

ALASKA LEGISLATURE COMMITTEE FILES 2001-2002 8672

10474 HOUSE TRANSPORTATION

**Table 22
Cost Synopsis
Cook Inlet to Bristol Bay Marine
Hovercraft Option**

	Annual O&M Cost	Total Capital Cost	Annualized Capital Cost @ 7% Interest	Annual Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer-Williamsport Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Lake Iliamna (Hovercraft)	\$1,728,600	\$5,500,000	\$519,161	\$2,247,761
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
TOTAL				
Paved Option	\$3,969,456	\$26,929,500	\$2,541,954	\$6,326,410
Unpaved Option	\$3,992,706	\$24,372,000	\$2,300,544	\$6,108,250

**Table 23
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Marine
Hovercraft Option**

	Travel Demand
Marine Elements	
Homer-Seldovia	4,000
Homer-Williamsport	4,200
Lake Iliamna Hovercraft Service	6,900
Roadway Elements	
Williamsport to Pedro Bay	4,200
Pedro Bay to Iliamna	22,100

**Table 24
Cost Synopsis
Cook Inlet to Bristol Bay Marine
Shallow-Draft Landing Vessel Option**

	Annual O&M Cost	Total Capital Cost	Annualized Capital Cost @7% Interest	Annual Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia*	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer, Williamsport Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Lake Iliamna (Shallow-Draft Vessel)**	\$318,300	\$526,000	\$49,651	\$367,951
Lake Iliamna Shoreside	\$6,250	\$250,000	\$23,598	\$29,848
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
TOTAL				
Paved Option	\$2,565,406	\$22,205,500	\$2,096,042	\$4,476,448
Unpaved Option	\$2,588,656	\$19,648,000	\$1,854,632	\$4,258,288

*Vehicle demand for this element of the alternative was estimated at 2,800 vehicles/year.

**Vehicle demand for this element of the alternative was estimated at 770 vehicles/year.

**Table 25
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay
Shallow-Draft Landing Vessel Option**

	Travel Demand
Marine Elements	
Homer-Seldovia	4,000
Homer-Williamsport	4,200
Lake Iliamna Marine Service (S.D.)	3,600
Roadway Elements	
Williamsport to Pedro Bay	4,200
Pedro Bay to Iliamna	22,100

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

NO. _____
BILL VERSION: HB 8
PUBLISH DATE: _____

Revision Date: _____
Title: "An Act establishing the Legislative Road Development Task Force; and providing...."
Sponsor: Representative Rokeberg
Requestor: House Transportation

Department Affected: Legislative Affairs Agency
BRU: Legislative Council
Component: Council and Subcommittees

COMPONENT SERIAL NO:

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
PERSONAL SERVICES	0	0	0	0	0	0.0
TRAVEL	6.0	0	0	0	0	0.0
CONTRACTUAL	1.5	0	0	0	0	0.0
SUPPLIES	2.3	0	0	0	0	0.0
EQUIPMENT	0	0	0	0	0	0.0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	9.8	0	0	0	0	0.0
CAPITAL	0	0	0	0	0	0.0
REVENUE FUND SOURCE	0	0	0	0	0	0.0

FUNDING: (Thousands of Dollars)

GENERAL FUND	9.8	0	0	0	0	0.0
FEDERAL FUNDS						
OTHER FUND SOURCE						
TOTAL	9.8	0	0	0	0	0.0

POSITIONS:

FULL-TIME	0	0	0	0	0	0.0
PART-TIME	0	0	0	0	0	0.0
TEMPORARY	0	0	0	0	0	0.0

Estimate of current year impact: _____

ANALYSIS: (Attach a separate page if necessary) HB8 establishes a thirteen member Legislative Road Development Task Force. The task force will be composed of 9 public members, 2 Legislators, and 2 state officials. The task force shall identify roads that are important to the future economic development of the state, study and research the feasibility of upgrading roads, and establish a priority ranking for projects to develop or upgrade those roads. The task force shall submit a report of its findings to the Legislature and the Governor before the 2nd session of the 22nd Alaska State Legislature convenes.

Prepared By: Karla Schofield, Deputy Director *Karla Schofield* Phone: 465-3852
 Division: Administrative Services Date: 1/24/01
 Approved By: Pamela A. Varni, Executive Director *Pamela Varni*
 Agency: Legislative Affairs Agency Date: 1/24/01

Personal Services

The existing staff of the Senator and Representative Co-Chairs of the task force will serve as staff to the task force.

0.0

Travel

It is anticipated that the task force will conduct most of their meetings by teleconference. One 2 day trip is anticipated to Anchorage in FY02. For the purposes of this fiscal note the 9 public members are assumed to be 3 from Fairbanks, 3 from Anchorage, 1 from Juneau, 1 from Kotzebue, and 1 from Ketchikan. Legislators are assumed to be from Anchorage and Fairbanks.

Travel costs for the DOTPF and DCED Commissioners or their designees will be paid for by the Executive Branch.

		Airfare	Per Diem		
<u>Public Members</u>					
Fairbanks	3	900	1,374		
Anchorage	3	0	0		
Juneau	1	380	458		
Kotzebue	1	375	458		
Ketchikan	1	420	458		
<u>Legislators</u>					
Anchorage	1	0	458		
Fairbanks	1	<u>260</u>	<u>458</u>		
		2,335	3,664	5,999	
				Total Travel	6.0

Contractual

Phone expenses for public members of the task force	500		
Postage expenses to mail out task force report	200		
Map and geological reproduction services	<u>800</u>		
	1,500	Total Contractual	1.5

The cost of printing the task force report will be absorbed within the Legislature's budget.

Supplies

It is anticipated that the task force will need to purchase geological information and maps. 2.3

Equipment

The task force will not need to purchase any equipment. 0.0

9.8



ALASKA MINERS ASSOCIATION, INC.

3305 Arctic #202, Anchorage, Alaska 99503 • (907) 563-4660 • FAX: (907) 563-9225 • www.alaskaminers.org

January 16, 2001

Honorable Norman Rokberg
Alaska State House
State Capitol
Juneau, AK 99801

JAN 24 2001

RE: House Bill 8, Legislative Road Development Task Force

Dear Representative Rokberg,

Thank you for the opportunity to comment on House Bill 8 which would establish a Legislative Road Development Task Force. This bill will provide a needed venue for discussing alternatives for new roads that are needed. The State planning process has typically focused on repair and maintenance of existing roads but has not effectively addressed the need for new roads.

We would recommend one change to HB-8 and this is to add one additional route into Section 1 that would be considered. This is as follows:

(23) a road from the Dalton Highway west to the Ambler copper district;

This road was contemplated in ANILCA where specific language was included to ensure a right of way would be allowed to follow this route. It would be appropriate for the Task Force to evaluate whether the time has come to develop this road.

We appreciate that the Alaska Federation of Natives is represented on the Task Force and observe that support from local Native groups will be essential for new roads that involve their lands and regions. These Native Corporations and their villages have much to gain if roads are developed and they also have concerns and views that should be considered by the Task Force.

Thank you for the opportunity to comment on this bill. We look forward to working with you as it move forward.

Sincerely,

Steven C. Borell, P.E.
Executive Director

A M E N D M E N T

OFFERED IN THE HOUSE

TO: HB 8

Page 1, lines 1, 6 and 7

Insert "Pioneer" between "Legislative" and "Road"

Page 3, after line 16, add two new sections as follows:

- "(23) East Lynn Canal Corridor Road;**
- (24) Road from Dalton Highway west to the Ambler
copper district;**
- (25) and any other road the task force feels merits
review"**



FEB 14 2001

750 W. 2nd Ave. #109, Anchorage AK 99501 / Ph. 907-258-6171 / Fax 907-258-6177
P.O. Box 22151, Juneau AK 99802 / Ph. 907-463-3366 / Fax 907-463-3312 / unite@akvoice.org

HB 8: Legislative Pioneer Road Development Task Force

TO: Representatives
DATE: February 14, 2001

Alaska Conservation Alliance and Alaska Conservation Voters are sister nonprofit organizations dedicated to protecting Alaska's environment through public education and advocacy. Our 44 member organizations and businesses represent over 35,000 registered Alaskan voters. Conservationists throughout Alaska support a healthy economy for all the benefits it provides us. However, we do not believe economic health is predicated on building roads. We have several concerns with HB 8:

- **The Task Force is stacked with pro-road advocates.**

Legislation (SB 3) to appropriate state funds for studies for a northern access into Denali National Park was recently heard in Senate Transportation committee. A major criticism leveled at the Denali Task Force that evaluated the feasibility of the route was that it was imbalanced with members opposed to the route. Clearly, the Task Force authorized under HB 8 could be similarly criticized – no positions have been designated for tourism interests, for municipal government representatives, or for representatives from agencies or organizations concerned with habitat protection.

- **The bill has no provision for meaningful public process.**

Alaskan history has shown time and again that road projects can be very controversial. The Task Force must be mandated to provide meaningful public process by holding local hearings and notifying citizens of comment periods for each and every road proposal under consideration. The Task Force must be funded sufficiently to provide for this process.

- **This legislation is backward looking.**

A healthy economic future for Alaska will not be found by looking backwards to 80 year old rutted tractor trails. ACV encourages legislators to put fiscal and time resources into meaningful studies of improving transportation needs for our state that would enhance the economic opportunities Alaskans are facing in this new millennium. HB 8 establishes a controversial, faulty process to take a great look backwards – for that reason, this legislation should be opposed.

Susan Schrader

Susan Schrader, Conservation Advocate

Conserve Alaska. It's Only Natural.

#3

22-LS0102\F3
Utermohle
2/6/01

AMENDMENT

OFFERED IN THE HOUSE
TO: CSHB 8(TRA)

BY REPRESENTATIVE DAVIES

1 Page 1, lines 1 - 2:

2 Delete all material and insert:

3 "An Act relating to the nomination of pioneer roads for consideration for inclusion in
4 the Statewide Transportation Improvement Plan; and providing for an effective date."

5

6 Page 1, line 6 through page 2, line 25:

7 Delete all material and insert:

8 "NOMINATION OF PIONEER ROADS FOR INCLUSION IN THE STATEWIDE
9 TRANSPORTATION IMPROVEMENT PLAN. (a) The commissioner of transportation
10 and public facilities shall nominate the following roads for evaluation for development as
11 pioneer roads and for inclusion in the Statewide Transportation Improvement Plan."

12

13 Page 3, lines 20 - 27:

14 Delete all material.

15 Insert new subsections to read:

16 "(b) The commissioner shall also nominate for evaluation for development as pioneer
17 roads and for inclusion in the Statewide Transportation Improvement Plan other pioneer roads
18 that are proposed by the governing body of a municipality and for which there are existing
19 plans to develop or upgrade the roads or for which there is potential for alternative funding for
20 construction or maintenance of the roads.

21 (c) A road nominated for evaluation under (a) or (b) of this section must be evaluated
22 especially for its potential to foster economic development in the region where it is located.
23 Additional weight shall be given to a road for which there are existing plans to develop or
24 upgrade the road or for which there is potential for alternative funding for construction or

22-LS0102\F.3

1 maintenance of the road.

2 (d) The commissioner shall prepare a written report before January 10, 2002,
3 describing the roads nominated for evaluation under this section, the evaluation process used
4 to evaluate the roads, and the status of each road in the Statewide Transportation
5 Improvement Plan process."

#1

AMENDMENT

OFFERED IN THE HOUSE
TO: CSHB 8(TRA)

By Rep. Bunde

- 1 Page 2, line 21 following "force.":
- 2 Insert "The task force shall consider rights-of-way under former 43 U.S.C. 932 (R.S.
- 3 2477) when establishing a priority ranking for projects. The task force shall also recommend
- 4 a schedule of appropriations, subject to the availability of federal or other funds, for projects
- 5 to develop or upgrade the roads and rights-of-way identified as important to the future
- 6 economic development of the state."

#2

By Representative Ken Lancaster

Amendments to House Bill 8 – “Establishing the Legislative Pioneer Road Development Task Force”

Page 1: Line 8

The task force shall consist of 13 voting members

Page 2: Line 6

(9) One member designated by the Alaska Railroad

(10) One member representing energy delivery in Alaska (i.e. corridor)

Then numbers would be renumbered accordingly

AMENDMENT #1

OFFERED IN THE HOUSE

TO: HB 8

Page 1, lines 1, 6 and 7

Insert "Pioneer" between "Legislative" and "Road"

Page 3, after line 16, add two new sections as follows:

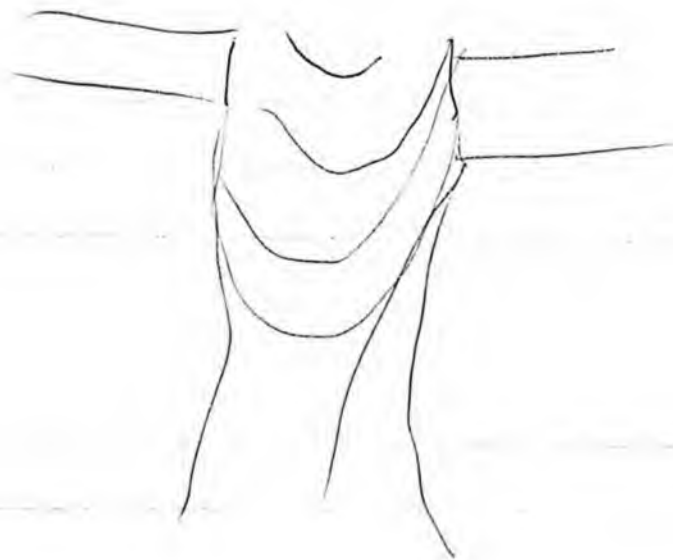
"(23) Road from Dalton Highway west to the Ambler copper district;

→ (24) BRADFIELD CANAL ROAD
(25) ~~(24)~~ and any other road the task force feels merits review"

Amendment # 2

p. 2 - Line 21 after those roads,

Insert: review alternate funding sources
for ongoing maintenance



.S0102\A

iding for

w section

stablished

sk Force.

Operating

Board of

HB 8

- 1 (5) one member designated by the Alaska State Chamber of Commerce;
- 2 (6) one member designated by the Associated General Contractors of Alaska;
- 3 (7) one member designated by the Alaska Miners Association;
- 4 (8) one member designated by the Alaska Federation of Natives;
- 5 (9) one public member jointly appointed by the President of the Senate and the
- 6 Speaker of the House of Representatives who resides in a rural area and is a member of the
- 7 Alaska Citizens Transportation Coalition;
- 8 (10) one member appointed by the President of the Senate from among the
- 9 members of the Senate;
- 10 (11) one member appointed by the Speaker of the House of Representatives
- 11 from among the members of the House of Representatives.

12 (b) The commissioner of transportation and public facilities or the commissioner's
 13 designee and the commissioner of community and economic development or the
 14 commissioner's designee shall serve as nonvoting members of the task force.

15 (c) The legislator members of the task force shall serve as co-chairs of the task force.
 16 The staff of the legislator members of the task force shall serve as staff to the task force.

17 (d) The task force shall identify roads that are important to the future economic
 18 development of the state, study the feasibility of developing or upgrading those roads in order
 19 to promote the future economic development of the state, research existing plans to develop or
 20 upgrade those roads, determine the availability and source of funds to develop or upgrade
 21 those roads, ^{insert here} and establish a priority ranking for projects to develop or upgrade roads identified
 22 ~~by the task force.~~ *reviews all funding sources for ongoing maintenance*

23 (e) The task force shall place particular emphasis on reviewing the following road
 24 projects to determine whether the road projects should be identified as important to the future
 25 economic development of the state:

- 26 (1) William... port Road from Iliamna Bay to Pile Bay;
- 27 (2) a road to the Pogo Mine;
- 28 (3) Rock Creek Road in the Nome area;
- 29 (4) a road to Tazlina Lake;
- 30 (5) a road from Wasilla to Bethel;
- 31 (6) a road from Wasilla to Tyonek;

Amend # 2

CORRECTION

THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION



Central Microfilm Services
Department of Education & Early Development
State of Alaska

.S0102\A

- 1 (5) one member designated by the Alaska State Chamber of Commerce;
- 2 (6) one member designated by the Associated General Contractors of Alaska;
- 3 (7) one member designated by the Alaska Miners Association;
- 4 (8) one member designated by the Alaska Federation of Natives;
- 5 (9) one public member jointly appointed by the President of the Senate and the
- 6 Speaker of the House of Representatives who resides in a rural area and is a member of the
- 7 Alaska Citizens Transportation Coalition;
- 8 (10) one member appointed by the President of the Senate from among the
- 9 members of the Senate;
- 10 (11) one member appointed by the Speaker of the House of Representatives
- 11 from among the members of the House of Representatives.

12 (b) The commissioner of transportation and public facilities or the commissioner's
 13 designee and the commissioner of community and economic development or the
 14 commissioner's designee shall serve as nonvoting members of the task force.

15 (c) The legislator members of the task force shall serve as co-chairs of the task force.
 16 The staff of the legislator members of the task force shall serve as staff to the task force.

17 (d) The task force shall identify roads that are important to the future economic
 18 development of the state, study the feasibility of developing or upgrading those roads in order
 19 to promote the future economic development of the state, research existing plans to develop or
 20 upgrade those roads, determine the availability and source of funds to develop or upgrade
 21 those roads, ^{insert here} and establish a priority ranking for projects to develop or upgrade roads identified
 22 ~~by the task force.~~ *review all funding sources for ongoing maintenance*

23 (e) The task force shall place particular emphasis on reviewing the following road
 24 projects to determine whether the road projects should be identified as important to the future
 25 economic development of the state:

- 26 (1) Williamsport Road from Iliamna Bay to Pile Bay;
- 27 (2) a road to the Pogo Mine;
- 28 (3) Rock Creek Road in the Nome area;
- 29 (4) a road to Tazlina Lake;
- 30 (5) a road from Wasilla to Bethel;
- 31 (6) a road from Wasilla to Tyonek;

Amend # 2

iding for

w section

established
isk Force.

Operating

Board of

FISCAL NOT

STATE OF ALASKA
2001 LEGISLATIVE SESSION

NO. _____
BILL VERSION: HB 8
PUBLISH DATE: _____

Revision Date: _____
Title: "An Act establishing the Legislative
Road Development Task Force; and providing...."
Sponsor: Representative Rokeberg
Requestor: House Transportation

Department Affected: Legislative Affairs Agency
BRU: Legislative Council
Component: Council and Subcommittees

COMPONENT SERIAL NO:

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
PERSONAL SERVICES	0	0	0	0	0	0.0
TRAVEL	6.0	0	0	0	0	0.0
CONTRACTUAL	1.5	0	0	0	0	0.0
SUPPLIES	2.3	0	0	0	0	0.0
EQUIPMENT	0	0	0	0	0	0.0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	9.8	0	0	0	0	0.0

CAPITAL	0	0	0	0	0	0.0
---------	---	---	---	---	---	-----

REVENUE FUND SOURCE	0	0	0	0	0	0.0
---------------------	---	---	---	---	---	-----

FUNDING: (Thousands of Dollars)

GENERAL FUND	9.8	0	0	0	0	0.0
FEDERAL FUNDS						
OTHER FUND SOURCE						
TOTAL	9.8	0	0	0	0	0.0

POSITIONS:

FULL-TIME	0	0	0	0	0	0.0
PART-TIME	0	0	0	0	0	0.0
TEMPORARY	0	0	0	0	0	0.0

Estimate of current year impact:

ANALYSIS: (Attach a separate page if necessary) HB8 establishes a thirteen member Legislative Road Development Task Force. The task force will be composed of 9 public members, 2 Legislators, and 2 state officials. The task force shall identify roads that are important to the future economic development of the state, study and research the feasibility of upgrading roads, and establish a priority ranking for projects to develop or upgrade those roads. The task force shall submit a report of its findings to the Legislature and the Governor before the 2nd session of the 22nd Alaska State Legislature convenes.

Prepared By: Karla Schofield, Deputy Director *Karla Schofield* Phone: 465-3852
Division: Administrative Services Date: 1/24/01

Approved By: Pamela A. Varni, Executive Director *Pamela A. Varni*
Agency: Legislative Affairs Agency Date: 1/24/01

22-LS0102C
Utermohle
1/16/01

CS FOR HOUSE BILL NO. 8(TRA)
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-SECOND LEGISLATURE - FIRST SESSION

BY THE HOUSE TRANSPORTATION COMMITTEE

Offered:
Referred:

Sponsor(s): REPRESENTATIVE ROKEBERG

A BILL
FOR AN ACT ENTITLED

1 **"An Act establishing the Legislative Transportation and Utility Corridor Development**
2 **Task Force; and providing for an effective date."**

3 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 *** Section 1.** The uncodified law of the State of Alaska is amended by adding a new section
5 to read:

6 **LEGISLATIVE TRANSPORTATION AND UTILITY CORRIDOR**
7 **DEVELOPMENT TASK FORCE.** (a) There is established in the legislative branch of state
8 government the Legislative Transportation and Utility Corridor Development Task Force.
9 The task force shall consist of 13 voting members, as follows:

- 10 (1) one member designated by the Alaska Trucking Association, Inc.;
- 11 (2) one member designated by the International Union of Operating
- 12 Engineers, Local 302;
- 13 (3) one member designated by Teamsters Union Local 959;
- 14 (4) one member who is a civil engineer designated by the State Board of

1 Registration for Architects, Engineers and Land Surveyors;

2 (5) one member designated by the Alaska State Chamber of Commerce;

3 (6) one member designated by the Associated General Contractors of Alaska;

4 (7) one member designated by the Alaska Miners Association;

5 (8) one member designated by the Alaska Federation of Natives;

6 (9) one public member jointly appointed by the President of the Senate and the
7 Speaker of the House of Representatives who resides in a rural area and is a member of the
8 Alaska Citizens Transportation Coalition;

9 (10) the chair of the board of directors of the Alaska Railroad Corporation or
10 the chair's designee;

11 (11) a member of the Regulatory Commission of Alaska who is designated by
12 the commission;

13 (12) one member appointed by the President of the Senate from among the
14 members of the Senate;

15 (13) one member appointed by the Speaker of the House of Representatives
16 from among the members of the House of Representatives.

