MATERIAL PROCESSING YARD

Benefits
- Higher percentage of material recovered for reuse.
- Faster dewatering times.
- More efficient processes.
- Streamlined truck-weighing system.
- Central location.
- Cleaner work environment.
- Demonstration site for low-impact development approaches.

A streamlined system at the new facility allows staff from Clean Water Services, partner cities and other jurisdictions to enter the yard, weigh their trucks, and track material much more accurately than they did at the old Material Processing Yard.

Maintaining a 120-square-mile urban stormwater system involves capturing many tons of material before it enters our pipes and streams. That material has to go somewhere, and most of it can be reused, once properly sorted and cleaned. That’s where the material processing yard comes in.

Since 1998, Clean Water Services has processed the material that CWS and its partners generate through street sweeping, catch basin cleaning, pipe maintenance and related activities. For many years, this facility was located in Forest Grove, at Fernhill. It had a couple of basic pieces of equipment, and involved a labor intensive process that relied heavily on time, gravity and evaporation to dry the material before reuse or disposal. As the Fernhill Natural Treatment System grew, it became necessary to find a new location for the material processing yard.

The new yard is opening in the fall of 2017 near the Hillsboro Airport, just off Evergreen Parkway. It offers not only a more central location, but an entirely new approach to resource recovery. Using methods adapted from the mining industry and repurposed equipment, the new facility is designed to recover more and cleaner resources, more efficiently. It's an investment in the health of our growing region.

The old facility used the “put it on the ground and let it drain” approach, which is less efficient, particularly in our damp climate.

By the Numbers
- First year of operation: 1998
- New facility opens: 2017
- Cubic yards of material processed per year: 12,000
- Dollars saved for each one-ton load kept out of the landfill: $44.
How it works
Trucks arrive at the materials processing yard from points near and far in the Tualatin River Watershed. Staff from Clean Water Services, partner cities and other jurisdictions use their key fobs to enter the property and weigh their trucks.

This security camera photo shows what happens next to the material from catch basins, water quality manholes and pipes. This material, which is generally very wet, arrives in the vactor truck that captured it. The operator opens a large hatch and deposits the contents into the receiving pit (1). The trommel (2) and the mix box below it spin, wash and screen the material, using water (3) that recirculates. Litter and large debris travel on a conveyor belt (4) to a storage bin, and eventually to the landfill. After further processing by the sand screw (5), the rock and sand are suitable for reuse, and the water from the recovery/settling tanks (6) is ready to be used again.

The process for street sweeping materials is similar, but uses a different set of equipment and involves less water. The gravel, dirt and leaf debris that remain after the processing are suitable for certain uses, such as construction backfill, non-residential landscaping and quarry reclamation. Depending on test results, expanded uses may be possible in the future.

A backup material storage area (7) is available when needed due to staffing levels, equipment maintenance or other factors.

Resources
Learn the who-when-where-why of street sweeping: cleanwaterservices.org/for-residents/street-sweeping.

Find stormwater regulations, reports and more: cleanwaterservices.org/stormwater.

What’s next
Goals for the first year of facility operations include:

• Test recovered resources to determine if they qualify as clean fill.
• Negotiate additional facility use agreements with jurisdictional partners.
• Install plants and growing medium in LIDA demonstration planters; begin measuring water quality results under variable conditions.
• Refine operating procedures as needed.

Considerations for the longer term include:

• Highest and best use of recovered materials.
• Possible co-location of additional functions.

Everything we do at Clean Water Services aims to protect public health while enhancing the natural environment of the Tualatin River Watershed.

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