

ALCOHOL SAFETY ACTION PROJECTS EVALUATION OF OPERATIONS: DATA, TABLES OF RESULTS, AND FORMULATION

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC
SAFETY ADMINISTRATION
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VOLUME 4



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FOREWORD

This volume contains the data used in the evaluation of 35 Alcohol Safety Action Projects implemented throughout the country. Historical background, discussion of analytic results and factors affecting impact detection are contained in the document titled "Evaluation of Operation—Evaluation Methodology and Overall Program Impact" [DOT-HS-803-896].

For each site, the following data have been supplied (where available):

1. Night fatal crashes (monthly)
2. Day fatal crashes (monthly or quarterly)
3. Comparison site night fatal crashes (monthly)
4. Night injury crashes (monthly)
5. Number of alcohol-related arrests (monthly or quarterly)
6. Results of voluntary roadside breath testing surveys.

In addition to the raw data, the results of the Time Series/Intervention Analysis (see volume on methodology) are summarized in a table accompanied by the time series model formulation. The time frame for baseline, operational and post operational periods pertaining to each site, appears at the top of each page.

GROUP 1 COMMENCING JANUARY 1971

**ASAP SITE:
ALBUQUERQUE
NEW MEXICO**

TIME FRAME
Baseline: 1968-1970
Operational: 1971-1973
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-3.78	N/A	1.00
Standard Deviation	1.48		.48
Value of t Test	-2.55		2.05
Delay Time	2 mos.		2 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -3.78 X_{Ft-2} + 1.00 X_{At-2} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971*	1972*	1973*
1	2	2	3	0
2	2	2	3	1
2	4	1	1	2
4	2	4	7	5
4	3	4	5	4
1	4	4	5	4
3	1	7	5	3
3	1	4	5	4
2	2	2	8	5
3	3	2	4	4
3	3	3	4	4
5	4	4	4	0

DAY FATAL CRASH ANALYSIS

COMPARISON SITE: ALBUQUERQUE DAY FATAL CRASHES			
	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	Not	Not	1.33
Standard Deviation	Present	Present	1.52
Value of t Test			.88

TIME SERIES MODEL EQUATION

$$Y_t = 1.33 X_{At-2} + e_t$$

DAY FATAL CRASH DATA

1968	1969	1970	1971	1972	1973
8	6	12	4	9	7
3	11	6	6	9	20
10	4	9	13	8	9
3	6	6	10	11	4

Quarterly

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE: SAN DIEGO, CALIFORNIA			
	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.48		.26
Standard Deviation	.54		.48
Value of t Test	-.75		.55

TIME SERIES MODEL EQUATION

$$Y_t = -.48 X_{Ft} + .26 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	3
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	2	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	6	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

*Operational

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: New Mexico 66
 SITE TYPE: High Crash or Alcohol Involved Crash Sites

Survey Number		1	3	4
Date (m/yr)		5/71	5/73	4/74
Cases (N)		850	919	905
BACs (F)		845	918	905
% (B/N)		(98.5)	(100)	(100)
D I S T R I B U T I O N	NEG (0%)	810 (73.2)	877 (73.7)	867 (71.3)
	.01-.04	116 (14.0)	120 (13.1)	124 (13.3)
	.05-.09	53 (6.3)	63 (6.9)	78 (8.3)
	.10-.14	22 (2.6)	32 (3.5)	36 (4.1)
	.15+	42 (5.0)	27 (2.9)	28 (3.0)

ALCOHOL-RELATED ARRESTS

1969	1970	1971	1972	1973
185	214	238	810	910
153	224	301	777	824
216	323	573	998	1038
237	317	730	1101	1236

Figures represent Quarterly Total A/R Arrests
 Years 1969, 1970 — Baseline; Years 1971, 1972,
 1973 — Operational

**ASAP SITE:
CHARLOTTE
NORTH CAROLINA**

TIME FRAME
Baseline: 1968-1971
Operational: 1972-1973
Post-Operational: 1974

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	*ASAP DUMYAR
Parameter Estimate	CCF = 0	-.29	-.77
Standard Deviation		.59	.44
Value of t Test		-.49	-1.75
Delay Time		2 mos.	0 mos.

Date of 55 mph NMSL: December 1973

*Note: ASAP Intervention Moved to January 1972

TIME SERIES MODEL EQUATION

$$Y_t = -.29 X_{St-2} - .77 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
4	1	4	4	2	3	5
4	2	6	3	3	2	0
3	2	6	3	1	4	3
1	2	2	0	0	3	1
3	0	3	5	2	2	2
5	0	2	2	1	1	2
3	3	2	2	3	0	1
2	4	3	1	4	1	0
2	3	6	3	3	2	7
4	8	1	4	5	3	3
1	6	3	3	1	1	3
2	3	4	5	4	3	8

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:

CHARLOTTE DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	CCF = 0	-1.06	.63
Standard Deviation		.58	.58
Value of t Test		-1.83	1.09
Delay Time		1 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -1.06 X_{St-1} + .63 X_{At} + (1 + .22B)e_t$$

DAY FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
1	3	5	5	4	0	3
3	5	3	4	5	1	1
2	4	2	1	6	5	1
1	6	1	0	3	4	4
3	1	1	2	2	3	2
4	4	1	4	4	5	3
4	3	1	6	6	2	4
2	1	1	6	2	4	5
2	2	3	5	1	1	0
5	6	3	9	4	7	3
6	2	3	7	6	1	1
4	4	6	3	4	4	1

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:

DADE COUNTY, FLORIDA

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.25	-.68	.27
Standard Deviation	1.45	1.13	.80
Value of t Test	-.17	-.60	.34

TIME SERIES MODEL EQUATION

$$Y_t = -.25 X_{Pt} - .68 X_{St} + .27 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
7	9	12	7	11	8	12	8
13	5	6	10	8	12	8	8
12	10	14	12	12	9	8	8
8	10	13	5	10	8	4	10
5	6	10	9	12	0	4	6
6	8	6	10	8	15	9	10
6	8	10	14	11	8	13	13
8	18	9	10	6	10	8	12
5	7	5	8	10	10	9	5
13	7	7	12	15	9	12	9
13	11	9	8	8	4	4	9
11	12	9	7	11	11	10	12

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE
PIMA COUNTY,
ARIZONA

	Fatal Crash	50 mph limit	60 mph limit
PARAMETER ESTIMATE	48	38	38
Standard Deviation	40	20	40
VALUE OF T-TEST	- .49	- 1.17	1.5
CRASH TIME			

TIME SERIES MODEL EQUATION

$$Y_t = .46 X_{1t} + .05 X_{2t} + .08 X_{3t} + a_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	4	3	8	8	3	0	1
1	2	1	4	1	5	4	1
2	4	1	4	2	3	3	4
3	2	1	10	3	4	1	8
4	1	1	3	5	4	0	3
5	1	5	1	3	4	4	2
6	8	1	1	10	2	1	1
7	1	2	2	4	5	3	1
8	1	1	1	2	1	5	3
9	1	4	4	3	4	6	0
10	4	1	4	4	1	3	3
11	5	5	3	1	5	3	2

NIGHT INJURY CRASH ANALYSIS

	Fatal Crash	50 mph limit	60 mph limit
PARAMETER ESTIMATE	194	1700	- 1110
Standard Deviation	810	807	710
VALUE OF T-TEST	- .24	2.01	- 2.43
CRASH TIME	1:00 PM	8:00 AM	2:00 PM

VALUE OF 50 mph LIMIT: November 1972

TIME SERIES MODEL EQUATION

$$(1 - B^12)Y_t = 7.83 X_{1t-1} + 17.88 X_{2t} - 1.19 X_{3t-2} + (1 - .7861B^12)a_t$$

NIGHT INJURY CRASH DATA

1968	1969	1970	1971	1972	1973	1974
0	76	85	80	87	107	94
1	98	73	76	63	78	102
2	77	88	84	80	110	90
3	103	80	118	102	86	120
4	82	142	124	104	107	117
5	73	90	100	78	105	114
6	74	100	108	85	80	113
7	88	124	113	87	108	140
8	90	78	103	127	109	121
9	101	120	128	118	116	115
10	83	78	111	87	87	140
11	97	103	109	111	80	142

RESULTS OF ABAP ROADSIDE BREATH TEST SURVEYS

ABAP CAMP - North - Arizona 27
S 15 AVENUE - 1/2 mile S of Interstate 19
S 15

Survey Month	1	2	3	4
Days (month)	10/23	10/27	10/29	10/30
CRASH (N)	778	741	658	667
BACs per 100 (N)	206	128	102	75
% (N)	(26.5)	(17.3)	(15.5)	(11.2)
0	100	100	100	100
1	17.2	17.2	17.2	17.2
2	1.1	1.1	1.1	1.1
3	0.1	0.1	0.1	0.1
4	0.1	0.1	0.1	0.1
5	0.1	0.1	0.1	0.1
6	0.1	0.1	0.1	0.1
7	0.1	0.1	0.1	0.1
8	0.1	0.1	0.1	0.1
9	0.1	0.1	0.1	0.1
10	0.1	0.1	0.1	0.1
11	0.1	0.1	0.1	0.1
12	0.1	0.1	0.1	0.1

ALCOHOL-RELATED ACCIDENTS

1974	1975	1976
234	241	267
180	174	221
208	182	204
187	221	215
168	223	210
175	208	213
210	208	218
178	200	204
205	242	206
204	208	204
207	202	203
200	204	204

ASAP SITE:
DENVER
COLORADO

TIME FRAME
Baseline: 1968-1970
Operational: 1971-1973
Post-Operational: 1974

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	-2.15	-1.19	-1.24
Standard Deviation	.87	.87	.47
Value of t Test	-2.48	-1.36	-2.62
Delay Time	3 mos.	5 mos.	4 mos.

Date of 55 mph NMSL: February 1977

TIME SERIES MODEL EQUATION

$$Y_t = -2.15 X_{FC,t-3} - 1.19 X_{SN,t-5} - 1.24 X_{AT,t-4} + e_t$$

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
DENVER DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.90	.16	-.08
Standard Deviation	.59	.44	.26
Value of t Test	-1.53	.36	-.31
Delay Time	2 mos.	1 mos.	4 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.90 X_{FC,t-2} + .16 X_{SN,t-1} - .08 X_{AT,t-4} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
SAN DIEGO, CALIFORNIA

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.48	.87	.26
Standard Deviation	.64	.61	.46
Value of t Test	-.75	1.44	.56

TIME SERIES MODEL EQUATION

$$Y_t = -.48 X_{FC,t} + .87 X_{SN,t} + .26 X_{AT,t} + e_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
1	6	4	5	4	5	2
3	7	3	3	4	2	0
4	1	6	3	2	6	1
3	7	4	8	3	1	3
6	7	4	3	5	3	3
6	5	5	3	6	4	4
4	4	1	9	3	3	9
8	5	11	5	3	1	4
6	6	5	4	9	2	3
5	5	6	1	8	4	2
5	5	5	6	7	3	3
4	6	3	4	2	1	3

DAY FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
3	3	4	0	4	4	2
7	3	6	5	7	2	6
7	6	2	1	6	4	2
6	3	4	7	4	5	5
8	2	5	1	6	4	2
5	4	2	9	3	3	6
3	5	6	5	4	4	5
5	7	5	3	1	4	3
3	6	3	5	10	2	4
7	2	7	2	5	3	6
1	4	0	4	2	6	3
6	5	5	3	3	2	4

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	3
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	2	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph HMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	9.01	12.43
Standard Deviation		12.46	14.04
Value of t Test		.72	.89
Delay Time		2 mos.	2 mos.

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = 9.01 X_{St-2} + 12.43 X_{At-2} + (1 - .33B^{12})e_t$$

NIGHT INJURY CRASH DATA

1970	1971	1972	1973	1974
175	178	156	185	200
166	166	180	175	150
193	196	201	244	209
169	225	223	217	213
208	231	188	234	233
216	225	260	253	255
238	244	262	221	271
221	238	264	217	235
230	220	265	261	247
205	196	260	243	224
230	205	208	203	236
217	220	208	187	214

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ALCOHOL-RELATED ARRESTS

1971	1972	1973
427	500	606
387	470	603
429	495	666
507	565	621
536	494	644
457	447	755
469	477	710
499	514	728
548	551	843
496	632	605
474	603	904
598	675	637

**ASAP SITE:
MARATHON-SHEBOYGAN
WISCONSIN**

TIME FRAME
Baseline: 1968-1970
Operational: 1971-1972
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	N/P	N/P	-.12
Standard Deviation			.34
Value of t Test			-.35
Delay Time			4 mos.

Date of 55 mph NMSL: N/P

TIME SERIES MODEL EQUATION

$$Y_t = -.12 X_{At-4} + \epsilon_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972
1	0	0	0	0
1	2	0	1	2
1	2	1	2	1
1	1	2	2	2
2	3	3	5	2
1	2	3	2	2
4	1	4	1	1
3	5	1	3	2
2	2	3	0	1
2	2	2	2	2
3	1	1	1	1
4	0	0	1	2

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
MARATHON-SHEBOYGAN, WISCONSIN**

	Fuel Crisis	55 mph NMSL	Expec. DUMVAR
Parameter Estimate	Not	Not	.42
Standard Deviation	Present	Present	1.23
Value of t Test			.34

TIME SERIES MODEL EQUATION

$$Y_t = .42 X_{At-4} + \epsilon_t$$

DAY FATAL CRASH DATA

Quarterly

1968	1969	1970	1971	1972
3	3	5	3	4
5	7	0	3	9
9	5	6	5	10
7	9	6	8	6

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

**COMPARISON SITE:
WEST VIRGINIA**

	Fuel Crisis	55 mph NMSL	Expec. DUMVAR
Parameter Estimate	N/P	N/P	-.28
Standard Deviation			1.60
Value of t Test			-.16

TIME SERIES MODEL EQUATION

$$Y_t = -.28 X_{At} + \epsilon_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	67	15	13	11	12	5	5
0	73	14	13	20	9	16	17
0	76	10	12	13	12	16	16
0	27	11	20	14	22	21	19
0	18	21	16	13	23	20	18
0	21	16	17	19	13	17	18
0	26	23	21	28	13	27	14
0	24	26	20	27	17	22	23
0	21	9	19	30	17	39	8
0	3	16	22	15	15	42	9
0	10	30	12	10	14	26	17
0	13	16	24	16	11	18	19

**RESULTS OF ASAP ROADSIDE
BREATH TEST SURVEYS**

ALCOHOL-RELATED ARRESTS

1968	1969	1970	1971	1972
51	72	81	115	46
91	83	62	—	21
84	78	71	18	208
90	67	76	—	216

Years 1968, 1969, 1970 — Baseline; Years 1971,

1972 — Operational

**ASAP SITE:
NASSAU COUNTY
NEW YORK**

TIME FRAME
Baseline: 1968-1971
Operational: 1972
Post-Operational: 1973-1974

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	CCF = 0	-.49	-.61
Standard Deviation		.74	.72
Value of t Test		-.66	-.85
Delay Time	mos.	3 mos.	0 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$Y_t = -.49 X_{St-3} - .61 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
3	5	1	2	3	10	11
6	4	8	7	6	5	1
4	6	5	5	4	7	7
6	7	1	6	9	7	6
5	8	11	8	9	5	6
9	9	2	9	5	6	3
2	10	9	6	5	9	6
2	8	12	9	4	5	2
5	9	6	6	7	6	11
6	11	9	9	11	6	3
6	6	7	3	4	6	12
7	6	11	6	6	6	7

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
NASSAU COUNTY DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.09	-1.20	.12
Standard Deviation	1.32	.94	.66
Value of t Test	-.07	-1.28	.18

TIME SERIES MODEL EQUATION

$$Y_t = -.09 X_{Pt} - 1.20 X_{St} + .12 X_{At} + e_t$$

DAY FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
3	4	3	11	11	10	3
4	1	8	5	4	5	2
4	5	3	5	3	6	6
6	3	6	8	5	6	1
6	5	9	4	6	4	4
7	3	5	9	1	9	3
8	7	4	5	6	3	1
5	6	10	7	4	9	4
6	11	6	6	10	4	9
9	11	3	3	8	5	9
8	7	10	6	3	4	4
5	9	9	11	8	10	8

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
MIAMI, FLORIDA

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	.67	.42	.64
Standard Deviation	.62	.45	.34
Value of t Test	1.08	.93	1.73

