2011-2012
Mountain Ridge High School
A.P. Environmental Science

PILOT PHASE: COLLECTING PRE-FRACKING BASELINE WATER QUALITY DATA.

Potential Frack Tributary to Piney Run Reservoir
(1 mile northwest, in Pennsylvania)

Frostburg Reservoir

Piney Run Reservoir for Frostburg

We, the AP Environmental Science students of Mountain Ridge High School, have decided to take the initiative and conduct baseline testing at seven locations that could potentially be affected by this fracking site.

Savage River Aquifer for Frostburg

Frostburg Municipal Drinking Water Treatment Plant

Mountain Ridge Baseline Tests and Sites

Fracking Indicators

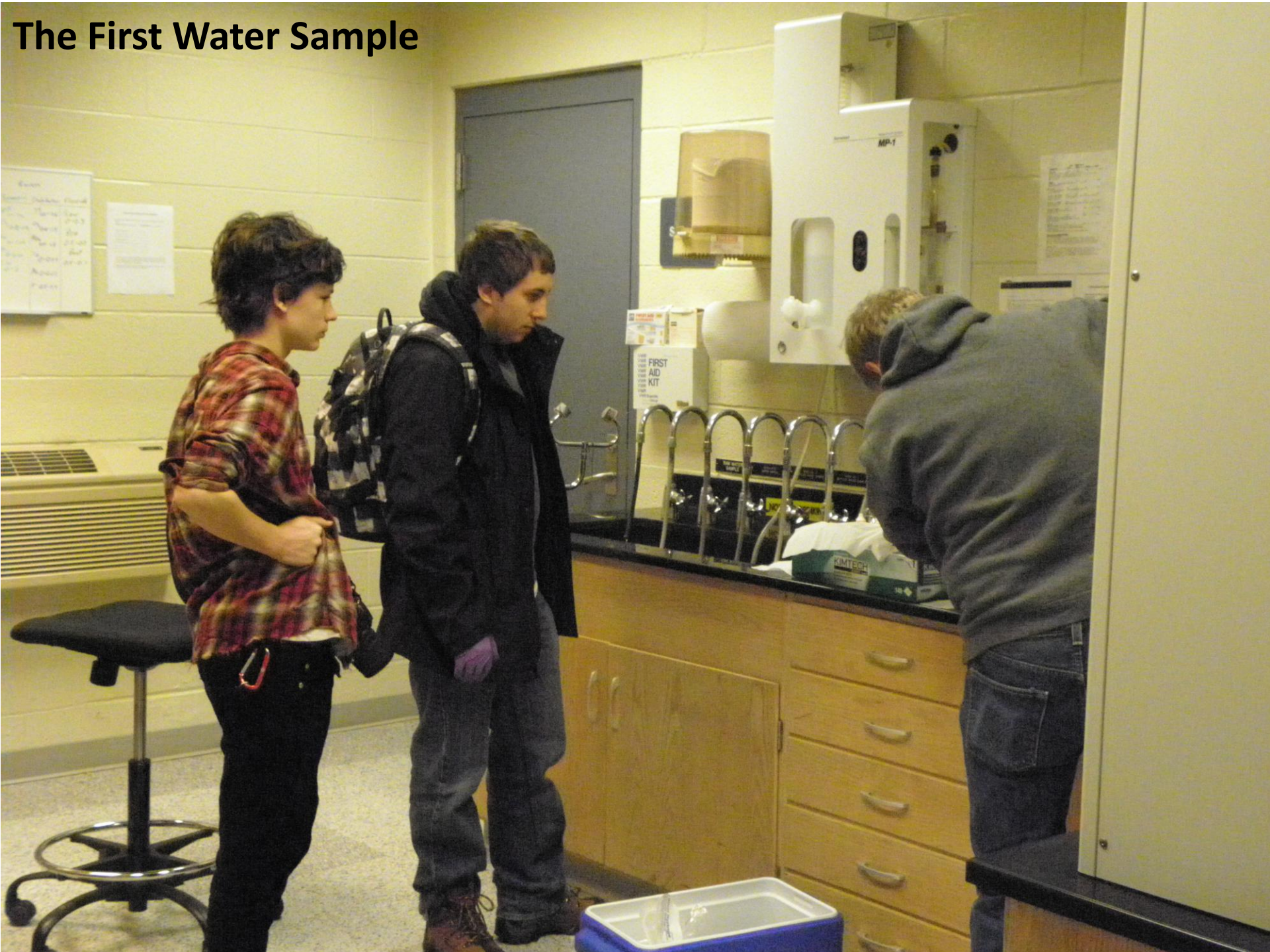
- Total Dissolved Solids
- Barium
- Bromide
- Strontium
- pH

