Health Canada **Santé Canada**

Attitudes Toward Environmental Noise in Rural and Non-Rural Canada
Methodological Report

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Canada

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1.0 - Executive Summary

1.1 - Background and objectives

Health Canada's provision of advice on noise and health for impact assessments (IA) under the Impact Assessment Act (IAA) is formulated from a global science base that is derived from social surveys conducted in developed urban/sub-urban areas. The department has very little information on attitudes and expectations toward noise in rural or remote communities, and no data that is specific to Indigenous Canadians. This has been identified as a knowledge gap for several years insofar as Health Canada's current guidelines (Health Canada, 2017) include a significant decibel adjustment (i.e., +10dB) based on an assumed greater expectation of peace and quiet in so-called "quiet rural areas".

Indeed, many of the communities impacted by project-related noise would qualify as rural/remote. For this reason, any additional insights the department may gain through conducting this survey in rural (when compared to non-rural) areas would support the provision of advice on IA. As well, information with regards to Indigenous Canadians will be helpful in informing this advice. Therefore, Health Canada would like to evaluate the community response to noise among Canadians (Indigenous/non-Indigenous) living in rural and non-rural communities across Canada.

Manner in which research supports government or departmental priorities:
Health Canada's Safe Environment Directorate (SED) provides the Canadian Impact Assessment Agency (CIAA) with advice on IA under *IAA*, which extends to noise impacts on human health. Environmental assessment coordinators at SED depend on subject matter experts (SME) from Consumer and Clinical Radiation Protection Bureau (CCRPB) to provide, upon request, science-based advice on noise and health. They also rely on CCRPB SMEs to develop, review and update Health Canada guidance on noise and health and to defend the Department's advice at formal panel hearings. To fulfill these obligations and support the development's legal obligation under *IAA*, CCRPB conducts research to address knowledge gaps that aim to improve the department's provision of advice.

Manner in which research findings will benefit Canadians:
Results will provide new information on noise annoyance, sleep, attitudes and expectations, which will inform future updates to Health Canada's guidelines. Health Canada considers both annoyance and sleep disturbance to be potential risk factors for adverse health outcomes and, for this reason, insights that can be gleaned through this survey will form the development of a knowledge base that can be relied upon to provide expert advice regarding noise-related health impacts.

Risks associated with failure to secure information:

There is a concern that existing data may not fully reflect Indigenous Peoples attitudes and expectations toward environmental noise. Scientists within Health Canada are pursuing other surveys to address this knowledge gap, however, to date, there has been no indication that any of these surveys will include any/sufficient noise content.

There are no risks associated with undertaking this project. Not undertaking this project would mean that the advice the Department provides on Impact Assessment remains status quo. This is associated with a level of uncertainty that may undermine the value of the advice provided.

The primary objective of the research was to gather information on attitudes and expectations regarding noise annoyance and sleep.

Specific research objectives included:
- Gain an understanding of noise levels in communities across Canada, including noise from road traffic, air traffic and machinery
- Determine how outdoor noise may affect attitudes and behaviours in one's home/community
- Assess outdoor noise as a potential contributor to sleep disturbances
- Identify correlations between outdoor noise disturbances and mental/physical health
- As some of the sampling regions will overlap with areas that have undergone a federal IA, this may allow us to take advantage of public noise modelling data through the Canadian Impact Assessment Registry

The probability-based study was conducted using Advanis' GPRS sample, in both English and French, using a two-step approach where respondents were recruited by telephone to participate in an online web survey. Overall, 6,647 people completed the survey between April 12th and May 26th, with a response rate of 57.8%, and a margin of error of 1.2% (19 times out of 20 at a 95% confidence interval). The data was weighted based on geographic area (remote, rural, suburban, urban), age, gender, and Indigenous status.

1.2 - Political Neutrality Requirement

Political neutrality certification

I hereby certify as Senior Officer of Advanis that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in *the Communications Policy of the Government of Canada and Procedures for Planning and Contracting Public Opinion Research*. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leaders.