TIME SERIES MODEL EQUATION

$$Y_t = .67 X_{Pt} + .42 X_{St} + .64 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
2	2	0	1	5	1	2	0
3	0	1	2	1	4	1	1
4	1	0	1	4	1	1	3
0	1	0	0	3	0	0	2
0	1	0	5	1	0	1	1
4	2	1	4	1	2	1	2
0	4	0	2	3	1	2	6
1	3	3	2	3	6	1	1
1	6	0	1	2	4	0	1
2	2	0	1	3	2	1	1
1	1	2	0	3	1	0	1
3	4	2	1	1	4	2	2

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
OMAHA,
NEBRASKA

	Fuel Crises	55 mph RMSL	Expec. DUMVAR
Parameter Estimate	.15	.72	-.15
Standard Deviation	.74	.63	.47
Value of t Test	.20	1.14	-.32

TIME SERIES MODEL EQUATION

$$Y_t = .15 X_{FT} + .72 X_{St} - .15 X_{At} + \theta_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
3	3	1	1	2	1	5	2
0	0	2	0	1	1	2	0
0	3	0	0	1	3	1	3
1	0	3	2	7	4	2	2
3	0	0	2	1	1	3	1
1	3	2	1	5	2	3	3
4	1	1	1	1	1	3	1
1	3	4	0	1	0	5	0
0	2	1	2	0	3	2	2
3	6	0	4	1	1	0	0
1	0	1	0	1	1	2	3
1	0	1	0	2	1	2	2

NIGHT INJURY CRASH ANALYSIS

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -65.22 X_{FT-2} + .36 X_{St-1} + 27.52 X_{At-3} + \theta_t$$

NIGHT INJURY CRASH DATA

1968	1969	1970	1971	1972	1973	1974
439	539	522	456	413	413	411
400	438	409	437	416	391	326
499	465	418	423	468	527	524
399	492	399	474	413	435	354
615	528	585	485	575	476	453
526	538	524	479	538	532	483
480	514	423	509	514	512	397
540	528	453	443	433	441	480
460	462	395	415	472	422	431
492	528	485	507	529	415	435
564	586	536	529	521	457	419
619	599	616	551	628	447	523

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ALCOHOL-RELATED ARRESTS

1971	1972
160	246
191	342
182	388
264	315
206	382
209	330
197	305
213	306
184	343
212	338
243	350
341	471

**ASAP SITE:
PORTLAND-EUGENE
OREGON**

TIME FRAME
Baseline: 1968-1970
Operational: 1971-1972
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	-1.11	OCF = 0	-.08
Standard Deviation	.70		.41
Value of t Test	-1.58		-.18
Delay Time	7 mos.		9 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$Y_t = -1.11 X_{FC,t-7} - .08 X_{AI,t-9} + (1 + .22B)e_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
3	2	1	2	4	2	3
3	0	2	1	4	3	2
4	2	3	1	3	2	3
0	0	1	1	2	0	2
2	0	4	3	1	1	1
0	3	0	1	3	2	1
3	4	1	2	6	1	1
2	6	2	4	3	1	1
2	4	1	5	2	1	1
2	1	0	1	3	2	2
3	1	3	2	3	2	5
1	4	4	0	2	2	1

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
PORTLAND-EUGENE DAY
FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-1.77	.18	.22
Standard Deviation	.52	.65	.48
Value of t Test	-1.92	.28	.45

TIME SERIES MODEL EQUATION

$$Y_t = -1.72 X_{FC,t} + .18 X_{SI,t} + .22 X_{AI,t} + e_t$$

DAY FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
4	1	1	2	1	7	0
0	2	7	1	4	0	0
3	3	1	2	2	2	3
3	1	3	6	5	3	4
1	2	0	0	3	2	1
1	2	2	0	3	5	1
7	3	0	3	4	3	1
1	0	2	4	6	0	4
2	2	2	0	4	0	1
3	3	3	1	4	1	3
6	1	4	2	0	0	6
5	4	4	1	7	1	3

**COMPARISON SITE NIGHT FATAL
CRASH ANALYSIS**

**COMPARISON SITE:
BIRMINGHAM,
ALABAMA**

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.53	.23	-.60
Standard Deviation	.53	.51	.37
Value of t Test	-.84	.45	-1.62

TIME SERIES MODEL EQUATION

$$Y_t = -.53 X_{FC,t} + .23 X_{SI,t} - .60 X_{AI,t} + e_t$$

**COMPARISON SITE NIGHT FATAL
CRASH DATA**

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	0	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	3	0	3	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	2.28	- 1.20	.512
Standard Deviation	1.06	.84	.845
Value of t Test	2.15	- 1.43	.793

TIME SERIES MODEL EQUATION

$$Y_t = 2.28 X_{Ft} - 1.20 X_{St} - .51 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	6	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	2	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	2	6	6	1
0	3	1	1	4	10	0	1
0	3	2	1	0	6	2	3

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	- 27.45	- 14.11	- 19.13
Standard Deviation	12.02	8.67	6.40
Value of t Test	- 2.28	- 1.63	- 2.99
Delay Time	0 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$Y_t = - 27.45 X_{Ft} - 14.11 X_{St} - 19.13 X_{At} + e_t$$

NIGHT INJURY CRASH DATA

1968	1969	1970	1971	1972	1973	1974
144	0	148	131	125	126	91
155	0	135	116	146	106	130
190	110	149	115	134	140	116
96	131	154	109	136	116	119
150	1	125	142	131	137	146
171	0	143	162	127	133	139
111	144	203	134	117	114	132
190	210	134	132	117	135	112
148	160	155	135	142	128	117
166	136	164	139	131	113	148
209	121	150	128	107	104	140
155	130	129	115	74	80	129

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Oregon 72
SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	3	
Date (month)	4/71	5/72	5/73	
Cases (N)	519	559	550	
BACs (R)	519	509	500	
% (B/N)	(100)	(100)	(100)	
D I S T R I B U T I O N	NEG (00)	129 (24.9)	262 (50.4)	132 (24.0)
	.01-.04	266 (57.0)	232 (41.5)	320 (58.2)
	.05-.09	56 (10.8)	33 (6.3)	66 (15.6)
	.10-.14	30 (5.8)	9 (1.8)	9 (1.6)
	.15+	6 (1.5)	3 (.5)	3 (.5)

ALCOHOL-RELATED ARRESTS

1971	1972
39	361
49	367
124	416
218	459
277	331
228	307
290	309
259	330
290	360
310	376
311	324
306	399

**ASAP SITE:
SEATTLE
WASHINGTON**

TIME FRAME
Baseline: 1968-1970
Operational: 1971-1972
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	N/A	N/A	-2.38
Standard Deviation			.60
Value of t Test			-3.97
Delay Time			8 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$Y_t = -2.38 X_{At} + \epsilon_t$$

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
SEATTLE DAY
FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	Not	Not	-1.04
Standard Deviation	Present	Present	3.17
Value of t Test			-.48

TIME SERIES MODEL EQUATION

$$Y_t = -1.04 X_{At} + \epsilon_t$$

**COMPARISON SITE NIGHT FATAL
CRASH ANALYSIS**

**COMPARISON SITE:
BIRMINGHAM,
ALABAMA**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.53	.23	-.60
Standard Deviation	.60	.51	.37
Value of t Test	-.84	.45	-1.62

TIME SERIES MODEL EQUATION

$$Y_t = -.53 X_{Ft} + .23 X_{St} - .60 X_{At} + \epsilon_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972
6	5	6	6	6
5	5	3	8	7
9	9	5	4	6
5	5	6	5	5
8	10	5	6	3
9	6	6	6	5
6	10	12	4	3
8	6	12	6	5
10	12	7	5	4
10	8	8	10	4
14	10	6	5	6
12	8	10	7	5

DAY FATAL CRASH DATA

Quarterly

1968	1969	1970	1971	1972
23	22	31	21	15
15	24	20	15	26
22	17	15	25	24
28	28	21	22	21

**COMPARISON SITE NIGHT FATAL
CRASH DATA**

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	9	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	3	0	3	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	2.28	- 1.20	.51
Standard Deviation	1.06	.84	.65
Value of t Test	2.15	- 1.43	.79

TIME SERIES MODEL EQUATION

$$Y_t = 2.28 X_{Ft} - 1.20 X_{St} + .51 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

	1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0	0
0	3	0	0	6	4	2	2	2
0	4	0	7	6	10	1	6	6
0	3	4	1	6	0	1	1	1
0	3	4	4	4	2	0	2	2
0	1	0	1	12	4	0	0	0
0	2	1	2	4	4	2	3	3
0	6	2	4	2	4	4	2	2
0	1	2	1	2	4	4	0	0
0	2	1	3	2	6	6	1	1
0	3	1	1	4	10	0	1	1
0	3	2	1	0	6	2	3	3

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Washington 73
SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	3	
Date (mo/yr)	11/71	6/72	12/72	
Cases (N)	500	525	523	
BACs (R)	500	525	523	
% (R/N)	(100)	(100)	(100)	
D I S T R I B U T I O N	NEG (0.0)	106 (21.6)	106 (37.1)	262 (48.2)
	.01-.04	316 (63.2)	273 (52.0)	252 (48.2)
	.05-.09	57 (11.4)	44 (8.4)	14 (2.7)
	.10-.14	15 (3.0)	11 (2.1)	5 (1.0)
	.15+	4 (.8)	2 (.4)	0 (0)

ALCOHOL-RELATED ARRESTS

1971	1972
1491	2275
2004	3390
1942	2275
2383	2843

Figures represent Quarterly Total A/R Arrests
Years 1971, 1972 — No Baseline Data,
Operational

**ASAP SITE:
WASHTENAW COUNTY
MICHIGAN**

TIME FRAME
Baseline: 1968-1970
Operational: 1971-1972
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	Not	Not	-.49
Standard Deviation	Present	Present	.44
Value of t Test			-1.11
Delay Time			0 mos.

Date of 55 mph NMSL: Not Applicable

TIME SERIES MODEL EQUATION

$$Y_t = -.49 X_{At} + (1 + .33B)e_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972
0	3	2	1	1
1	3	2	0	2
0	4	2	2	0
2	2	6	2	3
1	1	5	1	2
2	3	4	2	3
4	3	3	5	4
4	1	1	3	3
4	2	4	1	2
3	3	3	3	1
2	2	3	5	1
1	4	3	4	2

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
WASHTENAW COUNTY
DAY FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	Not	Not	1.42
Standard Deviation	Present	Present	1.31
Value of t Test			1.08

TIME SERIES MODEL EQUATION

$$Y_t = 1.42 X_{At} + e_t$$

DAY FATAL CRASH DATA

Quarterly

1968	1969	1970	1971	1972
7	1	2	6	8
6	7	5	7	10
7	8	8	8	8
13	4	11	8	11

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

**COMPARISON SITE:
DADE COUNTY,
FLORIDA**

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.06	-.32	.66
Standard Deviation	1.43	1.04	.78
Value of t Test	-.06	-.31	.85

TIME SERIES MODEL EQUATION

$$Y_t = .66 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
7	9	12	7	11	8	12	8
13	5	6	10	8	12	8	8
12	10	14	12	12	9	8	8
8	10	13	9	10	8	4	10
5	6	10	9	12	0	4	8
6	8	8	10	8	15	9	10
6	8	10	14	11	8	13	13
8	18	9	10	6	10	8	12
5	7	5	8	10	10	9	6
13	7	7	12	15	9	12	9
13	11	9	5	8	4	4	9
11	12	9	7	11	11	10	12

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
PIMA COUNTY,
ARIZONA

	Fuel Crisis	55 mph NMSL	Expan. DUMVAR
Parameter Estimate	-.25	-.54	.34
Standard Deviation	.92	.69	.52
Value of t Test	.27	-.78	1.81

TIME SERIES MODEL EQUATION

$$Y_t = .94 X_{At} + \epsilon_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
1	4	3	6	6	3	1	1
1	2	1	4	3	5	4	1
8	4	7	4	2	3	3	4
3	5	7	10	3	0	1	0
3	7	3	3	8	4	6	3
5	4	5	7	3	4	4	0
8	8	1	5	10	2	1	1
3	2	2	2	8	5	3	1
3	5	3	2	7	3	5	3
4	1	4	5	3	4	5	1
5	4	4	5	4	3	3	3
5	5	3	3	2	5	3	2

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Michigan 23
SITE TYPE: General or Other Random Selection Procedure

Survey Number	1	2	3	
Date (m/yr)	3/71-4/71	3/72-4/72	3/73-4/73	
Cases (N)	748	1132	969	
BACs (R)	746	1020	847	
% (BN)	(99.7)	(90.1)	(87.4)	
D I S T R I B U T I O N	NEG (00)	559 (74.9)	773 (75.8)	680 (80.3)
	.01-.04	111 (14.9)	148 (14.5)	100 (11.8)
	.05-.09	45 (6.2)	55 (5.4)	43 (5.1)
	.10-.14	22 (2.9)	30 (2.9)	20 (2.4)
	.15+	6 (1.1)	14 (1.4)	4 (.5)

ALCOHOL-RELATED ARRESTS

1969	1970	1971	1972
173	170	272	317
166	162	263	304
152	139	242	287
129	186	270	307

Figures represent Quarterly Total A/R Arrests
Years 1969, 1970 — Baseline; Years 1971,
1972 — Operational

GROUP 2 COMMENCING JANUARY 1972

ASAP SITE:
BALTIMORE
MARYLAND

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	-3.59	-.35	.73
Standard Deviation	.99	.88	.60
Value of t Test	-3.63	-.40	1.22
Delay Time	1 mos.	5 mos.	3 mos.

Date of 55 mph NMSL: December 1973

TIME SERIES MODEL EQUATION

$$Y_t = -3.59 X_{Ft-1} - .35 X_{St-5} + .73 X_{At-3} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
7	6	5	3	9	5
6	4	6	6	7	2
5	5	3	5	7	3
8	8	4	11	5	1
6	9	6	6	4	6
10	6	2	11	4	7
5	3	9	5	4	4
7	4	3	7	5	5
8	6	2	4	4	5
4	6	6	5	5	6
9	3	5	7	1	5
9	6	8	10	4	9

DAY FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-3.54	-3.31	-.81
Standard Deviation	2.82	2.23	1.68
Value of t Test	-1.25	-1.46	-.48

TIME SERIES MODEL EQUATION

$$Y_t = -3.54 X_{Ft} - 3.31 X_{St} - .81 X_{At-3} + e_t$$

DAY FATAL CRASH DATA

Quarterly

1969	1970	1971	1972	1973	1974
21	15	16	14	20	8
20	20	28	18	22	15
16	17	12	13	16	16
18	21	18	18	17	15

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-.59	.45	.49
Standard Deviation	.84	.51	.42
Value of t Test	.92	.88	1.17

TIME SERIES MODEL EQUATION

$$Y_t = -.59 X_{Ft} + .45 X_{St} + .49 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1969	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	3
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	2	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

**RESULTS OF ASAP ROADSIDE
BREATH TEST SURVEYS**

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974
659	1091	1178	1273
606	910	1236	1204
599	886	960	1040
668	1164	1178	1260

Figures represent Quarterly Total A/R Arrests

ASAP SITE
BOSTON
MASSACHUSETTS

TIME FRAME
Baseline: 1909-1972
Operational: 1973-1974
Post Operational:

NIGHT FATAL CRASH ANALYSIS

	Full CRASH	In mph NMPL	Delay CUMYAR
Parameter Estimate	CCF = 0	CCF = 0	- 1.24
Standard Deviation			57
Value of t Test			7.35
Delay Time			2.0000

Data of 12 mph NMPL - GOVERNOR 1974

DAY FATAL CRASH ANALYSIS

	Full CRASH	40 mph NMPL	Delay CUMYAR
Parameter Estimate	- 1.97	.27	.24
Standard Deviation	.08	.07	.07
Value of t Test	- 2.40	3.9	- 3.7
Delay Time	2.0000	1.0000	1.0000

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

	Full CRASH	In mph NMPL	Delay CUMYAR
Parameter Estimate	CCF = 0	CCF = 0	.26
Standard Deviation			74
Value of t Test			1.12

TIME SERIES MODEL EQUATION

$$Y_t = -.134 X_{t-1} + (1 - .134) u_t$$

TIME SERIES MODEL EQUATION

$$Y_t = -.167 X_{t-2} + .27 X_{t-1} + .34 X_{t-2} + u_t$$

TIME SERIES MODEL EQUATION

$$Y_t = .36 X_{t-1} + u_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
5	4	4	2	1	2
1	2	0	2	7	1
3	4	4	3	5	4
2	1	2	2	1	4
4	1	4	0	2	4
4	1	3	4	1	4
5	2	2	1	1	1
7	2	4	1	2	1
4	3	2	3	2	3
5	3	2	4	4	2
12	0	3	1	4	1
0	4	2	1	2	0

