

**Southern Foothills Study**  
**Telephone Survey**  
**Results**

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**for the:**  
**Southern Alberta Land Trust Society**



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## **1.0 BACKGROUND AND STUDY PURPOSE**

Starting in the fall of 2005, a group of concerned local people and organizations sponsored a study by Dr. Brad Stelfox to assess the cumulative effects of the rapid landscape changes taking place within the Southern Foothills area. Dr. Stelfox undertook the study using a model he had developed (ALCES®) designed to capture historical trends, both man-made and natural, and project these trends into the future.

The results of the Business as Usual scenario of the Southern Foothills Study were presented to the public at seven meetings around the study area in October and November of 2006. While over 600 people took part in these workshops, approximately 40,000 people live within the study area, and over 1 million people live immediately adjacent to the southern foothills landscape. To gauge the perceptions and understanding of the broader public, a random sample telephone survey was conducted in November and December, 2006.

The survey was completed by the Praxis Group. Representative responses were gathered from the two major urban areas (Calgary and Lethbridge), as well as more than 20 communities within or directly adjacent to the study area. The sample size was 800 respondents, and the accuracy of the survey was within 4.8%, 19 times out of 20.

The following report presents the analysis of the results from the telephone survey.

The Southern Alberta Land Trust Society (SALTS) is a locally-based, rancher-driven, non profit organization dedicated to preserving the ecological, productive, scenic, and cultural values of Alberta's Eastern Slopes, prairie, and foothill regions. SALTS was organized under the belief that the most effective and lasting conservation solutions both originate and are maintained at the community level through empowering individuals with the necessary tools and vision.

