



YOU CAN HELP SOLVE A MYSTERY!

**Please tell us what you think
about the magical world of Alberta's fish.**

**We are interested in what you have to say about fish,
even if you are not an angler or directly involved in the Alberta
fishery, or even whether you live in an urban area or a rural area.**

The Cows and Fish program works with Alberta communities to develop greater understanding about how the natural environments in and around waterbodies function, and how we can best manage these important areas. See the back page for more information on Cows and Fish.



To build even more awareness, Cows and Fish will be creating a new educational presentation for the Alberta public that focuses on fish and fish habitat. This new presentation will be called:

"THE MAGIC AND MYSTERY OF FISH".

Only by asking now for direct input from many different Albertans, including you, can "THE MAGIC AND MYSTERY OF FISH" presentation be designed so that it is really meaningful and helpful in raising awareness.

The enclosed short survey asks for about 12-15 minutes of your time to:

- ✓ share what you know about Alberta fish (whether it's a little or a lot);
- ✓ identify any opinions or concerns you have about the province's fish and their habitat; and
- ✓ tell us what you think it's important to do to manage fish and their habitat in Alberta.



THANK YOU !

(see the reverse for a few brief instructions)

SOME BRIEF INSTRUCTIONS ON COMPLETING THIS SURVEY



This survey is not a test!

Rather, it's just a good way to help the Cows and Fish program understand your thoughts about the interesting world of fish! The information you share will be used by Cows and Fish to develop appropriate content for "The Magic and Mystery of Fish" presentation.

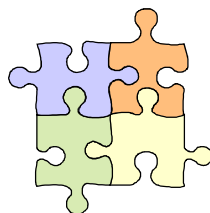
- 1.** Please answer each question that applies to you by checking **ONE BOX ONLY**, unless indicated otherwise.
- 2.** If you're not sure about the response to a question, please check the response that you are most comfortable with, or feel free to simply check the box labeled "Not sure / don't know". Remember, there isn't necessarily a "correct" or "incorrect" answer to a lot of the questions – rather, it's your opinion that counts.
- 3.** The survey questions are set out in 4 parts.
 - ✓ Part 1 asks about you and fish (even if you don't fish!).
 - ✓ Part 2 asks for some of your thoughts about fish conservation and management.
 - ✓ Part 3 deals with fish facts.
 - ✓ Part 4 asks you a little about yourself.
- 4.** When you've completed your survey, please hand it in to the person who distributed to you.

We appreciate you taking the time to participate in this important survey.

The survey will be collected and analyzed independently on behalf of Cows and Fish. All the information you provide will be treated with strict confidentiality and anonymity.

THANK YOU !

PLEASE BEGIN THE SURVEY NOW.



PART 1
ALBERTA'S FISH - AND YOU!

1. Please tell us a little about **YOUR INVOLVEMENT** in fishing and / or fish conservation.

- | | <u>YES</u> | <u>NO</u> |
|--|--------------------------|--------------------------|
| (A) Do you fish in Alberta at this time, or have you fished in Alberta at any time in the last 10 years? | <input type="checkbox"/> | <input type="checkbox"/> |
| (B) Are you involved in some aspect of fish conservation at this time, or have you been in the last 10 years (e.g. through your job, or as part of group or volunteer activities)? | <input type="checkbox"/> | <input type="checkbox"/> |

If you answered "No" to both (A) and (B), please skip ahead to Question 6 on the next page. If you answered "Yes" to either (A) or (B), please continue at Question 2 below.

2. Please select the **ONE** category that **BEST DESCRIBES YOUR INVOLVEMENT** in fishing and / or fish conservation in Alberta.

- You are mostly involved as a recreational or sport angler
- You are mostly involved as a commercial fisher
- You are mostly involved because you fish as part of the First Nations / Metis fishery
- You are a government employee involved in managing water and / or land resources
- You are a member, volunteer or employee of a non-government group or organization involved in conserving water and / or land resources
- Other (please specify) _____

3. For the one category you selected in Question 2, **HOW MANY YEARS** have you been involved in that way?

- 2 years or less
- 3 years to 10 years
- More than 10 years

4. **HOW OFTEN** do you fish in Alberta?

- Never
- Usually only 1 or 2 times a year
- Usually between 3 and 10 times a year
- More than 10 times a year

If you answered "Never" to Question 4, please skip ahead to Question 6 on the next page. Otherwise, please continue at Question 5 below.

5. **WHERE** do you usually fish?

- Mostly on lakes, wetlands and / or ponds
- Mostly on rivers and / or streams
- About equally on both of these two categories of waterbodies

11. We would like your opinion about the **BEST APPROACHES FOR CONSERVATION** of Alberta's fish and their habitat. Please **RANK TWO CHOICES** as #1 and #2 from the following list of possible approaches to conservation.