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
2	3	2	3	3	2
4	2	4	2	4	1
1	2	3	0	4	0
4	1	2	4	3	2
2	2	2	4	4	1
2	1	2	1	5	3
0	1	2	3	4	4
2	2	2	3	11	1
3	0	2	3	2	1
4	1	1	2	2	2
1	2	1	3	0	1

COMPARISON SITE NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
1	1	2	1	2	0	2	1
2	2	1	1	1	1	1	2
0	2	2	1	1	1	4	3
4	2	0	1	0	4	1	4
0	1	4	1	1	4	1	0
2	1	2	2	1	0	2	1
1	1	2	2	4	1	2	1
1	2	1	2	1	1	1	1
2	0	1	1	2	2	1	4
1	2	1	2	2	4	3	2
4	1	2	2	2	1	1	1
1	0	2	1	0	2	4	4

**RESULTS OF ASAP ROADSIDE
BREATH TEST SURVEYS**

ALCOHOL-RELATED ARRESTS

1971	1972
46	71
53	66
65	69
65	72
47	62
43	61
55	53
46	57
57	62
63	64
53	66
76	103

ASAP SITE:
CINCINNATI
OHIO

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	CCF = 0	-.11
Standard Deviation			.49
Value of t Test			-.22
Delay Time	mos.	mos.	0 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.11 X_{At} + \epsilon_t$$

NIGHT FATAL CRASH DATA

1970	1971	1972	1973	1974
	1	2	4	1
	3	4	1	3
	6	3	2	1
	2	2	6	1
	3	4	1	1
	4	1	5	4
3	0	4	1	
3	2	3	4	
3	5	6	3	
0	5	4	3	
3	5	3	4	
1	4	0	4	

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
CINCINNATI DAY
FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	2.69	-.07
Standard Deviation		.94	.48
Value of t Test		2.86	-.15
Delay Time		1 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -2.69 X_{St-1} - .07 X_{At} + \epsilon_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
0	0	3	3	4	3
0	0	1	2	2	1
0	0	3	3	2	0
0	0	4	1	3	4
0	0	4	3	2	5
0	0	3	2	4	7
0	3	4	4	1	0
0	2	6	6	6	0
0	3	2	4	1	0
0	3	2	2	2	0
0	1	3	4	1	0
0	1	2	2	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
BIRMINGHAM,
ALABAMA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.33	.61	-.60
Standard Deviation	.66	.55	.38
Value of t Test	-.50	1.48	-1.59

TIME SERIES MODEL EQUATION

$$Y_t = -.33 X_{Ft} + .61 X_{St} - .60 X_{At} + \epsilon_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	9	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	2	0	2	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	1.31	- 2.30	1.87
Standard Deviation	1.02	.83	.82
Value of t Test	1.28	- 2.88	3.02

TIME SERIES MODEL EQUATION

$$Y_t = 1.31 X_{Pt} - 2.39 X_{Gt} + 1.87 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	6	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	2	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	3	6	6	1
0	3	1	1	4	10	0	1
0	3	2	1	0	8	2	3

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: North Carolina 47
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	
Date (mo/yr)	4/72	9/73	9/74	
Cases (N)	644	1133	1137	
BACs (N)	644	1119	1135	
% (N/N)	(100)	(98.8)	(99.8)	
D I S T R I B U T I O N	NEG (00)	481 (74.7)	734 (65.6)	829 (73.0)
	.01-.04	107 (16.6)	207 (18.5)	168 (14.8)
	.05-.09	35 (5.4)	110 (9.8)	100 (8.8)
	.10-.14	16 (2.5)	47 (4.2)	21 (1.9)
	.15+	5 (.8)	21 (1.9)	17 (1.5)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
44	113	322	314	167	144
31	228	305	310	263	211
41	246	349	337	278	234
53	264	303	284	271	231
52	188	290	329	288	210
20	213	255	290	223	191
32	230	272	268	247	
24	227	298	329	226	
30	301	315	330	248	
45	262	342	366	243	
53	307	272	407	236	
35	318	321	337	258	

ASAP SITE:
COLUMBUS
GEORGIA

TIME FRAME
Baseline: 1968-1971
Operational: 1972-1973
Post-Operational: 1974

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	.52	CCF = 0	.19
Standard Deviation	.38		.14
Value of t Test	2.00		1.36
Delay Time	1 mos.		7 mos.

Date of 55 mph NMSL: February 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.52 X_{F1-t} + .19 X_{A1-t} + (1 - .31B)\theta_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
1	0	0	0	2	3
0	1	0	1	0	2
0	0	1	1	1	1
2	1	1	0	0	0
1	1	0	1	0	0
0	1	0	0	1	1
1	1	0	0	2	1
2	2	1	2	0	1
0	0	1	0	2	0
0	2	1	1	1	1
1	0	0	0	2	1
2	1	1	2	0	1

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
COLUMBUS DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	.07	.07
Standard Deviation		.39	.21
Value of t Test		.18	.33
Delay Time			

TIME SERIES MODEL EQUATION

$$Y_t = .07 X_{S1} + .07 X_{A1-t} + \theta_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
1	1	2	0	1	0
2	2	1	3	0	0
0	1	0	2	0	0
0	1	0	0	1	1
1	0	1	2	0	1
1	0	0	0	0	1
0	1	3	0	2	2
0	1	1	1	1	0
3	0	1	0	1	1
0	1	0	1	1	1
0	0	0	0	1	2
0	0	0	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
DADE COUNTY, FLORIDA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.25	-.68	.27
Standard Deviation	1.45	1.13	.80
Value of t Test	-.17	-.60	.34

TIME SERIES MODEL EQUATION

$$Y_t = -.25 X_{F1} - .68 X_{S1} + .27 X_{A1} + \theta_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
7	9	12	7	11	8	12	8
13	5	6	10	8	12	8	8
12	10	14	12	12	9	8	8
8	10	13	5	10	8	4	10
5	8	10	9	12	0	4	8
6	8	6	10	8	15	9	10
6	8	10	14	11	8	13	13
8	18	9	10	6	10	8	12
5	7	5	8	10	10	9	8
13	7	7	12	15	9	12	9
13	11	9	5	8	4	4	9
11	12	9	7	11	11	10	12

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
PIMA COUNTY,
ARIZONA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.46	-.86	.08
Standard Deviation	.96	.76	.54
Value of t Test	-.48	-1.14	.15

TIME SERIES MODEL EQUATION

$$Y_t = -.46 X_{FCt} - .86 X_{55t} + .08 X_{ATt} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975
1	4	3	6	6	3	1
1	2	1	4	3	5	4
6	4	7	4	2	3	3
3	6	7	10	3	0	1
3	7	3	3	8	4	6
5	4	5	7	3	4	4
6	6	1	5	10	2	1
3	2	2	2	8	5	3
3	5	3	2	7	3	5
4	1	4	5	3	4	5
5	4	4	5	4	3	3
5	5	3	3	2	5	3

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-1.52	3.22	-1.71
Standard Deviation	4.50	4.18	1.99
Value of t Test	-.34	.77	-.86
Delay Time	5 mos.	2 mos.	7 mos.

Date of 55 mph NMSL: February 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -1.52 X_{FCt-5} + 3.21 X_{55t-2} - 1.71 X_{ATt-7} + \frac{(1 - .57B^{12})}{(1 + .25B^{12})} e_t$$

NIGHT INJURY CRASH DATA

1969	1970	1971	1972	1973	1974
22	26	28	19	24	25
27	22	15	17	14	23
23	26	21	23	29	12
22	20	18	15	22	18
26	36	31	33	38	37
24	24	23	17	28	29
27	24	21	32	21	29
26	30	37	20	29	19
29	24	26	31	29	29
34	23	32	19	13	24
28	30	35	18	33	26
42	35	30	21	23	23

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: North Carolina 47
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	
Date (month)	10/71-11/72	10/72-11/73	10/73-	
Cases (N)	651	745	676	
BACs (#)	637	739	670	
% (BAC)	(97.8)	(99.2)	(99.1)	
D I S T R I B U T I O N	NEG (0%)	416 (65.3)	540 (73.1)	438 (65.4)
	.01-.04	148 (23.2)	110 (14.9)	143 (21.3)
	.05-.09	68 (10.7)	67 (9.1)	65 (9.7)
	.10-.14	5 (.8)	30 (4.1)	32 (4.8)
	.15+	0 (0)	2 (.3)	2 (.3)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
140	230	273	298	116	106
159	317	325	305	106	138
149	300	321	404	154	138
116	218	289	336	135	95
146	276	290	249	130	132
94	281	243	233	100	100
119	266	251	240	103	105
98	274	340	268	99	94
103	331	370	166	117	120
117	365	237	152	145	121
114	363	307	254	123	145
114	461	294	249	112	162

ASAP SITE:
FAIRFAX COUNTY
VIRGINIA

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	.24	-.70
Standard Deviation		.59	.60
Value of t Test		.41	-1.17
Delay Time		6 mos.	0 mos.

Date of 55 mph NMSL: November 1973

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
FAIRFAX COUNTY
DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	-1.30	.33
Standard Deviation		.40	.41
Value of t Test		-3.25	.80
Delay Time		2 mos.	0 mos.

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
HENRICO COUNTY,
VIRGINIA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate		1.93	-.56
Standard Deviation		.76	.57
Value of t Test		2.54	-.99

TIME SERIES MODEL EQUATION

$$Y_t = .24 X_{St-6} - .70 X_{At} + e_t$$

TIME SERIES MODEL EQUATION

$$Y_t = -1.30 X_{St-2} + .33 X_{At} + e_t$$

TIME SERIES MODEL EQUATION

$$Y_t = .19 X_{Pt} + 1.93 X_{St} - .56 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
3	2	5	3	0	1	4	2
2	3	2	2	1	0	4	1
2	2	3	3	1	3	4	1
0	0	6	8	3	3	1	0
6	2	4	4	1	2	1	2
2	2	2	2	4	7	3	5
2	6	1	1	4	5	2	7
4	3	0	1	7	1	4	5
2	6	3	5	4	4	4	1
2	2	8	4	2	2	2	4
3	2	2	0	1	1	2	2
3	3	11	4	2	4	1	1

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976	
4	4	1	3	2	3	3	1	2
2	1	4	2	1	1	0	1	1
1	3	1	4	2	2	2	2	3
3	1	5	4	5	4	2	1	3
3	3	3	3	3	5	1	0	1
3	4	3	4	4	0	2	2	7
0	3	5	5	3	5	3	2	1
2	3	0	6	1	5	2	2	1
1	3	4	5	3	3	2	1	2
2	3	1	2	4	3	5	3	3
7	3	1	6	5	5	1	1	5
2	2	1	3	8	4	1	3	3

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
1	2	5	0	0	0	2	0
7	0	0	1	2	0	0	4
0	1	1	7	0	1	5	0
0	4	1	0	0	0	0	2
3	0	2	2	4	0	0	1
2	1	1	0	0	0	2	0
0	3	0	0	1	0	9	2
0	3	3	0	6	1	9	4
0	0	2	0	0	4	2	2
0	4	2	3	1	0	0	1
2	1	0	1	0	0	0	2
5	0	0	1	0	7	1	1

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-5.01	8.96	-6.63
Standard Deviation	10.68	7.32	5.97
Value of t Test	-.56	1.22	-1.11
Delay Time	0 mos.	7 mos.	5 mos.

Date of 55 mph NMSL: November 1973

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

A-SAP NAME: Virginia 50
SITE TYPE: General or Other Random Selection Procedure

Survey Number	1	2	3	4	5	6	
Date (mo/yr)	1/72	10/72	10/73	10/74	10/75	10/76	
Cases (N)	1576	1488	1541	2804	1727	1889	
BACs (n)	1576	1477	1489	2750	1697	1867	
% (BAC)	(100)	(99.3)	(97.3)	(98.1)	(98.2)	(99.7)	
D I S T R I B U T I O N	0.00	1199 (76.2)	917 (62.3)	1179 (78.7)	1918 (69.7)	1598 (88.8)	1341 (71.2)
	.01-.04	245 (15.5)	379 (25.7)	189 (12.6)	502 (18.2)	306 (18.0)	308 (16.4)
	.05-.09	100 (6.3)	119 (8.1)	85 (5.7)	203 (7.4)	123 (7.2)	157 (8.3)
	.10-.14	44 (2.8)	44 (3.0)	33 (2.2)	103 (3.7)	64 (3.8)	53 (2.8)
	.15+	26 (1.6)	18 (1.2)	13 (.9)	24 (.9)	26 (1.5)	24 (1.3)

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -6.01 X_{FT} + 8.96 X_{3T-7} - 6.63 X_{A1-5} + (1 + .24B)(1 - .31B^{12})e_t$$

NIGHT INJURY CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
88	91	102	96	110	88	100	122
73	80	92	109	90	66	93	97
99	95	98	89		124	71	118
89	87	105	79	112	111	98	114
98	101	115	93	96	125	118	151
100	94	95	113	126	123	112	133
98	100	88	113	92	114	149	120
101	104	78	106	109	137	148	125
86	92	95	108	88	113	123	138
100	115	111	126	111	118	121	147
104	117	101	128	113	130	123	103
103	93	118	139	112	98	144	115

ALCOHOL-RELATED ARRESTS

1972	1973	1974	1975	1976
0	349	269	258	268
182	373	254	315	348
291	309	348	362	321
208	343	287	325	300
230	300	290	337	281
263	270	282	247	218
242	268	261	212	208
233	309	290	268	203
292	311	308	272	247
323	308	339	323	
319	315	330	357	
383	262	303	312	

ASAP SITE:
HENNEPIN COUNTY
MINNESOTA

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	1.85	-.28	-.09
Standard Deviation	1.05	.63	.69
Value of t Test	1.76	-.44	-.13
Delay Time	0 mos.	2 mos.	0 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = 1.85 X_{Ft} - .28 X_{St-2} - .09 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1970	1971	1972	1973	1974	1975	1976
5	0	3	2	3	0	2
4	3	2	0	3	3	3
4	5	0	7	6	3	0
1	9	2	6	7	2	1
4	3	2	2	2	6	3
3	4	3	6	6	6	7
3	1	2	8	6	3	6
3	3	3	4	2	3	4
7	5	4	2	7	2	2
3	5	9	11	4	8	4
6	2	4	5	1	4	4
6	4	4	6	2	4	3

DAY FATAL CRASH ANALYSIS

COMPARISON SITE: HENNEPIN COUNTY DAY FATAL CRASHES			
	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-1.60	-.46	-1.05
Standard Deviation	.84	.87	.84
Value of t Test	-1.70	-.81	-1.63
Delay Time	3 mos.	0 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -1.60 X_{Ft-3} - .46 X_{St} - 1.05 X_{At} + e_t$$

DAY FATAL CRASH DATA

1970	1971	1972	1973	1974	1975	1976
5	3	5	3	2	1	2
6	0	3	1	2	3	3
6	6	1	3	4	3	5
3	4	1	5	2	7	4
7	5	8	10	2	2	2
6	4	7	2	2	2	3
6	7	4	3	1	6	2
6	8	3	5	2	3	5
5	2	5	5	4	4	4
7	9	4	7	5	5	2
6	3	5	5	5	4	6
11	3	0	8	4	4	9

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE: MIAMI, FLORIDA			
	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	.45	-.87	.44
Standard Deviation	.83	.49	.35
Value of t Test	.72	-1.78	1.27

TIME SERIES MODEL EQUATION

$$Y_t = .45 X_{Ft} - .87 X_{St} + .44 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
2	2	0	1	5	1	2	0
3	0	1	2	1	4	1	1
4	1	0	1	4	1	1	3
1	1	1	0	3	0	0	2
0	1	0	5	1	0	1	1
4	2	1	4	1	2	1	2
0	4	0	2	3	1	2	6
1	3	3	2	3	0	1	1
1	0	0	1	2	4	0	1
2	2	0	1	3	2	1	1
1	1	2	0	3	1	0	1
3	4	2	1	1	4	2	2

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
OMAHA,
NEBRASKA

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.15	.40	.38
Standard Deviation	.71	.59	.43
Value of t Test	-.21	.68	.88