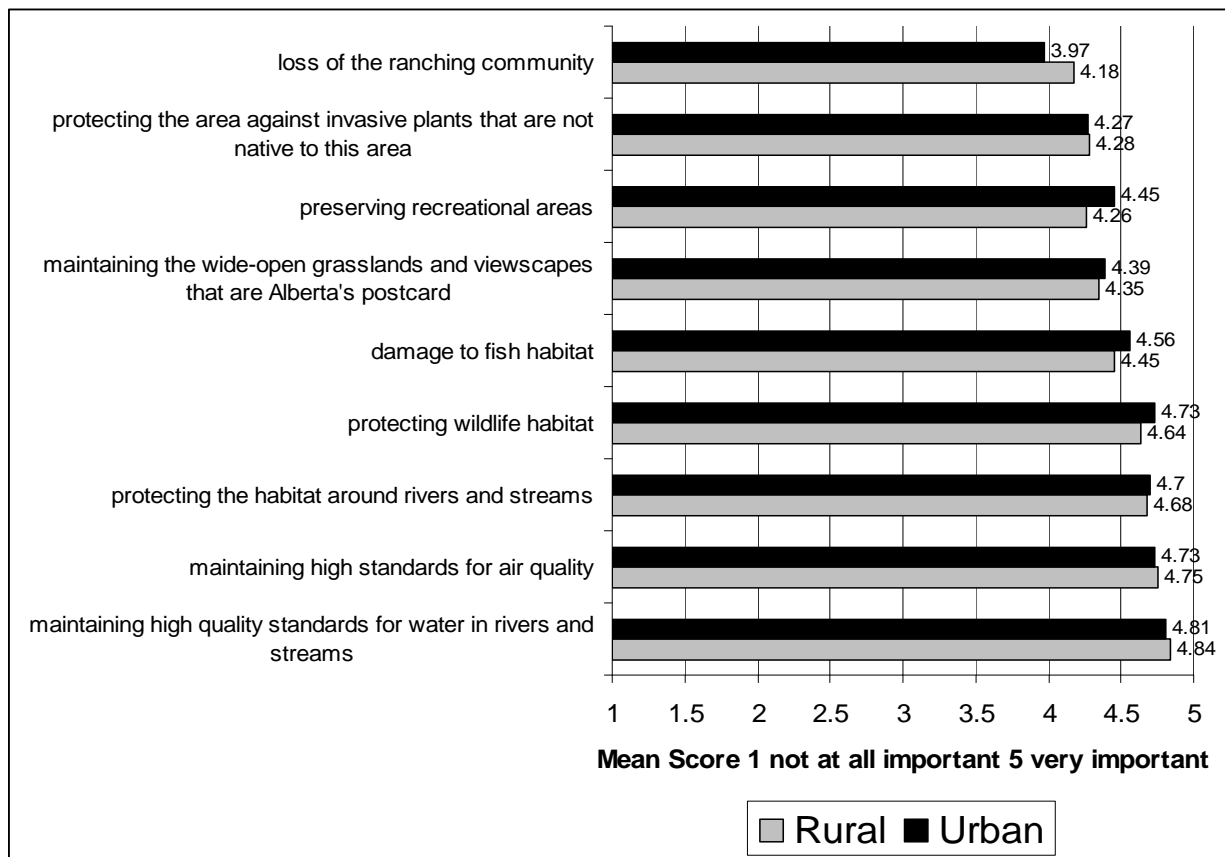
## 2.0 IMPORTANCE OF MAINTAINING THE ECOSYSTEM

Survey participants were asked to rate nine statements related to ecological integrity. Each statement was rated on a scale from 1 to 5, where 1 was not at all important and 5 was very important.

Figure 1 shows the mean scores by urban and rural respondents<sup>1</sup>. The results for both subpopulations are very consistent. The highest mean importance scores are associated with maintaining high quality standards for water in rivers and streams, maintaining high standards for air quality, and protecting habitat.

Based on analysis of variance (ANOVA) only two attributes have statistically significant differences. Rural residents place higher importance on preventing loss of the ranching community than urban residents. Urban residents place higher importance on preserving recreational areas than rural residents.

**FIGURE 1: IMPORTANCE OF MAINTAINING ECOSYSTEM**



<sup>1</sup> Urban respondents reside within the metro areas of Calgary and Lethbridge. Rural respondents reside within or around the communities located throughout the study area (e.g. Okotoks, Twin Butte, Claresholm – see Appendix 1)

