

**A Report to
Saskatchewan Environment
regarding Fire Awareness and
Recall Study**

March, 2004

Table of Contents

| | |
|----------------------------------|----|
| EXECUTIVE SUMMARY | i |
| I. INTRODUCTION | 1 |
| II. SAMPLE CHARACTERISTICS | 3 |
| III. BURNING PERMITS | 4 |
| IV. PRECAUTIONS | 6 |
| V. CAMPFIRES | 8 |
| VI. FIRE INFORMATION | 10 |
| VII. PROPERTY PROTECTION | 15 |

APPENDIX “A” – The Questionnaire

APPENDIX “B” – Selected Data

EXECUTIVE SUMMARY

- ★ Among those who use fire for recreational or constructive purposes, there appears to be a reasonable, and increasing, level of understanding of provincial burning permits. This group appears to be more knowledgeable than the broader population interviewed in previous surveys.
- ★ Those who burn for constructive purposes give the most consideration to wind as a factor when burning. A significant number ensure they have access to water as a precaution. The percentage taking precautions as advised in Saskatchewan Environment (SE) communications has increased.
- ★ Just over 30 percent of this group carry insurance against loss from wildfires. 70 percent either do not or do not know. The insured percentage is up (from 25 percent) when compared to the broader population base surveyed previously.
- ★ The largest number among this group (33%) believe whoever starts a wildfire is responsible for the costs of suppressing the fire. The general population appears more likely to believe this is a provincial government responsibility.
- ★ More than four-in-five of the sample build campfires. They generally use available or appropriate facilities and the vast majority drown these fires to ensure they are out.
- ★ Saskatchewan Environment is the principal source of information on wildfire safety for these residents, but a significant number (32%) do not know where to obtain this type of information.
- ★ The number who had noticed wildfire prevention messages was off slightly from that observed in July of 2003. Television was the principal source of this information.
- ★ There were 12 individuals who in some manner recalled the SE advertisements with no prompting. Six of these live in the forest or forest fringe areas. In July 2003, there were 26 unaided recalls for these messages, 18 being in the North.
- ★ Prompted recall for the Saskatchewan Environment message, “Be prepared – don’t let your fire go wild,” was 21.5% overall, higher in the forest area where the campaign was focussed. There was considerable variance with 48 percent of those in the province’s Northwest recalling this message, but only 14 percent of those in the North (Central) area.

- ★ Most northern property owners have not taken steps to reduce their risk from wildfires. Among those who have, clearing brush and creating fireguards are the most common measures.
- ★ There were 14 of 815 respondents who have accessed the Saskatchewan Environment website for information on wildfire safety. Ten of those were under 40 years of age.

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 2003 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 the Summer 2003 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.

In late March and early April of 2004 a further study was undertaken. In this instance, only those residents of the province who use fire as part of their work, recreational or seasonal cleanup activities in northern or central Saskatchewan were asked to participate. The balance of questions on the survey were similar to those previous surveys.

Where applicable, comparative data for the previous surveys has been incorporated in this report. In reviewing this data, readers should note that the change in eligibility for participation may influence apparent differences in response to a particular question.

A copy of the questionnaire administered in the study 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 engage in the use of fire for recreation or constructive purposes

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

The survey was administered during the period of March, 2004.

II. SAMPLE CHARACTERISTICS

There were 397 females (48.7%) and 418 males (51.3%) interviewed in this survey.

The number of interviews completed in Prince Albert was restricted for this survey. In earlier surveys, this city made up over 30 percent of the northern sample and in this case it was held to 20 percent.

The area was basically determined by Forward Sortation Area (postal code) within the forest and forest fringe area [NW – SOM, North – SOG, NE – S0P, SOE].

| AREA | |
|-----------------------------|---------------|
| South | – 299 (36.7%) |
| Forest/Forest Fringe | |
| Prince Albert | – 103 (12.6%) |
| Northwest | – 87 (10.7%) |
| North | – 160 (19.6%) |
| Northeast | – 166 (20.4%) |

Within the southern sample, there were 90 interviews with residents of Saskatoon and 60 with residents of Regina.

The vast majority of participants use fire only for recreational purposes (campfires, fire pits, etc.). There were only 196 who indicated they use fire for constructive purposes, mostly burning garbage/debris.

