A Report to
Saskatchewan Environment
Regarding
Fire Awareness Post-Campaign Survey

July, 2003

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EXECUTIVE SUMMARY

- ★ Approximately one-third of the population appears to have a reasonable understanding of provincial burning permits. There was a modest improvement in understanding in this period compared to the initial survey.

- ★ Wind remains the principal factor that persons take into consideration when burning for constructive purposes but the number citing soil moisture conditions as a factor dramatically increased from Spring to Summer.

- ★ The largest number of residents (42%) believe the Provincial Government is responsible for the costs of suppressing a wildfire (up from 26% in the Spring), while 25 percent believe these costs accrue to whoever starts the fire (up from 17% in the Spring).

- ★ Campfire builders either use available facilities or build on suitable material. Virtually all drown their fire or bury it to ensure it has been extinguished.

- ★ SERM is the principal source of information on wildfire safety for Saskatchewan residents. In urban centres, the Fire Department is considered a source for this information.

- ★ The number of respondents who had noticed wildfire prevention messages increased slightly overall from Spring to Summer. The increase was more noticeable in the forest fringe area (48%, up from 43%). The principal source for these messages was electronic media.

- ★ There were 26 respondents who in some manner recalled the SERM advertisements. Eighteen of these were resident in the forest or forest fringe area representing 3.5 percent of that sample.

- ★ There is a high level of recall for Smokey the Bear and the message conveyed by this symbol.

I. INTRODUCTION

Decision Research Inc. was commissioned by Saskatchewan Environment to conduct a study concerning fire safety awareness in March of 2003. The Department intended to undertake efforts to increase public awareness in the area of fire safety and the Spring study was to serve as a baseline against which the effectiveness of these efforts could be assessed.

The study took the form of a random sample telephone interview survey. The sample consisted of residents of the forest and forest fringe area of northern Saskatchewan (green area on map facing) and residents from the balance of the province who engage in recreational activities in northern and north central Saskatchewan.

The survey process was repeated during late June and early July of 2003. While most of the questions were repeated from one survey period to the next, the qualification for participation by residents of the southern portion of the province changed. In the Spring survey only those who either burn brush, stubble, grass or debris in northern or central Saskatchewan were asked the complete questionnaire if they were resident in the south and only those who had taken part in or planned to take part in recreational activities in the north were administered the final portion of the questionnaire. In this instance, the Summer survey, all residents of the south were asked to complete the final portion of the questionnaire. Those who do undertake burning were again administered the full questionnaire.

A copy of the questionnaire administered in the Summer survey is attached, Appendix "A".

There were a total of 500 interviews completed with residents of the forest and forest fringe areas. This sample will have a precision (range of error factor) of ± 3.4 percent at a 95 percent level of confidence (19 out of 20 times).

There were 300 interviews completed with respondents resident in southern Saskatchewan. This sample will have a precision of ± 4.6 percent at a 95 percent level of confidence for the population as a whole and a greater degree of precision for only those who undertake recreational activities

Qualification of southern residents to complete the full questionnaire was determined by the responses to three initial screening questions appearing on the questionnaire.

A complete set of the data tables arising from this survey has been forwarded to SERM electronically. Selected top-line data appears in Appendix "B".

The Spring survey was administered over the period of March 6th to March 20th, 2003. The Summer follow-up was administered during the period of June 28th to July 9th, 2003. In both instances, no interviewers were conducted in those areas where provincial by-elections were held until after the dates of those elections.

II. SAMPLE CHARACTERISTICS

There were 389 males (47.8%) and 425 females (52.2%) interviewed in this survey.

The sample obtained from interviewing in the southern area of the province was younger than that obtained in the north in both survey periods.

AGE GROUPINGS				
	Spring		Summer	
	South	Forest	South	Forest
Under 20	8.0%	7.8%	11.6%	5.5%
20 – 29	13.7%	12.4%	13.5%	8.4%
30 – 39	19.1%	13.4%	15.8%	13.9%
40 – 49	22.4%	23.2%	22.4%	17.8%
50 – 59	18.7%	14.0%	16.2%	21.1%
60 – 69	11.4%	18.0%	14.9%	16.4%
Older	5.7%	11.2%	5.6%	15.8%

The largest concentration of population in the forests and forest fringe sample were from the city of Prince Albert comprising over 30 percent of that sample The cities of Regina and Saskatoon each contributed just over 20 percent of the respondents to the southern sample.

III. BURNING PERMITS

All residents of the forest or forest fringe and the 87 residents of the south who use fire for constructive purposes were asked a series of questions concerning provincial burning permits.