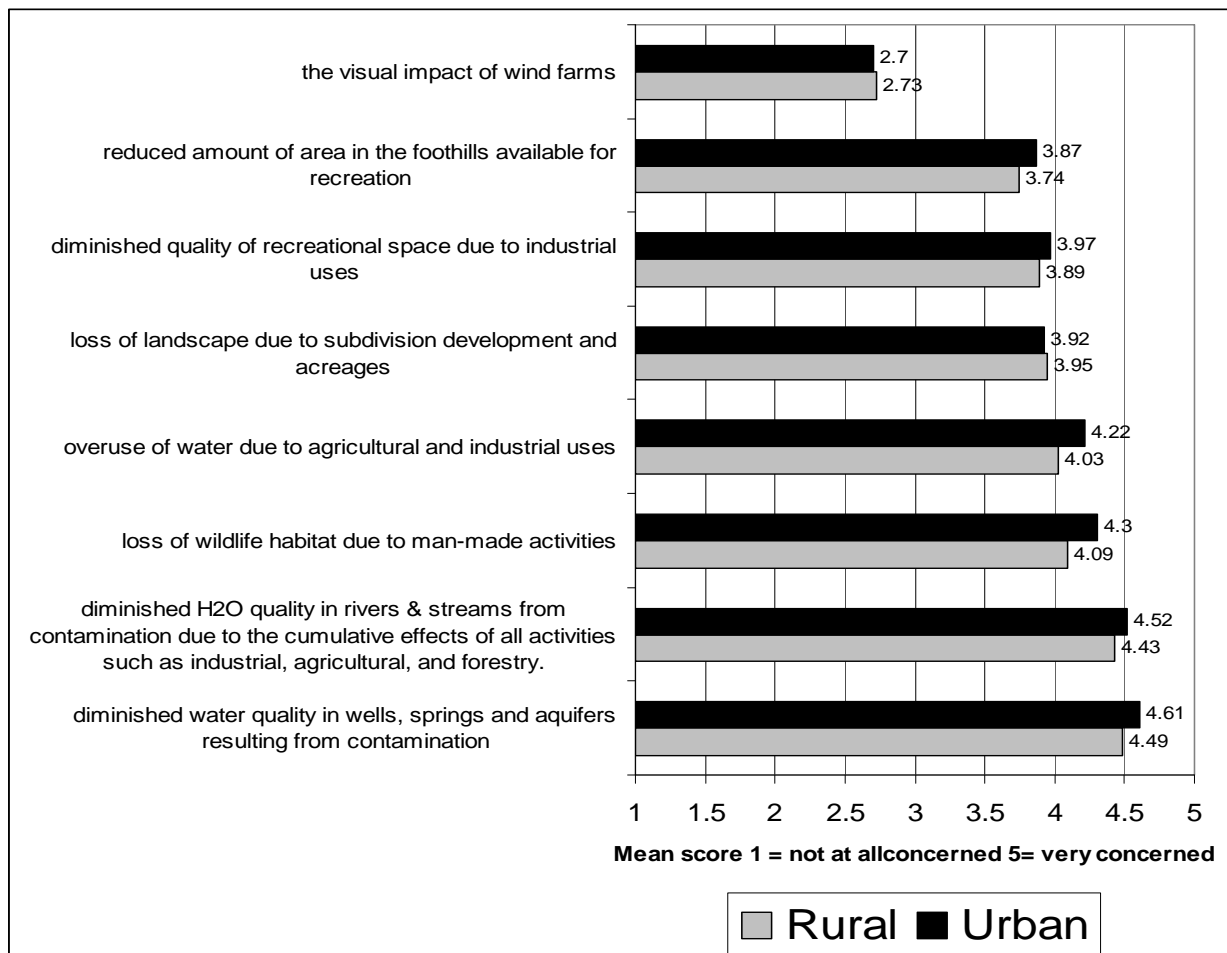
### 3.0 CONCERN FOR THE SOUTHERN FOOTHILLS LANDSCAPE

Survey participants were asked to indicate their degree of concern for eight features of the Southern Foothills Landscape. Each statement was rated on a scale from 1 to 5, where 1 was not at all concerned and 5 was very concerned.

The highest degree of concern from both urban and rural residents is in relation to diminished water quality in wells, springs, and aquifers resulting from contamination, followed by diminished water quality in rivers and streams.

