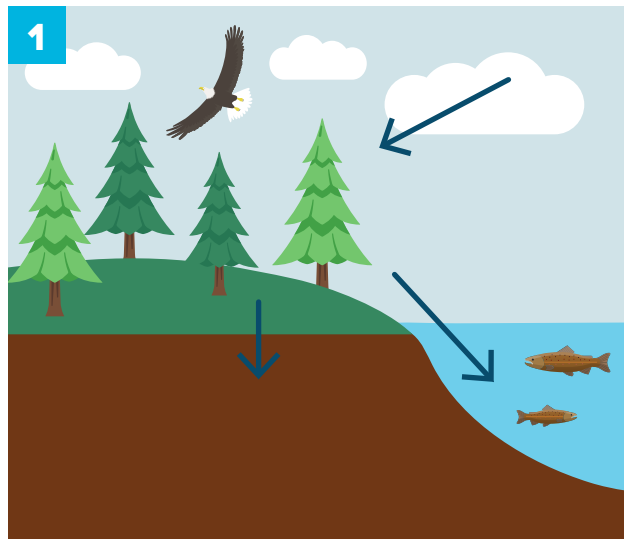
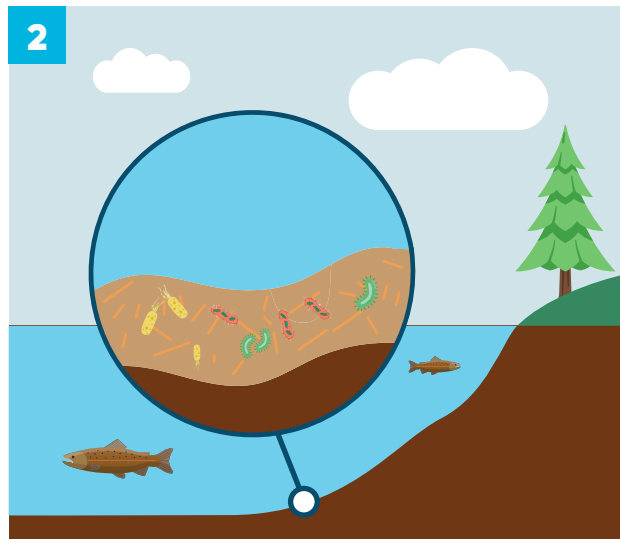


# Mercury in our environment

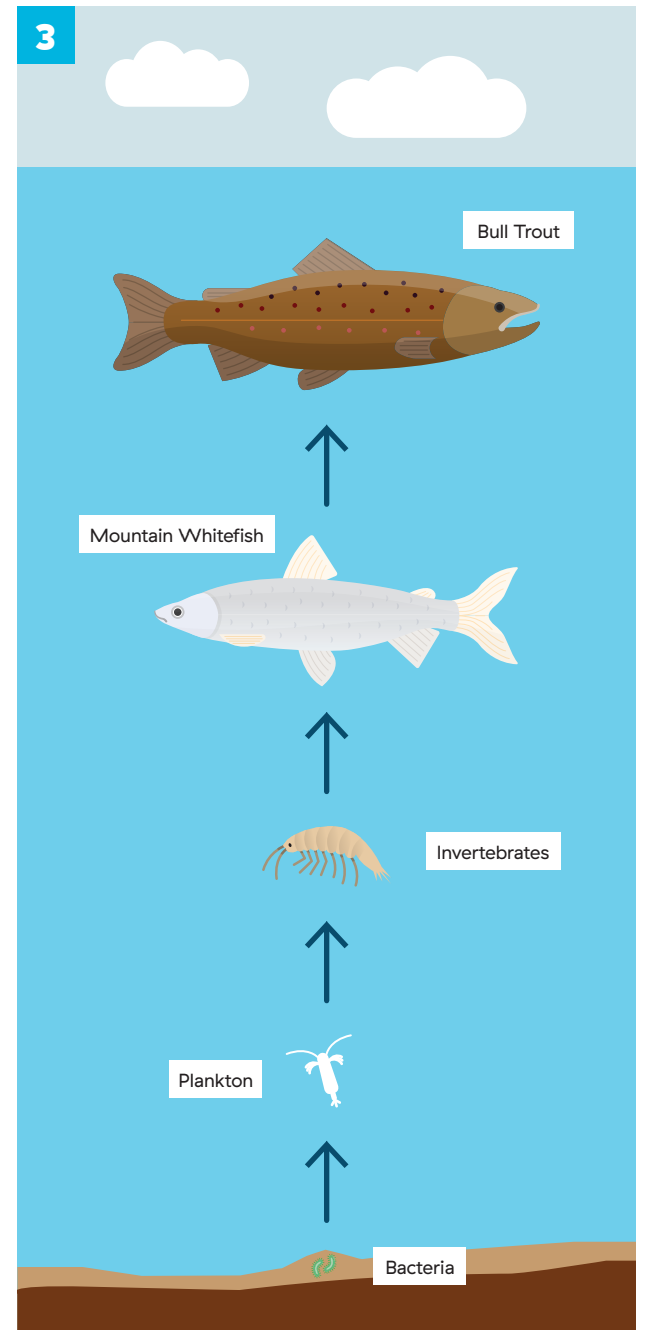
Mercury is a naturally occurring element that is found in low levels everywhere—in air, water, soil, plants, animals and humans.