17 (b) The commissioner of transportation and public facilities or the commissioner's
18 designee and the commissioner of community and economic development or the
19 commissioner's designee shall serve as nonvoting members of the task force.

20 (c) The legislator members of the task force shall serve as co-chairs of the task force.
21 The staff of the legislator members of the task force shall serve as staff to the task force.

22 (d) The task force shall identify transportation and utility corridors that are important
23 to the future economic development of the state, study the feasibility of developing new
24 transportation and utility corridors or upgrading existing transportation and utility corridors in
25 order to promote the future economic development of the state, research existing plans to
26 develop or upgrade transportation and utility corridors, determine the availability and source
27 of funds to develop or upgrade transportation and utility corridors, and establish a priority
28 ranking for projects to develop or upgrade transportation and utility corridors identified by the
29 task force.

30 (e) The task force shall place particular emphasis on reviewing the following
31 transportation and utility corridor development projects to determine whether the projects

1 should be identified as important to the future economic development of the state:

- 2 (1) Williamsport Road from Iliamna Bay to Pile Bay;
- 3 (2) a road to the Pogo Mine;
- 4 (3) Rock Creek Road in the Nome area;
- 5 (4) a road to Tazlina Lake;
- 6 (5) a road from Wasilla to Bethel;
- 7 (6) a road from Wasilla to Tyonek;
- 8 (7) a road along the west shore of Cook Inlet;
- 9 (8) a road to Nome;
- 10 (9) a road to Cordova;
- 11 (10) a road to Ruby;
- 12 (11) a road to Fort Yukon;
- 13 (12) Donlin Creek Road;
- 14 (13) a road to Dillingham;
- 15 (14) a road around the northern end of Lake Iliamna;
- 16 (15) upgrading the Dalton Highway;
- 17 (16) a road from Rampart to Eureka;
- 18 (17) a road from Ruby to McGrath;
- 19 (18) a road from Healy to the Richardson Highway;
- 20 (19) a road from Ruby to Takotna;
- 21 (20) a road from Takotna to Flat to Crooked Creek;
- 22 (21) Tonsina North Access Road;
- 23 (22) a road from Juneau to Atlin, British Columbia.

24 (f) The task force shall meet as frequently as its members determine necessary to
25 perform its work. The task force may meet and vote by teleconference.

26 (g) The members of the task force appointed under (a)(1) - (9) of this section are not
27 eligible for compensation but are entitled to per diem and travel expenses authorized for
28 boards and commissions under AS 39.20.180.

29 (h) The task force shall submit a written report of its findings and recommendations to
30 the legislature and the governor before the Second Regular Session of the Twenty-Second
31 Alaska State Legislature convenes.

- 1 * **Sec. 2.** This Act is repealed on the first legislative day of the Second Regular Session of
- 2 the Twenty-Second Alaska State Legislature.
- 3 * **Sec. 3.** This Act takes effect immediately under AS 01.10.070(c).

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

NO. _____
BILL VERSION: HB 8
PUBLISH DATE: _____

Revision Date: _____
Title: "An Act establishing the Legislative
Road Development Task Force; and providing...."
Sponsor: Representative Rokeberg
Requestor: House Transportation

Department Affected: Legislative Affairs Agency
BRU: Legislative Council
Component: Council and Subcommittees

COMPONENT SERIAL NO:

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
PERSONAL SERVICES	0	0	0	0	0	0.0
TRAVEL	6.0	0	0	0	0	0.0
CONTRACTUAL	1.5	0	0	0	0	0.0
SUPPLIES	2.3	0	0	0	0	0.0
EQUIPMENT	0	0	0	0	0	0.0
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	9.8	0	0	0	0	0.0

CAPITAL	0	0	0	0	0	0.0
---------	---	---	---	---	---	-----

REVENUE FUND SOURCE	0	0	0	0	0	0.0
---------------------	---	---	---	---	---	-----

FUNDING: (Thousands of Dollars)

GENERAL FUND	9.8	0	0	0	0	0.0
FEDERAL FUNDS						
OTHER FUND SOURCE						
TOTAL	9.8	0	0	0	0	0.0

POSITIONS:

FULL-TIME	0	0	0	0	0	0.0
PART-TIME	0	0	0	0	0	0.0
TEMPORARY	0	0	0	0	0	0.0

Estimate of current year impact: _____

ANALYSIS: (Attach a separate page if necessary) HB8 establishes a thirteen member Legislative Road Development Task Force. The task force will be composed of 9 public members, 2 Legislators, and 2 state officials. The task force shall identify roads that are important to the future economic development of the state, study and research the feasibility of upgrading roads, and establish a priority ranking for projects to develop or upgrade those roads. The task force shall submit a report of its findings to the Legislature and the Governor before the 2nd session of the 22nd Alaska State Legislature convenes.

Prepared By: Karla Schofield, Deputy Director *Karla Schofield* Phone: 465-3852
Division: Administrative Services Date: 1/24/01

Approved By: Pamela A. Varni, Executive Director *Pamela Varni*
Agency: Legislative Affairs Agency Date: 1/24/01

Distribution (by preparer): Leg. Finance, Legislative Sponsor, Requestor, OMB, Gov. , & Impacted Agency(ies).

HB

12

Alaska State Legislature

House of Representatives

COMMITTEES

JUDICIARY COMMITTEE, CHAIR
RULES
MILITARY & VETERANS AFFAIRS
UTILITY RESTRUCTURING
ETHICS



INTERIM:
10928 EAGLE RIVER RD., SUITE 141
EAGLE RIVER, AK 99577

SESSION:
ALASKA STATE CAPITOL
JUNEAU, AK 99801

Sponsor Statement

HB 12

Operating motorized vehicles under the influence of alcohol has been a major problem in Alaska for a long time. This legislation reduces the amount of alcohol a person can have in their blood while operating motorized vehicles.

The number of accidents and deaths that occur due to the operation of motor vehicles, while under the influence of alcohol, is an ongoing problem. Alaska ranks No. 5 in the nation for alcohol related incidences. It is imperative that the state takes action that reduces this serious problem.

Strengthening the current statutes, by lowering the amount of alcohol in a person's blood to .08, would serve as a deterrent for operating any type of motorized vehicle. Any cost associated with the implementation of this legislation will be beneficial in the long run, as it will save lives. This bill also affords local law enforcement agencies a better instrument in the prosecution of offenders. The Alaska Peace Officers Association, Mothers Against Drunk Driving, and other similar organizations support it.

This legislation is imperative for the State of Alaska to follow the lead of the federal government in lowering the amount of alcohol a person can have in that person's blood while operating motorized vehicles. If this legislation fails the State of Alaska stands to lose federal highway funds at a rate of 2% after 2004, 4% after 2005, 6% after 2006, 8% after 2007 and so on.

I urge your support of this legislation.

Representative Pete Kott

JUNEAU OFFICE (907) 465-3777 TOLL FREE 1-800-861-KOTT (5688) FAX (907) 465-2819
EAGLE RIVER OFFICE (907) 694-8944 FAX (907) 694-8945 E-MAIL: representative_pete_kott@legis.state.ak.us



Sectional Summary

HB 12

This sectional summary should not be considered an authoritative interpretation of the bill, with the bill itself the best statement of its contents.

This bill lowers the limit of blood alcohol levels of a person who has committed the crime of driving or operating motorized vehicles.

Section 1: Lowers the limit of alcohol a person can have in his or her blood while driving or operating a motorized vehicle.

Section 2: Lowers the limit of alcohol a person can have in his or her blood when determining that the person is not under the influence of intoxicating liquor. Lowers the limit of alcohol a person can have in his or her blood not giving rise to any presumption that the person was or was not under the influence of intoxicating liquor, but that fact may be considered with other competent evidence in determining whether the person was under the influence of intoxicating liquor. Lastly, lowers the limit of alcohol a person can have in his or her blood when presuming the person was under the influence of intoxicating liquor.

Section 3: Effective date: September 1, 2001

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: HB 12
() Publish Date: _____

Revision Date/Time(Note if Correction): _____ Dept. Affected: Corrections
Title: An Act relating to the offense of operating a BRU: Administration and Operations
motor vehicle, aircraft, or watercraft, while intoxicated;.... Component: All
Sponsor: Representative Kott
Requester: House Transportation Committee Component Number: 694

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous	1,211.1	1,183.8	1,217.7	1,254.7	1,254.7	1,254.7
TOTAL OPERATING	1,211.1	1,183.8	1,217.7	1,254.7	1,254.7	1,254.7

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()	164.8	164.8	164.8	164.8	164.8	164.8
-------------------------------	--------------	--------------	--------------	--------------	--------------	--------------

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	1,046.3	1,019.0	1,052.9	1,089.9	1,089.9	1,089.9
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other - 1156 Receipt supported serv.	164.8	164.8	164.8	164.8	164.8	164.8
TOTAL	1,211.1	1,183.8	1,217.7	1,254.7	1,254.7	1,254.7

Estimate of any current year (FY2001) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2002 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

This legislation would reduce the threshold for presumption of DWI from .10 to .08. It is estimated by the Department of Law that although this may not increase arrests by a large amount, it will increase convictions by 10%. In FY00 there were 4118 statewide misdemeanor convictions for DWI and 200 felony convictions. If we multiply 413 misdemeanants (10% of the total) by the percentages reflected in DMV's 2000 statistics for 1st, 2nd, 3rd, 4th and 5th time offenders, we come up with an estimate of how many of those offenders might be newly convicted under a .08 law. All 1st and 2nd time offenders go to the CRC (if there is one in their community) so the CRC cost of care is utilized for our calculations. Utilizing a snapshot done on 10/25/00 of our DWI population, we averaged the sentenced being served for 3rd, 4th and 5th time offenders and estimated proportions of time served in CRCs and hard beds to come up with a total cost.

Assuming 20 new felons convicted under this threshold, and utilizing the average sentence for DWI felons, we estimated

Prepared by: Candace Brower Phone 465-4652
Division: Commissioner's Office Date/Time 03/30/01/10:30 am
Approved by: Margaret Pugh Date 3/30/01
Agency: Department of Corrections

For distribution information, call the Governor's Legislative Office

20 X 352 days X \$88/day = \$619,520. The total for misdemeanants and felons then is \$1,211,134.

Felony DWI offenders are usually given an average of 3 years probation. Probation costs will not be incurred until after completion of sentence so the impact will not be felt until the 2nd and subsequent years. The daily cost for probationers is \$517/day. If 18 of the 20 felons were on probation the second year, the cost would be \$33,967. It would be necessary to add \$67,934 the third year and \$101,901 the fourth year. After that it would level off as the first probationers drop off.

The Department of Corrections expects a 15% decrease in the incarceration rate for manslaughter/negligent homicides as a result of this legislation, beginning the second year. It will take time for the public to become aware of lowered BAC and to change behaviors. That would result in an annual savings, beginning in FY03, of \$61,320 (or 1.5 persons incarcerated @ \$112/day per year).

Misdemeanant DWI offenders are required to pay the cost of their incarceration up to \$1,000. The Department of Corrections receives approximately 80% of that amount which is collected by the Department of Law. This would net approximately \$164,768 in revenues against the total costs.

FY02	FY03	FY04	FY05	FY06	FY07	
1,211,134	1,211,134	1,211,134	1,211,134	1,211,134	1,211,134	Cost of Incarceration
0	<u>33,967</u>	<u>67,934</u>	<u>101,901</u>	<u>101,901</u>	<u>101,901</u>	Probation Costs
1,211,134	1,245,101	1,279,068	1,313,035	1,313,035	1,313,035	Subtotal
0	-61,320	-61,320	-61,320	-61,320	-61,320	Less savings for ho
<u>-164,768</u>	<u>-164,768</u>	<u>-164,768</u>	<u>-164,678</u>	<u>-164,678</u>	<u>-164,678</u>	Costs paid by inmates
1,046,366	1,019,013	1,052,980	1,057,037	1,087,037	1,087,037	

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: HB 12
() Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Law
Title: "... offense of operating a motor vehicle, ... while BRU Criminal Division
intoxicated; ... presumptions arising from the amount of alcohol ... Component Third Judicial District: Anchorage
Sponsor: Representative Kott
Requester: House Transportation Committee Component No. 2261

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services	121.1	121.1	121.1	121.1	121.1	121.1
Travel	0.4	0.4	0.4	0.4	0.4	0.4
Contractual	18.7	18.7	18.7	18.7	18.7	18.7
Supplies	1.6	1.6	1.6	1.6	1.6	1.6
Equipment	6.5					
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	148.3	141.8	141.8	141.8	141.8	141.8

CAPITAL EXPENDITURES						
----------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	148.3	141.8	141.8	141.8	141.8	141.8
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	148.3	141.8	141.8	141.8	141.8	141.8

Estimate of any current year (FY2001) cost: 0.0

POSITIONS

Full-time	1	1	1	1	1	1
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

HB 12 amends AS 28.35.030(a) by lowering the blood alcohol limit from 0.10 to 0.08 percent by weight of alcohol in a person's blood (and a corresponding change in the limit for alcohol in a person's breath) for the offense of driving while intoxicated (DWI), a class A misdemeanor. The bill also changes the presumptions in AS 28.35.033(a) in a civil or criminal action from 0.05 - 0.10 to 0.04 - 0.08 percent by weight of alcohol in the person's blood (and a similar change for breath alcohol), as the area where there is no presumption about the person being under the influence of alcohol. Under this bill, a person who measures 0.04 and below is presumed not under the influence, and a person who measures 0.08 and above is presumed to be under the influence of intoxicating liquor. The bill will result in an increased number of DWI cases being prosecuted by the Department of Law.

In FY00, the Criminal Division accepted for prosecution 3,218 misdemeanor and 213 felony DWI referrals by law enforcement throughout the state. Recently received statistics from the Anchorage Police Department indicate there would be about a 6 percent

Prepared by: Joan M. Kasson Phone 465-5370
Division: Attorney General's Office Date/Time 3/30/01 4:33 PM
Approved by: Kathryn Daughhetee for Bruce M. Botelho, Attorney General Date 3/30/01
Agency: Department of Law

For distribution information, call the Governor's Legislative Office

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

BILL NO. HB 12

ANALYSIS CONTINUATION

increase in DWI referrals due to the lowering of the blood alcohol threshold to 0.08. Experience has varied in other states that have reduced from 0.10 to 0.08 the limit for driving while intoxicated (California, Maine, Oregon, and Utah). While some states have experienced a 20 to 40 percent increase in DWI cases, a conservative estimate for the increase is about 10 percent. This would result in 322 additional misdemeanor and 21 felony DWI cases, which are much more time-consuming to prosecute than misdemeanors. The Department of Law assumes that municipalities which presently prosecute misdemeanor DWI will amend their ordinances to mirror the change in state law. If this does not occur, the estimated number of misdemeanor prosecutions is understated.

Much of the anticipated increase in prosecutions will occur in southcentral Alaska. Because Anchorage is the hub from which prosecutors are sent to assist other offices in times of overload, it will be necessary to add one new attorney position to the Anchorage District Attorney's Office.

Using the department's FY02 standard attorney cost schedule, the fiscal impact from this legislation would be \$141,776. This cost includes clerical support, communications, space, supplies, data processing, and other normal overhead expenses. The standard cost does not include one-time new equipment purchases, and \$6,500 is added in FY02 for this purpose. Please note that although no clerical support position is being added, proportionate support position funding is included in the standard attorney cost schedule to reduce clerical support vacancy so that the new attorney's clerical burden can be handled.

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: HB 12
() Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Health & Social Services
Title: Reducing blood alcohol to .08 BRU: Alcohol & Drug Abuse Svcs
Component: Alcohol Safety Action Program
Sponsor: Rep. Kott
Requester: House (TRA) Component Number: 305

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services	60.0	60.0	60.0	60.0	60.0	60.0
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims	52.4	52.4	52.4	52.4	52.4	52.4
Miscellaneous						
TOTAL OPERATING	112.4	112.4	112.4	112.4	112.4	112.4

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	112.4	112.4	112.4	112.4	112.4	112.4
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	112.4	112.4	112.4	112.4	112.4	112.4

Estimate of any current year (FY2001) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2002 budget proposal:

POSITIONS

Full-time	1	1	1	1	1	1
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

HB 12 lowers the blood alcohol content from .10 to .08. It is estimated that this will result in a 10% increase in number of DUI cases resulting in convictions and mandatory referral to Alcohol Safety Action Programs (ASAP) and subsequently for treatment. Of these additional cases DHSS estimates that 100% would be referred to an ASAP. The costs to handle these additional cases is \$112.4. We estimate that 65-70% of these cases will be handled by the ASAP office in Anchorage, which is operated by employees of the Division of Alcoholism and Drug Abuse.

Prepared by: Ernie Turner Phone 465-2071
Division: Alcoholism & Drug Abuse Date/Time: _____
Approved by: Elmer A. Lindstrom, Special Assistant Date 4/2/01 12:45 PM
Agency: Department of Health & Social Services

For distribution information, call the Governor's Legislative Office

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: HB 12
() Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Administration
Title: "An Act relating to operating a vehicle while
intoxicated and relating to presumptions..." BRU: Legal & Advocacy Services
Sponsor: Representative Kott Component: Public Defender Agency
Requester: (H) Transportation Component Number: 1631

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services	98.9	98.9	98.9	98.9	98.9	98.9
Travel	3.7	3.7	3.7	3.7	3.7	3.7
Contractual	27.3	27.3	27.3	27.3	27.3	27.3
Supplies	2.2	2.2	2.2	2.2	2.2	2.2
Equipment	8.5	0.8	0.8	0.8	0.8	0.8
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	140.6	132.9	132.9	132.9	132.9	132.9

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	140.6	132.9	132.9	132.9	132.9	132.9
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL						

Estimate of any current year (FY2001) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2002 budget proposal:

POSITIONS

Full-time	1	1	1	1	1	1
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

See Page 2 for Analysis.

Prepared by: Barbara Brink, Director Phone 334-4400
Division: Public Defender Agency Date/Time 04/02/01
Approved by: Jim Duncan, Commissioner Date 4/2/01
Agency: Department of Administration

For distribution information, call the Governor's Legislative Office

Bill Analysis, HB 12 continued.

This bill would lower the threshold blood alcohol level for Driving While Intoxicated (DWI) from .10 to .08. The bill also lowers the threshold presumptive level for impaired driving from .05 to .04. This bill would result in an increase in the number of new criminal cases the Public Defender Agency is appointed to handle.

The Department of Law, in its fiscal note, estimated the number of new prosecutions at 322 additional misdemeanor and 21 additional felony cases. The Public Defender Agency accepts the Department of Law's estimates. The Department of Law based its estimate on a 10 percent increase in prosecutions. This is a conservative estimate. As the Department of Law points out, experience in other states varies. But in Maine, a state similar to Alaska in many respects (smaller population, Northern climate), there was about a 20 percent increase in prosecutions. The Public Defender Agency will be appointed in about 75% of the cases. Using Department of Law's estimate, the Agency will be appointed to 242 additional misdemeanor cases and 16 additional felony cases.

We will need one additional full-time attorney to handle this increased caseload. Because our Palmer office handles a significant number of DWI cases and has the largest caseload growth in recent years, we will place the attorney at that office. The attorney costs include clerical support and one-time equipment costs in the first year.

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: HB 12
() Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Health & Social Services
Title: Reducing blood alcohol to .08 BRU: Alcohol & Drug Abuse Svcs
Component: Alcohol/Drug Abuse Grants
Sponsor: Rep. Kott
Requester: House (TRA) Component Number: 1239

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims	582.2	582.2	582.2	582.2	582.2	582.2
Miscellaneous						
TOTAL OPERATING	582.2	582.2	582.2	582.2	582.2	582.2

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	582.2	582.2	582.2	582.2	582.2	582.2
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	582.2	582.2	582.2	582.2	582.2	582.2

Estimate of any current year (FY2001) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2002 budget proposal:

POSITIONS

Full-time					
Part-time					
Temporary					

ANALYSIS: (Attach a separate page if necessary)

HB 12 lowers the blood alcohol content from .10 to .08. It is estimated that this will result in a 10% increase in number of DUI cases resulting in convictions and mandatory referral to Alcohol Safety Action Programs and subsequently for treatment. Of these additional cases DHSS estimates that 75% would be treated in a public program. Due to existing wait capacity and waitlist an additional \$582.2 is required to fund the capacity required to provide the mandated treatment required.

Prepared by: Ernie Turner Phone 465-2071
Division: Alcoholism & Drug Abuse Date/Time: _____
Approved by: Elmer A. Lindstrom, Special Assistant Date 4/2/01 12:49 PM
Agency: Department of Health & Social Services

For distribution information, call the Governor's Legislative Office

FISCAL NOTE

STATE OF ALASKA
2001 LEGISLATIVE SESSION

BILL NO. HB 12

Revision Date/Time (Note if correction) _____ Dept. Affected _____
 Title BAC level for DWI BRU Alaska Court System
 Component Trial Courts
 Sponsor Rep. Pete Kott
 Requester House Transportation Committee Component No. 768

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Personal Services	67.9	67.9	67.9	67.9	67.9	67.9
Travel						
Contractual	6.2	6.2	6.2	6.2	6.2	6.2
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	74.1	74.1	74.1	74.1	74.1	74.1

CAPITAL EXPENDITURES						
----------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	74.1	74.1	74.1	74.1	74.1	74.1
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	74.1	74.1	74.1	74.1	74.1	74.1

Estimate of any current year (FY2001) cost: 0.0

POSITIONS

Full-time						
Part-time	2	2	2	2	2	2
Temporary						

ANALYSIS: (Attach a separate page if necessary)
 House Bill 12 lowers the BAC necessary for a DWI violation under 28.35.030 from .1 to .08. National studies show that this change typically results in a 10% increase in DWI filings. Based on that assumption, the court system would see an additional 500 misdemeanor filings a year and an additional 28 felony filings a year. This note reflects the additional judicial and jury costs associated with those increases.

