes the states and measures for which the

study found statistically significant reductions after .08 BAC laws became effective.

Table 2: Results of the 11-State Study of .08 BAC Laws

State	Year .08 BAC law became effective	Statistically significant reduction occurred in: Alcohol-related fatalities	Fatalities involving "high BAC" drivers	Proportion of fatalities involving "high BAC" drivers to those involving sober drivers
Utah	1983	No	No	No
Oregon	1983	No	No	No
Maine	1988	No	No	No
California	1990	No	No	No
Vermont	1991	**Yes**	**Yes**	**Yes**
Kansas	1993	No	No	**Yes**
North Carolina	1993	No	No	**Yes**
Florida	1994	**Yes**	**Yes**	**Yes**
New Hampshire	1994	No	No	No
New Mexico	1994	No	No	**Yes**
Virginia	1994	No	No	No
Total		**2 of 11**	**2 of 11**	**5 of 11**

Note: "Yes" indicates a statistically significant reduction after the .08 BAC law became effective. "No" indicates no statistically significant reduction.

Reductions in all three measures of fatalities involving alcohol occurred in Florida and Vermont. Although alcohol involvement in fatal crashes began to decline in Florida before the .08 BAC law was enacted, it continued to do so after the law went into effect on January 1, 1994. According to FARS, the number of alcohol-related traffic deaths in Florida declined in 1994 by nearly 10 percent, while the proportion of fatalities involving alcohol fell from 44 to 39 percent—in 1997 it stood at around 34 percent. While the study noted that Vermont has experienced fluctuations in its fatal crash rates, it found that after Vermont's .08 BAC law took effect, it also experienced statistically significant reductions in both the number of fatalities involving alcohol and the proportion of fatalities involving drivers with high BACs to those involving sober drivers. In this study, Vermont was the only state of the first five states to enact .08 BAC laws that showed any reductions in alcohol-related fatalities associated with .08 BAC laws.

Three other states that enacted .08 BAC laws in 1993 and 1994—North Carolina, New Mexico, and Kansas—experienced statistically significant reductions in the proportion of fatalities involving drivers with high BACs to those involving sober drivers. According to one of the authors, this proportion is the most accurate indicator of the study's three measures—the study noted that if fatalities involving sober drivers decline along with alcohol-related fatalities, then some broader cause other than alcohol legislation is affecting all traffic fatalities. However, if the .08 BAC law operates as expected, alcohol-related deaths will decline while deaths involving sober drivers remain unaffected. In Kansas, the proportion of alcohol involvement declined because fatalities involving sober drivers increased while alcohol-related fatalities remained relatively stable, and in North Carolina, fatalities involving sober drivers increased markedly while fatalities involving drivers with high and low BACs continued their preexisting downward trend. The author stated that without the .08 BAC legislation, alcohol-related fatalities would have been expected to increase along with fatalities involving sober drivers.

In two states where no statistically significant reductions occurred after .08 BAC laws became effective in any category—California and Virginia—the study found that the .08 BAC laws were effective when paired with the states' license revocation laws. In both cases, the license revocation laws went into effect after the .08 BAC laws, and the study found that the reductions did not begin until the license revocation laws were in force.

Finally, the study found no statistically significant reductions in four states. Utah experienced no noticeable change in fatalities involving alcohol after enacting both its .08 BAC and license revocation laws in 1983. The authors noted that the rate of alcohol involvement in fatal crashes in Utah was substantially lower than the national average and that further reductions would have been difficult. Fatalities involving alcohol in Oregon showed little change after the .08 BAC law went into effect in 1983—the most dramatic change occurred over 6 years after the law's implementation. Maine experienced no significant reductions in alcohol-related fatalities after its .08 BAC law was implemented in 1988. New Hampshire experienced a decline in alcohol-related fatalities 2 years before its .08 BAC law went into effect in 1993 but saw no significant decline in fatalities associated with the .08 BAC law.

The study was careful to not draw a causal relationship between the reductions it found and the passage of .08 BAC laws by themselves. Rather,

it concluded that .08 BAC laws added to the impact that enforcement; public information; and legislative activities, particularly license revocation laws, were having. In addition to the two states where .08 BAC and license revocation laws were found to be effective in combination, the study noted that the five states with .08 BAC laws that showed reductions already had license revocation laws in place. One of the authors told us that this suggested that the .08 BAC laws had the effect of expanding the scope of the license revocation laws to a new portion of the driving public.

University of North Carolina Study

A NHTSA-sponsored study by the University of North Carolina concluded, in contrast to the 11-state study, that the .08 BAC law in North Carolina had little clear effect. The study examined alcohol-related crashes and crashes involving drivers with BACs greater than .10 from 1991 through 1995; compared fatalities among drivers with BACs greater than .10 in North Carolina with such fatalities in 11 other states; and compared six measures of alcohol involvement in North Carolina and 37 states that did not have .08 BAC laws at that time. The study controlled for and commented on external factors that could confound the results, such as the state's sobriety checkpoints, enforcement, and media coverage. The study found the following:

- No statistically significant decrease in alcohol-related crashes after passage of North Carolina's .08 BAC law in three direct and two "proxy" measures.[b]
- A continual decline in the proportion of fatally injured drivers with BACs equal to or greater than .10 but no abrupt change in fatalities that could be attributed to the .08 BAC law.
- Decreases in alcohol-related crashes in North Carolina and in the 11 other states studied. While North Carolina's decreases were greater, the study concluded that no specific effects could be attributed to the .08 BAC law.
- No statistically significant difference between North Carolina and 37 states without .08 BAC laws in four of the six measures. While reductions in police-reported and estimated instances of alcohol involvement were found to be statistically significant, these reductions happened 18 months before North Carolina lowered its BAC limit. The authors attributed these decreases, in part, to increased enforcement.

[b]Direct measures are actual observations, such as police reports of alcohol involvement in crashes, whereas proxy measures are not actual observations, but categories in which the involvement of alcohol is considered probable, such as nighttime crashes between 2 and 3 a.m.

The study concluded that the .08 BAC law had little clear effect on alcohol-related fatalities in North Carolina, and that a downward trend was already occurring before North Carolina enacted its .08 BAC law and that this trend was not affected by the law. The authors offered several possible explanations, including that (1) the effects of the .08 BAC laws were obscured by a broader change in drinking-driving behavior that was already occurring; (2) North Carolina had made substantial progress combating drunk driving and that the remaining drinking and driving population in North Carolina was simply not responsive to the lower BAC law; and (3) .08 BAC laws are not effective in measurably affecting the behavior of drinking drivers.

50-State Study

The third April 1999 NHTSA study did a complex regression analysis assessing the effect of three drunk driving laws, including .08 BAC laws.[10] It evaluated .08 BAC laws by comparing two groups—states with .08 BAC laws with states with .10 BAC laws, before and after the laws were passed. The study examined quarterly FARS data for all 50 states and Washington, D.C. from 1982 through 1997 and tested for reductions in the involvement of (1) "low BAC" drivers (.01 BAC through .09 BAC) and (2) "high BAC" drivers (.10 BAC and above) in fatal crashes. The study was more comprehensive than the prior multistate studies, having controlled for the effects of factors such as the number of licensed drivers, vehicle miles traveled, per capita beer consumption, unemployment rates, urban/rural composition, season, safety belt laws, and existing downward trends in alcohol-related fatal crashes. This study concluded that states that enacted .08 BAC laws experienced an 8-percent reduction in the involvement of drivers with both high and low BACs when compared with the involvement of sober drivers. The study estimated that 274 lives have been saved in the states that enacted .08 BAC laws and that 590 lives could be saved annually if all states enacted .08 BAC laws.

While more comprehensive than other studies, the study used a method to calculate the 8-percent reduction that is different, and thus not directly comparable, to those for fatality estimates reported in other studies and publications. In particular, this method can produce a numerical effect that is larger than other methods. In the past, NHTSA's statistics and other studies measured differences either (1) in the number of alcohol-related fatalities or the number of drivers reported to have been using alcohol (termed "alcohol-involved" drivers) or (2) in the proportion of such

[10]Regression analysis is a statistical technique used to describe and analyze relationships between a dependent variable (e.g. fatal crashes involving alcohol) and one or more independent variables (e.g. .08 BAC and license revocation laws).

fatalities or drivers as a percentage of all fatalities or drivers. The 50-state study's 8-percent estimate is the change in the ratio of alcohol-involved drivers to sober drivers who are in fatal crashes. While this is not an inappropriate way to measure differences in crashes and fatalities, this method can increase the size of the effect because, rather than comparing fatalities or drivers involving alcohol to all fatalities or drivers, it compares the number of alcohol-involved drivers to just the number of sober drivers. This method produced a larger effect in this study because, since 1982, of the drivers involved in fatal crashes, the number reported to have been using alcohol has dramatically declined (by around 39 percent), while the number reported to have been sober has substantially increased (by around 25 percent). While the 11-state study also measured this ratio, that study did not report a numerical effect.

Table 3 illustrates the difference between these methods of portraying traffic statistics using NHTSA's FARS data on drivers involved in fatal crashes between 1995 and 1997. As the table shows, while the number of alcohol-involved drivers declined by about 6 percent, the ratio of such drivers to sober drivers declined by 9 percent.

Table 3: Drivers Involved in Fatal Crashes, 1995-97

	1995	1997	Difference
Alcohol-involved drivers	14,269	13,393	(6.1%)
Sober drivers	41,895	43,209	3.1%
All drivers	56,164	56,602	0.8%
Ratio of alcohol-involved drivers to sober drivers	34%	31%	(9%)

Source: GAO's analysis of FARS data.

Another reason why this study's results cannot be directly compared to other studies' is because it did not include data for drivers under 21. In 1997, drivers under 21 accounted for around 14 percent of the drivers in fatal crashes and about 12 percent of the drivers in fatal crashes involving alcohol. According to the authors, drivers under 21 were excluded from the analysis because other laws affect these drivers, such as minimum drinking age and "zero tolerance" BAC laws, and thus the primary effect of .08 BAC legislation would be expected to be on the population over 21 years old. While this argument may have merit, other arguments exist for including this population. First, NHTSA has stated that .08 BAC laws have a general deterrent effect on drinking and driving among all drivers. Also, young drivers violating .08 BAC laws have been prosecuted under those

laws without regard to age, suggesting that these laws do not affect only adults. For example, in California, 13,067 drivers under 21 were convicted under the state's .08 BAC law in 1997, compared with 11,517 drivers under 21 convicted under the state's "zero tolerance" BAC law. Finally, with the exception of the 1994 NHTSA staff study, all other studies of the effect of .08 BAC laws, including the recent 11-state and North Carolina studies, have included persons under 21 in their analyses.

Including persons under 21 years old would have changed these study results. In particular, the study would have found no statistically significant reductions associated with .08 BAC laws for drivers at low BAC levels. The findings regarding drivers at high BAC levels—a group that contains over 3 times as many drivers—would have remained substantially unchanged.