III. BURNING PERMITS

Respondents who use fire for constructive purposes (196) 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 | | |
|-----------------|---|----|
| Stubble | – | 40 |
| Campfires | – | 31 |
| Brush | – | – |
| Clearing Debris | – | 36 |
| Garbage | – | – |
| Grass | – | 14 |
| Burning Barrel | – | – |
| Old Lumber | – | 19 |
| Any / All Fires | – | 20 |
| Don't Know | – | 62 |

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

| PERMITS REQUIRED WHERE? | | |
|-------------------------|---|------------|
| Province-wide | – | 21 |
| Central and North | – | 6 |
| Within 4.5 km of Forest | – | 47 |
| Near Forest (general) | – | 44 |
| Parks | – | 30 |
| Other | – | 11 |
| Don't Know | – | 58 (29.4%) |

Those indicating near forest or within 4.5 kilometres of a forest total 46 percent of the sub-sample, up from 30 percent in earlier surveys.

The responses to the question as to where these permits are required from males and females showed little difference, but men were more likely to identify the correct areas where these permits are required and where to obtain these permits.

Only 4 of those who correctly identified where these permits are required were under the age of 30 years. Correct response was highest (36%) among those 40 to 49 years of age. Another 28 percent 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? | | |
|------------------------------|---|----|
| Year Round | – | 41 |
| April 1 to October 31 | – | 25 |
| Spring / Summer | – | 18 |
| Summer | – | 27 |
| Fall | – | 7 |
| When Fire Risk High | – | 32 |

There were 55 residents of the forest area who identified the correct period of time that permits are required (10.8 percent) in the summer of 2003. The 25 correct responses this time around represent 12.7% of those asked.

The final question specifically related to provincial burning permits asked these respondents if they could identify the agency that issues provincial burning permits. Over one-third of the sample named Saskatchewan Environment.

| AGENCY ISSUING BURNING PERMIT? | | |
|---------------------------------------|---|------------|
| Sask. Environment | – | 75 (38.9%) |
| Rural Municipality | – | 23 (11.9%) |
| Forestry | – | 9 (4.7%) |
| Fire Department | – | 4 (2.1%) |

Forty-two percent were unable to provide a response to this question. Forty-six percent of those aged 40 to 49 identified Saskatchewan Environment as the appropriate agency, highest of any age grouping.

IV. PRECAUTIONS

Those who use fire for constructive purposes were asked what precautions they take to ensure their fire does not escape. Having access to water was the most mentioned response.

| PRECAUTIONS | | |
|--------------------|---|----|
| Access to Water | – | 89 |
| Avoid Wind | – | 74 |
| Fireguards | – | 66 |
| Consider Weather | – | 17 |
| Time of Day/Year | – | 13 |

All respondents 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.

| FIRE CONDITIONS CONSIDERED | | | |
|-----------------------------------|-----------------------|-----------------------|-------------|
| | Spring '03 | Summer '03 | 2004 |
| Wind | 380 | 420 | 621 |
| Temperature | 126 | 73 | 77 |
| Humidity | 64 | 33 | 31 |
| Material Dryness | 120 | 58 | 286 |
| Weather (General) | 77 | 74 | 148 |
| Surface Litter | 40 | 16 | 54 |
| Soil Moisture | 85 | 264 | 47 |
| Organic Surface Material | 13 | 17 | 16 |
| Fire Break / Fire Guard | 54 | 74 | 29 |
| Water Available | 23 | 8 | 5 |
| Nearby Structures | 28 | 99 | 62 |

The drop in mentions for fireguards is likely due to excluding many farmers who burn stubble in the south.

All respondents were then asked if they are insured against loss from wildfire. The figure is up somewhat for this sample compared to earlier studies.

| WILDFIRE INSURANCE | | |
|---------------------------|--------------------|-------------|
| Spring 2003 | Summer 2003 | 2004 |
| 193 (24.2%) | 155 (25.9%) | 249 (30.6%) |

Those 40 to 49 years of age were not 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 2003 | Summer 2003 | 2004 |
| Whoever Starts | 135 (16.9%) | 20 (25.4%) | 256 (32.8%) |
| Property Owner | 101) | 7 (6.9%) | 66) |
| Municipality / City | 158 (12.7%) | 56 (12.5%) | 87 (8.5%) |
| Provincial Government | 205) | 10 (41.8%) | 195 (11.1%) |
| | (19.8%) | 2) |) |
| |) | 34 | (25.0%) |
| | (25.7%) | 0 |) |
| |) | | |

There were 170 or 22 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 (36% compared to 29%).

V. CAMPFIRES

Participants were asked if they ever build a campfire and more than four-in-five do so.

| BUILD CAMPFIRES | | |
|------------------------|----------|--------------|
| South | – | 82.6% |
| Prince | – | 94.2% |
| Albert | – | 91.9% |
| Northwest | – | 68.6% |
| North | – | 91.6% |
| Northeast | | |
| Total | – | 84.1% |

Males and females were equally likely to build campfires.

