

## **Wastewater issue revisited**

By Dallas Cross

In the article "Fish can tell us a lot about the water we drink," (The Issaquah Press, Dec. 15, 2009), I cautioned against the contamination of our streams and drinking water with estrogenic chemicals, those that mimic female hormones. In the article, I cite chemical-related abnormal effects on sexual development in aquatic animals, including sex reversal in fish.

Since then, such chemicals, phthalates and Bisphenol A, have been implicated in early sexual development of human females, and with smaller testes in human males. All are good reasons to stop using unsafe plastic baby bottles and containers, including plastic-lined food cans. These chemicals accumulate in our water systems from pharmaceuticals and by leaching from plastic, including plastic pipes.

From my city utility bill, I see that King County charges more for sewage disposal than the cost of the water.

Thus, I queried Issaquah Mayor Ava Frisinger about why the city used the county disposal system rather than having a possibly less expensive city plant? The mayor explained this was to protect the lower Issaquah Creek aquifer from which a large amount of Issaquah public well water is pumped. Regulations state that local wastewater treatment is not allowed in order to protect the underlying aquifer.

Being that current wastewater treatment methods do not remove all of the estrogenic chemicals, I understand this concern and am willing to support the high disposal cost to keep our drinking water safe and habitat clean for our aquatic animal neighbors.

Subsequently, I attended a Sno-King Watershed Council meeting for public education and comment presented by King County Wastewater Treatment personnel. The topic was potential uses of treated water from the soon-to-be-completed Brightwater sewage treatment plant in Snohomish County. This is a King County facility that is planned to be physically linked with its existing sewage system.

In response to queries about the purity of treated wastewater planned to be dumped into marsh lands, streams and rivers, the King County presenters stated that because of volume and expense there would be no process in the new plant to effectively remove or measure estrogenic and some other biochemical contaminants.

Attendees suggested an inexpensive method for biological monitoring of the treated waste stream for harmful chemicals. They proposed raising fish in the treated water to be examined for physical abnormalities, and especially to determine whether the male

fish had rudimentary egg development in their testes from estrogenic chemical exposure.

King County does plan to sell some Brightwater-processed wastewater to nonfood producing, agricultural entities, such as golf courses and tree farms, and to industry for use as wash-down water. They admitted the selling price of the water would be less than the cost of treating the water. It was evident there would be more treated water than they could sell and that a lot was going back into local surface waters.

A map of King County's current and planned wastewater system was presented. In long-term planning they showed a system of transport that would pipe water from treatment plants to Issaquah Valley to be dumped into Issaquah Creek at a place yet to be determined. This they entitled a "stream flow enhancement" measure.

Wait a minute! The city of Issaquah can't have its own wastewater treatment plant in order to protect the lower Issaquah aquifer, but King County can plan to dump its treated (but still somewhat chemically polluted) wastewater into the surface waters over it? This is double-speak and a bad deal for residents and wildlife alike.

The practice of returning processed, but undrinkable, wastewater to natural waters poses a broader risk. Consider harmful industrial chemicals being accidentally or intentionally flushed into the King County sewer system. Some of these would not be detected or completely removed at the processing plant. They could be redistributed throughout King County as stream or marsh land enhancement measures and threaten underlying aquifers, including the huge one under Issaquah.

Such problems do have solutions. Citizen-scientists attending the meeting proposed that the long-term planning of King County should better address both water supply and wastewater management in terms of water quality.

Issaquah now uses city-supplied water for residential purposes. More than one-third of this could be replaced with processed wastewater. The potential to use processed wastewater for business and industry is even greater. All of these demands would be better served with a dual-water system, supplying both fresh and recycled water. Such systems are being used by Australia, China and other water-poor countries, as well as by communities in Utah, Idaho, Arizona and Nevada.

The reuse of treated wastewater for sanitation and nonpotable purposes would contain and isolate harmful chemicals, now surviving sewage treatment, from reintroduction into drinking water sources. It would also greatly reduce the demand for fresh water.

Puget Sound citizens and its governments need to face the certainty that fresh water is becoming scarcer and its purity is vulnerable to contamination through our own wastewater management planning.

State, county and city governments should cooperatively make long-range plans and policies to enable domestic and commercial use of processed wastewater for noncritical purposes. To do so they need to establish new building codes to gradually convert to dual-water supply and linked waste water management systems.

These measures would conserve and protect our clean water supply for drinking and bathing. Wildlife and fish residents in our lakes, streams and wetlands would benefit as well. Within the context of King County long-range planning, 2025 would not be too soon to start.

Reach Dallas Cross at [FishJournal@aol.com](mailto:FishJournal@aol.com). View previous articles at [www.FishJournal.org](http://www.FishJournal.org). Comment on this column at [www.issaquahpress.com](http://www.issaquahpress.com).