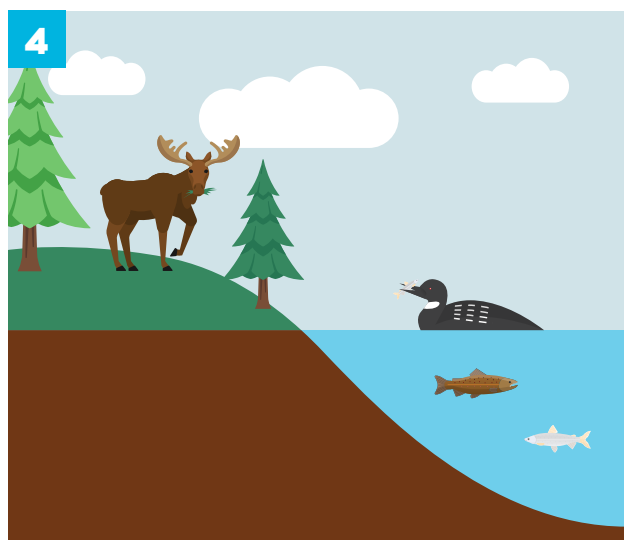
1 Plants absorb inorganic mercury from the air. When the plants decompose, the mercury ends up in the soil. Mercury is present—in low concentrations—in lakes and rivers.



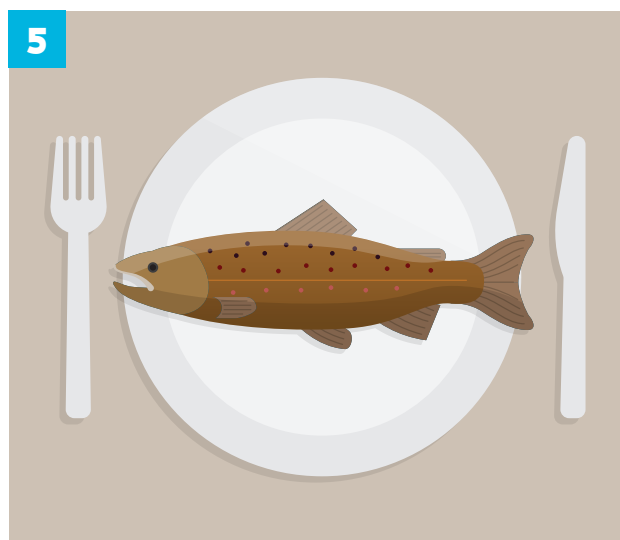
2 Bacteria that live at the bottom of lakes, rivers and oceans turn this naturally occurring inorganic mercury into methylmercury.