TIME SERIES MODEL EQUATION

$$Y_t = -.15 X_{FT} + .40 X_{ST} + .38 X_{AT} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
3	3	1	1	2	1	5	2
0	0	2	0	1	1	2	0
0	3	0	0	1	3	1	3
1	0	3	2	7	4	2	2
3	0	0	2	1	1	3	1
1	3	2	1	5	2	3	3
4	1	1	1	1	1	3	1
1	3	4	0	1	0	5	0
0	2	1	2	0	3	2	2
3	6	0	4	1	1	0	0
1	0	1	0	1	1	2	3
1	0	1	5	2	1	2	2

NIGHT INJURY CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-22.77	-12.26	14.23
Standard Deviation	14.13	10.34	16.01
Value of t Test	-1.61	-1.19	.89
Delay Time	0 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -22.77 X_{FT} - 12.26 X_{ST} + 14.23 X_{AT} + (1 - .48B^{12})e_t$$

NIGHT INJURY CRASH DATA

1970	1971	1972	1973	1974	1975	1976
310	252	234	231	205	190	210
232	209	245	170	180	206	185
243	211	214	235	211	192	195
203	176	186	218	220	182	170
225	206	172	237	224	243	227
230	207	227	309	251	284	240
265	220	231	277	256	243	254
236	226	278	230	261	248	232
267	227	223	236	218	216	215
252	212	234	253	258	215	234
165	168	210	187	203	273	190
297	244	301	254	258	255	305

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Minnesota 33
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	4	5	
Date (mo/yr)	6/72-5/73	5/73	5/74	5/75	5/76	
Cases (N)	609	607	942	649	604	
BACs (R)	847	782	937	842	804	
% (R/N)	(96.6)	(96.9)	(99.5)	(99.2)	(100)	
O I S T R I B U T I O N	NEO (00)	482 (96.9)	494 (93.2)	593 (93.2)	554 (95.8)	531 (96.0)
	.01-.04	230 (27.2)	165 (21.1)	168 (20.1)	165 (19.6)	152 (18.9)
	.05-.09	85 (10.0)	85 (10.9)	97 (10.4)	81 (9.6)	77 (9.6)
	.10-.14	36 (4.3)	22 (2.8)	37 (3.9)	34 (4.0)	27 (3.4)
	.15+	14 (1.7)	16 (2.0)	22 (2.3)	8 (1.0)	17 (2.1)

ALCOHOL-RELATED ARRESTS

1972	1973	1974	1975	1976
285	535	669	390	531
332	575	643	481	614
374	609	633	612	665
506	654	651	670	611
396	563	686	620	565
411	539	660	495	452
348	647	580	522	459
460	629	666	494	520
561	637	666	574	572
512	717	701	568	
452	626	630	617	
509	662	756	607	

**ASAP SITE:
INDIANAPOLIS
INDIANA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-.77	.41	-.15
Standard Deviation	.82	.56	.34
Value of t Test	-1.24	.73	-.44
Delay Time	4 mos.	2 mos.	6 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.77 X_{Ft-4} + .41 X_{St-2} - .15 X_{At-6} + (1 - .29B^{12})e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
3	1	4	1	5	4
4	1	3	3	1	2
3	1	3	2	1	2
4	2	2	2	1	3
2	4	1	4	2	1
4	2	1	3	2	2
2	5	1	1	1	2
3	2	0	3	1	3
2	3	3	4	0	4
2	4	3	3	1	4
1	2	1	2	2	2
0	4	2	3	2	2

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
INDIANAPOLIS DAY
FATAL CRASHES**

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	.14	.14	-2.06
Standard Deviation	2.13	1.84	1.27
Value of t Test	.07	.08	-1.63

TIME SERIES MODEL EQUATION

$$Y_t = .14 X_{Ft} + .14 X_{St} - 2.06 X_{At} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
10	7	3	9	4	6
11	9	7	5	6	9
3	7	6	4	8	7
11	10	11	5	6	2

Quarterly

**COMPARISON SITE NIGHT FATAL
CRASH ANALYSIS**

**COMPARISON SITE:
BIRMINGHAM,
ALABAMA**

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.33	.81	-.60
Standard Deviation	.66	.56	.38
Value of t Test	-.50	1.47	-1.58

TIME SERIES MODEL EQUATION

$$Y_t = -.33 X_{Ft} + .81 X_{St} - .60 X_{At} + e_t$$

**COMPARISON SITE NIGHT FATAL
CRASH DATA**

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	9	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	3	0	3	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	1.31	- 2.39	1.87
Standard Deviation	1.02	.63	.62
Value of t Test	1.28	- 2.88	3.02

TIME SERIES MODEL EQUATION

$$Y_t = 1.31 X_{FCt} - 2.39 X_{55t} + 1.87 X_{AIt} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	6	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	3	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	2	6	6	1
0	3	1	1	4	0	0	1
0	3	2	1	0	6	2	3

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Indiana 22
SITE TYPE: General or Other Random Selection Procedure

Survey Number	1	2	3	4	
Date (mo/yr)	11/71-12/71	11/72	11/73	11/74	
Cases (N)	600	640	640	640	
BACs (#)	608	602	615	605	
% (#N)	(93.3)	(94.1)	(96.1)	(94.5)	
D I S T R I B U T I O N	NEG (00)	437 (71.9)	429 (71.4)	380 (61.6)	410 (67.6)
	.01-.04	73 (12.0)	91 (15.1)	131 (21.3)	117 (19.3)
	.05-.09	34 (5.9)	42 (7.0)	57 (9.3)	42 (6.9)
	.10-.14	28 (4.6)	30 (5.0)	30 (4.9)	21 (3.5)
	.15+	16 (2.6)	10 (1.7)	17 (2.8)	15 (2.5)

ALCOHOL-RELATED ARRESTS

1969	1970	1971	1972	1973	1974
333	342	330	970	1276	1549
343	350	339	937	1255	1566
265	304	355	1053	1212	1441
353	356	409	1474	1332	1517

Years 1969, 1970, 1971 — Baseline; Years 1972, 1973, 1974 — Operational

**ASAP SITE:
KANSAS CITY
MISSOURI**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-1.78	.18	-.74
Standard Deviation	.80	.34	.34
Value of t Test	-2.23	.53	-2.18
Delay Time	3 mos.	7 mos.	9 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = -1.78 X_{FC,t-3} + .18 X_{55,t-7} - .74 X_{AT,t-9} + (1 - .52B^9)e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
3	2	3	4	1	0	3	3
4	4	5	3	3	0	1	5
1	3	0	8	4	3	1	2
8	7	0	5	5	4	4	3
4	2	5	5	3	2	3	5
4	2	2	2	3	1	3	4
5	3	3	6	4	4	3	6
4	4	2	4	4	4	5	4
2	6	4	4	1	5	4	4
4	3	6	1	2	0	3	4
7	2	5	1	2	4	5	1
6	7	5	6	3	3	0	3

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
KANSAS CITY DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-1.43	-1.12	.52
Standard Deviation	.88	.57	.54
Value of t Test	-1.65	-1.97	.96
Delay Time	3 mos.	8 mos.	9 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -1.43 X_{FC,t-3} - 1.12 X_{55,t-8} + .52 X_{AT,t-9} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
2	0	1	3	7	4	2	0
3	0	1	3	4	1	4	1
4	5	5	5	2	3	1	1
0	2	3	3	4	2	3	2
1	5	3	6	3	4	1	5
4	4	2	2	5	1	5	4
2	1	2	5	2	2	5	1
4	3	1	3	4	5	5	2
3	7	2	3	2	0	5	5
6	4	5	4	9	6	5	2
4	6	5	3	4	3	4	0
6	1	6	4	3	3	2	2

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
BIRMINGHAM, ALABAMA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.33	.81	-.60
Standard Deviation	.69	.55	.39
Value of t Test	-.50	1.48	-1.55

TIME SERIES MODEL EQUATION

$$Y_t = -.33 X_{FC,t} + .81 X_{55,t} - .60 X_{AT,t} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	9	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	3	0	3	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	1.31	-2.38	1.87
Standard Deviation	1.02	.83	.62
Value of t Test	1.28	-2.88	3.02

TIME SERIES MODEL EQUATION

$$Y_t = 1.31 X_{FT} - 2.38 X_{55} + 1.87 X_{AI} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	6	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	2	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	2	6	6	1
0	3	1	1	4	10	0	1
0	3	2	1	0	8	2	3

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-20.71	4.21	15.65
Standard Deviation	6.46	4.18	4.27
Value of t Test	-3.21	1.01	3.66
Delay Time	0 mos.	4 mos.	12 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -20.71 X_{FT} + 4.21 X_{55-t-4} + 15.65 X_{AI-t-12} + (1 - .47B^{12})e_t$$

NIGHT INJURY CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
105	177		115	154	115	114	120
141	121		114	112	99	128	135
133	131		133	156	144	150	142
149	154		139	132	128	166	141
157	138	158	149	170	173	185	211
157	152	129	131	140	158	179	211
159	156	139	150	138	179	163	178
156	130	142	124	118	157	156	186
158	126	130	112	138	137	146	183
185	139	129	126	142	148	163	196
150	134	118	133	106	151	134	141
161	125	149	139	130	152	160	161

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Missouri 34
SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	3	4	5	6	
Date (mo/yr)	10/71-11/71	10/72-11/72	10/73-11/73	10/74-11/74	10/75-11/75	10/75-11/75	
Cases (n)	1117	706	740	651	1108	1160	
BACs (n)	965	657	682	589	1059	1077	
% (n/n)	(86.2)	(93.1)	(92.2)	(90.5)	(95.6)	(92.8)	
O I S T R I B U T I O N	NEG (0.0)	694 (70.5)	468 (71.2)	501 (73.3)	432 (73.3)	774 (73.1)	804 (74.7)
	.01-.04 (15.6)	157 (15.6)	106 (16.4)	106 (15.5)	86 (14.8)	141 (13.2)	177 (16.4)
	.05-.09 (6.4)	83 (8.4)	42 (6.4)	46 (6.7)	46 (7.8)	92 (8.7)	72 (6.7)
	.10-.14 (3.4)	33 (3.4)	27 (4.1)	23 (3.4)	19 (3.2)	41 (3.8)	20 (1.9)
	.15+ (1.8)	18 (1.8)	12 (1.8)	6 (0.9)	6 (1.0)	11 (1.0)	4 (0.4)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
143	316	501	421	350	522
208	366	443	460	366	473
234	413	508	515	467	489
190	386	491	488	397	491
178	388	455	460	358	458
190	330	449	408	378	418
174	376	445	382	343	
189	424	457	398	392	
194	486	458	419	399	
353	561	454	411	451	
218	487	425	388	407	
262	521	461	394	471	

**ASAP SITE:
LINCOLN
NEBRASKA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	.14	.81	-.64
Standard Deviation	.75	.65	.59
Value of t Test	.19	1.25	-1.08
Delay Time	0 mos.	0 mos.	0 mos.

Date of 55-mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = .14 X_{FCt} + .81 X_{55t} - .64 X_{At} + \theta_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
—	—	0	0	1	1
—	—	3	1	0	2
—	—	2	2	0	2
—	—	1	2	1	1

Quarterly

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
LINCOLN DAY
FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	-1.57	.43	.07
Standard Deviation	1.15	.99	.90
Value of t Test	-1.37	.43	.08

TIME SERIES MODEL EQUATION

$$Y_t = -1.57 X_{FCt} + .43 X_{55t} + .07 X_{At} + \theta_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
—	—	1	1	4	0
—	—	2	1	0	2
—	—	0	1	3	4
—	—	3	1	0	0

Quarterly

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
MIAMI,
FLORIDA

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	.45	-.87	.44
Standard Deviation	.63	.49	.35
Value of t Test	.72	-1.78	1.27

TIME SERIES MODEL EQUATION

$$Y_t = .45 X_{FCt} - .87 X_{55t} + .44 X_{At} + \theta_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
2	2	0	1	5	1	2	0
3	0	1	2	1	4	1	1
4	1	0	1	4	1	1	3
1	1	1	0	3	0	0	2
0	1	0	5	1	0	1	1
4	2	1	4	1	2	1	2
0	4	0	2	3	1	2	6
1	3	3	2	3	0	1	1
1	0	0	1	2	4	0	1
2	2	0	1	3	2	1	1
1	1	2	0	3	1	0	1
3	4	2	1	1	4	2	2

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
OMAHA,
NEBRASKA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.15	.40	.38
Standard Deviation	.71	.59	.43
Value of t Test	-.21	.68	.88

TIME SERIES MODEL EQUATION

$$Y_t = -.15 X_{FCt} + .40 X_{NMSLt} + .38 X_{AVt} + \epsilon_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
3	3	1	1	2	1	5	2
0	0	2	0	1	1	2	0
0	3	0	0	1	3	1	3
1	0	3	2	7	4	2	2
3	0	0	2	1	1	3	1
1	3	2	1	5	2	3	3
4	1	1	1	1	1	3	1
1	3	4	0	1	0	5	0
0	2	1	2	0	3	2	2
3	6	0	4	1	1	0	0
1	0	1	0	1	1	2	0
1	0	1	5	2	1	2	2

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Nebraska 35
SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	3	4	
Date (moly)	11/71-12/71	11/72-12/72	10/73-11/73	10/74-11/74	
Cases (N)	927	871	751	794	
BACs (#)	772	802	695	792	
% (BIN)	(83.3)	(92.1)	(92.5)	(99.7)	
D I S T R I B U T I O N	NEG (00)	611 (79.1)	603 (75.2)	521 (75.0)	607 (76.6)
	.01-.04	89 (11.5)	132 (16.5)	106 (15.3)	130 (16.4)
	.05-.09	50 (6.5)	52 (6.5)	47 (6.8)	43 (5.4)
	.10-.14	16 (2.1)	10 (1.2)	15 (2.2)	11 (1.4)
	.15+	6 (.8)	5 (.6)	6 (.9)	1 (.1)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974
30	48	95	184
29	67	98	184
42	90	99	171
25	70	136	171
37	71	130	136
21	71	127	103
31	91	131	131
38	91	138	166
38	87	180	192
36	88	169	207
47	81	146	180
91	81	176	184

**ASAP SITE:
NEW HAMPSHIRE**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	*ASAP DUMVAR
Parameter Estimate	ODF = 0	1.15	- 1.65
Standard Deviation		.91	.86
Value of t Test		1.26	- 1.72
Delay Time		3 mos.	3 mos.

Date of 55 mph NMSL: December 1973

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = 1.15 X_{St-3} - 1.65 X_{At-3} + (1 + .04B + .20B^2 + .26B^3)(1 - .40B^{12})e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975
4	4	3	5	3	2	3
7	3	1	2	0	2	3
1	4	3	3	4	6	7
3	8	4	5	3	1	4
13	5	8	6	2	8	7
9	7	3	6	7	6	10
8	6	7	8	7	4	6
4	4	9	9	3	11	9
10	6	14	9	11	4	7
7	9	8	9	5	5	3
9	8	12	8	10	7	2
3	2	7	4	6	2	5

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
NEW HAMPSHIRE
DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	1.03	.81	- 1.72
Standard Deviation	1.32	.92	1.01
Value of t Test	-.78	.66	- 1.70
Delay Time	4 mos.	6 mos.	3 mos.

TIME SERIES MODEL EQUATION

$$Y_t = 1.03 X_{Ft-4} + .81 X_{St-6} - 1.72 X_{At-3} + (1 + .23B^{12})e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975
8	4	8	8	5	8	7
7	11	5	8	3	4	2
4	6	5	3	2	4	7
5	8	7	3	5	5	3
7	8	6	8	6	8	5
6	9	9	14	7	12	7
6	10	16	14	9	2	6
7	6	8	6	2	12	10
9	11	5	3	7	6	4
11	12	6	8	6	9	5
9	6	13	5	4	8	8
8	9	9	6	7	6	8

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
WEST VIRGINIA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- 9.45	11.39	- 1.19
Standard Deviation	3.35	3.79	1.92
Value of t Test	- 2.82	4.08	-.82
DELAY TIME	3 Mos.	2 Mos.	0 Mos.