Signed: Nicolas toutz

Nicolas Toutant, Vice-President, Research and Evaluation

2.0 - Methodology

Health Canada sought a probability-based sample of 5,000 Canadians aged 18 and older, drawn from the general population. One of the goals was to reach 1,000 Indigenous residents of rural and urban areas across Canada (with minimum of 500 coming from remote areas). Respondents self-classified in the survey into geographic areas (remote, rural, suburban, urban), as well as provided their Indigenous status.

The probability-based study was conducted using a two-step approach where respondents were recruited by telephone to participate in an online web survey. Respondents were recruited to the online study by either email or SMS (text message), based on their preference at the time of recruitment. After the initial invitation, if respondents had not yet completed the survey, they were sent a reminder message. Reminder messages were sent 3 and 6 days after the initial recruit.

Overall, 11,492 respondents were recruited to participate in the study. In total, 24,133 phone numbers were called between April 12th and May 19th, 2021, and 11,492 people were recruited to the survey, for a response rate on the recruit of 50.6% (see appendix A).

Of the 11,492 recruited participants, 6,647 completed the online survey, for a response rate among those recruited of 57.8%. The margin of error for the study was +/-1.2%, at a 95% confidence interval (i.e., 19 times out of 20).

The average length of time to complete the online survey was just under 10 minutes.

The *Attitudes Toward Environmental Noise in Rural and Non-Rural Canada Survey* was designed by Health Canada. The Government of Canada's standards for pretesting were adhered to, with pretests being conducted in both English and French. The pretest was conducted on April 12-13,

2021 in English, and April 13th, 2021 in French. During this pretest, 299 people were recruited by phone (212 in English and 87 in French). This led to 72 completed online surveys (61 English, and 11 French). The validation of the data was completed on the mornings of April 13th and April 14th. Changes made to the survey after pre-testing did not impact that pre-test data, and therefore results collected during the pre-test were included in the final analysis.

During the computer-assisted telephone interviews (CATI) recruit, Advanis requested permission to send the survey link to respondents' mobile phones via a Short Message Service (SMS). The advantage of SMS survey invitations is that, unlike email invitations, they avoid issues with incorrect email addresses and spam filtering. If the recruited respondent did not have a smartphone or preferred email, survey links were sent via email. Of the respondents who completed the CATI screener, 93% were recruited via SMS, and 7% were recruited by email. Of those recruited to the online survey by SMS, 65.6% completed the survey. Invite reminders were sent 3 days and 6 days after the initial invitation.

3.0 - Sampling plan and data collection

The target audience for this project was Canadians 18 years of age or older, aiming for 5,000 completes in total. In addition, there were target goals of 500 Indigenous completes in rural areas, 1,000 Indigenous completes overall (all geographic areas), and a target for 30% of Canadians living in rural areas. To collect the data, Advanis used its general population probability-based random sample (GPRS) in all of the provinces to recruit respondents via telephone to the online survey. In total 6,647 Canadians completed the *Attitudes Toward Environmental Noise in Rural and Non-Rural Canada Survey*.

Table 1: Sampling Plan

Region	Population Proportion	Exactly Representative	Target for this study	Minimum	Collected Completes[1]
BC	14%	623	+/- 10%	561	994
AB	11%	505	+/- 10%	455	929
SK	3%	135	+/- 10%	122	234
MB	4%	158	+/- 10%	142	231
ON	39%	1,748	+/- 10%	1,573	2,451
QC	23%	1,030	+/- 10%	927	1,151
Atlantic	7%	301	+/- 10%	271	639
TOTAL	100%	4,500	4,500		
Oversample Indigenous (rural areas)[2]			**500**		403
TOTAL Sample			**5,000**		6,647
Sampling details for Indigenous and Rural Canadians					
Indigenous (urban and rural)				1,000 in total	1,234
Rural Canadians (30% target)				1,350 in total	1,819

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[1] Collected completes by province do not sum to the total sample, as some respondents did not indicate their province.
[2] Oversample of indigenous completes are included within the provinces, this category is not exclusive.

