Appendix B Saskatchewan River Delta Survey Instrument

Managing the Saskatchewan River Delta
What is Your Opinion?

You are invited to participate in a research study about the Saskatchewan River Delta

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Purpose and Objective of the Research: The purpose of this research study is to understand people's opinions and attitudes for management of the Saskatchewan River Delta ecosystem.

Procedures: We are asking you to take part in a survey being held across Canada. The estimated time to complete this is about 20 minutes.

Funded by: The study is being funded by the Social Sciences and Humanities Research Council of Canada and the Global Institute for Water Security at the University of Saskatchewan.

Potential Risks: There are no known or foreseen risks associated with participation in this study.

Potential Benefits: Survey participants will help inform future decisions regarding conservation and development in the Saskatchewan River Basin.

Confidentiality: All information you provide is considered confidential and grouped with responses from other participants. Names will not be associated with survey responses. Access to the data will be restricted to the investigators. The survey is being collected using Voxco, a Canadian-owned and managed company whose data is securely stored in Canada. Information on Voxco's privacy policy is available here https://www.voxco.com/privacy-policy/.

Storage of Data: Electronic survey data will be stored on a password-protected research-dedicated computer, with access restricted to the researchers. Anonymous survey response data will be stored indefinitely.

Right to Withdraw: Participation in this survey is voluntary. You can decide not to participate at any time by closing your browser. Survey responses will remain confidential. Once the survey has been completed you cannot withdraw the information you provided.

Questions or Concerns: Contact the researcher(s) using the information at the top of screen. This research project has been approved on ethical grounds by the University of Saskatchewan

Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office: ethics.office@usask.ca; 306-966-2975; out of town participants may call toll free 1-888-966-2975.

Completion of the survey constitutes your consent to participate in this research.

In which province or territory do you currently reside?

- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon

Federal and provincial governments in Canada, working with local communities, face decisions about how to manage natural areas.

A representative group of citizens in Canada has been randomly selected to answer the questionnaire, including you. Your answers are important, whether or not you are interested in the topic. This survey will help these decision makers know what you would like to see happen in the Saskatchewan River Delta.

To help make these decisions, we ask for you to please read the carefully information about the Saskatchewan River Delta.

- I have read and understood these instructions

The Saskatchewan River Delta is located at the border of Saskatchewan and Manitoba and is downstream of the Saskatchewan River. A map showing the location of the delta is provided below along with a short description of the study area.

[Source: Understanding, Managing, and Preserving the Saskatchewan River Delta 2018]

Geography

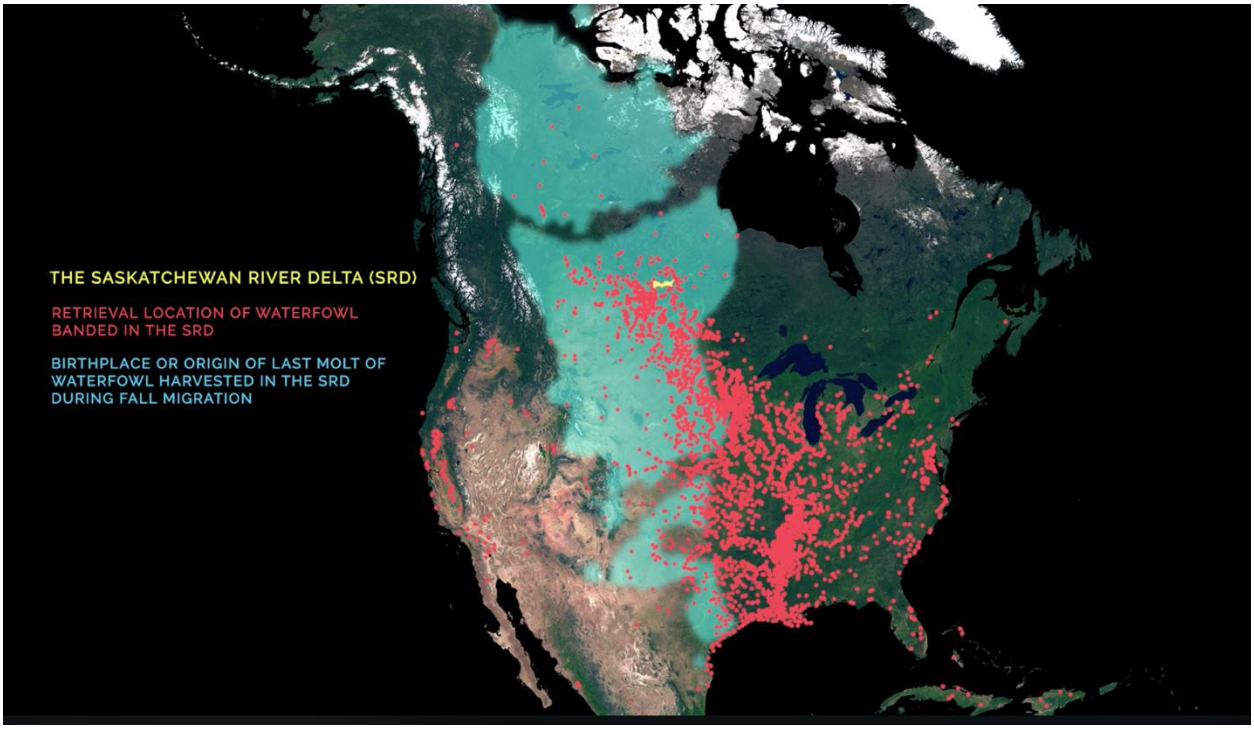
- The Saskatchewan River Delta is a network of waterways, wetlands, and forests covering an area of about 1 million hectares and is one of the largest inland freshwater deltas in North America and is almost twice as large as Prince Edward Island.
- The delta is fed by the South and North Saskatchewan rivers draining much of Alberta and Saskatchewan. Water in the delta drains into Lake Winnipeg and Manitoba.

