

Update on Dunkard Creek Fish Kill Investigation

The West Virginia Department of Environmental Protection continues to work with the WV Division of Natural Resources, the Pennsylvania Department of Environmental Protection and the Environmental Protection Agency in the investigation of the Dunkard Creek fish kill.

Additional water samples for golden algae taken on September 24 have reconfirmed the presence of golden algae in amounts known to have caused fish kills in other states and countries.

The WVDEP and other investigators have been assembling available scientific information on golden algae and the toxins it produces. As reported in available scientific literature, both the golden algae and the toxins it produces are influenced by environmental factors including the water's pH, temperature, salinity and nutrients.

“We have learned volumes about these algae in a relatively short period of time” said Scott Mandirola, Director of DEP's Division of Water and Waste Management. “My staff has been in contact with researchers in Texas, North Carolina, Wisconsin, Tennessee and Oklahoma. We are grateful for these people taking their time to help us understand and test for this algae.”

DEP has also been sharing information with officials from Consolidated Coal Company. A meeting between Cabinet Secretary Randy Huffman and Consol officials took place on Monday September 28th. Consol scientists have also confirmed the presence of the golden algae, *prymnesium parvum* in Dunkard Creek. “Consol understands the significance of this event and is keenly aware of the possible impact of their discharges in this watershed,” Huffman said.

The DEP has also been informed that Consol has agreed to stop injecting coalbed methane gas wastewater into a shaft at its Blacksville No. 1 mine. The ceasing of this discharge will help determine what impact that operation may have had on elevated discharges from its Blacksville No. 2 outlet.

Samples to evaluate the health of the benthic macroinvertebrate communities (stream insects including, hellgrammites, mayflies, caddisflies, etc) were taken recently at four locations in the Dunkard Creek watershed. Generally information from these samples reveals similar scores to data taken prior to the fish kill events. The golden algae are not known to affect benthic macroinvertebrate populations. A sample taken below Consol's Blacksville No. 2 discharge does indicate an impaired benthic macroinvertebrate community.

Some test results are still pending including analysis of fish liver, gills and kidney for the toxins expected to be produced by the algae. Also, additional water samples are being prepared for shipment to the University of Oklahoma. There they will attempt to grow the algae in the laboratory. If it can be cultured, the particular strain will be analyzed for to determine if it is similar to the strains seen in Texas. Also the DEP would then pursue testing to determine methods of controlling or eliminating the algae without use of algaecides.