4.0 - Weighting

Overall, 6,647 web interviews were conducted during data collection. The weighting of the final file was based on four variables: age, gender, Indigenous status, and geographic location. There were 28 people who did not indicate their age, and for these cases Advanis used their pre-profiled age category for weighting. The population sizes are based on the latest Statistics Canada census results published in the 2016 Census. Since the value for the 18 to 19 age category was not available (only 15 to 19 is provided), we reduced the 15 to 19 year category by 3/5 of the size to reflect the best estimate of the number of 18 to 19 year olds. Weighting was used to ensure that the results match the marginal population proportions for age, gender, Indigenous status and geographic location.

Table 2: The Weights

Segment	Unweighted N	Weight	Weighted N
18 - 34, Female, Indigenous, Rural	27	0.220	6
18 - 34, Female, Indigenous, Suburb	28	0.564	16
18 - 34, Female, Indigenous, Urban	55	0.245	13
18 - 34, Female, Indigenous, Very remote	6	0.193	1
18 - 34, Female, Not Indigenous, Rural	114	0.939	107
18 - 34, Female, Not Indigenous, Suburb	163	2.401	391
18 - 34, Female, Not Indigenous, Urban	258	1.043	269
18 - 34, Female, Not Indigenous, Very remote	20	0.821	16
18 - 34, Male, Indigenous, Rural	16	0.223	4
18 - 34, Male, Indigenous, Suburb	27	0.572	15
18 - 34, Male, Indigenous, Urban	52	0.248	13
18 - 34, Male, Indigenous, Very remote	16	0.195	3
18 - 34, Male, Not Indigenous, Rural	110	0.952	105
18 - 34, Male, Not Indigenous, Suburb	202	2.434	492
18 - 34, Male, Not Indigenous, Urban	315	1.057	333
18 - 34, Male, Not Indigenous, Very remote	35	0.832	29
35 - 54, Female, Indigenous, Rural	81	0.174	14
35 - 54, Female, Indigenous, Suburb	79	0.446	35
35 - 54, Female, Indigenous, Urban	142	0.194	27
35 - 54, Female, Indigenous, Very remote	25	0.152	4
35 - 54, Female, Not Indigenous, Rural	242	0.742	180
35 - 54, Female, Not Indigenous, Suburb	310	1.898	588
35 - 54, Female, Not Indigenous, Urban	392	0.824	323
35 - 54, Female, Not Indigenous, Very remote	44	0.649	29
35 - 54, Male, Indigenous, Rural	58	0.177	10
35 - 54, Male, Indigenous, Suburb	53	0.452	24
35 - 54, Male, Indigenous, Urban	97	0.196	19
35 - 54, Male, Indigenous, Very remote	29	0.154	4
35 - 54, Male, Not Indigenous, Rural	190	0.752	143
35 - 54, Male, Not Indigenous, Suburb	248	1.924	477
35 - 54, Male, Not Indigenous, Urban	430	0.836	359
35 - 54, Male, Not Indigenous, Very remote	45	0.658	30

Segment	Unweighted N	Weight	Weighted N
55+, Female, Indigenous, Rural	53	0.167	9
55+, Female, Indigenous, Suburb	74	0.427	32
55+, Female, Indigenous, Urban	104	0.185	19
55+, Female, Indigenous, Very remote	15	0.146	2
55+, Female, Not Indigenous, Rural	260	0.710	185
55+, Female, Not Indigenous, Suburb	374	1.817	679
55+, Female, Not Indigenous, Urban	548	0.789	432
55+, Female, Not Indigenous, Very remote	55	0.621	34
55+, Male, Indigenous, Rural	56	0.169	9
55+, Male, Indigenous, Suburb	40	0.432	17
55+, Male, Indigenous, Urban	80	0.188	15
55+, Male, Indigenous, Very remote	21	0.148	3
55+, Male, Not Indigenous, Rural	236	0.720	170
55+, Male, Not Indigenous, Suburb	300	1.841	552
55+, Male, Not Indigenous, Urban	457	0.800	366
55+, Male, Not Indigenous, Very remote	65	0.630	41

5.0 - Quality control

5.1 - Quality Control in Survey Programming

Advanis utilizes technology to maximize quality control in survey programming. Having developed a proprietary survey engine tool, Advanis professionals are able to design and program a survey in a browser-based environment, eliminating the need to involve a programmer who is less familiar with the survey subject matter. Below are the steps followed to ensure the quality of the survey.