TIME SERIES MODEL EQUATION

$$Y_t = -9.45 X_{Ft-3} + 11.39 X_{St-2} - 1.19 X_{At} + (1 + .29B)e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	67	15	13	11	12	5	5
0	73	14	13	20	9	16	17
0	75	10	12	13	12	15	16
0	27	11	20	14	22	21	19
0	18	21	16	13	23	20	18
0	21	15	17	19	13	17	16
0	26	23	21	26	13	27	14
0	34	26	20	27	17	22	23
0	21	9	19	20	17	29	6
0	3	16	22	15	15	42	9
0	10	30	12	10	14	26	17
0	13	16	24	16	11	18	19

**RESULTS OF ASAP ROADSIDE
BREATH TEST SURVEYS**

ALCOHOL-RELATED ARRESTS

1972	1973	1974	1975	1976
305	439	589	497	611
203	579	621	585	606
332	691	720	653	675
435	592	711	654	649
442	573	760	619	755
502	575	808	796	661
496	675	757	601	632
535	653	789	906	775
533	731	670	628	718
608	766	691	703	
524	671	607	770	
613	741	731	590	

**ASAP SITE:
NEW ORLEANS
LOUISIANA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-.51	.62	-1.12
Standard Deviation	.90	.55	.54
Value of t Test	-.57	1.13	-2.07
Delay Time	0 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: February 1974

TIME SERIES MODEL EQUATION

$$Y_t = .51 X_{FC,t-5} + .62 X_{55,t} - 1.12 X_{AI,t} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
4	4	8	0	7	1	6	3
4	5	6	5	0	7	6	1
4	4	4	4	3	2	6	5
3	6	5	1	2	4	1	3
7	5	3	1	4	2	11	2
2	2	3	1	1	3	3	3
4	2	1	6	3	2	2	
5	3	5	2	2	4	2	
3	2	2	2	5	8	1	
2	3	4	4	3	4	1	
4	3	4	3	4	1	2	
2	7	4	4	0	2	4	

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
NEW ORLEANS DAY
FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	-.56	-.63
Standard Deviation		.46	.46
Value of t Test		-1.22	-1.37
Delay Time		0 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.56 X_{55,t} - .63 X_{AI,t} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
2	2	5	4	4	0	3	4
3	3	6	4	5	5	4	3
7	4	4	3	5	4	5	4
3	1	5	1	0	4	0	4
4	7	4	2	6	3	3	4
6	4	2	1	4	2	5	1
6	5	1	6	4	4	1	
4	2	5	4	4	2	4	
4	9	1	6	6	2	1	
3	6	3	5	4	5	4	
7	3	5	5	2	1	2	
5	6	2	2	2	2	5	

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-7.39	27.84	32.94
Standard Deviation	13.89	9.40	8.63
Value of t Test	-0.53	2.96	3.73
Delay Time	5 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: February 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -7.39 X_{FC,t-5} + 27.84 X_{55,t} + 32.94 X_{AI,t} + (1 - .37B^{12})e_t$$

NIGHT INJURY CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
208	0	221	190	258	282	322	252
257	0	244	272	222	231	308	302
219	3	197	227	326	270	303	289
245	200	193	225	214	237	302	275
248	262	262	224	247	371	320	297
254	212	200	211	232	279	268	248
207	200	210	233	267	273	268	
220	181	206	244	249	267	261	
166	184	218	201	311	206	250	
208	201	204	226	268	277	261	
217	200	213	245	289	254	284	
221	225	258	265	286	304	312	

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Louisiana 45
 SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	3	4	5	6	
Date (moyy)	11/71-12/71	11/72-12/72	11/73-12/73	11/74-12/74	11/75-12/75	11/76-12/76	
Cases (N)	799	799	700	774	801	791	
BACs (n)	795	746	685	756	787	738	
% (BAC)	(99.5)	(97.0)	(97.9)	(97.8)	(98.3)	(94.5)	
D I S T R I B U T I O N	<.01	408 (51.2)	451 (60.5)	408 (59.6)	477 (62.9)	165 (21.0)	82 (11.1)
	.01-.04	265 (33.3)	197 (26.4)	181 (26.4)	246 (32.5)	497 (63.2)	548 (74.3)
	.05-.09	95 (11.9)	95 (12.8)	81 (11.8)	31 (4.1)	96 (12.2)	82 (11.1)
	.10-.14	17 (2.1)	26 (3.5)	11 (1.6)	4 (0.5)	20 (2.6)	18 (2.4)
	.15+	10 (1.3)	6 (.8)	4 (.6)	0 (0.0)	6 (.8)	10 (1.4)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
114	358	352	361	297	325
102	371	371	297	219	279
110	353	305	221	404	282
115	300	277	272	325	277
126	301	400	280	372	339
123	283	489	405	347	288
133	349	535	300	299	
109	310	338	289	278	
110	443	397	323	272	
120	457	344	311	300	
152	341	388	248	319	
321	373	339	244	307	

ASAP SITE:
OKLAHOMA CITY
OKLAHOMA

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	.09	.70
Standard Deviation		.46	.45
Value of t Test		.30	1.66
Delay Time		1 mos.	0 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = .09 X_{St-1} + .70 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
3	3	4	2	2	6	2	3
2	0	2	3	3	3	7	2
3	2	2	3	3	0	6	2
1	3	4	7	1	5	2	1
5	2	4	3	3	1	3	4
1	3	3	3	3	4	1	5
0	6	3	1	5	3	3	1
4	3	7	4	4	1	4	6
4	3	1	3	1	2	4	7
3	1	3	5	7	6	7	3
1	0	1	3	5	3	4	0
2	4	3	3	4	3	2	6

DAY FATAL CRASH ANALYSIS

COMPARISON SITE: OKLAHOMA CITY DAY FATAL CRASHES			
	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.22	-.30	.69
Standard Deviation	.75	.45	.46
Value of t Test	.30	-.67	1.50
Delay Time	0 mos.	0 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.22 X_{Pt} - .30 X_{St} + .69 X_{At} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
4	0	5	3	3	3	3	1
8	2	2	1	3	3	1	3
3	3	2	2	1	2	5	4
0	4	3	6	4	4	2	4
3	3	1	7	3	2	5	5
3	5	2	3	2	2	0	4
2	2	2	3	4	1	3	1
0	7	0	2	3	3	6	2
3	1	1	4	4	5	2	1
5	2	2	3	6	3	1	4
4	1	2	6	2	5	5	4
3	1	2	1	2	1	4	3

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE: BIRMINGHAM, ALABAMA			
	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.33	.61	-.60
Standard Deviation	.66	.55	.38
Value of t Test	-.60	1.48	-1.68

TIME SERIES MODEL EQUATION

$$Y_t = -.33 X_{Pt} + .61 X_{St} - .60 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	0
1	1	1	1	0	1	2
1	2	1	1	1	2	1
2	1	3	4	0	3	4
2	4	4	3	0	2	3
2	3	2	4	2	1	1
1	4	0	1	2	5	3
1	9	3	2	1	2	3
3	1	2	4	0	1	3
1	0	2	5	1	1	2
3	3	2	3	2	3	2
1	0	0	0	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. GUMVAR
Parameter Estimate	1.31	- 2.39	1.87
Standard Deviation	1.02	.83	.82
Value of t Test	1.28	- 2.88	3.02

TIME SERIES MODEL EQUATION

$$Y_t = 1.31 X_{Ft} - 2.39 X_{St} + 1.87 X_{At} + \theta_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	5	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	2	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	2	6	6	1
0	3	1	1	4	10	0	1
0	3	2	1	0	8	2	3

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Oklahoma 53
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	4	5	6	
Date (mo/yr)	8/71	8/72	8/73	8/74	8/75	8/76	
Cases (N)	1832	1730	1630	1555	1051	1119	
BACs (P)	1875	1722	1618	1545	1051	1100	
% (BAC)	(96.5)	(99.5)	(98.7)	(99.1)	(100)	(98.2)	
D I S T R I B U T I O N	0-0	1189 (73.6)	1295 (81.2)	1262 (84.2)	931 (81.3)	845 (80.4)	823 (74.8)
	.01-.04	287 (18.2)	193 (11.2)	126 (7.8)	119 (10.4)	110 (10.5)	184 (16.7)
	.05-.09	81 (5.1)	99 (5.7)	89 (5.5)	81 (5.3)	70 (6.7)	84 (8.8)
	.10-.14	36 (2.3)	26 (1.5)	28 (1.7)	22 (1.9)	17 (1.6)	18 (1.6)
	.15+	12 (.8)	10 (.6)	12 (.7)	12 (1.1)	9 (.8)	11 (1.0)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
130	304	401	413	457	487
128	273	431	363	496	522
150	328	465	428	525	585
169	300	366	371	463	575
134	234	458	348	402	520
123	229	362	373	405	509
121	226	407	354	459	484
135	241	362	398	480	503
125	357	421	449	458	562
154	361	423	480	382	483
129	374	413	381	405	419
176	438	378	368	476	485

**ASAP SITE:
PHOENIX
ARIZONA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-.58	.18	.46
Standard Deviation	.98	.58	.58
Value of t Test	-.70	.31	.80
Delay Time	2 mos.	6 mos.	0 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.68 X_{Ft-2} + .18 X_{St-6} + .46 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
2	6	6	8	4	4	6	6
2	3	2	6	2	5	2	6
4	1	3	3	3	3	6	3
8	7	2	6	6	4	4	5
2	3	4	2	2	4	4	0
0	3	5	2	5	6	5	4
2	1	3	2	4	2	2	1
3	6	0	2	4	5	5	3
2	6	0	4	2	4	4	1
5	5	6	3	5	6	3	6
3	2	4	2	7	9	1	2
6	2	5	8	1	5	6	7

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
PHOENIX DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	2.20	.09	.75
Standard Deviation	.90	.54	.53
Value of t Test	2.45	.17	1.42
Delay Time	1 mos.	4 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = 2.20 X_{Ft-1} + .09 X_{St-4} + .75 X_{At} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
7	2	5	6	3	6	4	5
2	3	1	2	4	5	6	3
4	1	1	3	5	5	2	5
6	5	2	2	4	9	7	6
4	5	3	4	6	2	5	2
2	3	6	6	6	5	4	7
2	2	4	3	6	4	4	4
2	5	6	1	4	2	5	3
5	6	1	7	5	8	2	3
9	4	5	6	6	6	6	7
5	6	6	5	11	8	7	6
5	4	4	8	5	2	9	3

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
DADE COUNTY, FLORIDA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.25	-.68	.27
Standard Deviation	1.45	1.13	.80
Value of t Test	-.17	-.60	.34

TIME SERIES MODEL EQUATION

$$Y_t = -.25 X_{Ft} - .68 X_{St} + .27 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
7	9	12	7	11	8	12	8
13	5	6	10	8	12	8	8
12	10	14	12	12	9	6	8
8	10	13	5	10	6	4	10
5	6	10	9	12	0	4	6
6	6	6	10	6	15	9	10
6	8	10	14	11	8	13	13
8	18	9	10	6	10	8	12
5	7	5	6	10	10	9	5
13	7	7	12	15	9	12	9
13	11	9	5	8	4	4	9
11	12	9	7	11	11	10	12

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
PIMA COUNTY,
ARIZONA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.48	-.86	.08
Standard Deviation	.95	.76	.54
Value of t Test	-.48	-1.14	.15

TIME SERIES MODEL EQUATION

$$Y_t = -.48 X_{FCt} - .86 X_{55t} + .08 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
1	4	3	6	6	3	1	1
1	2	1	4	3	5	4	1
8	4	7	4	2	3	3	4
3	5	7	10	3	0	1	0
3	7	3	3	8	4	6	3
5	4	5	7	3	4	4	0
8	8	1	5	10	2	1	1
3	2	2	2	8	5	3	1
3	5	3	2	7	3	5	3
4	1	4	5	3	4	5	1
5	4	4	5	4	3	5	5
5	5	3	3	2	5	3	2

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	CCF = 0	-65.52
Standard Deviation			17.29
Value of t Test			-3.79
Delay Time			12 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -65.52 X_{At-12} + (1 - .41B^{12})e_t$$

NIGHT INJURY CRASH DATA

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
	715	913	781	872	855
	852	867	757	909	882
	762	890	820	1044	965
	867	773	807	1109	930
	784	573	889	957	929
	894	604	798	803	868
	775	643	730	898	
	865	703	781	895	
	1108	608	774	828	
734	1095	860	877	878	
873	1060	881	899	895	
810	1018	868	887	915	

ASAP SITE:
PORTLAND
MAINE

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-.69	CCF = 0	-.76
Standard Deviation	.85		.92
Value of t Test	-1.53		-2.38
Delay Time	2 mos.		5 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.99 X_{Ft-2} - .76 X_{At-5} + (1 - .26B^6)e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975
2	3	1	2	0	0	0
1	1	1	2	2	0	1
3	4	2	1	0	2	0
2	4	2	1	3	1	1
1	1	3	3	0	0	2
3	3	3	0	3	3	1
5	6	3	4	3	6	2
4	3	3	3	1	2	8
0	3	4	3	1	2	5
4	5	4	0	1	0	2
8	1	0	3	2	3	0
1	2	2	2	1	1	4

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
PORTLAND DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.34	-1.18	-.21
Standard Deviation	.76	.82	.49
Value of t Test	-.45	-1.91	-.43
Delay Time	0 mos.	0 mos.	5 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.34 X_{Ft} - 1.18 X_{St} - .21 X_{At} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
2	3	3	2	1	2
2	4	1	4	1	0
2	1	2	1	1	0
2	3	0	2	6	1
2	3	1	5	2	2
1	6	5	2	1	3
4	6	2	4	6	3
1	2	3	6	4	2
4	2	3	2	2	1
2	4	7	4	3	2
9	3	4	3	3	3
3	4	3	2	4	1

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
WEST VIRGINIA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-9.74	10.57	.82
Standard Deviation	3.34	2.73	1.91
Value of t Test	-2.92	3.87	.49
Delay Time	3 mos.	2 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -9.45 X_{Ft-3} + 11.39 X_{St-2} - 1.19 X_{At} + (1 + .29B)e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	67	16	13	11	12	5	5
0	73	14	13	20	9	16	17
0	75	10	12	13	12	15	16
0	27	11	20	14	22	21	19
0	18	21	16	13	23	20	18
0	21	15	17	19	13	17	18
0	26	23	21	28	13	27	14
0	24	26	20	27	17	22	23
0	21	9	19	20	17	29	8
0	3	16	22	15	15	42	9
0	10	30	12	10	14	26	17
0	13	16	24	16	11	16	19

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Maine 02

SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number		1	2	3	4
Date (mo/yr)		10/71-12/71	9/72-10/72	9/73-11/73	9/74-11/74
Cases (N)		487	492	505	504
BACs (N)		487	492	505	502
% (BN)		(100)	(100)	(100)	(99.8)
O I S T R I B U T I O N	NEG LOB	392 (78.4)	396 (78.5)	393 (77.6)	394 (78.5)
	.01-.04	62 (12.7)	77 (15.7)	58 (11.5)	59 (11.8)
	.05-.09	28 (5.7)	21 (4.3)	34 (6.7)	38 (7.6)
	.10-.14	15 (2.1)	7 (1.4)	17 (3.4)	10 (2.0)
	.15+	5 (1.0)	1 (.2)	3 (.6)	1 (.2)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
61	162	190	139	103	114
68	167	197	204	136	152
114	198	233	243	145	197
137	242	198	185	165	162
137	177	179	239	180	165
135	220	200	212	167	189
126	220	197	234	146	229
131	207	222	205	171	207
127	225	215	184	156	176
150	222	202	180	132	225
99	188	153	149	147	142
109	164	189	153	112	166

**ASAP SITE:
PULASKI COUNTY
ARKANSAS**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	.99	.01	.26
Standard Deviation	.82	.56	.39
Value of t Test	1.60	.02	.67
Delay Time	3 mos.	3 mos.	1 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.99 X_{Ft-3} + .01 X_{St-3} + .26 X_{At-1} + (1 + .37B)\epsilon_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
1	0	1	0	2	1
0	0	2	3	2	0
4	0	0	3	2	2
1	1	1	2	0	0
1	2	0	3	0	0
0	3	2	1	1	1
0	2	2	0	2	2
2	4	1	0	1	2
2	3	2	1	1	0
2	2	2	3	3	2
5	1	2	2	2	2
3	1	1	1	2	4

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
PULASKI COUNTY
DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	CCF = 0	.33
Standard Deviation			1.17
Value of t Test			.26

TIME SERIES MODEL EQUATION

$$Y_t = .33 X_{At-1} + \epsilon_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
4	6	4	9	9	6
10	10	10	9	4	4
6	7	4	7	12	3
6	8	11	12	10	5

Quarterly

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
SAN DIEGO,
CALIFORNIA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.59	.45	.49
Standard Deviation	.54	.51	.42
Value of t Test	-.92	.88	1.17

TIME SERIES MODEL EQUATION

$$Y_t = -.59 X_{Ft} + .45 X_{St} + .49 X_{At} + \epsilon_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	3	3
0	0	4	3	2	1	3	3
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	2	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Arkansas 42

SITE TYPE: Combination of High Crash & High Arrest Sites

Survey Number		1	2	3	4
Date (mo/yr)		11/71	11/72	11/73-12/73	11/74
Cases (N)		1212	803	810	678
BACs (N)		1211	800	810	669
% (B/N)		(99.9)	(99.6)	(100)	(98.7)
D I S T R I B U T I O N	N60	810	567	556	472
		(66.9)	(70.5)	(68.6)	(70.6)
	.01-.04	245	130	130	100
		(20.2)	(16.3)	(16.0)	(14.9)
	.05-.09	109	71	68	56
	(9.0)	(8.9)	(8.4)	(8.4)	
.10-.14	31	27	42	30	
	(2.6)	(3.4)	(5.2)	(4.5)	
.15+	16	5	14	11	
	(1.3)	(.6)	(1.7)	(1.6)	

ALCOHOL-RELATED ARRESTS

1972	1973	1974	1975	1976
531	441	505	212	206
585	472	517	194	178
633	488	603	250	244
487	448	461	189	
449	466	436	220	
443	418	425	215	
452	478	396	186	226
477	517	463	203	240
434	541	380	194	153
435	596	365	207	247
435	591	378	216	258
474	482	384	192	220

**ASAP SITE:
RICHLAND COUNTY
SOUTH CAROLINA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	GCF = 0	GCF = 0	-.69
Standard Deviation			.32
Value of t Test			-2.15
Delay Time			0 mos.