YOUR RANKING

- _____ Conduct regular ecological monitoring and adjust fishing regulations accordingly
- _____ Continue with the approaches being used now
- _____ Ensure appropriate water flow and water levels
- _____ Plan at the watershed scale
- _____ Provide education about fish and fish habitat
- _____ Restore any habitat that may have been lost
- _____ Stop all fishing
- _____ Strictly enforce related laws and regulations
- _____ Use land management practices that are sustainable
- _____ Not sure / don't know
- _____ Other (please specify) _____

12. Please think about Alberta landowners who live in settled areas such as subdivisions, cottage communities, or villages, towns or cities. How much **NEGATIVE IMPACT, IF ANY**, do you think the **LAND USE CHOICES** made by those landowners have on fish?

- No negative impact on fish
- A minor negative impact on fish
- A moderate negative impact on fish
- A major negative impact on fish
- Not sure / don't know

13. Now, please think instead about Alberta landowners who **LIVE AWAY FROM** settled areas (i.e. they do **NOT** live in subdivisions, cottage communities, or villages, towns or cities). How much **NEGATIVE IMPACT, IF ANY**, do you think the **LAND USE CHOICES** made by those landowners have on fish?

- No negative impact on fish
- A minor negative impact on fish
- A moderate negative impact on fish
- A major negative impact on fish
- Not sure / don't know

14. Now, think about just your own actions and how they may or may not impact fish. Regardless of how close you live to a waterbody, how much **NEGATIVE IMPACT, IF ANY**, do you think **YOUR PERSONAL ACTIONS** have on fish?

- No negative impact on fish
- A minor negative impact on fish
- A moderate negative impact on fish
- A major negative impact on fish
- Not sure / don't know

15. In general, how would you describe the **AMOUNT OF HABITAT AVAILABLE NOW** that is needed to support Alberta's fish populations over the long-term?

- There is more than enough habitat
- There is about the right amount of habitat
- There is not enough habitat
- Not sure / don't know

16. Please select up to **THREE** factors from the following list that you feel pose the **GREATEST THREATS (IF ANY) TO FISH and FISH HABITAT** in Alberta.

*You may select
up to 3 boxes on
this question.*

- Climate change
- Poor management of the Alberta fishery
- Lack of awareness or knowledge among the public
- Not enough science to understand and appropriately manage Alberta's fish
- Logging / timber activities
- Carbon fuel / resource extraction activities (e.g. coal, oil, gas)
- Agricultural activities
- Domestic, municipal and / or industrial sewage, effluent and / or discharge
- Residential developments
- Recreational activities
- Over-fishing (sport angling and / or commercial fishing)
- Roads and / or bridges near waterbodies
- Dam-building and / or water withdrawals
- Fish diseases
- Introduction of non-native fish species
- Removal of plants that grow in waterbodies, or that grow at or near the shore / bank
- None of the above
- Not sure / don't know
- Other (please specify) _____

17. In your opinion, **HOW MANY FISH** should a person licensed to fish in Alberta be allowed to keep each year?
- None
 - A share of any of the extra fish population that is available for harvest
 - Enough to eat a meal of fish once in a while
 - As many as they want or feel they need
 - Not sure / don't know
 - Other (please specify) _____

18. The **QUALITY OF WATER** in a waterbody is generally most dependent on:
- The stability of the waterbody's shore or bank
 - Water that runs off from surrounding surfaces such as fields, forests, parking lots and roads
 - Sewage and treated discharges carried directly into the waterbody via outlet pipes
 - The number and type of creatures living in and near the waterbody (such as fish, insects, amphibians, birds and small mammals)
 - Changes in water levels due to climatic conditions (such as drought or flood)
 - The condition of the surrounding watershed
 - Not sure / don't know
 - Other (please specify) _____

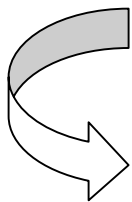
19. Please indicate whether you think each of the following statements is **TRUE** or **FALSE**.

| | <u>TRUE</u> | <u>FALSE</u> | <u>NOT SURE / DON'T KNOW</u> |
|--|--------------------------|--------------------------|----------------------------------|
| When a fish population declines, it can be a reflection of what is happening in the surrounding watershed | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| In order to benefit fish populations, draining wetlands is a good way to get more water into lakes, rivers and streams | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| As long as there is enough water available at the time when fish are reproducing, they can maintain their populations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fixing fish habitat is almost always successful in re-establishing fish populations over the long-term | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A fish population that has mostly big individuals in it means that the population is being maintained | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| As long as there is enough food available for fish, they can maintain their populations | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alberta's native fish have been quite successful at adapting quickly to changes people have made to their habitat | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alberta's non-sport fish are important to the survival of Alberta's sport fish | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

20. Can you describe one action that **YOU COULD TAKE** (as an individual) to maintain or restore Alberta fish populations and / or fish habitat? YES NO

If you answered "Yes", please give a short description of what that action could be.