- The survey was thoroughly pretested by Advanis' project team members, as well as by non-team members (non-team members provide "fresh eyes").
- The online survey was tested by representatives at Health Canada. This allowed Health Canada to ensure skip patterns and survey questions were correctly programmed.

5.2 - CATI Methodology and Quality Control

The CATI recruit script was programmed on Advanis' proprietary CATI platform with no unforeseen challenges. Advanis was able to leverage its experience for the survey programming and the reminder process to achieve high quality standards.

Advanis implemented the following to ensure the highest quality data collection:
- Trained the interviewers to best understand the study's objectives in case questions arose during recruitment.
- Detailed call records were kept by the automated CATI system, and were monitored for productivity analysis (i.e., not subject to human error).

- Screening scripts contained a description of the importance of the research and the importance of respondent participation, serving as a motivator for respondents.
- The recruit scripts were pretested for best possible flow.
- Our average interviewer employment tenure is very high compared to industry standards, resulting in a team of interviewers who are more experienced and knowledgeable regarding the target audience.
- Advanis' Quality Assurance team listened to the actual recordings of ten percent of completed surveys and compared the responses to those entered by the interviewer, to ensure that responses were properly recorded. This is in addition to the live monitoring done by field supervisors.
- Team Supervisors conduct regular, more formal evaluations with each interviewer, in addition to nightly monitoring of each interviewer on their team.

5.3 - Web Methodology and Quality Control

All Advanis Web surveys are hosted internally by Advanis, and we employ a rigorous and stringent set of data collection control mechanisms to ensure the highest quality for the data collected, including:
- Respondents have a unique access code to ensure that only that participant can complete the online survey.
- Extensive internal logic checks are programmed directly into the survey to ensure logical responses.
- Web surveys are implemented using Advanis' proprietary software (which is designed to handle complicated survey formats).
- Advanis administered a detailed internal test and an external pretest to ensure that the survey instrument was working as planned.
- We tested the questionnaire in multiple browsers and provided Health Canada with a link so they could conduct internal testing.

5.4 - Quality Control in Data Handling and Reporting

For the data collected, Advanis develops rules to check the validity of the data. These rules include items such as:
- Time taken to complete the survey
- Checking for verbatims that are gibberish or don't make sense
- And, of course, rigorous checks are completed to ensure the data is accurate and error-free according to the questionnaire logic (skip patterns).

Advanis staff have used the SPSS Statistics Software for over 20 years and are very proficient users of the software. All data cleaning performed on projects are outlined in syntax files with intermediate data files saved throughout the process. This ensures that the original raw data file

is never overwritten, and that if an error is discovered in our code, we can quickly and easily rerun the syntax to produce a new data file. Individuals developing code incorporate internal checks in their code (e.g., crosstabs) to ensure the syntax had the desired effect. In addition, all syntax is reviewed by another team member or technical specialist for accuracy.

6.0 - Data cleaning and guidelines for analysis and release

After the first English pretest, it was determined that respondents were potentially selecting the "Not at all" options rather than the "Does not apply/Do not hear" options on the Q8 and Q10 rating questions. This was due to the placement of the response level at the bottom of the lists (below the 10 "Extremely" options). Advanis re-ordered the response lists so that the "Does not apply/Do not hear" options were displayed next to the "Not at all" options, so respondents were more likely to select the appropriate response if the questions did not apply to them.

Once field was completed, it was determined that the level of "Other, specify" responses given on Q18 was too high, and a review of the responses was conducted. After this, responses were coded back into existing survey levels, based on feedback from Health Canada, and a new response level of "On paid leave" was added to categorize those who indicated they were on sick, maternity/paternity or disability leave.

