

## **ABSTRACT**

In the commonwealth of Pennsylvania, maximum contaminant levels for drinking water were last issued in April 2016. Since then, the industrial landscape of Southwestern Pennsylvania has changed significantly. With the advent of industrial development, changes are now appearing in the raw drinking water supplies and air quality. New chemicals are being introduced into the environment, which pose health problems. These chemicals include bromide, radium 226, lead, radium 228, etc. Supportive evidence provided from studies conducted by West Virginia Water Research Institute (WRI) and the Pennsylvania Department of Environmental Protection (DEP), along with data accumulated by the Environmental Working Group (EWG), have given substantial concerns for water quality.

Current drinking water standards do not address these new chemicals. Adjustments and new updates for drinking water standards must be addressed. Southwest Pennsylvania Environmental Health Project studies have shown there is a direct correlation of these new chemical to health problems. The data being used to corroborate the findings in this report originate from the DEP, WRI and EWG. There is evidence to demonstrate that new toxic chemicals are passing through our drinking water treatment plants and are being consumed by our populace. The pathways for these contaminants entering our water supplies are numerous. The following report is based on data that gives a strong indication that these health problems are associated with environmental conditions.

Our current guideline values (drinking water standards) are intended to be used as a basis of the protection of the populace. The development of new standards, where no national standards exist, is essential to protect our health. If properly implemented, they will assure the safety of drinking water supplies through the elimination or reduction of the contaminants, which are known to be hazardous to health.

The research herein will also give evidence of the woefully inept current regulations and inability of drinking water treatment methods to adjust to the newly introduced chemicals associated with local or national environmental, social, economic and cultural conditions.