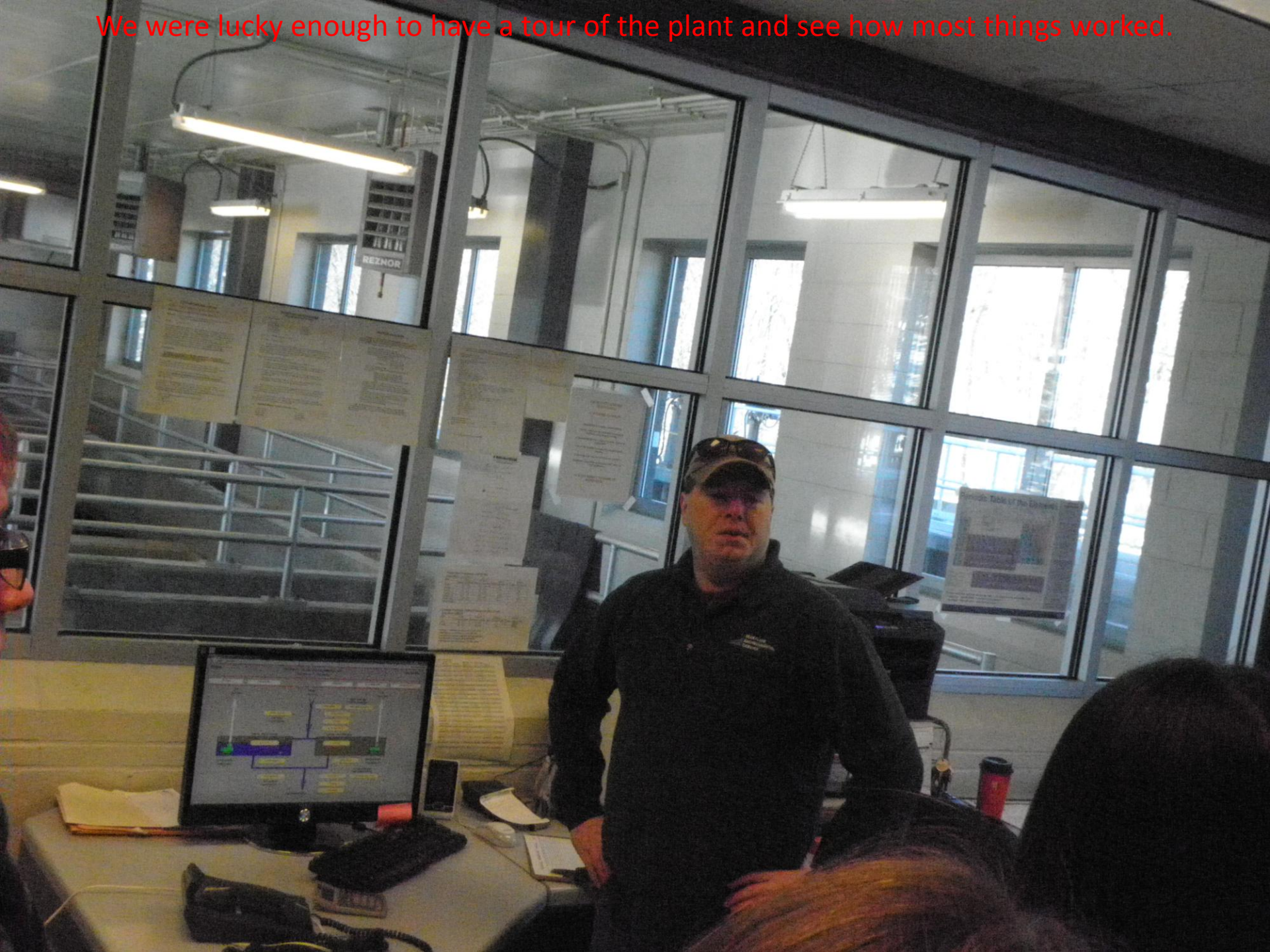
Sites

- Piney Run Tributaries (3)
- Piney Run Dam
- Savage River Aquifer
- Water Treatment Plant-Raw
- Water Treatment Plant-Filtered


First stop, The Water Treatment Plant!

