Analysis of Arsenic Levels
Thurston High School Well Water Testing Program

The Well Water Testing Program Background
● The Well Water testing team was founded in 2001.
● Students apply through a selective process to become a part of the team, one year prior to joining.
● Students volunteer six times over the course of the school year to test the quality of our communities’ well water

What We Test For
● Arsenic
● Coliform Bacteria
● E.coli Bacteria
● Conductivity
● Copper
● Hardness
● Iron
● Nitrates
● Turbidity
● pH

Sample Customer Report

Quality is Key for Successful Data Collection
● Team uses EPA approved chemical procedures
● Students are trained to test with standard solutions
● Correction blanks on reagents
● Dedicated glassware
● Random replicates & split sampling for quality control/assurance
● Electronic data collection to reduce risk for errors

Arsenic Study in Greater Springfield Area
Arsenic is a naturally occurring element found in soils and minerals, and can leach into private wells and groundwater.

Why treating your wells for arsenic is important:
● long exposure to contaminated water can cause a plethora of health issues
● Type 2 diabetes, High blood pressure, Impaired nerve function
● It can not be boiled out

How We Test
We use Hach Reagents and color detection test to determine the range of arsenic levels (sample detection strip on right)

Map of Detected Arsenic (30ppb or more)
Since 2001

Map Analysis
The EPA maximum safe limit for drinking water is 10ppb. Between Cedar Flats and the Deer Horn area there have been higher concentrations of 30 or more parts per billion of arsenic that the well water team has tested since 2001. It seems to be near the McKenzie river and the creeks that branch off from that river.

Conclusion
● People in Springfield with high concentrations should test for arsenic regularly for the benefits of health.
● Do not boil the water. Arsenic is a metal and cannot be removed by boiling the water.
● In fact, boiling the water will lead to evaporation which will increase the concentration of arsenic in the water.
● Re-test your water to confirm the results. In general, it is recommended that the water quality in private wells be tested at least once a year.
● Drinking and cooking with bottled water will reduce your exposure to arsenic. Be sure to keep a well log and note any water quality issues.
● Regular inspections of your drinking water well will also help identify potential problems

Source: Oregon State University Well Water Testing Program