People

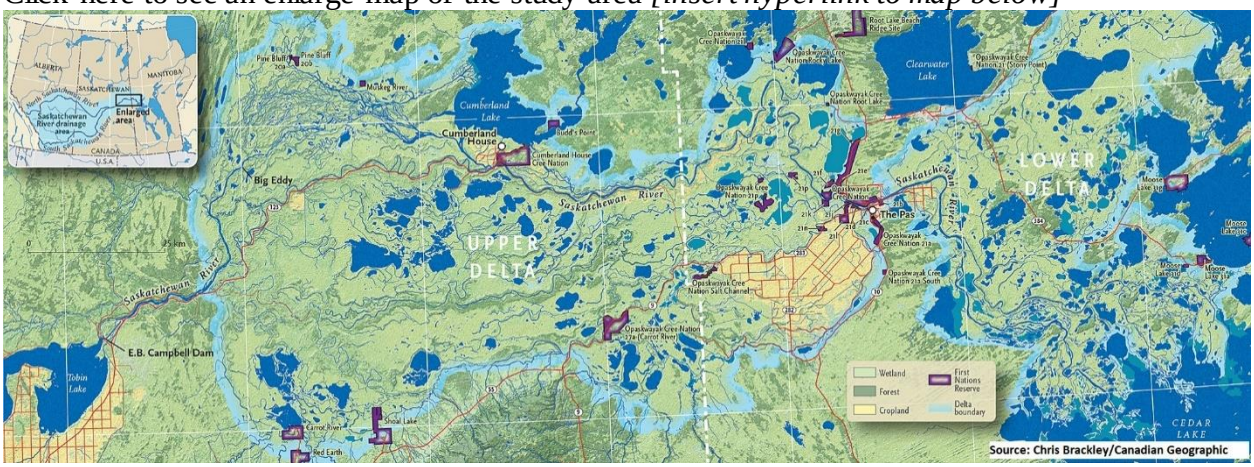
- The delta is the traditional territory for the Cumberland House Cree Nation, Peter Ballantyne Cree Nation, Opaskwayak Cree Nation, and Métis Nation communities who continue to rely on its ecosystems for food, livelihoods, economic opportunities, and cultural connection.
- Approximately 15,000 people live in the delta.

Fish and Wildlife

- The delta is over 80 percent wetland and contains at least 43 species of mammals, 48 species of fish, and over 200 different species of birds.
- Birds from all across North America visit the delta during their life and the area is recognized as an internationally important waterfowl breeding area (click here for a map).
- The delta is also home to species at risk including the Lake Sturgeon.



Click here to see an enlarge map of the study area *[insert hyperlink to map below]*



1. **Before** starting this survey, had you heard of the Saskatchewan River Delta?
   ___No
   ___Yes
Don't know

2. Have you ever visited the Saskatchewan River Delta?
   ___Yes
   ___No
   Don't know

Saskatchewan River Delta Status and Impacts

The Saskatchewan River is used for a variety of purposes that benefit society including:

- **Hydropower:** There are several dams used to generate electricity along the Saskatchewan River including the E.B. Campbell Dam just upstream of the delta. There is also the Grand Rapids Dam at the lower end of the delta.

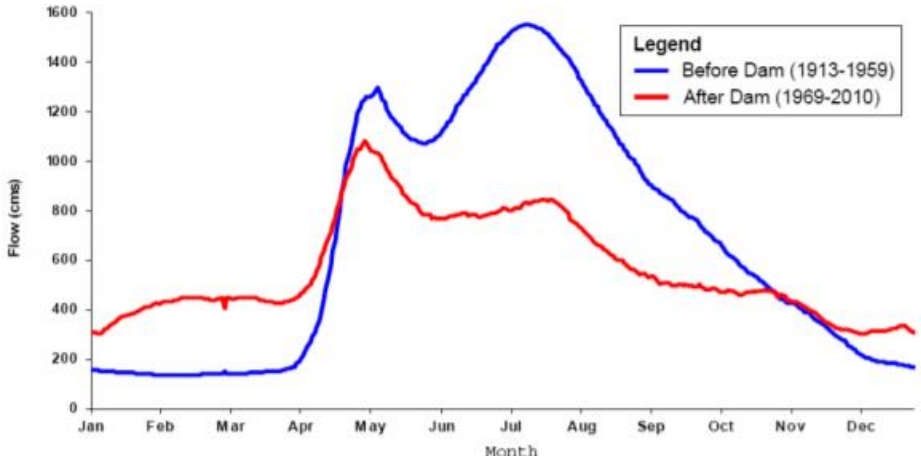
- **Agricultural Irrigation:** Water is used to support crop and livestock production in Alberta and Saskatchewan.

- **Industrial use:** Water is used in industrial processes in mining, manufacturing, and oil and gas activities.

- **Household use:** Water is used for drinking, cooking, cleaning and sanitation.

