May 6, 2008

My Virtual Journey to the Little Susitna

As we loaded up the car on a rainy Saturday morning, I asked my father what he had planned for us today. He explained a journey taken by many pioneers from the early 1900's. These pioneers and miners used to haul their large wagons up the through the valley on what is now the Wasilla-Fishhook Road. These miners would make the long voyage to spend their days and nights digging for gold in Hatcher's Pass and fishing in the Little Susitna River. My father explained how we were going to head to the gold mine to learn about mining, then travel down the Little Susitna to examine the river and how it has changed since the days of the miners. What once started out as a small mining community has now turned into a large bustling town of 30,000 people and growing. My father made plans to spend the day visiting the Little Susitna and monitoring its water quality. We packed our boots, our lunches and drinks, our rain gear and our "Streamkeeper's Journal" and headed out to the wilderness.

As we entered Hatcher's Pass, we decided to pull over and take a look at the river. We were amazed at the beautiful color of the streambed. It was an amazing turquoise blue with huge rocks and boulders. The river reminded me of the young rivers that my teachers always rambled about during science class. The vegetation was thick, but there were not a lot of really tall trees. Most of the trees were short and round. My father claims they were called alders and willows, but what does he know. My father took out his pocket thermometer to measure the water. He determined the water to be about 5$^{o}$C. Wow, I am glad I am wearing my boots that is some cold water!

We jumped back in the car and headed down the river. The road was winding along the side of the river and we spotted a young Bull Moose grazing on the stream bank. My father explained that this river has certainly changed over the past year, especially after last year's flood. From what he can tell, the main channel is no longer running right along the road. We decided to stop at the first major bridge we could come to. The first thing that came to mind was the Shoshanna Bridge. The river at Sushana was really flowing fast so we decided to measure its velocity and determine the discharge of the river. As I waded across the cobbles in the river, my dad yelled out, "Don't fall in, this section of the river is not much warmer than up at Hatcher Pass. It is 7$^{o}$C!" I figured it would be best to just diagram the river so I drew as sketch of the riverbed in my journal. I figured I could calculate the stream flow when we got home and out of the rain.

At our next stop, Shrock Road, we ran into a good friend of ours, George Taylor. George was setting some fish traps and collecting macro invertebrates for some students he was working with, so we decided to help him out. We collected several macro invertebrates, but it was raining too hard to sort them, so we just took a picture. While we were at the stream, George took some Dissolved Oxygen and pH measurements. George said the dissolved oxygen was 7 mg/L, 8 mg/L, and 6.5 mg/L. He claims that if we calculate the average dissolved oxygen levels and compare it to the 8$^{o}$C water temperature, we can figure out the oxygen saturation in the water. George also gave us three pH measurements because he knew how interested we were in water quality. The measurements were 6.3, 6.8, and 5.9. As we started to leave, George began talking about the importance of the riparian zone on our rivers. He went on and on about the Nitrogen cycle and alders, the organisms living in the stream, and all different types of stream ecology. It really interested me, so I thought I would look up a few things on the Internet about stream ecology. I thought that if I asked my teacher nicely during class, she would let me search the web to learn about riparian zones.

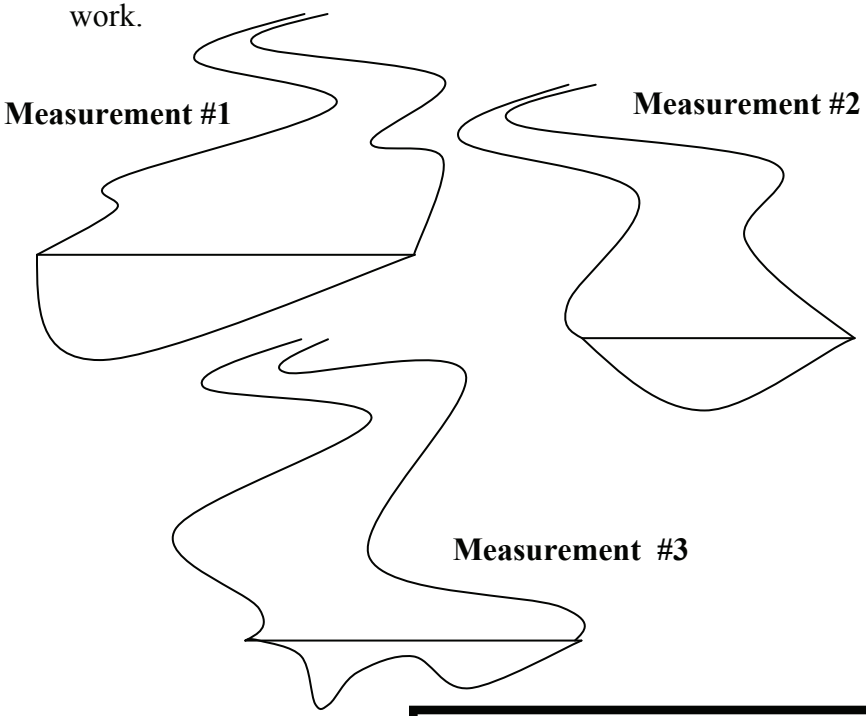
Finally, after a day worth of rain, the sun broke out. The temperature raised to a balmy 70$^{o}$ F and my dad and I sat down on the riverbank to eat our lunch and reflect on our day. I am sure glad that I put away the PSP to enjoy a day with my father along the river.

# Little Susitna Field Trip Alternate Assignment

Each of the following measurements were taken along a 20 meter stretch of river. Use your knowledge of stream velocity to calculate the amount of discharge traveling through the stream.

When the velocity of the stream was measured, it took a tennis ball 18 seconds to travel the 20 meter distance. Use the stream flow data table to record your data and calculate the streamflow.

Be sure that you use the correct labels and show all of your work.




**Scale:**
**1cm = 3 meters**
**River Bottom:**
**Mixture of gravel and plants**

# Macroinvertebrate Sample