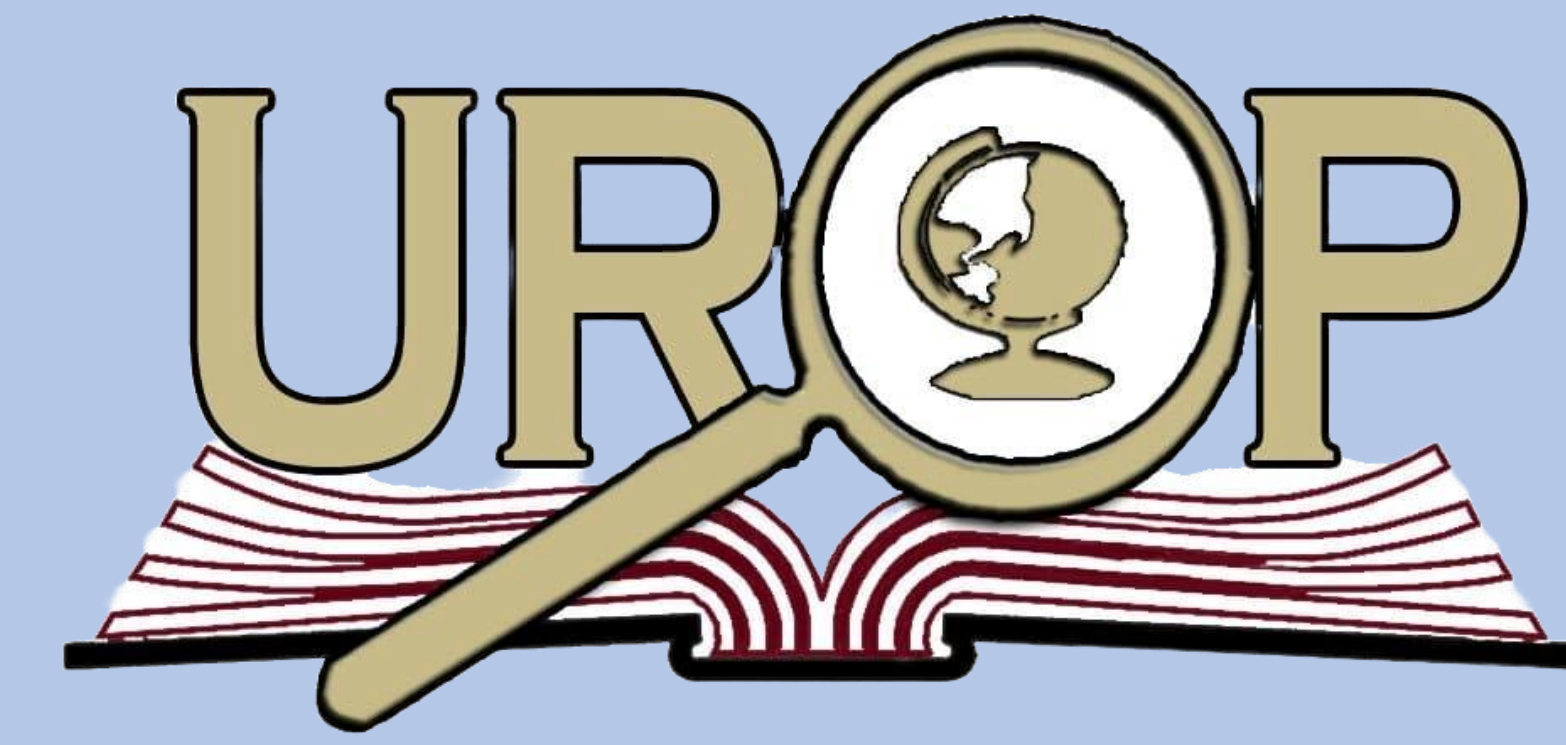




# The Effect of Unsanitary Drinking Water from Groundwater and a Public Water Supply

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## Introduction

Groundwater is essential and benefits our environment in different ways through crop irrigation or agricultural production. Groundwater exists in many places, like artesian wells, artificial wells, springs, and aquifers. Most importantly, it is necessary for people with only access to clean drinking water through groundwater. Currently, in the United States and other parts of the world, contamination in groundwater is becoming very common and is affecting people's health daily. To see how different levels affect each other and how it can affect the contamination of people drinking it. Most importantly, I will develop an activity to help high schoolers in a summer camp understand the importance of not having clean water and highlight the effects. The activity will be similar to what I am doing, which is testing water, but they will be testing the faucet they are drinking from.