Prepared by: Douglas Wooliver Phone 463-4750 264-8265
 Division: Alaska Court System Date/Time 4/03/01 9:30 a.m.
 Approved by: Stephanie Cole Date _____
 Agency: Alaska Court System

For distribution information, call the Governor's Legislative Office

**Alaska Court System
Fiscal Note Calculations for HB12**

4/3/01

	FY02	FY03	FY04	FY05	FY06
<u>Superior Court:</u>					
50 Jurors 1.0 Days for Selection	1,250	1,250	1,250	1,250	1,250
14 Jurors for 1.5 Days of Court	525	525	525	525	525
12 Jurors for .5 Days of Deliberation	150	150	150	150	150
Deliberation Meal \$11/12 jurors + bailiff	143	143	143	143	143
Total per Superior Court Trial	2,068	2,068	2,068	2,068	2,068
Proposed # Superior Court Trials	3	3	3	3	3
Estimated Cost of Superior Court Trials	6,204	6,204	6,204	6,204	6,204
<u>District Court:</u>					
District Court Judge (5 Months) PPT	50,419	50,419	50,419	50,419	50,419
In-Court Clerk (5 Months) PPT	17,499	17,499	17,499	17,499	17,499
	67,918	67,918	67,918	67,918	67,918
Fiscal Note for 500 Misdemeanors + 3 Felony Trials	74,122	74,122	74,122	74,122	74,122

DOT APPORTIONMENTS 38

State	Eligible for IM/STP/NHS Total	.08 Grants	Oct. 1, 2003	Oct. 1, 2004	Oct. 1, 2005	Oct. 1, 2006
			2% Penalty	4% Penalty	6% Penalty	8% Penalty
Alabama	\$342,638,533	X	-0-	-0-	-0-	-0-
Alaska	179,048,339		\$3,580,967	\$7,161,934	\$10,742,900	\$14,323,867
Arizona	346,186,696		6,923,734	13,847,468	20,771,202	27,694,936
Arkansas	243,992,590		4,879,852	9,759,704	14,639,555	19,519,407
California	1,529,215,765	X	-0-	-0-	-0-	-0-
Colorado	247,386,936		4,947,739	9,895,477	14,843,216	19,790,955
Connecticut	184,287,424		3,685,748	7,371,497	11,057,245	14,742,994
Delaware	82,934,413		1,658,688	3,317,377	4,976,065	6,634,753
D.C.	72,529,086	X	-0-	-0-	-0-	-0-
Florida	908,997,513	X	-0-	-0-	-0-	-0-
Georgia	649,914,759		12,998,295	25,996,590	38,994,886	51,993,181
Hawaii	87,533,317	X	-0-	-0-	-0-	-0-
Idaho	140,668,319	X	-0-	-0-	-0-	-0-
Illinois	578,788,117	X	-0-	-0-	-0-	-0-
Indiana	477,023,185		9,540,464	19,080,927	28,621,391	38,161,855
Iowa	233,761,151		4,675,223	9,350,446	14,025,669	18,700,892
Kansas	228,816,583	X	-0-	-0-	-0-	-0-
Kentucky	311,045,588	X	-0-	-0-	-0-	-0-
Louisiana	258,290,690		5,165,814	10,331,628	15,497,441	20,663,255
Maine	90,738,751	X	-0-	-0-	-0-	-0-
Maryland	260,265,880		5,205,318	10,410,635	15,615,953	20,821,270
Massachusetts	269,627,680		5,392,554	10,785,107	16,177,661	21,570,214
Michigan	578,169,423		11,563,388	23,126,777	34,690,165	46,253,554
Minnesota	304,583,674		6,091,673	12,183,347	18,275,020	24,366,694
Mississippi	235,276,784		4,705,536	9,411,071	14,116,607	18,822,143
Missouri	405,527,772		8,110,555	16,221,111	24,331,666	32,442,222
Montana	191,791,565		3,835,831	7,671,663	11,507,494	15,343,325
Nebraska	166,733,536		3,334,671	6,669,341	10,004,012	13,338,683
Nevada	141,949,392		2,838,988	5,677,976	8,516,964	11,355,951
New Hampshire	85,380,575	X	-0-	-0-	-0-	-0-
New Jersey	358,791,296		7,175,826	14,351,652	21,527,478	28,703,304
New Mexico	202,633,907	X	-0-	-0-	-0-	-0-
New York	615,866,843		12,317,337	24,634,674	36,952,011	49,269,347
North Carolina	489,204,742	X	-0-	-0-	-0-	-0-
North Dakota	143,729,580		2,874,592	5,749,183	8,623,775	11,498,366
Ohio	597,212,812		11,944,256	23,888,512	35,832,769	47,777,025
Oklahoma	290,063,196		5,801,264	11,602,528	17,403,792	23,205,056
Oregon	221,819,579	X	-0-	-0-	-0-	-0-
Pennsylvania	593,111,563		11,862,231	23,724,463	35,586,694	47,448,925
Rhode Island	86,676,803		1,733,536	3,467,072	5,200,608	6,934,144
South Carolina	316,689,556		6,333,791	12,667,582	19,001,373	25,335,164

What if this were the 19th State to have .08 in 2000?

19th State	2000 Oblig. Auth.(87.1%)
Alaska	847,468
Arkansas	2,084,629
Arizona	2,319,676
Colorado	2,425,076
Connecticut	1,790,867
Delaware	847,468
Georgia	4,119,339
Indiana	3,519,787
Iowa	2,453,537
Kentucky	2,492,121
Louisiana	2,612,752
Maryland	2,575,320
Massachusetts	3,183,945
Michigan	5,397,959
Minnesota	3,353,651
Mississippi	1,974,459
Missouri	3,606,033
Montana	1,103,086
Nebraska	1,700,499
New Jersey	3,951,785
New York	8,783,620
Nevada	1,053,060
North Dakota	1,194,576
Ohio	5,997,730
Oklahoma	2,619,944
Pennsylvania	6,447,658
Puerto Rico	1,841,228
Rhode Island	847,468
South Carolina	2,316,067
South Dakota	1,189,839
Tennessee	3,157,815
West Virginia	1,235,442
Wisconsin	3,403,571
Wyoming	847,468

Talking Points On New .08 BAC Studies Released In April, 1999

Background

- In February 1991, NHTSA issued a Report to Congress on the "Effects of Alcohol and Expected Institutional Responses to New Limits." Based upon impairment data and epidemiological research showing the increased risk of crashing as driver BAC increases, NHTSA recommended that a .08 per se limit be adopted by the States and jurisdictions.
- In October 1992, in a subsequent "Report to Congress on Alcohol Limits", NHTSA recommended that all states enact a .08 BAC level, at and above which it is a per se criminal offense to drive. Again, this recommendation is based on the fact that everyone is impaired at .08 BAC; epidemiological research shows an increase in crash risk of 9-11 times at .08 BAC; there is strong public acceptance of this limit; and a new study of the effectiveness of .08 BAC and administrative license revocation laws in California suggests that these laws are effective in reducing alcohol related crashes.
- On March 3, 1998, more than 150 representatives of national organizations and highway safety partners joined President Clinton as he addressed the Nation on setting new standards to prevent impaired driving. The President called for a national standard under which it would be illegal, per se, to operate a motor vehicle with a blood alcohol content (BAC) of .08 or higher. President Clinton called on Congress to enact legislation that would apply the .08 BAC standard across the country. (The Safe and Sober Streets Act of 1997 passed the Senate on March 4, 1998, by a 67 to 32 margin).
- On June 9, 1998, President Clinton signed the Transportation Efficiency Act (TEA 21) into law. In his signing statement, he expressed his deep disappointment "that H.R. 2400 failed to include language that would help establish 0.08 percent (BAC) as the standard for drunk driving in each of the 50 states." He further stated that his Administration would continue to fight for it.

Key Points

- In 1997, 16,189 people lost their lives on U.S. highways in alcohol-related crashes. This represented 39 percent of all traffic fatalities in 1997.

- While alcohol-related traffic fatalities have been decreasing (and the 39 percent in 1997 represented an all-time low in the U.S.), we have a long way to go to meet the national goal of no more than 11,000 alcohol-related fatalities by the year 2005.
- We know what works. In order to reduce impaired driving in this Nation, we need tough laws set by the states, highly visible enforcement of these laws, and a change in the public's attitude regarding this problem.
- One step in that direction will be to adopt .08 BAC as the illegal limit for adult drivers in all 50 states. Currently, only 16 states and the District of Columbia have such laws.
- Research shows that virtually all drivers, even experienced drinkers, are substantially impaired at .08 BAC with regard to critical driving tasks (such as braking steering, lane changing, judgement, and divided attention)
- The risk of being involved in a crash increases gradually at each blood alcohol level, but rises very rapidly after a driver reaches or exceeds .08 BAC.
- .08 BAC is a reasonable limit to set. A 170-lb. male would have to consume 5 or more 12-ounce beers in a 2-hour period on an empty stomach to reach .08 BAC. An average (137 lb.) female would need to consume 4 beers in 2 hours to reach .08.
- Surveys show that most people would not drive after consuming 2 or 3 drinks and that 2 out of 3 Americans favor lowering the limit to .08, when they are made aware of how much alcohol that means.
- Most other industrialized nations have set BAC limits at .08 or lower. For example, Canada and Great Britain have had .08 for many years; Australia, France and Germany are at .05; and Sweden has an illegal limit set at .02 BAC.
- Past research has shown that .08 laws have been effective in reducing impaired driving in several states that have adopted them. However, some have suggested that because these studies have found different results in various states that they provide only "equivocal" evidence of the effectiveness of these laws.
- In fact, the quality and consistency of the results of the past studies is quite similar to that of studies conducted from 1980 -1990 to evaluate the effectiveness of minimum drinking age laws. Any inconsistency found in the studies (in both areas) has generally been in magnitude, not direction of effect, and it has involved primarily smaller states where fatal crashes vary significantly from year-to-year.
- However, because concerns have been raised, the Department of Transportation commissioned these three new studies to further investigate the effectiveness of .08 BAC laws.

- These three independently conducted studies add additional support for the effectiveness of .08 BAC laws.
- Even though these three studies provide additional evidence for the effectiveness of .08 laws, it should be pointed out that longstanding support for .08 BAC laws was based on the behavioral research that indicates that virtually everyone is impaired at this level; on epidemiological research that shows that the likelihood of being involved in a fatal or serious injury crash increases dramatically at this level; on the fact that the public overwhelmingly supports such a level; and on the fact that nearly all industrialized nations have a limit which is lower than .08.
- The most comprehensive of the three new studies conducted by the Pacific Institute for Research and Evaluation analyzed data from all 50 states. It examined the effectiveness of three major alcohol safety laws: administrative license revocation (ALR) laws; .10 illegal per se BAC laws, and .08 illegal per se BAC laws. It found that all three laws are effective in reducing alcohol-related crashes.
- This study found that .08 BAC laws reduce the involvement of drinking drivers in fatal crashes by about 8 percent. It estimated that these laws saved 275 lives in 1997 alone and that an additional 590 lives could have been saved if every state would have had a .08 BAC limit in place in that year. Reductions among drivers with high BACs were just as great as those with low BACs (i.e., about 8 percent).
- Another multi-state study (Rainbow Technologies and NHTSA) examined 11 states with .08 BAC laws and found significant reductions in alcohol-related fatalities in 7 states; in 5 of the 7 states (VT, KS, NC, FL, NM) the reduction was associated with the .08 BAC law itself; in 2 of the 7 states (CA, VA), the reductions were associated with the combined effect of .08 BAC laws and administration license revocation (ALR) laws enacted within six months of each other. In 4 states, no significant effects of .08 laws were observed.
- A third study looked at North Carolina alone (University of North Carolina - Highway Safety Research Center). It found no clear effect of a .08 BAC law implemented in North Carolina in 1993, during an already sharp decline in alcohol-related fatal crashes. Several study outcomes suggested modest additional reductions associated with the .08 law, but the magnitude of these results was not sufficient to be scientifically conclusive.
- The enactment of the .08 BAC law in North Carolina was but one of a number of comprehensive and aggressive efforts which the State has implemented over the past two decades to deter alcohol-impaired driving. As a result, the state has experienced a sharp decline in alcohol-related crashes and fatalities that began in 1987 and continued after the .08 BAC law was enacted.
- In aggregate, the three studies provide additional support for a comprehensive legislative approach to drunk driving, which includes .08 BAC laws. These laws are particularly

effective when coupled with other efforts, including ALR laws, sobriety checkpoints, enforcement blitzes, and public information campaigns.

- Even with these studies, there will undoubtedly be those who will still claim the evidence for the impact of .08 laws is still "equivocal." All research is (equivocal). However, with the addition of these studies, the quantity and quality of studies is reinforced. In fact, it can be argued that both the quality of the studies and the consistency of their results parallels that of the minimum drinking age (MDA 21) studies, which have been widely viewed (including GAO reviewers) as constituting one of the most unequivocal areas of highway safety evaluation]

Questions and Answers Regarding the .08 Issue and the Recent Studies Supporting Its Impact

Questions Directly Related to the .08 Studies

- Q. How do you resolve the fact that in one study of the effects of .08 BAC legislation in North Carolina, the researchers found "no clear effect," while in the other study a significant effect of the law was found?**

There is more consistency than inconsistency in the findings of these two recent studies of the North Carolina .08 law implemented in 1993. Both studies found that the .08 BAC law was *implemented in the midst of a sharp decline* in alcohol-related crashes that had begun in 1987. Thus, both studies attempted to find evidence of an *additional* effect, above and beyond the downward trend that was already occurring.

In fact, both studies did find evidence of an *additional* effect associated with the .08 BAC law. In the 11-state study (Apsler, Char, Harding, and Klein), the outcome (for North Carolina) was a statistically significant reduction in alcohol related fatalities. In the case of the North Carolina study (Foss, Stewart, and Reinfurt), several analyses were conducted, the majority of which found evidence of an *additional* reduction in alcohol related crashes associated with the .08 BAC law (in comparison with all states without .08 laws and in comparison with 11 other states with high BAC testing). In this study, however, the magnitude of these results was not great enough for the researchers to conclude that there was a clear effect. Some of the differences in the size of the effect observed appear to be related to differences in pre/post time periods. In any case, the majority of the outcomes of both studies suggested an *additional* effect associated with the law.

In summary,

Both studies found long term declines in alcohol-related fatal crashes in North Carolina, due to a variety of activities and programs implemented within the State.

With regard to the specific impact of the .08 BAC legislation, the majority of the analyses (in both studies) indicated fewer alcohol-related crashes or fatalities associated with the .08 BAC legislation. Thus, the *direction* of the results was consistent between the two studies.

Because there already was a sharp decline occurring in alcohol related crashes, the residual reductions found to be attributable to the .08 BAC legislation in North Carolina were deemed by the researchers to be modest and not statistically significant in the single state (NC) study. While a 4% decline in alcohol-related fatalities attributable to the .08 BAC law may not have been "statistically significant", it is significant when viewed in terms of the lives saved.

The slight differences in the outcomes (i.e., statistical significance versus non-significance) in the two studies are likely due, at least in part, to differences in the time periods studied.

Q. How did these studies separate out the effects of many different programs and laws working at the same time, such as administrative license revocation, sobriety checkpoints, enforcement blitzes, and designated driver programs?

The current studies employed several methods to single out the impact of .08 legislation.

Each study included in its analysis, *data and trends regarding extraneous factors* which might affect crashes, both alcohol-related and non-alcohol related.

Each study also used at least one *dependent variable* (i.e., the ratio of alcohol-related to non-alcohol-related drivers) to control for factors which equally affect alcohol-related and non-alcohol related crashes.

Two of the current studies used sophisticated *time-series analysis* techniques to control for the implementation of other countermeasures as well as changes in extraneous factors such as alcohol consumption, seasonal effects, trend effects, etc. These techniques depend upon differences in the timing of the implementation of various actions or programs to determine individual impact.

Finally, several studies have *compared states* with .08 BAC legislation with those that do not have such legislation on various measures.

Additional Information

Nearly all of the progress we have made in reducing drunk driving has been the result of a combination of a large number of actions that have been taken over the past two decades. Success at any one point builds upon the successes of previous efforts, especially with regard to legislative efforts. It is not reasonable to expect that any single action will have a major impact

on this very difficult problem. Thus, many countermeasures are in operation at any one time and it is very difficult try to separate out the impact of specific actions.

In addition, there are many extraneous factors that can affect drunk driving (e.g. alcohol consumption levels and patterns, unemployment, etc.). These factors (at least those which are known to affect alcohol-related crashes) must also be accounted for in any credible study.

Efforts to control for the impact of extraneous variables and to estimate the impact of individual measures are never perfect.

However, primarily because of differences in the timing of various efforts, it is often possible to determine (using time series analysis) with some confidence if a particular countermeasure (such as .08 BAC legislation) is having an impact.

It is also possible to use different measures and comparisons with other states to show differences.

The replication of such impact by an accumulation of studies, conducted over different time periods and using different measures and techniques adds to the confidence of these findings.

Q. How did you account for public attitude changes to drunk driving mainly due to the work of grass roots groups such as MADD and SADD?

All of the studies took into account the potential impact of such factors by including a "year trend" factor in their analyses. Even taking this trend into account, the two national level studies still found that .08 laws had a significant effect on reducing alcohol related fatal crashes.

Q. Intuitively a .08 law with lots of publicity and enforcement should work better than a law with little of either. Does that account for some of the variability in your results? Can you be assured that the presence or absence of publicity and/or enforcement in conjunction with these laws has been taken into account?

Unfortunately, there is not good data available regarding the level of enforcement or publicity that accompanied the implementation of .08 BAC laws in all of the states that enacted them. It is certainly possible that differences in the levels of these complementary activities resulted in differences in measured impact in various states with .08 BAC legislation.

Q. Everybody knows that the baby boomers are getting older and more health conscious and that alcohol consumption is going down in the U.S. The young population was also decreasing over the years of your study. Those factors cause a long-term decline in drinking and driving along with many other social problems. How did your analyses account for that?

All of the studies used "time factors" in their analyses to attempt to control for such factors that are highly correlated with time. Again, even after accounting for these time trends, the two

national studies released today found that .08 BAC laws were effective in reducing alcohol related fatal crashes in several states.

- Q. In the past, supporters of .08 BAC laws claimed that there is no evidence to believe that people will drink less or that bars and restaurant businesses will be hurt by .08 BAC laws. Both of the new studies seem to indicate that .08 laws do affect alcohol consumption. How do you resolve this conflict?**

In the past, there was little or no evidence that .08 laws affected alcohol consumption. In the four .08 states where consumption figures were available, there were no changes in per capita alcohol consumption trends when .08 was adopted. However, NHTSA decided to examine this issue in the new national studies using time series analyses to determine any deviations from the already decreasing alcohol consumption trends.

QUESTIONS NOT DIRECTLY RELATED TO THE .08 IMPACT STUDIES

- Q. Why did the New Jersey Governor's DWI Task Force conclude that the results were mixed on the effects of .08 and consequently did not recommend to the Governor that the limit be lowered to .08?**

The Task Force reviewed only the four previously published studies of the effects of .08 BAC and concluded, in their review, that the "results were mixed." We believe that, while the direction of the findings of all the previous studies is remarkably consistent, the studies released today contribute considerably to the evidence that .08 BAC laws reduce alcohol-related fatalities.

- Q. If .08 BAC legislation is so effective, and the rationale behind it is so solid, why have only 16 states adopted .08 this far?**

This year, there was legislative activity in a substantial number of states regarding .08 BAC laws. However, such legislation is never easy to enact and some in the alcohol and hospitality industries have strongly opposed such legislation. Their lobbyists have been very effective in confusing the facts regarding number of drinks required to reach .08, impairment and increased crash risk at various BAC levels, and the effectiveness of .08 BAC laws. As a result, they have often been effective in getting .08 legislation killed in legislative committees. It is our perception that more and more .08 legislation is now getting out of committee and is being voted on by the full house or Senate in the states. This suggests that such legislation is gaining more momentum and support in the states and we expect an increasing number of states to enact .08 BAC laws in the near future.

- Q. Do your latest studies show that .08 legislation affects the real drinking driving problem in this country, drivers who reach BACs of .15 or greater?**

Yes, nearly all of the studies of .08 BAC legislation that have been conducted have shown that such laws reduce the involvement of both high and low BAC drivers in fatal crashes.

This legislation sends a message to all potential drinking drivers that the standard is being lowered and that their risk of arrest, conviction and sanction is becoming greater.

Q. Doesn't a .08 BAC law mean that a 120-lb woman who has two glasses of wine in two hours will be subject to arrest, fines and jail?

This scenario is extremely unlikely. Obviously, if the woman drinks large glasses of high alcohol-content wine on an empty stomach, her BAC could rise to that level. However, numerous demonstrations have been conducted around the country which have included small-statured women. In those demonstrations, even on an empty stomach, two glasses of wine have not resulted in BACs of .08 -- even though the women often showed obvious signs of impairment.

That is the important point -- all persons, small-statured women or large, heavy men, show significant impairment before reaching a BAC of .08. That is why research shows that the risk of being involved in a fatal or serious injury crash increases significantly by the time one is at a .08 BAC.

Q. If lowering the illegal BAC limit from .10 to .08 saves lives, why not lower it to .06 or .05 and save even more lives?