The First Water Sample




We were lucky enough to have a tour of the plant and see how most things worked.
REZNOR


This dome holds some of the
water that flows through
parts of the county.

Piney Dam!

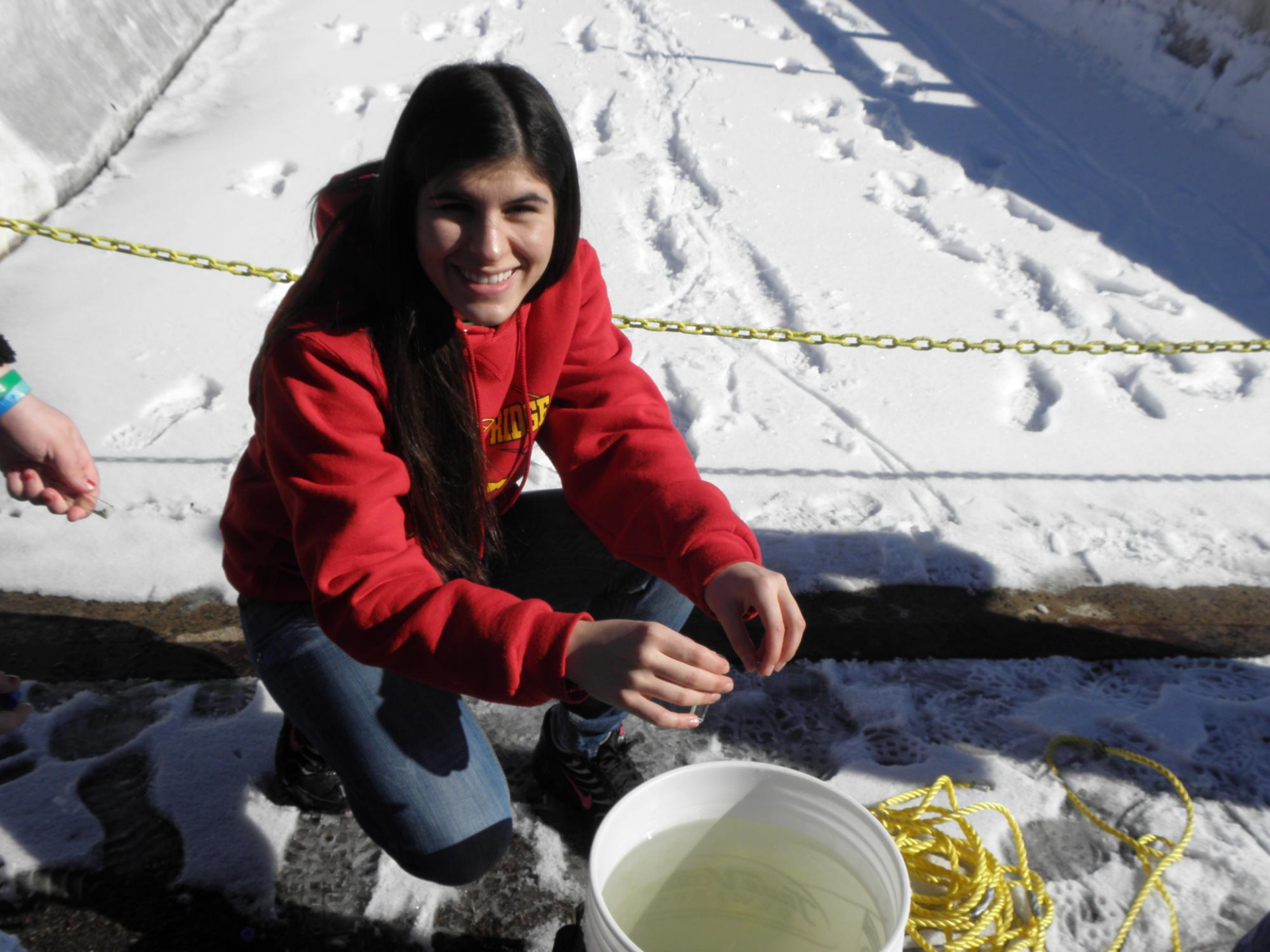
Pulling up water from the dam

(and throwing some snow)


SOCCER


TDS Testing…Let
the tests begin!!


