Chester County Conservation District Helps to Protect Public from Disease

The Chester County Conservation District (CCCD), in partnership and collaboration with United Water, has worked to identify and reduce the levels of harmful parasites found in water resources, increasing safety while mitigating increases in operating costs at local water treatment facilities.

Cryptosporidium, an extremely small cystic parasite that lives in the excrement of warm-blooded mammals, is resistant to most conventional filtration and chlorination or conventional disinfection making it costly and difficult to remove from local water supplies. In partnership with United Water, CCCD began investigating the source of the contamination and found two prime locations in the Red & White Clay Creek Watersheds on which to install Best Management Practices (BMPs) to prevent contamination of the water supply at the source.

The first and highest priority site was recently completed at a 160 head-heifer-cow farm. A tributary of the White Clay Creek originates on this farm and flows through the pastures. Prior to this project, the heifers had free access to the stream, which has led to streambank erosion and water contamination from the cow manure. United Water agreed to partially reimburse the farmer for installing a variety of BMPs, which include streambank fencing, planting of a forested-riparian buffer, installing two stream crossings and creating a water access. CCCD performed the survey, and with help of the Natural Resource Conservation Service (NRCS), completed the engineered-approved design.

The CCCD and United Water also plan to implement BMPs on a mushroom growing farm, which would involve the collection and handling of the 'dirty' water runoff from mushroom compost. This runoff contains *Cryptosporidium*, nitrogen, phosphorus, potassium, chloride and suspended solids. BMPs for this project would include the installation of drop boxes, piping and storage tanks. The drop boxes will collect the runoff and feed it through piping to storage tanks. Currently, CCCD is talking to the landowners regarding timing and working on establishing a contract. The target completion date is December 2012.

"For both of the projects, the CCCD, along with assistance from the NRCS, has completed the engineered-approved design and will be responsible for performing construction checks, certifying the practices once they are complete and ensuring the landowners properly maintain the BMPs," explained Adam Mowery, CCCD Mushroom Farm Resource Conservationist. "At this point, we are still working to develop a contract between United Water, CCCD and the landowners for the mushroom farm project," added Mowery.

United Water Engineering Director Nancy Trushell expressed enthusiasm concerning the collaborative initiative, "The Watershed Control Plan approach is among the toolkit of options provided by the U.S. Environmental Protection Agency as a holistic and cost effective methodology for ensuring compliance with enhanced safe drinking water regulations."

A video on the Chester County Conservation District and United Water Delaware's involvement in this project is available at http://www.youtube.com/watch?v=NHEVPFLagfM.

This unique partnership will allow the conservation district to fulfill its mission of keeping nutrients and sediment out of the streams while also controlling the levels of *Cryptosporidium* in the local water supplies. It's a win-win for the conservation district, United Water and the entire community, which relies on having a clean and safe drinking water supply.