

SC DHEC

September 23, 2019

Subject: Comments on proposed revisions to Water Quality Standards, R-61-68

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As one with lengthy involvement in and supervision of the Water Quality Standards and Water Quality Planning programs during my career at DHEC and subsequently as a citizen, I offer these brief comments and suggestions on proposed changes to R-61-68.

Contrary to an opening statement in proposed Regulation 61-68, SC Water Quality Standards are established and promulgated not just to comply with Federal requirements and recommendation. They also implement State law and policies.

The General Assembly of South Carolina in the Pollution Control Act has declared the following policy: "It is declared to be the public policy of the State to maintain reasonable standards of purity of the air and water resources of the State, **consistent with the public health**, safety and welfare of its citizens, maximum employment, the industrial development of the State, the propagation and protection of terrestrial and marine fauna and flora, and the protection of physical property and other resources. It is further declared that to secure these purposes and the enforcement of the provisions of this Act, the Department of Health and Environmental Control shall have authority to abate, control and prevent pollution.

R-61-68 states that uses in all waters shall be protected, wherever attainable, regardless of flow and classification of waters. This includes protection of public health from unregulated contaminants.

The cancer causing substances contained in wastewater from point sources and nonpoint sources should be of more concern to DHEC Staff and its Board. Increasing evidence supports that various cancers caused by substances in drinking water are occurring in our population and is inconsistent with protection of public health. Below is just one scientific study report on the subject. To help combat this **cancerous** health risk, DHEC should restrict the percent of wastewater flows to rivers and streams to no more than 10% of natural flow. This policy should be incorporated into the general rules section of R-61-68.

Pharmaceuticals, Hormones, and Other Organic Wastewater Contaminants in U.S. Streams, 1999–2000: A National Reconnaissance

<http://pubs.acs.org/doi/abs/10.1021/es011055j>

Abstract

To provide the first nationwide reconnaissance of the occurrence of pharmaceuticals, hormones, and other organic wastewater contaminants (OWCs) in water resources, the U.S. Geological Survey used five newly developed analytical methods to measure concentrations of 95 OWCs in water samples from a network of 139 streams across 30 states during 1999 and 2000. The selection of sampling sites was biased toward streams susceptible to contamination (i.e. downstream of intense urbanization and livestock production). OWCs were prevalent during this study, being found in 80% of the streams sampled. The compounds detected represent a wide

range of residential, industrial, and agricultural origins and uses with 82 of the 95 OWCs being found during this study. The most frequently detected compounds were coprostanol (fecal steroid), cholesterol (plant and animal steroid), *N,N*-diethyltoluamide (insect repellent), caffeine (stimulant), triclosan (antimicrobial disinfectant), tri(2-chloroethyl)phosphate (fire retardant), and 4-nonylphenol (nonionic detergent metabolite). Measured concentrations for this study were generally low and rarely exceeded drinking-water guidelines, drinking-water health advisories, or aquatic-life criteria. Many compounds, however, do not have such guidelines established. The detection of multiple OWCs was common for this study, with a median of seven and as many as 38 OWCs being found in a given water sample. Little is known about the potential interactive effects (such as synergistic or antagonistic toxicity) that may occur from complex mixtures of OWCs in the environment. In addition, results of this study demonstrate the importance of obtaining data on metabolites to fully understand not only the fate and transport of OWCs in the hydrologic system but also their ultimate overall effect on human health and the environment.

And here is a link to an article about contaminants in the drinking water of NC soldiers that raises more concerns about unregulated contaminants that contribute to cancer:

<https://www.newsobserver.com/news/local/article205393274.html>

I look forward to your action to ensure protection of the public health through appropriate revisions to R-61-68.

Thank you for the opportunity to comment on the proposed changes.

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