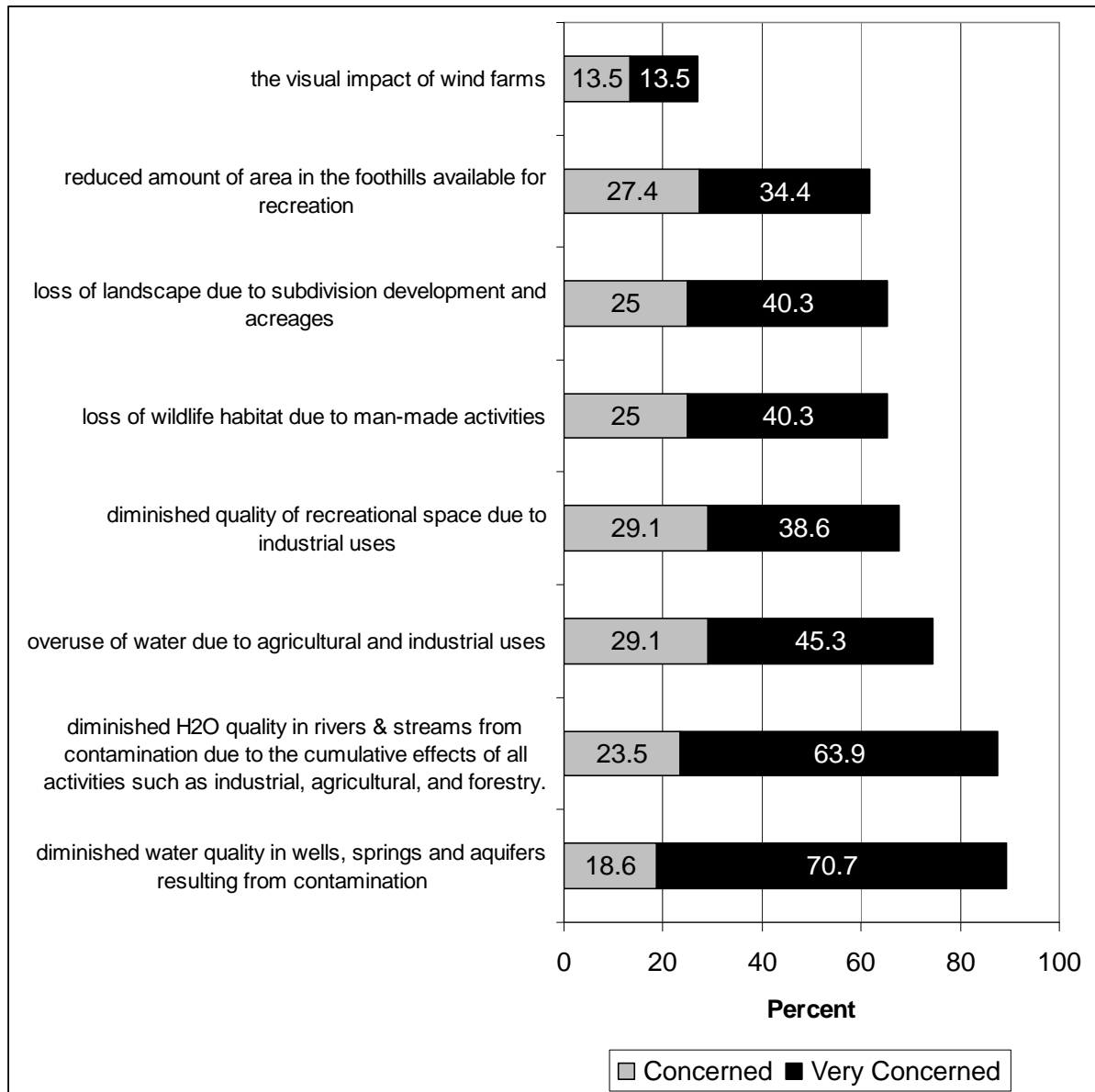
Two attributes had statistically significant differences between urban and rural respondents. Urban respondents are more concerned about over-use of water due to agricultural and industrial uses than rural respondents, and they are also more concerned about loss of wildlife habitat. However, both mean scores are very high showing that both urban and rural residents are concerned about these features of the Southern Foothills Landscape.