However, these activities are also having impacts downstream in the Saskatchewan River Delta ecosystem. These impacts include:

- **Changes to the timing of seasonal water flows into the delta.** Compared to natural conditions, more water is released by dams during the winter and less water in the spring and summer. This has led to a decrease in the frequency of flooding to wetlands which provide habitat for fish and wildlife. The figure below shows the average weekly river flows into the Saskatchewan River Delta before and after dam construction in 1968.



[Source: Michael David Ervin 2011]

- **Changes to the timing of daily water flows into the delta.** Water released from hydro dams to match electricity demands means rapid increases and decreases in water levels every day which negatively impacts fish and wildlife.

- **Lower overall water flows into the delta** due to upstream water consumption means less habitat for fish and wildlife.

- **Drier conditions within the** Saskatchewan River Delta. Overbank flooding historically occurred once every 12 years on average but now flooding is estimated to occur on average once every 45 years.

- **Reduced sediment supply into the delta** has increased erosion and decreased water connections to side channels and wetlands.

- **Increased water pollutants** entering the delta from human activities has impacts on the water quality and aquatic life in the delta.

- **Increased invasive species** such as reed grass (Phragmites) have reduced habitat quality for fish and wildlife.

- **Natural habitat loss** due to the permanent flooding of about 100,000 hectares to create the reservoir for the Grand Rapids Dam and around 50,000 hectares of wetlands have been drained for agricultural developments.

3. After reading the information about the various uses of the Saskatchewan River and downstream impacts, how concerned are you, if at all, about the delta ecosystem?

Extremely concerned
Very concerned
Moderately concerned
Somewhat concerned
Not at all concerned
Don't know

People are interested in taking action to conserve natural areas for a variety of reasons that may include:

- Natural areas are a source of recreation, enjoyment and learning for people now and in the future.

- Natural areas help to maintain a healthy ecosystem and should not be endangered by human actions.

- Natural areas are culturally and economically important to Indigenous peoples.

People are concerned about taking action to conserve natural areas for a variety of reasons that may include:

- There may be restrictions placed on what people can do, including limits on agricultural activities, industrial development, and land uses.

- There may be an increase in the cost of producing products such as food, electricity, housing, and transportation, which may increase the prices consumers pay.

- Protecting natural areas diverts government funding away from other important uses.

[If Group = A1 or A2 (WTP)]

New Conservation Actions for the Saskatchewan River Delta

The federal and provincial governments, in collaboration with local communities and private conservation groups, are considering several actions and tools to improve the condition of the delta. The tools available are:

River flow controls – Dam managers can modify the water releases from the dams to better mimic the natural pattern of water flow by changing the timing, fluctuations, and average flows into the delta.

Water use efficiency -- Irrigators can reduce upstream water withdrawals by improving irrigation water use efficiency and industrial users can increase water recycling in production processes.

Fish and wildlife habitat restoration – Resource managers can actively restore native fish and waterfowl habitat by using various tools designed to partially control weeds or improve the movement of water. These control tools affect the growth and survival of the fish species and promote healthy waterfowl populations.

Water pollution controls – Implement regulations and policies to reduce agricultural run-off and industrial pollutants entering the river upstream of the delta.

Cost of tools -- Water managers are able to use these tools in combinations in order to benefit the delta ecosystem. These actions come with costs, which include the following

- Reduced electricity from dams
- Reduced agricultural production
- Money for active restoration

If conservation actions are taken in the delta, it will cost every household more money.

- The federal government is considering a fixed annual tax increase that would be invested in a Saskatchewan River Delta conservation fund.
- The increase in annual taxes is expected to last for a period of 20 years while the primary conservation activities take place.

Assume that the costs for using the management tools mentioned above for your household (and similar households in your area) would begin in 2022 and would last for the next 20 years.

4. How much do you agree or disagree with the following statement?
Even if it costs households more money, we should do more to conserve the Saskatchewan River Delta.
__Strongly Agree
__Agree
__Somewhat Agree
__Neither Agree nor Disagree
__Somewhat Disagree
__Disagree
__Strongly Disagree
__Not sure

[If Group = B1 or B2 (WTA)]

New Developments Affecting the Saskatchewan River Delta

Governments are currently considering additional upstream development in the Saskatchewan River Basin that are expected to degrade the natural resource conditions in the delta unless mitigation activities are undertaken. The development and mitigation activities are:

Expanded irrigation: Alberta and Saskatchewan are planning to substantially increase irrigation which will require additional water withdrawals, leaving less water for the delta ecosystem. Increased agricultural production may result in additional pollutants entering the river and flowing downstream into the delta.

Industrial development: Additional mining and industrial projects that require more water to be used for cooling and the production process.

Mitigation tools: The government can also undertake projects to mitigate the adverse impacts of future developments on the delta. These activities can include

- River flow controls to better mimic natural water flow
- Water use efficiency to increase water flows to the delta
- Water quality improvements to reduce pollution entering the delta, and
- Fish and wildlife habitat restoration.

Increased government revenue – Allowing future irrigation and industrial development will increase government revenue which can be returned to households.

If future development occurs, money will be returned to every household in Canada.

- The government is considering a uniform refundable tax credit that will be used to compensate Canadian households.

- The annual tax credit is expected to last for a period of 20 years while the development activities take place.

Assume that the tax credit given to your household (and similar households in your area) would begin in 2022 and would last for the next 20 years.