The research on impairment, risk of crash involvement, and effectiveness of legislation, along with the level of public acceptance of current and proposed BAC legislation all points to .08 as the most appropriate illegal level. If future research suggests that lower levels should be adopted and the public agrees, perhaps lower limits will be considered. Right now, .08 is the level recommended for adults. Keep in mind, all states now have adopted per se levels of .04 BAC for commercial drivers (large trucks, buses, etc) and .02 BAC (or zero tolerance) for drivers under the age of 21.

Q. Some countries with .08 BAC limits (e.g. Mexico, Canada, Austria) have higher alcohol involvement rates in fatal crashes than in the U.S. How do you explain that?

Some countries do have higher alcohol involved fatal crash rates than the U.S., even though they have .08 BAC limits. Such laws are only one among many factors influencing alcohol-related fatality rates. There are many other factors that affect these statistics, such as enforcement levels, sanctions, public attitudes toward drinking and driving, alcohol consumption levels and patterns, availability of alternative transportation, etc.

In the U.S., 39% of the traffic fatality are alcohol-related. In many countries with lower BAC limits, like Sweden, the percent alcohol-related is far lower, usually below 30%.

Q. Even in countries like Sweden, the average BAC of a person involved in an alcohol-related fatal crash is .15. How do you explain that?

An average BAC of .15 among drinking drivers involved in fatal crashes is quite common across nations. It is only a measure of average BAC among the population of fatally injured drivers who were drinking, regardless of the size of that population.

The percent of fatal crashes involving a drinking driver is much more relevant as a measure of success and, where .08 has been introduced, there is strong and growing evidence that this measure of alcohol-involvement is reduced.

on across
rivers

asure of
this

ORIGINAL ARTICLES

Effects of recent 0.08% legal blood alcohol limits on fatal crash involvement

Ralph Hingson, Timothy Heeren, Michael Winter



This article is dedicated to Ross H and Geri J Goughler who in 1992, while traveling to a Thanksgiving visit with their daughter, were struck and fatally injured by a driver in New Mexico. Police reports indicated the driver had been drinking but his blood alcohol level was below 0.10%, the legal limit at the time. He was not charged with a drunk driving violation.

Abstract

Objectives—This study assessed whether states that lowered legal blood alcohol limits from 0.10% to 0.08% in 1993 and 1994 experienced post-law reductions in alcohol related fatal crashes.

Methods—Six states that adopted 0.08% as the legal blood alcohol limit in 1993 and 1994 were paired with six nearby states that retained a 0.10% legal standard. Within each pair, comparisons were made for the maximum equal available number of pre-law and post-law years.

Results—States adopting 0.08% laws experienced a 6% greater post-law decline in the proportion of drivers in fatal crashes with blood alcohol levels at 0.10% or higher and a 5% greater decline in the proportion of fatal crashes that were alcohol related at 0.10% or higher.

Conclusions—If all states adopted the 0.08% legal blood alcohol level, 400–500 fewer traffic fatalities would occur annually.

(*Injury Prevention* 2000;6:109–114)

Keywords: fatal crash; legal blood alcohol limit; drunk driving

Traffic crashes are the leading cause of death for persons between the ages of 1 and 24 in the United States¹ and alcohol is involved in nearly 40% of fatal traffic crashes.² In 1998, 15 935 persons died in alcohol related traffic crashes² and approximately one million are injured each year.³ Those deaths and injuries cost the nation over \$45 billion in lost economic productivity, hospital and rehabilitation costs.¹

To reduce alcohol related traffic deaths, 17 states have lowered their criminal per se legal blood alcohol limit from 0.10% to 0.08%. To reach 0.08% blood alcohol content (BAC), a 170 pound (77.1 kg) male would have to consume four drinks in one hour on an empty stomach, and a 135 pound (61.2 kg) female would need to consume three drinks in one hour.¹

Experimental laboratory studies have shown that at 0.08% BAC, driving performance is impaired. At 0.08%, there is reduced peripheral vision, poor recovery from glare, poorer performance on complex visual tracking, and reduced divided attention performance.¹ Driver simulation and road course studies have

revealed poor parking performance, impaired driving performance at slow speed, and steering inaccuracies.⁵ Roadside observational studies have identified speeding and breaking performance deterioration.⁶ A national comparison of drivers in single vehicle fatal crashes with drivers not involved in crashes stopped at roadside indicated that each 0.02% increase in BAC nearly doubles the risk of fatal crash involvement.⁷ In all age and sex groupings at a BAC of 0.05%–0.09%, the fatal crash risk was at least nine times greater than at zero BAC.

Many countries have established blood alcohol limits at 0.08% or lower.¹ Austria, Canada, the United Kingdom, and Switzerland have 0.08% blood alcohol limits. Legal limits range from 0.05%–0.8% in Australia, and are at 0.05% in Finland, France, Germany, the Netherlands, Norway, and Japan. Sweden has a legal blood alcohol limit of 0.02%, a level similar to the zero tolerance laws for drivers under age 21 now found in all states in the United States.

In California, the largest state to adopt a 0.08% law, researchers found a 12% decline in alcohol related fatal crashes after the law was adopted (National Highway Traffic Safety Administration, 1991). Because California also adopted an administrative license revocation (ALR) law six months after the 0.08% per se law, the separate effects of each law were difficult to determine. According to one study, most of the effects occurred after the ALR provisions were added (Rogers, 1995⁸).

Johnson and Fell monitored six measures of driver alcohol involvement in the first five states to adopt 0.08% laws (Utah, Oregon, Maine, California, and Vermont) and identified several statistically significant pre-law to post-law decreases.⁹ Because the study did not compare states with the 0.08% law to states that did not have the law, researchers could not determine whether the changes were independent of general regional trends. The researchers did conclude the effects of the law were independent of national trends.

Another study, conducted by the authors of this report, examined the first five states to lower legal blood alcohol limits to 0.08% relative to nearby states which retained 0.10% as the legal limit. These 0.08% law states experienced a 16% greater post-law decline in the proportion of fatal crashes that involved a fatally injured driver with a BAC of 0.08% or

Boston University
School of Public
Health: Social and
Behavioral Sciences
Department
R Hingson

Epidemiology and
Biostatistics
Department
T Heeren

Data Coordinating
Center
M Winter

Correspondence to
Dr Ralph W Hingson, Social
and Behavioral Sciences
Department, Boston
University School of Public
Health, 715 Albany Street,
T 2W, Boston, MA 02118
(e-mail rhingson@bu.edu)

er.¹⁰ Comparison states were selected which had parallel pre-law trends in the proportion of fatally injured drivers with BACs of 0.08% or higher, similar population sizes and geographic proximity. The results of this study resembled those initially found in both the United Kingdom and France when those countries first combined 0.08% laws with automatic license revocation.^{11, 12} In the United Kingdom the proportion of drivers killed with an illegal BAC declined from 25% the year before the law to 15% the following year. During the first year after France's 0.08% law, traffic deaths declined 13.9%.

Because all of the 0.08% law states also had ALR laws and some adopted them in close time proximity to the 0.08% laws, our earlier study was not able to fully disaggregate 0.08% law effects from ALR law effects. National studies indicate ALR laws are associated with 6%–9% reductions in alcohol related fatal crashes.^{13, 14} Some investigators have noted that the paper did not detail comparison state selection criteria and questioned whether selection of different comparison states would have altered the study's findings.^{15, 16} They argued that the use of multiple comparison states or a national comparison would be a preferable approach.

Foss *et al* conducted a time series analysis of alcohol related fatal crashes from 1991 through 1996 before and after North Carolina adopted a 0.08% law in 1993.¹⁷ They did not find a statistically significant reduction in alcohol related fatalities after the law. They also compared the proportion of drivers in North Carolina in fatal crashes with a BAC of 0.01% or higher during the 33 months before and the 39 months after North Carolina's 0.08% law to the proportion in the 37 states without a 0.08% law. Using an analytic approach similar to that used in our earlier paper, North Carolina experienced a 6% greater decline during the post-law period. A similar decline was found among drivers with a BAC of 0.10% or higher. Neither decline was statistically significant when compared to non-0.08% law states. Given the number of crashes in these states, an 8% greater post-law decline in North Carolina would have been needed for statistical significance. That analysis had less than 80% power to detect a 10% post-law reduction in study outcomes and less than 60% power to detect an 8% decline. In this context, statistical power describes the likelihood of detecting a true 0.08% law effect. Most researchers would argue that a study should have power of 80% or higher. No power calculations were presented for the time series analyses, making these null findings difficult to interpret. In studies of single states changing a traffic law, potentially meaningful post-law

reductions in alcohol related traffic deaths may not reach statistical significance. The same magnitude of decline however, if observed in multiple states adopting the law, can be statistically significant.

Two multistate studies of 0.08% laws were recently published.^{13, 14} Apsler *et al* studied the first 11 states to adopt 0.08% laws.¹³ They examined each state separately using intervention model time series analysis of trends in the ratio of fatal crashes involving drivers with BAC of 0.10% or higher relative to fatal crashes with no driver alcohol involvement. Examining data from the Fatality Analysis Reporting System from 1982–97 they found 0.08% laws either alone or in conjunction with ALR laws were associated with significant declines in seven states. In five of those states, declines were specifically associated with 0.08% laws alone. No comparison areas were included in the analysis to rule out regional or national secular trends. Voas and Tippetts conducted a national study from 1982–97 and identified an 8% decline in the proportion of drivers with positive BACs involved in fatal crashes relative to other fatal crashes.¹⁴ Using regression models they determined this reduction was independent of other drinking while under the influence laws such as 0.10% per se laws and ALR laws as well as safety belt laws and demographic, economic, and seasonal factors and per capita alcohol consumption. They projected that there would be 500–600 fewer deaths nationwide if all states adopted 0.08% laws.

In a review of all the 0.08% law studies cited above the United States General Accounting Office concluded "there are strong indications that 0.08% BAC laws in combination with other drunk driving legislation (particularly license revocation laws), sustained public education and consistent enforcement efforts can save lives".¹⁶ However, the report also indicated "the evidence does not conclusively establish that 0.08% BAC laws by themselves result in reduction in the number and severity of alcohol related crashes".

There is a need to further explore whether lowering the legal blood alcohol limit from 0.10% to 0.08% produces reductions in alcohol related fatal crashes beyond that achieved by administrative license revocation laws.

STATES RECENTLY ADOPTING 0.08% LAWS

In 1993 and 1994, six states not included in our first study¹⁰ lowered their criminal per se legal blood alcohol limits from 0.10% to 0.08% (Kansas, North Carolina, Florida, New Mexico, New Hampshire, and Virginia) (table 1). This study explores whether these newer 0.08% laws reduced alcohol involvement in fatal crashes and whether the declines were independent of implementation of ALR laws. The analysis period extends beyond previously published studies into 1998.

Table 1 Analysis periods: recent 0.08% law states and comparison states

New 0.08% law state	Date of law	Comparison state	Analysis period
Kansas	July 93	Oklahoma	July 88–June 98
North Carolina	October 93	Tennessee	Oct 88–Sept 98
Florida	January 94	Georgia	Jan 89–Dec 98
New Mexico	January 94	Colorado	Jan 89–Dec 98
New Hampshire	January 94	Connecticut	Jan 89–Dec 98
Virginia	July 94	Maryland	July 90–June 98

Method

This study compared fatal crash trends in the six states that adopted 0.08% laws between 1993 and 1994 with nearby states that retained 0.10% as their legal blood alcohol limit. We sought to address criticisms of our earlier analysis of the first five states to adopt 0.08% legislation by (1) explicitly describing comparison state selection criteria, (2) comparing states with new 0.08% laws to matched individual comparison states as well as comparing them to all other states without 0.08% laws, and (3) conducting separate analyses of states adopting 0.08% laws and ALR in close time proximity and those that adopted 0.08% laws several years after they adopted ALR laws. This latter analysis was done to assess whether 0.08% laws have effects independent of ALR laws.

We searched for comparison states which (1) were contiguous, (2) had similar population size, (3) had 75% or more of fatally injured drivers tested for BAC, and (4) had similar pre-0.08% law trends in the proportion of fatal crashes that were alcohol related. Five of the six comparison states met all our criteria. New Hampshire did not share a common border with a New England 0.10% law state. Vermont and Maine have 0.08% per se laws and Massachusetts adopted a 0.08% ALR law in 1994. Consequently, New Hampshire was compared with Connecticut, the most populous state in New England that retained a legal BAC of 0.10%. We selected comparison states that were contiguous or from the same geographic region because they would be more likely to experience similar economic trends and weather patterns that could affect trends in fatal crashes.

In each pair of states, we examined the maximum equal number of pre-law and post-law years for which fatal crash data were available. Table 1 lists the 0.08% law states, their comparison states and the analysis periods.

We examined (1) the proportion of drivers in fatal crashes who had BACs at 0.10% or higher and (2) the proportion of fatal crashes that were alcohol related, where alcohol was present in a driver or pedestrian at BACs of 0.10% or higher. We also examined fatal crash data from the United States Department of Transportation Fatality Analysis Reporting System. Alcohol results were derived based on imputational methods used by the National Highway Traffic Safety Administration to calculate annual state and national data on alcohol involvement in fatal crashes.¹⁹ This method uses actual blood alcohol test results when available and estimates the proportion of untested drivers and crashes where alcohol was present at levels of 0.01% to 0.09% and at 0.10% and higher based on characteristics identified in states with high levels of alcohol testing to significantly predict alcohol involvement in fatal crashes with a high degree of accuracy. We used data calculated by the imputational method. This method controls for any pre-law to post-law variability between 0.08% law and

comparison states in the percentage of drivers tested for alcohol.

The proportion of drivers in fatal crashes who had raised BACs of 0.10% or higher was examined instead of the absolute number of drivers in fatal crashes with raised BACs to control for the long term downward trend in fatal crashes over the last decade and changes in exogenous variables that might influence driver involvement in fatal crashes such as the economy, safety characteristics of vehicles and highways, and the price of fuel. For similar reasons, we examined the proportion of fatal crashes that were alcohol related rather than the absolute number of alcohol related fatal crashes.

Within each state, the change in the level of alcohol involvement in fatal crashes from the pre-law to post-0.08% law period is described through the ratio (relative risk) of the post-law to pre-law proportion of crashes involving alcohol according to the measures described above. A relative risk of less than 1.0 indicated a reduction in the level of alcohol involvement. This relative risk (RR) is related to the percentage change in crashes with drivers with higher BACs:

$$100\% \times (p_{\text{post}} - p_{\text{pre}}) / p_{\text{pre}} = 100\% \times (\text{RR} - 1)$$

and changes are described through this percentage change.

Within each state pair, the relative change (and the 95% confidence interval) in the proportion of alcohol involved crashes in the law state relative to the control state was calculated as the ratio of the two relative risks. Subtracting 1 from this ratio gives the percentage change in the proportion of alcohol involved fatal crashes in the 0.08% law state relative to the comparison state.

Meta-analytic methods were used to calculate an overall relative change due to 0.08% laws across the set of six state pairs.²⁰ This overall effect is a weighted average of the individual state effects, where states with more crashes are weighted more heavily. A test of heterogeneity of effects across the six state pairs was conducted to test the significance of state to state variation in effects. Regardless of the observed variation in effect, the relative change in the proportion of fatal crashes involving alcohol was treated as a random effect in the meta-analysis. A pooled estimated and standard error for the natural log of the ratio of relative risks from each state pair were calculated. This estimate and its 95% confidence interval were transformed back to the scale of the ratio of relative risks for presentation, and subtracting one from this ratio gives an estimate for the overall percentage of change in the proportion of alcohol involved fatal crashes in the 0.08% law states relative to control states.

In a commentary on meta-analytic approaches DerSimonian and Laird indicate that meta-analysis "is becoming increasingly popular in medical research where information on the efficacy of a treatment is available from a number of clinical studies with similar treatment protocols. If considered separately any one study may be either too small or too limited

Table 2 Proportion of drivers in fatal crashes with a BAC of 0.10% or higher before and after the passage of 0.08% legal blood alcohol limit in six states

0.08% Law states and comparison states	Proportion before 0.08% law (n)	Proportion after 0.08% law (n)	% Change in proportion (RR)	Ratio of the RRs (95% CI)
Kansas (0.08%)	0.24 (649/2723)	0.19 (574/3068)	-22% (0.78)	0.96 (0.85 to 1.10)
Oklahoma	0.23 (928/4114)	0.18 (885/4821)	-19% (0.81)	
North Carolina (0.08%)	0.20 (1847/9381)	0.15 (1507/9947)	-23% (0.77)	0.95 (0.88 to 1.04)
Tennessee	0.25 (1929/7594)	0.20 (1704/8361)	-20% (0.80)	
Florida (0.08%)	0.21 (3925/18499)	0.15 (2875/19739)	-31% (0.69)	0.93 (0.86 to 1.00)
Georgia	0.21 (2012/9755)	0.15 (1616/10585)	-26% (0.74)	
New Mexico (0.08%)	0.31 (875/2841)	0.23 (651/2782)	-24% (0.76)	0.94 (0.83 to 1.06)
Colorado	0.25 (876/3509)	0.20 (825/4086)	-19% (0.81)	
New Hampshire (0.08%)	0.23 (220/944)	0.18 (155/851)	-22% (0.78)	0.93 (0.75 to 1.14)
Connecticut	0.28 (648/2329)	0.23 (502/2137)	-16% (0.84)	
Virginia (0.08%)	0.22 (1028/4669)	0.19 (931/4971)	-15% (0.85)	0.93 (0.81 to 1.07)
Maryland	0.14 (501/3551)	0.13 (469/3644)	-9% (0.91)	
Overall law effect				0.94 (0.90 to 0.98)

BAC = blood alcohol content; CI = confidence interval; RR = relative risk.

in scope to come to unequivocal or generalizable conclusions about the effect of a treatment. Combining the findings across such studies represents an attractive alternative to strengthen the evidence about the treatment efficacy".²⁰

They caution against integrating results from studies that are diverse in terms of design and methods used. This is clearly not a problem in the analysis we conducted because in this study all six states adopted 0.08% criminal per se laws within a one year time period and exactly the same outcome measures and comparison state selection criteria were used in each analysis.

Of note, four of the 0.08% law states (Kansas, North Carolina, Florida, and New Mexico) had ALR laws in effect for three or more years before the legal limit was lowered to 0.08%, most if not all of the pre-0.08% law analysis periods in those states. Hence, simultaneous enactment of ALR laws could not account for any differential post-0.08% law reductions in alcohol related fatal crashes in those states. Analyses were repeated for those states as a group.

Results

DRIVERS IN FATAL CRASHES WITH RAISED BACS

Based on the meta-analysis, the six 0.08% states experienced a 6% greater relative post-0.08% law decline in the proportion of drivers

in fatal crashes with raised BACs at 0.10% or higher ($p < 0.01$, table 2). The proportion of drivers in fatal crashes with raised BACs declined 26.1% from 0.218 (8545/39 057) to 0.161 (6693/41 408) in 0.08% law states. In the comparison states, the decline was 20.2% from 0.223 (6894/30 852) to 0.178 (6002/33 634). Each 0.08% law state experienced a greater decline than its respective comparison state. There was no significant variation in 0.08% law effect across the six state pairs.

In the four 0.08% law states with ALR laws in place long before the 0.08% limit was adopted, the meta-analysis indicated the relative post-0.08% law decline in the proportion of drivers with raised BACs was also 6% greater than their comparison states experienced ($p < 0.02$). Those four 0.08% law states experienced a 27.5% post-0.08% law decline from 0.218 (7297/33 444) to 0.158 (5607/35 586). Their comparison states experienced a 21.3% decline from 0.230 (5745/24 972) to 0.181 (5030/27 853). Results were similar when we examined the proportion of drivers in fatal crashes with BACs at 0.01% or higher (data available on request).

ALCOHOL RELATED FATAL CRASHES

Based on our meta-analysis, the 0.08% law states experienced a relative 5% greater post-law decline in the proportion of fatal crashes that involved alcohol at BACs of 0.10% or

Table 3 Proportion of fatal crashes involving a driver or pedestrian with a BAC of 0.10% or higher before and after the passage of 0.08% legal blood alcohol limit in six states

0.08% Law states and comparison states	Proportion before 0.08% law (n)	Proportion after 0.08% law (n)	% Change in proportion (RR)	Ratio of the RRs (95% CI)
Kansas (0.08%)	0.36 (664/1834)	0.29 (589/2049)	-21% (0.79)	0.95 (0.85 to 1.07)
Oklahoma	0.36 (994/2778)	0.30 (960/3217)	-17% (0.83)	
North Carolina (0.08%)	0.36 (2217/6209)	0.28 (1847/6512)	-21% (0.79)	0.95 (0.89 to 1.02)
Tennessee	0.40 (2021/5104)	0.33 (1834/5546)	-16% (0.84)	
Florida (0.08%)	0.35 (4568/12035)	0.29 (3611/12537)	-24% (0.76)	0.97 (0.92 to 1.04)
Georgia	0.35 (2292/6489)	0.28 (1882/6836)	-22% (0.78)	
New Mexico (0.08%)	0.50 (1060/2115)	0.41 (814/2003)	-19% (0.81)	0.93 (0.84 to 1.02)
Colorado	0.38 (928/2441)	0.33 (910/2735)	-12% (0.88)	
New Hampshire (0.08%)	0.35 (232/657)	0.29 (167/572)	-17% (0.83)	0.95 (0.79 to 1.15)
Connecticut	0.42 (678/1608)	0.37 (544/1458)	-13% (0.87)	
Virginia (0.08%)	0.35 (1133/3230)	0.31 (1037/3381)	-13% (0.87)	0.90 (0.80 to 1.01)
Maryland	0.26 (632/2415)	0.25 (591/2326)	-3% (0.97)	
Overall law effect				0.95 (0.92 to 0.99)

high $p < 0.01$ (table 3). As a group, the 0.08% law states experienced a 21.4% post-law reduction from 0.379 (9874/26 080) to 0.298 (8065/27 054). The comparison states experienced a smaller decline, 16.0% from 0.362 (7545/20 835) to 0.304 (6722/22 148). Again, each 0.08% law state experienced a greater decline than its respective comparison state. There was no significant heterogeneity in trend between 0.08% law states.

