



Meet the Scientist!



Hydrologists study how water moves around the world, whether as streamflow, groundwater, precipitation, or transpiration. Water is important to all life.

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Important Scientist Characteristics

I enjoy math, which is important for many types of scientists. Math is short, simple, and meaningful, which makes it a bit like poetry to me. When we express our ideas about nature mathematically, it is easier to see what we understand and find testable questions.

Example of a simple research question I have tried to answer:

How do we measure how sensitive a stream is to changes in climate? Streams are warming with the climate, which is important to fish and other wildlife. Some streams are more sensitive to changes in climate than others. I studied over 200 streams in Oregon and Washington. I learned that cold streams are less sensitive to warming than warm streams.

Technology or equipment used in research:

I use large tipping buckets to measure runoff and sediment coming from forest roads. A tipping bucket is like a teeter-totter made of two triangular-shaped "buckets." When tilted to one side, water flows into the upturned bucket until it collects enough water to make the teeter-totter tip. When it tips, the water spills out, and the other bucket begins to collect water.

Most Exciting Discovery

I noticed that river runoff was declining across the Northwestern U.S. Our team figured out that precipitation was declining. The decline was only occurring in the mountains. The reason was that winter winds across the region were slowing down. The lack of winter winds reduced the lifting of clouds over mountains, which also reduced the amount of precipitation. Declining precipitation is important to forests and streams across the region and helps explain increased drought.

When did you know you wanted to be a scientist?

I was hooked on science after doing two fun science projects in 6th grade. The creative, problem-solving aspect of science is what grabbed my attention and still does today.

<http://www.fs.fed.us/research/people/profile.php?alias=cluce>