

## Waste Diversion from Trash to Soil in 45 days 2008 - 2009

We used to call the stuff we throw away ‘trash’. It’s called ‘waste’ now because simply throwing it away is not only wasteful, but also perpetuates wasteful impacts on our environment and resources.

Evergreen College currently hauls waste to the Hawks Prairie waste disposal site and pays a dumping fee. Waste is then shipped to the actual landfill destination (about 250 miles from Evergreen), where it becomes part of a methane generating contaminated landfill. (Find out more at <http://www.evergreen.edu/sustainability/zerowaste.htm>) Every step of this normal waste disposal process creates greenhouse gasses and environmental pollutants without creating positive returns.

A new program at Evergreen, however, is turning some of that ‘waste’ into ‘waste not’ by composting food and other organic products, including the napkins, paper plates, utensils, and cups currently used on campus. Compostable waste generated in our Campus Activities Building (CAB) is transported to Silver Springs Organics (only about 21 miles away). Once there, it is converted into sterile, safe dirt at less cost than the dump, with less greenhouse gas production, and very little environmental contamination. This process of creating valuable soil from trash is one of many sustainability programs at the college aimed at minimizing Evergreen’s carbon footprint and converting wasteful practices into productive opportunities for our environment and community.

Twelve students, faculty, and staff members from Evergreen toured the Silver Springs Organics Composting facility on November 21<sup>st</sup>, 2008. Silver Springs staff Greg and



Stephanie took us on a guided tour of their facility. They were very friendly, informative and excited about their jobs. We learned that their facility provides an innovative, cost effective, and sustainable waste diversion option for much of the south sound region. Silver Springs accepts solid waste from multiple sources throughout the region, 80% of which is yard, household, and wood waste and 20% of which is food waste.

Incoming waste is ground up the day it arrives, which reduces the appeal to rodents and birds and prepares it for effective composting. It is then piled up into batches roughly the

size of a trailer home and covered with re-useable tarps. The batches are left to sit for 15 days, and then mixed and re-piled. The compost sits another 15 days before being mixed and re-piled for the final 15 day composting period. Forty-five days from arrival, the batch is filtered for contaminants and is ready for use as a high quality soil amendment. The 45 day composting time allows for destruction of weed seeds and mitigation of fertilizers and pesticides. Silver Springs regularly sends samples to an independent lab to test for sterility and their final product is commonly used for landscaping or fill. The Washington state Department of Transportation is their biggest consumer of compost, purchasing it for landscaping along roadsides and other disturbed areas for erosion prevention, storm water cleaning, and fill.



During the composting process, air is pulled through the piles and exhausted into a bio-



filter (below) to accelerate the decomposition process and reduce odors. The bio-filter is simply a separate pile of wood and stump grindings topped with compost that absorbs the air/gases from the ducts pulling air from the piles. This simple system is 96% efficient at reducing Volatile Organic Compounds (VOC's). The pile is used for this function for 18-24 months, then it will be composted and a new bio-filter is built from wood wastes.

Silver Springs uses a temperature regulation system that records pile temperatures every ten seconds. 45 degrees Celsius is known to be the ideal composting temp, but they regulate their compost at a slightly higher temp (which apparently is somewhat controversial - but it works great for them).



An amazing variety of wood, paper, and food wastes can be composted at Silver Springs (with a few exceptions like dog food bags and other plastic lined products). Even wax coated boxes (which CAN'T be recycled) will compost!!! Currently, only 0.5% of incoming waste at Silver Springs is non-compostable and it is separated out after composting with a screen filter.



Overall, Silver Springs is a very low energy facility. They use an electric grinder and efficient, low power fans. They produce zero waste. They also recycle 100% of their water through a holding pond that catches all runoff to protect groundwater.

Silver Springs has a huge capacity; they are currently using about half! There is also more demand for their product than they can produce with current incoming waste supplies. They serve a 5 to 6 county area and Thurston County only makes up 15-20% of their intake!

Composting is less expensive upfront than sending waste to a landfill. Businesses and Institutions can actually cut disposal costs immediately because it costs less to send waste to Silver Springs than to the landfill. The long term savings, in terms of environmental impact, can be appreciated by everyone.

A campus solid waste audit last spring determined that nearly 80% of campus trash is compostable. We currently send a small portion of that 80% to compost at the Organic Farm, who have their own composting operation, and Silver Springs. All it takes for us to send a greater proportion of waste to compost is for each of us to sort it out as we throw it away.

Collection of compostable materials is currently available in the CAB; look for the green bins in the Market Dining area near the Bookstore.

Contributed by Lindsay Raab, Halli Winstead, Scott Morgan.  
Photos by John Pumilio.