In the four 0.08% states with longstanding ALR laws, the meta-analysis indicated the relative post-law decline was also 5% greater in the 0.08% law states than their comparison states ($p < 0.03$). As a group, 0.08% law states with long standing ALR laws experienced a 22.5% reduction in the proportion of fatal crashes involving alcohol at 0.10%+ from 0.383 (8509/22 193) to 0.297 (6862/23 101) while their comparison states experienced a 17.8% decline from 0.371 (6235/16 812) to 0.305 (5586/18 334). Results were similar when we examined trends in the proportion of fatal crashes involving alcohol at 0.01% or higher (data available upon request).

Discussion

On both measures of alcohol involvement in fatal crashes examined in this study, recent 0.08% law states experienced significantly greater post-law declines than their comparison states. These declines were significant not in each individual 0.08% state relative to its paired comparison state, but in the 0.08% law states as a group relative to the comparison states as a group. These are not contradictory findings. Given the number of crashes in each state, the statistical power of showing a significant decline in any individual state was low. The power to detect an 8% post-law decline, as reported by Voas and Tippetts,¹⁰ in individual 0.08% law states in this study was between 12% and 60%. By pooling the results across states, using meta-analysis, the statistical power was stronger. The meta-analysis had 97% power of significantly detecting such a decline. Further, all six 0.08% law states had greater post-law declines than their respective comparison states and there was no significant heterogeneity in effect between 0.08% law states.

The relative post-0.08% law declines were significantly greater, even in 0.08% law states with longstanding ALR laws, suggesting the post-0.08% law declines were independent of ALR laws. One comparison state, Tennessee, did not have an ALR law. Even if we deleted the North Carolina-Tennessee pair from our analysis of states with longstanding ALR laws, the post-law declines in 0.08% states with longstanding ALR laws were significantly greater than their comparison states again showing effects of 0.08% laws independent of ALR. Georgia, Florida's comparison state, adopted an ALR law during the study period after Florida adopted its 0.08% law. That made it more difficult for us to detect the greater post-0.08% law reductions we found on study outcomes in Florida.

the 0.08% states had criminal per se laws before the study period as did four comparison states Oklahoma, Georgia, Colorado, and Connecticut. In addition, all states in the study except New Hampshire had safety belt laws throughout the study. Also, all states had a minimum legal drinking age of 21 before the study period. Thus, passage of those laws during the study period did not confound results.

Of note, the comparison states in this study experienced very similar trends on study outcomes during the study period as all remaining states in the United States without 0.08% laws. There were no significant differences on study outcomes from the pre-law to post-law periods between comparison states and other non-0.08% law states. Also, the decline in study outcomes were significant in the 0.08% law states relative to these other 0.10% law states. Thus, it is unlikely that there were any biases in the selection of comparison states.

A limitation of this study was that the level of alcohol testing of fatally injured drivers was not as high and consistent as in an earlier analysis of the first five states with 0.08% laws. Consequently, we were not able to examine the effects of the law on drivers with BACs of 0.08% and 0.15% and higher. None the less, this study replicates the earlier analysis of the first five 0.08% law states, which indicated 0.08% laws significantly reduce the proportion of fatal crashes that involve alcohol. Further, this study identified effects of 0.08% laws that were independent of ALR legislation. While the 0.08% reductions in alcohol related fatal crashes in this study were 5%–6% and smaller than the 16% reduction observed earlier in states passing 0.08% laws and ALR laws in close time proximity, the decline in the more recent 0.08% law states is close to what might have been anticipated given that ALR laws have been found in national studies to produce 6%–9% reductions in alcohol related fatal crashes.^{13, 14}

In 1998 there were 8503 fatalities in crashes involving alcohol at levels of 0.10% or higher in states that had not yet lowered the legal per se limit to 0.08%. If all those states were to adopt a 0.08% per se limit and were to experience the 5% reduction in alcohol related traffic crashes experienced by these recent 0.08% law states, 400–500 fewer fatalities would occur annually. Currently, 33 states do not have 0.08% criminal per se legal blood alcohol limits and 10 states have still not adopted ALR laws. All states should adopt both ALR and 0.08% laws.

1 US Department of Health and Human Services. *Health United States 1996-1997 and injury charbook*. Washington, DC: DHSS, 1997. (DHHS Publication No PHS 97-1232 7-0248 (7/97).)

2 National Highway Traffic Safety Administration. *Traffic safety facts 1998-alcohol*. Washington, DC: Department of Transportation, National Center for Statistics and Analysis, 1999.

3 National Highway Traffic Safety Administration. *Strong limits, saving lives: the case for 0.08% BAC laws*. Washington, DC: NHTSA, 1997. Publication No DOT HS 808 524.

4 Moskowitz H, Burns M. Effects of alcohol on driving performance. *Alcohol Health and Research World* 1990;14:12-14.

5 Mortimer RG, Sturgis SP. Effects of low and moderate levels of alcohol on steering performance. In: Israelstam S, Lambert S, eds. *Alcohol, drugs and traffic safety*. Toronto, Canada: Addiction Research Foundation, 1975:329-45.

6. Damkot DK, Perrine MW, Whitmore DG, et al. *On the road: driving behavior and breath alcohol concentration*. Vols I and II. Washington, DC: Department of Transportation, 1975. (Technical report DOT HS 364 37567.)
7. Zador P. Alcohol-related relative risk of fatal driver injuries in relation to driver age and sex. *J Stud Alcohol* 1991;53:301-10.
8. Roger PN. *The general deterrent impact of California's .08% blood alcohol concentration limit and administrative per se license suspension laws*. Sacramento, CA: Department of Motor Vehicles, 1995.
9. Johnson D, Fell J. The impact of lowering the illegal BAC limit in five states in the US. Washington, DC: US National Highway Traffic Safety Administration. *39th Annual Proceedings of the Association for the Advancement of Automotive Medicine*. Chicago, IL, 16-18 October 1995.
10. Hingson R, Heeren T, Winter M. Lowering state legal blood alcohol limits to 0.08%: the effects on fatal motor vehicle crashes. *Am J Public Health* 1996;86:1297-9.
11. Ross HL. Law science and accidents: the British Road Safety Act of 1967. *Journal of Legal Studies* 1973;2:1-79.
12. Ross HL. *Detering the drinking driver: legal policy and social control*. Lexington, MA: Lexington Books, 1982.
13. Zador P, Land A, Fields M, et al. Fatal crash involvement and laws against alcohol impaired driving. *J Public Health Policy* 1989;10:467-85.
14. Klein T. *Change in alcohol-involved fatal crashes associated with tougher state alcohol legislation*. Washington, DC: National Highway Traffic Safety Administration, 1980. (Contracts No DTNH-22-86-L-07045.)
15. Apsler R, Chan AR, Harding W. *The effects of 0.08% BAC law*. Washington, DC: National Highway Traffic Safety Administration, 1999.
16. General Accounting Office. *Highway safety's effectiveness of state .08 blood alcohol laws*. Washington, DC: General Accounting Office, 1999. (GAO RCED-99-179.)
17. Foss D, Stewart R, Reinfurt D. *Evaluation of the effects of North Carolina's 0.08% BAC law*. Chapel Hill, NC: Highway Safety Research Center, University of North Carolina, November 1998.
18. Voas R, Tippetts AS. *Relationship of alcohol safety laws to drinking drivers in fatal crashes*. Washington, DC: National Highway Traffic Safety Administration, 1999.
19. Klein T. *Methods for estimating posterior BAC distribution for persons involved in fatal crashes*. Washington, DC: National Highway Traffic Safety Administration, 1986. (DOT HS 807 094.)
20. DerSimonian R, Laird N. Meta-analysis in clinical trials. *Control Clin Trials* 1986;7:177-88.

Brazil bans computer games for violent content

Brazil's Justice Ministry recently banned six computer games for their violent content, including one that they said encouraged a medical student to go on a deadly shooting rampage last month in a movie theatre, Reuters reported in December. The games the Justice Ministry banned stores from selling are *Doom*, *Mortal Kombat*, *Requiem*, *Blood*, *Postal*, and *Duke Nukem*. The ministry also said it would rule on other games with violent content in 120 days. "The games are considered violent and affecting people who play them, particularly children", the Justice Ministry spokeswoman said. "As for *Duke Nukem*, the ministry regulation says its virtual world may have motivated Mateus da Costa Meira to stage the cinema shooting on November 3 in Sao Paulo". Stores that violate the ban will be fined \$11 000 per day.

Accident man gets £3526 bill

A pub landlord knocked down by a bus has received a £3526 bill for damaging the vehicle. Norman Green, 51, of Thornbury, near Bristol, was crossing a city centre street when he was sent sprawling and suffered four broken ribs, which laid him off work for 14 weeks. He was stunned when the bus company asked him to pay for repairs to a light and windscreen broken in the collision and threatened to take him to court if he refused to pay. The company said the accident happened because "Mr Green was not looking where he was going" and it had suspended the summons until his finances improved.

Screening teens for suicide

In spite of the fact that suicide is the third leading cause of death among adolescents, less than one quarter of US pediatricians and family physicians screen these patients for risk factors associated with suicide. A recent study reported nearly one half of the 600 physicians surveyed reported that at least one of their patients had attempted suicide in the past year. Routine screening was associated with more frequent counselling about safe storage of firearms and car occupant safety. Apparently, one barrier (or excuse) for not screening more often is concerns about confidentiality. Another may be the lack of evidence that the counselling provided is effective (*Arch Pediatr Adolesc Med* 2000;154:162-8).

Surviving massive burns

A surprising report in *JAMA* suggests that most children who survive a massive burn have a satisfying quality of life. The study by Sheridan and colleagues from the highly respected Shriners Burn Hospital in Boston was based on an evaluation of 68 children who had burns involving more than 70% of their body surface. The assessment took place an average of 15 years after the injury. The burned children were compared with age matched general population norms using a standardized measure. The unexpectedly good results are either a tribute to the excellent aftercare program or may reflect weaknesses in the measure itself (*JAMA* 2000;283:69-73).

Aggressive children? Is it hormones after all?

A study shows an association between low levels of salivary cortisol and early and persistent aggression in boys 7-12. The key finding is aggression that starts early and persists among this subgroup of children. The study is based on a four year follow up of 38 school aged boys. Aggression was measured by peer evaluations. Those with low cortisol levels on two occasions displayed three times as many aggressive symptoms and were three times more likely to be chosen as most aggressive by their peers. Interestingly, the investigator noted that "stress delivered to a pregnant female mammal can permanently reset the cortisol system in the infant" (*Arch Gen Psychiatry* 2000;57:38-43).



SETTING LIMITS, SAVING LIVES

THE CASE FOR '08 BAC LAWS

SECTION 1

Introduction

Overview of the Problem

Impaired driving is the most frequently committed violent crime in America. Every 33 minutes, someone in this country dies in an alcohol-related crash. In the time it takes you to read this booklet, someone else will die needlessly.

For many years, we were making good progress. Due to the tireless efforts of many organizations and citizens around the country, alcohol-related traffic deaths decreased significantly. In the last decade, alcohol-related fatalities dropped from 23,630 in 1988 to 15,935 in 1998, according to the National Highway Traffic Safety Administration (NHTSA).

This 33% drop in alcohol-related deaths is generally attributed to:

- STRONGER LAWS,
- TOUGHER ENFORCEMENT, AND
- GOOD CONSUMER EDUCATION.

Americans better understand the impaired driving problem, fewer are driving after drinking, and more are getting caught when they do.

While alcohol-related fatalities have decreased the past three years (after an increase in 1995),

alcohol involvement is still the single greatest factor in motor vehicle deaths and injuries. Only about 5% of all crashes involve the use of alcohol, but 38% of fatal crashes do.

15,935 deaths in one year is 15,935 grieving families too many. But the carnage doesn't end there. In addition to these tragic deaths, another one million people are injured in alcohol-related traffic crashes annually. And these crashes cost society over \$45 billion every year for things like:

- EMERGENCY AND ACUTE HEALTH CARE COSTS,
- LONG-TERM CARE AND REHABILITATION,
- POLICE AND JUDICIAL SERVICES,
- INSURANCE,
- DISABILITY AND WORKERS' COMPENSATION,
- LOST PRODUCTIVITY, AND
- SOCIAL SERVICES FOR THOSE WHO CANNOT RETURN TO WORK AND SUPPORT THEIR FAMILIES.

Just one alcohol-related fatality is estimated to cost society \$950,000. Each alcohol-related injury averages \$20,000. Eventually, we all bear the costs of these deadly actions, through taxpayer supported services and programs, higher insurance costs and even higher prices on goods and services, since employers pick up about half the costs associated with motor vehicle crashes.

**EVERY 33
MINUTES SOMEONE
IN THIS COUNTRY
DIES IN AN
ALCOHOL-RELATED
CRASH. IN THE
TIME IT TAKES
YOU TO READ
THIS BOOKLET,
SOMEONE ELSE
WILL DIE
NEEDLESSLY.**

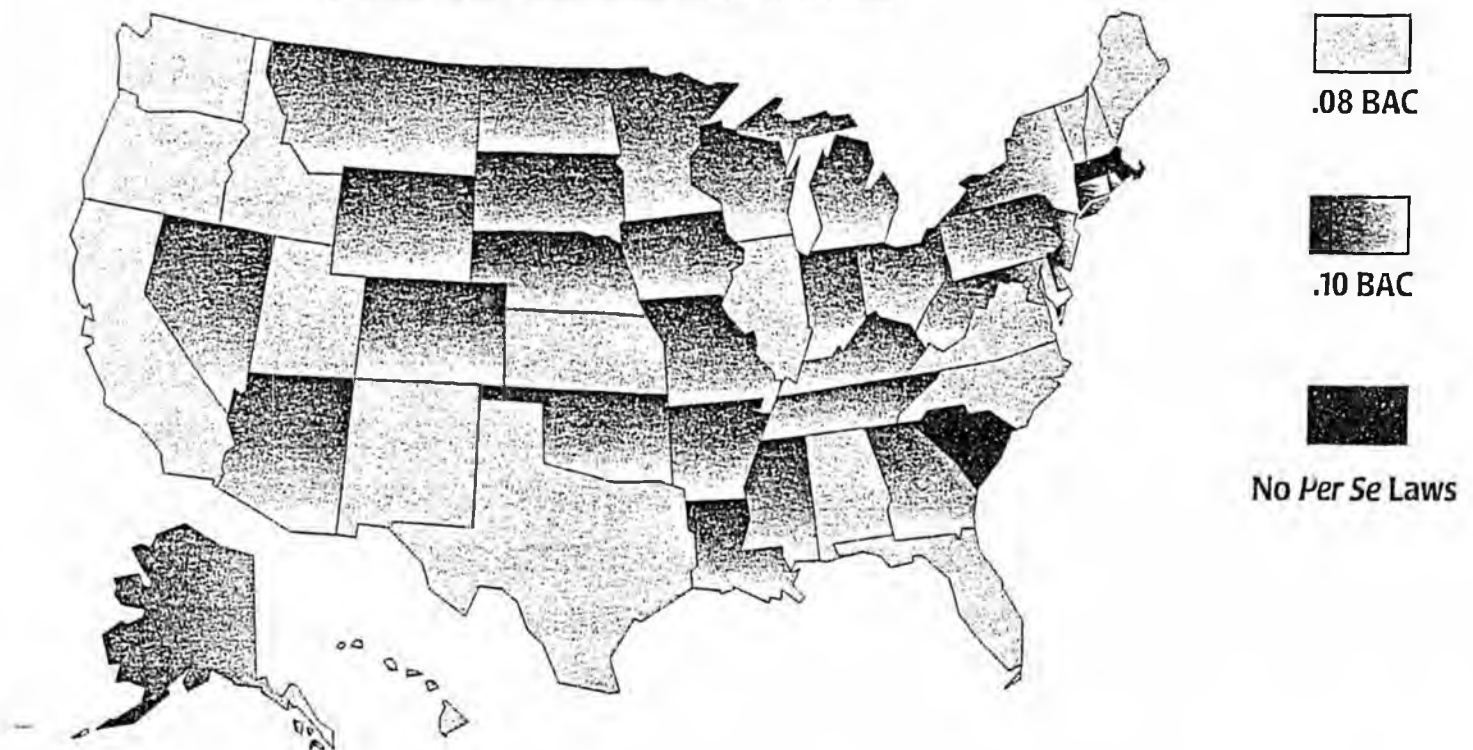
Conducted properly or that other challenges about the accuracy of alcohol detection equipment are valid). As of late 1999, all 50 states plus DC had zero tolerance laws for youth. States that did not have zero tolerance laws for youth by 1998 faced a federal sanction of the withholding of highway construction funds.

.08 BAC – .08 establishes a lower limit to define intoxication for all drivers. Lowering the BAC limit to .08 sets the illegal limit at a point at which driving skills are proven to be compromised. At .08 BAC, all drivers, even experienced ones, show impairment in driving ability. For the great majority, there is serious deterioration in driving performance at .08. Although virtually all highway safety groups and transportation safety agencies support .08, only 17 states, plus DC have adopted such laws as of late 1999. Some organizations in the alcohol and hospitality industries vigorously oppose .08 legislation whenever it is proposed.

In addition to these four key laws, the National Safety Council and the National Highway Traffic Safety Administration (along with many other organizations and agencies) encourage other anti-impaired driving steps such as:

- THE USE OF SOBRIETY CHECKPOINTS AND SATURATION PATROLS BY LAW ENFORCEMENT AGENCIES COUPLED WITH HIGH LEVELS OF PUBLICITY;
- INCREASED ENFORCEMENT FOR UNDERAGED DRINKING AND DRIVING;
- GRADUATED DRIVER LICENSING PROGRAMS FOR NEW, YOUNG DRIVERS;
- THE USE OF DESIGNATED DRIVER AND SAFE RIDE PROGRAMS;
- RESPONSIBLE SERVER PROGRAMS;
- CONSUMER EDUCATION; AND
- CONTINUED RESEARCH TO FIND NEW AND BETTER WAYS TO COMBAT IMPAIRED DRIVING.

States With BAC *per se* Laws



SECTION 2

What is .08?

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." Because the volume of blood varies with the size of a person, BAC establishes an objective measure to determine levels of impairment.

The measurement is based on grams per deciliter (g/dl), and in most states a person is considered legally intoxicated if his or her BAC is .10 g/dl or greater; that is, alcohol makes up one-tenth of one percent of the person's blood.

A driver's BAC can be measured by testing the blood, breath, urine or saliva. Breath testing is the primary method used by law enforcement agencies. Preliminary breath testing can be performed easily during a roadside stop using a hand-held

device carried by police officers. It is non-invasive and can even be performed while the person is still in his or her vehicle.

Evidentiary breath testing equipment is evaluated for precision and accuracy by NHTSA. Test instruments approved by NHTSA as conforming to specifications are accurate within plus or minus .005 of the true BAC value.

State BAC Levels

All states but two (Massachusetts and South Carolina) have established BAC *per se* levels. Seventeen of those states plus the District of Columbia have set that level at .08 (Alabama, California, Florida, Hawaii, Idaho, Illinois, Kansas, Maine, New Hampshire, New Mexico, North Carolina, Oregon, Texas, Utah, Virginia, Vermont and Washington). For more state-specific data, see the chart "The State of the States," on next page.

**"A DRINK IS A
DRINK IS A DRINK"**

**1 DRINK EQUALS 54
OUNCES OF ALCOHOL.
THIS IS THE
APPROXIMATE AMOUNT
FOUND IN:
ONE SHOT OF DISTILLED
SPIRITS, OR ONE CAN
OF BEER, OR ONE GLASS
OF WINE.**

SECTION 3

Effect of BAC on Traffic Crashes

The Effect of Alcohol on Ability

With each drink consumed, a person's blood alcohol concentration increases. Although the 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. In a recent study of 168 drivers, every one was significantly impaired with regard to at least one measure of driving performance at .08 BAC. The majority of drivers (60-94%) were impaired at .08 BAC in any one given measure. This is regardless of age, gender, or driving experience (see chart, "BAC and Impairment," at right).

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 .08 BAC compared to drivers with no alcohol in their system.

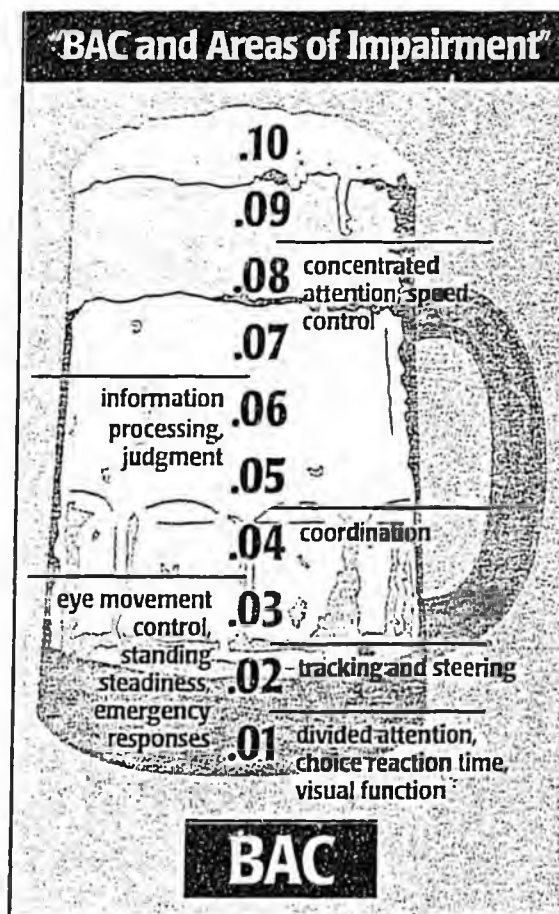
A recent study found that the risk of being killed in a single vehicle crash at .08 to .099 BAC ranged from 11 times the risk at .00 BAC for older drivers to 52 times the risk at .00 BAC for young male drivers.