**FIGURE 2: CONCERN RELATED TO FEATURES OF THE SOUTHERN FOOTHILLS LANDSCAPE (MEANS SCORES BY URBAN AND RURAL POPULATIONS)**



The visual impact of windmills was rated as the area of least concern by both urban and rural respondents. Twenty-seven percent of respondents indicated they are concerned or very concerned with the visual impact of windmills. By contrast, 89% are concerned or very concerned about diminished water quality in wells, springs, and aquifers resulting from contamination. Figure 3 illustrates the percentage of ‘concerned’ and ‘very concerned’ responses for each attribute.

**FIGURE 3: CONCERN RELATED TO FEATURES OF THE SOUTHERN FOOTHILLS LANDSCAPE (FREQUENCIES FOR CONCERNED AND VERY CONCERNED)**

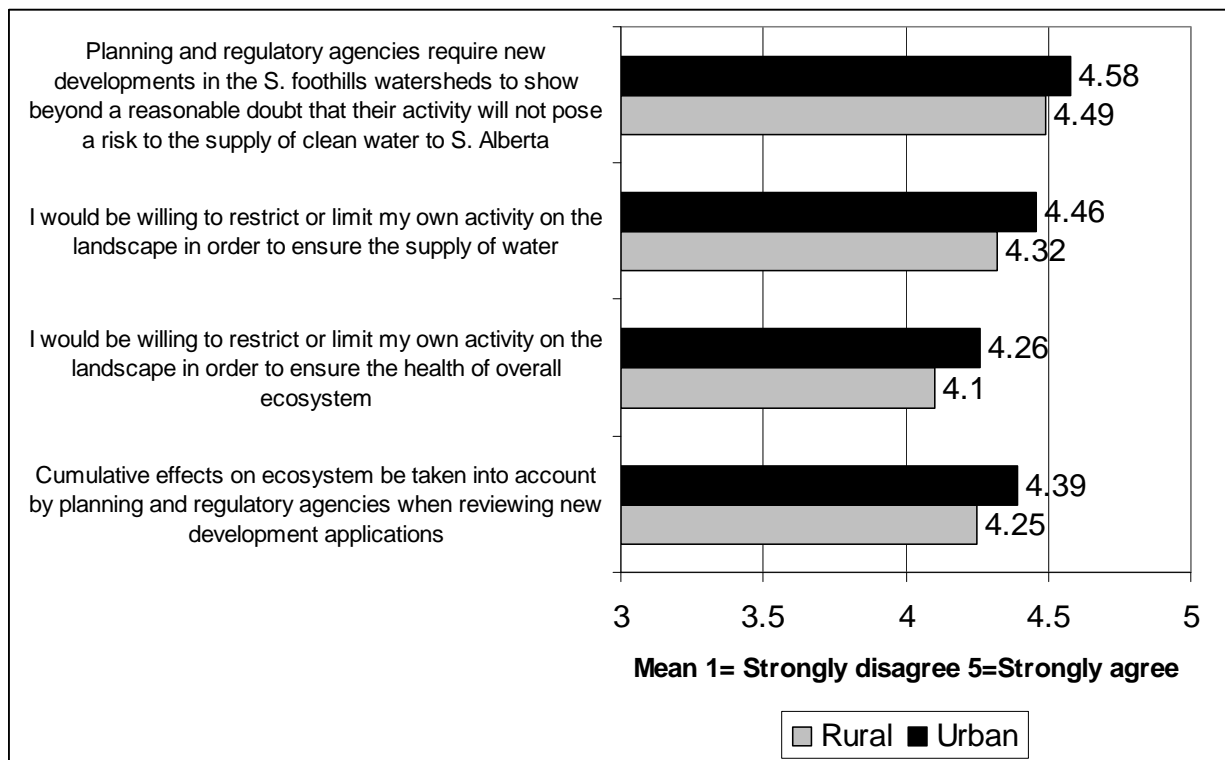


## 4.0 MANAGING CUMULATIVE EFFECTS IN THE SOUTHERN FOOTHILLS LANDSCAPE

Survey participants were asked to rate their level of agreement with four statements related to methods of managing cumulative effects. All four statements showed strong support from both urban and rural respondents. *“Planning and regulatory agencies requiring new developments in Southern Foothills watersheds to show beyond a reasonable doubt that their activity will not pose a risk to the supply of clean water to Southern Alberta”* had the highest overall mean score. For this statement 89% of respondents ‘agreed’ or ‘strongly agreed’.

All the differences between rural and urban respondents are statistically significant, with urban being higher in agreement in all cases. However, the means scores show strong support for all the measures, regardless of location.

**FIGURE 4: MANAGING CUMULATIVE EFFECTS**



## 5.0 ACTIVITIES ON LANDSCAPE

### 5.1 Rural Respondents

Rural respondents were asked which activities their household members took part in within the Southern Foothills landscape. Table 1 shows the percent of rural respondents for each of the categories provided in the survey. A respondent could choose more than one activity category.

Non-motorized recreational use is the main activity by households (58.8%). The main industrial activity is agriculture (25.9%).

**TABLE 1: ACTIVITIES BY RURAL RESIDENTS**

Activity	Percent
non-motorized recreational use	58.8
motorized recreational use	24.9
agriculture	25.9
oil and gas industry	12.8
forestry	8
mining and gravel extraction	5.1
wind energy production	4.6

Mean scores for questions on importance of ecological features within the Southern Foothills landscape are shown for the non-motorized and motorized recreational categories. Although there are differences between the groups, all of the mean scores are very high, indicating the importance of the features to both recreational groups.

**TABLE 2: IMPORTANCE OF ECOSYSTEM BY RECREATION TYPE  
(MEAN SCORES 1 = NOT AT ALL IMPORTANT TO 5 = VERY IMPORTANT)**

	non-motorized recreational use	motorized recreational use
maintaining high quality standards for water in rivers and streams	4.88	4.75
preserving recreational areas	4.39	4.47
maintaining the wide-open grasslands and viewscapes that are Alberta's postcard	4.44	4.26
protecting the area against invasive plants that are not native to this area	4.28	4.33
protecting wildlife habitat	4.72	4.59
maintaining high standards for air quality	4.84	4.73
protecting the habitat around rivers and streams	4.74	4.69
damage to fish habitat	4.52	4.34
loss of the ranching community	4.21	4.13



Mean scores for questions on importance of ecological features within the Southern Foothills landscape are shown for the major industrial categories included in the survey. All groups share the highest importance, which is maintaining high water quality standards.

Those within the agricultural community rated the importance of 'loss of ranching' higher than the other industry categories, however, all categories rated this attribute greater than 4.0 out of 5.0.

It is evident that regardless of the industry activity in which the household participate, the ecological attributes measured remain important.

