CHESTER COUNTY SOLID WASTE AUTHORITY

Ground Water Monitoring
Groundwater Monitoring Well #89

The landfill is constructed with a liner system designed to collect any liquid (leachate) that is generated when rainwater percolates through the waste in the landfill. The leachate is collected in sumps at the bottom of the landfill cells and pumped to the leachate treatment plant.

There are 40 groundwater monitoring wells on site that are evaluated on a quarterly basis by Chester County Solid Waste Authority staff and contractors, to make sure the landfills are not impacting the groundwater. There are also samples collected from 12 leachate collection sumps, 3 additional sump locations, and the 3 locations in the Conestoga River.

The samples are collected and analyzed by an environmental testing laboratory licensed by the Pennsylvania Department of Environmental Protection (PADEP) to perform that type of work. MW-89 well location was approved by PADEP to be one of four new monitoring wells installed as part of the Area D Landfill Expansion.

Groundwater Monitoring Well #89 Sampling Results

Location	Date	Chloride (mg/l)	COD (mg/l)	Total Iron (ug/l)	H2O Elevation
MW-89	8/13/2019	2.7	<15	100	897.05
MW-89	11/7/2019	2.7	<5	370	887.46
MW-89	2/5/2020	3.0	<5	640	885.72
MW-89	5/7/2020	3.0	<5	52	892.83

< – Less than symbol – indicates the measurement was under the detection limit for that parameter

mg/l - milligrams per liter (usually thought of as parts per million)

ug/l - micrograms per liter (usually thought of as parts per billion)

Chloride - is an inorganic element that travels quickly in an aquifer; in leachate chloride concentrations are usually in the 1,000's of mg/l

COD – Chemical Oxygen Demand – a measure of organic compounds; leachate COD is in the 1,000's of mg/l range

Total Iron - The quantity of iron suspended and dissolved in the water collected. The rocks in this aquifer are mainly Chickies Quartzite and are naturally high in iron and other minerals

H20 Elevation – Elevation above mean sea level of the water surface in Well #89