The study warns that "it is important to interpret estimates of lives saved due to any single law with considerable caution." In particular, as the study notes, factors such as public education, enforcement, and changes in societal norms and attitudes toward alcohol have produced long-term reductions in drunk driving deaths over many years. This study did more to control for extraneous factors than any of the other multistate studies, but this is inherently difficult to do, and in this case the authors estimate that 50 to 60 percent of the reductions in alcohol-related fatalities are explained by the laws it reviewed and the other factors it considered, a moderate level for statistical analyses of this type. Because of the uncertainties, the study's estimate of lives saved is also expressed as a range—and the number of lives saved in states with .08 BAC laws could have been as few as 88 or as many as 472.[11] Similarly, if the states without .08 BAC laws enacted them and experienced reductions comparable to those found in the study, the number of lives saved annually was projected to be as few as 200 or as many as 958. While the study reported results for the three laws it reviewed, including .08 BAC laws, the study also concluded that "the attribution of savings to any single law should be made with caution since each new law builds to some extent on existing legislation and on other ongoing trends and activities."

Conclusions

While indications are that .08 BAC laws in combination with other drunk driving laws as well as sustained public education and information efforts and strong enforcement can be effective, the evidence does not

[11]The study made range estimates at the 95 percent confidence level, meaning that one would expect these results to occur in 95 out of 100 cases.

conclusively establish that .08 BAC laws by themselves result in reductions in the number and severity of crashes involving alcohol. Until recently, limited published evidence existed on the effectiveness of .08 BAC laws, and NHTSA's position—that this evidence was conclusive—was overstated. In 1999, more comprehensive studies have been published that show many positive results, and NHTSA's characterization of the results has been more balanced. Nevertheless, these studies fall short of providing conclusive evidence that .08 BAC laws by themselves have been responsible for reductions in fatal crashes.

Because a state enacting a .08 BAC law may or may not see a decline in alcohol-related fatalities, it is difficult to accurately predict how many lives would be saved if all states passed .08 BAC laws. The effect of a .08 BAC law depends on a number of factors, including the degree to which the law is publicized; how well it is enforced; other drunk driving laws in effect; and the unique culture of each state, particularly public attitudes concerning alcohol.

As drunk driving continues to claim the lives of thousands of Americans each year, governments at all levels seek solutions. Many states are considering enacting .08 BAC laws, and the Congress is considering requiring all states to enact these laws. Although a strong causal link between .08 BAC laws by themselves and reductions in traffic fatalities is absent, other evidence, including medical evidence on impairment, should be considered when evaluating the effectiveness of .08 BAC laws. A .08 BAC law can be an important component of a state's overall highway safety program, but a .08 BAC law alone is not a "silver bullet." Highway safety research shows that the best countermeasure against drunk driving is a combination of laws, sustained public education, and vigorous enforcement.

Agency Comments and Our Evaluation

DOT provided comments on a draft of this report (see app. I). The Department generally agreed with the information presented in the report. DOT reiterated its long-standing commitment to a systems approach for combating drunk driving and stated that while no individual component, including .08 BAC laws, is effective in isolation, the overall evidence supports the effectiveness of .08 BAC laws. DOT stated that the four original studies provided positive, if not conclusive, results and formed a reasonable basis for supporting .08 BAC laws. The three recent studies added to this body of evidence, including the North Carolina study, which, while finding little clear effect of the state's .08 BAC law, did find

reductions. Consequently, DOT concluded that significant reductions have been found in most states, that consistent evidence exists that .08 BAC laws, at a minimum, add to the effectiveness of laws and activities already in place, and that a persuasive body of evidence is now available to support the Department's position on .08 BAC laws.

Overall, we believe that DOT's assessment of the effectiveness of .08 BAC laws is fairly consistent with our own. We agree with DOT on the importance of a systems approach to combating drunk driving; we have noted examples in this report such as the state of California, where .08 BAC laws were not effective until other complementary measures were put into place. DOT did not disagree with our discussion concerning the limitations and methodological concerns for three of the first four studies or with our assessment that recent studies reach different conclusions about the effectiveness of .08 BAC laws; we believe those study results must be viewed in the context of their limitations and conclusions. Although DOT stated that studies showed significant reductions in most states, the 11-state study demonstrated reductions associated with .08 BAC laws in a minority of states (5 of 11) and a minority of the measures (9 of 33) it studied. In addition, many of the results DOT cited as consistent evidence supporting its position were reductions that study authors determined not to be statistically significant—thus, no conclusions on the effectiveness of .08 BAC laws can be drawn from them. Although we characterize the strength of the study results differently, we and DOT reach essentially the same conclusion regarding the effectiveness of .08 BAC laws, both by themselves and in combination with other measures.

Scope and Methodology

To determine the effect of .08 BAC laws on the number and severity of alcohol-related crashes, we analyzed the body of research published between 1991 and 1999. Of the seven studies, five were published by NHTSA, one by the state of California, and one by the American Journal of Public Health. We reviewed the studies' methodologies, findings, and conclusions and met with study authors at NHTSA, the Pacific Institute for Research and Evaluation, the California Department of Motor Vehicles, and Boston University's School of Public Health. We also discussed the studies and traffic safety issues with NHTSA officials in Washington, D.C., Boston, Massachusetts, and San Francisco, California; officials of the American Automobile Association, the Insurance Institute for Highway Safety, the National Sheriffs Association, Mothers Against Drunk Driving, the American Beverage Institute, the National Restaurant Association; and state traffic safety and law enforcement officials in California.

The scope of our study was limited to the effect of .08 BAC laws on the number and severity of alcohol-related crashes. We did not review several other arguments raised by both proponents and opponents of .08 BAC laws; for example, while we describe the medical evidence on impairment, we did not evaluate that evidence. In addition, our ability to review the severity of alcohol-related crashes was limited by the fact that the FARS database—used entirely by five of the seven studies and in part by a sixth—includes only fatal crashes. The .08 BAC laws reviewed may have had a greater or lesser effect on nonfatal crashes than it did on fatal crashes. Finally, section 2008 of the Transportation Equity Act for the 21st Century required us to review the effect of .02 BAC laws for drivers under 21 in reducing the number and severity of alcohol-related crashes. As agreed with your staff, we will not address those laws as all 50 states and the District of Columbia now have laws establishing BAC levels of .02 or less for drivers under 21 years of age.

We performed our work from August 1998 through April 1999 in accordance with generally accepted government auditing standards.

We will send copies of this report to cognizant congressional committees; the Secretary of Transportation; and the Administrator, National Highway Traffic Safe' 'ministration. We will make copies available to others upon request. you have any questions regarding this report, please contact me at (202) 512-3650 or Ronald Stouffer at (202) 512-4416. Key contributors are listed in appendix II.

Sincerely yours,

Phyllis F. Scheinberg

Phyllis F. Scheinberg
Associate Director,
Transportation Issues

Comments From the Department of Transportation

U.S. Department of Transportation

Assistant Secretary for Administration

400 Seventh St. S.W.
Washington, D.C. 20590

June 8, 1999

Ms. Phyllis Scheinberg
Associate Director, Transportation Issues
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Scheinberg:

Enclosed are the Department of Transportation's comments on the GAO draft report, "Highway Safety: Effectiveness of State .08 Blood Alcohol Laws," RCED-99-179.

We appreciate this opportunity to review and comment on the draft report. Please contact Martin Gertel on (202)-366-5145 if there are any questions concerning our comments.

Sincerely,

Melissa J. Allen

Melissa J. Allen

Department of Transportation
Comments on the General Accounting Office (GAO) Draft Report
"Highway Safety: Effectiveness of State .08 Blood Alcohol Laws,"
RCED-99-179

The Department commends GAO for reaching the sound and accurate conclusion that a .08 blood alcohol concentration (.08 BAC) law can be an important component of a state's overall highway safety program. We agree that highway safety research shows that the best countermeasure against drunk driving is a combination of laws, including .08 BAC, sustained public education, and vigorous enforcement. The Department has consistently supported such a systems approach to reduce alcohol related driving fatalities. The 08 BAC laws are an important component of this system, as research has shown substantial evidence that performance in driving-related skills such as reaction time, tracking and steering, and emergency response is substantially impaired for all persons at .08 BAC. It is not the Department's position that .08 BAC laws, by themselves, are sufficient to address the issue of alcohol-impaired driving.

Systems Approach Most Effective for Reducing Alcohol Related Highway Deaths

GAO aptly recognizes in the draft report that the National Highway Traffic Safety Administration (NHTSA) has, since 1970, espoused a systems approach for reducing alcohol-impaired driving. This systems approach must include legislative, enforcement, judicial, licensing and public information components. In 1998, NHTSA further refined this concept with the publication of an action plan to further reduce alcohol related driving fatalities. This plan recommends that all states initiate a wide range of laws and programs including .08 BAC limits, administrative license revocation (ALR) laws, comprehensive screening and treatment programs for alcohol offenders, vehicle impoundment and zero tolerance BAC laws for youth.

While studies conducted for NHTSA have attempted to measure the effectiveness of individual components of such a systems approach to reducing alcohol related deaths, it is recognized that no component operates in a vacuum. All of the efforts to reduce alcohol-impaired driving over the past two decades have built upon and operated in the environment created by the totality of actions which have preceded it. Thus, new laws will be most effective when they complement other laws and activities. Consistent with this position, the Agency has often pointed out that .08 BAC laws are likely to be most effective when combined with ALR laws, and vice versa. The studies conducted to date convincingly support this position.

Studies Provide Consistent Evidence Supporting .08 BAC Law Effectiveness

There is consistent evidence supporting the effectiveness of .08 BAC laws in reducing alcohol-related fatalities. Six of the seven published studies, and one study completed but not yet published, were designed and executed in accordance with sound, well accepted scientific procedures. All of the studies conducted to date have been directionally consistent in demonstrating reductions in alcohol-related fatalities associated with .08 BAC laws. Significant reductions have been reported for most of the states studied. Studies which have pooled or averaged results across states have shown reductions in alcohol related fatalities ranging fro :t 6-16 percent. Most variation in individual state outcomes has been among smaller or less populated states where the number of fatalities is small and as a result, relatively small changes in annual crash statistics can profoundly affect the measurement of results.

At a minimum, the study results available to date provide consistent evidence that .08 BAC laws add to the effectiveness of laws and other activities already in place, and result in reductions in alcohol-related fatalities. When all of the outcomes contained in all of the studies are considered in total, these results are consistent and persuasive. Particularly in the multi-state studies, the results consistently suggest that these laws are more frequently associated with significant reductions in alcohol-related crashes than was the case with minimum drinking age laws.

Thus, NHTSA agrees with GAO that there are strong indications that .08 BAC laws, in combination with other drunk driving laws and other programs, can save lives. This is particularly the case when .08 BAC laws are combined with the ALR laws already in place in most states.

Earlier Study Results Provided Reasonable Basis for Supporting .08 BAC Laws

Four early studies, three of which controlled for extraneous factors, provided consistent, if not conclusive, evidence of the benefit of .08 BAC laws. While all studies have limitations, these studies provided credible evidence of the impact of these laws, either alone or in combination with ALR laws. Nonetheless, NHTSA recognized the need for more replication on which to base conclusions. In addition, it recognized that in the two California studies, it was very difficult to isolate the effects of the .08 BAC and ALR laws, which were implemented within 6 months of each other. Thus, NHTSA initiated three new studies.