They were first asked what these burning permits are needed for. Multiple responses were recorded.

BURNING PERMITS		
	Spring	**Summer**
Stubble	136	125
Campfires	86	43
Brush	56	43
Clearing Debris	61	43
Garbage	34	3
Grass	60	68
Burning Barrel	15	35
Old Lumber	24	16
Any / All Fires	29	141
Don't Know	73	190

These respondents were then asked where these provincial burning permits are required.

PERMITS REQUIRED WHERE?		
	Spring	**Summer**
Province-wide	95	86
Central and North	24	28
Within 4.5 km of Forest	54	66
Near Forest (general)	92	114
Parks	83	91
Other	43	35
Don't Know	225 (39.3%)	164 (27.4%)

In the south 37 of 87 (43%) did not know where permits are required. Those indicating near forest or within 4.5 kilometres of a forest total 30 percent of the sample, up from 25 percent in the Spring.

Other responses included farms (13), rural areas (2), and Crown land (5).

The responses to the question as to the type of fires permits are required from males and females showed little difference, but men were much more likely to identify the correct areas where these permits are required. Sixteen percent of males but only 6 percent of females gave a correct response.

Only 6 of those who correctly identified where these permits are required were under the age of 30 years. Correct response was highest (15%) among those 40 to 49 years of age. Another 24% in this group said "near forest".

This portion of the sample was then asked during what period these provincial burning permits are required. The correct answer is from April 1st to October 31st each year.

PERMIT REQUIRED WHEN?

	Spring	Summer
Year Round	51	62
April 1 to October 31	65	66
Spring / Summer	137	62
Spring to Fall	18	26
Summer	44	102
Summer / Fall	9	–
April/May to Fall	14	6
Fall	23	34
Spring	3	23
When Fire Risk High	–	129

There were 55 residents of the forest who identified the correct period of time that permits are required (10.8 percent).

The final question specifically related to provincial burning permits asked respondents if they could identify the agency that issues provincial burning permits. Over one-third of the sample named Saskatchewan Environment and Resource Management (most often identified as Environment Department or Department of Resources).

AGENCY ISSUING BURNING PERMIT?		
	Spring	**Summer**
SERM	216 (37.8%)	231 (38.7%)
Rural Municipality	56 (9.8%)	50 (6.1%)
Forestry	36 (6.3%)	35 (4.3%)
Others		
Fire Department	6	1
Government (general)	7	6
SGI	6	3
Parks	3	7
Town / City	4	11

Forty percent were unable to provide a response to this question. Residents of the north were much more likely to identify SERM as the source of these permits at 41% compared to only 28% among southern residents.

IV. PRECAUTIONS

Those who reside in the north and residents of the south who use fire for constructive purposes were asked what conditions they take into consideration when doing so. Wind is considered the most important factor in lighting these fires. This factor was the first mention for 70 percent of the sample. There was a dramatic increase from survey to survey in the numbers referring to soil moisture. This number tripled over the three-month period.

FIRE CONDITIONS CONSIDERED

	Spring	Summer
Wind	380	420
Temperature	126	73
Humidity	64	33
Material Dryness	120	58
Weather (General)	77	74
Surface Litter	40	16
Soil Moisture	85	264
Organic Surface Material	13	17
Fire Break / Fire Guard	54	74
Water Available	23	8
Nearby Structures	28	99

All respondents in Spring were then asked if they are insured against loss from wildfire. One-in-four are. In the Summer period, only southerners who burn for constructive purposes were included.

WILDFIRE INSURANCE

Spring	Summer
193 (24.2%)	155 (25.9%)

Those 40 to 49 years of age were most likely to be insured (36%) and the incidence of insurance was higher in the forest areas.

All respondents were then asked who is responsible for the cost of suppressing a wildfire.

WILDFIRE SUPPRESSIONS COSTS

	Spring		Summer	
Whoever Starts	135	(16.9%)	207	(25.4%)
Property Owner	101	(12.7%)	56	(6.9%)
Municipality / City	158	(19.8%)	102	(12.5%)
Provincial Government	205	(25.7%)	340	(41.8%)
Federal Government	11		8	
Taxpayers	23		32	
Fire Department	14		13	
Insurance	6		1	

Other responses included “everybody” (5) and “forestry (3).

There were 119 or 15 percent of the sample who could not answer this question.

Men were more likely than women to say these costs accrue to whoever starts the fire while women were more likely to cite taxpayers.

V. CAMPFIRES

Members of both samples were asked if they ever build a campfire and a large majority indicated they do so. In both survey periods, this is more common among southerners.