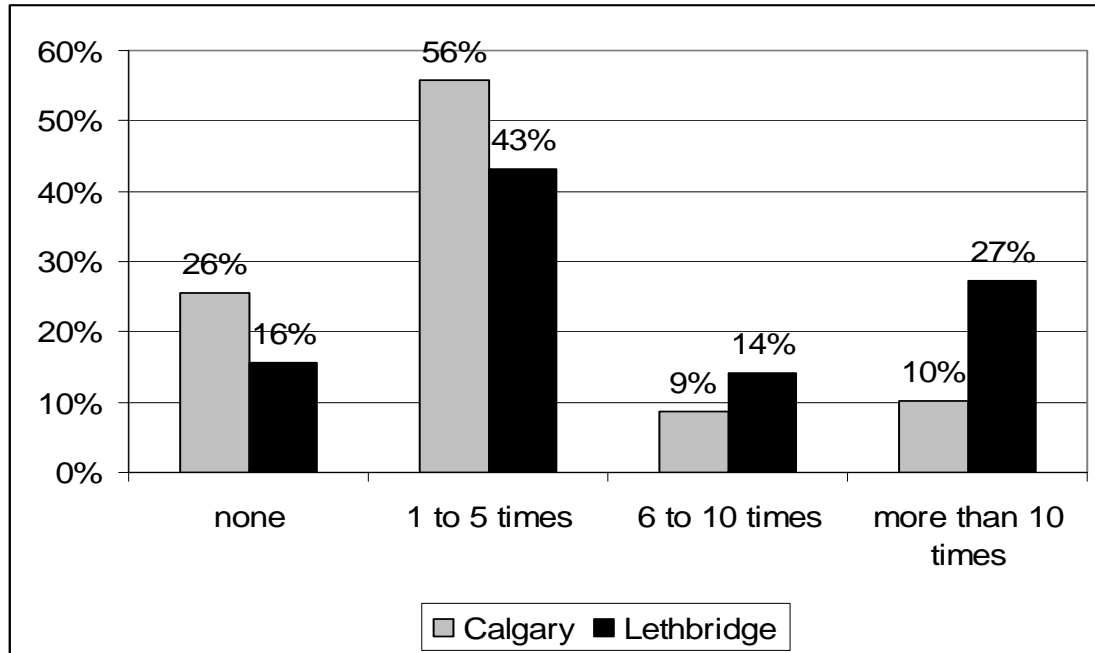
**TABLE 3: IMPORTANCE OF ECOSYSTEM BY MAJOR INDUSTRY ACTIVITY  
(MEAN SCORES 1 = NOT AT ALL IMPORTANT TO 5 = VERY IMPORTANT)**

	agriculture	oil and gas industry	forestry	mining and gravel extraction	wind energy production
maintaining high quality standards for water in rivers and streams	4.84	4.79	4.82	4.76	4.79
preserving recreational areas	4.16	4.36	4.03	4.29	4.21
maintaining the wide-open grasslands and viewsapes that are Alberta's postcard	4.34	4.26	4.33	4.24	4.26
protecting the area against invasive plants that are not native to this area	4.48	4.28	4.03	4.19	4.11
protecting wildlife habitat	4.58	4.57	4.58	4.57	4.53
maintaining high standards for air quality	4.71	4.68	4.67	4.48	4.84
protecting the habitat around rivers and streams	4.68	4.62	4.48	4.52	4.63
damage to fish habitat	4.36	4.34	4.06	4.33	4.37
loss of the ranching community	4.46	4.17	4.06	4.29	4.11

## 5.2 Urban Respondents

The majority of respondents from both Lethbridge and Calgary visit the Southern Foothills area at least once a year.

**FIGURE 5: NUMBER OF TIMES VISITING THE SOUTHERN FOOTHILLS AREA IN A YEAR**



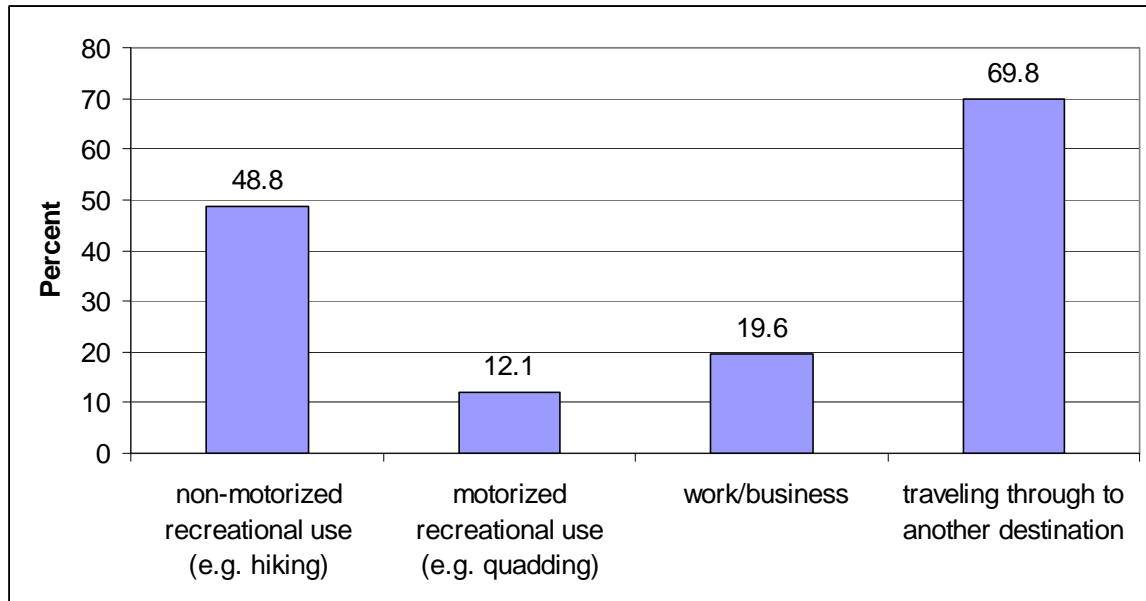
As noted earlier, urban respondents rated the importance of maintaining the ecological integrity of the Southern Foothills landscape very high (all over 4 out of 5). Statistically significant differences were noted on three attributes, where more frequent visitors rated the importance higher than non-visitors.

