Good Morning,

My name is Charles Brown. In 2001, I graduated with a master's degree in Geoenvironmental Sciences. I am currently the President of CW Brown Consulting Group, LLC. To give a brief background about myself, I have spent the last 20 years performing a variety of hydrogeologic assessments. This involves analyzing and modeling the interaction between the subsurface geology and surface and groundwater. I have located, tested and permitted a variety of public water supply wells; for boroughs, resorts and hospitals. I have also designed irrigation systems for golf courses. I have developed monitoring networks and assessed the hydrogeologic conditions for landfills. In addition, I have delineated contaminant plumes and designed systems to treat groundwater and restore aquifers. Over the last 10 years I have been focused mainly on large, non-coal mining. Specifically, performing hydrogeologic studies that analyze the impacts of mining.

Theses mines are primarily extracting limestone and dolomite for the production of aggregate, concrete and asphalt. These mines are very large and deep (some are 1000 acres in extent and in excess of 500 feet deep). For mining activities to occur, the area needs to be dewatered. This dewatering not only removes the water from the footprint of the mine, but also creates a cone of depression in the surrounding area. The delineation of the cone of depression is done by the aid of three-dimensional computer modeling. A multitude of testing, with tens of thousands of data points are used to form this model. After the model is formed, data is continuously collected and used to make further adjustments to the model...in other words, it is a working, dynamic model that can change based upon empirical data. The model helps us predict the amount of water that will need to be pumped to keep the quarry dry and also predicts the extent of which the aquifer will be impacted.

In order to complete these hydrogeologic assessments, I assess all available data. This includes reviewing TMDL (total maximum daily load) studies within the area of the project. These TMDL studies all have one thing in common, they are not accurate. In fairness, many are decades old and use antiquated data, but still contain many flaws. However, we are forced to use these studies. These TMDL studies are the driving force for many decisions that are being made at a regulatory level. These studies desperately need reviewed and revised.

I want to talk briefly about how MS4 has affected my clients in the mining industry. We secure NPDES discharge permits that allow the mines to discharge to a receiving waterway. This water is pumped from a very large and deep sump. In all instances, that I have been involved, the discharged water is better quality than the background water quality of the receiving stream. Quarries already have BMP's (best

management practices) in place. A lot of sampling and analyzing of the data go into obtaining an NPDES permit. To maintain the NPDES permit, continuous, bi-monthly sampling is required. If there is a TMDL on the receiving stream, there are more restrictions placed on the discharge. Yet, after all the sampling, analyzing, studying and permit fees my clients are still responsible for millions of dollars in fees for MS4. Furthermore, every municipality is different. My clients have quarries all over the state and country. It is difficult for them to keep track of the different ways in which each municipality calculates the MS4 fee. I would like to point out that we have zero discharge facilities that are being charged tens of thousands of dollars...facilities that actually capture storm water and never discharge are being charged a storm water fee.

What happens to the fees that my clients pay? They will be passed on. Who is the largest purchaser of concrete and aggregate in the state of Pennsylvania? The state of Pennsylvania.

While the bulk of my recent clients are within the mining industry, I have also been helping other businesses, churches and homeowners navigate MS4. We have churches that may have to close their doors because of these fees. We have homeowners that are spending thousands of dollars in engineering fees because they want to put in a swimming pool. I am still waiting for an explanation on how a swimming pool is an impervious surface. I don't see a lot of swimming pools overflowing with storm water.

I am not sitting here saying nothing needs to be done. I am questioning, from a scientific perspective, are we doing the right thing?

I mentioned earlier that I have reviewed many TMDL Studies. The TMDL Study for the Lake Ontelaunee Watershed (Lake Ontelaunee is the PWS for the City of Reading) designates a sediment load of 68,634 t/yr. Of that amount 127 t/yr are being contributed by MS4 facilities. How does a 10% or even 100% reduction help?

Moving closer to the Harrisburg area, Trindle Spring Run (near Mechanicsburg) shows approximately 2,950 t/yr of annual sediment. Of which less than 3% is attributed to development while 96.6% is attributed to a form of farmland. Again, I ask, are we not targeting the wrong industry?

Rep. Gleim and Rep. Keefer have been asking these same questions for many years now. In reviewing Rep. Gleim's bill HB2331, it is a step in the right direction. We currently have little to no data. How are we to know if we are having any impact without data?

I strongly feel that we need to acquire accurate data. We need to Review and revise TMDL studies, especially within MS4 areas. Let these studies be the guide as to what the real problem is and then we can adopt an appropriate plan to fix it. Spending money doesn't fix the environment. We need to take a targeted, scientific approach.

I want to thank Chairman Metcalfe and the entire Environmental Resources and Energy Committee for allowing me to speak today and for considering my comments.

Thank you,

Charles Brown