3 Methylmercury levels increase up the food chain. Large, predatory fish have higher levels of mercury than smaller fish lower down the food chain. That's why lake trout, bull trout and walleye have more mercury than kokanee, whitefish or rainbow trout.

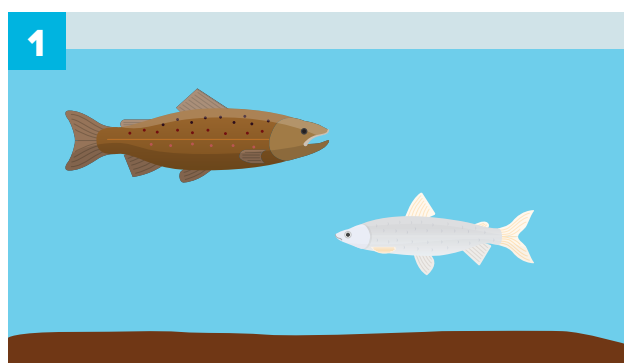


4 The amount of methylmercury in an animal depends on the amount and type of fish it eats. Animals that don't eat fish, such as moose, have very low levels of methylmercury. But other wildlife that do eat fish, such as loons, can have higher levels of methylmercury.

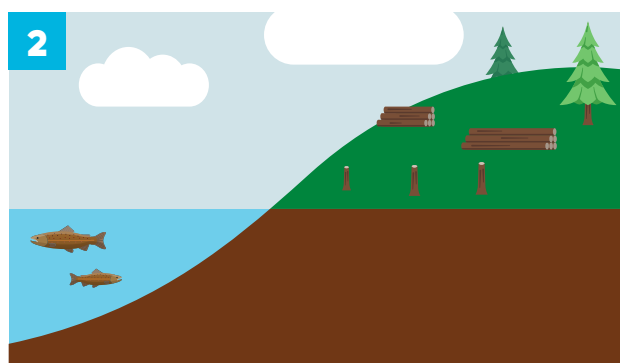


5 We consume small amounts of methylmercury when we eat fish.

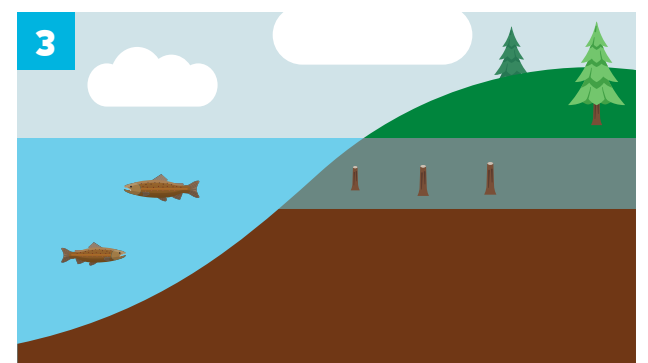
## MERCURY IN THE SITE C RESERVOIR



1 Currently, methylmercury levels in Peace River fish are relatively low—similar to fish in other lakes and rivers in B.C.