- maintaining the wide-open grasslands and viewsapes that are Alberta's postcard
- preserving recreational areas
- protecting wildlife habitat

The majority of urban respondents visit the area while travelling through to another destination (70%). The second highest response was non-motorized recreational use (49%). Note that respondents could choose more than one response (see figure 6).

The reason for visiting the area had no bearing on the importance of maintaining ecological integrity (it was important to all).

**FIGURE 6: MAIN REASON FOR VISITING THE SOUTHERN FOOTHILLS AREA IN A YEAR**





## **Appendix A: Demographics of Telephone Respondents**



**FIGURE 7: AGE CATEGORY**

			Which age category are you in?				
			19 to 30	31 to 50	51 to 65	over 65	Total
Region	Rural	Count	67	163	103	80	413
		% within Region	16.2%	39.5%	24.9%	19.4%	100.0%
		% within Which age category are you in?	40.1%	50.0%	55.7%	54.4%	50.1%
		% of Total	8.1%	19.8%	12.5%	9.7%	50.1%
	Urban	Count	100	163	82	67	412
		% within Region	24.3%	39.6%	19.9%	16.3%	100.0%
		% within Which age category are you in?	59.9%	50.0%	44.3%	45.6%	49.9%
		% of Total	12.1%	19.8%	9.9%	8.1%	49.9%
Total	Count	167	326	185	147	825	
	% within Region	20.2%	39.5%	22.4%	17.8%	100.0%	
	% within Which age category are you in?	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	20.2%	39.5%	22.4%	17.8%	100.0%	



**FIGURE 7: GENDER BREAKDOWN**

			Gender		Total
			Male	Female	
Region	Rural	Count	181	232	413
		% within Region	43.8%	56.2%	100.0%
		% within Gender	52.2%	48.3%	49.9%
		% of Total	21.9%	28.1%	49.9%
	Urban	Count	166	248	414
		% within Region	40.1%	59.9%	100.0%
		% within Gender	47.8%	51.7%	50.1%
		% of Total	20.1%	30.0%	50.1%
Total	Count	347	480	827	
	% within Region	42.0%	58.0%	100.0%	
	% within Gender	100.0%	100.0%	100.0%	
	% of Total	42.0%	58.0%	100.0%	



## **Appendix B: Survey Instrument**



## Introduction

Hello, my name is \_\_\_\_\_ and I'm with Praxis, a Calgary research firm. We are conducting a brief survey related to people's awareness of some environmental challenges that exist in southwestern Alberta. The survey takes no more than 5 minutes to complete and I want to assure you there are no sales or promotions associated with this study. The results of the survey will be used to help plan for the future of this area.

Would you be able to take the time right now to complete the survey?

IF YES, continue.

IF NO, ask for a suitable time to call back.

IF No, thank and discontinue. → Go to end

Before we begin, can I confirm that you are 18 or older? {If not, ask to speak to an adult and repeat from start}. Please be assured that no individual information gathered in this survey will be reported and the information is strictly for survey analysis purposes.

The questions we are about to ask refer to the area of Alberta that is between Calgary and Lethbridge and between Highway 2 on the east to the frontal mountain range on the west. This is referred to as the Southern Foothills landscape.