Three Recent Studies Strengthen Analytical Basis for Supporting .08 BAC Laws

NHTSA recently released the results of these three high quality studies of .08 BAC law effects, which provided additional evidence to support the effectiveness of these laws. When combined with the previously conducted studies, the three new studies provide additional confidence in the expectation that .08 BAC laws, when added to existing laws or programs, reduce alcohol-related traffic fatalities. A substantial body of directionally consistent evidence is now available to support the Department's position that .08 BAC laws are effective in reducing alcohol-related fatalities. The 50-state study, for example, controlled for more extraneous variables than any previous study and showed a significant reduction in the involvement of both low BAC and high BAC drivers in fatal crashes. The 11-state study found that .08 BAC laws were associated with reductions in alcohol-related fatalities in 7 of the 11 states studied, either alone or in conjunction with ALR laws. In the North Carolina study, which found no clear effect of its .08 BAC law, the majority of outcomes were directionally consistent with such an effect, over and above the sharp decline in alcohol-related fatalities that began before the law was enacted.

The methodologies used in these studies provide tools to make responsible estimates of how many lives would be saved if all states enacted .08 BAC laws. It is common and appropriate for such estimates to be made, based on average, pooled, or aggregated study results. Researchers that make such estimates are fully aware that there will be a range of results experienced by individual states. However, if such estimates are based on sound research and appropriate algorithms, it is reasonable to predict average effects which can be expected in states yet to adopt a particular program.

Appendix II

GAO Contacts and Staff Acknowledgments

GAO Contacts

Phyllis F. Scheinberg, (202) 512-3650
Ronald E. Stouffer, (202) 512-4416

Acknowledgments

In addition to those named above, Steve Cohen, Amy Gleason Carroll, Sara Ann Moessbauer, Mitchell B. Karpman, and Allan Rogers made key contributions to this report.

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are $2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. VISA and MasterCard credit cards are accepted, also. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

U.S. General Accounting Office
P.O. Box 37050
Washington, DC 20013

or visit:

Room 1100
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC

Orders may also be placed by calling (202) 512-6000
or by using fax number (202) 512-6061, or TDD (202) 512-2537.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:

info@www.gao.gov

or visit GAO's World Wide Web Home Page at:

http://www.gao.gov

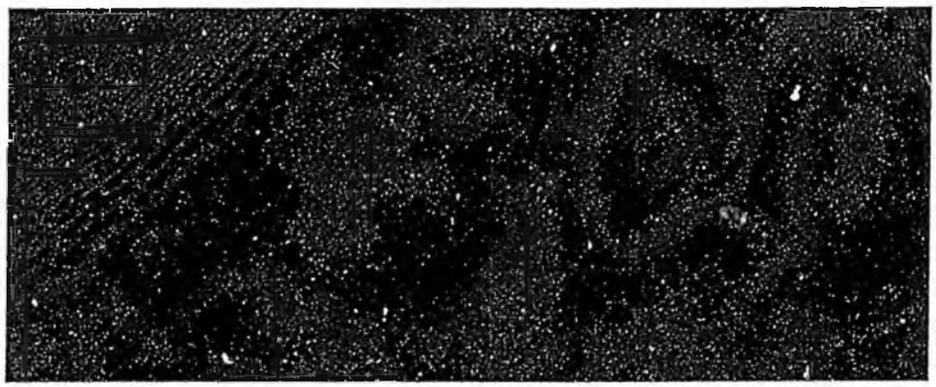
PRINTED ON RECYCLED PAPER

United States
General Accounting Office
Washington, D.C. 20548-0001

Bulk Rate
Postage & Fees Paid
GAO
Permit No. G100

Official Business
Penalty for Private Use $300

Address Correction Requested



POLICY BRIEF
Minnesota House of Representatives
Research Department
600 State Office Building
St. Paul, MN 55155

March 1994

Jim Cleary, Legislative Analyst (296-5053)

The 0.08 Alcohol Concentration Limit

One recently proposed DWI countermeasure would lower from 0.10 to 0.08 the "per se" level -- i.e., the legal limit for a driver's alcohol concentration. This policy brief describes that proposal and examines several fundamental questions pertaining to it.

Contents

Introduction

"**Per se level**" refers to the legal limit for a driver's alcohol concentration. This is the level at and above which it is illegal, in itself (i.e., per se), to be driving a motor vehicle. The general **per se level** in Minnesota is 0.10, or one-tenth of one percent of alcohol in the bloodstream. For commercial motor vehicle drivers and airplane pilots the **per se level** is 0.04.

NHTSA is the acronym for the **National Highway Traffic Safety Administration**. While **NHTSA** has little direct authority in controlling drinking driving, it influences states' policies primarily through its qualifying conditions for certain federal incentive grants to states. **NHTSA** is regarded as the chief advocate for lowering the per se limit.

Drinking and driving has long been regarded as a serious public health and public safety issue. In 1992, the most recent year for which data are available, 229 people were killed and 5,837 injured in Minnesota in alcohol-related motor vehicle crashes. These figures represent at least 39 percent of all deaths and at least 15 percent of all injuries due to motor vehicle crashes statewide.[1]

Alcohol-related crashes incur significant social and economic costs. In 1992, alcohol-related fatalities in Minnesota cost an estimated $99,000,000 in lost wages, medical expenses, insurance administration costs, and motor vehicle damage.[2] Significant costs also accompanied the numerous alcohol-related crashes in which injuries or property damage occurred.

One recently proposed and widely debated drinking driving countermeasure would lower the per se level, which is the legal limit for a driver's alcohol concentration (AC), from 0.10 to 0.08. The trend to lower the per se level stems from greater knowledge of the risks associated with drinking and driving and continued public support for tougher drinking driving laws. The findings from recent empirical research on the effects of alcohol impairment on driving suggest that even small doses of alcohol may have a deleterious effect on driving related skills. Numerous studies show that many driving related skills become significantly impaired at or below alcohol concentration levels of 0.08 and some skills become impaired at 0.05 AC or less.[3] Several professional associations and other groups support reductions in alcohol concentration limits to 0.08 or 0.05, including the American Medical Association, National Highway Traffic Safety Administration, National Safety Council, International Association of Chiefs of Police, and Mothers Against Drunk Driving.[4]

Opponents of a reduction in the legal alcohol concentration limit include such representatives of the alcohol industry as the American Beverage Institute (ABI), the National Beer Wholesalers' Association, the Beer Institute, and Miller Brewing. Of these groups, the ABI is arguably the most vocal opponent. These opponents argue that the proposed 0.08 per se level "is arbitrary, unnecessary, and targeted at the wrong population."[5] The ABI asserts that there is no clear empirical evidence suggesting that reduced alcohol concentration standards lead to a reduction in highway fatalities. Furthermore, court records reveal that the majority of drivers convicted of driving while intoxicated have blood alcohol concentration

levels far exceeding the legal limit of 0.10. These drivers also are most often the victims in alcohol-related fatal crashes.

Consequently, those opposed to the more restrictive standard assert that this strategy will affect only the less intoxicated and least dangerous drivers, and that a more effective approach would be to emphasize enforcement policies that target drivers with high alcohol concentration levels, since these drivers represent the greatest threat to public safety and are responsible for most of the costs and damage resulting from alcohol-related crashes.[6] For example, Richard Berman, executive director of the ABI, contends that:

> "increased enforcement, harsher sentences, and intervention programs to identify and treat the problem drinker are the answer to the threat posed by drunk driving."[7]

ABI refers to the **American Beverage Institute**, arguably the most outspoken opponent of lowering the per se level. In this report, "opponents of the 0.08 policy" generally refers to the ABI.

Those opposed to lowering the alcohol concentration limit contend that the proposed 0.08 per se level "is arbitrary, unnecessary, and targeted at the wrong population."

This policy brief addresses several important questions related to any proposal for lowering the per se limit to 0.08 in Minnesota. The answers to some of these questions are based on the results of several years of empirical research; others are derived from pioneering studies or the "best guesses" of experts. For some questions, there are only assertions and counterassertions about likely effects; such opposing views are presented for the reader's own appraisal.

Scientific evidence of the negative effects of alcohol impairment on driving ability appear to support the reduction of the per se level to 0.08, yet little is known about the practical implications of reducing the per se level for law enforcement agencies and the court system. Thus far, California is the only state to undertake a systematic evaluation of the effects of the change to the 0.08 per se level. The results of that evaluation recently appeared in a controversial report published by NHTSA. Findings from that study are interpreted with caution for this brief due to the recent criticisms and absence of any similar studies.

The trend to lower the alcohol concentration limit stems from greater knowledge of the risks associated with drinking and driving and continued public support for tougher drinking driving laws.

In policy briefs such as this one, the House Research Department does not take a position or make recommendations. The intent here is to describe the proposed policy as thoroughly and objectively as possible and to discuss the implications of the policy using the best evidence available. It is assumed that the reader will factor this information with his or her other concerns to arrive at a conclusion about the viability of the policy.

How Many Drinks Does It Take To Reach 0.08 AC?

The amount of alcohol that must be consumed to reach an alcohol concentration level of 0.08 is affected by several factors including gender, body weight, ingestion of food, and duration of the drinking episode.[8]

Women usually reach higher peak alcohol concentration levels than men when given identical weight-adjusted doses of alcohol.[9] The intoxicant in alcoholic beverages is ethanol. Ethanol, a water soluble and fat insoluble substance, is distributed throughout the total body water after alcohol is consumed. Thus, the concentration of ethanol in the body is inversely related to an individual's total volume of body water.

The amount of alcohol that must be consumed to reach an alcohol concentration level of 0.08 is affected by several factors including gender, body weight, ingestion of food, and duration of the drinking episode.

The average man is comprised of approximately 58.3 percent water, while the average woman is approximately 48.5 percent water.[10] These figures suggest that the total volume of distribution available in a man and woman of equal weight often is greater in the man, which decreases the man's alcohol concentration level relative to the woman's after each has had the same number of drinks.

For example, a 150 pound man has a total volume of body water of 39.75 kilograms: Multiplying his weight in kilograms (68.18) by his average percent of body water (58.3 percent) yields a total volume of body water of 39.75 kilograms. In contrast, a 150 pound woman who is approximately 48.5 percent water has a total volume of body water of 32.72 kilograms. If each consumes 13.6 grams of ethanol, the amount of ethanol in one standard drink, the concentration of ethanol in the man's body water will be 13.6 ÷ 39.75 = .342. Multiplying this result by .8 corrects for the percentage of body water in blood and yields 27.4 milligrams of alcohol per 100 milliliters of blood, or 0.027 AC. Completing the same calculations for the 150 pound woman shows that her alcohol concentration level after one drink, 0.033, is slightly higher than the man's [(13.6 ÷ 32.72) x .8 = 32.9 milligrams of alcohol per 100 milliliters of blood or 0.033 AC].