Additionally, variables were created for weighting purposes that combined the gender and sex at birth questions, and bucketed the Indigenous status levels. Indigenous levels (First Nations, Métis, Inuk) were grouped to avoid having extreme weights and/or large coefficients of variation that would preclude the reporting for each Indigenous level. Advanis also recoded the age for respondents who did not provide this information (28 respondents in total) based on the previous profile data on the respondent in the age_group variable, so everyone would be assigned a proper weight.

Appendices

Appendix A: Response Rate Calculation

	TOTAL	%
GENERATED	24133	100.0%
Used	**24133**	**100.0%**
No service	1027	4.3%
Not residential/business	60	0.2%
Line problems	82	0.3%
Fax	60	0.2%
Wrong number	12	0.0%
Invalid[3]	1241	5.1%
Potentially Eligible	**22892**	**94.9%**
U. No answer	1692	7.4%
U. Busy	22	0.1%
U. Answering machine/voicemail	5318	23.2%
U. Unresolved[4]	**7032**	**29.1%**
IS. Language barrier	14	0.1%
IS. Illness/incapacity	22	0.1%
IS. Household refusals	13	0.1%
IS. Respondent refusal	4171	18.2%
IS. Appointments	48	0.2%
IS. In-Scope Non-Responding[5]	**4268**	**17.7%**
R. Non eligible	100	0.4%
R. Quota Blocked	0	0.0%
R. Completed	11492	50.2%
R. Responding Units[6]	**11592**	**50.6%**
Completed Web Surveys	**6647**	**57.8%**

% REFUSAL[7]	**18.3%**
% COMPLETED[8]	**50.2%**
COOPERATION RATE[9]	**73.1%**
RESPONSE RATE[10]	**50.6%**

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[3] No possible contact at this number

[4] Cases where cannot be established whether call was made to eligible or ineligible respondent

[5] Includes refusals, break-offs, and other eligible non-respondents

[6] Includes cases who would have participate but were disqualified, completes and partial completes

[7] Household + Respondent Refusal / Potentially Eligible Sample

[8] Completed / Potentially Eligible Sample

[9] Responding Units / (Potentially Eligible - Unresolved)

[10] Responding Units / (Unresolved + In Scope Non-Responding + Responding Units)

Environmental Noise

Government of Canada

ADVANIS

Languages: English, French

Section Screeners and Community

LoginTCHForCLient

Page Screeners

LoginTCHForCLient

This survey is being conducted by Advanis, a research firm, on behalf of Health Canada. Si vous préférez répondre au sondage en français, veuillez cliquer sur le bouton FRANÇAIS ci-dessus.

The survey's aim is to collect information on how community noise may affect you. This will help Health Canada develop guidelines to limit noise impacts on Canadians. The survey will take you about 10 minutes to complete.

The personal information you provide will be used by Health Canada under the authority of section 4 of the *Department of Health Act* and handled in accordance with the *Privacy Act*. We invite you to review the Privacy Notice below for further details.

If you have any questions about the survey, you may contact Advanis at survey+noise@tellcityhall.net (mailto:survey+noise@tellcityhall.net).

Your help is greatly appreciated and we look forward to receiving your feedback. If you get interrupted while doing the survey, you **can click on the same link** to pick up right where you left off.

Privacy Notice
Why are we collecting your personal information?
The personal information you provide to Health Canada is required to better understand the attitudes towards community noise in Canada. This will help Health Canada develop guidelines to limit noise impacts on Canadians. In this survey, we ask about your home and the community you live in, your response towards noise sources that you may sometimes hear while you are at home, your health and well-being and general socio-demographic questions such as gender, education and employment status.

You may choose to provide your postal code so that Health Canada can determine if the response to noise is influenced by geographic area. You may also choose to provide your home address so that Health Canada may estimate the noise levels outside your home. Health Canada will be using this information to understand how noise levels affect attitudes toward noise.

We will not ask you to provide us with any information that could directly identify who you are, such as your name, or full date of birth. It is possible that the responses you provide could be used alone or in combination with other available information to identify you, however your personal information will be safeguarded to ensure that you are not identified.

The data tables in the final report will be presented in aggregate form and will not contain any information that could identify you. The final report will be available to the public from the Library and Archives Canada (www.bac-lac.gc.ca (www.bac-lac.gc.ca)) within six months following end of fieldwork.