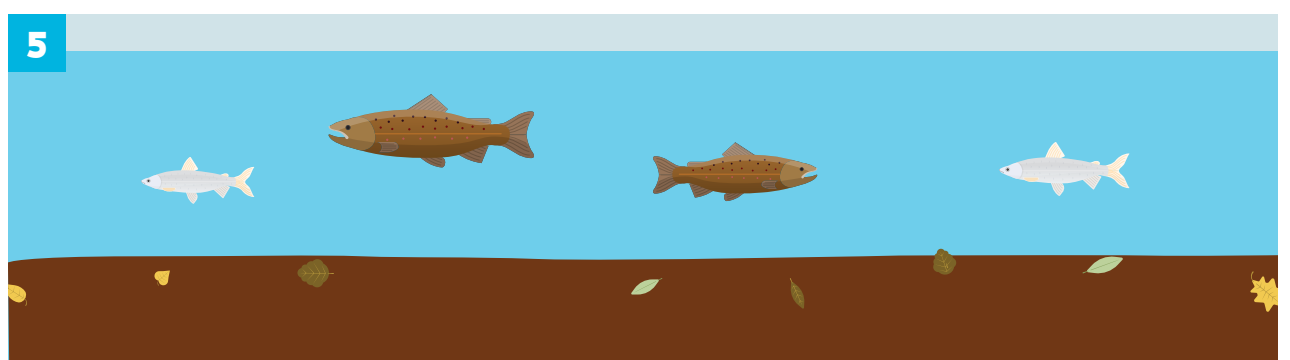
2 We're removing most of the vegetation in the reservoir area to reduce organic material that will end up underwater.



3 In 2023, when the Site C reservoir is created, parts of the existing shoreline will be permanently covered with water.



4 Methylmercury levels in fish in the reservoir will initially rise as bacteria decompose organic material in newly submerged areas and convert inorganic mercury to methylmercury.

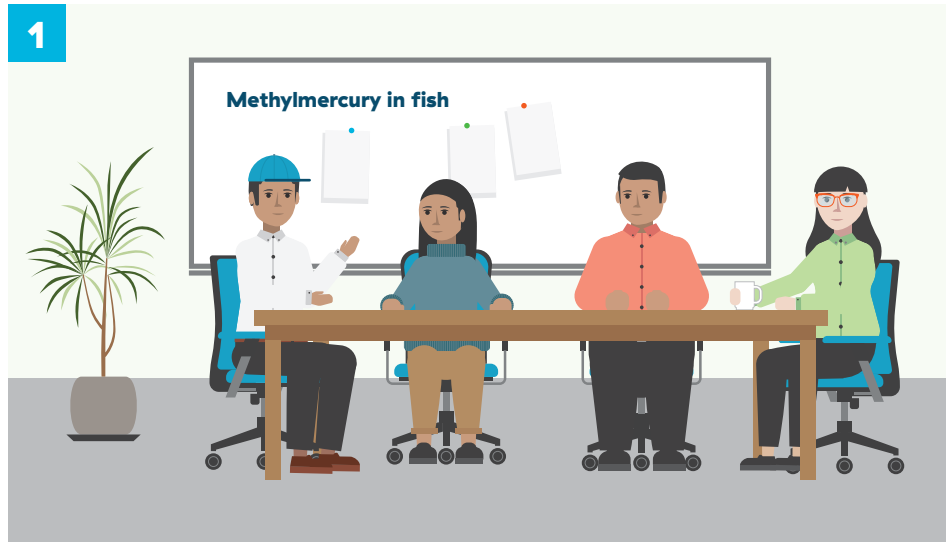


5 Eventually, organic matter becomes scarce at the bottom of the reservoir. Methylmercury creation slows down and levels drop throughout the food chain.

Methylmercury levels in fish are predicted to temporarily increase by 3 to 4 times, before slowly returning to a new baseline 20 to 30 years after the reservoir is created.

Fish methylmercury levels downstream of the dam, as far as Many Islands, Alberta, are predicted to initially double, before returning to a new baseline.