The term "standard drink" refers to the quantity of alcohol in one 5 ounce glass of wine (12% alcohol by volume), 1 1/2 ounces of spirits (40% alcohol by volume), or a 12 ounce glass of beer (5% alcohol by volume).

Total volume of body water also is responsible for the influence of body weight on alcohol concentration levels as volume of body water increases with body weight.

The ingestion of food also affects alcohol concentration levels. Food in the stomach slows the absorption rate of alcohol and results in a longer period over which alcohol remains in the body.[11] Consequently, a lower peak AC level will be obtained if alcohol is consumed with or after the consumption of food.

A 130 pound woman who consumes two standard drinks will reach a peak alcohol concentration level of 0.077, nearly the proposed 0.08 per se level. If she consumes three standard drinks, the same woman will reach a peak AC level of 0.116, which is beyond the current limit of 0.10.

A fourth important variable in determining alcohol concentration levels is the duration of time over which the alcohol is consumed. As soon as alcohol is ingested, it begins to be metabolized by the body. Thus, other things being equal, the more slowly the alcohol is ingested, the greater the proportion that is metabolized during the drinking session and the lower the drinker's alcohol concentration level.

On average, the rate of metabolism[12] for an adult is 15 milligrams of ethanol per 100 milliliters of blood per hour or 0.015 AC per hour.[13] As shown above, a 150 pound man who consumes one standard drink will reach a peak alcohol concentration level of 0.027. If he does not have a second drink, his AC level will decrease to 0.012 after one hour (0.027 - 0.015 = 0.012). Generally, peak AC levels are reached between 30 and 90 minutes after the last drink is consumed.[14]

The following tables present the estimated alcohol concentration levels over time for a 130 pound woman and a 175 pound man by number of standard drinks. The alcohol concentration levels reported in these tables were computed using the total body water averages and metabolic rate cited above, and assumes the person has not eaten recently.

A 175 pound man may consume three standard drinks and his peak alcohol concentration level will remain below 0.08. If he consumes a fourth drink, his peak AC level will be 0.094, and after one hour his AC level will be approximately 0.08.

Table 1 shows that a typical 130 pound woman who consumes two standard drinks will reach a peak alcohol concentration level of 0.077, nearly the proposed 0.08 per se level. After one hour, her alcohol concentration level will decrease well below this limit. If she consumes three standard drinks, the same woman will reach a peak AC level of 0.116. Her AC level still will be just over 0.08 after two hours provided that she does not consume additional alcohol.

Table 2 reveals that a typical 175 pound man may consume three standard drinks and his peak alcohol concentration level will remain below 0.08. If he consumes a fourth drink, his peak AC level will be 0.094; after one hour, his AC level will be approximately 0.08 provided that he does not have a fifth drink.

Table 1
Estimated Alcohol Concentration Levels by Number of Drinks:
for a 130 Pound Woman

AC Level	Number of Standard Drinks* One	Two	Three	Four	Five
At the peak**	.038	.077	.116	.144	.194
After 1 hour	.023	.062	.101	.139	.179
" 2 hours	.008	.047	.086	.124	.164
" 3 hours	-	.032	.071	.109	.149
" 4 hours	-	.017	.056	.094	.134
" 5 hours	-	.002	.041	.079	.119
" 6 hours	-	-	.026	.064	.104

* The term "standard drink" refers to the quantity of alcohol in one 5 ounce glass of wine (12% alcohol by volume), 1 1/2 ounces of spirits (40% alcohol by volume), or a 12 ounce glass of beer (5% alcohol by volume).
** Peak alcohol concentration level is generally attained within 30 to 90 minutes after the last drink.

House Research Department

Table 2
Estimated Alcohol Concentration Levels by Number of Drinks
for a 175 Pound Man

AC Level	Number of Standard Drinks* One	Two	Three	Four	Five
At the peak**	.023	.047	.071	.094	.118
After 1 hour	.008	.032	.056	.079	.103
" 2 hours	-	.017	.041	.064	.088
" 3 hours	-	.002	.026	.049	.073
" 4 hours	-	-	.011	.034	.058
" 5 hours	-	-	-	.019	.043
" 6 hours	-	-	-	.004	.028

* The term "standard drink" refers to the quantity of alcohol in one 5 ounce glass of wine (12% alcohol by volume), 1 1/2 ounces of spirits (40% alcohol by volume), or a 12 ounce glass of beer (5% alcohol by volume).
** Peak alcohol concentration level is generally attained within 30 to 90 minutes after the last drink.

House Research Department

Can a Person Accurately Judge His or Her Own Alcohol Concentration Level?

There is no practical way for a driver to accur. tely estimate his or her own alcohol concentration level.

Proof refers to alcoholic strength indicated by a number that is twice the percent by volume of alcohol present. For example, whiskey that is 90 **proof** is 45% alcohol.

There is no practical way for a driver to accurately gauge his or her own alcohol concentration level; the variability in the amount and proof of alcohol in many drinks as well as individual differences in body water to fat ratios and metabolic rates preclude a reliable estimate.[15]

In a 1990 Minnesota roadside survey study of 2,857 randomly sampled drivers, 438 were found to have alcohol concentration levels of at least 0.02.[16] Each was informed that 0.10 AC was the legal limit and was then asked to estimate his or her own AC. The study revealed that drivers with more than 0.05 AC strongly tend to underestimate their AC levels, and that this tendency to underestimate one's own AC increases with consumption. Nearly all of those drivers with ACs of 0.10 or more underestimated their own ACs. Every driver with an AC of 0.15 or more underestimated his or her own AC. Furthermore, underestimations were far more likely among drivers under age 21 than among older drivers.

A study in which experimentally naive subjects were administered different amounts of alcohol also revealed that the ability to estimate one's own alcohol concentration decreases as the quantity consumed increases.[17] Yet another study suggests that the discrepancy between subjective impairment ratings and actual impairment of driving performance appears greatest when alcohol concentration levels are falling.[18] Thus, impaired drivers who wait for a time (even one to two hours) to "sober up" following their last drink, could readily underestimate their continuing impairment.

Accordingly, people most likely to be impaired are the very ones least likely to accurately judge their own alcohol concentration levels. Consequently, some researchers contend that AC tables such as those presented above provide drivers with the best estimate of their AC level and should be carried by anyone who plans to drink any amount of alcohol and drive.[19]

Why the Trend to Lower the Legal Limit?

The regulation of drinking driving is primarily a state responsibility. However, the federal government, through NHTSA, has advocated a number of drinking driving counter-measures, including lowering the alcohol concentration limit to 0.08.

The regulation of drinking and driving is primarily a state responsibility. However, in recent decades the federal government, through NHTSA, has advocated a number of drinking driving countermeasures and incorporated them into a set of qualifications for obtaining certain federal traffic safety incentive funds. One of these qualifications involves lowering the alcohol concentration to 0.08. NHTSA's proposal needs to be understood in its historical context.

Drinking driving laws were difficult to apply before the advent of chemical tests for alcohol because alcohol impairment had to be determined by an officer based upon his or her interpretation of behavioral cues or other physical evidence.[20] The ability to test bodily substances for alcohol came about in the 1940s, prompting legislation allowing police to request these tests for suspected impaired drivers and easing enforcement problems. Prosecution of impaired drivers also became easier as prosecutors were allowed to employ the results of AC tests as evidence of impairment in court.

The early absence of research into the effects of alcohol impairment on driving ability led to the setting of initially quite high alcohol concentration standards of impairment, above which virtually all drivers were expected to be visibly impaired.

The early absence of research into the effects of alcohol impairment on driving ability led to the setting of initially quite high alcohol concentration standards of impairment, above which virtually all drivers were expected to be visibly impaired. In most states, legislatures followed the recommendations of the American Medical Association and established a "presumptive" alcohol concentration limit of 0.15.[21] A presumptive AC limit establishes a point above which a driver is presumed to be impaired, but this presumption can be refuted in court if contrary evidence exists. Many states also set a presumptive limit of 0.05 AC as the limit below which a driver was presumed not to be under the influence of alcohol.

In Minnesota, the first presumptive limits were established in 1955.[22] Similar to the early laws of most states, Minnesota law stipulated that drivers with alcohol concentration levels at or above 0.15 were presumed to be impaired while those with alcohol concentration levels at or below 0.05 were presumed to be unimpaired. Evidence of alcohol concentration levels between these two points was regarded as "relevant" evidence of a driver's impairment.

During the 1960s and 1970s, the results of epidemiological and pharmacological studies increasingly showed a positive relationship between driver alcohol concentration level and crash risk. The results of this research, coupled with improvements in alcohol concentration testing technology,

induced most states to lower their alcohol concentration limits to 0.10.[23] Forty six states also changed the nature of their alcohol concentration laws from presumptive to "per se," making it a crime in itself for a driver to have an alcohol concentration in excess of the legal limit. In Minnesota, the alcohol concentration limit was reduced to 0.10 in 1967[24] and changed from presumptive to per se in 1971.[25]

The movement to reduce the alcohol concentration limit to 0.10 was based on mounting scientific evidence of the effect of alcohol on driving related skills. However, the 0.10 per se standard was still a somewhat arbitrary cutoff.

As stated above, the movement to reduce the alcohol concentration limit to 0.10 was based on mounting scientific evidence of the effect of alcohol on driving related skills. Nevertheless, the 0.10 per se standard was still a somewhat arbitrary cutoff. Little was known at that time about the effect of lower doses of alcohol on driving ability as few studies had examined alcohol concentration levels below 0.10.

Many more-recent studies, however, conclude that the ability to drive generally becomes impaired when drivers attain alcohol concentration levels as low as 0.05.[26] This finding, combined with continued public support for tougher laws against drinking and driving, has helped persuade several state legislatures to further lower their alcohol concentration limits. By 1991, California, Oregon, Utah, Maine and Vermont lowered their per se levels to 0.08. Five additional states-North Carolina, New Mexico, New Hampshire, Florida and Kansas-passed similar legislation in 1993
(Table 3). In addition, more restrictive alcohol concentration standards have been adopted in several foreign countries. Great Britain, Austria, Switzerland, Canada, and most Australian states have set their alcohol concentration limits at 0.08; Norway, Finland, the Netherlands and the remaining Australian states have adopted a 0.05 standard; and Sweden has set its alcohol concentration limit at 0.02 (Table 4).[27]

Many recent research studies focusing on the effects of low doses of alcohol on driving ability conclude that the ability to drive becomes impaired when drivers attain alcohol concentration levels as low as 0.05.