Will we use or share your personal information for any other reason?
The aggregated survey results may also been shared with the scientific community through journal publications.

What happens if you don't want to provide your personal information?
Participation is completely voluntary. Your decision to participate or not is yours alone and there will be no consequences if you decide not to participate.

What are your rights?
You have the right to access and request a correction and/or notation to your personal information. You also have a right to complain to the Privacy Commissioner of Canada if you feel your personal information has been handled improperly. For more information about these rights, or about how we handle your personal information, please contact Health Canada's Privacy Management Division at privacy-vie.privee@hc-sc.gc.ca (mailto:privacy-vie.privee@hc-sc.gc.ca).

For more information:
The collection of your personal information is described in Info Source at infosource.gc.ca (http://www.infosource.gc.ca/index-eng.asp). Refer to the personal information bank Public Communications – PSU 914.
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Section Survey

Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8a, Q9, Q10a, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q27, Q21, Q22, Q24Int, Q24, Q26, Q23

Page Housing Conditions

Q1

The first few questions are related to your home and the community you live in.

How long have you lived in your current home?
- ❍ 1   Less than 1 year
- ❍ 2   1 year to less than 5 years
- ❍ 3   5 years to less than 10 years
- ❍ 4   10 years and over

Q2

In the time since you have lived in your home, how has the overall outdoor noise around your home changed?
1.　　　During the daytime (7AM-10PM)
2.　　　During the nighttime (10PM-7AM)

❍ 1　　It is louder
❍ 2　　It is less loud
❍ 3　　It has not changed

Q3

Which best describes the area in which you live?
❍ 1　　Very remote - Area with less than 1,000 inhabitants
❍ 2　　Rural - Area with between 1,000 and 10,000 inhabitants, and not a suburb
❍ 3　　Suburb - A mixed-use or residential area, existing either as part of a city or urban area or as a separate residential community within commuting distance of a city
❍ 4　　Urban - A city with more than 10,000 inhabitants

Q4

Do you live in an area where you have a high expectation for tranquility, peace and quiet?
❍ 1　　Yes, definitely
❍ 2　　Yes, somewhat
❍ 3　　No

Q5

With respect to outdoor noise levels, how often is the area where you live very quiet, calm and relaxing?
❍ 1　　Never
❍ 2　　Sometimes
❍ 3　　Often
❍ 4　　Always

Page Noise perceptions and sleep disturbance

Q6

The next few questions are related to your response towards noise sources that you may sometimes hear while you are at home. **"At home" means either inside or outside your home.**

Thinking about the last 12 months or so, when you are at home, how much does noise from road traffic bother, disturb, or annoy you?

Not at all annoyed										Extremely annoyed
❍ 0	❍ 1	❍ 2	❍ 3	❍ 4	❍ 5	❍ 6	❍ 7	❍ 8	❍ 9	❍ 10

Q7

How often do you notice road traffic noise when you are at home?

- ❍ 1   Never
- ❍ 2   Sometimes
- ❍ 3   Often
- ❍ 4   Always

Q8a

The following list includes other outdoor sources of noise you may hear from inside or outside your home. Thinking about the last 12 months or so, indicate how bothered, disturbed, or annoyed you are for each source. If you never hear the source, select "do not hear".

1.   Trains
2.   Aircraft/helicopters
3.   Wind turbines
4.   Mining related noise
5.   Other industry unrelated to mining
6.   Marine activity (e.g. ships, boats, watercraft)
7.   Construction activity, including backup alarms
8.   Lawnmowers, hedge trimmers, leaf blowers, chain saws *

*Levels marked with * are randomized*

- ❍ -9   Do not hear
- ❍ 0   0 Not at all annoyed
- ❍ 1   1
- ❍ 2   2
- ❍ 3   3
- ❍ 4   4
- ❍ 5   5
- ❍ 6   6
- ❍ 7   7
- ❍ 8   8
- ❍ 9   9
- ❍ 10   10 Extremely annoyed

Programming note: Other industry unrelated to mining should always come after Mining related noise, these levels are in a group that is randomized within the list.