Next, pH testing; ten drops of solution must be added to the water sample.



Collecting for the lab

Filtering out unwanted particulates


One more good bucket full for sampling.


Next, to the Tributary!


First, a game of
follow the leader!!


To the water we go!


Measuring
water depth


We collected these samples for
Johan’s lab analysis at each site.


Then, its back to work;
labeling sample
equipment…


Purple gloves were worn when handling samples that would be tested to assure that none were contaminate by the oils or particles on our skin.

Dr. Johan Schijf of the University of Maryland Center for Environmental Science has assisted us in the planning phase.


After some hard work an 11in long
piece was removed from the tree.


Last , but not least, the Aquifer!!


First we must
collect a sample…

And then continue with our tests!

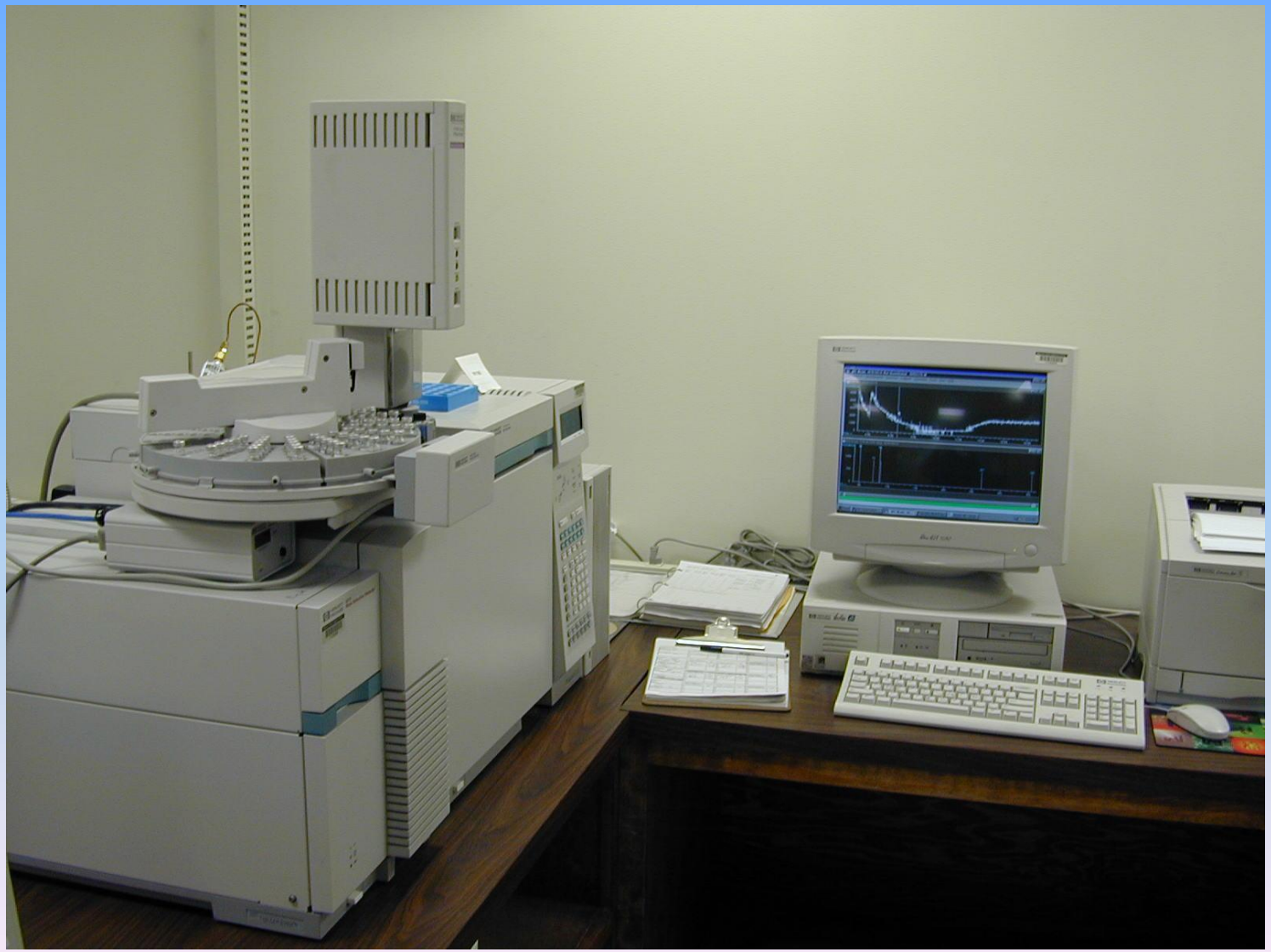

More water is filtered.