Additionally, 20 states have recently enacted lower alcohol concentration standards for drivers under 21, ranging from a high of 0.07 in Texas to a low of 0.00 in six states.[28] In some states, violation of such law constitutes a full fledged DWI violation. However, Minnesota's law merely provides for administrative license suspension triggered by conviction for violation of the state's underage drinking laws, provided that the person committed the offense while driving a motor vehicle. Thus, unless the youth's alcohol concentration is in excess of 0.10, the offense is not recorded as an actual DWI violation.[29]

Table 3
States with a 0.08 Per Se Policy By Year

State	Year Effective
Oregon	1983
Utah	1983
Maine	1988
California	1990
Vermont	1991
North Carolina	1993
Kansas	1993
Florida	1994
New Hampshire	1994
New Mexico	1994

* Source: National Conference of State Legislatures

House Research Department

Table 4
Foreign Countries with Per Se Levels Below 0.10 AC

0.09 AC	0.08 AC	0.05 AC	0.03 AC	0.02 AC
India	Australia* Austria Canada Denmark France Great Britain New Zealand Sri Lanka Switzerland	Australia* Finland Iceland Japan Netherlands Norway	Czechoslovakia	Sweden

* Most Australian states have set their per se standard at 0.08; the remainder have set it at 0.05.
** Source: NHTSA.

House Research Department

At What Level of Alcohol Concentration Do Drivers Actually Become Impaired?

Numerous laboratory studies of the pharmacological effects of alcohol and epidemiological analyses of traffic accident data conclude that relatively low alcohol concentration levels significantly impair the ability to drive a motor vehicle.

Laboratory Studies

NHTSA recently conducted a meta-analysis of all laboratory studies of the effects of alcohol on driving related skills.[30] Over 500 studies were located; 177 met the selection criteria employed by NHTSA and were retained for analysis. The results are grouped into nine behavioral categories and summarized below.

Numerous laboratory studies of the pharmacological effects of alcohol and epidemiological analyses of traffic accident data conclude that relatively low alcohol concentration levels significantly impair the ability to drive a motor vehicle.

Divided Attention: Most studies find impairment of divided attention at or below the alcohol concentration level of 0.08; some studies find impairment begins at less than 0.02. This finding is important because driving is a multi task operation requiring a driver to employ several skills simultaneously.

Tracking Performance: Tracking is one of the principal components of driving. Three types of tracking are addressed in the studies reviewed: compensatory tracking, critical tracking, and pursuit tracking. Compensatory tracking involves making inputs to a task to maintain an index at a predetermined position, such as when a driver acts to maintain a vehicle in its lane. Critical tracking is an unstable form of compensatory tracking. Pursuit tracking is more complicated than either compensatory or critical tracking, requiring a control index to be maintained in a constant position relative to another moving index. Most studies of tracking performance find onset of impairment at or below 0.05 AC. Impairment of pursuit tracking, which involves a divided attention situation, occurs at even lower alcohol concentration levels.

Information Processing: Studies of information processing suggest that this skill becomes impaired at or below alcohol concentration levels of 0.08; however, only a few of the studies examined AC levels below 0.05.

Psychomotor Skills: Tasks requiring skilled motor performance and coordination (tasks combining steadiness

or coordination measures with speed and accuracy tasks) are more likely to become impaired at lower alcohol concentration levels than other psychomotor tasks. Skilled psychomotor tasks often become impaired at 0.05 AC, while psychomotor tasks requiring less skill become impaired at higher levels.

Visual Functions: Ocularmotor control, which refers to the control of eye movement, tends to become impaired at alcohol concentration levels of 0.05 or less. Other visual functions, including glare recovery, visual acuity, and flicker fusion, do not appear impaired at low or moderate AC levels.

The majority of laboratory studies of alcohol and driving related skills conclude that most driving related skills become significantly impaired at AC levels below 0.08.

Reaction Time: Complex reaction time (i.e., involving a choice decision) becomes impaired at lower alcohol concentration levels than simple reaction time (i.e, with no choice involved). In general, reaction time is not as sensitive to low AC levels as other types of driving skills. An exception to this finding occurs when accuracy is considered. Most studies including a measure of accuracy find that complex reaction times can become impaired at AC levels of 0.03 to 0.04; in contrast, simple reaction times appear to become impaired at 0.04 or more. Studies not taking accuracy into account find that reaction times become impaired at or above 0.10 AC.

Some critical skills, including tracking ability, reaction time, skilled psychomotor tasks, and ocularmotor control become impaired at AC levels at or below 0.05.

Concentrated Attention: Concentrated attention, measured by fixation in a visual field and peripheral vision, appears to be the driving related skill least impaired by alcohol. No study included in the review found impairment below 0.05 AC and most did not find impairment below 0.08 AC.

Perception: Most studies find little impairment of perception below 0.08 AC. Typically, measures of perception include the distribution in space of eye fixations and the duration of fixation.

Driving (in a simulator or on road driving): The findings from studies employing driving simulators vary considerably; much of this variation stems from the diversity of behavioral demands imposed by the driving tasks. Some studies find that alcohol concentrations as low as 0.03 produce significant impairment of driver performance. Most studies find that AC levels of 0.08 or lower impair a driver's accuracy of steering, braking, speed control, lane tracking, gear changing, and judgements of speed and distance in the driving situation.

The majority of laboratory studies of alcohol and driving related skills conclude that most, but not all, driving related skills become significantly impaired at alcohol concentration levels below 0.08. Some critical skills -- including reaction time, tracking ability, skilled psychomotor tasks, and ocularmotor control -- become impaired at AC levels at or below 0.05.

Table 5
Alcohol Concentration Level at which Various Driving Skills Become Impaired

Driving Related Skill	AC Level at which Skill is Impaired
Complex Reaction Time	0.03
Simple Reaction Time	0.04
Tracking Skilled Psychomotor Tasks Ocularmotor Control	0.05
Divided Attention Information Processing Driving Related Tasks (steering, braking, speed control, lane tracking, gear changing, judgements of speed and distance)	0.08
Concentrated Attention Perception	0.09 to 0.10

* Source: NHTSA review of published findings.

House Research Department

Epidemiological Studies

After controlling for drinking frequency, their analysis revealed that crash risk among all drivers with alcohol concentration levels of 0.08 or higher was 175 times greater than non drinking drivers.

Drivers who drank only yearly were at the greatest risk of being involved in a crash. At 0.08 AC, yearly drinkers were nearly 1,000 times more likely to be involved in a crash, compared to sober yearly drinkers.

Epidemiology is the study of the occurrence of a phenomenon among naturally occurring subpopulations. Many epidemiological studies employ traffic accident data to examine the relationship between alcohol concentration levels and accident risk. A recent and notable study of this relationship, conducted by Zador,[31] examines the alcohol concentration levels of drivers killed in single vehicle crashes to determine the relative risk of death accompanying different alcohol concentration levels. According to Zador, the risk of being killed in a single vehicle crash relative to drivers who had not been drinking is 11 times greater for drivers with alcohol concentrations between 0.05 and 0.09, 48 times greater for drivers with AC levels between 0.10 and 0.14, and 380 times greater for drivers with AC levels of 0.15 or more. Zador also found that at comparable AC levels the fatality risk is greater among females and drivers under the age of 20 years when compared to males and drivers over 20 years of age. The results of Zador's research suggest that driver fatality risk increases considerably at alcohol concentrations as low as 0.05, and this risk is even higher among certain population subgroups (Table 6).

Table 6
Fatality Risk for Drivers in Single Vehicle Crashes At Various Alcohol Concentration Levels: Relative to Non-Drinking Drivers

AC Level	Fatality Risk
0.05-0.09	11 times greater
0.10-0.14	48 times greater
0.15 or higher	380 times greater

* Source: Zador study, 1991.

House Research Department

Additional epidemiological studies corroborate Zador's findings. A reanalysis of data first evaluated in one of the earliest studies of this kind, the Grand Rapids study,[32] revealed dramatic increases in crash risk accompanying higher alcohol concentration levels as well as increased risk among subgroups of drivers.[33] After controlling for drinking frequency, the analysis revealed that crash risk among all drivers with alcohol concentration levels of 0.08 or higher was at least 175 times greater than non drinking drivers. Drivers who drank three times a week had the lowest crash risk at 0.08 AC; nevertheless, compared to their sober counterparts, these drivers still were approximately 125 times more likely to be involved in a crash. Drivers who drank only yearly were, when drinking, at the greatest risk of being involved in a crash; at 0.08 AC, yearly drinkers were nearly 1,000 times more likely to be involved in a crash, compared to sober yearly drinkers.

In sum, the majority of laboratory studies and epidemiological analyses conclude that the impairment of driving ability often begins at low alcohol concentration levels and increases markedly as the level of alcohol concentration increases.

Summary of the Empirical Research

In sum, the majority of laboratory studies and epidemiological analyses conclude that the impairment of driving ability often begins at low alcohol concentration levels and increases markedly as the level of alcohol concentration increases. However, research does not reveal an alcohol concentration "threshold" at which the impairment of driving related skills begins or below which no impairment is found.[34] The findings from laboratory studies indicate that some driving related skills become significantly impaired at AC levels as low as 0.03 while other skills are relatively unimpaired at AC levels of 0.08 or more.

However, research does not reveal an alcohol concentration "threshold" at which the impairment of driving related skills begins or below which no impairment is found.

Additionally, alcohol consumption does not impair the driving ability of all drivers uniformly. Variables such as age, gender, and driving experience appear to mediate the effect of alcohol concentration level on driving ability; consequently, as little as one drink may impair the driving related skills of some drivers while the skills of others may appear relatively unaffected by such low doses. A few recent studies also suggest that some driving related skills are more impaired when alcohol concentration levels are increasing than when AC levels are decreasing relative to the peak AC reached.[35] Despite these caveats, many researchers cite 0.05 AC level as the point above which most skills and most drivers show signs of impairment.

Would It Be Difficult to Detect Drivers Between 0.08 and 0.10 AC?

Enforcement of alcohol concentration limits depends primarily upon observations of deviant driving, indicating to an officer that a driver might be impaired. These observations form the basis of the reasonable suspicion that police officers are required to have to stop a vehicle. However, some drivers do not exhibit these cues at lower AC levels, making police stops of drivers with lower AC levels unlikely[36] and, in fact, potentially unlawful.[37]

Enforcement of alcohol concentration limits depends primarily upon observations of deviant driving. However, some drivers do not exhibit these cues at lower AC levels, making police stops of drivers with lower AC levels unlikely.

A crude estimate of the likelihood of detecting drivers with low alcohol concentration levels can be derived from the number of alcohol content reports being filed by Minnesota law enforcement officers. Officers are required to file an alcohol content report for each driver stopped and administered a preliminary breath test (PBT), and found to have an AC level just under the legal limit (i.e., between 0.07 and 0.09). In 1992, Minnesota law enforcement officers filed 1,205 alcohol content reports.

For several reasons, this number is an inexact estimate of the ability to detect drivers with alcohol concentration levels between 0.08 and 0.10. First, it includes an alcohol concentration level (i.e. 0.07) that would not be affected by a reduction in the standard to 0.08. Second, officers are not necessarily motivated to detect drivers with ACs in the 0.07 to 0.09 range, since those AC levels are less than the current per se level. Finally, the accuracy of this number is itself uncertain. Police officers are mandated to submit alcohol content reports to the Department of Public Safety, but it is not known how consistently they comply with this mandate. Still, this number is fairly small relative to the roughly 35,000 drinking driving arrests made annually, supporting the belief that drivers with low alcohol concentration levels are difficult to detect.

Would Current Alcohol Measurement Techniques Work with a 0.08 Limit?