Q9

Thinking about the last 12 months or so, while you are at home, how disturbed was your sleep?
(sleep disturbance in any way for any reason)

Not at all disturbed									Extremely disturbed	
$\bigcirc$ 0	$\bigcirc$ 1	$\bigcirc$ 2	$\bigcirc$ 3	$\bigcirc$ 4	$\bigcirc$ 5	$\bigcirc$ 6	$\bigcirc$ 7	$\bigcirc$ 8	$\bigcirc$ 9	$\bigcirc$ 10

Q10a

For each of the listed sources, indicate to what extent your sleep has been disturbed over the past 12 months or so. If you never hear the source, or it does not apply to you, select "does not apply".

1. Wind turbines *
2. Noisy neighbours *
3. Pain/illness/sleep disorder *
4. Your partner's sleep disturbance (e.g. using washroom, snoring, sleep disorder, illness, pain) *
5. Having to use the washroom *
6. Stress/anxiety/worrying about something *
7. Indoor noise from people/TV/radio/ventilation *
8. Road traffic noise *

*Levels marked with * are randomized*

$\bigcirc$ -9   Does not apply
$\bigcirc$ 0   0 Not at all disturbed
$\bigcirc$ 1   1
$\bigcirc$ 2   2
$\bigcirc$ 3   3
$\bigcirc$ 4   4
$\bigcirc$ 5   5
$\bigcirc$ 6   6
$\bigcirc$ 7   7
$\bigcirc$ 8   8
$\bigcirc$ 9   9
$\bigcirc$ 10   10 Extremely disturbed

Q11

Please indicate if there are any other reasons your sleep may have been disturbed in the past year.

Please do not enter personally identifying information (e.g., name, email address, phone number, mailing address), as anything you enter may be shared with the sponsor of this research.

_____
_____
_____
_____
_____
❏ -5   No other reasons

Q12

In general, how sensitive would you say you are to noise?

Not at all sensitive to noise									Extremely sensitive to noise	
$\bigcirc$ 0	$\bigcirc$ 1	$\bigcirc$ 2	$\bigcirc$ 3	$\bigcirc$ 4	$\bigcirc$ 5	$\bigcirc$ 6	$\bigcirc$ 7	$\bigcirc$ 8	$\bigcirc$ 9	$\bigcirc$ 10

Page Health Status

Q13

The next few questions are related to your health and well-being.

In general, for your age, how would you rate your physical health?
- $\bigcirc$ 1   Excellent
- $\bigcirc$ 2   Very good
- $\bigcirc$ 3   Good
- $\bigcirc$ 4   Fair
- $\bigcirc$ 5   Poor

Q14

In general, how would you rate your mental health?
- $\bigcirc$ 1   Excellent
- $\bigcirc$ 2   Very good
- $\bigcirc$ 3   Good
- $\bigcirc$ 4   Fair
- $\bigcirc$ 5   Poor

Q15

For each of the following health conditions, indicate if you have been diagnosed by a healthcare professional with....

1. Heart disease including high blood pressure *
2. Anxiety or depression *
3. Sleep disorder *
4. Hearing loss *

*Levels marked with * are randomized*

- $\bigcirc$ 1   Diagnosed
- $\bigcirc$ 2   Not diagnosed, but I suffer from this
- $\bigcirc$ 3   Does not apply to me

Q16

For each of the following, indicate how you have been personally affected by the COVID-19 pandemic.
1. Physical health
2. Mental health
3. Annoyance toward environmental noise
4. Annoyance toward indoor noise
5. Stress in your life
6. Overall well-being

❍ 1   Much worse
❍ 2   Somewhat worse
❍ 3   Unchanged
❍ 4   Somewhat improved
❍ 5   Much improved

Page Participant information

Q17

The last few questions are strictly for statistical purposes. All of your answers are completely confidential.