BUILD CAMPFIRES		
	South	**Forest**
Spring	244 (81.6%)	332 (66.5%)
Summer	228 (75.2%)	272 (53.2%)

Males were somewhat more likely to build campfires at 66 percent compared to 58 percent among females.

The number building campfires tends to decline with the age of the respondent

AGE COMPARISONS FOR BUILDING FIRES		
Age	**Spring**	**Summer**
Under 30	85.5%	76.9%
30 to 49	77.5%	64.4%
50 to 69	65.2%	540%
70 or Over	41.7%	18.0%

Those who do build campfires were asked what steps they take to ensure their campfire is safe and then what they do to ensure their campfire is out.

CAMPFIRE SAFETY MEASURES (Total Mentions of 576)		
	Spring (of 576)	**Summer (of 500)**
Use Facilities Where Available	322	286
Build on Mineral / Rock / Sand	216	207
Clear Away Burnable Material	122	105
Keep Fire Small	58	60
Keep Fire in Sight	51	43
Have Water / Shovel Handy	63	101
Not During Wind	10	16

Other responses included digging a pit/hole (13), lids/covers (9).

ENSURING CAMPFIRE IS OUT (Total Mentions)		
	Spring (of 576)	**Summer (of 500)**
Drown Fire	544	478
Float and Stir Coals	74	76
Check Coals for Heat	28	43
Bury / Cover with Dirt / Sand	65	55
Stay / Watch Until Out	13	61

Females are more likely to attempt to use available facilities while males are more likely to build on rock or sand or to dig a pit for their campfires. There was little difference in the way the two genders approach ensuring that a campfire is out.

Middle-aged campfire builders are more likely to use available facilities than either younger or older respondents. Younger builders were more likely to have water or a shovel nearby.

VI. INFORMATION

Respondents were asked where they can obtain wildfire safety knowledge. Saskatchewan Environment and Resource Management was cited by over 26 percent of those living in the forest and forest fringe but by just 9% of those in the southern sample. SERM fell off from 25% in the Spring to 20% in Summer, but "Provincial Government" generically increased.

SOURCE OF INFORMATION WILDFIRE SAFETY KNOWLEDGE

	Spring	Summer
SERM	208	162
Provincial Government	–	78
Internet	78	68
Parks	64	87
Fire Department	38	74
Forestry	36	82
R.M.	32	22
Libraries	22	29
Media	14	27
Schools	11	12
Tourism	8	6

Others: SGI (2), Wildlife (5), word-of-mouth (2), scouts (3), experience (3), conservation officers (3).

They were then asked if they had seen or heard any information about wildfire prevention in the past year and, if so, where they had noticed this information.

Just under one-half of the total respondents had noticed information in the Spring period. This rose slightly during the most recent interviewing period.

NOTICE WILDFIRE PREVENTION INFORMATION

	South	Forest
Spring	153 (51.2%)	213 (42.6%)
Summer	157 (51.8%)	247 (48.3%)

The principal source of this information was television (multiple mentions recorded):

INFORMATION SOURCE WILDFIRE PREVENTION INFORMATION

	Spring	Summer
Television Ads	183	215
Newspapers	80	77
Radio Ads	77	93
Billboards, Outdoor	51	59
Mail, Brochures, Etc.	39	18
Parks/Campgrounds	8	–
Word-of-Mouth	7	11
Schools	5	4

Other: local fires (7), Fire Departments(4), work (3).

Respondents who did indicate they had noticed information on wildfires were then asked if they could indicate the message or what the images looked like that were conveyed by this information. Four out of ten could not do so.

UNPROMPTED MESSAGE RECALL			
SERM Ad	–	2	
"Be prepared … don't let your fire go wild"	–	12	
Fire taking off from campfire (general)	–	8	
"Fire getting away while people loading truck"	–	0	
"Fire getting away while fishing on the water"	–	4	(26 Total)
'Only you can prevent forest fires" / Smokey the Bear/ the Bear	–	65 / 71	(136 Total)
Make sure it's out	–	56	

There were many references as well to fire hazard signs or billboards. A complete set of the "other" responses has been included in Appendix "B".

The two individuals who specifically said "SERM ads" both reside in the north. Ten of the 12 who provided the images from the SERM advertisements also live in the forest or forest fringe area. The "Be prepared ..." message was given by an equal number of southern residents as residents of the forest fringe (6 each).

Ten of the12 who gave the SERM message were male but 8 of the 12 who gave the images were female. Recognition/recall for the SERM ads was slightly higher among middle aged respondents.