## Materials and Methods

- Analyzing two samples of water one from the San Luis Mission Park and the other from my apartment sink which are both located in Tallahassee, FL.
- I collected the groundwater in a mason jar making sure there were no air bubbles and that it was securely closed with a lid
- To determine the different levels of Nitrate, Ph, and Coliform bacteria in each sample
- I used a water monitoring kit that included all materials such as tubes, tablets, thermometer, and a booklet that showed step-by-step directions
- Each tube took a different amount of time to determine the final results; 24 hours, a few minutes, and a few hours

## Results

- The public water supply contained 42% of nitrate and the groundwater from the lake contained 46%.
- PH levels of both were similar since the groundwater was a 7 and the public water was a 6
- Coliform bacteria were negative in the public water supply and positive in the groundwater which is normal.



The picture above shows the results from the public water supply



The picture above shows the results from the groundwater



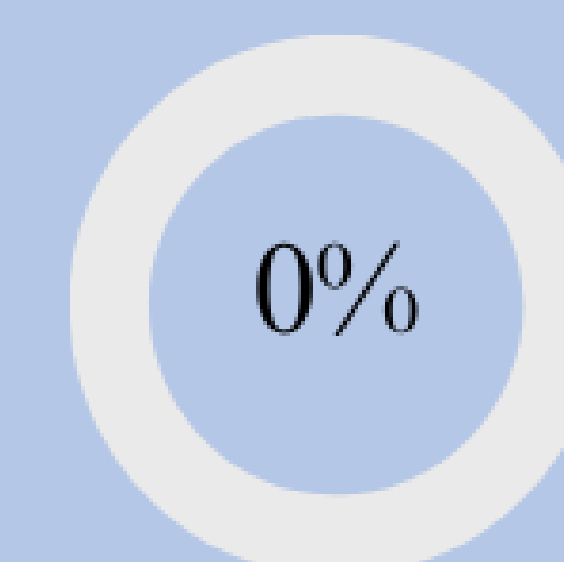
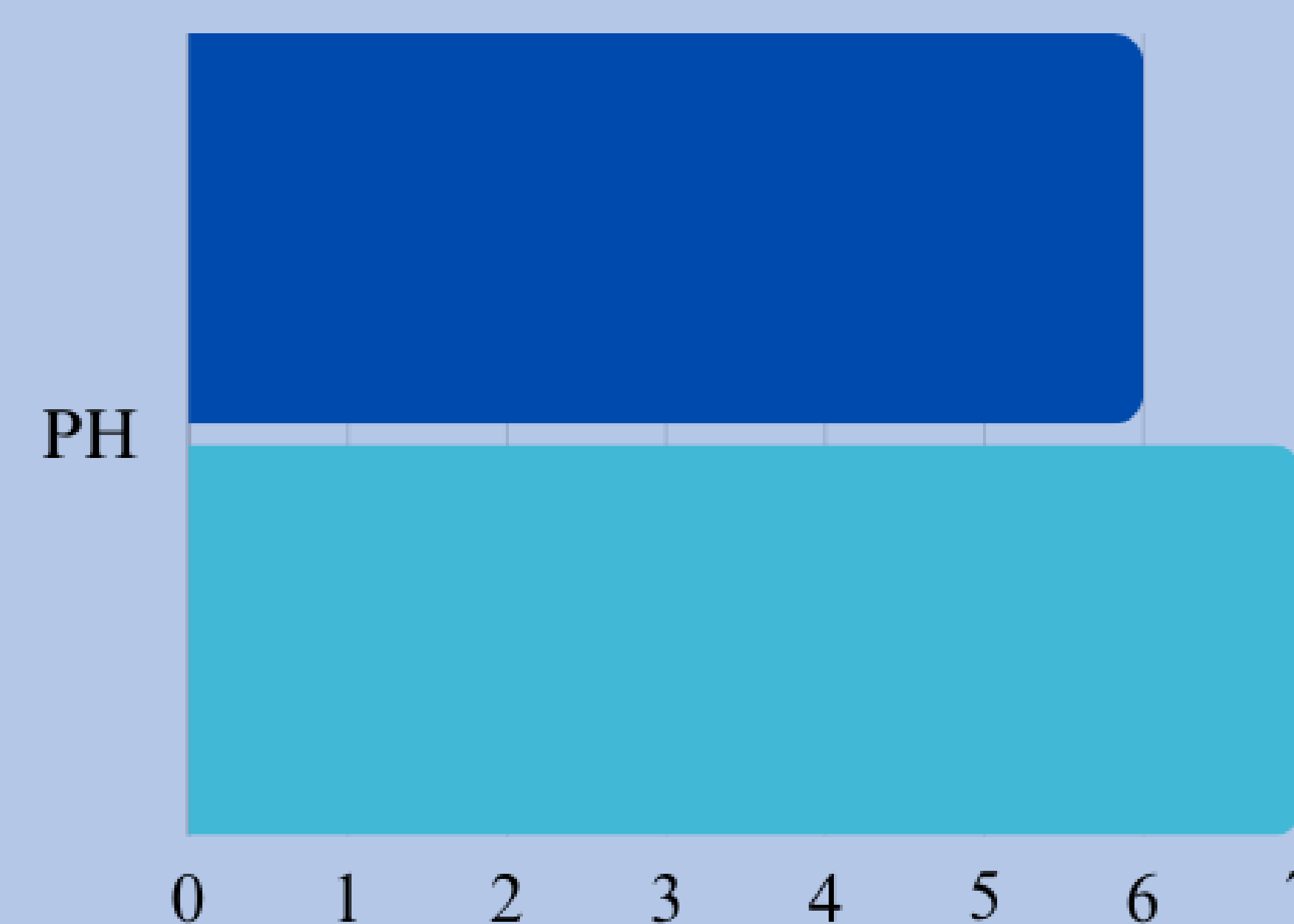
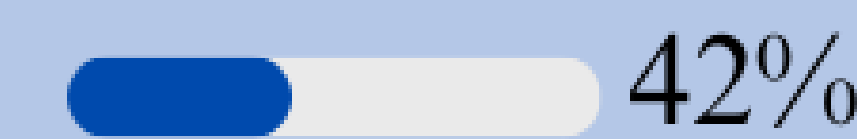
Groundwater