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

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 | | | |
|---------------------------------|---------------------------------|---------------------------------|--------------------------|
| | Spring 2003 (of 576) | Summer 2003 (of 500) | 2004 (of 683) |
| Use Facilities Where Available | 322 | 286 | 297 |
| Build on Mineral / Rock / Sand | 216 | 207 | 146 |
| Clear Away Burnable Material | 122 | 105 | 110 |
| Keep Fire Small | 58 | 60 | 170 |
| Keep Fire in Sight | 51 | 43 | 125 |
| Have Water / Shovel Handy | 63 | 101 | 201 |

| ENSURING CAMPFIRE IS OUT (Total Mentions) | | | |
|--|---------------------------------|---------------------------------|--------------------------|
| | Spring 2003 (of 576) | Summer 2003 (of 500) | 2004 (of 683) |
| Drown Fire | 544 | 478 | 584 |
| Float and Stir Coals | 74 | 76 | 48 |
| Check Coals for Heat | 28 | 43 | 25 |
| Bury / Cover with Dirt / Sand | 65 | 55 | 109 |
| Stay / Watch Until Out | 13 | 61 | 96 |

Males are more likely to attempt to use available facilities than are females. 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 get wildfire safety knowledge. Saskatchewan Environment was cited by over 28 percent.

| SOURCE OF INFORMATION WILDFIRE SAFETY KNOWLEDGE | | | |
|--|------------------------|------------------------|-------------|
| | Spring 2003 | Summer 2003 | 2004 |
| Sask. Environment | 208 | 162 | 226 |
| Provincial Government | – 78 | 78 68 | 39 44 |
| Internet | 64 | 87 | 88 |
| Parks | 38 | 74 | 75 |
| Fire Department | 36 | 82 | 42 |
| Forestry | 32 | 22 | 2 |
| R.M. | 22 | 29 | 6 |
| Libraries | 14 | 27 | 3 |
| Media | 11 | 12 | 2 |
| Schools | 8 | 6 | – |
| Tourism | | | |

There were 248 respondents or 32 percent who do not know where to obtain this information.

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.

One-half of the total respondents had noticed information during the 2003 surveys. This fell slightly during the interviewing period.

| NOTICE WILDFIRE PREVENTION INFORMATION | | |
|---|---|-------------|
| Yes | – | 379 (46.5%) |
| No | – | 423 (51.9%) |

The principal source of this information continues to be television (multiple mentions recorded):

| INFORMATION SOURCE WILDFIRE PREVENTION INFORMATION | | | |
|---|--------------------|--------------------|-------------|
| | Spring 2003 | Summer 2003 | 2004 |
| Television Ads | 183 | 215 | 196 |
| Newspapers | 80 | 77 | 87 |
| Radio Ads | 77 | 93 | 77 |
| Billboards, Outdoor | 51 | 59 | 40 |
| Mail, Brochures, etc. | 39 | 18 | 23 |
| News Reports | – | – | 104 |
| Schools | 5 | 4 | 12 |

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.

| | July 2003 | March 2004 |
|---|------------------|-------------------|
| Saskatchewan Environment Ad | 2 | – |
| “Be prepared ... don’t let your fire go wild” | 12 | 6 |
| Fire taking off from campfire (general) | 8 | 5 |
| “Fire getting away while people loading truck” | 0 | 0 |
| | 0 | 1 |
| Youth burning stubble | 4 | 0 |
| “Fire getting away while fishing on the water” | (26 total) | (12 Total) |
| “Only you can prevent forest fires” / Smokey the Bear | 136 | 105 |

| | | |
|-----------------------------|-----|-----|
| Make sure it's out | 56 | 63 |
| Total Recalling Any Message | 404 | 379 |

There were fewer than half the number of unaided references to Saskatchewan Environment messages during this period than was the case in July of 2003.

Four of the 6 who gave the “Be prepared ...” response were in their 50s, one in his 30s and one was over 70 years of age. The 5 providing the general image of a fire taking off from a campfire were across a wide age spectrum.

There were 3 males and 3 females who provided the “Be prepared ...” response and 3 of those citing the general image of an out of control campfire were male.

The one individual citing the image of a youth burning stubble was a male in his 60s.