Date of 55 mph NMSL: February 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.69 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1970	1971	1972	1973	1974
0	5	1	2	2
3	0	2	1	1
4	2	1	0	1
2	3	1	1	1
3	4	3	0	1
1	2	2	4	1
1	4	1	1	2
2	2	0	1	3
1	1	0	0	3
1	4	1	0	0
1	1	4	6	2
2	0	0	2	1

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
RICHLAND COUNTY
DAY FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-1.26	-.75	-.16
Standard Deviation	.57	.57	.58
Value of t Test	-2.21	-1.31	-.42
Delay Time	3 mos.	6 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -1.26 X_{Pt-3} - .75 X_{St-6} - .16 X_{At} + e_t$$

DAY FATAL CRASH DATA

1970	1971	1972	1973	1974
6	0	2	1	2
3	3	2	3	1
1	4	2	1	1
2	2	2	2	1
3	3	5	3	1
1	1	0	4	0
3	1	1	2	3
1	0	3	3	1
2	4	1	3	1
1	3	2	0	1
4	4	3	1	2
4	3	3	5	2

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

**COMPARISON SITE:
SAN DIEGO,
CALIFORNIA**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.59	.45	.49
Standard Deviation	.84	.51	.42
Value of t Test	-.62	.88	1.17

TIME SERIES MODEL EQUATION

$$Y_t = -.59 X_{Pt} + .45 X_{St} + .49 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	3
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	2	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

NIGHT INJURY CRASH ANALYSIS

	1971	1972	1973
Maximum Fatality	110	137	137
Minimum Fatality	23	19	19
Value of t Test	1.45	1.74	1.74
Delay Time	5.00	5.00	5.00

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TIME SERIES MODEL EQUATION

$$Y_t = -4.47 X_{t-1} + 2.15 X_{t-2} - 4.39 X_{t-3} + (1 - 0.56^{12})C_t$$

NIGHT INJURY CRASH DATA

1970	1971	1972	1973	1974	1975	1976
15	17	17	26	16	20	26
11	25	17	13	21	24	16
17	16	14	26	16	24	29
26	31	21	21	26	27	28
28	13	19	23	21	27	20
14	11	11	11	24	11	21
21	28	18	21	11	20	17
22	29	21	16	17	21	18
14	27	25	26	22	14	24
21	21	17	29	19	18	21
22	28	16	21	11	21	25
26	21	21	18	27	27	20

RESULTS OF ANAP ROADSIDE BREATH TEST SURVEYS

ANAP (ANAP) - South Carolina
 1971-1976 - Highways 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Survey number	1	2	3	4
1971	110	137	137	137
1972	110	137	137	137
1973	110	137	137	137
1974	110	137	137	137
1975	110	137	137	137
1976	110	137	137	137

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
121	148	171	211	212	265
110	204	163	188	212	181
142	211	253	182	218	174
124	228	298	218	210	113
128	227	255	231	181	164
111	211	210	210	179	147
132	247	226	184	17	
118	180	210	220	143	
114	241	242	219	104	
125	197	233	212	148	
104	225	280	235	264	
120	245	158	211	214	

**ASAP SITE:
SAN ANTONIO
TEXAS**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	.85	.71	.56
Standard Deviation	1.06	.86	.73
Value of t Test	.80	1.09	.76
Delay Time	0 mos.	2 mos.	0 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$Y_t = .85 X_{Ft} + .71 X_{St-2} + .56 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1970	1971	1972	1973	1974	1975	1976
4	6	4	4	5	5	3
7	9	4	4	1	5	3
5	4	3	7	6	5	10
2	3	2	3	1	10	2
5	2	5	4	6	0	6
3	3	1	6	7	3	5
4	7	6	11	9	5	2
4	3	2	5	6	1	8
2	3	9	5	1	4	6
5	4	3	7	6	6	6
5	2	4	5	5	4	7
7	4	2	6	11	5	3

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
SAN ANTONIO DAY
FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.37	-.18	.74
Standard Deviation	.83	.51	.56
Value of t Test	-.44	-.36	1.32
Delay Time	4 mos.	0 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.37 X_{Ft-4} - .18 X_{St} + .74 X_{At} + e_t$$

DAY FATAL CRASH DATA

1970	1971	1972	1973	1974	1975	1976
6	3	3	2	4	1	6
2	3	3	2	2	1	4
2	3	6	3	3	1	1
1	2	2	5	1	1	3
5	2	3	2	3	4	3
4	0	2	4	5	1	7
4	2	6	5	4	2	4
3	3	0	5	7	6	4
0	1	2	3	2	2	1
4	2	2	6	6	4	2
3	1	2	6	2	6	1
6	5	3	6	6	5	4

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

**COMPARISON SITE:
SAN DIEGO,
CALIFORNIA**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.59	.45	.49
Standard Deviation	.64	.51	.42
Value of t Test	.92	.88	1.17

TIME SERIES MODEL EQUATION

$$Y_t = -.59 X_{Ft} + .45 X_{St} + .49 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	0
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	0
0	0	2	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

NIGHT INJURY CRASH ANALYSIS

	Fuel Crails	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	- 3.79	15.65	23.27
Standard Deviation	10.36	6.70	11.19
Value of t Test	- .36	1.80	2.08
Delay Time	3 mos.	5 mos.	10 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -3.79 X_{CT-3} + 15.65 X_{ST-5} + 23.27 X_{AI-10} + (1 - .62B^{12})a_t$$

NIGHT INJURY CRASH DATA

1970	1971	1972	1973	1974	1975	1976
185	153	188	188	182	203	188
156	154	188	210	193	198	183
175	180	186	211	228	217	205
148	129	209	213	205	243	253
199	213	204	232	229	253	238
142	171	192	225	234	210	213
169	194	201	208	213	195	229
204	199	218	211	239	242	232
148	165	182	228	238	222	249
188	217	186	237	236	214	263
148	165	197	207	221	204	227
177	224	229	228	231	223	277

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Texas 49
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	4	5	6
Date (mo/yr)	11/71	11/72	11/73	11/74	11/75	11/76
Cases (n)	634	652	652	649	480	268
BACs (n)	634	652	652	649	480	268
% (BAC)	(100)	(100)	(100)	(100)	(100)	(100)
D I S T R I B U T I O N	NEQ (0.0)	414 (65.3)	390 (60.3)	381 (58.4)	268 (55.8)	137 (51.1)
	.01-.04	68 (10.7)	109 (16.7)	120 (18.4)	101 (15.6)	97 (35.8)
	.05-.09	70 (11.0)	80 (12.3)	82 (12.6)	83 (12.8)	81 (12.7)
	.10-.14	51 (8.0)	37 (5.7)	39 (6.0)	48 (7.4)	38 (7.5)
	.15+	31 (4.9)	30 (4.6)	30 (4.6)	29 (4.3)	30 (6.2)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
94	308	545	360	381	474
77	364	429	369	365	400
90	448	438	433	376	381
55	415	415	310	351	293
79	385	438	381	308	377
85	436	421	346	323	320
101	414	427	351	342	371
85	428	408	380	415	324
111	483	424	324	433	332
80	436	382	382	408	345
92	488	381	383	458	290
181	713	377	396	466	393

**ASAP SITE:
SOUTH DAKOTA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	1.93	- 1.18	- 1.15
Standard Deviation	1.51	.89	.89
Value of t Test	1.27	- 1.71	- 1.66
Delay Time	0 mos.	5 mos.	2 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = 1.93 X_{FCt} - 1.18 X_{55t-5} - 1.15 X_{ASAt-2} + (1 - .49B^{12})e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
2	2	7	6	4	6	5	6
5	3	2	7	4	7	3	7
6	2	5	2	4	5	7	10
7	7	5	11	6	9	9	7
5	8	4	9	5	2	6	11
7	9	7	14	11	13	5	12
14	10	9	11	9	8	9	10
6	8	19	13	18	6	10	8
16	14	9	12	10	4	6	10
13	6	2	9	10	14	5	6
14	10	9	10	9	12	3	4
6	4	8	6	10	8	6	6

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
SOUTH DAKOTA
DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- 3.70	- 1.85	.37
Standard Deviation	1.86	1.20	1.18
Value of t Test	- 1.99	- 1.54	.31
Delay Time	3 mos.	5 mos.	2 mos.

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = - 3.70 X_{FCt-3} - 1.85 X_{55t-5} + .37 X_{ASAt-2} + (1 + .10B + .25B^2 - .26B^3)(1 + .21B^{12})e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
10	4	5	9	6	4	2	6
4	3	2	5	6	3	2	3
7	4	12	4	6	0	5	3
5	6	11	5	11	11	7	4
13	11	8	5	13	6	9	6
10	9	12	13	11	6	7	5
12	15	13	19	10	7	15	8
11	11	11	20	15	15	9	12
9	13	14	9	13	9	13	6
15	12	6	11	12	13	4	14
9	10	13	6	14	14	6	7
12	5	9	10	9	12	4	7

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
WYOMING

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- 2.82	CCF = 0	-.14
Standard Deviation	1.41		.83
Value of t Test	- 2.00		-.18
Delay Time	2 mos.		0 mos.

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = - 2.82 X_{FCt} - .14 X_{ASAt} + (1 - .40B^{12})e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
3	4	2	4	9	4
3	3	5	7	7	3
5	7	6	8	3	7
4	5	5	5	6	6
11	13	4	4	5	3
8	9	6	10	7	9
11	12	10	8	11	10
14	11	10	15	12	12
9	6	7	6	7	12
6	7	4	9	6	11
5	2	2	3	6	10
7	4	6	9	10	2

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-18.56	5.86	-8.05
Standard Deviation	9.03	6.54	6.01
Value of t Test	-1.87	.90	-1.34
Delay Time	3 mos.	6 mos.	9 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -18.56 X_{FCt-3} + 5.86 X_{55t-6} - 8.05 X_{ADt-9} + (1 - .76B^{12})e_t$$

NIGHT INJURY CRASH DATA

1969	1970	1971	1972	1973	1974	1975	1976
75	77	100	113	105	112	106	84
63	72	95	83	93	88	88	141
88	93	90	114	144	111	109	125
86	97	135	125	133	106	103	150
132	119	169	129	150	121	160	199
144	110	136	137	166	160	125	163
134	128	175	168	156	155	166	202
130	140	152	142	152	179	156	195
145	118	133	133	177	139	148	156
140	122	149	191	159	129	164	197
100	123	127	117	127	133	136	141
141	104	109	134	120	150	145	134

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: South Dakota 37
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	4	5	
Date (m/y/d)	10/71-12/71	1-4, 6-8/72	2/73-12/73	2/74-12/74	10/75-11/75	
Cases (N)	810	4426	5561	5672	1767	
BACs (R)	810	4426	5548	5671	1747	
N (per)	(100)	(100)	(99.9)	(99.9)	(98.3)	
O I S T R I B U T I O N	NEO (1.00)	664 (14.6)	3153 (71.2)	3535 (63.7)	3792 (68.6)	627 (72.1)
	21-24	118 (14.6)	706 (15.6)	1114 (20.1)	1141 (20.1)	176 (15.5)
	25-29	68 (8.4)	386 (8.7)	509 (9.2)	444 (7.8)	89 (7.8)
	30-34	42 (5.2)	117 (2.6)	281 (5.1)	297 (5.2)	30 (2.6)
	35+	18 (2.2)	64 (1.4)	108 (2.0)	87 (1.5)	29 (2.2)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
85	213	240	334	317	330
90	266	200	300	342	351
128	309	257	385	455	326
123	295	271	372	434	352
164	229	241	367	486	343
126	174	253	342	402	289
155	228	233	377	337	335
174	218	290	491	445	272
154	302	278	471	392	263
162	266	274	478	390	
167	224	272	449	346	
131	323	280	410	366	

**ASAP SITE:
TAMPA
FLORIDA**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1976
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	- 1.39	1.46
Standard Deviation		.69	.77
Value of t Test		- 2.01	1.90
Delay Time		0 mos.	0 mos.

Date of 55 mph NMSL: December 1973

TIME SERIES MODEL EQUATION

$$Y_t = -1.39 X_{St} + 1.46 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1970	1971	1972	1973	1974	1975	1976
7	4	2	5	6	1	7
6	4	2	10	8	0	7
5	4	6	10	6	6	1
4	7	6	4	7	6	2
5	6	7	8	7	9	6
1	6	7	8	4	2	7
5	10	10	9	7	2	10
4	5	0	11	4	7	3
3	2	7	7	5	7	5
5	11	6	6	5	5	7
2	3	6	6	3	6	7
5	7	3	3	3	5	2

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
TAMPA DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	2.19	- 1.53	.45
Standard Deviation	.88	.54	.60
Value of t Test	2.49	- 2.83	.76
Delay Time	1 mos.	0 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = 2.19 X_{Ft-1} - 1.53 X_{St} + .45 X_{At} + e_t$$

DAY FATAL CRASH DATA

1970	1971	1972	1973	1974	1975	1976
5	6	5	9	8	5	3
3	9	8	6	6	6	6
3	4	8	6	8	5	7
7	8	11	5	8	6	6
4	4	6	8	5	3	4
7	7	8	11	5	6	3
9	7	6	6	4	4	7
7	4	4	8	6	7	6
5	7	6	4	7	2	4
4	3	5	5	7	6	4
5	8	5	12	10	3	9
9	10	4	6	6	5	11

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
DADE COUNTY, FLORIDA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- .25	- .68	.27
Standard Deviation	1.45	1.13	.80
Value of t Test	- .17	- .60	.34

TIME SERIES MODEL EQUATION

$$Y_t = -.25 X_{Ft} - .68 X_{St} + .27 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
7	9	12	7	11	8	12	8
13	5	6	10	8	12	8	8
13	10	14	12	12	9	8	8
8	10	13	5	10	8	4	10
5	6	10	9	12	9	4	6
6	8	6	10	8	15	9	10
6	8	10	14	11	8	13	13
8	16	9	10	6	10	8	12
9	7	5	8	10	10	9	5
13	7	7	12	15	9	12	9
13	11	9	5	8	4	4	9
11	12	9	7	11	11	10	12

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
PIMA COUNTY,
ARIZONA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.46	-.86	.08
Standard Deviation	.96	.76	.54
Value of t Test	-.67	-1.13	.15

TIME SERIES MODEL EQUATION

$$Y_t = -.46 X_{FCt} - .86 X_{55t} + .08 X_{AVt} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
1	4	3	6	6	3	1	1
1	2	1	4	3	5	4	1
8	4	7	4	2	3	3	4
3	5	7	0	3	0	1	0
3	7	3	3	0	4	6	3
5	4	5	7	3	4	4	0
6	8	1	5	10	2	1	1
3	2	2	2	0	5	3	1
3	5	3	2	7	3	5	3
4	1	4	5	3	4	5	1
5	4	4	5	4	3	3	3
5	5	3	3	2	5	3	2