5. How much do you agree or disagree with the following statement?
Even if households receive less money, we should mitigate the negative impacts of development on the Saskatchewan River Delta.
__Strongly Agree
__Agree
__Somewhat Agree
__Neither Agree nor Disagree
__Somewhat Disagree
__Disagree
__Strongly Disagree
__Not sure

Environmental Outcomes in the Saskatchewan River Delta

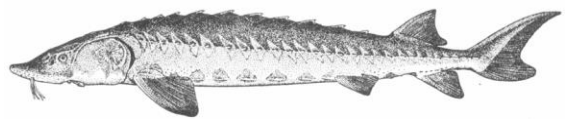
[If Group = A1 or A2 (WTP)] Depending on how conservation activities are done, changes can have different outcomes in the Saskatchewan River Delta.
[If Group = B1 or B2 (WTA)] Depending on the extent of upstream development and mitigation activities, changes can have different outcomes in the Saskatchewan River Delta.

The following four environmental outcomes are of interest to this survey:

- Lake Sturgeon
- Waterfowl population
- Muskrat abundance
- Habitat in healthy ecological condition

Please read this carefully to answer the questions in the survey.

Lake Sturgeon



- Lake Sturgeon are one of the largest, longest-lived, freshwater fish species in Canada

and have special significance to Indigenous people.

- Lake Sturgeon in the delta are currently listed as endangered by the Committee on the Status of Endangered Wildlife in Canada.
- They are a sensitive indicator of overall aquatic health of the delta ecosystem.
- Population levels in the delta are estimated to be 10% of historical abundance due to past harvests and dam construction.
- The conservation target for the delta population is 10,000 adult fish to allow for subsistence harvest by the local community.

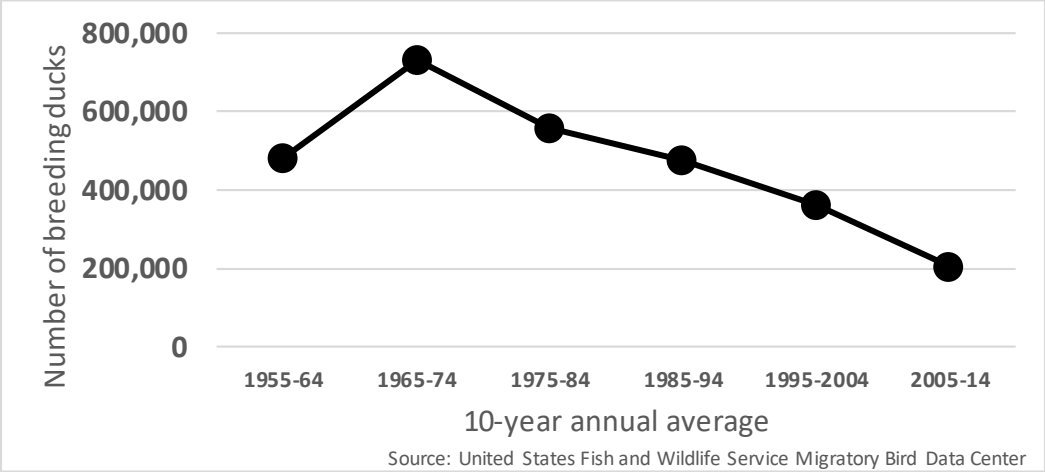
- I have read and understood these instructions

Waterfowl population

- The Saskatchewan River Delta is recognized internationally as an Important Bird Area due to the high concentration of waterfowl
- The area is an important migratory stopover location and contributes significantly to waterfowl populations in North America.

- Hundreds of thousands of ducks nest in the delta each year but these numbers have decreased from around 800,000 during the late 1960s to 200,000 in the 2010s.

10-year annual average for number of breeding ducks in Saskatchewan River Delta



- I have read and understood these instructions

Muskrat abundance

- Muskrats are culturally important for the local community and are harvested for food and their furs.
- Current muskrat harvest levels are 99% below 1960s levels.
- They are particularly sensitive to changing water levels and upstream river flow alterations and ecological deterioration have led to population declines in the delta.
- Muskrat abundance is an important indicator of overall wetland ecosystem health.

▪ I have read and understood these instructions

Habitat in healthy ecological condition

- The abundance and diversity of wildlife in the delta depends on the ecological health of streams, lakes, wetlands, and uplands.
- Habitat degradation and loss has occurred in the delta due to
  - Less water and sediments entering the delta
  - Permanent flooding of wetlands for hydropower reservoirs (100,000 hectares)
  - Conversion of wetlands to agriculture (50,000 hectares)
  - Invasive species that out-compete native species for water and nutrients such as an aggressive plant named Phragmites (European Common Reed).
- Healthy ecological condition is measured using local Indigenous knowledge and recognized standards.
- This outcome measures the quantity of the delta in healthy ecological condition.

▪ I have read and understood these instructions

[Survey versions A1 and A2]

Summary of Environmental Outcomes in the Saskatchewan River Delta

The effects of each possible scenario will be described using the following scores:

	What it Means
Lake Sturgeon	A score between 0 and 100 percent showing **the estimated size of the Lake Sturgeon population compared to the conservation target**. A score of 100 means that the population meets the conservation target; 0 means no fish. Without management changes, **the score in the delta will be 35.**
Waterfowl population	A score between 0 and 100 percent showing **the estimated size of waterfowl populations compared**

	to historical levels. A score of 100 means that populations are the largest natural size possible; 0 means no birds. Without management changes, **the score in the delta will be 25.**
Muskrat abundance	A score between 0 and 100 percent showing **the estimated abundance of muskrats compared to historical levels**. A score of 100 means that populations are the largest natural size possible; 0 means no muskrats. Without management changes, **the score in the delta will be 5.**
Habitat in healthy ecological condition	A score between 0 and 100 percent showing **the quantity of habitat in the delta in healthy ecological condition of**. Higher scores mean that more of the delta is in a healthy natural condition. Without management changes, **the score in the delta will be 45.**
Annual cost to your household for 20 years	The amount of money that your household will have to pay each year for 20 years while the primary conservation activities take place.