.08 Sets a Reasonable Limit

Setting the BAC limit at .08 is a reasonable response to the problem of impaired driving. This is not a couple of beers after work or a glass or two of wine with dinner. At .08, everyone is impaired to the point that driving skills are degraded. Most states that have lowered their

BAC to .08 have found a measurable drop in impaired driving crashes and fatalities, as have many countries that have adopted .08 (see chart, "BAC Levels in Other Countries," on page 10). .08 also serves to deter driving after drinking. Crash statistics show that even heavy drinkers, who account for a high percentage of DWI arrests, are less likely to drink and drive because of the general deterrent effect of .08. At the same time, lowering the BAC limit to .08 makes it possible to convict seriously impaired drivers whose BAC levels are now considered marginal because they are at or just over .10.

**SETTING THE BAC
LIMIT AT .08 IS A
REASONABLE
RESPONSE TO THE
PROBLEM OF
IMPAIRED
DRIVING.**



SECTION 4

The Case for .08 BAC Laws

.08 Laws Work

The effect of California's .08 law was analyzed by NHTSA, which found that 81% of the driving population knew that the BAC limit was stricter (from a tremendously successful public education effort). The state experienced a 12% reduction in alcohol-related fatalities, although some of this can be credited to the new administrative license revocation law. The state also experienced an increase in DUI arrests.

The second multi-state analysis of the effect of lowering BAC levels to .08 was conducted recently by Ralph Hingson, Sc.D., a professor at Boston University's School of Public Health and Chairman of the school's Social and Behavioral Sciences Department, along with two other researchers. The results of their study were reported in the September 1996 issue of the *American Journal of Public Health*, a peer-reviewed journal.

Hingson compared the first five states to lower their BAC limit to .08 (California, Maine, Oregon, Utah and Vermont) with five nearby states that retained the .10 limit. Overall, the .08 states experienced a 16% reduction in the proportion of fatal crashes with a fatally injured driver whose BAC was .08 or higher, as well as an 18% reduction in such crashes with a fatally injured driver whose BAC was .15 or higher.

The immediate significance of these findings is that, not only did the .08 BAC laws reduce the overall incidence of alcohol fatalities, but also reduced fatalities at the higher BAC levels. The effect on extremely impaired drivers (the "problem drinking drivers") was even greater than the overall affect.

The study concluded that if all states lowered their BAC limits to .08, alcohol-related highway deaths would decrease by 500-600 per year.

In a NHTSA analysis of these five states (Johnson and Fell, 1995), significant reductions in alcohol-related fatal crashes were found in 4 out of the 5 states ranging from 4% to 40% when compared to the rest of the states with .10 BAC laws.

Impaired Driving Affects Us All

About two out of every five Americans will be involved in an alcohol-related crash at some time in their lives, and many of them will be innocent victims. There is no such thing as a drunk driving accident. Virtually all crashes involving alcohol could have been avoided if the impaired person were sober.

As BAC levels rise, so does the risk of being involved in a fatal crash. Recent research has shown that, in single vehicle crashes, the relative fatality risk for drivers with BACs between .08 and .099 is at least eleven times greater than for drivers with a BAC of zero and is 52 times greater for young males.

**A RECENT
COMPARISON
STUDY (COVERING
ALL 50 STATES)
ANALYZED THE
EFFECTS OF .08
BAC AND OTHER
LAWS OVER A 16
YEAR PERIOD.
THE STUDY
ESTIMATED THAT
.08 BAC LAWS
HAD AN 8%
EFFECT IN
REDUCING FATAL
CRASHES
INVOLVING
DRIVERS AT BOTH
HIGH BACs AND
LOWER BACs. IT
ESTIMATES THAT IF
ALL 50 STATES HAD
.08 BAC LAWS IN
EFFECT IN 1997
AN ADDITIONAL
590 LIVES WOULD
HAVE BEEN SAVED.**

above. (NHTSA supports zero tolerance for drivers under the legal drinking age — see Section 1 for more information.) Numerous other federal agencies with an interest in public health and safety issues, as well as dozens of private sector organizations, support NHTSA's call for universal .08 state laws (see box, "Who Supports .08 BAC Laws?," page 13).

Why Some States Don't Have .08

As a public policy to deter impaired driving, .08 has lagged behind other countermeasures such as *per se*, administrative license revocation and zero tolerance for those under 21. Nearly all states have *per se*, the vast majority have ALR and all have zero tolerance.

But the passage of new .08 laws have been few and far between, despite consistent evidence that they work, because some organizations in the alcohol and hospitality industries oppose any and all such proposals at the state level. This is both sad and ironic, since these industries have not only been strong supporters of many other anti-impaired driving laws, but have also been crucial partners in getting safety messages out to hard-to-reach audiences.

Promotions such as designated driver programs and sober ride/call-a-cab efforts showcase their concern, generate enormous goodwill from the general public and raise awareness. It is tragic that some of the same companies and trade associations that have launched excellent server training programs, public information campaigns and other efforts to reduce impaired driving so vigorously oppose legislation when it comes to .08 (see box, "What the Hospitality Industry Can Do," on page 18).

A recently released report by the General Accounting Office (GAO), which reviewed the currently available .08 BAC studies stated that, while the evidence of impact of .08 BAC laws is not conclusive, "there are...strong indications that

"Who Supports .08 BAC Laws?"

The following organizations support a BAC limit of .08 or lower:

ADVOCATES FOR HIGHWAY AND AUTO SAFETY
 ALLSTATE INSURANCE
 AMERICAN ALLIANCE FOR RIGHTS AND RESPONSIBILITIES
 AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS
 AMERICAN ASSOCIATION OF NEUROLOGICAL SURGEONS
 AMERICAN AUTOMOBILE ASSOCIATION
 AMERICAN AUTOMOBILE MANUFACTURERS ASSOCIATION
 AMERICAN COALITION FOR TRAFFIC SAFETY
 AMERICAN INSURANCE ASSOCIATION
 AMERICAN MEDICAL ASSOCIATION
 AMERICAN SPINAL CORD INJURY ASSOCIATION
 AMERICAN SPINAL INJURY ASSOCIATION
 AMERICAN TRUCKING ASSOCIATIONS
 ASSOCIATION FOR THE ADVANCEMENT OF AUTOMOTIVE MEDICINE
 CENTER FOR SUBSTANCE ABUSE PREVENTION, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
 DAIMLER-CHRYSLER CORPORATION
 FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION
 FORD MOTOR COMPANY
 INSURANCE INFORMATION INSTITUTE
 INSURANCE INSTITUTE FOR HIGHWAY SAFETY
 INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE
 KEMPER INSURANCE GROUP
 MOTHERS AGAINST DRUNK DRIVING (MADD)
 NATIONAL ASSOCIATION OF GOVERNORS' HIGHWAY SAFETY REPRESENTATIVES
 NATIONAL COMMISSION AGAINST DRUNK DRIVING
 NATIONAL COMMITTEE ON UNIFORM TRAFFIC LAWS AND ORDINANCES
 NATIONAL DISTRICT ATTORNEYS ASSOCIATION
 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION
 NATIONAL INSTITUTE FOR ALCOHOL ABUSE AND ALCOHOLISM
 NATIONAL SAFETY COUNCIL
 NATIONAL SHERIFFS' ASSOCIATION
 NATIONWIDE INSURANCE
 OPERATION LIFESAVER
 REMOVE INTOXICATED DRIVERS
 STUDENTS AGAINST DESTRUCTIVE DECISIONS (SADD)
 USAA INSURANCE
 U.S. DEPARTMENT OF JUSTICE
 U.S. SURGEON GENERAL

SECTION 5

Myths about .08 BAC

Myths about .08 abound, many proliferated by those who actively oppose .08 laws. Here are a few of the commonly heard myths, countered by research-based facts from the National Highway Traffic Safety Administration, academic and scientific institutions, and credible private sector organizations such as Mothers Against Drunk Driving.

MYTH:

"If you lower the BAC limit to .08, it means I can't even have a couple of drinks with my dinner."

FACT: While there is no "safe" amount of alcohol for drivers, most people can drink moderately and drive legally when the illegal *per se* limit is set at .08. A 170-pound male typically would have to consume more than four drinks in one hour on an empty stomach to reach a BAC of .08. A 135-pound female typically would have to consume three drinks in the same time frame.

MYTH:

"I know when I'm 'too drunk to drive' -- I don't need to be concerned about my blood alcohol concentration."

FACT: Your driving skills can be seriously compromised even when your behavior is not observably "drunk." Alcohol causes impairment in reaction time, attention, tracking, comprehension and other skills essential for safe driving. Even when attempting to drive carefully, an impaired driver cannot compensate for those reduced abilities. In addition, alcohol affects your ability to judge whether or not you are impaired.

MYTH:

"The American public does not support .08 because most people have no idea how much alcohol it would take to put them over the legal limit."

FACT: According to several national surveys, most Americans would not drive after having two or three drinks in one hour, an amount that would put them below .08. Most people know how much alcohol it takes to impair their driving ability and they accept lower limits such as .08 for adults.

MYTH:

".08 BAC legislation will not affect problem drinker drivers who have high BAC levels."

FACT: 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 high BACs over .10 (Voas and Tippetts, 1999). A .08 law serves as a general deterrent to drinking and driving, sends a message that the state is getting tougher on impaired driving, and makes people think twice about getting behind the wheel after they've had too much to drink. .08 is a key part of a complete package to reduce impaired driving. While problem drinker drivers do account for a significant part of the DWI problem, most fatally injured drinking drivers (70-80%) had no prior alcohol-related offenses. A comprehensive anti-impaired driving program must use all available laws and programs to reduce DWI.

A .08 LAW SERVES AS A GENERAL DETERRENT TO DRINKING AND DRIVING, SENDS A MESSAGE THAT THE STATE IS GETTING TOUGHER ON IMPAIRED DRIVING, AND MAKES PEOPLE THINK TWICE ABOUT GETTING BEHIND THE WHEEL AFTER THEY'VE HAD TOO MUCH TO DRINK.

SECTION 6

Consumer Education and Public Support

Polls Support Anti-DWI Efforts

The American public overwhelmingly supports legislation and programs to curb impaired driving. In a poll conducted for Mothers Against Drunk Driving (MADD), the Gallup Organization found that the vast majority of the American public considers drunk driving the number one major highway safety problem and most support tough laws and sanctions to reduce impaired driving.

All of the approaches to deal with impaired driving do well in public opinion polls, but the programs that have received more attention in the media and other public forums – ALR, zero tolerance, sobriety checkpoints and vehicle confiscation for repeat offenders – poll higher than .08. The likely reason is that people do not understand the technical aspects of how BACs are determined and what .08 means in real terms. When it comes to their own tolerance for alcohol and their own abilities, however, the American public is certain: most say they would not drive after consuming two or three drinks in one hour.

.08 is a Public Health Policy

The challenge for .08 supporters is to help people make a connection between their own common sense and the public policy that would define impaired driving as .08. Clearly, the more people know about the problem and the potential solutions, the more they support changes to bring about those solutions. .08 is a key part of any public health initiative that aims to reduce society's burden from impaired driving.

Supporters of .08 have many allies and resources to call upon, both at the national level and in the states. A list of resource organizations is included in the appendix.

Help is Available

Federal and State Governments and several private sector organizations hold workshops, publish idea samplers and planners, and offer other helpful organizing tools that may help .08 supporters achieve their public policy goals.

"What You Can Do"

Around the country, voluntary efforts are underway by concerned citizens who support adoption of .08 BAC laws. To become part of the activities in your state:

FIND OUT YOUR STATE'S BAC LIMIT, AND WHETHER THERE IS AN ILLEGAL PER SE LAW, BY CALLING YOUR GOVERNOR'S HIGHWAY SAFETY REPRESENTATIVE, YOUR LOCAL SAFETY COUNCIL OR YOUR LOCAL MADD CHAPTER (SEE RESOURCE SECTION);

IF YOUR STATE DOESN'T HAVE AN ILLEGAL PER SE LAW OF .08, CONTACT EXISTING GRASSROOTS AND GOVERNMENT ORGANIZATIONS INVOLVED IN PREVENTION EFFORTS TO FIND OUT HOW YOU CAN HELP;

JOIN OR HELP FORM A COALITION TO SUPPORT LEGISLATIVE EFFORTS IN YOUR STATE TO LOWER THE BAC LIMIT;

SPREAD THE WORD ABOUT THE IMPORTANCE OF .08 LAWS, THROUGH NEWSLETTER ARTICLES, PRESS RELEASES, CONFERENCES, SPEECHES TO LOCAL ORGANIZATIONS, ETC.; COOPERATE WITH STATE HIGHWAY AND PUBLIC HEALTH AGENCIES TO DRAW ATTENTION TO YOUR EFFORT;

LET YOUR GOVERNOR AND STATE LEGISLATORS KNOW ABOUT THE EFFECTIVENESS OF .08 LAWS IN SAVING LIVES AND TAXPAYER DOLLARS.

SECTION 7

Law Enforcement

Enforcing .08

One of the arguments used against .08 is the impact on the law enforcement and judicial system. However, when the largest state, California, lowered the BAC limit to .08, there was little impact on court administrators or judges.

The main impact in California has been on prosecutors' decisions concerning whether or not cases should be filed. Previously, those arrested for DWI with BACs below .12 typically were allowed to plea to reduced charges. Since the limit was changed, this plea-bargain "cut off" has dropped to about .10 BAC. No increases were reported in the proportion of DWI defendants pleading guilty, requesting jury trials, or appealing convictions.

Quick and Easy Testing

Modern breath analysis equipment is easy to use during a roadside stop, whether the legal limit is .08 or any other limit. The devices are small enough and inexpensive enough that every patrol car on traffic duty can be equipped with one. Law enforcement officers can administer the test quickly and easily, without the driver even leaving the car. If the preliminary breath test shows the person is not impaired, motorists can be on their way and police can continue their duties. .08 does not change the fact that law enforcement officers can conduct these roadside tests quickly and easily.

Law Enforcement Supports .08

.08 is supported by law enforcement organizations, including two of the largest: the International Association of Chiefs of Police and the National Sheriffs' Association. These organizations and others like them would not support a law that is unenforceable, ineffective or burdensome on police officers.

Treatment Can Help

Medical treatment programs for repeat offenders — and sometimes even first time offenders — have become an increasingly popular part of the sentencing process. Some states require certain treatments while others recommend but do not require them.

This leads to concern that programs will be overcrowded with long waiting lists. Most safety organizations recommend that impaired driving programs be self-supporting. Fines and fees paid by offenders should cover the cost of all sentencing, including treatment for alcoholism or alcohol abuse. This reduces the burden on taxpayers while helping to ensure that offenders get the help they need.

Medical treatment for impaired drivers, whether required by law or ordered at the discretion of a judge, correctly positions impaired driving as a public health problem. .08 laws do not contribute to burdens on society but help to identify those with a problem and get them into programs to reduce the chance they will eventually kill or injure themselves or someone else.

**.08 IS SUPPORTED
BY LAW
ENFORCEMENT
ORGANIZATIONS . . .
[GROUPS THAT]
WOULD NOT
SUPPORT A
LAW THAT IS
UNENFORCEABLE,
INEFFECTIVE OR
BURDENSOME ON
POLICE OFFICERS.**

SECTION 8

Summary

.08 is Reasonable

.08 is a reasonable BAC level. A .08 BAC is not reached with a couple of beers after work or a glass or two of wine with dinner. The public supports .08, and surveys show that most people would not drive after consuming two or three drinks.

.08 Works

As a public health initiative and a traffic safety policy, .08 works and works well, especially in combination with other laws and programs. A .08 BAC *per se* law will:

- INCREASE THE ARREST AND CONVICTION RATES FOR IMPAIRED DRIVERS AT .10 AND ABOVE;
- RAISE THE PERCEIVED RISK OF ARREST FOR DRIVING AFTER DRINKING;
- IMPROVE PUBLIC AWARENESS ABOUT HOW MUCH ALCOHOL IT TAKES TO BE DANGEROUSLY IMPAIRED; AND
- BRING THE U.S. CLOSER TO *PER SE* LIMITS OF MOST INDUSTRIALIZED NATIONS.

.08 Could Save Your Life

If every state adopted a .08 *per se* law, hundreds of lives could be saved every year, with thousands of injuries prevented and millions of dollars saved. But even more important would be all the extra birthday candles that would get blown out, the graduation ceremonies that would be attended, the weddings that would be celebrated and the millions of everyday smiles that would be exchanged.

No one will ever know if they or one of their loved ones will be the next victim of impaired driving, just as no one will ever know if they are the one who was spared thanks to good public policy. .08 is sensible, reasonable and effective. It's time to adopt .08 in every state.

**IF EVERY STATE
ADOPTED A .08 PER
SE LAW, HUNDREDS
OF LIVES COULD BE
SAVED EVERY YEAR,
WITH THOUSANDS
OF INJURIES
PREVENTED AND
MILLIONS OF
DOLLARS SAVED.**

APPENDIX A

Facts on The Impaired Driving Problem

According to the US Department of Transportation's Fatality Analysis Reporting System and the National Highway Traffic Safety Administration's National Center for Statistical Analysis:

- In 1998, 41,471 people were killed in highway crashes. Another 3 million were injured. These crashes cost society \$150 billion every year.
- Of those killed on our highways in 1998, 15,935 died in alcohol-related crashes (38%).
- Approximately one million people are injured in alcohol-related traffic crashes annually.
- Alcohol involvement is the single greatest factor in motor vehicle deaths and injuries. While about 5% of all crashes involve the use of alcohol, 38% of fatal crashes do.
- Anti-impaired driving efforts work. From 1988 to 1998, alcohol-related fatalities dropped 33%. This drop is generally attributed to stronger laws, tougher enforcement, and good consumer education.
- Among all drivers involved in fatal crashes in 1998, 23% had been drinking.
- Many states now are lowering the BAC defining impaired driving from .10 to .08. A BAC as low as .02 has been shown to affect driving ability and crash likelihood.
- The probability of a crash increases significantly at .05 and even more rapidly at .08.
- Among drivers with BACs above .15 on weekend nights, the likelihood of death in a single-vehicle crash is more than 380 times higher than it is for nondrinking drivers.
- The highest proportion of driver deaths involving BACs at or above .08 in 1998 occurred in passenger vehicles. The group of drivers with the lowest proportion was tractor-trailer drivers.
- In 1998, 29 percent of all fatal crashes during the week were alcohol-related, compared to 52 percent on weekends. For all crashes, the alcohol involvement rate was 5 percent during the week and 12 percent during the weekend.
- The highest rates of drivers involved in fatal crashes in 1998 with BACs at or above .10 were recorded for drivers 21-24 years old (28 percent), followed by ages 25-34 (24 percent) and 35-44 (21 percent).

The Facts About .08

- A law making .08 BAC the legal limit is a reasonable, sensible approach to the problem of impaired driving.
- .08 laws increase the arrest and conviction rates for impaired drivers at .10 and above while raising the perceived risk of arrest for driving after drinking.
- .08 laws raise public awareness about how much alcohol it takes to be dangerously impaired.

Most other industrial nations already set their legal limit at .08 or lower.
- Supporters of .08 BAC laws include federal and state agencies, consumer and victim's organizations, highway safety groups, law enforcement organizations, medical and public health groups, insurance companies and other business interests, and many others.
- According to a recent poll by the Gallup Organization for Mothers Against Drunk Driving, 97% of Americans believe drunk driving is a major highway safety problem.
- If every state had adopted a .08 *per se* law in 1997, instead of the 15 states that had .08 laws, an additional 590 lives could have been saved, according to a recent study conducted by researchers at the Pacific Institute for Research and Evaluation.
- It takes about 3-4 drinks in one hour on an empty stomach to reach a .08 BAC. This does not affect the casual, social drinker who may have a couple of beers after work or a glass or two of wine with dinner once in a while.
- On average, alcohol metabolizes in the body and dissipates from the blood at a rate of about .015 BAC per hour.
- At .08, virtually all drivers are impaired to the point that critical driving skills such as reaction time, attention, tracking, and comprehension are degraded.

APPENDIX B

Resources

The Federal Government

The National Highway Traffic Safety Administration (NHTSA), an agency of the US Department of Transportation, is responsible for anti-impaired driving and other highway safety programs. NHTSA maintains statistics and fact sheets, and provides information to the media, grassroots organizations, other government agencies, and the general public. Check out their homepage on the World Wide Web (<http://www.nhtsa.dot.gov>) for more information about the agency's services and publications, as well as highway safety facts.

NHTSA also has ten regional offices to serve the safety community and the general public. The NHTSA regional administrator that serves your state is a great resource for those working to fight impaired driving.