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-2.87	-42.98	-47.20
Standard Deviation	6.13	24.42	17.60
Value of t Test	-.47	-1.76	-2.68
Delay Time	1 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: December 1973

TIME SERIES MODEL EQUATION

$$(1-B)Y_t = -2.87(1-B)X_{FCt-1} - 42.98(1-B)X_{55t} - 47.20(1-B)X_{AVt} + (1-.64B)e_t$$

NIGHT INJURY CRASH DATA

1970	1971	1972	1973	1974	1975	1976
196	151	166	201	160	182	167
176	209	160	242	166	188	154
221	200	211	216	151	223	177
180	195	154	234	186	222	190
192	205	151	257	188	209	178
198	196	176	234	165	163	194
143	207	167	235	171	206	178
167	195	147	221	208	154	165
170	196	154	217	215	157	182
211	263	194	246	196	191	182
197	231	198	202	185	169	190
236	214	202	177	222	164	189

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Florida 43
SITE TYPE: Combination of High Crash & High Arrest Sites

Survey Number	1	2	3	4	5	6	
Date (mo/yr)	1/72	7/72	1/73	7/73	1/74	7/74	
Cases (N)	865	430	822	411	820	412	
BACs (n)	865	438	822	411	820	412	
% (BAC)	(99.9)	(99.8)	(100)	(100)	(100)	(100)	
D I S T R I B U T I O N	NEC	942	300	889	279	571	287
	100	(65.0)	(66.5)	(71.7)	(67.9)	(69.6)	(69.7)
	.01-.04	178	76	122	70	157	70
		(20.6)	(17.4)	(14.8)	(17.0)	(18.9)	(17.0)
	.05-.09	70	23	46	37	63	29
	(8.1)	(5.3)	(5.6)	(9.0)	(7.6)	(7.0)	
.10-.14	31	26	36	11	28	16	
	(3.6)	(5.9)	(4.4)	(2.7)	(3.4)	(4.4)	
.15+	24	13	29	14	11	8	
	(2.8)	(3.0)	(3.5)	(3.4)	(1.3)	(1.9)	

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
	202	466	616	670	730
	245	606	690	660	683
	581	797	638	970	726
93	674	697	670	753	750
112	534	600	706	830	661
98	525	646	661	743	624
124	532	613	529	733	628
104	484	626	638	737	683
109	595	673	560	646	573
143	575	567	711	793	
181	560	763	647	876	
142	742	962	647	782	

**ASAP SITE:
VERMONT**

TIME FRAME
Baseline: January 1968-
June 1971
Operational: July 1971-
December 1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	.90	-.41	-.10
Standard Deviation	.66	.51	.42
Value of t Test	1.38	-.80	-.24
Delay Time	0 mos.	0 mos.	4 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$Y_t = .90 X_{Ft} - .41 X_{St} - .10 X_{At-4} + e_t$$

NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975	1976
0	0	0	0	0	1	1	0	0
1	0	1	0	0	1	0	0	0
1	2	1	0	0	2	2	1	1
2	1	0	1	0	2	2	0	1
1	3	0	4	5	0	2	1	2
2	1	1	3	1	0	1	3	0
0	2	2	2	1	2	2	1	0
4	3	1	3	2	3	1	3	3
1	4	1	3	3	1	1	1	2
0	0	0	5	2	7	2	0	1
2	2	1	0	2	1	2	2	1
0	0	0	1	0	1	1	1	2

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
VERMONT DAY
FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	-1.26	.59
Standard Deviation		.40	.30
Value of t Test		-3.15	1.97
Delay Time		0 mos.	4 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -1.26 X_{St} + .59 X_{At-4} + e_t$$

DAY FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974
1	3	1	1	1	1	0
0	1	0	0	1	3	0
1	0	1	0	0	1	0
0	2	1	2	1	4	1
1	0	0	1	2	1	0
2	0	3	4	2	2	2
0	3	1	1	4	2	2
2	1	1	0	3	4	0
3	2	3	1	2	2	0
1	1	2	4	3	4	0
4	4	1	1	2	1	3
2	2	2	4	1	2	1

**COMPARISON SITE NIGHT FATAL
CRASH ANALYSIS**

**COMPARISON SITE:
WEST VIRGINIA**

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-9.74	10.57	.82
Standard Deviation	3.24	2.73	1.91
Value of t Test	-2.92	3.87	.43
Delay Time	3 mos.	2 mos.	0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -9.74 X_{Ft-3} + 1.06 X_{St-2} + .82 X_{At} + (1 + .29B) e_t$$

**COMPARISON SITE NIGHT FATAL
CRASH DATA**

1968	1969	1970	1971	1972	1973	1974	1975
0	67	10	13	11	12	0	0
0	73	14	13	20	9	16	17
0	75	10	12	13	12	15	16
0	27	11	20	14	22	21	19
0	18	21	16	13	23	20	18
0	21	15	17	19	13	17	18
0	26	23	21	28	13	27	14
0	24	26	20	27	17	22	23
0	21	9	19	20	17	29	8
0	3	16	22	15	15	42	9
0	10	30	12	10	14	26	17
0	13	16	24	16	11	18	19

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	- 1.48	4.56	- 3.49
Standard Deviation	5.06	4.24	2.42
Value of t Test	-.29	1.08	- 1.44
Delay Time	4 mos.	5 mos.	5 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -1.48 X_{C_{t-4}} + 4.57 X_{N_{t-5}} - 3.48 X_{A_{t-5}} + (1 + .23B)(1 - .77B^{12})e_t$$

NIGHT INJURY CRASH DATA

1968	1969	1970	1971	1972	1973	1974
32	44	46	28	48	48	27
34	33	47	32	36	44	25
37	39	37	37	37	40	48
38	33	41	36	37	46	32
46	53	40	36	43	46	43
38	43	39	50	48	32	39
	57	45	52	54	53	48
	54	49	66	52	38	54
	44	52	56	50	33	57
47	56	52	54	49	42	55
49	47	42	44	41	37	38
43	63	45	65	33	29	36

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Vermont 06
SITE TYPE: High Arrest or Alcohol-Involved Arrest Sites

Survey Number	1	2	3	4	
Date (mo/yr)	7/71	10/71-11/71	6/72-10/72	9/73-10/73	
Cases (N)	334	65	220	224	
BACs (R)	334	63	216	217	
% (BAC)	(100)	(95.9)	(98.2)	(95.9)	
D I S T R I B U T I O N	NEG (0.0)	206 (62.3)	42 (66.7)	133 (61.6)	114 (52.5)
	.01-.04	77 (23.1)	14 (22.2)	59 (27.3)	64 (29.5)
	.05-.09	34 (10.2)	3 (4.8)	14 (6.5)	22 (10.1)
	.10-.14	9 (2.7)	2 (3.2)	6 (2.8)	9 (3.7)
	.15+	6 (1.8)	2 (3.2)	4 (1.9)	9 (4.1)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975	1976
21	66	68	115	86	118
19	77	53	78	66	76
47	73	91	116	93	90
35	77	97	80	92	66
46	73	118	97	51	89
60	65	96	89	63	75
36	60	109	60	76	58
45	66	95	74	62	60
77	109	110	92	66	111
42	72	85	68	69	
51	70	130	63	81	
47	58	96	64	104	

**ASAP SITE:
WICHITA
KANSAS**

TIME FRAME
Baseline: 1969-1971
Operational: 1972-1974
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-.44	.17	.39
Standard Deviation	.52	.43	.31
Value of t Test	-.85	.40	1.26
Delay Time	1 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: March 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.44 X_{Ft-1} + .17 X_{St} + .39 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
3	2	1	0	3	2
1	4	2	1	2	2
3	2	3	2	0	0
1	2	3	4	0	3
1	3	3	3	4	3
4	1	2	3	3	3
3	0	2	1	1	3
1	1	2	3	3	3
0	2	1	3	1	1
2	2	1	2	4	1
1	2	1	3	1	2
1	0	4	2	3	4

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
WICHITA DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.90	CCF = 0	-.06
Standard Deviation	.58		.32
Value of t Test	-1.55		.19
Delay Time	2 mos.		0 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.90 X_{Ft-2} - .06 X_{At} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
1	2	4	3	1	2
0	2	1	2	0	1
3	3	1	3	0	2
2	1	1	2	1	1
3	1	2	0	2	1
1	0	2	5	3	2
4	3	0	1	4	2
4	0	3	3	1	3
4	0	3	1	1	4
4	2	4	2	4	3
3	2	3	1	4	1
1	2	1	2	1	3

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
BIRMINGHAM, ALABAMA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.33	.81	-.60
Standard Deviation	.66	.55	.38
Value of t Test	-.50	1.48	-1.58

TIME SERIES MODEL EQUATION

$$Y_t = -.33 X_{Ft} + .81 X_{St} - .60 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	9	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	3	0	3	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crises	55 mph NMBL	Exper. DUMVAR
Parameter Estimate	1.31	- 2.39	1.67
Standard Deviation	1.02	.83	.82
Value of t Test	1.29	- 2.89	3.04
Delay Time			

TIME SERIES MODEL EQUATION

$$Y_t = 1.31 X_{Ft} - 2.39 X_{St} + 1.67 X_{At} + \theta_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	6	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	2	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	2	6	6	1
0	3	1	1	4	10	0	1
0	3	2	1	0	6	2	3

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Kansas 32
SITE TYPE: Systematic Random Selection of Sites

Survey Number	1	2	3	4	
Date (mo/yr)	11/71	10/72- 11/72	10/73- 11/73	10/74- 11/74	
Cases (N)	911	741	737	827	
BACs (n)	644	700	691	768	
% (BN)	(92.7)	(94.5)	(93.8)	(92.9)	
D I S T R I B U T I O N	NEG (.00)	659 (76.1)	494 (70.6)	496 (71.8)	577 (75.1)
	.01-.04	108 (12.8)	116 (16.6)	137 (19.8)	100 (13.4)
	.05-.09	49 (5.8)	53 (7.6)	41 (5.9)	56 (7.3)
	.10-.14	23 (2.7)	22 (3.1)	9 (1.3)	18 (2.3)
	.15+	5 (.6)	15 (2.1)	8 (1.2)	14 (1.8)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975
58	50	124	134	66
50	60	135	128	49
54	73	157	126	66
46	52	125	69	64
57	52	96	62	74
40	46	91	94	37
71	77	108	76	45
64	66	109	94	58
64	106	121	108	43
49	151	92	90	63
47	172	117	62	79
56	164	136	79	75

GROUP 3 COMMENCING JULY 1972

ASAP SITE:
DELAWARE

TIME FRAME
Baseline: July 1969-
June 1972
Operational: July 1972-
June 1975
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	- 1.83	- .45	.58
Standard Deviation	1.03	.80	.69
Value of t Test	- 1.58	- .56	.81
Delay Time	1 mos.	8 mos.	2 mos.

Date of 55 mph NMSL: November 1973

TIME SERIES MODEL EQUATION

$$Y_t = -.45 X_{Ft-6} - .45 X_{St-6} + .56 X_{At-2} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
2	3	6	7	3	2
2	5	3	7	5	9
1	5	5	2	4	3
3	7	4	9	6	5
3	5	4	5	5	9
2	4	5	4	3	6
2	2	2	7	4	4
3	1	4	4	4	3
4	1	4	5	2	1
6	3	5	5	3	2
6	5	6	7	6	3
5	4	6	5	5	5

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
DELAWARE DAY
FATAL CRASHES

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- 3.90	- 2.20	- .32
Standard Deviation	3.37	2.54	2.14
Value of t Test	- 1.16	- .86	- .15

TIME SERIES MODEL EQUATION

$$Y_t = -3.90 X_{Ft} - 2.20 X_{St} - .32 X_{At} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974	1975
	10	8	14	15	6	13
	22	17	15	15	10	13
12	15	11	10	10	13	
24	11	20	17	11	13	

Quarterly

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
SAN DIEGO,
CALIFORNIA

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- .60	.44	.41
Standard Deviation	.85	.53	.44
Value of t Test	.92	.83	.93

TIME SERIES MODEL EQUATION

$$Y_t = -.60 X_{Ft} + .44 X_{St} + .41 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	3
0	0	1	2	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	3	3	3	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

**RESULTS OF ASAP ROADSIDE
BREATH TEST SURVEYS**

ALCOHOL-RELATED ARRESTS

1972	1973	1974
	773	769
	747	772
764	701	739
878	696	691

Figures represent Quarterly Total A/R Arrests; all figures are operational (no baseline data)

ASAP BITF:
IDAHO

TIME FRAME

Baseline: July 1966-
June 1972
Operational: July 1972
June 1975
Post Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Gross	55 mph Normal	ASAP Duration
Parameter Estimate	-2.25	0.12	1.71
Standard Deviation	1.07		1.1
Value of T Test	-1.00		-1.00
Delay Time	1.000		0.000

Time of 50 MPH BITF, January 1974

DAY FATAL CRASH ANALYSIS

COMPARISON SITE
IDAHO BITF
FATAL CRASHES

	Fuel Gross	55 mph Normal	ASAP Duration
Parameter Estimate	-1.70	1.00	-1.60
Standard Deviation	1.21	1.07	1.17
Value of T Test	-2.10	.00	1.41
Delay Time	1.000	2.000	0.000

**COMPARISON SITE NIGHT FATAL
CRASH ANALYSIS**

COMPARISON SITE
BY OTHERS

	Fuel Gross	55 mph Normal	ASAP Duration
Parameter Estimate	-2.00	0.10	1.0
Standard Deviation	1.40		1.5
Value of T Test	-2.14		-1.2
Delay Time	0.000		0.000

TIME SERIES MODEL EQUATION

$$(1 - B^12)Y_t = -0.05 X_{t-1} - 1.21 X_{\Delta t} + (1 - .22B^12)(1 + .77B^12)e_t$$

TIME SERIES MODEL EQUATION

$$(1 - B^12)Y_t = 1.50 - 3.70 X_{t-1} + 1.00 X_{t-2} - 1.50 X_{\Delta t} + (1 - .07B^12)e_t$$

TIME SERIES MODEL EQUATION

$$(1 - B^12)Y_t = -2.99 X_{t-1} + .02 X_{\Delta t} + (1 - .40B^12)e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
4	12	5	4	5	7
1	4	5	9	10	8
2	11	5	6	8	6
5	8	8	10	14	8
16	15	9	17	14	17
7	0	17	14	16	12
11	14	14	16	14	11
8	10	15	8	14	12
9	10	15	10	9	18
16	8	12	10	11	8
12	1	1	12	5	11
5	4	2	5	4	6

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
5	6	12	8	11	12
4	8	7	10	6	8
7	6	9	9	11	10
2	12	8	10	1	7
11	12	14	14	15	14
6	9	10	15	17	17
7	14	15	12	15	20
15	16	18	12	20	21
9	12	20	21	19	18
14	17	18	14	18	14
19	14	12	14	11	16
17	10	12	14	8	12

**COMPARISON SITE NIGHT FATAL
CRASH DATA**

1969	1970	1971	1972	1973	1974
2	1	2	2	5	4
3	2	4	7	1	3
5	2	8	6	3	1
4	5	5	5	6	8
11	17	1	4	6	1
8	9	0	10	8	0
1	12	11	8	11	10
14	11	10	15	12	13
8	8	7	5	7	12
6	7	4	8	6	11
5	1	7	1	6	14
7	1	0	0	10	2

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-6.12	13.72	-37.26
Standard Deviation	17.74	15.03	14.48
Value of t Test	-.34	-1.31	-2.57
Delay Time	0 mos.	1 mos.	3 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -6.12 X_{F1} + 13.72 X_{GS-1} - 37.26 X_{AI-3} + (1 - .45B^{12})e_t$$

NIGHT INJURY CRASH DATA

1969	1970	1971	1972	1973	1974
99	179	157	167	164	128
100	155	189	178	148	140
107	199	196	132	183	195
109	191	175	189	185	180
152	226	273	240	225	195
136	261	226	261	230	239
183	248	257	293	235	225
196	261	258	273	254	243
161	211	231	271	229	239
190	239	275	246	196	213
251	196	214	192	194	224
229	201	199	212	213	217