[Survey versions B1 and B2]

Summary of Environmental Outcomes in the Saskatchewan River Delta

The effects of each possible scenario will be described using the following scores:

	What it Means
Lake Sturgeon	A score between 0 and 100 percent showing **the estimated size of the Lake Sturgeon population compared to the conservation target**. A score of 100 means that the population meets the conservation target; 0 means no fish. Without management changes, **the score in the delta will be 100.**
Waterfowl population	A score between 0 and 100 percent showing **the estimated size of waterfowl populations compared to historical levels**. A score of 100 means that populations are the largest natural size possible; 0 means no birds. Without management changes, **the score in the delta will be 75.**
Muskrat abundance	A score between 0 and 100 percent showing **the estimated abundance of muskrats compared to historical levels**. A score of 100 means that populations are the largest natural size possible; 0 means no muskrats. Without management changes, **the score in the delta will be 70.**

Habitat in healthy ecological condition	A score between 0 and 100 percent showing **the quantity of habitat in the delta in healthy ecological condition of**. Higher scores mean that more of the delta is in a healthy natural condition. Without management changes, **the score in the delta will be 85.**
Annual benefit to your household for 20 years	The amount of money that your household will receive each year for 20 years while primary development and mitigation activities take place

Which Saskatchewan River Delta Future Do You Prefer?

Your opinions are important to understand what Saskatchewan River Delta future outcomes the public prefers. The results of this survey are advisory. The survey will inform policymakers on the opinions and preferences of Canadians to help decide if and what actions should be taken that affect the delta.

[Group A1]
Next, we will ask you to make six (6) choices between the outcomes of different Saskatchewan River Delta future alternatives, to indicate which option you prefer. In each question, you are asked to choose between a Status Quo Alternative (leave as is) and two other alternatives (Alternative A and Alternative B):

- The Status Quo Alternative (leave as is) shows expected outcomes over the next 20 years if no new delta conservation projects occurs, and would not increase the costs to your household.
- Alternatives A and B show the expected outcomes over the next 20 years under two of the many potential future scenarios that do more and cost more to conserve the delta. The added cost to your household each year for 20 years is shown for each alternative.

For each question, ask yourself whether you believe the Saskatchewan River Delta improvements offered under Alternatives A or B are worth the additional costs each year to your household over 20 years.

[Group A2]
Next, we will ask you to make a choice between the outcomes of different Saskatchewan River Delta future alternatives, to indicate which option you prefer. You are asked to choose between a Status Quo Alternative (leave as is) and one other alternative (Alternative A):

- The Status Quo Alternative (leave as is) shows expected outcomes over the next 20 years if no new delta conservation projects occurs, and would not increase the costs to your household.
- Alternative A shows the expected outcomes over the next 20 years under a potential future scenario that does more and costs more to conserve the delta. The added cost to your household each year for 20 years is shown.

*A*sk yourself whether you believe the Saskatchewan River Delta improvements offered under Alternative A are worth the additional costs each year to your household over 20 years.

[Group B1]
Next, we will ask you to make six (6) choices between the outcomes of different Saskatchewan River Delta future alternatives, to indicate which option you prefer. In each question, you are asked to choose between a Status Quo Alternative (leave as is) and two other alternatives (Alternative A and Alternative B):

- The Status Quo Alternative (leave as is) shows expected outcomes over the next 20 years if delta conditions remain the same, and would not change the net cost to your household.
- Alternatives A and B show the expected outcomes over the next 20 years under two of the many potential future scenarios that do less to conserve the delta, but result in benefits to households. The added benefit to your household each year for 20 years is shown for each alternative.

For each question, ask yourself whether you believe the Saskatchewan River Delta degradations offered under Alternatives A or B are worth the additional money each year your household would receive over 20 years.

[Group B2]
Next, we will ask you to make a choice between the outcomes of different Saskatchewan River Delta future alternatives, to indicate which option you prefer. You are asked to choose between a Status Quo Alternative (leave as is) and one other alternative (Alternative A):

- The Status Quo Alternative (leave as is) shows expected outcomes over the next 20 years if delta conditions remain the same, and would not change the net cost to your household.
- Alternative A shows the expected outcomes over the next 20 years under a potential future scenario that does less to conserve the delta, but results in benefits to households. The added benefit to your household each year for 20 years is shown.

*A*sk yourself whether you believe the Saskatchewan River Delta degradations offered under Alternative A are worth the additional money you would receive each year to your household over 20 years.

[All survey versions]
There is no right or wrong answer. We have found some people support these alternatives and others do not support them. Both kinds of people have good reasons for why they would choose one way or the other.

It is important that you make each of your upcoming selections like you would if you were **actually** facing these exact choices in reality.

[Group A1 or B1] Please treat each of the following questions individually as a separate choice.

[Group A1 or A2] Remember, paying for environmental improvement means you would have less money available to buy other things.

[Group B1 or B2] Remember, the money you receive as a tax credit can be used to buy other things.