NHTSA Region I

(Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont)

Volpe National Transportation Systems Center
Kendall Square, Code 903
Cambridge, MA 02142
Phone 617/494-3427
Fax 617/494-3646

NHTSA Region II

(New Jersey, New York, Puerto Rico, Virgin Islands)

222 Mamaroneck Avenue, Suite 204
White Plains, NY 10605
Phone 914/682-6162
Fax 914/682-6239

NHTSA Region III

(Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia)

10 South Howard Street, Suite 4000
Baltimore, MD 21201
Phone 410/962-0077
Fax 410/962-2770

NHTSA Region IV

(Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Atlanta Federal Center
61 Forsyth Street, Suite 17T30
Atlanta, GA 30303
Phone 404/562-3739
Fax 404/562-3763

NHTSA Region V

(Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

19900 Governor Drive, Suite 201
Olympia Fields, IL 60461
Phone 708/503-8822
Fax 708/503-8991

NHTSA Region VI

(Arkansas, Louisiana, New Mexico, Oklahoma, Texas, Indian Nations)

819 Taylor Street, Room 8A38
Fort Worth, TX 76102
Phone 817/334-3653
Fax 817/334-8339

NHTSA Region VII

(Iowa, Kansas, Missouri, Nebraska)

901 Locust Street
Kansas City, MO 64106
Phone 816/329-3900
Fax 816/329-3910

NHTSA Region VIII

(Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

555 Zang Street, 4th Floor
Lakewood, CO 80228
Phone 303/969-6917
Fax 303/969-6294

NHTSA Region IX

(Arizona, California, Hawaii, Nevada, American Samoa, Guam, Northern Mariana Islands)

201 Mission Street, Suite 2230
San Francisco, CA 94105
Phone 415/744-3089
Fax 415/744-2532

Safety Office Florida Department of Transportation

605 Suwannee Street, MS 53
Tallahassee, FL 32399-0450
Phone: 904/488-3546
Fax: 904/922-2935

Georgia Governor's Office of Highway Safety

1 Park Tower
34 Peach Tree Street, Suite 1600
Atlanta, GA 30303
Phone: 404/656-6996
Fax: 404/651-9107

Highway Safety Coordinator

Guam Department of Public Works
PO Box 2950
Agana, GU 96910
Phone: 011-671-646-3211
Fax: 011-671-649-3733

Operator Assisted Calls: 01-671-646-3211**Motor Vehicle Safety Office****Hawaii Department of Transportation**

601 Kamokila Boulevard, Suite 511
Kapolei, HI 96707
Phone: 808/692-7650
Fax: 808/692-7665

Office of Highway Safety

Idaho Transportation Department
PO Box 7129, 3311 West State Street
Boise, ID 83707-1129
Phone: 208/334-8101
Fax: 208/334-3858

Division of Traffic Safety

Illinois Department of Transportation
PO Box 19245
3215 Executive Park Drive
Springfield, IL 62794-9245
Phone: 217/782-4972
Fax: 217/782-9159

Indiana Governor's Council on Impaired and Dangerous Driving

150 West Market Street, Suite 330
Indianapolis, IN 46204
Phone: 317/232-1299
Fax: 317/232-5150

Indian Highway Safety Program

Bureau of Indian Affairs
Department of the Interior
PO Box 2006
Albuquerque, NM 87103
Phone: 505/248-5053
Fax: 505/248-5064

Governor's Traffic Safety Bureau

Iowa Department of Public Safety
307 East 7th Street
Des Moines, IA 50319-0248
Phone: 515/281-3907
Fax: 515/281-6190

Kansas Bureau of Traffic Safety

Thacher Building, 2nd Floor
217 S.E. 4th
Topeka, KS 66603-3504
Phone: 913/296-3756
Fax: 913/291-3010

Highway Safety Standards Branch

Kentucky State Police Headquarters
919 Versailles Road
Frankfort, KY 40601
Phone: 502/695-6356
Fax: 502/573-1634

Highway Safety Commission

Louisiana Department of Public Safety
PO Box 66336
Baton Rouge, LA 70896
Phone: 504/925-6991
Fax: 504/922-0083

Bureau of Highway Safety

Maine Department of Public Safety
164 State House Station
Augusta, ME 04333
Phone: 207/624-8756
Fax: 207/624-8768

Northern Mariana Islands**Department of Public Safety**

PO Box 791
Saipan, M.P. 96950
Phone: 011-670-034-6505
Fax: 011-670-234-8531

Office of Traffic & Safety**Maryland State Highway Administration**

7491 Connelley Drive
Hanover, MD 21076
Phone: 410/787-5822
Fax: 410/787-5823

Massachusetts Governor's Highway Safety Bureau

100 Cambridge Street, Room 2104
Boston, MA 02202
Phone: 617/727-5073
Fax: 617/727-5077

Michigan Office of Highway Safety Planning

4000 Collins Road, PO Box 30633
Lansing, MI 48909-8133
Phone: 517/333-5291
Fax: 517/333-5756

Office of Traffic Safety**Minnesota Department of Public Safety**

Town Square, Suite 100-B
444 Cedar Street
St. Paul, MN 55101-2128
Phone: 612/296-3804
Fax: 612/297-4844

Highway Safety Office**Mississippi Department of Public Safety**

PO Box 23039
401 North West Street, 8th Floor
Jackson, MS 39225-3039
Phone: 601/359-7842
Fax: 601/359-7832

Missouri Division of Highway Safety

PO Box 104808
Jefferson City, MO 65110-4808
Phone: 573/751-7643
Fax: 573/634-5977

**Virginia Department of Motor Vehicles
Transportation Safety Office**
PO Box 27412
2300 West Broad Street
Richmond, VA 23269
Phone: 804/367-8140
Fax: 804/367-6631

**Governor's Representative
Virgin Islands Office of Highway Safety**
Lagoon Street Complex, Fredricksted
St. Croix, VI 00840
Phone: 809/776-5820
Fax: 809/772-2626

Washington Traffic Safety Commission
PO Box 40944
1000 South Cherry Street
Olympia, WA 98504-0944
Phone: 360/753-6197
Fax: 360/586-6489

**Governor's Highway Safety Program West Virginia
Criminal Justice & Highway Safety Division**
Capitol Complex, Building 3, Room 118
Charleston, WV 25301
Phone: 304/558-6080
Fax: 304/558-0391

**Bureau of Transportation Safety
Wisconsin Department of Transportation**
PO Box 7936
4802 Sheboygan Avenue, Room 809
Madison, WI 53707
Phone: 608/266-0402
Fax: 608/267-0441

**Highway Safety Program
Wyoming Transportation Department**
PO Box 1708
Cheyenne, WY 82003-1708
Phone: 307/777-4450
Fax: 307/777-4250

The Private Sector

The National Safety Council, with chapters all over the country, can provide information on a wide range of occupational, home and traffic safety issues. The Council produces dozens of publications and provides services and educational opportunities in these areas.

National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143
Phone: 630/285-1121
Fax: 630/285-1315
Web site: <http://www.nsc.org>

Mothers Against Drunk Driving is a non-profit, grass roots organization with more than 400 chapters nationwide. It "is not a crusade against alcohol consumption;" its focus is "to look for effective solutions to the drunk driving and underage drinking problems, while supporting those who have already experienced the pain of these senseless crimes." To join, find a chapter in your area or for more information, contact the National Office at:

Mothers Against Drunk Driving
511 E. John Carpenter Freeway., #700
Irving, Texas 75062
Phone: 214/744-MADD (6233)
Fax: 972/869-2206/2207
Web site: <http://www.madd.org>

Other private sector groups may be helpful. Here is a list of some of the national organizations that support .08 BAC laws.

Advocates for Highway and Auto Safety
750 First Street, NE, Suite 901
Washington, DC 20002
Phone: 202/408-1711
Web site: <http://www.saferoads.org>

American Automobile Association
1000 AAA Drive
Heathrow, FL 32746
Phone: 407/444-7000
Web site: <http://www.aaa.com>

American Automobile Manufacturers Association
1401 H Street, NW, Suite 900
Washington, DC 20005
Phone: 202/326-5500
Web site: <http://aama.com>

American Coalition for Traffic Safety
1110 N. Glebe Road, Suite 1020
Arlington, VA 22201
Phone: 703/243-7501

American Insurance Association
1130 Connecticut Avenue, Suite 1000
Washington, DC 20036
Phone: 202/820-7100
Web site: <http://www.aiadc.org>

American Medical Association
515 North State Street
Chicago, IL 60610-4379
312/464-5000
Web site: <http://www.ama-assn.org>

Insurance Institute for Highway Safety
1005 North Glebe Road
Arlington, VA 22201
Phone: 703/247-1500
Web site: <http://www.hwysafety.org>

International Association of Chiefs of Police
515 North Washington Street
Alexandria, VA 22314
Phone: 703/836-6767
Web site: <http://www.theiacp.org>

National Commission Against Drunk Driving
1900 L Street NW, Suite 705
Washington, DC 20036
Phone: 202/452-6004
Web site: <http://www.ncadd.com>

Remove Intoxicated Drivers (RID)
PO Box 520
Schenectady, NY 12301
Phone: 518/393-4357
Web site: TBA

Students Against Destructive Decisions (SADD)
PO Box 800
Marlboro, MA 01752
Phone: 508/481-3568
Web site: www.sadd.org

APPENDIX C

Model Law

The Uniform Vehicle Code, published by the National Committee on Uniform Traffic Laws and Ordinances, is a document developed by transportation and highway safety professionals to serve as a guideline for those developing state motor vehicle legislation. Inclusion of this model law here should not be interpreted as a formal endorsement by the National Safety Council or the National Highway Traffic Safety Administration. The entire Uniform Vehicle Code is available on the World Wide Web at <http://www.ncutlo.org>.

CHAPTER 11 - Rules of the Road

ARTICLE IX – SERIOUS TRAFFIC OFFENSES

11-902 – Driving while under the influence of alcohol or drugs

(a) A person shall not drive or be in actual physical control of any vehicle while:

1. The alcohol concentration in such person's blood or breath is 0.08 or more based on the definition of blood and breath units in [Section 11-903(a)(5)].

Optional 1. The alcohol concentration in such person's blood or breath as measured within three hours of the time of driving or being in the actual physical control is 0.08 or more based on the definition of blood and breath units in [Section 11-903]. If proven by a preponderance of evidence, it shall be an affirmative defense to violation of this subsection that the defendant consumed a sufficient quantity of alcohol after the time of driving or actual physical control of a

vehicle and before the administration of the evidentiary test to cause the defendant's alcohol concentration to be 0.08 or more. The foregoing provision shall not limit the introduction of any other competent evidence bearing upon the question whether or not the person violated this section, including tests obtained more than three hours after such alleged violation.

2. Under the influence of alcohol;

3. Under the influence of any other drug or combination of other drugs to a degree which renders such person incapable of safely driving;
or

4. Under the combined influence of alcohol and any other drug or drugs to a degree which renders such person incapable of safely driving.

(b) The fact that any person charged with violating this section is or has been legally entitled to use alcohol or other drug shall not constitute a defense against any charge of violating this section.

(c) In addition to the provisions of [Section 11-904], every person convicted of violating this section shall be punished by imprisonment for not less than 10 days or more than one year, or by fine of not less than \$100 nor more than \$1,000, or by both such fine and imprisonment and on a second or subsequent conviction, such person shall be punished by imprisonment for not less than 90 days nor more than one year, and, in the discretion of the court, a fine of not more than \$1,000.

ACKNOWLEDGMENTS

This publication was written by Katherine R. Hutt, APR, President of Nautilus Communications, designed by Bobbi Kittner, principal of Kittner Design, and edited by Jane Roemer, Director of Public Policy, and Laura Wilkinson, Public Policy Associate, of the National Safety Council. Special thanks to the National Highway Traffic Safety Administration for their support of this project, especially James C. Fell, Chief of the Research and Evaluation Division, Kay Chopard, Highway Safety Specialist and Sue Ryan, Chief of the Impaired Driving Division.

Bibliography

Traffic Safety Facts: Alcohol 1998, National Center for Statistics and Analysis, National Highway Traffic Safety Administration, 1999.

"Lowering State Legal Blood Alcohol Limits to 0.08%: The Effect on Fatal Motor Vehicle Crashes," by Ralph Hingson, Sc.D., Timothy Heeren, Ph.D. and Michael Winter, M.P.H., Social and Behavioral Science Department and Department of Epidemiology and Biostatistics, Boston University, as published in American Journal of Public Health, September 1996.

.08 BAC Limit Saves Lives – Why Every State Needs a .08 BAC Law (brochure); National Safety Council,asca, IL, and National Highway Traffic Safety Administration, Washington, DC; 1994.

.08 BAC Illegal Per Se Level (State Legislative Fact Sheet); National Highway Traffic Safety Administration, Washington, DC; September 1996.

.08 – Save Lives in Your State, 11-minute video produced by USAA, San Antonio, TX, for the National Highway Traffic Safety Administration, Washington, DC; 1985.

The Effects Following the Implementation of an 0.08 BAC Limit and an Administrative Per Se Law in California, National Highway Traffic Safety Administration (DOT HS 807 777), August 1991.

Mothers Against Drunk Driving, fact sheets (various)

Mothers Against Drunk Driving, press release dated September 20, 1996.

"The Impact of Lowering the Illegal BAC Limit to .08 in Five States in the U.S.," by Delmas Johnson and James Fell, National Highway Traffic Safety Administration, Washington, DC, 39th Annual Proceedings of the Association for the Advancement of Automotive Medicine, Chicago, IL, October 16-18, 1995.

Too Impaired to Drive?, 12-minute video on impairment at .08 BAC by USAA, San Antonio, TX, for the National Highway Traffic Safety Administration, Washington, DC, 1999.

The Relationship of Alcohol Safety Laws to Drinking Drivers in Fatal Crashes, by Robert B. Voas and A. Scott Tippetts, Pacific Institute for Research and Evaluation, Bethesda, MD, for the National Highway Traffic Safety Administration, April, 1999.

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

BACKGROUND

Motor vehicle crashes account for approximately half of all fatalities resulting from unintentional injury (Baker et al., 1992). In the U.S., alcohol is involved in about 7% of all traffic crashes, but is much more commonly involved in fatal crashes. During 1997, an estimated 35.6% of traffic fatalities in North Carolina were *alcohol-related* (i.e., involved a driver, pedestrian, or bicyclist with BAC > 0.01%; NHTSA, 1998). This is somewhat less than the 38.6% of fatalities with alcohol-involvement nationally during 1997. Although there has been clear improvement in the proportion of alcohol-related crashes during the past decade, motor vehicle crashes in which alcohol was centrally involved continue to be a major part of the injury problem nationally, as well as in North Carolina.

Following national movement toward establishment of *per se* limits (a blood alcohol concentration [BAC] that is considered to be illegal, regardless of evidence of impaired behavior) and the move to raise the legal drinking age to 21 in all states, traffic safety efforts in many states are now focusing on lowering the *per se* BAC limit from 0.10% to 0.08%. Continuing a trend for North Carolina to be among the leaders in state efforts to combat impaired driving, the illegal *per se* BAC limit was reduced to 0.08% effective October 1, 1993.

Both experimental and epidemiologic evidence suggests that a BAC limit of 0.10% is too high. A variety of behaviors and cognitive functions begin to show evidence of impairment at BACs as low as 0.04% (Moscowitz & Burns, 1990). In addition to this experimental evidence, the best epidemiologic information currently available on BAC and the risk of a driver crashing shows a clear increase in the slope of the risk curve at BACs of about 0.08%. Hence there is a clear and substantial scientific basis for setting the *per se* BAC limit at 0.08% (or lower).

Data on BACs of persons involved in fatal crashes suggests, however, that reducing the legal BAC limit may have little effect. Fatality Analysis Reporting System (FARS; NHTSA, 1991) data indicate that among fatally injured drivers who have been drinking, BACs are well in excess of the current legal limit of 0.10% (in most states). Thus it is argued that drivers killed in alcohol-related crashes are already in substantial violation of the BAC limit and that, therefore, reducing the legal limit will likely have no effect.

A counter argument can be made that, although individuals drive with BACs in excess of the legal limit, reducing that limit can send the message to heavier drinkers that they need to reduce their consumption when they are going to drive. Thus, if drinking drivers believe (though incorrectly) that they are 'okay,' to drive after drinking a certain amount, a lowered BAC limit will send the message that their personal "drinking limit" must be lowered as well. Accordingly the predicted effect of a lowered legal BAC limit would be to reduce the general BAC level among drinking drivers, even though it might not bring persons in line specifically with the new, lower limit. This is the classic public health approach, wherein benefits for a population are achieved through policies that alter, even fractionally, the risk of entire groups rather than concentrating on individuals.

Since a number of states have already enacted 0.08% BAC limits, evidence has begun to accumulate on the effect of this lower limit. These results are briefly reviewed below.

Previous Evaluations of 0.08% BAC Laws

There have been four attempts to empirically determine the effects of 0.08% *per se* laws.

- California's 0.08% law was initially examined under the sponsorship of the National Highway Traffic Safety Administration (NHTSA, 1991); more recently the California Department of Motor Vehicles conducted its own assessment (Rogers, 1995).
- In 1994 the NHTSA released the results of a preliminary assessment of the effects of the lowered BAC limit in the first five states to reduce their *per se* limit to 0.08%.
- Most recently Hingson et al. (1996) reported results of another study of the effects seen in the first five states to reduce their BAC limit to 0.08%.

California

Among the 16 states that have reduced the *per se* illegal BAC limit to 0.08%,¹ only the California law has been subjected to a thorough evaluation. Because California has a very large number of crashes, it was possible to conduct a scientifically valid examination of the effects of the lower BAC limit shortly after the new law took effect. A study conducted by Research and Evaluation Associates (NHTSA, 1991) shortly after the lower BAC limit took effect found a 12% decrease in alcohol-related fatalities, but no corresponding decline in non-alcohol crashes. Unfortunately, another law - providing for administrative license revocation (ALR) for persons found driving with illegal BACs - took effect six months after the 0.08% law was implemented. Moreover, a good deal of public discussion about the ALR law occurred prior to its enactment, overlapping the period immediately following enactment of the 0.08% law. As a result, it was not possible to determine whether the decrease in alcohol-related fatalities that occurred was due to the 0.08% law, the ALR law, or some combination of the two.

In 1995 another study examined effects of the California 0.08% law (Rogers, 1995). A large number of crash types² were studied using time series analysis techniques to control for a variety of factors such as amount of driving and general economic conditions (indicators of crash exposure). Trends were examined for a five year period prior to implementation of the lower BAC limit and four years following implementation. No decrease in alcohol-involved crashes or alcohol-involved fatal crashes was found to be associated with the 0.08% law. Some decline was found in surrogate measures for alcohol crashes: nighttime serious injury or fatal crashes and fatal or injury crashes occurring between 2 and 3 am.

First Five States to Enact 0.08% BAC Limit

In a preliminary evaluation of the first five states to reduce BAC limits to 0.08%, six measures or indicators of drinking-driving available from FARS were examined for comparable time periods before and after the lower BAC limit was enacted in five states where the lower limit had been in effect for two

¹ Alabama, California, Florida, Hawaii, Idaho, Illinois, Kansas, Maine, New Hampshire, New Mexico, North Carolina, Oregon, Utah, Vermont, Virginia and Washington.

² Alcohol-involved crashes, nighttime crashes, 2-3 am crashes, and single vehicle crashes were all examined. Moreover, each of these types was considered for three different degrees of severity: fatal crashes only, fatal + severe injury, and fatal + injury.

years or more (NHTSA, 1994)³. The findings were inconsistent across the five states, with anywhere from zero to four of the six indicators examined showing a statistically significant decline. In three of the five states, the proportion of drivers in fatal crashes found to have a BAC above 0.10% did decline significantly. Despite a somewhat inconsistent pattern of changes on the other measures, it is noteworthy that no significant declines on any of the six measures were found in the rest of the nation. Although this comparison does not control for other possible explanations for this change besides the lower BAC limit, it does help to rule out the possibility that the observed changes merely reflect a general and widespread decline in drinking-driving that has been documented (Transportation Research Board, 1994).

Hingson et al. (1996) reported findings that appear to corroborate the preliminary results reported by NHTSA, using a more controlled research design. Each of the first five states to reduce their *per se* limit to 0.08% was matched with a similar state from the same general region that did not reduce the limit. Among the 0.08% states, compared with 'matching' states, there was a significant reduction in the proportion of fatal crashes in which a fatally injured driver had a BAC above 0.08%. Similar results were obtained for the proportion of fatally injured drivers with BACs above 0.08%. Unfortunately, as was the case in California, it is difficult to disentangle the effects of the 0.08% laws from administrative license revocation laws that took effect at about the same time as the 0.08% laws in three of the states. Moreover, nearly half (4/9) of the statistically significant effects the NHTSA study found occurred in Vermont and Utah, yet Hingson et al. found no decline in Vermont, and an increase in alcohol-involved crashes subsequent to the 0.08% law in Utah.

Overall then, the available empirical evidence on the effect of 0.08% legislation to date is not strong, but does suggest that there may be a desired effect. The greatest drawback in previous studies has been the inability to attribute apparent effects clearly to 0.08% laws rather than to co-existing ALR laws, which have been demonstrated to reduce drinking-driving (Wagenaar et al., 1995). Another problem is the inherent difficulty in finding appropriate 'matches' to 0.08% states. For example, although Vermont and New Hampshire are both small, largely rural New England states, they are dramatically different politically and in other ways specific to drinking-driving (e.g., sobriety checkpoints are constitutionally prohibited in New Hampshire). Similarly, Utah and Idaho are sparsely populated states in the intermountain west, but there are numerous differences, not the least of which is the presence of a large Mormon population in Utah – potentially a critical confounding factor in studies of alcohol use.

Distinctiveness of the North Carolina Study

To shed additional light on the effects of reducing the *per se* BAC limit to 0.08%, we examined data from North Carolina. There is a sufficiently large number of crashes in North Carolina to conduct time series analyses using monthly crash rates, thus allowing use of North Carolina as its own 'control.' An additional benefit of this study is that effects of North Carolina's ALR law, which was enacted in 1983, are not confounded with the 0.08% law. No other major drinking-driving legislation was enacted in close temporal proximity to the October 1, 1993 date on which the 0.08% BAC limit took effect. Thus, the methodological problems that have confounded interpretation of results from other states, rendering conclusions about the effects of 0.08% laws tentative, can be avoided by using North Carolina data.

³ Indicators examined were: (1) driver BAC $\geq 0.01\%$, (2) driver BAC $\geq 0.10\%$, (3) police-reported alcohol involvement, (4) 'estimated' alcohol involvement (e.g., police reported drinking, positive BAC measurement, or alcohol violations/citations), and two surrogate measures, (5) single-vehicle nighttime crashes, and (6) single-vehicle nighttime male driver crashes.

