**Be Well by Headspace**

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**Vision:**

Be Well aims to provide users with the opportunity to get up to date information on water quality in Nova Scotia. The intention of this app is to make an app that allows users to ensure they have safe, clean drinking water.

Be Well allows people to see the locations of possible pollutants in relation to the location of their well.

National Pollutant Release Inventory data was used to map the location of facilities that report the release of toxic substances, air pollutants and other substances of concern to air, water, and land. In the future, we hope to be able to allow people to upload water test results anonymously to the map.

When results of water tests are made publicly accessible and presented visually, people will become aware of water issues when they do arise, and the hope is that action will be taken before peoples’ health is negatively impacted by poor quality drinking water.

**Why Safe Drinking Water is Important:**

Clean, safe drinking water is an inherent human right, yet the issue is a considerable concern within Nova Scotia. The documentary “There’s Something in The Water” directed by Ellen Page and Ian Daniel brought attention to the issue of the impact of contaminated water on the health of individuals.

There are about 200,000 private wells in the province, representing more than 440,000 people (Armstrong, O'Toole, McSheffrey, & Woodford, 2019). Almost half of the province’s population relies on water that has been found to contain varying levels of lead, arsenic and uranium depending on the area. The placement of facilities that release pollutants into the air, land, and water, near wells provides further risk of contamination (Armstrong, et al., 2019).

This contamination can lead to major health issues.

Numerous instances exist within Nova Scotia in which communities are currently or were previously adjacent to dumps and other pollutant sources. One example of this is the north end of Shelburne, which is adjacent to the Shelburne dump that shut down in 2016 (Ore, 2018). In Shelburne, community members continue to suffer long-term health effects as a result of living near waste sites. Concern about water quality stresses the need for extensive water testing to understand the impact on well water in these areas.

**How to Use the App:**

When you first open the app, you will be presented with our mission statement. If you are going to come back to this app multiple times, you can check the box so this pop up does not come up when you open the app again. Feel free to read over our mission statement or hit ok if you are ready to enter the app.

To move around the map you can hold down the left button of your mouse and move the mouse around if you are on a computer. Or your finger if you are on a mobile device.

At the bottom of the screen there is a ribbon that says be well. This is where most of the features of our map can be found. To minimize the ribbon, hit the three small black dots in the centre of the ribbon.

To zoom in or out of the map, you can use the plus and minus signs or your mouse. Just to the right of the zoom out button there are three dots. These will hide the zoom functions if you want less clutter on your ribbon.

The next button is the legend button. If you hit the legend, a window pops up to tell you what the symbols on the map mean. When you are zoomed out you can only see the pollutant sources and the areas serviced by wells. As you zoom in, the locations of wells will also appear on the legend. The legend tells you the different types of pollutant sites and the different types of wells. To minimize the legend you can hit the three black dots in the upper right corner. To close the legend you can hit the x in the upper right corner.

The button to the right of the legend button is the layers button. If you hit the layers, a window will pop up to show you which layers are visible. You can turn off a layer by hitting the blue checkmark beside the layer’s name. To the right of each layer there are also three small black dots which provide you with a range of actions. You can zoom to the layer, set the transparency of the layer, set the visibility range of the layer, disable pop-ups from the layer, move the layer up or down which changes the drawing order of the layers, view the attribute table of the layer, or show the item details which will open up in a new window. Minimizing and closing the layers window works the same as with the legend window.

The next button is the information button which is the circle with a small i in it. The about button opens up a window which gives you more information about our mission, why the app is important, and our sources. Minimizing and closing the information window works the same as with the legend and layers windows.

The two buttons not on the ribbon are the full screen and attribute table buttons. To make the map full screen, hit the square in the bottom right of the screen. To get more information on the data, open up the attribute table by clicking the arrow at the bottom of the screen. You can hit the different tabs to open up more information about the pollutant sources or wells. You can select a specific point by clicking the small grey box on the far left, this will highlight the point on your map. You can also hit zoom to with your desired point selected to zoom to the point on your map. To clear your selection hit the clear selection button. If you want to turn columns on or off, you can hit the options button, and select show/hide columns, or you can hit the plus sign on the far right of the table.

This concludes our tutorial on how to use the Be Well app. Thank you for watching. If you have any questions, please do not hesitate to email us at BeWellGISApp@gmail.com.

**Link to App:** <https://dalspatial.maps.arcgis.com/apps/webappviewer/index.html?id=2ea240dfa0754ad5afcedb54a3d62084>

**Sources:**

Armstrong, L., O'Toole, M., McSheffrey, E., & Woodford, Z. (2019, November 4). Thousands of Nova Scotians at risk of lead exposure from wells. Global News. Retrieved from <https://globalnews.ca/>

Ore, J. (2018, April 4). A community of widows': How African-Nova Scotians are confronting a history of environmental racism. CBC News. Retrieved from: <https://www.cbc.ca/radio/thecurrent>

**Data Sources:**

National Pollutant Release Inventory (2018). Retrieved from: <https://open.canada.ca/data/en/dataset/d9be6bec-47e5-4835-8d01-d2875a8d67ff>

Nova Scotia Department of Natural Resources (2015). Retrieved from: <https://data.novascotia.ca/Mines-and-Minerals/Nova-Scotia-Well-Logs-Database/eqej-ag64>

**All Images were created by Headspace**