Odor Control

We have all smelled it, whether being downwind, living in close proximity, or driving by on I-5, the distinctive odor from the Wastewater Treatment Plant is unmistakable. But that will change with the upcoming plant expansion and upgrade.

Older technology, coupled with Wilsonville's population growth, has overwhelmed the current odor control system. Complaints about odor, and improvements to address odor are not new to the plant. However, upgrades over the years served only as band aids, and did not sufficiently help the plant meet today's higher standards.

There were a lot of odor complaints in the 80's and 90's, which led to covering the digesters with diamond-plate aluminum and installation of a Calgon activated carbon tower. The tower worked great. The carbon lasted four to five years and complaints went away. During a plant upgrade in 1998, the secondary process tanks were converted into biosolids storage units and also connected to the tower. The carbon then only lasted about five months and needed to be changed, but a decision was made to replace them with a bark chip filter. That worked for a couple of years, but there was so much hydrogen sulfide and organics in the air that it eventually broke down the media and filter. This led to replacement with potting soil, which didn't work, which eventually led to the installation of the current twin tower bio-filters.

The bio-filters work well, but a large part of the problem is that it is not always easy to pinpoint and capture all of the different sources, including the headworks, aeration basins, and solids handling. To address this problem, the current upgrade and expansion will construct an interconnected network of ventilation ductwork which will suck odors from all of the different processes to a central bio-filter facility for treatment. Individual processes are also required to be covered or otherwise contained.

The City is committed to addressing odor issues. Air discharges from the bio-filter facility will be subject to very strict limits, both from a regulatory standpoint and from a contractual standpoint. The City wrote an "Odor Guarantee" into the operations contract for CH2M-Hill, which includes stiff financial penalties for non-compliance.