The experience of California law enforcement officials following the implementation of the 0.08 standard suggests that law enforcement agencies can adapt to this lower standard with minimal changes.

Once a suspected drinking driver is stopped, police officers rely heavily on the standard field sobriety test (SFST) to develop probable cause to arrest an impaired driver and conduct a preliminary breath test. The SFST currently used by officers is designed to detect alcohol concentration levels of 0.10 or more. Thus, new procedures or techniques must be developed if officers are to detect AC levels as low as 0.08.[38]

The experience of California law enforcement officials following the implementation of the 0.08 standard suggests that law enforcement agencies can adapt to this lower standard with minimal changes. The primary modification that occurred in California was a new scoring system for the SFST. Some California officers also required training to recognize the subtle indications of alcohol impairment.[39]

Alternatives to modifications in the SFST include the use of passive alcohol sensors or greater use of PBTs; both of these alternatives would require additional or modified equipment and training procedures. Nearly all Minnesota law enforcement agencies currently possess or have access to PBT devices. Most of these devices employ a set of colored lights to indicate whether or not a driver's alcohol concentration level is beyond the legal limit. Currently, PBT devices are calibrated to detect three ranges of alcohol concentration levels: 0.003 to 0.055, 0.056 to 0.110, and 0.111 and beyond.[40] Drivers with alcohol concentrations in the last category "fail" the PBT and are arrested and detained for an evidentiary alcohol concentration test using a more sophisticated testing instrument, the Intoxilyzer.

PBT refers to a **preliminary breath testing device.** About the size of a pocket radio, a **PBT** is used to measure a DWI suspect's alcohol concentration level at the roadside. A driver failing the **PBT** test is typically arrested, taken to the police station, and given an evidentiary-quality test using the **Intoxilyzer**, a considerably more sophisticated breath testing device.

According to the Minnesota Bureau of Criminal Apprehension (BCA), PBT devices can be recalibrated to detect lower alcohol concentration levels. However, such recalibration would consume some time of BCA technicians and incur some monetary costs as well.

Current evidentiary breath testing devices accurately measure alcohol concentration levels to as low as 0.001.[41] Thus, law enforcement agencies would not need to change the methods employed to determine alcohol concentration levels after a driver is arrested.

Are Existing Enforcement and Court Resources Sufficient to Implement 0.08?

Opponents of the 0.08 per se level maintain that it would increase the number of DWI arrests and flood an already overburdened court system with new cases. They contend that this would result in an increased likelihood that some more-dangerous offenders would go unpunished, thereby diminishing the deterrent effect of the per se law.

Those opposed to the 0.08 per se level contend that a reduction in the alcohol concentration standard would have an adverse effect on the law enforcement and court systems. They posit that lowering the per se level to 0.08 would increase the number of DWI arrests and flood an already overburdened court system with new cases.[42] They contend that, unless there is a concurrent increase in resources, many apprehended DWI suspects would not be prosecuted or the charges against them would be plea bargained to a lesser charge than DWI; this would result in an increased likelihood that some of the more dangerous offenders would go unpunished thereby diminishing the deterrent effect of the per se law.

In contrast, proponents of lower per se levels suggest that, while tightening the limit would result in some increase in arrests and prosecutions -- at least initially and until the public adapts to the tighter standard -- such an increase probably would not be so dramatic as to overburden the system. Their rationale is that since officers generally must rely on deviant driving as an indicator of alcohol impairment and since there are generally fewer observable signs of impairment at lower alcohol concentration levels, the number of additional arrests would not be great. Support for this premise is generated by data on the AC levels of persons arrested for driving while intoxicated. In Minnesota, the average AC level of drivers apprehended for driving while intoxicated is between 0.15 and 0.18.

The Minnesota Department of Finance anticipates that a change to 0.08 in Minnesota would result in an additional 1,500 alcohol-related driving convictions annually, or a four percent increase.

The California study revealed that misdemeanor DWI arrests increased 11.1 percent in California following adoption of the 0.08 per se level. However, whether this increase was due to the change to the 0.08 limit or to some other factor is difficult to discern, since the simultaneous increase in adult misdemeanor arrests of all types was nearly two percentage points greater than that for misdemeanor DWIs. Furthermore, the increase in misdemeanor DWI arrests varied greatly by jurisdiction -- from a low of 2% to a high of 39% for the 12 jurisdictions examined. Thus, while some increase in DWI arrests in Minnesota could be expected following adoption of the 0.08 per se level, it is difficult to predict the amount of increase.

In its bill analysis for the 1993 legislative session, the Minnesota Department of Finance estimated that a change to the 0.08 per se level in Minnesota would result in an additional 1,500 alcohol-related driving convictions annually, or a four percent increase.

Given the limited experience of other states, such estimation appears to be largely educated guesswork.

The actual result might depend in part on the perceived intent of the change to the 0.08 per se level. The California study noted that at least some law enforcement agencies perceived the new 0.08 per se policy as signalling increased social disapproval of drinking driving, which encouraged them to step up their enforcement activities in various ways, thus possibly explaining the larger increases in some jurisdictions. Such efforts are likely to be self limiting -- i.e., when enforcement and court resource limits are encountered, the stepped up enforcement is likely to be reined in. Any change in DWI arrests is also likely to depend upon the degree of general public acceptance of the tighter per se limit, as well as the extent of eventual adaptation to the lower legal limit by the drinking driving public.

In California, the main impact on the court system of the change to the 0.08 standard was on prosecutors' decisions to file charges. It appears to have increased the certainty of prosecution for DWI at lower alcohol concentration levels.

It is also difficult to predict whether the likely increase in DWI cases would overload the court system. California's experience suggests it would not. Evaluation of California's court records showed no significant changes in the following measures following the implementation of the tighter standard: the proportions of DWI arrestees pleading guilty (95 percent) versus requesting jury trials, convictions, appeals, and sentencing patterns by judges (since California judges, the report notes, typically simply impose the mandatory minimum sentence for DWI). The study also found no significant increase in jail overcrowding.

The California study found that the main impact on the court system was on prosecutors and their decisions to file charges. Prior to the law change, prosecutors were reluctant to prosecute cases as DWI in which chemical tests showed the driver's alcohol concentration level was at or just above 0.10. Typically, drivers arrested for DWI with AC levels of 0.12 or 0.13 and below were charged with the lesser offense of reckless driving. Reduction of the limit to 0.08 led to the lowering of this point at which DWI charges were substituted with lesser charges to approximately 0.10 AC. Thus, the adoption of the 0.08 standard in California appears to have increased the certainty of prosecution for DWI at lower alcohol concentration levels.[43]

Would a 0.08 Limit Divert Enforcement Resources?

Would a 0.08 limit divert enforcement resources from more seriously impaired drivers or unfairly target social drinkers?

The claim by opponents to the 0.08 per se limit that a reduced per se level would affect only the least dangerous drinking drivers is difficult to assess due to the multitude of ways in which one may determine who is a "dangerous" driver. The opponents posit that recent data on fatal traffic accidents shows that the most dangerous drinking drivers are those with alcohol concentration levels exceeding 0.10. Both logic and data tend to support this claim. In 1991, 24 percent of all drivers involved in fatal crashes nationwide had AC levels of 0.10 or more, while only 7.2 percent had lower positive alcohol concentration readings.[44] In Minnesota, these figures were 21 and 8 percent, respectively.[45] Thus, of drinking drivers involved in fatal crashes, the vast majority -- about three-fourths -- have AC levels of 0.10 or more.

Recent data on fatal traffic accidents shows that the most dangerous drinking drivers are those with alcohol concentration levels exceeding 0.10.

Proponents of the 0.08 per se level agree that empirical evidence suggests the less impaired "social drinker" is less dangerous than the more impaired driver, but assert that both are nevertheless dangerous.

Proponents of the 0.08 per se level agree that empirical evidence suggests the less impaired "social drinker" is less dangerous than the more impaired driver, but assert that both are nevertheless dangerous. Both logic and data support this claim, as well. As mentioned previously, many driving related skills are significantly impaired at alcohol concentration levels between 0.05 and 0.08. Further, epidemiological studies show that drivers with AC levels as low as 0.05 are at considerably greater risk of being involved in an accident than drivers who abstain from alcohol.

To the extent that all impaired drivers -- whether above or just below the current per se limit -- are dangerous, it matters somewhat less where the enforcement focus would be placed under the policy of a 0.08 per se level. Nevertheless, given that the most seriously impaired drivers are indeed more dangerous, it is still a valid question to ask whether enforcement resources would be shifted from them to the less seriously impaired drivers.

Among enforcement agencies generally, such a refocusing would seem unlikely, since police must still have probable cause to detect, apprehend and arrest suspected drinking drivers and since, as has already been reasoned, not many drivers with alcohol concentrations in the 0.08 to 0.10 range would be easily detectable in general driving situations. Nevertheless, at enforcement checkpoints -- i.e., DWI roadblocks -- DWI arrests might be expected to include a higher proportion of drivers in the 0.08 to 0.10 range, since that enforcement setting provides more opportunity for detection (e.g., through smell) of the more marginally impaired drivers. However, the relatively high cost

and difficulty of properly administering DWI roadblocks results in only infrequent use of this enforcement technique in Minnesota and most other states.

It seems unlikely that with a change to 0.08 there would be any sizeable shift of enforcement resources toward the less impaired drivers.

For prosecutors and courts, on the other hand, such refocusing could become an unintended consequence of a change to 0.08, but only should they happen to decide to actually prosecute most of defendants with AC readings between 0.08 and 0.10, since defendants with readings just above any legal limit are more inclined to contest their DWI charge. This consequence, however, also seems unlikely in light of the control that prosecutors have in defining the AC level below which they routinely engage in charge reduction through plea bargaining. The California finding discussed earlier suggests that this point will be lowered under a 0.08 per se level policy (perhaps to about 0.10 or 0.11), but it will still exist. Thus, the likely result is that prosecutors will be more able to obtain guilty pleas for defendants in the approximate range of 0.10 to 0.13, without becoming overburdened with actually prosecuting DWI charges based on AC readings in the approximate range of 0.08 to 0.10.

How Many Crashes, Injuries and Fatalities Would Be Averted with a 0.08 Limit?

While it seems reasonable to expect some decrease in alcohol-related traffic crashes, injuries and fatalities from a change to the 0.08 per se level, any estimate of such effects at this time must be regarded as quite tentative.

It is difficult to predict what effect a tightening of the alcohol concentration standard would have on the number of alcohol-related traffic crashes, injuries, and fatalities in Minnesota. In California, the reduction in alcohol-related traffic fatalities following implementation in January, 1990 of the 0.08 per se level was estimated at 12%.[46] However, as the authors of the California study note, it is virtually impossible statistically to apportion that effect between 1) the reduction in the per se level to 0.08, and 2) the implementation of an administrative license revocation law in that state just six months later. They note that, due to the publicity surrounding the simultaneous legislative action on both countermeasures, part of the estimated fatality reduction impact may actually be due to the anticipatory effect of the administrative license revocation law. It is noteworthy that the California study found no corresponding reduction in non-alcohol-related fatalities in California, nor in alcohol-related fatalities nationwide.