## WORKING TOGETHER TO MONITOR METHYLMERCURY LEVELS

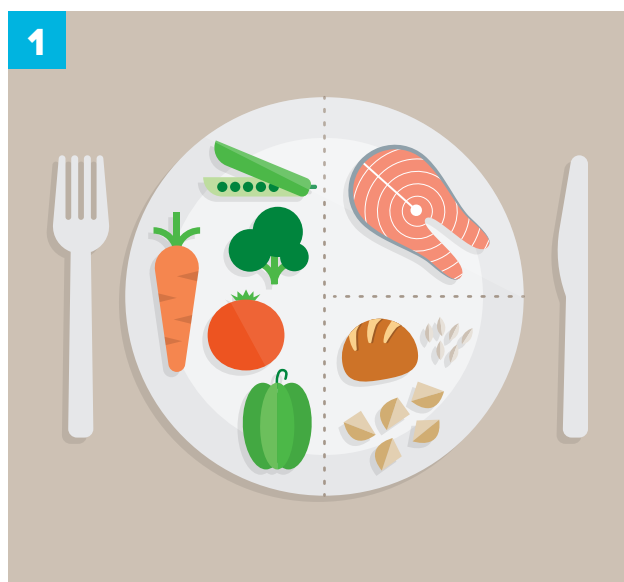


Our understanding of methylmercury in fish after filling the Site C reservoir is based on scientific predictions. To verify these predictions, we're working with Indigenous groups, communities and health authorities to develop a methylmercury monitoring plan for Site C.



We'll regularly measure methylmercury levels in local fish and collect information on how much fish people are eating. This information will be communicated, in partnership with health authorities, to Indigenous groups and the general public.

## YOU CAN EAT FISH FROM THE SITE C RESERVOIR

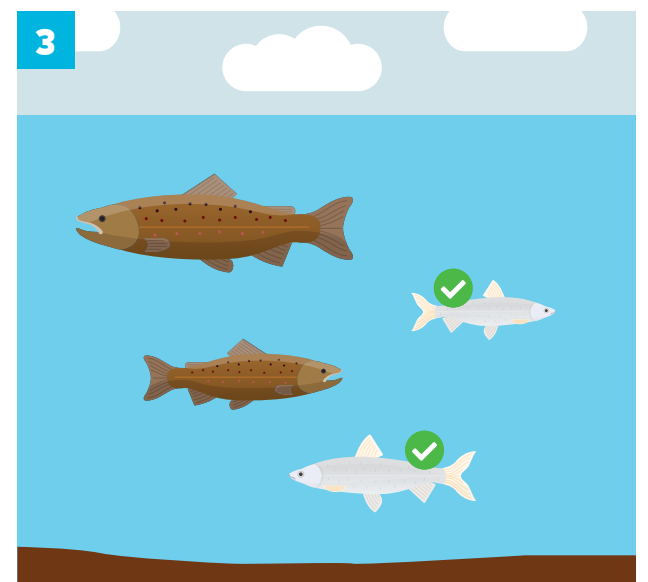


Canada's Food Guide recommends eating fish as a nutritious and healthy source of protein.