PART 3 FISHY FACTS



Please continue, even if you are not involved in fishing. If you're not sure about an answer, just check the box for "Not sure / don't know".

21. **TROUT** generally prefer:
- Warm water
 - Cool water
 - Cold water
 - Not sure / don't know
22. **WALLEYE, PIKE and PERCH** will die when the water temperature exceeds:
- 9° C (or 48° F)
 - 19° C (or 66° F)
 - 29° C (or 84° F)
 - Not sure / don't know

23. Please indicate whether each of the following fish species is **NATIVE** or **NON-NATIVE** in Alberta.



| | <u>NATIVE</u> | <u>NON-NATIVE</u> | <u>NOT SURE / DON'T KNOW</u> |
|------------------------|--------------------------|--------------------------|------------------------------|
| Arctic grayling | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Brook trout | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fathead minnow | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Goldeye | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lake sturgeon | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Trout-perch | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

24. A variety of different types of living and dead vegetation along the shore or bank of a waterbody **INDICATES GOOD HABITAT** for:
- Fish
 - People
 - Both fish and people
 - Neither fish nor people
 - Not sure / don't know

25. Which one of the following descriptions do you feel is the best definition of a **RIPARIAN AREA**?
- A waterbody such as a lake, wetland, stream or river
 - An area with water-loving vegetation that borders a lake, wetland, stream or river
 - An upland area located away from the water
 - Not sure / don't know

26. Please indicate whether you feel each of the following statements about Alberta fish is **TRUE or FALSE**. (If you're just not sure, please feel free to check the appropriate box!)

| | TRUE | FALSE | NOT SURE / DON'T KNOW |
|---|--------------------------|--------------------------|------------------------------|
| All fish tend to migrate to warmer water as the weather turns cold in the fall | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fish can lay their eggs anywhere in the water at any time throughout the year | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sand or silt on the bottom of a waterbody protects fish eggs so they can hatch successfully | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fish mostly breathe by surfacing to get oxygen from the air | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| To conserve their energy, fish position themselves near fallen trees, rocks and vegetation in the water | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| All fish need about the same amount of oxygen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fish never stop swimming | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Fish eat more food in the winter months as added protection against the cold conditions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Most of Alberta's lakes, rivers and streams rely on stocked fish from fish hatcheries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

YOU ARE ALMOST DONE !

PLEASE PROCEED TO PART 4 ON THE NEXT PAGE FOR THE FINAL FEW QUESTIONS ...



PART 4
FOR COMPARISON PURPOSES - A LITTLE MORE ABOUT YOU !

27. In what **ALBERTA MUNICIPALITY** is your primary residence located? (e.g. City of Edmonton, MD of Willow Creek, Red Deer County)
28. What **TYPE OF AREA** is your primary residence located in?
- In a settled area** (e.g. in a subdivision, cottage community, village, town or city)
- Away from any settled area** (i.e. not in a subdivision, cottage community, village, town or city)
29. Is your primary residence immediately **ADJACENT TO A WATERBODY**? YES NO
30. Do you have a **SECONDARY RESIDENCE** (such as a recreational property) that is immediately **ADJACENT TO A WATERBODY**?
31. And a little about your **EDUCATION ...**
- (A) **Have you completed some or all of a post-secondary certificate, diploma or degree in the natural or physical sciences?**
- (B) **Are you a middle, junior or high school student (in Grades 7 to 12)?**
32. Which **ONE** of the following categories best describes your **PRIMARY OCCUPATION**?
- Agriculture**
- Engineering or construction of roads, bridges, dams or other water crossings**
- Fish and / or wildlife conservation, protection, education, enforcement or management**
- Resource extraction** (e.g. timber, oil, gas, coal, etc.)
- None of the above**
33. And **FINALLY**, about this survey!
- (A) **At what event were you given this survey?**
- (B) **In what community did you get this survey?**
- (C) **On what date did you complete this survey?**

That's it !
You've given us some very valuable information in solving

"THE MAGIC AND MYSTERY OF FISH".

Thank you !





For more information on Cows and Fish, please visit www.cowsandfish.org or contact Norine Ambrose at (403) 381-5538.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Fisheries and Oceans Canada has provided generous financial assistance in support of this survey.

Cows and Fish wishes to thank all local sponsors for helping us distribute and deliver this survey, in addition to general support provided by our partners:

- Landowners and Community Groups
- Alberta Beef Producers
- Trout Unlimited Canada
- Canadian Cattlemen's Association
- Alberta Sustainable Resource Development
- Alberta Agriculture and Food
- Alberta Environment
- Fisheries and Oceans Canada
- Agricultural and Agri-Food Canada – Prairie Farm Rehabilitation Administration
- Alberta Conservation Association



On behalf of Cows and Fish, this survey was prepared by NGB Evaluation Solutions Inc. of Edmonton, Alberta.