The California study also analyzed alcohol-related crash data and, rather surprisingly, found some increase in this measure in two of the four study sites, though not statewide. The study convincingly notes, however, that the measure of alcohol-involvement in the case of non-fatal crashes is based on the subjective judgment of the attending officer rather than on alcohol concentration tests[47] (as used with fatal crashes[48]). It is quite possible that the law itself may have resulted in more conscientious reporting of alcohol involvement, thereby invalidating the use of this measure for evaluating the actual impact of the law. Thus, the finding regarding a 12% reduction in alcohol-related fatalities in California following implementation of the 0.08 per se level could not be corroborated using crash data. Unfortunately, it could not be corroborated using traffic injury data either, since that data was in a form that made it totally unavailable for use in the California study.

Critics of the California study take issue with that study's methodology and findings, and claim that the report offers no evidence to link any reduction in drinking driving deaths to California's 0.08 law.[49] Using a different methodology, the ABI claims that alcohol-related fatalities in California decreased only 6.1% in 1990, compared to a nationwide decrease of 6.3%.[50]

In light of the controversy surrounding the findings of the California study, it seems prudent to be cautious about

generalizing its fatality impacts to other states and situations. Nevertheless, if one were to generalize from California's experience, Minnesota might expect an annual reduction of perhaps 6% in the number of alcohol-related traffic fatalities following the implementation of the 0.08 standard. Based on 1992 figures, this translates to an annual savings of roughly 14 lives and approximately $6,300,000 in social costs associated with the would-be fatalities. Other health and cost savings would accrue from avoided injuries and property damage. While it seems reasonable to expect some decrease in alcohol-related traffic crashes, injuries, and fatalities with a tightening of the per se level, any estimate of such effects at this time must be regarded as quite tentative.

Would Drivers Adapt to the 0.08 Limit by Drinking Less?

Proponents of the more restrictive alcohol concentration standard claim that the intent of such legislation is not to decrease the consumption of alcohol but to decrease driving while impaired and to prevent traffic accidents, injuries, and fatalities.

Proponents claim that the intent of such legislation is not to decrease the consumption of alcohol but to decrease driving while impaired.

Nevertheless, it seems possible that a change to the 0.08 per se level would result in some decrease in alcohol consumption, particularly at drinking establishments and events that involve subsequent driving. The ABI voices this concern, asserting that a change to 0.08 would have a devastating effect on the hospitality industry.[51] However, available data appears to offer little support for this assertion.[52]

As noted, California's 0.08 legislation became effective in January, 1990. Given the strong publicity and high general awareness of the law change among Californians, one would expect any subsequent reduction in alcohol consumption to be rather immediate. Indeed, according to consumption data published by the Beer Institute, per capita wine consumption in California decreased by 6.3% during 1990. However, a closer inspection of the data reveals that such decrease is consistent with the downward trend in wine consumption in that state beginning in 1987 and continuing to the present; in fact the decrease in each of the two years prior to implementation of the 0.08 standard exceeded 9%. The same data source reveals that the consumption of malted beverages (i.e., beer) and distilled spirits (i.e., liquor), which also had been declining in recent years, actually increased very slightly in 1990.

Nevertheless, it seems likely that the sale and consumption of alcohol at drinking establishments and events that involve subsequent driving would in fact decrease.

It may be important to note that the greatest annual decrease in California's per capita consumption of malt beverages (-6.3%), distilled spirits (-14.9%), and wine (-10.5%) occurred in 1991, the second year following implementation of the 0.08 standard. It is reasonable to ask whether such decreases might be due to a delayed effect of the law change. It would seem more likely, however, that such decreased consumption was due to the combined effects of the factors driving the long-term downward trends coupled with a very significant alcohol tax increase in California, effective July 15, 1991.[53]

The inconsistent and weak decline in California's alcohol consumption levels following the change to the 0.08 standard initially seems incongruent with the 12% reduction in fatalities reported in the California study. However, this discrepancy might be explained by an increase in the proportion of adults choosing to drink in their home, rather than elsewhere, or to an

The ABI contends that the impact on the hospitality industry would be devastating, but the data does not appear to support that claim.

increase in the use of designated drivers to avoid driving after drinking. If such behavioral adaptation has in fact occurred, it might indeed result in some loss of business to the server industry without a concomitant decrease in alcohol consumption itself. Supporters of the 0.08 standard suggest that establishments that promote the "designated driver" concept may be less affected, as might those restaurants and bars that serve food and non-alcoholic beverages in addition to alcohol. In general, it seems likely that those businesses offering other products, services, or entertainment besides alcohol would be less affected than those that offer only alcohol.

Would the Public Accept the Lower Legal Limit?

Opponents of a reduction in the per se level suggest that the 0.10 standard is the historical standard for intoxication and changing this standard would be difficult.

Proponents of the 0.08 alcohol concentration limit assert that the public is ready for a tightening of the per se standard.

It seems reasonable to expect that the public's willingness to accept or embrace the 0.08 standard would depend primarily on whether they view it as appropriate and contributing to public safety.

Proponents of the 0.08 alcohol concentration limit assert that the public is ready for a tightening of the per se standard. The limited available data appears to support this claim. A 1988 survey of the Michigan public's attitudes toward various alcohol policies found that a majority (55 percent) of respondents supports a reduction in the per se level to 0.05, a lower and more controversial limit than the 0.08 standard.[54] The primary weakness of that study involves the generalizability of its findings; that is, since the survey was limited to Michigan residents, it is unclear whether the findings apply more broadly.

Proponents of the 0.08 standard also maintain that tightening the standard would draw further attention to the seriousness of driving while impaired and thus would enhance the moral proscription against drinking driving.[55] A reduction in drinking driving depends not only on certain, severe, and swift punishment of offenders but also on public awareness of and attitudes toward drinking and driving. Proponents assert that the public should be made aware that alcohol degrades driving performance at any measurable level, and that legislating a more restrictive per se standard would contribute to educating the public on the dangers of drinking and driving.

Those who oppose a reduction in the per se level suggest that the 0.10 standard is the historical standard for intoxication and changing this standard would be difficult. Supporters of a reduced per se level counter this argument by stating that the public has accepted several changes in drinking driving laws over the last few decades, including the previous reduction in the standard from 0.15 to 0.10 AC.

Minnesotans have enthusiastically embraced a broad range of restrictive and punitive DWI laws and crackdowns during the past 15 years. It seems reasonable to expect that the public's willingness to accept or embrace the 0.08 standard would depend primarily on whether they view it as appropriate and contributing to public safety; that, in turn, would likely depend on their beliefs regarding whether or not drivers are excessively impaired and unsafe at alcohol concentrations of 0.08 and above.

This publication can be made available in alternative formats upon request. Please call (651) 296-6753 (voice); (651) 296-9896 or 1-800-657-3550 (TDD).

Notes

1. Office of Traffic Safety, 1993. Minnesota Motor Vehicle Crash Facts 1992. St. Paul: Minnesota Department of Public Safety.

2. Ibid.

3. Snyder, M.B., 1991. "Lower Alcohol Levels, Driver Impairment and Crash Risk." Auto and Traffic Safety, 1(1):11-19; NHTSA, 1988. Effects of Low Doses of Alcohol on Driving-related Skills: A Review of the Evidence. Washington, D.C.: SRA Technologies, Inc.; NHTSA, 1992a. Driving Under the Influence: A Report to Congress on Alcohol Limits. Washington, D.C.: U.S. Department of Transportation; Council on Scientific Affairs, 1986. "Alcohol and the Driver." Journal of the American Medical Association, 225(4):522-527.

4. "0.08 Illegal Per Se." Report prepared for NHTSA, 1993. Washington, D.C.

5. "Issue: The Lowering of the Allowable Blood Alcohol Concentration (BAC) from 0.10% to 0.08%." Report prepared for the American Beverage Institute (ABI), 1993, p.1. Washington, D.C.

6. Position statement prepared for individual distribution to policymakers; May 15, 1992.

7. Ibid; Klein, T.M., 1986. "DWI-Are We Off Track?." In Beverage Retailers Against Drunk Driving, eds. Straight Talk About the Drunk Driving Problem, Part 2; Washington, D.C.: American Beverage Institute.

8. Fisher, H.R., R.I. Simpson and B.M. Kapur, 1987. "Calculation of Blood Alcohol Concentration (BAC) by Sex, Weight, Number of Drinks and Time." Canadian Journal of Public Health, 78:300-304.

9. Ibid; Council on Scientific Affairs. "Alcohol and the Driver."

10. Fisher, Simpson, and Kapur, "Calculation of Blood Alcohol Concentration (BAC)."

11. Ibid.

12. The rate of metabolism refers to both how quickly ethanol is absorbed from the intestines into the bloodstream and how quickly it is decomposed by the liver.

13. Fisher, Simpson, and Kapur, "Calculation of Blood Alcohol Concentration (BAC)."

14. Ibid.

15. NHTSA, Driving Under the Influence.

16. Foss, R.D., R.B. Voas, D.J. Beirness and A.C. Wolfe, for the Minnesota Department of Public Safety, 1990. Minnesota Roadside Survey of Drinking and Driving: 1990. Also reported in: Beirness, D.J., R.D. Foss and R.B.Voas, 1993. "Drinking drivers estimates of their own blood alcohol concentrations." Journal of Traffic Medicine, 21:73-78. See also: Beirness, D.J., 1987. "Self-estimates of blood alcohol concentrations in drinking-driving context." Drug and Alcohol Dependence, p.79-90.

17. Mongrain, S. and L. Standing, 1989. "Impairment of Cognition, Risk-Taking, and Self-Perception by Alcohol." Perceptual and Motor Skills, 69:199-210.

18. Gengo, F.M., C. Gabos; C. Straley and C. Manning, 1990. "The Pharmacodynamics of Ethanol: Effects on Performance and Judgement." Journal of Clinical Pharmacology, 30:748-754.

19. Fisher, Simpson, and Kapur. "Calculation of Blood Alcohol Concentration (BAC)."

20. Ross, H. Laurence, 1992. Confronting Drunk Driving: Social Policy for Saving Lives. New Haven: Yale University Press.

21. Ibid.

22. Laws of Minn. 1955, c487, establishing Minnesota Statutes 1955, sec 169.12.

23. Snyder, "Lower Alcohol Levels, Driver Impairment and Crash Risk."

24. Laws of Minn. 1967, sec. 1; Minnesota Statutes 1967, sec. 169.121, subd. 2.

25. Laws of Minn. 1971, c893, sec. 1-3; Minnesota Statutes 1971, sec. 169.121, subd. 1(d).

26. Snyder, "Lower Alcohol Levels, Driver Impairment and Crash Risk."; NHTSA, Effects of Low Doses of Alcohol on Driving-related Skills.