[Group A1 or B1]
[] I am ready to make choices between potential Saskatchewan River Delta futures

[Group A2 or B2]
[] I am ready to make a choice between potential Saskatchewan River Delta futures

[Group A1 Example: 1 of 6 choice sets]

6. Alternatives A and B are potential Saskatchewan River Delta futures. The Status Quo alternative means no new conservation occurs. Given the choice between these three alternatives, how would you vote?

	Results in 20 years		
	Status Quo	Alternative A	Alternative B
Lake Sturgeon	**30%** 3,000 of 10,000 fish conservation target	**15%** 1,500 of 10,000 fish conservation target	**100%** 10,000 of 10,000 fish conservation target
Waterfowl population	**25%** 200,000 of 800,000 breeding ducks possible	**50%** 400,000 of 800,000 breeding ducks possible	**75%** 600,000 of 800,000 breeding ducks possible
Muskrat abundance	**5%** 1 muskrat found per hectare out of 20 possible	**30%** 6 muskrats found per hectare out of 20 possible	**60%** 12 muskrats found per hectare out of 20 possible
Habitat in healthy ecological condition	**45%** 405,000 of 900,000 hectares	**60%** 540,000 of 900,000 hectares	**75%** 675,000 of 900,000 hectares
Annual cost to your household for 20 years	**$0** Increase in annual taxes for 20 years	**$15** Increase in annual taxes for 20 years	**$325** Increase in annual taxes for 20 years
I would vote for…	☐ Status Quo	☐ Alternative A	☐ Alternative B

7. Considering the alternatives outlined above, what do you think a typical person in your neighbourhood would choose if the following options were put to vote in a real referendum?

A typical neighbour of mine would vote for…	☐ Status Quo	☐ Alternative A	☐ Alternative B

[Include the following attribute descriptions below each choice task]

Lake Sturgeon

- Lake Sturgeon are one of the largest, longest-lived, freshwater fish species in Canada and have special significance to Indigenous people.
- Lake Sturgeon in the delta are currently listed as endangered by the Committee on the Status of Endangered Wildlife in Canada.
- They are a sensitive indicator of overall aquatic health of the delta ecosystem.
- Population levels in the delta are estimated to be 10% of historical abundance due to past harvests and dam construction.
- The conservation target for the delta population is 10,000 adult fish to allow for subsistence harvest by the local community.

Waterfowl population

- The Saskatchewan River Delta is recognized internationally as an Important Bird Area due to the high concentration of waterfowl
- The area is an important migratory stopover location and contributes significantly to waterfowl populations in North America.
- Hundreds of thousands of ducks nest in the delta each year but these numbers have decreased from around 800,000 during the late 1960s to 200,000 in the 2010s.

Muskrat abundance

- Muskrats are culturally important for the local community and are harvested for food and their furs.
- Current muskrat harvest levels are 99% below 1960s levels.
- They are particularly sensitive to changing water levels and upstream river flow alterations and ecological deterioration have led to population declines in the delta.
- Muskrat abundance is an important indicator of overall wetland ecosystem health.

Habitat in healthy ecological condition

- The abundance and diversity of wildlife in the delta depends on the ecological health of streams, lakes, wetlands, and uplands.
- Habitat degradation and loss has occurred in the delta due to
  - Less water and sediments entering the delta
  - Permanent flooding of wetlands for hydropower reservoirs (100,000 hectares)
  - Conversion of wetlands to agriculture (50,000 hectares)
  - Invasive species that out-compete native species for water and nutrients such as an aggressive plant named Phragmites (European Common Reed).
- Healthy ecological condition is measured using local Indigenous knowledge and recognized standards.
- This outcome measures the quantity of the delta in healthy ecological condition.

[INCLUDE REST OF CHOICE SETS HERE]

[Group A2]

8. Alternative A is a potential Saskatchewan River Delta future. The Status Quo alternative means no new conservation occurs. Given the choice between these two alternatives, which one would you prefer?

	Result in 20 years	
	Status Quo	Alternative A
Lake Sturgeon population	**35%** 3,500 of 10,000 fish conservation target	**100%** 10,000 of 10,000 fish conservation target
Waterfowl population	**25%** 200,000 of 800,000 breeding ducks possible	**75%** 600,000 of 800,000 breeding ducks possible
Muskrat abundance	**5%** 1 muskrat found per hectare out of 20 possible	**70%** 14 muskrat found per hectare out of 20 possible
Habitat in healthy ecological condition	**45%** 405,000 of 900,000 hectares	**85%** 765,000 of 900,000 hectares
Cost to your household per year for 20 years	**$0** Increase in annual taxes for 20 years	**$[$BIDAMT]** Increase in annual taxes for 20 years
I would vote for…	☐ Status Quo	☐ Alternative A

9. Considering the alternatives outlined above, what do you think a typical person in your neighbourhood would choose if the following options were put to vote in a real referendum?

A typical neighbour of mine would vote for…	☐ Status Quo	☐ Alternative A

[Group B1 Example: 1 of 6 choice sets]

10. Alternatives A and B are potential Saskatchewan River Delta futures. The Status Quo alternative means no new conservation occurs. Given the choice between these three alternatives, how would you vote?

