**THE IMPORTANCE OF PROTECTING**

 **DRINKING WATER AQUIFERS FROM CONTAMINATION**

As stated above, sixty-five percent of Washington’s population use groundwater as a drinking water source, and in many areas this water is delivered untreated to the end user. It is essential to protect these aquifers from pollution that could render them unusable or cause long term widespread health problems. Once polluted, it is impossible in many cases to remove the pollution from the aquifer.

Many studies have been done on the effects of pollutants on water quality. However, there are many unregulated contaminants entering water bodies and many unanswered questions. The following is from a Metropolitan King County Council Regional Water Quality Committee Staff Briefing on Toxics and Chemicals of Emerging concern in Marine Waters, September 5, 2018 (“Briefing”):

*Under existing law, many* ***contaminants of emerging concern (CECs)*** *are not regulated, or assessed for toxic impacts, before they are introduced into commerce or industrial processes. SRKW and their prey are exposed to these chemicals—many of which are endocrine disruptors—because* ***they often find their way into our waters through wastewater treatment plants and stormwater runoff.*** *It can be very expensive to clean up or provide water quality treatment at these “end of pipe” locations (i.e., stormwater and wastewater treatment).*

This Briefing focused on the impacts of King County’s sewage treatment plants on water quality in Puget Sound, but it also contains valuable information regarding contaminants primarily from stormwater flowing into those plants or directly into Puget Sound. These are the same stormwaters that are the subject of this current rulemaking. It is important to keep the contaminants in these stormwaters from polluting Puget Sound, but it is even more important to keep them from polluting our drinking water aquifers.

The consequences of polluting just one aquifer used for drinking water are potentially catastrophic. Not only is it difficult or impossible to extract contaminants and restore a contaminated aquifer to drinking water quality levels, the health effects on those drinking contaminate water can be significant.

Contaminants entering a very large body of water such as Puget Sound are disbursed and diluted. This is very different than what happens in aquifers (experts to complete)

The Briefing reports that runoff and air deposition are the “primary pathways” for toxic contaminants to reach receiving waters:

Half-Century Assessment of the West Point Treatment Plant

The resulting report, entitled “Half Century Assessment of the West Point Treatment Plant[2](#bookmark0)”, cited a Washington Department of Ecology Report “Control of Toxic Chemicals in Puget Sound[3](#bookmark1)” indicating that wastewater treatment plants account for less than 10 percent of the load to the marine environment of a selected 16 key contaminants. The Half-Century Assessment concluded that **“many toxic contaminants entering the waste stream are generated by runoff from the watershed or accumulated through air deposition…the primary pathway for most of these contaminants to reach receiving waters is by stormwater runoff,** and the toxic contaminants in their current concentrations do not significantly impact West Point operations or treatment

effectiveness.” Briefing, P. 10

The Briefing also reports that the level of toxics from urban surfaces is increasing:

**Recent Reports by King County WLRD/WTD addressing Toxic Contaminants**

In addition to the NOAA studies described above, King County wastewater and water resource agencies have completed reviews that discuss these issues, among other topics. RWQC has been briefed on these studies over the last year.

The Committee approached the broad issue of the impacts of toxics in the effluent of the West Point Treatment Plant in its 2017 review of legislation directing the Executive to review the status and capacity of West Point after a half-century of service. The legislation calling for that review, Motion 14882, directed a broad evaluation of the plant’s service readiness for coming years, including a review of “**the increasing levels of toxics from outdoor urban surfaces, including automotive chemicals, pesticides and herbicides, chemicals accumulated through air deposition and other toxics** that are directed to the plant… “ p. 10

Determining on what regulations are necessary to stop or reduce the flow of contaminants into Puget Sound is a complex problem. However, the decision to disallow deep injection wells that create direct pathways for contaminants to flow into to drinking water aquifers is relatively simple. The decision should be not to allow them in proximity to aquifers or areas that flow to aquifers because the risk of aquifer contamination is too high.

This needs to be done to protect the large segment of our State’s population that relies on groundwater for drinking.