

## Appendix 1.

List of questionnaire questions provided to participants of the Manitoba Nocturnal Owl Survey citizen science project as part of a study on their motivations and scientific attitudes. Original questionnaire was distributed online using Google Forms, an interactive browser-based survey software.

Questions indicated by a \* were only seen by a subset of respondents based on previous responses.

### Demographics

This section aims to get an idea of the cross-section of Manitoba Nocturnal Owl Survey volunteers. Who is the average volunteer?

How old are you?

- 24 or under
- 25 – 34
- 35 – 44
- 45 – 54
- 55 – 64
- 65+

What is your gender?

- Male
- Female
- Other

What is your background? (Check all that apply.)

- European
- First Nations, Inuit, or Métis
- East Asian
- South Asian
- Middle Eastern
- African
- Other: \_\_\_\_\_

What is the highest level of education you have completed?

- Did not complete high school
- High school graduate

- Some post-secondary
- Associate's Degree or College Diploma
- Bachelor's Degree
- Master's Degree
- Doctorate
- Medical school
- Law school
- Other: \_\_\_\_\_

Are you currently a student or do you plan on further education?

- Yes, currently a student
- Yes, planning on further education
- No, neither

If you answered yes to the previous question, what level of education are you currently completing, or planning on completing?\*

- High school
- Associate's Degree or College Diploma
- Bachelor's Degree
- Master's Degree
- Doctorate
- Medical school
- Law school
- Other: \_\_\_\_\_

Do you have a post-secondary degree in natural sciences, environmental resources, or a related field?\*

- Yes
- No

If you answered yes to the previous question, what field is your degree in?\*

\_\_\_\_\_

Are or were you employed in the natural sciences or natural resources sectors?\*

- Yes
- No

If you answered yes to the previous question, who is or was your employer? (If retired, check off previous employer as well as retired.)\*

- Federal government
- Other government
- University
- Other educational institute
- Consulting firm
- Non-governmental organization
- Retired
- Other: \_\_\_\_\_

### Science and Ecology

This section asks volunteers first about their scientific background and secondly about their opinions on science, ecology, and the environment. For the purpose of this questionnaire, “science” refers to the natural sciences, including biology, physics, chemistry, earth sciences, and medicine.

How often do you read or hear about science in the media? (For example: in the newspaper, on the radio, on television, online.)

- Daily
- Multiple times a week
- Weekly
- Bi-weekly
- Monthly
- Less than once a month

How often do you deliberately try to learn more about science, either from established knowledge or science news? (For example: in science magazines, documentaries, science podcasts, science blogs, science videos.)

- Daily
- Multiple times a week
- Weekly
- Bi-weekly
- Monthly
- Less than once a month

How would you describe your scientific literacy? (Scientific literacy, at its simplest, is the ability of a person to understand scientific concepts and processes enough to meaningfully make personal decisions and engage in discussion and debate about science and technology. For a longer explanation, see <http://www.literacynet.org/science/scientificliteracy.html>)

Poor 1 2 3 4 5 Strong

How did you primarily acquire your scientific literacy?

- Formally (eg. classes or courses in college or university)
- Informally (eg. self-taught, through recreation, volunteering, or personal reading)
- Combination

If you would like to expand on how you acquired your scientific literacy, please do so below.

How scientifically literate do you think the general Canadian public is?

Not literate enough 1 2 3 4 5 Very literate

Are you concerned about wildlife and/or habitat conservation?

Not at all 1 2 3 4 5 Very concerned

If wildlife or habitat conservation is a concern for you, what are your specific concerns?

Are you concerned about the declining state of the environment? (For example: global climate change, water pollution, or air pollution.)

Not at all 1 2 3 4 5 Very concerned

If the declining state of the environment is a concern for you, what are your specific concerns?

Have you participated in other scientific or ecological projects? List and describe. (For example: Breeding Bird Survey, Christmas Bird Count, Project NestWatch, restoration projects, bird banding, Galaxy Zoo.)

Do you consider yourself a birder? How many birds can you identify by sight or sound?

- No, I am not a birder
- Yes, I can identify <50 birds
- Yes, I can identify <100 birds
- Yes, I can identify <200 birds
- Yes, I can identify <400 birds

- Yes, I can identify over 400 birds

Do you have any other wildlife experiences or interests? List and describe.

### Manitoba Nocturnal Owl Survey Experience

This section asks about your experiences volunteering with the Manitoba Nocturnal Owl Survey, from how you were recruited to why you stopped (or would consider stopping) volunteering. How did you first hear about the Manitoba Nocturnal Owl Survey? (If more than one is applicable, check both.)

- Actively recruited
- Word-of-mouth
- Manitoba Conservation and Water Stewardship presentation/meeting
- Manitoba Hydro flier
- Press release
- Manitoba Government website
- Bird studies Canada website
- NatureNorth website
- Other: \_\_\_\_\_

What originally motivated you start volunteering? (Check all that apply.)

- Personal reasons
- Professional reasons
- Conservation concerns
- Educational opportunity
- Other: \_\_\_\_\_

If you wish you explain your original motivations in more detail, please do so here.

Have your motivations changed since you started volunteering?

- Yes
- No

If you answered yes to the above, what are your motivations now? (Check all that apply.)\*

- Personal reasons
- Professional reasons
- Conservation concerns
- Educational opportunity
- Other: \_\_\_\_\_

If you wish you explain your new motivations in more detail, please do so here.\*

How many years have you participated with the Manitoba Nocturnal Owl Survey?

\_\_\_\_\_

Which year did you begin volunteering?

\_\_\_\_\_

Are you planning on volunteering in 2016?

- Yes
- No

As a repeat volunteer, what has or may cause you to not volunteer in certain years?\*

Do you typically conduct the survey alone or with others?

- Alone
- With others

If you answered “with others” to the above question, who do you typically conduct your surveys with? (Check all that apply.)\*

- Family members
- Children under 16
- Friends
- Other: \_\_\_\_\_

How many routes have you covered in total?

\_\_\_\_\_

What do you feel you gained from your experiences volunteering with Manitoba Nocturnal Owl Survey?

Approximately how far is/are your route(s) from your residence (or cabin), in kilometers? (Use the starting point of your route for this distance. List multiple distances if you cover multiple routes.)

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Do you read the Annual Report on the survey findings? What do you like about it, and is there anything else you would like to see in it?

If you would like to share one of your favourite moments or experiences of volunteering with the Manitoba Nocturnal Owl Survey, please do so below!

If you have any other comments, clarifications, or feedback you wish to share, please do so in the space below.

Thank you for participating in this survey.