**2 BULL TROUT**

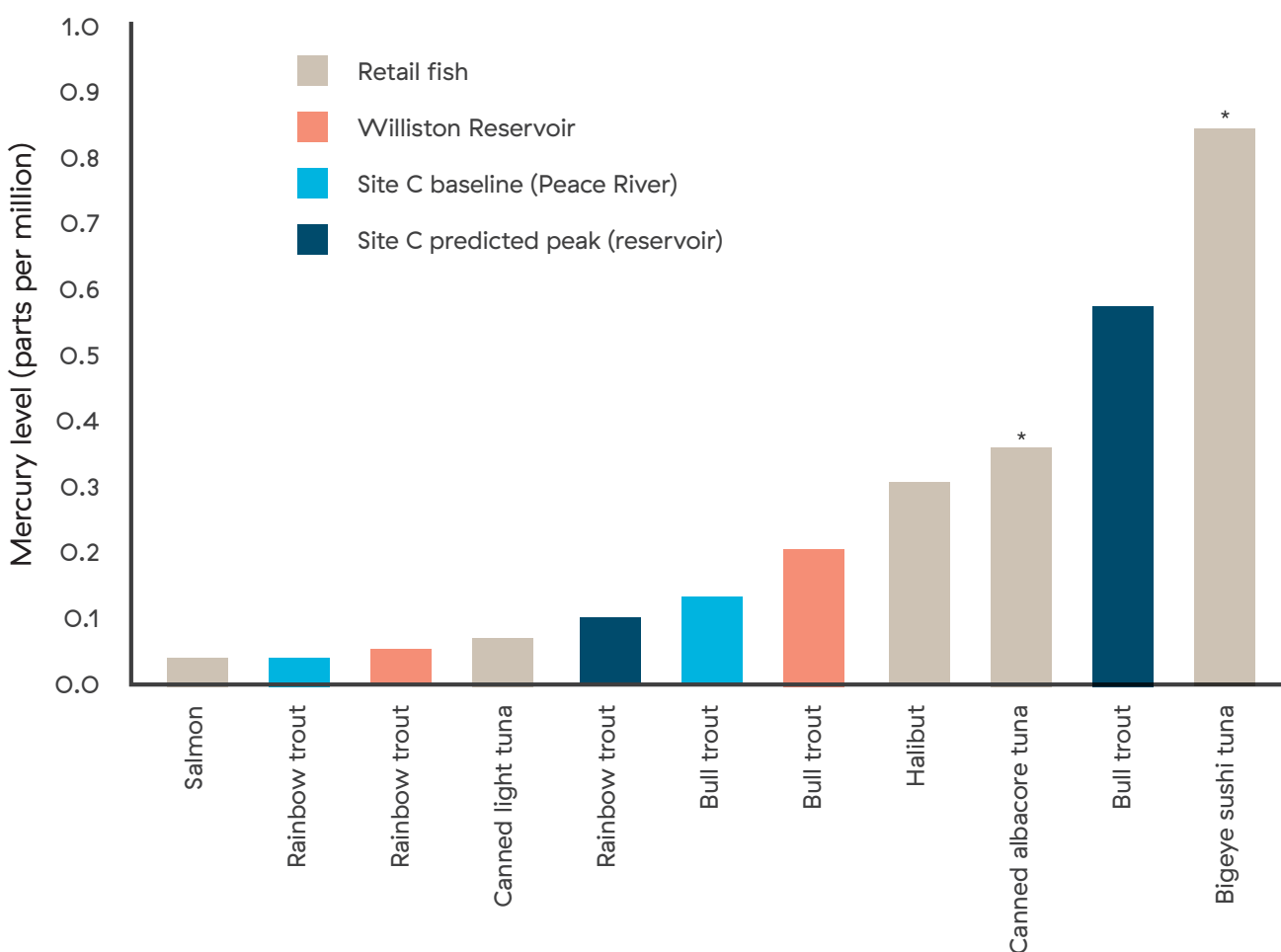
<b>Children</b>	<b>Adults</b>
Up to <b>2</b> servings of fish every month	Up to <b>10</b> servings of fish every month
<b>People who are, or may become, pregnant</b>	
Up to <b>4</b> servings of fish every month	

Based on Health Canada's guidelines and BC Hydro's predicted fish methylmercury levels, people can eat between two and 10 servings a month of long-lived and predatory fish, such as bull trout, from the Site C reservoir.



People who eat more than the recommended number of servings of fish from the Site C reservoir, or eat more than one kind of fish, may need to limit their consumption of large predatory fish, such as bull trout and lake trout, to stay within Health Canada's safe level of methylmercury.

## PREDICTED METHYLMERCURY LEVELS IN SITE C RESERVOIR FISH, COMPARED TO RETAIL FISH



Data for retail fish (sold in restaurants and grocery stores) are from Health Canada (2007) and Lowenstein et al. (2010).

\*Refer to Health Canada for consumption guidelines for canned albacore tuna and fresh tuna.

For more info on Health Canada's consumption advice visit: [canada.ca/en/health-canada/services/food-nutrition/food-safety/chemical-contaminants/environmental-contaminants/mercury/mercury-fish-questions-answers.html#ca2](https://canada.ca/en/health-canada/services/food-nutrition/food-safety/chemical-contaminants/environmental-contaminants/mercury/mercury-fish-questions-answers.html#ca2)