Name:

Familiarize yourself with the map. Identify the icons you will need on the map, including the search bar, layers icon and zoom functions.

1. **Chloride Levels**

Use the following steps to fill in the chart below:

Zoom out until you can see the entire Region of Peel on your screen.

1.  Select the layers icon and make sure that the Chloride Monthly Average layer is turned on.

Select the purple dots that represent the locations listed on the table below. Use the data to complete the table below.

1. Select the layers icon and make sure that the land use layer is turned on.

Identify the land use by selecting the land use immediately surrounding each location on the map (this may include more than one type of land use). Fill in the land use type(s) for each location in the table below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Location | January Monthly Average  Chloride (mg/L) | April Monthly Average  Chloride (mg/L) | August Monthly Average  Chloride (mg/L) | November Monthly Average Chloride (mg/L) | Land Use Type |
| Credit River at Highway 10 |  |  |  |  |  |
| Credit River at Belfountain Conservation Area |  |  |  |  |  |
| Fletchers Creek |  |  |  |  |  |
| Cooksville Creek at Lakeshore |  |  |  |  |  |

1. **Graphing Chlorides**

Use the information from the table to plot the data on the graph paper provided below. Use a pencil crayon and ruler to connect the dots representing each location. For example, use red to connect the dots you plotted for the Credit River at Highway 10 location and a green to connect the dots you plotted for the Fletchers Creek location.

August

April

November

January

Now use the table and graph you’ve created to answer the questions below about the 2019 the Credit River chloride levels.

1. At which location are chloride levels the highest? In which month does this occur? Why do you think chloride levels are the highest in this month?
2. What kind of land use is associated with the highest chloride levels? What kind of land use is associated with the lowest chloride levels? What patterns or changes do you notice about chloride levels in urban areas versus chloride levels in rural areas?
3. According to the Canadian Water Quality Guidelines for the Protection of Aquatic Life the long-term exposure limit for certain freshwater species is 120 mg/L of chloride. This number is used to identify areas where chloride levels are high enough to negatively impact aquatic plants and fish. Use a pencil crayon and ruler draw a line to show 120 mg/L on your graph above. Do any of the locations exceed the long-term exposure limit? Are any of the locations below the long-term exposure limit?