In the present study, the primary focus of analysis was on crashes prior to and following implementation of the 0.08% law. Time series analyses were employed to examine various possible indicators of the effects of this new law. We considered a variety of outcome or criterion variables: alcohol-related crashes as identified by the investigating officer, alcohol-related fatal crashes, and alcohol-related injury crashes. In addition, because reports of alcohol involvement in all but fatal crashes are somewhat problematic, proxy measures for alcohol-related crashes (nighttime crashes, fatal/serious injury nighttime crashes) were also examined. Although not the primary focus of this research, we were able to obtain information about the general public's knowledge about and perceived effects of the 0.08% law. This information will help to place the effects on crash rates in context. We turn first to the question of public awareness of the new law.

□ PUBLIC KNOWLEDGE AND PERCEPTIONS OF THE LOWER BAC LIMIT

A critical element in the success of any social policy approach that involves individuals making a choice to alter their behavior is that the public whose behavior is targeted must be aware of the policy. It is often assumed by policy makers that enacting a policy or law is sufficient to achieve its goal. It is axiomatic, however, that without awareness, no effect can be expected. There appear to be essentially three ways in which the public might have learned about the new, lower BAC limit: through the media, through direct experience (being arrested), and subsequently, by word of mouth from individuals who initially learned about the law through one of the two primary channels.

As a proposed law is being deliberated in the legislature, media attention will likely alert some proportion of the public to the issue. Following passage, additional media attention should provide the first information that there is a new BAC limit (albeit not yet in effect). At about the time the new law becomes effective, additional media attention as well as public information/education campaigns should increase awareness. Upon implementation of the law, if it is enforced, awareness should begin to grow slowly. There was relatively little media attention to the 0.08% BAC law as it was being considered, or when it took effect. However, enforcement was vigorous, as is typical in North Carolina.

We were able to obtain one "point-in-time" indicator of awareness of the new 0.08% BAC limit 17 months after the law went into effect. During February, 1995, the Insurance Institute for Highway Safety sponsored a telephone survey in North Carolina to obtain a variety of traffic safety-related information. At our request, a few questions about the 0.08% law were included and the data were provided to HSRC for those items as well as the other questions in the survey. This survey consisted of interviews with 802 randomly selected individuals living in four areas in the state. Consequently, these data are not from a representative sample of the entire state. However, the four areas do provide broad geographic representation. Figure 1 shows the locations where interviews were conducted (Cumberland, Guilford,

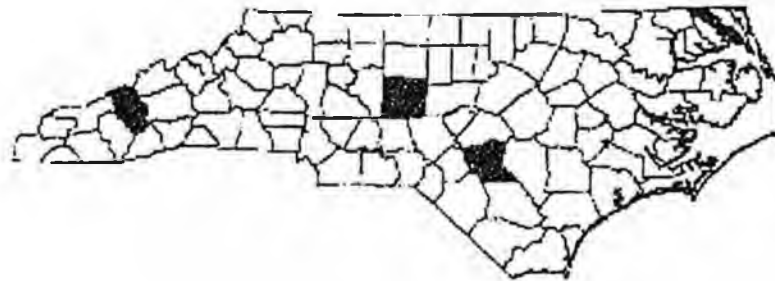


Figure 1 Counties where telephone interviews were conducted

Haywood, and Pasquotank counties)⁴. The demographic characteristics of the composite of these four counties are quite similar to the state as a whole. Table 1 presents 1990 census information on race, sex and age characteristics of the state as a whole, the four counties where interviews were conducted, and the sample of interviewed respondents. This allows for a direct comparison of how well the full interview sample represents the population of the counties interviewed. It is clear that the sample of persons interviewed somewhat over represents females, whites, and persons in the primary age group for drinking-driving.

Table 1. Demographic Characteristics of Survey Respondents and Sampled Geographic Regions

	Population	% Male	% Nonwhite	Age 21 - 35
North Carolina	6,628,637	48.5	24.4	25.6
4-County Population (Mean)		48.4	26.6	25.9
Cumberland County	274,566	51.7	38.1	33.0
Haywood County	46,942	47.7	2.0	19.9
Guilford (High Point)	347,420	47.3	28.2	26.5
Pasquotank (Elizabeth City)	31,298	46.7	38.0	24.1
4-County Survey Respondents (N)	802	40.8	18.4	31.2

Note. Population data are from 1990 census.

In addition to a series of questions pertaining to seat belts and drinking-driving enforcement, respondents were asked the following questions regarding the BAC limit:

- Do you know the legal blood alcohol limit (BAC) for drivers in North Carolina?
 - If respondents said yes, they were asked: "What is it? [The legal blood alcohol limit in North Carolina?]"
- Has the legal blood alcohol content limit for drivers in North Carolina been changed since 1992?
- Do you think that reducing the blood alcohol limit (BAC) has made it more likely that drinking drivers in North Carolina will be arrested for DWI?
- How much publicity have you seen or heard about the new blood alcohol limit (BAC) since it took effect? Would you say this new limit has been publicized. . . *Very well, Pretty well, Not very well, Not at all well.*
- What effect, if any, has the change in the blood alcohol limit had on your own behavior? Would you say you (*Are less likely to drive after drinking since the limit was lowered, Drive more carefully after drinking since the limit was lowered, Drink less since the limit was lowered, Have*

⁴ These four counties had been selected as demonstration counties for the 'Booze It and Lose It' campaign which began in November, 1994. Interviews were conducted to learn of residents awareness of that program, and other highway safety issues.

made no change [drink and drive the same as before]. Unread options: *Don't drink, Don't drink & drive*).

Knowledge of the BAC Limit

Only half of the respondents (50%) claimed to know the BAC limit (see Figure 2). Of those, nearly three-quarters (74%) correctly reported the limit as 0.08%. Another 17% reported the old limit of 0.10%. Thus, among all respondents, only 37% knew the correct BAC limit.

When asked whether the BAC limit had changed since 1992, sixty-four percent of respondents thought it had; another 27% were not sure and 10% said it had not.

Knowledge both of the limit and that it had changed was related to education, sex, and race. As is shown in Figure 3, males, those with higher levels of formal education and whites were more likely to know the BAC limit had changed and what the new level was.

It would appear that general knowledge in the population of the new BAC limit was poor. However, this kind of information is not so relevant to non-drinkers as it is for drinkers, and a substantial proportion of North Carolina residents are non-drinkers. Survey data routinely collected on alcohol use indicate that from 45 - 50% of adults in North Carolina report being non-drinkers (Kroutil et al., 1997). In the present sample 70% reported being non-drinkers.

As is shown in Figure 4, those persons who reported that they do drink were far more likely to be aware of the BAC limit and that it had changed recently. Knowledge of the limit was even more closely related to reported frequency of drinking. Whereas 67% of those who drink more than once a week knew the new limit, barely a quarter of non-drinkers could report that 0.08% was the limit (not shown in figure).

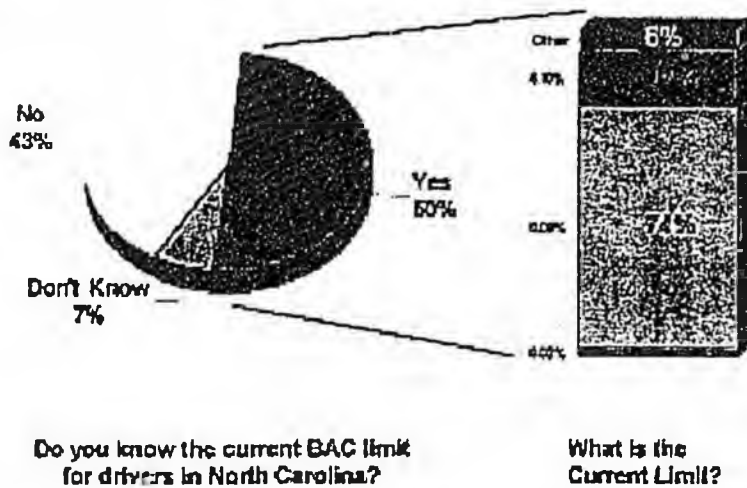


Figure 2 Reported knowledge of new BAC limit.

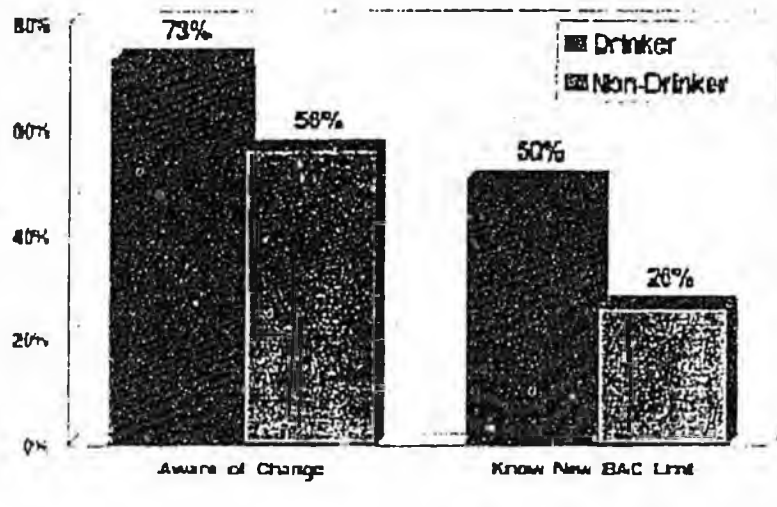


Figure 3 Drinker vs. non-drinker knowledge of 0.08% BAC limit

Drinking status also significantly modified the relationship between knowledge of the BAC limit and demographic characteristics. When drinking status is controlled, neither sex nor race is related to knowledge that the BAC limit had changed (although there is still a weak relationship between race and knowledge among non-drinkers). Among both drinkers and non-drinkers, males are more likely to know the correct BAC limit. Among drinkers, there were no racial differences in knowledge of the limit, but among non-drinkers blacks were less likely to know the current BAC limit.

Not surprisingly, level of formal education was strongly related to knowledge of the BAC limit and that it had changed. Among both drinkers and non-drinkers this relationship remains strong. Moreover, education largely explains the racial differences in knowledge of the limit and that it had changed. Controlling for education had no effect on the relationship between sex and knowledge. Consistently across levels of education, males were more knowledgeable about the new limit than females.

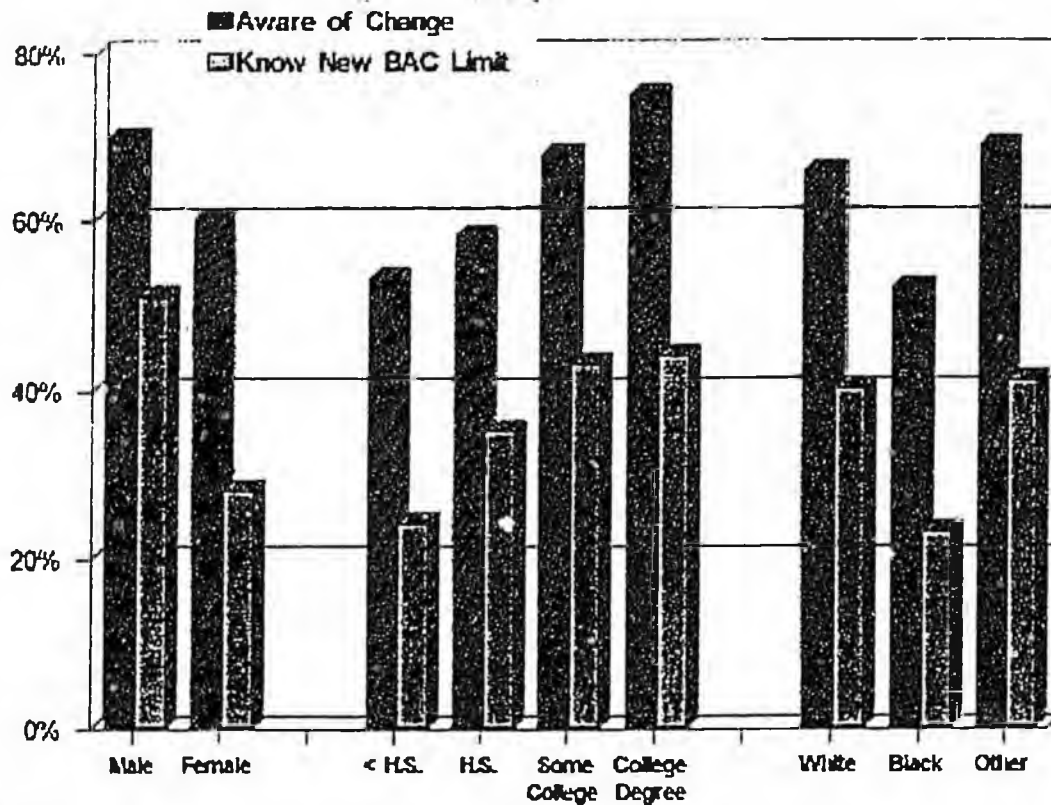


Figure 4 Knowledge of BAC limit by demographic subgroup

Perceived Publicity about the New Law

It is clear that some 17 months after the change formally took place a substantial number of North Carolinians did not know that the BAC limit had been lowered. It is probably not of great importance that non-drinkers were unaware of this change. Nearly three-quarters (73%) of drinkers thought the limit had changed, but only half (50%) could correctly identify the new BAC limit. Even among persons who reported that they drink once a week or more, fully a third could not correctly identify the new limit.

A question arises, then, as to how well the new limit was conveyed to the public. We have no objective way to measure that, but it is possible to address respondents' perceptions of how well the law was publicized. Figure 5 shows the distribution of responses to the question, "How much publicity have you seen or heard about the new blood alcohol limit (BAC) since it took effect? Would you say this new limit has been publicized..." (This question was asked only of those 512 respondents who thought the law had changed.) Despite a substantial lack of knowledge about the new limit, respondents in general appear to believe that the new law was well-publicized. Two-thirds (68%) thought the law was publicized either very well (26%) or pretty well (42%).

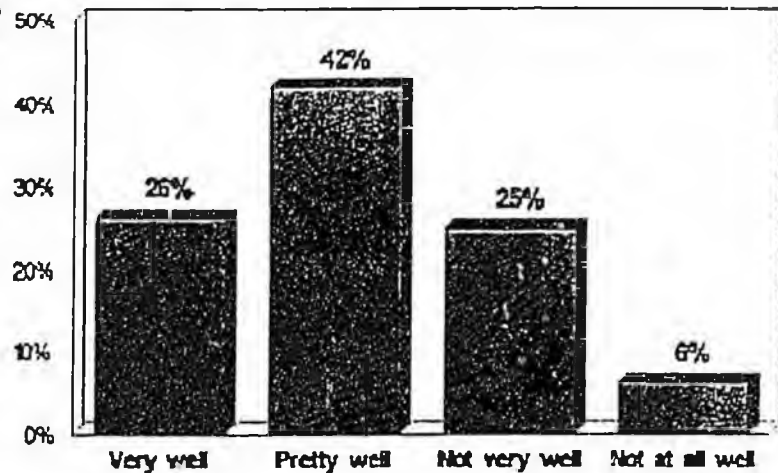


Figure 5 How well has the new BAC limit been publicized? (N = 512)

Perceived publicity of the lower limit was clearly related to age, with older respondents believing the publicity had been more extensive.

Education was weakly related to perceived publicity. Less educated respondents were somewhat more likely to believe the change in the law had been well-publicized. Drinking status, race, and sex were unrelated to perceptions about publicity of the law.

Those respondents who correctly identified the new BAC limit were somewhat more likely to believe the law had been well-publicized. This association undoubtedly would have been stronger if the question had been asked of all respondents, including those who did not think there had been a change.

Perceived Effect of the Lower BAC Limit

Respondents overwhelmingly (85%) believed that lowering the BAC limit increased the likelihood that individuals would be arrested for drinking-driving. The vast majority denied that it had any relevance to them, however. Fifty-two percent of those who knew of the change reported either that they don't drink or don't drink and drive. Another 18% said the law had not affected their behavior. (In all likelihood some of these individuals also meant they were unaffected because it didn't apply to them.) Nine percent indicated that they are less likely to drive after drinking and 3% reported that they began drinking less. Of the entire sample, fewer than 6% reported that they had driven after having anything to drink during the past month. Only two admitted that they might have been above the legal limit.

Roadside survey studies of drivers' perceptions of risk of apprehension have demonstrated that those individuals to whom DWI laws are most likely to apply (e.g., persons coming from bars, and those with elevated or illegal BACs) are least likely to believe they will be detected or arrested (Foss & Perrine, 1990). A similar finding emerged in the present survey. In response to the question of whether the new limit would increase the likelihood of individuals being arrested for drinking-driving, persons who drink most frequently (more than once a week) were least likely to believe the likelihood of arrest was increased by the law (see Figure 6).

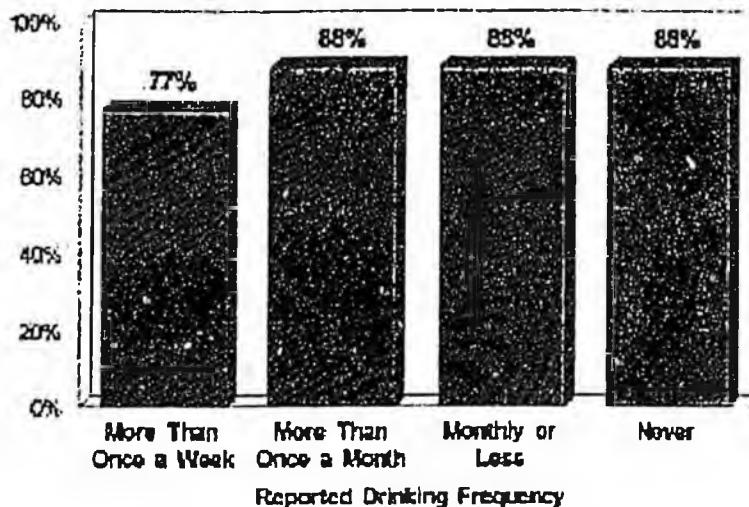


Figure 6 Perceived likelihood that DWI arrests will increase following new law by respondent drinking frequency.

□ CHANGES IN ALCOHOL-RELATED CRASHES

For the following crash analyses, we used data reported to the North Carolina Division of Motor Vehicles, Collision Reports section (the North Carolina Traffic Crash File). Since January 1991 information obtained from the North Carolina Medical Examiner's Office concerning alcohol use by drivers killed in crashes has been used to update information recorded by investigating officers at the crash scene. As a result, data on alcohol involvement in fatal crashes prior to this date are not directly comparable to the more recent information.

Figure 7 shows the proportion of fatal crashes in North Carolina that involved alcohol from 1991 through 1995 as reported by the NC Division of Motor Vehicles in its annual Crash Facts report. There was a dramatic decline in alcohol-related fatal crashes, from 42% to 27% – a 36% relative decrease. The majority of this decline occurred from 1991 to 1993. Although the sharpest drop occurred during the year when the lower B.A.C limit took effect, the new limit was in effect only for the final three months of 1993.

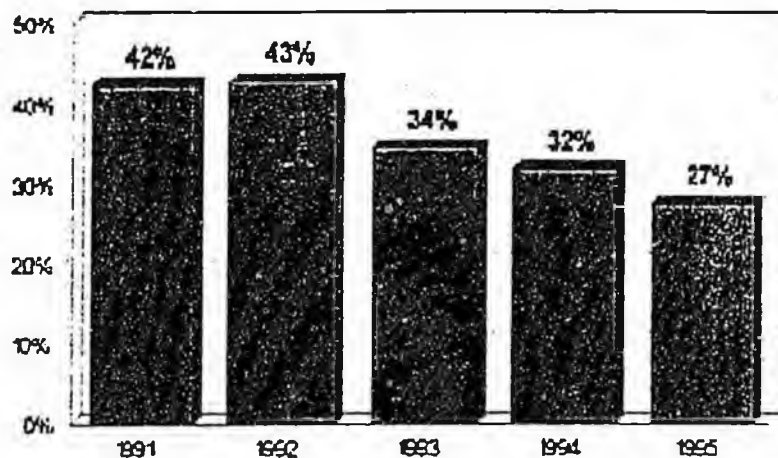


Figure 7 Percent of North Carolina fatal traffic crashes involving alcohol, 1991 - 1995 (source: NC Div. of Motor Vehicles).

Because the 0.08% law applies to operators of vehicles, we examined changes only for those crashes where drivers of motor vehicles had been drinking (either by objective measurement or officer judgment) as the criterion of interest. That is, those crashes that involved alcohol only by virtue of drinking by a pedestrian or bicyclist were not considered alcohol-involved crashes for purposes of this evaluation.

Figure 8 shows the percent of all crashes that involved a drinking driver by month from January 1991 through December, 1995. It is clear that the most dramatic part of the decline in alcohol involvement occurred well in advance of the reduction in the BAC limit. Although 'anticipatory' effects of traffic laws are sometimes seen, that does not appear to have occurred in the present case. Legislation to reduce the BAC limit was introduced in the North Carolina General Assembly in March of 1993 and was passed in July.⁵

Examination of the data series suggests that if there was a time-delineated shift (rather than simply a general continuing decline), it probably occurred somewhere in early- to mid-1992, fully a year before the 0.08% legislation was introduced. We are unable to find any events or policy changes that occurred around that time which might have resulted in such a decline.

⁵ We examined coverage of this issue in the *Raleigh News & Observer*, one of the two major newspapers in the state that give detailed coverage of legislative activity. Given the high level of interest in drinking-driving issues in North Carolina, the low amount of coverage accorded this issue is fairly striking. This may be due, in part, to the fact that the legislation was not the subject of extensive debate. The bill received little attention until the final days of the session, when it was passed.