In which of the following age categories do you belong?
❍ 1   18-24
❍ 2   25-34
❍ 3   35-44
❍ 4   45-54
❍ 5   55-64
❍ 6   65 or older
❍ 7   Prefer not to answer

Q18

Which of these best describes your current situation?
Select all that apply
❑ 1   Working or attending school outside my home
❑ 2   Working or attending school inside my home
❑ 3   Retired
❑ 4   Unemployed
❑ 5   Other (please specify): _____

Q19

What is the highest level of education you have completed?
- ❍ 1   Less than high school diploma or its equivalent
- ❍ 2   High school diploma or equivalent
- ❍ 3   Registered Apprenticeship or other trades certificate or diploma
- ❍ 4   College, CEGEP or other non-university certificate or diploma
- ❍ 5   University certificate or diploma below bachelor's level
- ❍ 6   Bachelor's degree
- ❍ 7   Post graduate degree above bachelor's level
- ❍ 8   Prefer not to answer

Q20

What is your gender?
- ❍ 1   Female
- ❍ 2   Male
- ❍ 3   Other
- ❍ 4   Prefer not to answer

Q27   *Show if Q27 Other prefer not to answer*

What was your sex at birth?
- ❍ 1   Male
- ❍ 2   Female

Q21

Do you self-identify as an Aboriginal person, that is, First Nations, Métis or Inuk (Inuit)?
- ❍ 1   No, not an Aboriginal person
- ❍ 2   Yes, First Nation
- ❍ 3   Yes, Métis
- ❍ 4   Yes, Inuk (Inuit)

Q22

Which of the following best describes your total household income last year, before taxes, from all sources for all household members?
- ❍ 1   Under $20,000
- ❍ 2 $20,000 to just under $40,000
- ❍ 3 $40,000 to just under $60,000
- ❍ 4 $60,000 to just under $80,000
- ❍ 5 $80,000 to just under $100,000
- ❍ 6 $100,000 to just under $150,000
- ❍ 7 $150,000 and above

❍ 8   Prefer not to answer

Q24Int

Health Canada is interested in estimating how loud it is outside your home. Even if you find it to be very quiet around your home, this information is important because it can help determine noise limits to protect Canadians from noise. Health Canada does not need to go to your home to do this, however the computer software used to calculate noise levels is based on the distance between your home and the nearest road. To calculate this distance Health Canada is asking that you share your address below. As with all of the answers you have provided on this survey, your information is protected and remains confidential under the Privacy Act.

Press the arrow to continue.

Q24

Please enter your...

Street name and house number   _____

City, town, municipality, or Indian Reservation   _____

❑ -8   Prefer not to say

Q26

In which province or territory do you live?

❍ 1   British Columbia (BC)

❍ 2   Alberta (AB)

❍ 3   Manitoba (MB)

❍ 4   Saskatchewan (SK)

❍ 5   Ontario (ON)

❍ 6   Quebec (QC)

❍ 7   New Brunswick (NB)

❍ 8   Nova Scotia (NS)

❍ 9   Prince Edward Island (PE)

❍ 10   Newfoundland and Labrador (NL)

❍ 11   Yukon (YT)

❍ 12   Nunavut (NU)

❍ 13   Northwest Territories (NT)

❑ -8   Prefer not to say

Q23

What is your 6-digit postal code?

_____
_____
_____
_____
_____

❑ -8   Prefer not to say

Section Pretest

P1, P2

Page Pretest

P1

Overall, how would you rate the extent to which the questions in this survey were easy to understand? Please use a scale from 0 to 10 where 0 means very difficult, and 10 means very easy.

Very difficult										Very easy
○ 0	○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7	○ 8	○ 9	○ 10

P2   *Show if P1 is 7 or less*

Please tell us why you gave this rating to the survey. What specific words or questions did you find difficult to understand?

_____
_____
_____
_____
_____

❑ -8   Prefer not to answer

Page Ene1

EndTCH

We have asked you all of our questions. We hope you've found this interesting, and we sincerely thank you for your time.

This study was designed and funded by Health Canada. The survey was hosted by:

(http://www.advanis.ca)

using our data collection method:

(http://tellcityhall.ca/)

If you'd like to see results from other studies conducted by Advanis via TellCityHall, please visit tellcityhall.ca/surveys (http://www.tellcityhall.ca/surveys.html).

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Status Code: -1