Those who did identify a message were asked where they noticed this particular message.

| SOURCE FOR PARTICULAR SAFETY MESSAGE | | |
|---|---|-----|
| Television | – | 146 |
| Radio | – | 38 |
| Newspaper | – | 25 |
| Other Print | – | 13 |
| Outdoor | – | 77 |
| School | – | 19 |
| News | – | 9 |

Respondents were then specifically asked if they had seen or heard in the past summer Saskatchewan Environment’s fire awareness message: “Be prepared ... don’t let your fire go wild.” Just over one-in-five had.

| Noticed Saskatchewan Environment FIRE AWARENESS MESSAGE | | |
|--|---|-------------|
| Yes | – | 175 (21.5%) |
| No | – | 609 (74.8%) |
| Don't Know / Not Sure | – | 30 (3.7%) |
| <hr/> | | |
| South | – | 15.8% |
| Prince Albert | – | 26.2% |
| Northwest | – | 48.3% |
| North | – | 13.8% |
| Northeast | – | 22.3% |

They were also asked where they noticed this message.

| WHERE NOTICED SE FIRE AWARENESS MESSAGE | | |
|--|---|----|
| Television | – | 75 |
| Radio | – | 76 |
| Newspaper | – | 9 |
| Other Print | – | 12 |
| Outdoor | – | 16 |
| School | – | 2 |
| News Report | – | 10 |

Only 2 of the 22 residents of the North area of the forest cited television as their source. In the Northeast there were 21 mentions of television among the 37 who indicated they had noticed the SE fire awareness message.

Prompted recall for the Saskatchewan Environment message was 22 percent among females and 21 percent among males. It was highest among those aged 50 to 59 at 26 percent and lowest among those over 70 years of age at 16 percent.

The following charts compare the recall and recognition for wildfire safety messages in July of 2003 to the 2004 study period within the four regions of the forest and forest fringe area.

| WILDFIRE SAFETY MESSAGE (Unaided Recall) | | | | | |
|---|-----|-------------|-------------|--------------|-------------|
| | | P.A. | N.W. | North | N.E. |
| Noticed Any | 200 | 54.1 | 37.6% | 49.3% | 47.6% |
| Noticed Any | 3 | % | 54.0% | 33.5% | 36.6% |
| | 200 | 43.7 | | | |
| | 4 | % | | | |
| Mentions | | | | | |
| Be Prepared | 200 | 1 | 1 | 3 | 1 |
| | 3 | | | | |
| | 200 | 2 | – | – | 1 |
| | 4 | | | | |
| Fire from Campfire | 200 | 2 | – | 3 | 3 |
| | 3 | | | | |
| | 200 | – | – | – | 2 |
| | 4 | | | | |
| While fishing | 200 | 2 | 1 | – | – |
| | 3 | | | | |
| | 200 | – | – | – | – |
| | 4 | | | | |
| Loading Truck | 200 | – | – | – | – |
| | 3 | | | | |
| | 200 | – | – | – | – |
| | 4 | | | | |
| Burning Stubble | 200 | – | – | – | – |
| | 3 | | | | |

| | | | | | |
|--|----------|---|---|---|---|
| | 200 4 | 1 | - | - | - |
|--|----------|---|---|---|---|

Respondents were also asked if they or a member of their family have used or accessed Saskatchewan Environment’s website for information on wildfires. There were 14 individuals who had been to the website for this purpose.

Ten of these individuals were under 40 years of age and the other four were in their 50s. There were 7 males and 7 females. The largest group of these (5 individuals) live in Prince Albert with another five living in the South and four in the forest area.

VII. PROPERTY PROTECTION

Respondents were asked if they own or lease property or operate a business in or near wild lands in central or northern Saskatchewan. There were 257 individuals or 31.8 percent who indicated they do.

Those with property were asked if they had noticed any information on how to protect their property from the risks of wildfire and if so where.

There were 66 individuals who had noticed information (25.5% of property owners).

| SOURCE OF INFORMATION ABOUT PROTECTING PROPERTY | | |
|--|---|----|
| Television | – | 23 |
| Radio | – | 9 |
| Newspaper | – | 15 |
| Other Print | – | 20 |
| Outdoor | – | 4 |
| News Report | – | 3 |

Those with businesses or property were asked if they had done anything to reduce their wildfire risk. Most, 157 or 62.8 percent, had not taken any initiatives. The responses from others follow.

| STEPS TAKEN TO REDUCE RISK TO PROPERTY | | |
|---|---|-------------|
| Clear Brush / Yard | – | 42 mentions |
| Fireguards / Backfires | – | 16 mentions |
| Caution / Careful (General) | – | 7 mentions |
| Extinguisher / Alarms | – | 5 mentions |
| Keeps Grass Down | – | 4 mentions |
| Water Grass | – | 2 mentions |
| Store Hazardous Material | – | 2 mentions |
| Safe Time of Year | – | 2 mentions |
| Aware of Ban Periods | – | 2 mentions |

Other mentions included burning less, new hoses, new taps, pump truck, checking regularly, concrete structures, and insurance.

Those living in the forest and forest fringe area were less likely to have taken steps than were their southern counterparts.

APPENDIX "A"

The Questionnaire

APPENDIX "B"

Selected Data