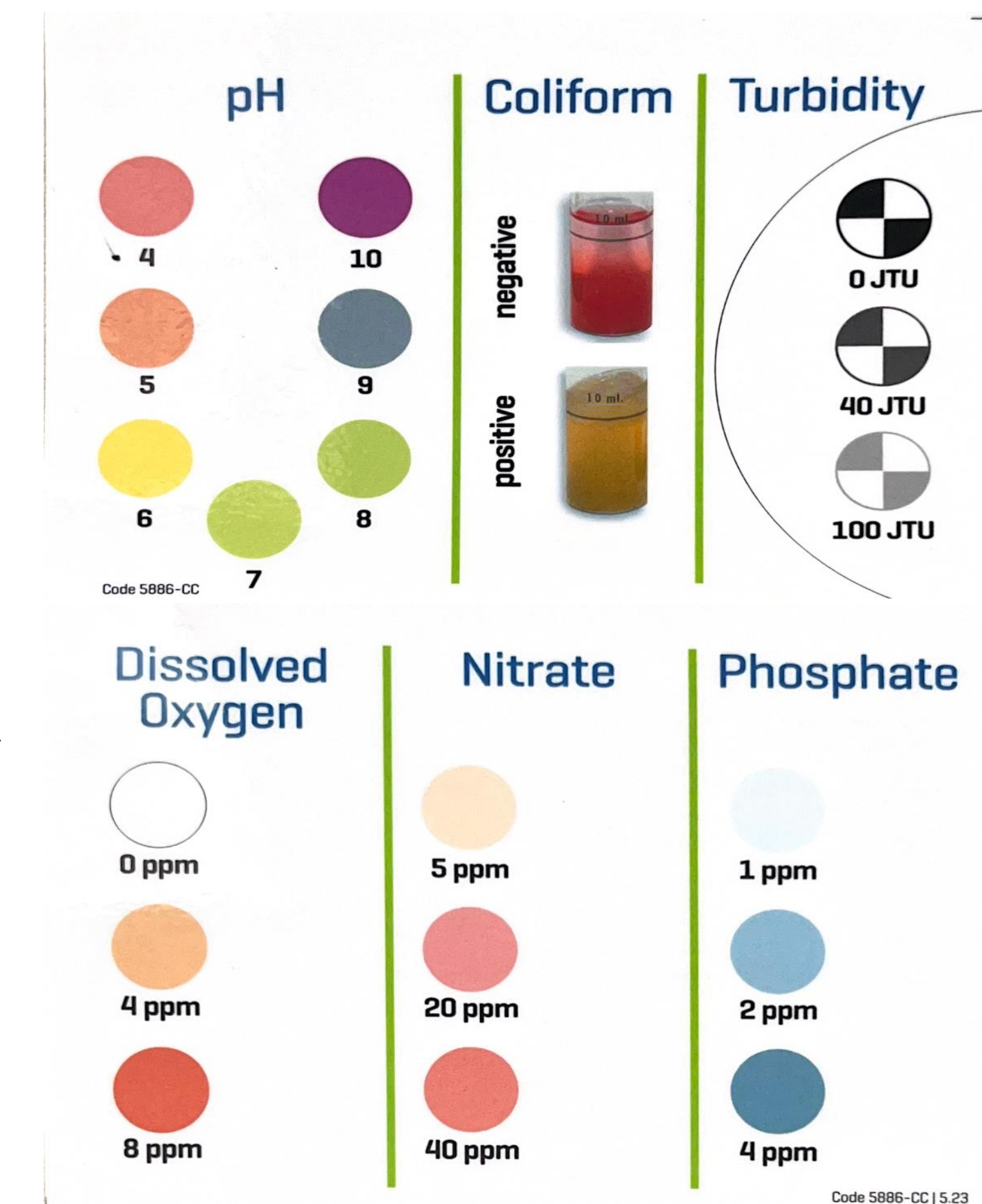
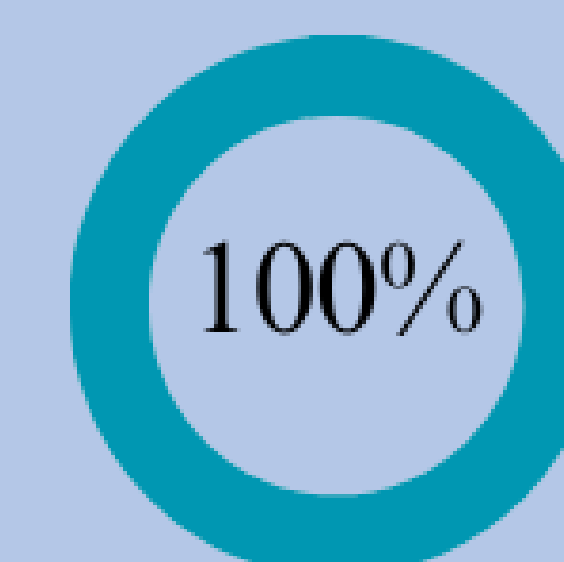
Nitrate



Public Water Supply



Coliform



These two keys show how to compare our results to find the correct findings

## Conclusions

The groundwater from the lake was the worst in all three categories. It tested positive for coliform bacteria which indicates sewage or fecal contaminations. This makes it unsafe to drink and not be able to use it for primary or secondary contact. On the other hand, it tested negative in my apartment which is a good sign since it should always be that way. Overall, it is unsafe to drink from the groundwater.

## References

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