### Urban Sample (Calgary and Lethbridge)

**Q1→** How many times do you travel to the Southern Foothills area within a typical year?

1= none → go to 4

2= 1 to 5 times

3= 6 to 10 times

4= more than 10 times

→ go to Q2

**Q2→** What are the main activities that you take part in when traveling to this area?

1= non-motorized recreational use (e.g. hiking)

2= motorized recreational use (e.g. quadding)

3= work/business

4= traveling through to another destination

5= other (specify)

→ go to Q4

**Rural Sample only**

**Q3→** *Please indicate which of the following activities your household is involved in within the Southern Foothills landscape?*

- 1= non-motorized recreational use (e.g. hiking)
- 2= motorized recreational use (e.g. quadding)
- 3= agriculture
- 4= oil and gas industry
- 5= forestry
- 6= mining and gravel extraction
- 7= wind energy production
- 8= other (specify)

**→ go to Q4**

**High River, Okotoks, Cowley, Bellevue, Blairemore, Hillcrest Mines, Hill Spring, Lundbreck, Pincher Creek, Twin Butte, Black Diamond, Cayley, Claresholm, Fort McLeod, Longview, Nanton, Standoff, Stavely, Turner Valley and surrounding areas,**

**Q4→** *Please indicate how important each of the following are to you, by rating each statement on a scale of 1 to 5, where 1 is not at all important and 5 is very important.*

- 1= maintaining high quality standards for water in rivers and streams
- 2= preserving recreational areas
- 3= maintaining the wide-open grasslands and viewsapes that are Alberta's postcard
- 4= protecting the area against invasive plants that are not native to this area
- 5= protecting wildlife habitat
- 6= maintaining high standards for air quality
- 7= protecting the habitat around rivers and streams
- 8= damage to fish habitat
- 9= loss of the ranching community

**Q5 →** *The Southern Foothills landscape is constantly changing, as are all areas of Alberta. Please indicate how concerned you are personally about the future state of the Southern Foothills landscape. Please rate your level of concern on a scale of 1 to 5 where 1 is not at all concerned and 5 is very concerned for each of the following:*

- 1= diminished water quality in rivers and streams resulting from contamination due to the cumulative effects of all activities such as industrial, agricultural, and forestry.
- 2= overuse of water due to agricultural and industrial uses
- 3= diminished quality of recreational space due to industrial uses
- 4= reduced amount of area in the foothills available for recreation
- 5= loss of landscape due to subdivision development and acreages
- 6= the visual impact of wind farms
- 7= loss of wildlife habitat due to man-made activities
- 8= diminished water quality in wells, springs and aquifers resulting from contamination



**Q6 →** *Recent studies have shown that the environmental indicators of health in the southern Foothills area have declined over the past decades and will continue to decline if past and current trends continue. This is not necessarily due to any one activity, but the cumulative effect of all activities in the area. With this in mind, please indicate your level of agreement or disagreement with the following statements, where 1 is strongly disagree and 5 is strongly agree.*

- 1= Cumulative effects on the ecosystem should be taken into account by planning and regulatory agencies when reviewing new development applications
- 2= I would be willing to restrict or limit my own activity on the landscape in order to ensure the health of the overall ecosystem
- 3= I would be willing to restrict or limit my own activity on the landscape in order to ensure the supply of water
- 4= Planning and regulatory agencies should require new developments in the southern foothills watersheds to show beyond a reasonable doubt that their activity will not pose a risk to the supply of clean water to southern Alberta

***Finally I would like to ask you a few questions about you and your family that will help us classify your answers. This information will only be used for helping us analyze the survey results and your responses will remain confidential.***

**Q7.** *How long have you lived in Southern Alberta?*

Record # of years Q9 \_\_\_\_\_

**Go to → Q8**

**Q8.** *How many members of your household, including yourself, are in the following age groups (Read list)?*

- 1= 0 to 12
- 2= 13 to 18
- 3= 19 to 30
- 4= 31 to 50
- 4= 51 to 65
- 5= over 65

**Go to → Q9**

**Q9.** *Which age category are you in (Read list)?*

- 1= 19 to 30
- 2= 31 to 50
- 3= 51 to 65
- 4= over 65

**Go to → Q10**

**Q10.** *And finally, can you tell me what your occupation is:*

**Q11.** *Record gender {do not ask}*



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1= Male  
2= Female

***END →Thank you for your time. Your views are appreciated.***