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Idaho-63
SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	3	4	
Date (month)	4/72- 6/72	4/73- 6/73	4/74- 6/74	4/75- 6/75	
Cases (N)	1614	2013	1819	1477	
BACs (#)	1433	1835	1772	1455	
% (#N)	(88.8)	(91.2)	(97.4)	(98.5)	
D I S T R I B U T I O N	NCO (.00)	1031 (71.8)	1388 (73.9)	1289 (71.8)	1070 (73.5)
	.01-.04	211 (14.7)	271 (14.8)	274 (15.5)	245 (16.9)
	.05-.09	112 (7.8)	138 (7.8)	141 (8.0)	93 (6.4)
	.10-.14	46 (3.2)	46 (2.5)	55 (3.1)	31 (2.1)
	.15+	33 (2.3)	24 (1.2)	33 (1.8)	18 (1.1)

ALCOHOL-RELATED ARRESTS

1971	1972	1973	1974	1975
	283	533	578	513
	279	614	631	510
	370	620	723	719
	389	603	632	637
	375	579	603	623
	361	564	651	599
218	371	537	668	583
214	524	511	672	533
251	562	646	708	506
230	662	570	662	431
249	574	522	607	451
217	547	597	595	455

**ASAP SITE:
LOS ANGELES
CALIFORNIA**

TIME FRAME
Baseline: July 1969-
June 1972
Operational: July 1972-
June 1975
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crises	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	-.72	.65
Standard Deviation		.88	.54
Value of t Test		-.82	.09
Delay Time		1 mos.	4 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$Y_t = -.72 X_{St-1} + .50 X_{At-4} + \epsilon_t$$

NIGHT FATAL CRASH DATA

1970	1971	1972	1973	1974
1	3	3	4	5
4	3	4	1	1
5	3	1	4	3
2	7	7	5	5
5	3	6	4	5
5	5	7	5	5
4	4	4	2	4
7	5	3	1	4
2	1	8	4	5
3	2	5	5	6
3	4	5	5	1
4	3	3	4	6

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
LOS ANGELES
DAY FATAL CRASHES**

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.79	CCF = 0	-.32
Standard Deviation	.85		.49
Value of t Test	-.93		-.55
Delay Time	0 mos.		4 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.79 X_{Ft} - .32 X_{At-4} + (1 - .34B)\epsilon_t$$

DAY FATAL CRASH DATA

1970	1971	1972	1973	1974
5	3	3	2	2
4	6	2	0	2
4	3	5	5	2
7	4	5	2	5
5	5	11	4	3
3	3	5	5	7
4	9	4	8	2
3	0	4	1	6
6	2	3	9	1
3	4	9	1	3
6	4	3	9	6
5	8	8	3	7

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

**COMPARISON SITE:
BIRMINGHAM,
ALABAMA**

	Fuel Crises	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	-.06	.51	-.11
Standard Deviation	.59	.59	.43
Value of t Test	-.87	.86	.26

TIME SERIES MODEL EQUATION

$$Y_t = -.06 X_{Ft} + .51 X_{St} - .11 X_{At} + \epsilon_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	1	1	1	1	1	0
1	1	1	1	0	1	2	2
1	2	1	1	1	2	1	2
2	1	3	4	0	3	4	2
2	4	4	3	0	2	3	2
2	3	2	4	2	1	1	1
1	4	0	1	2	5	3	0
1	8	3	2	1	2	3	0
3	1	2	4	0	1	3	0
1	0	2	5	1	1	2	0
3	3	2	3	2	3	2	0
1	0	3	0	3	0	1	0

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
LOUISVILLE,
KENTUCKY

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	1.80	-1.79	.65
Standard Deviation	1.10	.92	.71
Value of t Test	1.63	-1.95	.92
Delay Time			

TIME SERIES MODEL EQUATION

$$Y_t = 1.80 X_{Ft} - 1.79 X_{55t} + .65 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	3	2	4	2	2	1	0
0	3	0	0	6	4	2	2
0	4	0	7	6	10	1	6
0	3	4	1	6	0	1	1
0	3	4	4	4	2	0	2
0	1	0	1	12	4	0	0
0	2	1	2	4	4	2	3
0	6	2	4	2	4	4	2
0	1	2	1	2	4	4	0
0	2	1	3	2	6	6	1
0	3	1	1	4	10	0	1
0	3	2	1	0	8	2	3

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	1.73	-8.13	-6.46
Standard Deviation	6.32	4.53	5.05
Value of t Test	.33	-1.79	-1.28
Delay Time	0 mos.	1 mos.	0 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = 1.73 X_{Ft} - 8.13 X_{55t-1} - 6.46 X_{At} + (1 - .22B^{12})e_t$$

NIGHT INJURY CRASH DATA

1970	1971	1972	1973	1974
153	94	93	97	102
114	118	100	99	70
120	124	107	108	97
128	118	93	86	99
132	126	124	115	107
135	101	126	120	110
122	121	109	104	113
138	136	97	110	103
148	127	117	115	137
133	129	133	105	103
161	139	124	163	116
149	154	116	135	114

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: California 71
SITE TYPE: High Crash or Alcohol-Involved Crash Sites

Survey Number	1	2	
Date (mo/yr)	9/72	9/73	
Cases (N)	1329	1080	
BACs (#)	1294	1030	
% (#/N)	(97.4)	(95.4)	
D I S T R I B U T I O N	NEG LOB	1011 (76.1)	660 (64.1)
	.01-.04	151 (11.7)	249 (24.2)
	.05-.09	69 (5.3)	54 (5.2)
	.10-.14	36 (2.8)	34 (3.3)
	.15+	27 (2.1)	33 (3.2)

ALCOHOL-RELATED ARRESTS

1972	1973	1974	1975	1976
591	730	744	966	466
556	735	612	662	495
604	625	662	729	554
561	763	662	603	564
533	658	702	703	437
445	522	659	672	420
485	516	632	621	
538	567	580	613	
591	541	636	495	
632	467	647	684	
652	542	688	518	
699	523	671	476	

**ASAP SITE:
PUERTO RICO**

TIME FRAME
 Baseline: July 1969-
 June 1972
 Operational: July 1972-
 June 1975
 Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMYAR
Parameter Estimate	NOT	NOT	2.63
Standard Deviation	Present	Present	2.37
Value of t Test			1.10
Delay Time			0 mos.

Date of 55 mph NMSL: Not Applicable

DAY FATAL CRASH ANALYSIS

**COMPARISON SITE:
PUERTO RICO DAY
FATAL CRASHES**

	Fuel Crisis	55 mph NMSL	Exper. DUMYAR
Parameter Estimate	NOT	NOT	5.75
Standard Deviation	Present	Present	1.25
Value of t Test			4.00
Delay Time			0 mos.

**NO
COMPARISON
SITE**

TIME SERIES MODEL EQUATION

$$Y_t = 2.63 X_{At} + \frac{(1 + .21B^{12}) e_t}{(1 - .26)B}$$

TIME SERIES MODEL EQUATION

$$Y_t = 5.75 X_{At} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
21	14	19	15	16	16
16	23	16	13	20	20
21	11	14	20	22	17
23	24	22	30	13	16
16	23	18	27	19	20
24	14	15	24	22	24
18	14	13	28	14	16
17	12	11	22	22	26
12	12	11	25	12	17
16	16	19	29	16	11
25	30	26	31	21	16
30	28	28	24	36	18

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
19	17	16	14	21	24
22	16	11	23	20	19
21	11	16	33	31	26
19	27	19	33	26	22
22	17	23	23	27	30
27	21	10	30	26	19
14	19	21	37	16	26
19	14	17	28	22	19
23	19	26	30	16	30
18	21	21	27	23	16
17	18	20	34	15	13
18	21	30	35	30	24

**NO
COMPARISON
SITE**

**NO
INJURY DATA
AVAILABLE**

**RESULTS OF ASAP ROADSIDE
BREATH TEST SURVEYS**

ASAP NAME: Puerto Rico 82
SITE TYPE: High Crash or Alcohol-Involved Crash
Sites

Survey Number		2	3
Date (mo/yr)		6/73-7/73	6/74-7/74
Cases (N)		1238	1308
BACs (N)		1238	1298
% (NR)		(100)	(99.2)
D I S T R I B U T I O N	NEG (00)	810 (65.5)	708 (54.5)
	.01-.04	225 (20.6)	286 (22.0)
	.05-.09	103 (8.3)	193 (14.9)
	.10-.14	49 (4.0)	72 (5.5)
	.15 +	19 (1.5)	39 (3.0)

ALCOHOL-RELATED ARRESTS

	1971	1972	1973	1974	1975
		111	205	427	544
		108	270	505	558
		120	430	573	749
		120	446	507	667
		104	358	492	521
		122	367	522	583
87	191	460	581	750	
73	209	268	711	917	
74	156	284	801	774	
122	221	658	910	918	
163	219	546	892	950	
121	341	524	1152	1170	

**NO
INJURY DATA
AVAILABLE**

ASAP SITE:
SALT LAKE CITY
UTAH

TIME FRAME
Baseline: July 1969-
June 1972
Operational: July 1972-
June 1975
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	CCF = 0	.24	- 1.14
Standard Deviation		.90	.64
Value of t Test		.36	- 1.78
Delay Time		3 mos.	3 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$Y_t = .24 X_{St-3} - 1.14 X_{At-3} + e_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
1	7	8	5	0	0
3	9	6	5	3	2
9	3	5	3	7	3
3	7	6	5	6	9
8	5	8	4	4	5
5	8	6	7	9	4
6	3	7	6	5	4
6	6	6	6	6	2
6	7	6	5	4	9
4	6	6	3	5	6
0	2	3	3	6	1
10	5	2	7	6	1

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
SALT LAKE CITY
DAY FATAL CRASHES

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	CCF = 0	CCF = 0	- .57
Standard Deviation			.75
Value of t Test			- .76
Delay Time			3 mos.

TIME SERIES MODEL EQUATION

$$Y_t = -.57 X_{At-3} + e_t$$

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
12	8	7	7	8	4
1	5	4	4	3	0
6	6	3	11	9	3
8	4	9	5	7	6
7	4	3	11	13	5
11	9	7	4	7	6
6	6	11	12	10	5
5	5	13	8	11	6
7	5	7	10	7	5
8	12	7	9	9	9
7	10	14	5	7	11
10	10	14	14	6	6

COMPARISON SITE NIGHT FATAL CRASH ANALYSIS

COMPARISON SITE:
SAN DIEGO,
CALIFORNIA

	Fuel Crisis	55 mph NMSL	Exper. DUMVAR
Parameter Estimate	- .60	.44	.41
Standard Deviation	.89	.93	.44
Value of t Test	- .91	.82	.94

TIME SERIES MODEL EQUATION

$$Y_t = -.60 X_{Pt} + .44 X_{St} + .41 X_{At} + e_t$$

COMPARISON SITE NIGHT FATAL CRASH DATA

1968	1969	1970	1971	1972	1973	1974	1975
0	0	1	3	4	1	4	2
0	0	1	1	3	3	3	3
0	0	0	1	4	2	2	3
0	0	4	3	2	1	3	3
0	0	1	3	0	1	3	3
0	0	4	2	2	5	2	3
0	0	2	1	2	5	3	3
0	0	3	3	2	3	1	2
0	0	2	5	5	2	3	1
0	3	2	1	1	1	2	0
0	2	4	2	6	0	5	5
0	2	2	0	1	3	3	1

NIGHT INJURY CRASH ANALYSIS

	Fuel Crisis	55 mph NMSL	ASAP DUMVAR
Parameter Estimate	-46.8	8.4	-7.1
Standard Deviation	11.0	8.0	8.1
Value of t Test	-4.25	1.05	-.86
Delay Time	1 mos.	0 mos.	0 mos.

Date of 55 mph NMSL: January 1974

TIME SERIES MODEL EQUATION

$$(1 - B^{12})Y_t = -46.8 X_{Ft-1} + 8.4 X_{St} - 7.1 X_{At} + (1 - .09B^{12})e_t$$

NIGHT INJURY CRASH DATA

1969	1970	1971	1972	1973	1974
213	223	186	193	215	187
172	172	195	192	206	137
198	204	229	197	231	201
196	219	196	213	248	240
246	219	250	236	221	211
240	216	222	268	234	248
246	268	268	219	241	248
245	243	251	231	234	267
231	230	204	225	226	226
277	231	249	227	213	240
196	197	228	228	214	205
290	228	289	310	244	251

RESULTS OF ASAP ROADSIDE BREATH TEST SURVEYS

ASAP NAME: Utah 67
SITE TYPE: General or Other Random Selection Procedure

Survey Number	1	2	3	4	
Date (mo/yr)	5/72-6/72	5/73-6/73	5/74-6/74	5/75-6/75	
Cases (N)	835	822	819	756	
BACs (#)	832	808	818	753	
% (#N)	(99.6)	(98.3)	(99.9)	(99.6)	
D I S T R I B U T I O N	NEO (00)	699 (84.0)	658 (81.4)	684 (90.0)	696 (90.9)
	.01-.04	83 (10.0)	69 (11.0)	114 (13.9)	70 (9.3)
	.05-.09	26 (3.1)	46 (5.7)	32 (3.9)	52 (6.9)
	.10-.14	17 (2.0)	11 (1.4)	15 (1.8)	16 (2.1)
	.15+	7 (.8)	4 (.5)	3 (.4)	7 (.9)

ALCOHOL-RELATED ARRESTS

1972	1973	1974	1975	1976
	417	510	713	699
	465	489	733	571
	439	491	806	630
	548	507	663	532
	499	482	662	424
	415	480	776	324
287	423	517	575	278
394	462	579	621	363
455	489	682	583	338
489	530	714	622	
516	532	775	513	
410	697	763	625	

ASAP SITE:
SIOUX CITY
IOWA

TIME FRAME
Baseline: July 1969-
June 1972
Operational: July 1972-
June 1975
Post-Operational:

NIGHT FATAL CRASH ANALYSIS

	Fuel Consumption	80 mph Miles	ASAP Equivalent
Parameter Estimates	.11	.04	-.07
Standard Deviation	.07	.03	.05
Value of t Test	1.73	2.21	-1.08
Delay Time	1.000	0.000	1.000

Date of 80 mph: 1972 March 1972

DAY FATAL CRASH ANALYSIS

COMPARISON SITE:
SIOUX CITY IOWA
FATAL CRASHES

	Fuel Consumption	80 mph Miles	ASAP Equivalent
Parameter Estimates	.13	.04	-.07
Standard Deviation	.08	.03	.05
Value of t Test	1.85	1.68	-1.06
Delay Time	1.000	0.000	1.000

**COMPARISON SITE NIGHT FATAL
CRASH ANALYSIS**

COMPARISON SITE:
MIAMI,
FLORIDA

	Fuel Consumption	80 mph Miles	ASAP Equivalent
Parameter Estimates	.04	-.10	.10
Standard Deviation	.04	.07	.05
Value of t Test	.04	1.75	.30

TIME SERIES MODEL EQUATION

$$Y_t = .71 X_{t-1} + .04 X_{t-2} - .42 X_{t-3} + \epsilon_t$$

TIME SERIES MODEL EQUATION

$$Y_t = .73 X_{t-1} + .01 X_{t-2} - .27 X_{t-3} + \epsilon_t$$

TIME SERIES MODEL EQUATION

$$Y_t = .54 X_{t-1} - .70 X_{t-2} + .13 X_{t-3} + \epsilon_t$$

NIGHT FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
0	1	1	0	0	1
0	1	1	0	0	0
1	0	0	0	1	0
1	0	0	0	0	1
0	1	1	0	0	1
1	0	0	2	0	0
1	0	0	2	1	1
0	2	0	0	0	1
1	0	0	0	1	0
1	0	0	0	0	0
1	1	0	0	1	0
1	1	0	0	1	0

DAY FATAL CRASH DATA

1969	1970	1971	1972	1973	1974
0	0	0	0	1	1
2	0	1	0	0	1
1	0	0	0	0	0
1	1	1	1	0	2
1	1	2	0	0	0
0	0	0	0	1	0
1	1	2	1	1	1
2	2	1	0	0	0
1	0	1	0	0	1
0	0	1	1	1	1
1	1	0	0	2	0
1	0	1	0	1	0

**COMPARISON SITE NIGHT FATAL
CRASH DATA**

1968	1969	1970	1971	1972	1973	1974	1975
0	2	3	1	4	1	2	0
0	2	1	2	1	4	1	1
4	1	0	1	4	1	1	2
10	10	10	0	20	0	0	2
0	1	0	5	1	0	1	1
4	2	1	4	1	2	1	0
1	4	1	0	4	1	2	0
1	0	1	0	0	0	1	1
1	0	0	1	0	4	0	1
2	2	0	1	0	2	1	1
1	1	0	0	0	1	0	1
3	1	2	1	1	4	2	2

DOT HS 804 085
June 1979