…and the last pH test is completed.

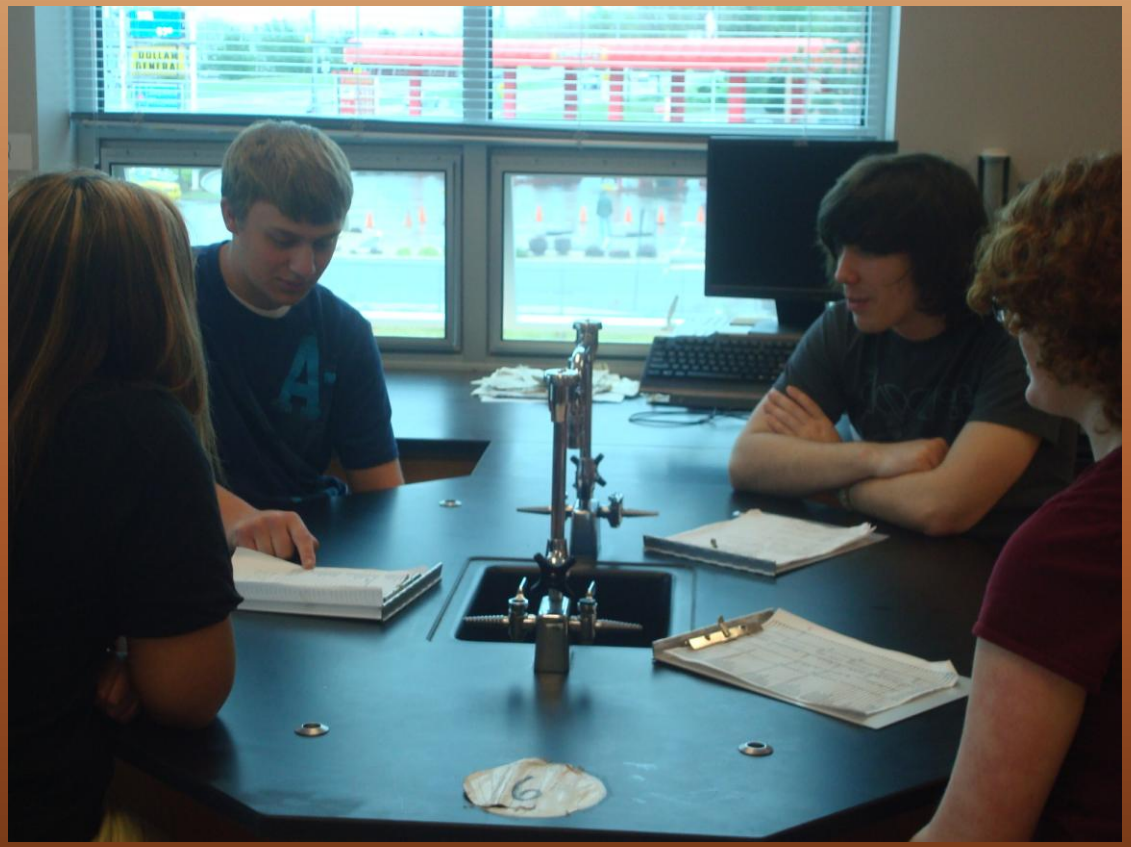
Will this become a fracking site?