	Results in 20 years		
	Status Quo	Alternative A	Alternative B
Lake Sturgeon	**100%** 10,000 of 10,000 fish conservation target	**30%** 3,000 of 10,000 fish conservation target	**15%** 1,500 of 10,000 fish conservation target
Waterfowl population	**50%** 400,000 of 800,000 breeding ducks possible	**50%** 400,000 of 800,000 breeding ducks possible	**25%** 200,000 of 800,000 breeding ducks possible

Muskrat abundance	**40%** 8 muskrat found per hectare out of 20 possible	**30%** 6 muskrats found per hectare out of 20 possible	**5%** 1 muskrat found per hectare out of 20 possible
Habitat in healthy ecological condition	**60%** 540,000 of 900,000 hectares	**60%** 540,000 of 900,000 hectares	**45%** 405,000 of 900,000 hectares
Annual benefit to your household for 20 years	**$0** Annual tax credit for 20 years	**$15** Annual tax credit for 20 years	**$325** Annual tax credit for 20 years
I would vote for…	☐ Status Quo	☐ Alternative A	☐ Alternative B

11. Considering the alternatives outlined above, what do you think a typical person in your neighbourhood would choose if the following options were put to vote in a real referendum?

A typical neighbour of mine would vote for…	☐ Status Quo	☐ Alternative A	☐ Alternative B

[INCLUDE REST OF CHOICE SETS HERE]

[Group B2]

12. Alternative A is a potential Saskatchewan River Delta future. The Status Quo alternative means no new conservation occurs. Given the choice between these two alternatives, which one would you prefer?

	Result in 20 years	
	Status Quo	Alternative A
Lake Sturgeon population	**100%** 10,000 of 10,000 fish conservation target	**35%** 3,500 of 10,000 fish conservation target
Waterfowl population	**75%** 600,000 of 800,000 breeding ducks possible	**25%** 200,000 of 800,000 breeding ducks possible
Muskrat abundance	**70%** 14 muskrat found per hectare out of 20 possible	**5%** 1 muskrat found per hectare out of 20 possible
Habitat in healthy ecological condition	**85%** 765,000 of 900,000 hectares	**45%** 405,000 of 900,000 hectares
Annual benefit to your household for 20 years	**$0** Annual tax credit for 20 years	**$[$BIDAMT]** Annual tax credit for 20 years
I would vote for…	☐ Status Quo	☐ Alternative A

13. Considering the alternatives outlined above, what do you think a typical person in your neighbourhood would choose if the following options were put to vote in a real referendum?

A typical neighbour of mine would vote for…	☐ Status Quo	☐ Alternative A

[All survey versions: Consequentiality question]
The next four questions are about what you believed when you voted.

14. How would you rate the difficulty in answering the previous Saskatchewan River Delta future scenario questions?
[Likert 5-point scale]

Very easy to answer 1
2
3
4
Very difficult to answer 5

15. When the federal and provincial governments decide whether or not to implement the Saskatchewan River Delta future scenarios you just voted on, how likely do you think it is that the governments will take into account your vote and that of the other respondents to this study in its decision-making?

Very likely Likely Somewhat likely Somewhat unlikely Unlikely Very unlikely
□ □ □ □

[Group A1: WTP CE version]
16. If one of the alternative scenarios is implemented, how effective do you think it will be at conserving the delta over the next 20 years?

Extremely Effective Very Effective Moderately Effective Slightly Effective Not Effective at All
□ □ □ □ □

17. Did you believe that if one of the alternative scenarios is implemented, you and your family would be charged the annual tax shown for the next 20 years, more than annual tax shown, or less than annual tax shown?

□ Charge annual tax shown
□ Charge more
□ Charge less

[Group A2: WTP CV version]

If the alternative scenario is implemented, how effective do you think it will be at conserving the Saskatchewan River Delta over the next 20 years?

Extremely Effective	Very Effective	Moderately Effective	Slightly Effective	Not Effective at All
☐	☐	☐	☐	☐

Did you believe that if the alternative scenario is implemented, you and your family would be charged an annual tax of [$BIDAMT] for the next 20 years, more than [$BIDAMT], or less than [$BIDAMT]?

☐ Charge [$BIDAMT]
☐ Charge more
☐ Charge less

[Group B1: WTA CE version]
If the status quo scenario is implemented, how effective do you think it will be at conserving the Saskatchewan River Delta over the next 20 years?

Extremely Effective	Very Effective	Moderately Effective	Slightly Effective	Not Effective at All
☐	☐	☐	☐	☐

Did you believe that if one of the alternative scenarios is implemented, you and your family would be paid the annual tax credit shown for the next 20 years, more than annual tax credit shown, or less than annual tax credit shown?

☐ Receive annual tax credit shown
☐ Receive more
☐ Receive less

[Group B2: WTA CV version]
If the status quo scenario is implemented, how effective do you think it will be at conserving the Saskatchewan River Delta over the next 20 years?

Extremely Effective	Very Effective	Moderately Effective	Slightly Effective	Not Effective at All
☐	☐	☐	☐	☐

Did you believe that if the alternative scenario is implemented, you and your family would be paid an annual tax credit of [$BIDAMT] for the next 20 years, more than [$BIDAMT], or less than [$BIDAMT]?

☐ Receive [$BIDAMT]
☐ Receive more
☐ Receive less

[All survey versions]
Conservation actions often have uncertain impacts on the environment.

Some conservation actions have greater certainty over the environmental outcome, but result in smaller changes.

Other conservation actions have more uncertainty over environmental outcomes, but have the chance of resulting in larger changes.

18. Suppose the government is choosing between two conservation projects that aim to increase the waterfowl population in the Saskatchewan River Delta.

    Which project would you prefer the government implement?

___Project A: Certain to increase the waterfowl population by 100,000 breeding ducks.

___Project B: A 50% chance of increasing the waterfowl population by 200,000 breeding ducks and a 50% chance of resulting in no change in waterfowl population numbers.