27. NHTSA, "0.08 Illegal Per Se."

28. Digest of State Alcohol-Highway Safety Related Legislation, 11th edition, 1993; National Highway Traffic Safety Administration. NHTSA credits Minnesota with having a zero per se level for youth. This is somewhat an overstatement, however, since Minnesota's new law relating to youth merely provides for administrative license suspension based on conviction for violation of the underage consumption law (MS 340A.503, subd. 1), provided that the person committed the offense while driving a motor vehicle. The period of suspension is 30 days for a first offense and 180 days for a repeat offense. Such a violation is not regarded as a DWI under the state's DWI laws. "Consumption" is defined as both "the ingestion" and the "physical state of having ingested" an alcoholic beverage, other than at home and with a parent's permission.

29. Minnesota Statutes 1993 Supplement, sections 171.173 and 340A.503, subd. 1, clause c.

30. NHTSA, Effects of Low Doses of Alcohol on Driving-related Skills.

31. Zador, P.L., 1991. "Alcohol-related Relative Risk of Fatal Driver Injuries in Relation to Driver Age and Sex." Journal of Studies on Alcohol, 52(4):302-310.

32. Borkenstein, R.F., R.F. Crowther, R.P. Shumate, W.B. Ziel and D.A. Zylman, 1964. The Role of the Drinking Driver in Traffic Accidents. Bloomington, IN: Indiana University Department of Police Administration.

33. Hurst, P.M., D.S. Harte and W.J. Frith, 1991. "A Reanalysis of the Grand Rapids Data." Cited in NHTSA, Driving Under the Influence.

34. NHTSA, Driving Under the Influence.

35. Nicholson, M.E., M. Wang, C.O. Airhihenbuwa, B.S. Mahoney, R. Christina and D.W. Maney, 1992. "Variability in Behavioral Impairment Involved in the Rising and Falling BAC Curve." Journal of Studies on Alcohol, 53(4):349-356.

36. NHTSA, Driving Under the Influence.

37. An arrest for DWI stemming from a police stop not involving the prior observation of deviant driving behavior or some other visible indicator of impairment would be unlawful since it would not be properly supported by "probable cause" for the stop. In the event of a judicial challenge by a defendant, unless probable cause can be demonstrated for the stop, the case would be dismissed and the driver's license reinstated.

38. NHTSA, 1991. The Effects Following the Implementation of an 0.08 BAC Limit and Administrative Per se Law in California. Washington, D.C.: Research and Evaluation Associates; NHTSA, Driving Under the Influence.

39. NHTSA, The Effects Following the Implementation of an 0.08 BAC Limit.

40. According to Robert Mooney, lab technician at the Minnesota Bureau of Criminal Apprehension, most of the PBT devices in use in Minnesota issue results as a "pass", "warning" or "failure", though a few have digital readouts. To compensate for possible measurement variance, the failure level is typically calibrated at 0.11. The dividing point between a pass and a warning is calibrated at half that of the failure point (.11÷2 = .055). If the per se level is changed to 0.08, the dividing point will become 0.04 (or 0.045 if the PBTs are calibrated at .09).

41. Mr. Mooney indicated that any AC reading below 0.003 is reported as zero. He noted that the biggest problem applying to both PBT and Intoxilyzer tests occurs in the situation of less-than-complete exhalation by the suspect. However, he noted that this situation presents the greatest problem at very low AC levels; for the most part, accuracy is not an issue for either device in the vicinity of 0.08 AC or higher.

42. ABI, "Issue: The Lowering of the Allowable Blood Alcohol Concentration."

43. Ibid.

44. NHTSA, 1992. 1991 Alcohol Fatal Crash Facts. Washington, D.C.: National Center for Statistics and Analysis (Research and Development).

45. Office of Traffic Safety, 1991 Minnesota Motor Vehicle Crash Facts 1992.

46. NHTSA, The Effects Following the Implementation of an 0.08 BAC Limit.

47. Of course, in many cases of suspected alcohol involvement in nonfatal crashes, the attending officer is able to obtain an alcohol concentration test for subsequent use in legal proceedings. However, alcohol concentration tests are not required in the case of nonfatal accidents. Thus, the report form, which is the source of data for this measure, is highly dependent on the subjective impressions and sensitivity of the attending officer, which conceivably could have been enhanced by the law change itself.

48. In the case of fatal accidents, investigating officers are both directed and able to be much more thorough in obtaining alcohol concentration tests of drivers. Such data are then centralized nationally in the Fatal Accident Reporting System (FARS) administered by NHTSA, from which they were obtained for use in the California study.

49. ABI, "Has the Emperor No Clothes?"

50. The ABI critique compares the number of fatalities in 1990 to the preceding four year average. Methodologically, this is a questionable approach since, unlike the time-series analysis methodology (i.e., ARIMA modelling) used in the California study, the technique employed by ABI does not take into consideration any pre-intervention trends in the data.

51. ABI, "Issue: The Lowering of the Allowable Blood Alcohol Concentration," p.1.

52. Beer Institute. 1993. "Brewers Almanac."

53. The tax increase, which went into effect July 15, 1991, raised the California alcohol tax from 2 to 20 cents per gallon for beer and wine, from $2 to $3.30 per gallon for distilled spirits of less than 100 proof, and from $4 to $6.60 per gallon for distilled spirits of 100 or more proof. The tax on sparkling wine remained the same.

54. Wagenaar, A.C. and F.M. Streff, 1990. "Public Opinion on Alcohol Policies." Journal of Public Health Policy, 11(2):189-205.

55. NHTSA, Driving Under the Influence.

HOUSE JUDICIARY COMMITTEE

March 9, 2001

CHANGE "DWI" TO "DUI"

(IN ADDITION TO ORIGINAL PACKET)

Final Report
of the
DUI Prevention Task Force

Municipality of Anchorage

October 30, 2000

Summary of Task Force Recommendations

The Task Force addressed the broad spectrum of legislative modifications, enforcement issues, potential government programs, and other types of public and private organizations within the scope of the charter statement and reached consensus on the following recommendations:

State and Municipal Legislative Recommendations

- Change the legal designation from DWI (Driving While Intoxicated) to DUI (Driving Under the Influence)
- Update present statutes to reflect subsequent court decisions
- Make third and subsequent DUIs felonies by eliminating "look back" provisions
- Identify enhancements for charging and sentencing considerations
- Graduate Blood Alcohol Concentration (BAC) levels and penalties from.08, and consider modifying AS 28.35.032, Refusal To Submit To A Chemical Test, to reflect the graduated penalty implications
- Require a valid driver's license and proof of insurance to register a vehicle
- Adopt a mandatory impoundment and forfeiture procedure at the state level
- Explore the feasibility of a centralized clearinghouse for licenses and investigate the expanded options provided by technological advances for tracking licenses whose holders have convictions for certain alcohol related offenses
- Require mandatory alcohol awareness training and a victim's panel as a prerequisite for a obtaining a valid resident driver's license
- Provide parameters for monitored, certifiable residential treatment in sentencing when enhancement factors are present
- Offer screening, mandatory alcohol education, and mandatory alcohol assessment during incarceration for DUI
- Provide for monitored alcohol treatment and ensure certifiable minimum standards in all DUI treatment programs
- Adopt Alaska Criminal Justice Assessment Commission recommendation #15 that the state should encourage the expansion of the Department of Health and Social Services Alcohol Safety Action Program (ASAP) through legislation and funding
- Recognize that halfway houses are not appropriate for repeat offenders and analyze halfway house administration
- Adopt Alaska Criminal Justice Assessment Commission recommendation #8 which relates to underage drinkers
- Make AS 04.16.050, Possession, Control, or Consumption by Persons Under 21 a misdemeanor and provide for alcohol treatment or counseling, peer options such as Youth Court, and parental/guardian notification
- Repeal AMC 10.50.015(H), Solicit the Purchase, Attempt to Purchase, or Possess Intoxicating Liquor, and require these offenses be charged under a revised AS 04.16.050

- Establish and fund a DUI Court
- Make As 28.05.095, Use of Seat Belts and Child Safety Devices Required, a primary law

Enforcement Recommendations

- Encourage focused enforcement of youthful offenders
- Encourage the state to enforce and prosecute AS 28.35.280, Minor Operating a Vehicle After Consuming
- Establish a Report Every Drunk Driver Immediately (REDDI) program in Anchorage
- Expand "Drunk Busters" program, and initiate year round saturation patrols
- Streamline drunken driver arrest processing procedures
- Initiate safety checkpoints when deemed appropriate by law enforcement
- Implement ignition interlock devices as a condition of probation for DUI offenders after their driving privileges have been reinstated

Other Government Programs

- Increase alcohol server mandatory training from every three years to every two years
- Establish media awareness campaigns that target the "uncaught offender"
- Establish mandatory alcohol education and awareness programs in schools
- Study alternative forms of transportation between Girdwood and Anchorage
- Establish an umbrella group to facilitate continued coordination, compilation and exchange of data, and exchange of materials between interested groups and organizations

Public/Private Organizations

- Establish a Responsible Hospitality Institute Chapter in Anchorage

Task Force Recommendations

State and Municipal Legislative

1. **Change the legal designation in state law and municipal law from DWI (Driving While Intoxicated) to DUI (Driving Under The Influence).**

   Goal: Provide clarification as to the intent of the law

   Discussion: The Task Force is convinced that the legal designation for this offense should reflect the nature of the impairment to the driving or operation of a vehicle while under the influence of any drug, legal or illegal, including alcohol.

   Action Needed: Change State and Municipal law

   Responsible Entities: State Legislature and Municipal Assembly

2. **Update present statutes to reflect court decisions, particularly AS 28.35.031, Implied Consent, and AS 28.35.033 (e), Presumptions and Chemical Analysis of Breath or Blood.**

   Goal: Bring statutory language into conformance with court interpretations of that particular language

   Discussion: The language of some statutes pertaining to drunken driving has been addressed by the Alaska Court of Appeals and the Alaska Supreme Court. Particularly, the use of a preliminary breath test instrument, as set forth in AS 28.35.031 differs from a subsequent court interpretation that precludes an officer from using a portable breath tester for probable cause (Leslie v. State, 711 P.2d 575 (1986 Alaska Court of Appeals)). In another situation, the independent test established in AS 28.35.033 (e) has been recognized as a constitutional right, and the existence of two possible tests is difficult to explain and can result in the loss of valuable evidence (Gundersen v. Municipality of Anchorage, 792 P.2d 673 (1990 Alaska Supreme Court)).

   Action Needed: Review language in present State statutes pertaining to drunk driving, and modify for clarity if court interpretations exist.

   Responsible Entity: State Legislature

Subject: DWI and DUI - information
Date: Fri, 09 Mar 2001 07:44:27 -0900
From: Mary Marshburn <mary_marshburn@admin.state.ak.us>
To: Representative_Norman_Rokeberg@legis.state.ak.us
CC: Janet_Seitz@legis.state.ak.us

Representative Rokeberg:

Regarding changing "DWI" to "DUI", "DUI" is the national standard for states motor vehicle agencies and is the standard for the federal government in their regulation of commercial vehicle drivers. Driving Under the "Influence" is more descriptive of the negative affect that multiple substances can have on driving than is "intoxicated" which is more closely associated with alcohol.

Mary Marshburn
Director, DMV