(Soeder, 2012)

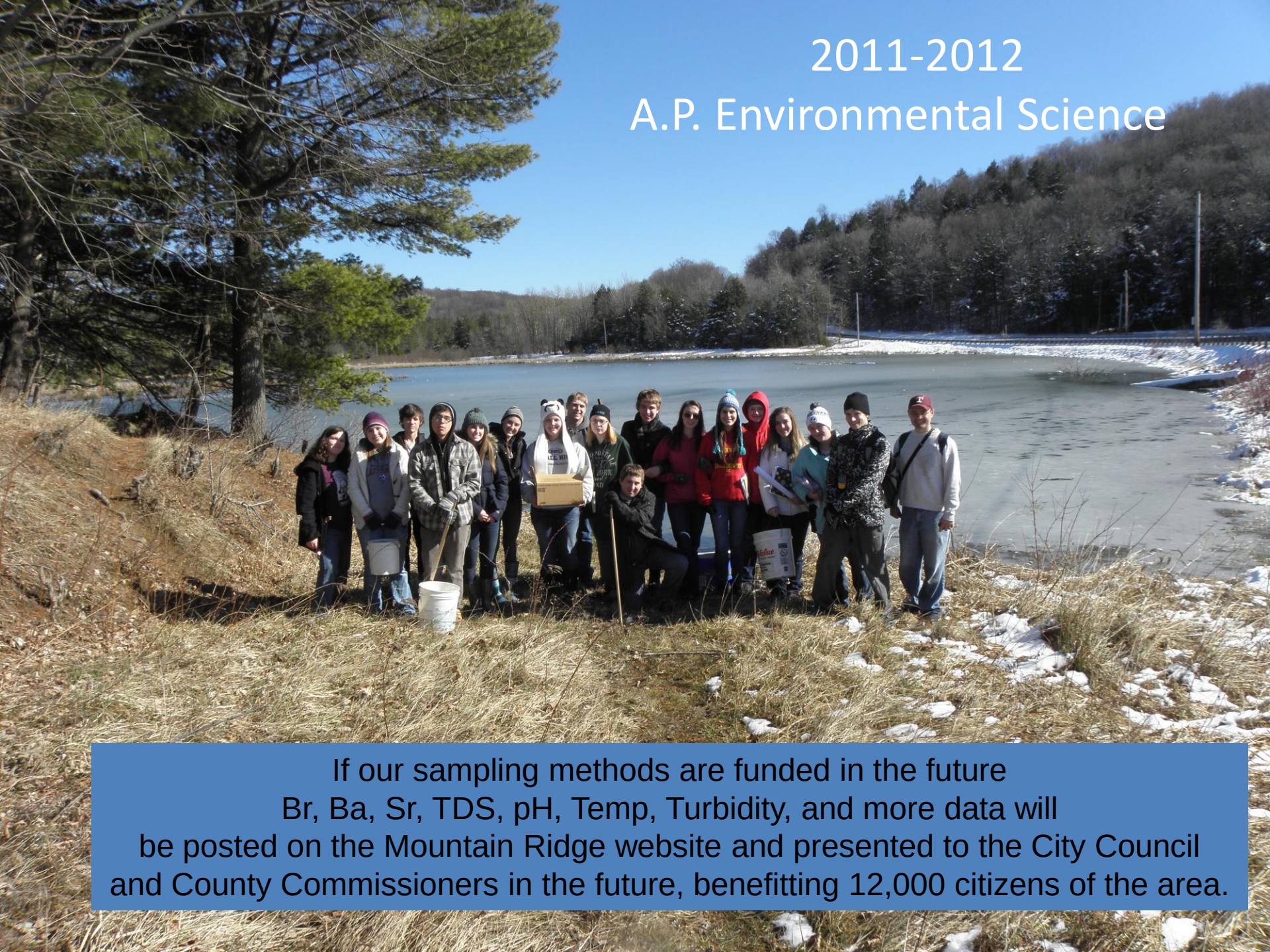
Gathered samples are sent to the lab for detailed ppm and ppb analysis



Students discuss field data collection methods and results. They improve the plan for the future.



Times-News Photo: Ben Meredith, a Mountain Ridge High School senior, presents a student-authored report on Marcellus shale gas drilling Thursday at the Allegany County Commission meeting in May of 2011. The data we collect through this project will be shared with the City Council and County Commissioners in May of 2013 and will benefit 12,000+ citizens of the local area who drink from the water supply.



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If our sampling methods are funded in the future
Br, Ba, Sr, TDS, pH, Temp, Turbidity, and more data will
be posted on the Mountain Ridge website and presented to the City Council
and County Commissioners in the future, benefitting 12,000 citizens of the area.