

Appendix B: Groundwater Quality of eastern Long Island, NY golf courses

In New York, groundwater quality has been tested on 27 golf courses in Suffolk County by the Suffolk County government. From 1999 to 2010, up to 42 wells were sampled for a total of 366 sampling events. The samples were tested for a wide range of compounds from nutrients like nitrate and ammonia; metals like arsenic, copper and cadmium; and 54 organic compounds, including pesticides and metabolites. These sample tests resulted in over 20,000 individual results. These test results are provided on the next page and as a download from the NY BMP web site.

Nitrate was found to be a common contaminate of groundwater in some areas, although 57% did not have a detectable level of nitrate. Twenty nine percent had nitrate concentrations of less than 5 mg/L, 10 % had concentration from 5 to 10 mg/l and only 4 % were greater than 10 mg/L, the drinking water standard. The Nitrogen Challenge with Suffolk County golf courses and the Peconic Estuary Program has set a target goal of groundwater of no greater than 2 mg nitrate/L. Sixty eight percent of the samples tested were below this goal level.

The most commonly detected golf course pesticide was metalaxyl. Fourteen percent of the samples tested had detectable levels of metalaxyl, with concentration ranging from 0.1 to 2.74 ppb (ug/L). An old no longer used herbicide dacthal (the acid metabolite) was detected in 9% of the samples, at concentration as high as 272 ppb. Imidacloprid was detected in 6% of the samples in concentrations no greater than 10 ppb. Several other pesticides (PCNB, propiconazole and iprodione) were occasionally detected at very low concentrations (<1 ppb).

The results of this testing would suggest that golf courses are having at most a minor impact on the groundwater quality of eastern Long Island.