19. Now suppose the government is choosing between allowing two upstream projects that will decrease the waterfowl populations in the Saskatchewan River Delta.

    Which project would you prefer the government implement?

___Project C: Certain to decrease the waterfowl population by 100,000 breeding ducks.

___Project D: A 50% chance of decreasing the waterfowl population by 200,000 breeding ducks and a 50% chance of resulting in no change in waterfowl population numbers.

20. We would like to understand what factors may or may not have influenced your responses to earlier questions. Below is a list of statements people have made in similar surveys about why they responded as they did.

How much do you agree or disagree with each of the following statements?
[Randomize statement orders]

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
I had enough information to make an informed choice.					
Information in the survey was easy to understand.					
I do not trust the government to conserve the delta.					
I did not consider selecting the Status Quo alternative in making my choices.					
It is important to conserve the delta, no matter how much it costs.					
The added cost I am willing to pay is to protect the environment in general and not just to protect the delta.					

21. Thinking about the choices you have just made, please rate how much you agree or disagree with each of the following statements
[Randomize statement orders]

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
My choices would have been different if the economy in my area were better.					
With the COVID-19 pandemic, I think my priority of spending my money has changed.					
I do not think I should have to contribute to the conservation of the delta.					
I do not believe that the alternative conservation scenarios are actually feasible.					
The delta is too far away from my home for me to actually care.					

[Next question is for Group A1 or A2 only]
[Programmer's note: Only present the next question to respondents who choose the Status Quo option at least once]

22. If you voted for Status Quo, please rate how much you agree or disagree with each of the following statements

	Strongly Agree	**Agree**	**Neither Agree or Disagree**	**Disagree**	**Strongly Disagree**
I voted for the Status Quo because I am against any more taxes or government spending.					
I would not vote for the conservation programs even if there were no added costs to my household.					
I voted for the Status Quo alternative because I believe my taxes are already too high.					

23. How important to you are the following benefits from natural areas in Canada?

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
Support the traditions, livelihoods and culture of Indigenous peoples					
Being able to eat fish and animals that have been caught in the wild					
Support tourism and provide local communities with jobs					
Being able to see wildlife when in nature					
Knowing that a large diverse range of plants and animals exist in Canada, even if I never see them					

24. During the past 12 months, how much money in total did you spend on donations or membership fees to nature or conservation organization? *(This includes groups at the local, regional, national, or international level. If you did not spend any money, enter "0")*

$CDN ____

25. Do you consider that the amount of income tax you pay is...?
___Too high
___About right
___Too low
___Don't know

26. Please think back about everything you read during this survey. Overall, do you think it tried to push you to choose one way or the other, or let you make up your own mind about how to choose?

☐ Tried to push you to choose the Status Quo option
☐ *[If A1 or B1]* Tried to push you to choose the Alternative A or B options
☐ *[If A2 or B2]* Tried to push you to choose the Alternative A option
☐ Let me make up my own mind

There are different ways for people to pay for new programs to protect the environment. One way is for the government to pay the cost. This will raise everyone's taxes. The other way is for businesses to pay the cost. This will make prices go up for everyone.

27. If you had to choose, would you prefer to pay for new environmental programs through higher taxes, or through higher prices?
__ Higher Taxes
__ Higher Prices
__ Either one, I don't care which

28. Would you say that you think of yourself as:
__ A very strong environmentalist
__ A strong environmentalist
__ A moderate environmentalist
__ Slightly an environmentalist
__ Not an environmentalist at all

29. When it is safe to travel, would you like to visit the Saskatchewan River Delta?
__Yes
__No

__ Don't Know

This information is for statistical purposes only – to help us better understand your answers. Remember that responses are confidential.

~~30.~~ How many individuals live in your household (including yourself)?
_____

31. How many children under the age of 18 live in your house?
_____

32. Which gender do you prefer to identify with?
___Man
___Woman
___Gender non-binary/third gender/other
____Prefer not to say

~~33.~~ What is your birth year?
_____

~~34.~~ What is the first 3 digits of your postal code?
_____

~~35.~~ Did you or your parents immigrate to Canada from another country?

___ Yes
___ No

36. To the best of your knowledge, the total household income from all sources before tax falls into which of the following:

$0-$9,999
$10000-$29999
$30000-$49999
$50000-$69999
$70000-$89999
$90000-$124999
$125000-$149999
$150000-$174999
$175000-199999

Over $200,000
Prefer not to say

37. What is the highest level of education that you have completed?
____Less than high school
____High school graduate
____Vocational/Trade/Technical School
____Some University/College
____Bachelor's degree
____Advanced degree

38. Which of the following categories best describes your current employment status?
_____Employed full time
_____Employed part time
_____Student
_____Retired
_____Full-time homemaker
_____Unemployed

39. If a federal election were held today, how would you vote federally? Please select one response only.

___Conservative
___Green
___Liberal
___New Democratic
___Bloc Quebecois
___Other
___Not Eligible to Vote
___I would not Vote
___Prefer not to say

40. Has any members of your household received income support or lost their employment due to COVID-19?
____Yes
____No

[If Yes to previous question, present this question]
41. Please think about three months from now, how likely do you think is that the person impacted will be employed at that time?

Very likely	Somewhat likely	Somewhat unlikely	Very unlikely
□	□	□	□

Thank you very much for taking the time to answer the questionnaire.

42. Please enter any additional comments you may have about this survey in the space provided.

_____